大洋州地域廃棄物管理改善支援
プロジェクト
終了時評価調査報告書

平成28年3月
（2016年）

独立行政法人国際協力機構
地球環境部

環 境
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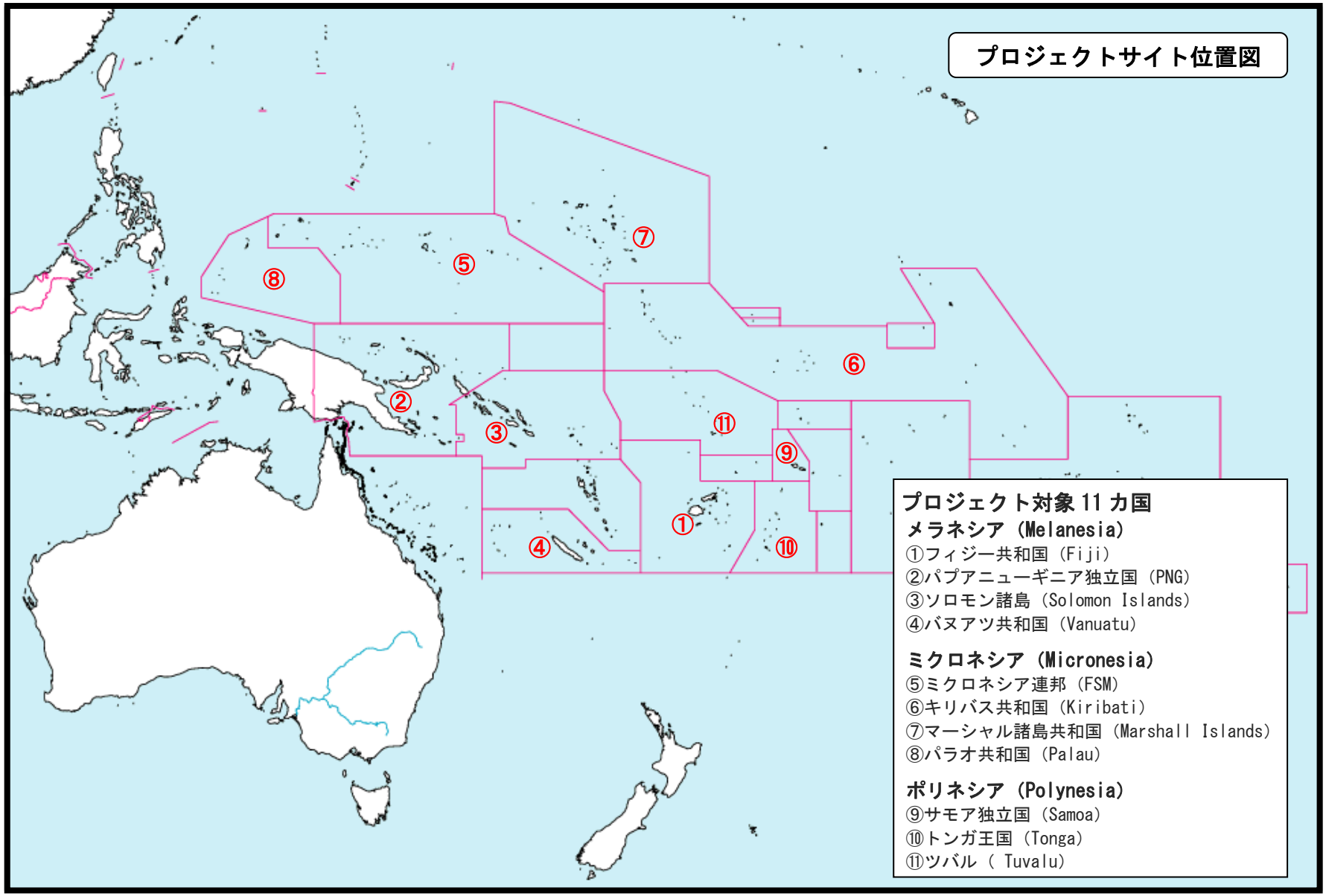


プロジェクトサイト位置図

写　　真

１．フィジー

スバ市場から出た野菜ごみをコンポストヤードへ搬出する様子。

環境局主催でホームコンポスト補助金制度及びクリーンスクール・プログラム財政措置の開始式と関連の技術ワークショップを実施（2015年4月）。

全13自治体が参加した合同定例会議の様子（2015年7月ラウトカ市役所）。会議のロジ、議事次第等はすべて環境局が担当。

出所：短期専門家（ポリネシア地域担当）

２．トンガ

2011年7月

2015年2月

本プロジェクトによる工事と運営管理で改善されたカラカ処分場。

カラカ改善処分場は小中学生がごみ問題について学ぶ社会科見学の場にもなっている。

プロジェクトC/P（環境局）によるコミュニティでのごみ収集のモニタリングの様子。

出所：短期専門家（ポリネシア地域担当）

３．キリバス

ベシオ町役場（BTC）敷地内でのシュレッダー運転でつくられた木質チップとチェーンソーで販売用に切断された薪。

BTC敷地内にある苗圃前に置かれた販売用の木質チップ。

テイナイナオ町役場（TUC）のC/Pによる学校でのコンポスト状況のモニタリング。

出所：短期専門家（ポリネシア地域担当）

４．ミクロネシア

ポンペイ州の既存最終処分場。パイロットプロジェクトとして福岡方式の導入を行った。

チューク州の既存最終処分場。パイロットプロジェクトとして境界線の明確化などを行った。

ヤップ州で新設された福岡方式最終処分場。本プロジェクトでは設計や運営を指導。

出所：終了時評価調査団撮影

５．マーシャル

マジュロの最終処分場にて、出荷のために袋詰めされるコンポスト。

イバイの新収集システムで用いられる予定の収集ルートマップ。

イバイにおける、啓発用の看板。島のすべての学校に配付した。

出所：終了時評価調査団撮影

６．パラオ

最終処分場外観。本プロジェクトにて一部改善工事及び運営や閉鎖計画の指導を実施。

処分場見学者向けの模型で浸出水排水パイプと浸出水池のデモンストレーション。

コロール州リサイクル・センターにおけるペットボトル計数機。本プロジェクトでは、容器デポジット・プログラムの運営管理にかかる国レベルの能力強化を実施。

出所：終了時評価調査団撮影

７．PNG

ポートモレスビー。バルニ最終処分場第1セル（工事完了後の様子）。バルニ処分場改善工事費用はPNG側が負担。

ポートモレスビー。3Rパイロットプロジェクト (1) 学校でのごみの分別。

ポートモレスビー。3Rパイロットプロジェクト (2) 廃タイヤの花壇への再利用。

出所：プロジェクト・オフィス

８．ソロモン

ホニアラ。ラナディ最終処分場の改善工事。

ホニアラ。3Rパイロットプロジェクト対象コミュニティに設置されたごみ分別収集スケジュール及び3R活動の看板。

ギゾ。プロジェクトで運営・管理改善を支援しているギゾ最終処分場。

出所：プロジェクト・オフィス

９．バヌアツ

ポートビラ。コンポスト化のために中央市場から収集されたグリーン・ウェイスト。

ポートビラ。コミュニティに設置された空き缶回収ケージ。

C/Pによるごみ量・ごみ質調査。

出所：プロジェクト・オフィス

10．サモア

サヴァイ島。ヴァイアタ最終処分場に整備された浸出水処理施設（石・珊瑚・砂・ココナッツの殻の簡易浄化設備、沈殿池、浸出水池）。

アピア（ウポル島）。タファイガタ最終処分場に導入されたウェイブリッジで計量中のごみ搬入車両。

アピア。ごみ分別・減量化パイロットプロジェクトにて、民間企業の協力の下、設置された資源ごみ回収箱。

出所：プロジェクト・オフィス

略　語　表

略　語	正式名称	日本語
ADB	Asian Development Bank	アジア開発銀行
AusAID	Australian Agency for International Development	オーストラリア国際開発庁
CCY	Currency	通貨
CDL	Container Deposit Legislation	容器デポジット制度 （預り金払い戻し制度）
C/P(s)	Counterpart Personnel	カウンターパート
EIA	Environmental Impact Assessment	環境影響評価
EPA	Environmental Protection Agency	環境保護庁
EU	European Union	欧州連合
GEF	Global Environment Facility	地球環境ファシリティ
ILO	International Labor Organization	国際労働機構
IMF	International Monetary Fund	国際通貨基金
JCC	Joint Coordinating Committee	合同調整委員会
JICA	Japan International Cooperation Agency	国際協力機構
JOCV	Japan Overseas Cooperation Volunteer	青年海外協力隊
J-PRISM	Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries	大洋州地域廃棄物管理改善支援プロジェクト
MM	man-month	人/月
NGO(s)	Non-Governmental Organization(s)	非政府組織
ODA	Official Development Assistance	政府開発援助
OISCA	Organization for Industrial, Spiritual and Cultural Advancement	オイスカ
OJT	On-the-job Training	オンザジョブ・トレーニング
PALM	Pacific Islands Leaders Meeting	太平洋・島サミット
PCM	Project Cycle Management	プロジェクト・サイクル・マネジメント
PDCA	Plan-Do-Check-Action	計画・実施・評価・改善
PDM	Project Design Matrix	プロジェクト・デザイン・マトリックス
PIC(s)	Pacific Island Country(ies)	大洋州島嶼国
PIDOC	Pacific Islands Database of Capacity Development Activities	大洋州人材育成データベース
PNG	Independent State of Papua New Guinea	パプアニューギニア
PO	Plan of Operations	実施計画
3R	Reduce, Reuse, Recycle	リデュース・リユース・リサイクル

略　語	正式名称	日本語
4R	Refuse, Reduce, Reuse, Recycle	リフューズ・リデュース・リユース・リサイクル
R/D	Record of Discussions	討議議事録
RS 2010	Pacific Regional Solid Waste Management Strategy (2010-2015)	大洋州地域廃棄物管理戦略
S/C	Steering Committee Meeting	ステアリング・コミッティ・ミーティング
SPREP	Secretariat of the Pacific Regional Environment Programme	太平洋地域環境計画
SV	Senior Volunteer	シニアボランティア
SWM	Solid Waste Management	固形廃棄物管理
UNDP	United Nations Development Programme	国連開発計画
UNEP	United Nations Environment Programme	国連環境計画
UNSIDS	United Nations Small Island Developing States	国連小島嶼開発途上国会議
UNWOMEN	United Nations Entity for Gender Equality and the Empowerment of Women	ジェンダー平等と女性のエンパワーメントのための国連機関
USA	United States of America	アメリカ合衆国
WHO	World Health Organization	世界保健機関
WMPC	Waste Management and Pollution Control	廃棄物管理・汚染対策部
■Federated States of Micronesia (FSM)		**ミクロネシア連邦**
DT&I	Department of Transport and Infrastructure, Kosrae	公共事業運輸局、コスラエ
DT&PW	Department of Transportation and Public Works, Chuuk	公共事業運輸局、チューク
DPW&T	Department of Public Works and Transportation, Yap	公共事業運輸局、ヤップ
EPA	Environmental Protection Agency	環境保護局
KIRMA	Kosrae Island Resources Management Authority	コスラエ資源管理局
NSWMS	National Solid Waste Management Strategy	国家廃棄物管理戦略
OEEM	Office of Environment and Emergency Management, FSM	環境危機管理局
SSWMS	State Solid Waste Management Strategy	州廃棄物管理戦略
T&I	Transportation and Infrastructure, Pohnpei	交通インフラ局、ポンペイ
■Republic of Fiji (Fiji)		**フィジー共和国**
BTC	Ba Town Council	バ町役場
CBD	Commercial Business District	商業ビジネス地区
DLG	Department of Local Government	地方自治局
DOE	Department of Environment	環境局
FJD	Fiji Dollar	フィジードル
LCC	Lautoka City Council	ラオトカ市役所

略　語	正式名称	日本語
NWMS	National Waste Management Strategy	国家廃棄物管理戦略
NTC	Nadi Town Council	ナンディ町役場
OHS	Occupational Health Safety	労働安全衛生
RTC	Rakiraki Town Council	ラキラキ町役場
SCC	Suva City Council	スバ市役所
STC	Sigatoka Town Council	シガトカ町役場
TTC	Tavua Town Council	タブア町役場
■Republic of Kiribati　(Kiribati)		**キリバス共和国**
ALD	Agriculture and Livestock Division	農業家畜局
AUD	Australian Dollar	オーストラリアドル
BTC	Betio Town Council	ベシオ町役場
ECD	Environment and Conservation Division	環境保全局
MELAD	Ministry of Environment, Lands and Agriculture Development	環境・土地・農業開発省
TTM	Taiwan Technical Mission	台湾技術團
TUC	Teinainao Urban Council	テイナイナオ町役場
UDP	Urban Development Programme	都市開発プログラム
■Republic of the Marshall Islands (RMI)		**マーシャル諸島共和国**
EPA	Environmental Protection Agency	環境保護局
KALGov	Kwajalein Atoll Local Government	クワジェリン環礁地方政府
MALGov (MLG)	Majuro Atoll Local Government	マジュロ環礁地方政府
MAWC	Majuro Atoll Waste Company	マジュロ環礁廃棄物公社
MICS	Marshall Islands Conservation Society	マーシャル諸島自然保護協会
MOE	Ministry of Education	教育省
MOH	Ministry of Health	保健省
MPW	Ministry of Public Works	公共事業省
NSWMS	National Solid Waste Management Strategy	国家廃棄物管理戦略
OCS	Office of Chief Secretary	主席長官事務所
ODCS	Office of Deputy Chief Secretary	副主席長官事務所
OEPPC	Office of Environmental Planning and Policy Coordination	環境政策局
■Republic of Palau (Palau)		**パラオ共和国**
BPW	Bureau of Public Works, Ministry of Public Infrastructure, Industries and Commerce	公共事業局、公共基盤・産業・商業省
EQPB	Environmental Quality Protection Board	環境保護局
MOF	Ministry of Finance	財務省
MPIIC	Ministry of Public Infrastructure, Industries and Commerce	公共基盤・産業・商業省

略　語	正式名称	日本語
NSWMP	National Solid Waste Management Plan	国家廃棄物管理計画
PEEC	Public Education and Enhancement Committee	住民教育啓発部会
SWM-BPW	Division of Solid Waste Management, Bureau of Public Works, MPIIC	廃棄物管理課
SWM-KSG	Solid Waste Management, Koror State Government	廃棄物管理室、コロール州政府
■Independent State of Papua New Guinea (PNG)		**パプアニューギニア独立国**
3R HEART	3Rs for improvement of **H**ealth, **E**nvironment, **A**ttitude, **R**esource efficiency and **T**houghts	「健康、環境、意識、資源の効率性、思考」の改善のための 3R
CEPA	Conservation and Environment Protection Authority	環境保護・保全公社
DNPM	Department of National Planning and Monitoring	国家計画モニタリング省
NCD	National Capital District	首都特別区
NCDC	National Capital District Commission	首都特別区委員会
PGK	Papua New Guinean Kina	パプアニューギニアキナ
WMD	Waste Management Division	廃棄物管理課
■Independent State of Samoa (Samoa)		**サモア独立国**
DEC	Division of Environment and Conservation	環境保護課
MNRE	Ministry of Natural Resources and Environment	天然資源環境省
PPP	Public-Private Partnership	官民連携
STA	Samoa Tourism Authority	サモア観光局
WST	Western Samoan Tala	西サモアタラ（通貨）
■Solomon Islands		**ソロモン諸島**
GTC	Gizo Town Council	ギゾ町役場
HCC	Honiara City Council	ホニアラ市役所
MECDM	Ministry of Environment, Climate Change, Disaster Management & Meteorology	環境・気候変動・災害対策省
MHMS	Ministry of Health and Medical Services	保健・医療サービス省
SBD	Solomon dollar	ソロモンドル
■Kingdom of Tonga (Tonga)		**トンガ王国**
IWCM	Integrated Water and Coastal Management Project	統合的水・沿岸管理プロジェクト
IWRM	Integrated Water Resources Management Project	統合的水資源管理プロジェクト
MEIDECC	Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications	環境・エネルギー・気候変動・災害管理・気象・情報・通信省
MOH	Ministry of Health	保健省
TOP	Tonga Pa’anga	トンガパアンガ（通貨）

略　語	正式名称	日本語
VEPA	Vava'u Environmental Protection Association	ババウ環境保護協会
■Tuvalu		**ツバル**
EDF11	European Development Fund 11	欧州開発基金 11
MHA	Ministry of Home Affairs	自治省
SWAT	Solid Waste Agency of Tuvalu	ツバル廃棄物管理公社
■Republic of Vanuatu (Vanuatu)		**バヌアツ共和国**
DARD	Department of Agriculture and Rural Development	農業農村開発局
DEPC	Department of Environmental Protection and Conservation	環境保護・保全局
LMC	Luganville Municipal Council	ルーガンビル市役所
PVMC	Port Vila Municipal Council	ポートビラ市役所
VSA	Volunteers Service Abroad	海外ボランティアサービス
VUV	Vanuatu Vatu	バヌアツバツ（通貨）

評価調査結果要約表

<table>
<tr><td colspan="3">１．案件の概要</td></tr>
<tr><td colspan="2">国名：大洋州地域</td><td>案件名：廃棄物管理改善支援プロジェクト（J-PRISM）</td></tr>
<tr><td colspan="2">分野：廃棄物管理</td><td>援助形態：技術協力プロジェクト</td></tr>
<tr><td colspan="2">所轄部署：JICA 地球環境部環境管理グループ、環境管理第一チーム</td><td>協力金額（評価時点）：約 11 億円</td></tr>
<tr><td rowspan="3">協力期間</td><td rowspan="3">（R/D）：2011 年 1 月～2016 年 1 月</td><td>先方関係機関：太平洋地域環境計画（Secretariat of the Pacific Regional Environment Programme：SPREP）及び、大洋州島嶼国（Pacific Island Countries：PICs）11 カ国の廃棄物管理所轄機関</td></tr>
<tr><td>日本側関係機関：志布志市、沖縄リサイクル市民の会等</td></tr>
<tr><td>他の関連協力：パラオ「廃棄物管理改善プロジェクト」（2005 年 10 月～2008 年 10 月）、バヌアツ「ブファ廃棄物処理場改善プロジェクト」(2006 年 9 月～2008 年 9 月)、フィジー「廃棄物減量化・資源化促進プロジェクト」（2008 年 10 月～2012 年 3 月）</td></tr>
</table>

１－１　協力の背景と概要

大洋州の島嶼国における廃棄物管理は、その国土の狭小性といった地理的条件や伝統的な土地所有制度等の社会的背景から適切な廃棄物処理が困難なうえ、海洋（珊瑚礁）や陸域等の観光・産業資源及び人々の公衆衛生への深刻な影響が問題となってきている。昨今では、急速な生活様式の近代化等に起因する廃棄物の多種･大量化が顕著となっており､これらの廃棄物の適正処理を実現していくことが、大洋州地域島嶼国に共通する大きな課題の 1 つとなっている。これに対して、独立行政法人国際協力機構（JICA）は、2000 年以降、技術協力や専門家派遣、機材供与など、さまざまな支援を行ってきた。

今般､JICA は大洋州 11 カ国より申請のあった技術協力プロジェクトの要請を取りまとめて 1 つの広域案件とし､これまでの協力で策定された｢大洋州地域廃棄物管理戦略（Pacific Regional Solid Waste Management Strategy）（2010～2015 年）｣（以下、｢RS 2010｣と記す）や国家廃棄物管理計画の下、大洋州各国が適正な廃棄物管理体制を整え、その知識や経験が大洋州島嶼国内で共有され、大洋州全域の廃棄物管理が改善されることを目的とし、対象各国の廃棄物管理所管機関をカウンターパート（Counterpart Personnel：C/P）として｢大洋州地域廃棄物管理改善支援プロジェクト（Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries：J-PRISM）｣（以下、｢本プロジェクト｣または｢J-PRISM｣と記す）を 2011 年 2 月から 2016 年 2 月までの予定で実施中である。

１－２　協力内容

(1) 上位目標

大洋州地域において、自立発展的な廃棄物管理が促進される

(2) プロジェクト目標

RS 2010 の実施を通して、大洋州島嶼国（PICs）の廃棄物管理にかかる総合的基盤（人材と制度）が強化される

(3) アウトプット

アウトプットは、12 の個別プロジェクト（11 カ国それぞれ及び地域協働の活動）のアウトプットで構成されている。個別プロジェクトは、それぞれ固有のプロジェクト・デザイン・マトリックス（Project Design Matrix：PDM）/活動計画（Plan of Operations：PO）で運営管理される単体のプロジェクトである。またこれらのプロジェクトの事業内容は対象 11 各国のニーズ、地域戦略で示された優先課題にかんがみ、個別に設定されている。

上位目標			大洋州地域において、自立発展的な廃棄物管理が促進される											
プロジェクト目標			RS 2010 の実施を通して、大洋州島嶼国の廃棄物管理にかかる総合的基盤（人材と制度）が強化される											
アウトプット以下は地域協働の活動と 11 カ国それぞれの個別プロジェクトで構成される。														
アウトプット（個別プロジェクト） 廃棄物管理地域戦略の優先課題			地域協働	フィジー	PNG	ソロモン	バヌアツ	ミクロネシア	キリバス	マーシャル	パラオ	サモア	トンガ	ツバル
1	自立発展的な財務体制													
2	総合的廃棄物管理	2-1 3R/4R												
		2-2 処分場												
		2-3 ごみ収集												
3	法整備													
4	啓発・教育/コミュニケーション													
5	人材育成・能力強化**													
6	環境モニタリング													
7	政策・計画策定・実施													
8	廃棄物産業													
*	地域戦略のモニタリング													

注記：廃棄物地域戦略の優先課題別に本プロジェクトが支援する分野を網掛けで明示した。

(4) 投入

1) 日本側：

長期専門家派遣　：120.9 人/月（5 名）
短期専門家派遣　：153.6 人/月（13 名）
ローカル専門家派遣　：47.2 人/月（1 名）（経費はローカルコスト負担に含まれる）
研修員受入　：19 名
供与機材　：25 万 5,000 米ドル（主要機材：ウェイブリッジ、シュレッダー、グラス・カッター、チェインソー、コピー機、プリンター、コンピュータ、プロジェクター等）
ローカルコスト負担　：262 万 8,000 米ドル（主要経費：航空運賃等の交通費、通信費、消耗品費、ローカル専門家傭上費等）

2) 大洋州側：

カウンターパート（C/P）配置　：176 名
ローカルコスト負担　：446 万 1,000 米ドル
土地・施設提供　：専門家執務室、光熱費

２．評価調査団の概要

<大洋州側>

	担当分野	氏　名	所　属
1	総括	Mr. David Sheppard	Director General, Secretariat of the Pacific Regional Environment Programme (SPREP)
2	廃棄物管理（1）	Dr. David Haynes	Director, Waste Management and Pollution Control Division (WMPC), SPREP
3	廃棄物管理（2）	Dr. Frank Griffin (a)	Hazardous Waste Management Advisor, WMPC, SPREP
4	廃棄物管理（3）	Mr. Anthony Talouli	Pollution Advisor, WMPC, SPREP
5	廃棄物管理（4）	Ms. Ma Bella Guinto (b)	Solid Waste Management Advisor, WMPC, SPREP

注記：(a) オブザーバーとして PNG、ソロモン、バヌアツ、フィジーでの現地調査に参加
(b) オブザーバーとしてミクロネシア、マーシャルでの現地調査に参加

＜日本側＞

	担当分野	氏　名	所　属	派遣期間
1	総括	森　尚樹	地球環境部環境管理グループ次長	9 月 20 日~26 日
サブチーム 1				
2	協力計画（1） フィジー/キリバス	澤田　秀貴	JICA フィジー事務所　所員	8 月 12 日~19 日 8 月 26 日~ 27 日
3	協力計画（2）トンガ	岩田　章一	JICA トンガ支所 企画調査員	8 月 20 日~25 日
4	協力計画（3）地域協働	田口　達	地球環境部環境管理第一チーム	9 月 9 日~27 日
5	評価分析（A）フィジー/ キリバス/トンガ/地域協働	岸並　賜	（株）国際開発アソシエイツ パーマネント・エキスパート	8 月 12 日~9 月 26 日
サブチーム 2				
6	協力企画（4）PNG	堀越　大輔	JICA PNG 事務所　所員	8 月 16 日~22 日
7	協力企画（5）ソロモン	福田　晃子	JICA ソロモン支所 企画調査員	8 月 23 日~28 日
8	協力企画（6）バヌアツ	浅野　洋子	JICA バヌアツ支所 企画調査員	8 月 29 日~9 月 5 日
9	協力企画（7）サモア	中曽根　徹治	JICA サモア支所 企画調査員	9 月 6 日~11 日
10	評価分析（B）PNG/ ソロモン/バヌアツ/サモア	広内　靖世	（株）国際開発アソシエイツ パーマネント・エキスパート	8 月 15 日~ 9 月 26 日
サブチーム 3				
11	協力企画（8）ミクロネシア	渡辺　敬久	JICA ミクロネシア支所企画調査員	8 月 13 日~18 日 8 月 26 日~9 月 4 日
12	協力企画（9）パラオ	松井　信晃	JICA パラオ支所　所長	8 月 19 日~25 日
13	協力企画（10）マーシャル	大沼　洋子	地球環境部環境管理第一チーム 特別嘱託	9 月 5 日~11 日
14	評価分析（C）ミクロネシア /マーシャル/パラオ	原口　孝子	（株）国際開発アソシエイツ パーマネント・エキスパート	8 月 15 日~ 9 月 26 日

調査期間	2015 年 8 月 12 日～2015 年 9 月 26 日	評価種類：終了時評価

３．評価結果の概要

３－１　実績の確認

(1) アウトプットの達成状況

全体的に、中間レビュー時以降、ほとんどすべての国において進展がみられた。設定された総計 51 のアウトプットのうち 41 のアウトプットが終了時評価時点で達成もしくはおおむね達成、またはプロジェクト完了までには達成の見込みであると判断された。特に啓発・教育/コミュニケーションの優先課題に対応するアウトプットは、どの国においても高い達成レベルであった。一方で、他の優先課題に対応するアウトプットの達成状況は国に

よってさまざまであった。

(2) プロジェクト目標の達成状況

プロジェクト目標の達成状況は、地域協働の活動に設定された指標、国レベルの個別プロジェクトに共通の指標と国別の固有の指標で検証した。

プロジェクト目標	指　標	
RS 2010 の実施を通して、大洋州島嶼国の廃棄物管理にかかる総合的基盤（人材と制度）が強化される	地域協働	1. SPREP が RS 2010 のレビュー（中間時と終了時）で検証する RS 2010 実施に対する本プロジェクトの貢献度合い
		2. 本プロジェク活動を通して得られたグッド・プラクティスが PIC 諸国で活用された数
	国レベル	1. 廃棄物管理の特定の分野での専門性をもち、SPREP の専門家リストに登録された専門家の数
		2. 各国特有の課題（下記）が改善された状況を検証する指標

フィジー	地域研修プログラムの確立
PNG	廃棄物管理計画に基づく最終処分場管理とごみ収集
ソロモン	ごみ減量化/年次計画に基づく最終処分場管理等
バヌアツ	ごみ減量化/年次計画に基づく最終処分場管理
ミクロネシア	最終処分場管理/優良事例共有
キリバス	廃棄処分量の減少
マーシャル	優良事例共有
パラオ	容器デポジット・プログラム
サモア	廃棄物処分量減少
トンガ	ごみ収集システムの普及
ツバル	ごみ収集業務の改善

設定された指標の多くは達成、またはおおむね達成されており、アウトプットの達成状況を踏まえると、プロジェクト全体として、プロジェクト目標はプロジェクト完了までにおおむね達成される見込みであるといえる。

プロジェクト目標の達成見込み

本プロジェクトは地域協働の活動と 11 カ国それぞれの個別プロジェクトで構成される																
RS 2010 の実施を通して、大洋州島嶼国の廃棄物管理にかかる総合的基盤（人材と制度）が強化される	地域協働	フィジー	PNG	ソロモン	バヌアツ	ミクロネシア					キリバス	マーシャル	パラオ	サモア	トンガ	ツバル
						国	コスラエ	ポンペイ	チューク	ヤップ						
	M	M	M	M	M	M	M	M	M	M	P	M	M	M	M	NA

■判定基準

凡例	達成度	説　明
F	達成	設定されたすべての指標を達成した（目標値または期待された状態を100%かそれ以上達成）。
M	おおむね達成	設定された主要な指標はすべて達成（目標値または期待された状態を100%かそれ以上達成）または、おおむね達成した（約 70%以上達成）。

P	部分的に達成	設定された主要な指標は部分的に達成（ベースラインからの改善はあったものの、目標値または期待された状態の 70%以下の達成）。
NA	評価せず	達成状況は評価しない（関連の活動がほとんど実施されず、データもないため）。
（　）	-	プロジェクト目標達成における本プロジェクトの貢献は部分的または間接的。

出所：終了時評価調査団

1) 地域協働

指標 1 は既に達成された。SPREP が実施した地域戦略のレビューでは、本プロジェクトが支援した優先課題の項目のうち、「自立発展的な財務体制」以外のすべての項目で、本プロジェクトが貢献したとの言及があった。特に総合廃棄物管理や人材育成の分野において、本プロジェクトの貢献が顕著であった。指標 2 は部分的に達成された。本プロジェクトの活動を通して、4 つのグッド・プラクティスが特定され、うちトンガで生み出されたグッド・プラクティスがソロモンのギゾで活用された。また過去の JICA 技術協力での活動を通して生み出され、特定された 6 つのグッド・プラクティスが、本プロジェクトの活動を通して 14 の地域で活用されていることが確認された。

2) 国レベル

指標 1 は参考情報として用いた。SPREP のインベントリーとして構築された大洋州人材育成データベース（Pacific Islands Database of Capacity Development Activities：PIDOC）[1] によると、2015 年 6 月時点で、計 23 名の C/P が廃棄物管理の 14 分野でトレーナーとして育成され、延べ 70 名の C/P が、本プロジェクトが実施した国際レベル/地域レベル/国レベルでの研修やワークショップにトレーナーとして貢献した。指標 2 としては、各対象国での達成度を測る個別の指標が計 16 設定されている。そのなかで、終了時評価時に評価可能なものが計 12 あり、うち 10 が、プロジェクト完了までに完全にまたはおおむね達成される見込みである。

３－２　評価結果の要約

(1) 妥当性

必要性、優先度及びアプローチの適切性の観点において、本プロジェクトは引き続き妥当と評価される。

1) 必要性

上位目標及びプロジェクト目標は、大洋州地域及び各国のニーズに照らして引き続き妥当である。対象国は、土地や人口が限られていることによる国内市場の小ささ、地理的条件による孤立といった共通の特徴を数多くもっているが、経済発展・都市化や生活様式の近代化などに伴い輸入品から発生する廃棄物が増加するなかで、廃棄物管理が十分行われてこなかったことの影響がさらに悪化する懸念があった。廃棄物の適切な処分は対象国にとって重要な課題であり、特に、廃棄物管理を担当する地方政府の能力強化は緊急に必要とされている。

2) 優先度

本プロジェクトは、地域戦略（大洋州地域における単一の対象セクター政策）、対象国

[1] PIDOC に登録されているトレーナー経験者は、本プロジェクトの活動でトレーナー経験を積んだ C/P であり、SPREP が正式に承認したトレーナーではないこと、各国の目標値（トレーナー人数）は PIDOC が作成される以前に決定されたものであり、トレーナーの定義は一定ではなかったため、プロジェクト目標の達成を検証する直接的な指標としては適切ではないことから、本指標は参考情報として位置づけられた。

の開発計画及び日本の援助政策と引き続き合致している。また、本プロジェクトは日本の援助政策とも整合している。2015 年 5 月に出された第 7 回太平洋・島サミット（Pacific Islands Leaders Meeting：PALM7）「福島・いわき宣言」では、廃棄物管理を含む環境問題への対応に係る継続的な協力が再確認された。この宣言を受けて、JICA は環境・気候変動、災害リスク管理、廃棄物管理、教育、エネルギー安全保障、インフラの分野における援助を供与し、地域レベルの課題解決、特に廃棄物管理及び環境・気候変動に係る支援にも取り組むとしている。

3) 手段としての適切性

日本による援助は、廃棄物管理に係る技術と日本の経験を移転することに比較優位がある。2000 年以降、JICA はボランティア事業や技術協力プロジェクトといった各種スキームを活用し、対象国の廃棄物管理分野への支援を行っており、準好気性処分場の建設・運営技術やごみ質やタイムアンドモーションスタディなどのごみ調査手法の実施技術は、大洋州地域において適正な技術であると広く認知されている。また、ドナーによる支援の効果を最大化し、重複を避けるべく、SPREP は欧州連合（European Union：EU）、アジア開発銀行（Asian Development Bank：ADB）、地球環境ファシリティ（Global Environment Facility：GEF）、国連環境計画（United Nations Environment Programme：UNEP）、JICA といった国際ドナーによる支援の調整と担当分野の割り振りに中心的な役割を果たしている。

(2) 有効性

プロジェクト目標達成の見込みとアウトプットの貢献状況から判断して、本プロジェクトは比較的有効であると評価される。

1) プロジェクト目標達成の見込み

上記「プロジェクト目標の達成状況」に記載したとおり、プロジェクト目標はプロジェクト完了時までにおおむね達成される見込みである。個別プロジェクトの指標や補足情報からは、C/P の能力が強化され、各国の廃棄物管理が向上しつつあることが確認できる。

2) アウトプットのプロジェクト目標への貢献

全体として、アウトプットはプロジェクト目標の達成に貢献している。本プロジェクトを構成する 11 カ国それぞれ及び地域協働活動の個別プロジェクトは共通のプロジェクト目標（及び上位目標）を掲げているが、各国は固有の課題に取り組むため、地域戦略の優先課題と連動したアウトプットをそれぞれ設定している。同時に、地域協働活動は、主に研修の形で各国個別プロジェクトの目標達成を間接的に支援している。このようにして、本プロジェクト全体としては、域内の廃棄物管理能力の強化が図られている。

(3) 効率性

アウトプット達成状況、アウトプット達成のための投入の適切さ及び地域協働活動や外部リソースの活用状況から判断して、本プロジェクトはおおむね効率的であると評価される。

1) アウトプットの達成状況

上記「アウトプット達成状況」に記載したとおり、アウトプットは全体としておおむね達成された。

2) 投入の適切さ

日本側の投入はアウトプット達成におおむね適切であった。専門家派遣の質的側面では、適正な経歴と関連の経験、十分な技術水準をもつ専門家が派遣された。派遣のタイミング及び量的側面でも対象国の多くで適切であったものの、一部の国で、プロジェクトの前半に十分な派遣がなされず活動が停滞した。機材供与は、供与された国及び地域協働の活動に対してほぼ計画どおり行われ、活用されたが、ウェイブリッジ・システムの供与が 3 カ国で計画されたものの、種々の理由（電力供給がない、技術的問題等）で 1 カ国のみでの供与となった。研修員受入について、本プロジェクトによる日本での研修機会は限られていたが、2015 年 5 月に沖縄で開催された「J-PRISM 地域専門家養成広域研修」は、参加した C/P から、廃棄物管理で主導的な役割を果たしていく自信を深めることができたと評価されている。ローカルコスト負担については、日本側から必要額が期間内に支出された。

大洋州側の投入は全体として、アウトプット達成におおむね適切であった。C/P 配置の質的側面としては、ほとんどの対象国にて関連する経歴及び経験をもった人員が配置された。量的側面及び配置のタイミングはほとんどの対象国にて活動に大きな支障を来さなかったが、C/P が他の業務などで多忙であり本プロジェクトの活動に専念するのが困難であったり、プロジェクト実施中の C/P の不在、頻繁な交代や離職があったりして、一部の実施機関の能力強化が影響を受けた。実施機関の廃棄物管理担当者の人数が不足しているため、C/P の人数が不十分だった国もあった。施設の提供については、JICA 専門家のための事務所スペース及び電気・水道がいずれの対象国でもおおむね適切に提供された。ローカルコストの支出（ディスバース）は大半の国で計画どおりであったが、ディスバースが遅れ、活動の進捗に影響を来した国もあった。また、燃料（費）の不足が最終処分場やごみ収集に係る活動の遅れの一因となった国もみられた。

3) J-PRISM の地域協働活動の各国レベルにおける活用

研修受講者として延べ 162 名、トレーナーとして延べ 70 名（実数は 23 名）の C/P が J-PRISM 実施のさまざまな地域協働活動に参加した。調査団が聞き取りを行った C/P の多くが、地域協働活動への参加により新たな知見、アイデア、技術、教訓を得たと答えた。それら C/P は、自身が学んだことを同僚と共有し、本プロジェクトの活動を通してそれを実行に移した。このような学びの環境は、C/P の技術能力の継続的な向上や参加者のモチベーション維持に役立った。

4) 外部リソースの活用

本プロジェクトは効率性を最大化するために、課題別研修事業、草の根技術協力事業、ボランティア事業、草の根・人間の安全保障無償資金協力事業、ノン・プロジェクト無償資金協力事業といった日本の他の援助スキームとの連携を取り入れた、一体的アプローチをとった。また、さまざまなドナーとの協力・調整が行われた。これらによる技術支援・研修機会や施設・機材などは本プロジェクトのアウトプット達成にあたっても活用された。

5) 過去の援助からの蓄積の活用

本プロジェクトでは、パラオ、バヌアツ、フィジーにおける過去の JICA 技術協力プロジェクトから得られたノウハウや経験も役立てられた。これらのプロジェクトにて知識や技術を得た C/P は、J-PRISM の各国個別プロジェクト、地域協働活動にいずれにおいても重要な役割を果たした。

(4) インパクト

上位目標の達成見込みは個別プロジェクトによって異なるが、さまざまなプラスのインパクトが既に観察されている。

1) 上位目標達成の見込み

上位目標は、多くの国で一定程度以上の達成が期待される。一部の国では、設定されている指標の定義が不明確かまたは目標値の設定がなく、達成度見込みの判断が困難である。また、指標が達成されるかどうかは地域協働活動の持続性次第であり、各国ではコントロールできないというケースもある。

2) プラスのインパクト

地域レベルでは、ドナー調整の改善、J-PRISM ローカル専門家派遣による他ドナーのプロジェクトへの技術支援、3R+リターンの認知向上〔アジア 3R 推進フォーラムや国連小島嶼開発途上国会議（United Nations Small Island Developing States : UNSIDS）等〕などのプラスのインパクトが確認された。

国レベルでは、プロジェクトで得た知識を活用した廃棄物管理法案作成、3R 推進の財政メカニズムの導入（補助金等）、リサイクル基金による廃棄物管理関連活動の持続的資金調達、廃棄物関連の常勤ポスト追加設置など制度面・組織財政面のインパクトが確認されたほか、処分場関連では、ウェイスト・ピッカーの雇用、野焼き禁止や現場監督強化による火災減少、覆土等の運営改善による環境衛生面の改善、対象処分場での経験の他処分場への応用等の波及効果がみられた。また、ウェイブリッジを導入した国では、重量に応じたごみ処理料（tipping fee）の設定が可能になり、処分場への廃棄物搬入量が減少した。さらに、ごみ収集の改善や市場ごみのコンポスト化等による環境衛生面の改善もみられた。また、多くの国で一般市民のごみ分別、減量化の意識が向上し、民間企業との連携が促進されたことが確認された。その他、関連機関の交流の活発化が新たな共同事業（ガラス工芸等）の創出につながったケースがあった。

(5) 持続性

地域協働活動及び各国の個別プロジェクトによって評価判断が分かれた。これに基づくと、本プロジェクトの効果の持続性は「中程度」から「高い」の間と評価される。

1) 地域協働活動に係る持続性

2 つの観点があり、まず、廃棄物管理の分野における域内/南南協力一般は継続する見込みが高い。一方で、J-PRISM において日本側がこれまで行ってきた域内での研修やワークショップなどを SPREP が引き継いで、必要な人的・金銭的資源を配分するかどうかは、SPREP がそのためのドナー資金を長期的に確保できるかにかかっている。

a) 政策面

廃棄物管理における南南協力一般、J-PRISM の地域協働活動の継続どちらに対しても、政策的な支援は確保される見込みが高い。新地域戦略案（2016～2025 年）が策定され、2015 年 9 月の SPREP 年次総会における採択が見込まれている[2]。J-PRISM の下で実施されてきた 3R＋リターンや域内協力・協働が同戦略のなかに基本理念として組み込まれている。

b) 組織面

廃棄物管理における南南協力一般は、新地域戦略案の戦略的アクションとして域内・各国内協力の促進が掲げられていることから、組織面での持続性は確保される見

[2] 2015 年 9 月 25 日のステアリング・コミッティ・ミーティング（Steering Committee Meeting：S/C）にて採択された。

込みである。加えて、域内廃棄物管理委員会（クリーン・パシフィック・ラウンド・テーブル）が設置され、新地域戦略案の進捗モニタリングを行うメンバー国と域外ドナー間のプラットフォームとして機能することが期待されている[3]。一方、J-PRISM のプロジェクト・オフィスが実施してきた地域協働活動は、その継続のための組織面での持続性に懸念がある。SPREP の廃棄物管理分野の人員は、廃棄物管理・汚染対策課（WMPC Division）に中核スタッフ（廃棄物管理アドバイザー）1 名が配置されているのみである。同課は増大しつつある廃棄物管理への需要に対応するべくリサイクル担当官のポジションを設けることを提案しているものの、いまだ実現には至っていない。現在のままであれば、研修準備の事務作業などは、SPREP が J-PRISM 完了後に自力で活動を継続・拡大させるのは困難であると予想される。

c) 財務面

廃棄物管理における南南協力一般は、財務面の持続性は確保される見込みである。増大しつつある廃棄物管理の需要に対応するため、SPREP は資金の確保に努めており、これまでに 1,700 万ユーロが EDF（European Development Fund）11（2017～2022 年）の下でプレッジされている。SPREP は予算の計画額と実際の調達額のギャップを埋めるための交渉の場として、クリーン・パシフィック・ラウンド・テーブルを活用することを計画している。しかしながら、上記の資金が J-PRISM の地域協働活動継続のためにどの程度活用できるかは不確かである。

d) 技術面

技術面において、廃棄物管理における南南協力一般に係る問題はないと考えられる。J-PRISM の地域協働活動の継続についても、技術面の持続性確保は可能である。域内トレーナーの養成研修（地域専門家養成研修）に参加した 16 名の C/P はプロジェクト・オフィスの専門家と協働で、現場指導、ワークショップ、研修などの際の参考資料としての島嶼国廃棄物管理ガイドブックを作成中である。このガイドブックは養成研修参加者が学んだ現場経験や教訓を反映しており、実践的で島嶼国のニーズに応える資料となることが期待されている。さらに、J-PRISM のトレーナー及び研修の受講者を登録したデータベース（PIDOC）が SPREP のインベントリーとして構築されており、①廃棄物管理分野で南南協力に効果的な役割を果たすことができる域内のリソース・パーソンを探したり、②廃棄物管理の研修ニーズやニーズと実際のギャップを洗い出したりするのに役立つと思われる。PIDOC をより包括的・実用的なものとするため、他ドナーによる研修のデータも併せて入力することが検討されている。

2) 各対象国の個別プロジェクトに係る持続性

各国の個別プロジェクトに係る持続性は「中程度」から「高い」の間でばらつきがある。組織面と財務面の持続性に懸念がある国が多い。

a) 政策・法律面

廃棄物管理活動の継続に対する政策的･法的支援はおおむね確保されると思われる。ほとんどの対象国で、廃棄物管理に係る政策的・法的枠組みが存在しているか、本プロジェクトにより設置済みまたは設置予定である。

b) 組織面

組織面の持続性は国によりばらつきがあるものの、全体としては半数以上の対象国で確保されると考えられ、また持続性が低い国もない。実施機関の多くは、本プロジェクトで導入された活動を、プロジェクト中と同様の規模かまたは少なくとも部分的

[3] 同上。

には継続していくだけの組織体制を有している。複数国に共通してみられたプラスの要素としては、①廃棄物管理に係る組織戦略が存在していること、②廃棄物管理の実施を担当する組織に廃棄物専任部署が存在していること、③廃棄物管理を担当する人員が増加したことなどがあった。課題としては、①廃棄物管理を担当する人員が不足していること、②本プロジェクトで創設されたメカニズムを継続する戦略・計画が欠如していること、③職員の頻繁な交代、離職または整理解雇された職員の後継者となり得る人材がいないことなどがみられた。

c) 財務面

全体的にみると、財務面の持続性は半数以上の対象国で確保されると考えられ、また持続性が低い国もない。もっとも、不確実な点が残る国もある。複数国で共通するプラスの要素として、①廃棄物管理に係る国家または地方の予算が増加していること、②自己資金調達メカニズムを構築しつつあること、③その他の財務面でのイニシアティブがあることなどがあった。課題としては、①廃棄物に係る国家予算が減少しているか不確実であること、②予算のディスバースが遅いこと、③将来の外部資金の見通しが不明であることなどがみられた。

d) 技術面

全体的にみると、技術面の持続性は半数以上の対象国で確保されると考えられ、また持続性が低い国もない。複数国で共通するプラスの要素として、①本プロジェクトによる能力強化により技術面の持続性が向上したこと、②組織内に、知識や技術を共有する仕組みがあることなどがある。課題としては、①C/P の離職などにより移転技術が失われたこと、②活動によっては、データ分析及び分析結果の廃棄物管理業務への活用についての技術移転がさらに必要であること、③一部一部の供与機材のメンテナンスに課題があること（ウェイブリッジのメンテナンスや校正ができる業者がいまだ特定されていない）などがある。

３－３　効果発現に貢献した要因

(1) 計画内容に関すること

特になし

(2) 実施プロセスに関すること

1) 地域協働活動による学びの環境をつくったこと

地域協働活動への参加は C/P にとって新たな知見、アイデア、技術、教訓を得る機会となった。彼らは自身が学んだことを同僚と共有し、本プロジェクトの活動を通してそれを実行に移した。このような学びの環境は、C/P の技術能力の継続的な向上や参加者のモチベーション維持に役立った。

2) 2 段階のキャパシティ・アセスメントを実施したこと

各国において、個人レベル、組織レベルの 2 段階のキャパシティ・アセスメントが行われたが、固形廃棄物管理（Solid Waste Management：SWM）に係る C/P 及び実施機関の現行能力及び強化分野の把握に有用であった。

3) 定例会議が開催されたこと

複数の国において、プロジェクト活動実施の関係機関間の定例会議等で情報共有、意見交換の場をもったことで、プロジェクトの進捗をフォローすることが可能になった。さらに、モチベーションの維持、チームワークの強化につながり、プロジェクト活動が

推進された。

4) 現地ステークホルダーと緊密に連携したこと

州知事、関係省庁、NGO、コミュニティ代表、民間企業（リサイクル業者、ごみ収集業者、廃棄物排出事業者等）、学校など活動推進に重要な役割を果たすステークホルダーの支援を確保して、連携協力したことで、相乗効果を得ることができた。

5) カウンターパート表彰制度を導入したこと

「年間ベスト・カウンターパート・チーム賞」及び「年間ベスト・カウンターパート賞」といったカウンターパート表彰制度が、C/P の意欲の継続・亢進につながった。

6) 長期間の支援で構築された太平洋側と日本側の信頼関係があること

SPREP と JICA 並びに各国 C/P と専門家の信頼関係が、プロジェクトを通して構築・強化されたことが、活動の円滑な実施に貢献した。

7) 組織的・財政的コミットメントがあること

例えば PNG 政府及び NCDC は十分なカウンターパート・ファンドを確保しており、バルニ処分場（オープン・ダンプ）の改善にあたって、財政的支障がなかった。

３－４　問題点及び問題を惹起した要因

(1) 計画内容に関すること

1) PDM が十分に明確ではなかったこと

PDM に活動が示されておらず、多くの指標が不明確〔間接的、目標値がない、判断基準が曖昧、達成不可能（外部条件の影響が大きい）、客観的な検証が困難等〕であり、特に専門家や C/P が頻繁に交代した国において、PDM の内容に対する共通理解をもつことに時間がかかった。

2) 域内研修に対するモニタリング評価が活動に含まれていなかったこと

域内研修のモニタリング評価が PDM/PO の活動に含まれておらず、体系的なモニタリング評価が行われかったため、能力強化のインパクトを客観的に測定できなかった。

(2) 実施プロセスに関すること

1) JICA の技術協力に対する理解が不足していたこと

一部の国においては、プロジェクト開始当初、C/P が JICA 技術協力のコンセプトに通じていなかったため、直接的な財政支援や機材供与はほとんどなく、技術移転と人材育成が中心であることを理解するのに、時間がかかった。

2) 一部 C/P に技術移転が集中し、組織内で移転技術の共有がなかったこと

適任者がいないという理由から、技術移転がごく数名の C/P に対してのみ行われた国があった。加えて、習得された知識、経験、技術は他の C/P や関連職員に十分共有されなかったため、主要 C/P が整理解雇となった際、実施機関内には役割を引き継げる職員がおらず、活動が停滞した。

3) PDM と PO の活用が不十分であったこと

一部の国では、中間レビューの提言を受け、PDM と PO の活用度は改善されたが、十分ではなかった。モニタリングの責任者が必ずしも明確になっておらず、指標の進捗がしっかりとモニタリングされていない。さらに、一部の指標は、終了時評価時においても不明確であった。また、詳細 PO や年間 PO も策定されなかった。これらの問題は、プロジェクトの関係者が、全体的な実施プロセスや PO に基づく進捗、また PDM のプロジェクト目標やアウトプットの期待される達成度について、共通の理解を有することを

困難にしてきた。

4) 土地問題が発生したこと

最終処分場に係る土地問題が発生したことで環境影響評価（Environmental Impact Assessment：EIA）が遅れ、処分場改善工事の遅れを招いたケースがあった。

5) その他の問題

ミクロネシア地域の対象国では、複数の最終処分場において覆土用の土が入手できず（島に存在する土が限られているため）、処分場運営計画を完全に実行できないという共通の問題がみられた。

３－５　結論

・プロジェクト目標「大洋州地域廃棄物管理戦略の実施を通して、大洋州島嶼国の廃棄物管理にかかる総合的基盤（人材と制度）が強化される」はおおむね達成した。
・本プロジェクト成果の継続性を確保するための各国に取り組むべき課題は残っている。
・本プロジェクトは多くの国際会議等の場において発表され認知度は高い。

３－６　提言

(1) 専門家データベースの活用方法を検討する。

本プロジェクトにより専門家データベース（PIDOC）が SPREP のデータベースとして作成された。他方、同データベースの今後の活用方法については明確になっていない。今後とも大洋州地域内でのローカル専門家の活用を想定すると、これらは有用なデータベースであることから、SPREP が中心となってこれらの活用法について検討を進める。

(2) 本終了時評価にてまとめられた提言の着実な実行

各国において、それぞれ本プロジェクト期間内に行うべき活動を提言としてまとめた。これらの実施は、本プロジェクト目標達成に寄与するのみならず、プロジェクト終了後の本プロジェクト成果の持続性の確保、向上につながることから、各国実施機関、専門家、各事務所・支所、プロジェクト・オフィスにて連携をとりつつ進めていく。

(3) JICA と SPREP 間のより一層密な情報共有の実施

各国の現場レベルで SPREP の活動がみえないとの意見を耳にする。このため、プロジェクト・オフィスを中心とした JICA と SPREP の間で、一層の情報共有を進め、かつ JICA 関係者内でもそれらの情報を共有することで、現場レベルへも SPREP 活動の状況を伝えるよう配慮する。これにより、活動の重複を避けるとともに、より効果的な連携が可能となると思料する。

３－７　教訓

(1) 技術指導方法の高い適応性

実施機関の人員、能力等、あまり十分ではない大洋州諸国にとって、市民、民間企業、及びその他関係者を巻き込んで進めた 10 年以上にわたる協力の方法は、適正に機能していた。また、対象域内におけるローカル人材の活用、優良事例の共有等も効率的なプロジェクト実施に寄与した。加えて、各国の C/P 同士が教え合い、現況をシェアするような場を提供したことも、効率的な人材育成につながったといえる。

(2) RS 2010 への初期からの関与

RS 2010 作成時より JICA が関与したことで、SPREP と JICA 間でお互いの支援方法やスタンスを早い段階で共有することができた。このため、相互補完の関係を速やかに確立することにつながり、円滑なプロジェクト実施に寄与したといえる。

(3) 現場経験のあるトレーナーによる研修の効果

J-PRISM の C/P のほとんどは自治体職員であり現場での実務者である。このため、域内研修においてこれらの C/P が講師を務めると、説明する内容も実務に即した内容となるため、参加者たちにとっても有益かつ理解しやすいものとなるため、研修効果も高い。さらには、講師にとっても教える場を得ることで、定常化している業務を再確認する場となり、新たな気づきを得ることもできる。

(4) ローカル専門家による災害廃棄物管理の実践

台風、洪水等による災害廃棄物が発生した場合、迅速な初動が重要となる。このため、本プロジェクトでは初期段階から日本人専門家に加えてローカル人材を活用して対応を行うことで、現場に近いところでの人材育成を並行して進めてきた。この結果、本プロジェクト期間内に人材が育成され、現場レベルでは他ドナーと協調しながら対応できるまでになった。

(5) 関連組織の上層部の巻き込み

実施機関を含む廃棄物管理の関連組織の活動を促進し、成果を発現させるためには、決定権、発言権を有する上層部の理解、積極的な巻き込みが重要である。このため、JCC 等を活用し、上層部に十分な情報提供を行うとともに、発言する場を提供するよう心がけることが必要である。

Summary of Evaluation Results

1. Outline of the Project		
Country: 11 Pacific Islands Countries (PICs)		**Project title:** Japanese Technical Cooperation Project For Promotion Of Regional Initiative On Solid Waste Management In Pacific Island Countries (J-PRISM)
Issues/Sector: Solid waste management		**Cooperation scheme:** Technical Cooperation
Division in charge: Environmental Management Team 1, Global Environment Group, Global Environment Department		**Total cost:** approximately 1,100,000 thousand yen (at the time of terminal evaluation)
Period of Cooperation	**(R/D):** February 2011 - February 2016	**Partner Country's Implementing Organization:** Secretariat of the Pacific Regional Environment Programme (SPREP) and Implementing agencies in charge of solid waste management of 11 PICs
		Supporting Organization in Japan: Municipality of Shibushi-shi, Okinawa Citizens Recycling Movement
Related Cooperation Projects:	"The Project for Improvement of Solid Waste Management in the Republic of Palau (Oct. 2005 – Oct. 2008)", "Improvement of Bouffa Landfill" (Sep. 2006 -Sep. 2008) in Vanuatu, and "Waste Minimization and Recycling Promotion Project in the Republic of the Fiji Islands (Oct. 2008 to Mar. 2012)"	

1. Background of the Project

In order to improve waste management in PICs, SPREP and JICA have been working together for the last ten years since the first dispatch of JICA expert to SPREP in the year 2000. The partnership has been enhanced especially through JICA's previous technical cooperation project on "Solid Waste Management Project in the Oceania Region", which was based in Samoa and was implemented from 2006 to 2010. One of the remarkable achievements in the region resulting from the joint assistance of SPREP and JICA is the development of the Pacific Regional Solid Waste Strategy (RS 2010) after a series of consultation in 2009. The RS 2010 was unanimously adopted as the guiding principle for the region at the annual SPREP Meeting in November 2009.

In response to the request from PICs for continued assistance of Japan, JICA launched a new regional project, entitled J-PRISM, from February 2011 to February 2016. J-PRISM has been implemented in eleven (11) PICs , namely, FSM, Fiji, Kiribati, RMI, Palau, PNG, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu. In addition to the above countries, Cook Islands, Nauru and Niue have been invited to participate in regional and/or sub-regional activities.

2. Project Overview

(1) Overall Goal

"Sustainable management of solid waste in the Pacific Region is enhanced."

(2) Project Purpose

"Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)"

(3) Outputs

Outputs of the Project are divided into 12 individual projects (11 independent projects in individual PICs and the Region-wide Activities) which have been separately managed and monitored by individual Project Design Matrixs (PDMs)/Plan of Operaions (POs). Each individual project tackles particular

issues on its own, which are linked with priority items of the RS2010.

Framework of the Project

Overall Goal	Sustainable management of solid waste in the Pacific Region is enhanced.
Project Purpose	Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS 2010)

Outputs are divided into 12 individual projects

Priorities in RS 2010			Regional	Fiji	PNG	Solomon	Vanuatu	FSM	Kiribati	RMI	Palau	Samoa	Tonga	Tuvalu
1	Sustainable Financing													
2	IntegratedSWM	2-1 3R/4R												
		2-2 Waste Disposal												
		2-3 Waste Collection												
3	Legislation													
4	Awareness/Education/ Communication													
5	Capacity Building													
6	Environmental Monitoring													
7	Policy, Planning and Performance													
8	Solid Waste Industry													
*	Monitoring of RS 2010													

Note: Colored cells under each PIC indicate the area of outputs/activities assisted by J-PRISM.

(4) Inputs

Japanese side：

Long-term Experts	5 persons (120.9 MM)
Short-term Experts	13 persons (153.6 MM)
Local Expert	1 person (47.2 MM) (Cost for Local Expert is included in Local Cost)
Training in Japan	19 persons
Equipment Provision	US$255,000 (Weighbridge data base system, Shredder, Glass Cutter, Chainsaw, Copiers, Printers, Computers, Projectors, etc.)
Local Cost	US$2,628,000 (Transportation, especially Air Fare, Communication, Consumables, Consultant fee for Local Expert, etc.)

Pacific Side：

Allocation of Counterparts (C/Ps)	176 persons (11 PICs)
Local Cost	US$4,461,000
Land and Facilities	Project Office with office furniture and utilities

II. Evaluation Team

<Pacific Side>

	Name	Role/Responsibility	Position/Affiliation
1	Mr. David Sheppard	Leader	Director General, Secretariat of the Pacific Regional Environment Programme (SPREP)
2	Dr. David Haynes	Waste Management (1)	Director, Waste Management and Pollution Control Division, SPREP
3	Dr. Frank Griffin	Waste Management (2)	Hazardous Waste Management Advisor, Waste Management and Pollution Control Division, SPREP
4	Mr. Anthony Talouli	Waste Management (3)	Pollution Advisor, Waste Management and Pollution Control Division, SPREP
5	Ms. Ma BellaGuinto	Waste Management (4)	Solid Waste Management Advisor, Waste Management and Pollution Control Division, SPREP

<Japanese Side>

	Name	Role/Responsibility	Position /Affiliation	Period
1	Mr. Naoki MORI	Leader	Deputy Director General Global Environment Department	Sep. 20-26, 2015
Sub-Team 1				
2	Mr. Hideki SAWADA	Cooperation Planning (1) Fiji/Kiribati	Assistant Representative JICA Fiji Office	Aug. 12-19, 2015 Aug. 26-27, 2015
3	Mr. Shoichi IWATA	Cooperation Planning (2) Tonga	Project Formulation Advisor JICA Tonga Office	Aug. 20-25, 2015
4	Mr. Toru TAGUCHI	Cooperation Planning (3) Regional	Deputy Director, Environmental Management Team 1 Global Environment Department	Sep. 9-27, 2015
5	Mr. Atau KISHINAMI	Evaluation Analysis(A) Fiji/Kiribati/Tonga/Regiona l	Permanent Expert, International Development Associates Ltd.	Aug. 12 - Sep. 26, 2015
Sub-Team 2				
6	Mr. Daisuke HORIKOSHI	Cooperation Planning (4) PNG	Assistant Representative JICA PNG Office	Aug. 16-22, 2015
7	Ms. Keiko FUKUDA	Cooperation Planning (5) Solomon	Project Formulation Advisor JICA Solomon Office	Aug. 23-28, 2015
8	Ms. Yoko ASANO	Cooperation Planning (6) Vanuatu	Project Formulation Advisor JICA Vanuatu Office	Aug. 29 - Sep. 5, 2015
9	Mr. Tetsuji NAKASONE	Cooperation Planning (7) Samoa	Project Formulation Advisor JICA Samoa Office	Sep. 6-11, 2015
10	Ms. Yasuyo HIROUCHI	Evaluation Analysis(B) PNG/Solomon/Vanuatu/ Samoa	Permanent Expert, International Development Associates Ltd.	Aug. 15 - Sep .26, 2015
Sub-Team 3				
11	Mr. Hirohisa WATANABE	Cooperation Planning (8) FSM	Project Formulation Advisor JICA FSM Office	Aug. 13-18, 2015 Aug. 26 - Sep. 4, 2015
12	Mr. Nobuaki MATSUI	Cooperation Planning (9) Palau	Chief Representative JICA Palau office	Aug. 19-25, 2015
13	Ms. Yoko ONUMA	Cooperation Planning (10) RMI	Special Advisor Environmental Management Team 1 Global Environment Department	Sep. 5-11, 2015
14	Ms. Takako HARAGUCHI	Evaluation Analysis（C） FSM/RMI/Palau	Permanent Expert, International Development Associates Ltd.,	Aug. 15 - Sep. 26, 2015

Period of Evaluation	Aug. 12, 2015 – Sep. 26, 2015	Type of Evaluation: Terminal Evaluation

III. Results of Evaluation

1. Project Performance

(1) Outputs:

Overall, progress has been made since the Mid-term Review in almost all countries. 41 out of the total 51 Outputs have been fully or mostly achieved or are likely to be achieved by the end of the Project. The degree of achievement is high in all individual projects in the area of Awareness/Communication/Education, while it varies in other priority items.

(2) Project Purpose:

The prospects of achieving the Project Purpose have been assessed by two indicators for the Region-wie Activities, and one common indicator and country specific indicator(s) for national level.

Project Purpose	Indicators	
Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS 2010)	Region-wide Activities	1 Level of contributions by the project to the RS 2010 implementation
		2. Total number of good practices which can be applied in other PICs is generated through the activities of the projects.
	National	1. Number of experts (Trainers) in the relevant field of solid waste management (SWM) listed in the SPREP inventory
		2.Progress of issues separately undertaken by each PIC

Fiji	Establishment of the regional training program in Fiji
PNG	Landfill management/collection services according to the SWM Plan
Solomon	Waste minimization, landfill management based on annual operation plan
Vanuatu	Waste minimization , landfill management based on annual operation plan
FSM	Landfill management/ sharing of good practices
Kiribati	Reduction of the waste volume at landfill
RMI	Sharing of good practices
Palau	Beverage Container Deposit Fee Program
Samoa	Decrease of amount of waste disposal
Tonga	Expansion of the community-base garbage collection system
Tuvalu	Improvement of the waste collection operation

Overall, it is likely that the Project Purpose will be mostly achieved by the end of the Project, considering the current achievement level of the valid indicators, majority of which have already been fully or mostly achieved, and the ongoing progress of production of the Outputs.

Prospect of Achievement of the Project Purpose

J-PRISM consists of Region-wide activities and 11 individual country projects																
Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS 2010)	Region-Wide Activities	Fiji	PNG	Solomon	Vanuatu	FSM					Kiribati	RMI	Palau	Samoa	Tonga	Tuvalu
						N	K	P	C	Y						
	M	M	M	M	M	M	(M)	M	M	M	P	M	M	M	M	NA

Note: For FSM, N=National, K=Kosrae, P=Pohnpei, C=Chuuk, Y=Yap

Judgment

Legend	Degree of achievement	Description
F	Fully achieved	All indicators are fully achieved (100% or higher degree of achievement of the targets/ expected states).
M	Mostly achieved	Major indicators are either fully achieved (100% or higher degree of achievement of the targets/expected states) or mostly achieved (roughly 70%-100% or higher degree of achievement of the targets/expected states).
P	Partly achieved	Major indicators are partly achieved (progress is made from the baseline but it is not reaching roughly 70% of the targets/expected states)
NA	Not assessed	Degree of achievement was not assessed.
( )	-	This Project partly or indirectly contributed to the achievement of the Project Purpose.

Source: Terminal Evaluation Team

Region-wide Activities

Indicator 1 has already been achieved. The review of RS 2010 conducted by SPREP has identified the high level of J-PRISM contribution to the implementation of RS 2010. In all thematic areas assisted by J-PRISM except the sustainable financing, contributions of J-PRISM have been listed up. Especially, in the areas of integrated SWM and capacity building, J-PRISM contribution is concentrated.

Indicator 2 has been partly achieved. There are four good practices originated through J-PRISM activities and one of these practices, the Community-based Garbage Collection System originated in Vava'u, Tonga has been already introduced to Gizo, Solomon Island. It should be well noted that six good practices originated from previous JICA technical cooperation projects have already been introduced through this Project to 14 cities or towns by now.

National level

Indicator 1 was used only for reference. According to the Pacific Islands Database of Capacity Development Activities (PIDOC) that has been developed as an SPREP inventory[4], as of June 2015, the cumulative total of 70 C/Ps (net total of 23 C/Ps) have participated in the international/regional/country training and workshops organized by J-PRISM as trainers and thus listed in the PIDOC.For Indicator 2, the Project has a total of 16 individual indicators to masure the degree of achievement in each PIU. Twelve of them are evaluable at the time of the terminal evaluation, and ten of them are likely to be fully or mostly achieved by the end of the Project.

2. Summary of Evaluation Results

(1) Relevance

The Project is still relevant in terms of necessity, priority and appropriateness of its approach.

Necessity:

The Overall Goal and the Project Purpose are still relevant with the needs of the region and the respective PICs. The PICs have a number of common characteristics, such as their small domestic markets due to limited land areas and populations, isolation because of geographical settings, etc. The threat arising from poor SWM of the PICs is made worse due mainly to the increase of waste generated from imported goods as a result of economic and urbanization growth as well as the modernization of life style. Therefore, proper disposal of solid waste is a crucial concern for the PICs; especially it is urgently needed for the PICs to strengthen the capacities of local authorities who are responsible for waste management in the (local) government area.

Priority:

The Project is still consistent with the regional strategies, which is the single sector policy of the SWM for the region, and PICs' national development plans as well as Japanese Official Development Assistance (ODA) policy. In the 7th Pacific Islands Leaders Meeting (PALM7) Fukushima 'Iwaki' Declaration on May 2015, in which continuous cooperation to address environmental issues, including waste management was reaffirmed. JICA follows this declaration by providing assistance in the areas of environment and climate change, disaster risk management, SWM, education, energy security and infrastructure.

Appropriateness as Means:

Japanese assistance has its comparative advantages in transferring the technologies and Japan's experiences in SWM. Since 2000, JICA has assisted in the field of SWM for these PICs utilizing the various schemes of Japanese assistance such as JOCV/SVs as well as the technical cooperation projects. Technologies to construct and operate semi-aerobic landfills and to conduct the studies such as waste audit and time-and-motion study have been widely recognized as appropriate in the Pacific region. These comparative advantages in technical aspects have greatly met the needs of the target population of the region. In order to maximize the benefits of donor's contribution, not to duplicate the work, SPREP has taken the key role to coordinate and demarcate the assistances of international donors such as European Union (EU), Asian Development Bank (ADB), Global Environment Facility (GEF), United Nations Environment Program (UNEP) and JICA.

[4] This indicator was not used as a direct measure of the Project Purpose for the following reasons: (i) while the PIDOC, the existing database, is an inventory of SPREP, the persons listed are trainers recognized by J-PRISM but not considered as officially certified trainers by SPREP; and (ii) the target values are not valid as they had been determined before the introduction of PIDOC (thus not consistent with the number of trainers listed in it).

(2) Effectiveness

The Project is evaluated to be relatively effective considering the prospects for achievement of the Project Purpose and contribution of the Outputs to the achievement.

Prospects of Achieving the Project Purpose:
As stated in the Project Performance, it is likely that the Project Purpose will be mostly achieved by the end of the Project. Considering the achievement level of indicators set for individual project and supplemental information, it is confirmed that human capacity of for sustainable Solid Waste Management has been strengthened, and significant improvement has been observed in the targeted SWM issues.

Contribution of the Outputs to the Project Purpose:
Overall, the Outputs have contributed to achievement of the Project Purpose. The Project consists of individual projects in 11 countries and the Region-wide Activities. Nominally, all these individual projects share the same Project Purpose (and the Overall Goal). Each of individual projects separately tackles particular country issues under the respective Outputs, which are linked with priority items of the RS 2010. At the same time, the Region-wide Activities provide the indirect support to each project, mainly in the form of training. As a whole, the Project collectively strives to strengthen the capacity development of SWM within the region.

(3) Efficiency

The Project is evaluated to be mostly efficient considering the production level of the Outputs, appropriateness of the Inputs in producing the Outputs, and the degree of utilization of the Region-wide Activities and external resources.

Production of Outputs:
As explained, the Outputs have been fully or mostly achieved.

Appropriateness of the Inputs:
Japanese side: Inputs from the Japanese side is mostly appropriate to achieve the Outputs.

Dispatch of JICA experts is moderately appropriate. In terms of quality, the experts with adequate background, relevant experiences and sufficient technical level have been dispatched. In terms of timing and quantity, in the majority of the countries, dispatch of JICA experts has been mostly appropriate. In some countries, however, the insufficient assignment period of JICA experts in the first half of project period caused the delay of some activities. Provision of equipment is also mostly appropriate and has been effectively utilized for the Project activities. Provision of weighbridge system was planned for three countries; but the system was procured only in one country due to various reasons, such as lack of electrical supply to the landfill site and technical problems related to the identified installation site. Although opportunity of training in Japan under this Project was limited, "J-PRISM Regional Training for Trainers" held in Okinawa in May 2015, one of such opportunities, was particularly appreciated by the C/Ps who attended it as the one that gained their confidence in performing leading roles in SWM. Necessary amount of local cost has been disbursed in time.

Pacific side: Inputs from the Pacific side is mostly appropriate to achieve the Outputs.

Assignment of the C/P is mostly appropriate. In terms of quality, in most of the countries, the personnel with the relevant background and experiences have been assigned to the Project. In terms of quantity and timing, assignment of the C/Ps has been mostly appropriate in most of the countries. It is noted that the C/Ps are sometimes too busy with other duties/engagements to concentrate on the Project activities. In some cases, change or leaving of some C/Ps during the project implementation period affected capacity development of the implementing agencies they belonged to. In some countries, the number of C/Ps has been insufficient primarily due to shortage of staff for waste management in the Implementing Agencies. Provision of facilities is also mostly appropriate. Office space and utilities necessary for JICA experts have been provided. As for the local cost, it is mostly appropriate. While the local costs were disbursed mostly as planned in the majority of the countries, there were delays in releasing the fund in

some countries, which have affected the progress of some activities. In some countries, an issue of lack of (cost for) fuel was sometimes found as a cause for delays in landfill or waste collection-related activities.

Utilization of Region-wide Activities of J-PRISM at Country Level:
Cumulative total of 162 C/Ps as trainees and 70 C/Ps (net total 23 C/Ps) as trainers participated in the various Region-wide Activities organized by the J-PRISM. A number of C/Ps interviewed by the Terminal Evaluation Team commented that they gained new insights, ideas, skills, and lessens from all of the activities they participated in. Most of the C/Ps have shared what they learned to their colleagues and apply them in the Project. Such learning environments have contributed to the continual upgrade of the technical capacity of C/Ps and help to keep participants motivated as well.

Utilization of External Resources:
In order to maximize the efficiency, J-PRISM has used a holistic approach involving other schemes of Japanese assistance: JICA Training and Dialogue Program, JICA Partnership Program, JICA Volunteer Scheme, Grant Assistance for Grass-root Human Security Project and Non Grant Aid of the Government of Japan. These external resources provided through different Japanese schemes, such as training opportunities and facilities and equipment have been effectively utilized to achieve the Outputs. In implementing the activities, the Project has also collaborated/coordinated with various donors.

Utilization of Assets Accumulated through Previous Assistances:
The Project also benefitted from the know-how and experiences from JICA technical cooperation projects conducted in the past, in Palau, Vanuatu and Fiji. Those C/Ps who acquired knowledge and skills through these projects have played pivotal roles in the specific projects of their respective countries as well as the Region-wide Activities of J-PRISM.

(4) Impact
Likelihood of achievement of the Overall Goal varies by individual project, and various positive impacts
have been observed.

Impact at Overall Goal Level:
Likelihood of achievement of the Overall Goal varies by individual project. It is difficult to assess the degree of likelihood in some countries as the designated Indicators are not clearly defined and/or lacking target values. Likelihood of achievement of some Indicators will depend on the sustainability of the Region-wide Activities, which is beyond the control of the respective country.

Positive Impacts:
At regional level, several positive impacts include the improvement of donor coordination by SPREP, technical assistance by J-PRISM local expert to other donor's project and enhancement of recognition of 3R + Return at the Regional 3R Forum in Asia and the Pacific and International Conference on Small Island Developing States.

At national level, various positive impacts have also been observed already. Positive impacts in the institutional and organizational/financial aspects include the development of Waste Management Act, introduction of financial mechanism (such as subsidies) for 3R promotion, sustainable funding of SWM by using the Recycling Fund and an creation of permanent positions for SWM. In relation to the landfill management, positive impacts include employment opportunities given for waste pickers, the decrease of incidents of fires, the improvement of environmental health at the landfills. Transfer of project experiences in landfill management to other areas has also been observed. In such country that the weighbridge system was introduced, setting tipping fee based on the weight became possible, which served to decrease the incoming wastes. Furthermore, environmental helath improvement has been observed in the communities and the markets where the effective garbage collection system and market composting were introduced. In many countries, public awareness on waste segregation and minimization has been promoted and the collaboration with private sector has been increased. Finally, the interaction between national and state level organizations promoted through this Project led to new

joint initiatives such as glass craft projects.

(5) Sustainability

Sustainability of effects of this Project is evaluated to be medium to high, based on mixed judgment for the Region-wide Activities and the individual country projects.

Sustainability for Region-wide Activities:

Sustainability of the Region-wide Activities is twofold. On one hand, in terms of the likelihood of continuity of regional/south-south cooperation in general in the field of SWM, sustainability is likely to be secured. On the other hand, there is an issue of whether SPREP would be able to allocate necessary human and financial resources to take over the Region-wide trainings/workshops, etc. of J-PRISM. This would be dependent on SPREP securing long-term dedicated donor funding for this purpose.

・ **Policy aspects**

Policy supports for both south-south cooperation in general in SWM and continuation of the Region-wide Activities of J-PRISM are likely to continue. The draft new Regional Strategy (CLEANER PACIFIC 2025: Pacific Regional Waste and Pollution Management Strategy 2016-2025) has been developed, which is expected to be adopted by the annual SPREP General Meeting in September 2015[5]. What have been practiced under J-PRISM, such as 3R + Return and regional cooperation and collaboration, have been incorporated into the draft strategy as guiding principles.

・ **Organizational aspects**

Organizational sustainability of south-south cooperation in general in SWM is likely to be secured since promotion of regional and national cooperation is included in the Strategic Actions of SPREP in the draft Regional Strategy (2016-2025). In addition, establishment of Regional Waste Management Committee (namely, Clean Pacific Round Table) is expected to serve as platform between PIC member countries and external donors to monitor the progress of implementation of the Regional Strategy (2016-2025). On the other hand, there is a matter of concern on organizational sustainability of continuation of Region-wide Activities of J-PRISM, which have been managed by the Project Office. At present, only one core staff (i.e. SWM advisor) is assigned in the field of SWM under the Waste Management and Pollution Control (WMPC) Division at SPREP. In order to cope with the increasing demands of SWM, the WMPC Division has been proposing to create a position for a recycling officer but has not been able to secure the position yet. With current staffing, SPREP may face some difficulties to continue and enhance activities for themselves, including logistical tasks for trainings, etc., after the completion of J-PRISM.

・ **Financial aspects**

Financial sustainability of south-south cooperation in general in SWM is likely to be secured. In order to cope with the increasing demands of SWM, SPREP has made effort to secure funding. So far, 17 million EURO has already been pledged under European Development Fund (EDF) 11 (2017-2022). SPREP plan to utilize Clean Pacific Round Table to negotiate about funding in order to fill the gap between the planned budget and actual funding. It is uncertain, however, to what extent the above-mentioned funds could be utilized for continuation of Region-wide Activities of J-PRISM,

・ **Technical aspects**

Technically, no problem is anticipated for south-south cooperation in general in SWM. Technical sustainability of continuation of Region-wide Activities of J-PRISM is possible. Sixteen (16) who participated in the Regional Trainings for Trainers has now working to develop a guidebook for SWM in PICs in collaboration with Project Office and SPREP. This is a reference material for on-site training, workshops, training, etc. Since the hands-on experiences and the lessons learned by the TOT participants will be reflected, the guidebook is expected to be practical and relevant with the needs of PICs. Moreover, the database of trainers and trainees of J-PRISM, known as PIDOC, has been developed as an inventory for SPREP, which would be useful for (i) identification of resource persons for SWM in the region, who can play an effective role in south-south cooperation; and (ii) identification

[5] It was adopted by the Steering Committee Meeting of annual SPREP General Meeting on that day.

of training needs and gaps for SWM. Incorporation of the training data from other donors is being discussed to make PIDOC more comprehensive and practical.

Sustainability for Individual Project in Each PIC:
Sustainability of individual country projects varies between medium to high. In many countries, there are matters of concern on organizational and financial aspects of sustainability.

- **Policy and legal aspects**

Policy and legal support would generally be secured for continuation of SWM activities. In most of the countries, policy and legal frameworks to support SWM exist or were/will be established through the Project.

- **Organizational aspects**

Organizational sustainability varies by country, but overall, it would be secured in majority of the countries and there would be no country where organizational sustainability is low. Most Implementing Agencies have organizational settings and personnel to manage to continue the activities introduced under this Project at a full or at least partial scale.

Some common positive aspects observed are: (i) Organizational strategies in SWM exist, (ii) Dedicated organizational units exist within the implementation bodies of SWM and (iii) Manpower in SWM has been increased. On the other hands, some common challenges observed are: (i) Manpower in SWM is insufficient, (ii) Lack of strategies/plan to continue an implementation mechanism created under the Project and (iii) Other challenges include frequent change of officers, no or absence of qualified of successors of officers who left jobs/were redundant.

- **Financial aspects**

Overall, financial sustainability would generally be secured in majority of countries and there would be no country where financial sustainability is low, while uncertainty remains in some countries.
Some common positive aspects observed are: (i) National or local SWM budget is increasing, (ii) Self-financing mechanisms have been established and (iii) There are some effective initiatives to support funding. On the other hands, some common challengs observed are: (i) National SWM budget is declining or uncertain, (ii) Disbursement of budget is slow and (iii) External funding is uncertain in the future

- **Technical aspects**

Overall, technical sustainability would generally be secured in majority of countries, and there would be no country where technical sustainability is low. Some common positive aspects observed are: (i) Capacity development attained under this Project has enhanced technical sustainability, (ii) There is a mechanism to share knowledge and skills within an organization. On the other hands, some common challenges observed are: (i) Transferred techniques were lost with leaving of C/Ps, (ii) Some activities require further capacity and experiences of data analysis and its utilization in SWM operation and (iii) Operation and maintenance of the equipment provided is an issue.

3. Factors promoting better sustainability and impact

(1) Factors concerning to Planning

None in particular.

(2) Factors concerning to the Implementation Process

- **Effective learning environment through Region-wide Activities:** Participation in the Region-wide Activities has provided C/Ps with the opportunities to gain new insights, ideas, skills, and lessens. Most of the C/Ps have shared what they learned to their colleagues and apply them in the Project. Such learning environments have contributed to the continual upgrade of the technical capacity of C/Ps and help to keep participants motivated as well.

- **Two-stage capacity assessment:** In each country, capacity assessment has been conducted in two stages: individual level and organization level. This was helpful to identify the current capacity of

both C/Ps and organization regarding SWM, as well as areas to be improved further. The final capacity assessment is planned at the end of 2015.

- **Regular meetings among C/Ps:** In some PICs, regular C/P meetings, where all members report their activities and exchange views, have made the monitoring of activities more effective. Regular meetings were also effective in connecting many C/Ps, keeping them motivated and in strengthening a teamwork.

- **Collaboration with local stakeholders:** Close collaboration with local stakeholders, such as Governor, related ministries, NGOs, community leaders and private companies (recycle companies, garbage collectors, waste generators, etc) and schools, who have been playing the pivotal roles, has accelerated the implementation process as well as generated the synergy effects.

- **The Counterpart Team Award System**: The Counterpart Award System to honor "Best Counterpart Team of the Year" and "Best Counterpart of the Year" has served to encourage C/Ps as well as to keep them motivated.

- **Trust relation between Pacific and Japanese sides**: Trust relation between SPREP and JICA as well as the C/Ps of the respective countries and JICA experts has been enhanced through the Project, which has facilitated smooth implementation of the Project.

- **Strong organizational and financial commitment:** For example, the GoPNG and NCDC have committed counterpart funding so that the Project team have been able to improve the dumpsite without financial impediment.

4. Factors inhibiting better sustainability and impact

(1) Factors concerning to Planning

- **Ambiguity of PDM:** No activities are listed in the PDM. Furthermore, many indicators are not well defined, e.g., they are indirect, lack of target value, unclarity of judgmental standard, not attainable (largely affected by external factors) and difficult to measure. These problems have made it difficult for all those concerned to have common understanding about what was described in PDM especially in the countries where assigned JICA experts and C/Ps were frequently changed.

- **Lack of monitoring and evaluation activities for regional training:** Monitoring and evaluation activities for regional training were not included in the PDM for Region-Wide-Activities. Systematic monitoring and evaluation have not been conducted for regional trainings so that the impact on the capacity development could not be objectively measured.

(2) Factors concerning to the Implementation Process

- **Unfamiliarity with the concept of technical cooperation of JICA:** The C/Ps in some countries were not familiar with the concept of the technical cooperation project of JICA. Therefore, it took some time for them to realize that there was little direct financial support and/or equipment involved in this Project, but rather, technology transfer and capacity development was the core of the Project.

- **Concentration of technical transfer to the limited C/Ps and insufficient sharing of the transferred techniques:** There was a case in an implementing organization where technical transfer was focused on a few C/Ps primarily because of lack of suitable personnel. In addition, the acquired knowledge, information, experiences, and skills were not sufficiently shared with others. When these C/Ps were redundant, no staff in the implementing organization were ready to take over their roles, which has caused stagnation in the project activities.

- **Insufficient utilization of PDM and PO**: Utilization of PDM and PO has not been sufficient though, in some countries, it was somewhat improved in response to the recommendation made at Mid-term Review. Progress of Indicators has not been monitored sufficiently partly because those in

charge of monitoring were not necessarily clearly identified.Furthermore, some indicators were still ill-defined at the time of Terminal Evaluation. Also, detailed PO and annual PO have not been developed. Tthese problems have made it difficult for all those concerned to have common understanding of the overall implementation process and progress of the Project based on the PO as well as expected achievement level of the Outputs and the Project Purpose of the PDM.

- **Land issue:** A land issue for a landfill resulted in suspension of the process of Enviromental Impact Assessment (EIA) and therefore caused a delay in the project activities related to its rehabilitation.

- **Others:** In Micronesian countries, some landfills had a common difficulty in finding soil for covering to fully implement the operation plans due to limited existence of soil in islands.

5. Conclusion

- The Project Purpose, "Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through the implementation of RS 2010", expected to be mostly achieved at the end of the cooperation period,
- There still remain some significant issues in each country and for SPREP to be improved and secured to sustain the effect of the Project after the Project period concludes,
- The outcome of the Project was presented at international conferences. Therefore, it could be concluded that this Project is one of the good practices of Region-wide cooperation covering several counties.

6. Recommendation

(1) Utilization of trainers and trainees database

The database of waste management practitioners has been created as a PIDOC in the Project to identify the training needs and gaps, and the resource persons who could play important roles for south-to-south cooperation in SWM. However, the purpose of its use is still unclear. Therefore, SPREP and JICA need to agree on the way of utilization of the database.

(2) Following-up recommendations in each country and SPREP

It could be significantly suggested that implementing agencies in each country and SPREP with support of the Project Office in Samoa follow up recommendations proposed by the Terminal Evaluation (For details, see ANNEX) within the remaining project period. Final result of these follow up activities should be reported in the last JCC to be held in each country and in the meeting between SPREP and JICA at the Project completion.

(3) Communication between SPREP and the Japanese side

Through the close communication and sharing information among SPREP, JICA Headquarters, JICA overseas offices and J-PRISM Project Office in Samoa, JICA experts and C/Ps are able to be aware of the SPREP's activities in individual country so that they can integrate their activities with SPREP's ones on the ground. This integration could also make the implementation process more efficient and produce synergistic effects between both activities.

7. Lessons Learned

(1) Cooperation approach applicable to PICs

The continuous effort of capacity development involving citizens, private companies and other organizations more than 10 years could effectively function as the development process for PICs under relatively limited capacity of the local government.

It has also contributed the efficiency of the Project that various resources such as local experts trained by J-PRISM and good practices, were shared in the target countries. Additionally, by creating the common platform or occasions where C/Ps from different countries can exchange their ideas, experience and skills, they could learn each other very quickly and at high level, because they have quite similar situation and environment in PICs.

(2) Collaboration from the initial stage of RS 2010
JICA has been in partnership with SPREP in the waste management area since the year 2000. It has been highly effective for JICA, who usually emphasizes on the technical assistance on the ground, and SPREP, who works at the regional and policy levels, to exchange ideas and concepts of their cooperation approaches from the initial stage of drafting the regional SWM strategy 2010. With this collaboration at early stage, both SPREP and JICA could mutually understand their cooperation approaches, demarcate the responsibilities in SWM and smoothly implement the Project. This good collaboration leads to better coordination with other donor agencies in implementation of J-PRISM.

(3) Capacity development of the trainers who have the experiences as practitioners
Most of C/Ps of the Project are the staff of local authorities ordinary working on SWM on the ground. The Project gave them the opportunities to deliver lectures related with their experiences in SWM to other C/Ps. They could teach them in the practical way so that the participants could learn it more easily connecting to their work. Furthermore, this experience as lecturers gave them a good opportunity to brush up their knowledge and skills.

(4) Disaster waste management by the local experts trained by J-PRISM
JICA has carried out post-disaster pilot activities on bulky waste disposal in Samoa, Fiji, Vanuatu and other countries by local experts using experience gained from Samoa's tsunami activities in the previous JICA project in 2009. Through these experiences, J-PRISM immediately tried to train the local experts to dispatch them as soon as the case happens. This could be one of the key factors which minimize effects by the disaster waste in PICs, including Solomon Islands and Vanuatu.

(5) Necessity of high level commitment
High level to achieve the commitment by the senior and high level personnel in supporting SWM activities would be a promoting factor for achieving outcomes. Therefore, the implementation system could be designed in a way that such senior/high level personnel have opportunity to have enough information on the project activities (such as through involving them in SC/JCC and/or as C/Ps depending on the situation of the country).

第１章　終了時評価調査の概要

１－１　調査団派遣の経緯と目的

大洋州の島嶼国（Pacific Island Countries：PICs）における廃棄物管理は、その国土の狭小性といった地理的条件や伝統的な土地所有制度等の社会的背景から適切な廃棄物処理が困難なうえ、急速な生活様式の近代化等に起因する廃棄物の多種・大量化が顕著となっており、PICs に共通する大きな課題の 1 つとなっている。

上記を踏まえ、JICA は、2006 年 6 月から 2010 年 5 月まで、地域国際機関である太平洋地域環境計画（Secretariat of the Pacific Regional Environment Programme：SPREP）をパートナーとして、サモア国を拠点とした広域協力である技術協力プロジェクト「太平洋廃棄物管理プロジェクト」や、2008 年 10 月から 2012 年 3 月までフィジー国にて技術協力プロジェクト「廃棄物減量化・資源化促進プロジェクト」を実施し、大洋州地域における適正な廃棄物管理や、3R〔Reduce（リデュース）、Reuse（リユース）、Recycle（リサイクル）〕推進に取り組んできた。

このような背景の下、さらなる継続的な廃棄物管理改善への支援の必要性を認識した大洋州 11 カ国〔ミクロネシア連邦国（以下、FSM）、マーシャル諸島国（以下、RMI）、パラオ国、キリバス国、サモア国、トンガ国、ツバル国、パプアニューギニア国（以下、PNG）、フィジー国、ソロモン諸島国、バヌアツ国〕から、わが国に対し、それぞれ個別の技術協力プロジェクトが要請された。

JICA は 11 件の技術協力プロジェクトの要請を取りまとめて 1 つの広域案件とし、これまでの協力で策定された大洋州地域廃棄物管理戦略（Pacific Regional Solid Waste Management Strategy 2010-2015：RS 2010）や国家廃棄物管理計画の下、大洋州各国が適正な廃棄物管理体制を整え、その知識や経験が PICs 内で共有され、大洋州全域の廃棄物管理が改善されることを目的として対象各国の廃棄物管理所管機関をカウンターパート（Counterpart Personnel：C/P）として「大洋州地域廃棄物管理改善支援プロジェクト（Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries：J-PRISM）」（以下、「本プロジェクト」または「J-PRISM」と記す）を 2011 年 2 月から 2016 年 2 月までの予定で実施中である。

本プロジェクトは、JICA の大洋州地域「島嶼における循環型社会形成支援プログラム」（以下、「プログラム」と記す）の基幹プロジェクトとして位置づけられており、他スキーム（ボランティア事業、草の根技術協力、草の根無償資金協力等）と一体的に実施している。これまでに、各国へ短期専門家（廃棄物管理）を派遣し、廃棄物管理の現状基礎調査、5 年間の活動計画の精査、廃棄物管理計画策定ワークショップや処分場管理地域研修等を実施してきている。

１－２　終了時評価調査の目的

本調査は、プロジェクト期間終了の 6 カ月前において、調査時点までのプロジェクトの投入実績、活動実績、実施プロセス、プロジェクト目標や成果の達成状況、PDM 及び活動計画に基づき調査・確認し、評価 5 項目（妥当性、有効性、効率性、インパクト、持続性）の観点から評価を行う。その結果を踏まえ、提言や教訓をまとめ、本プロジェクトの成果・活動を、今後もプロジェクト対象国において継続・発展させていくための方策を関係者間で議論・共有することを目的として実施した。

１－３　調査団の構成

本レビュー調査は以下に示すとおり、日本側評価メンバー14 名と大洋州側評価メンバー5 名の 19 名で構成される。大洋州側評価メンバーは本プロジェクトのパートナー機関である SPREP の 5 名である。日本側評価メンバーは調査対象国ごとに総括チームと 3 つのサブチームで構成され、それぞれのチームが担当国での現地調査を実施した。

(1)　日本側調査団

No.	担当分野	氏　名	所　属	派遣期間
1	総括	森　尚樹	地球環境部環境管理グループ 次長	Sep. 20-26
Sub-Team 1				
2	協力企画（1） フィジー/キリバス	澤田　秀貴	フィジー事務所　所員	Aug. 12-19, 26-27
3	協力企画（2） トンガ	岩田　章一	トンガ支所 企画調査員	Aug. 20-25
4	協力企画（3） 地域協働	田口　達	地球環境部環境管理第一チーム	Sep. 9-27
5	評価分析（A） フィジー/キリバス/トンガ/ツバル/地域協働	岸並　賜	（株）国際開発アソシエイツ パーマネント・エキスパート	Aug. 12-Sep. 26
Sub-Team 2				
6	協力企画（4） PNG	堀越　大輔	PNG 事務所　所員	Aug. 16-22
7	協力企画（5） ソロモン	福田　晃子	ソロモン支所 企画調査員	Aug. 23-28
8	協力企画（6） バヌアツ	浅野　洋子	バヌアツ支所 企画調査員	Aug. 29-Sep. 5
9	協力企画（7） サモア	中曽根　徹治	サモア支所 企画調査員	Sep. 6-11
10	評価分析（B） PNG/ソロモン/バヌアツ/サモア	広内　靖世	（株）国際開発アソシエイツ パーマネント・エキスパート	Aug. 15-Sep. 26
Sub-Team 3				
11	協力企画（8） ミクロネシア	渡辺　敬久	ミクロネシア支所 企画調査員	Aug. 13-18, 26-Sep. 4
12	協力企画（9） パラオ	松井　信晃	パラオ支所　所長	Aug. 19-25
13	協力企画（10） RMI	大沼　洋子	地球環境部環境管理第一チーム 特別嘱託	Sep. 5-11
14	評価分析（C） ミクロネシア/マーシャル/パラオ	原口　孝子	（株）国際開発アソシエイツ パーマネント・エキスパート	Aug. 15-Sep. 26

(2) SPRERP 側調査団

No.	担当分野	氏　名	所　属
1	総括	Mr. David Sheppard	Director General, SPREP
2	廃棄物管理（1）	Dr. David Haynes	Director, Waste Management & Pollution Control（WMPC）, SPREP
3	廃棄物管理（2）	Dr. Frank Griffin（a）	Hazardous Waste Management Advisor, WMPC, SPREP
4	廃棄物管理（3）	Mr. Anthony Talouli	Pollution Advisor, WMPC, SPREP
5	廃棄物管理（4）	Ms. Ma Bella Guinto（b）	Solid Waste Management Advisor, WMPC, SPREP

注記：(a) オブザーバーとして PNG、ソロモン、バヌアツ、フィジーでの現地調査に参加
(b) オブザーバーとしてミクロネシア、マーシャルでの現地調査に参加

１－４　日程

(1) 日程：2015 年 8 月 12 日～9 月 26 日

(2) 訪問予定先：太平洋地域環境計画（Secretariat of the Pacific Regional Environment Programme：SPREP）、各国実施機関等

１－５　主要面談者

現地調査では、対象国実施機関、関係機関の関係者だけではなく、JICA 在外事務所/支所、及び青年海外協力隊、シニアボランティアにも面談し、現状の把握に努めた。

第２章　評価の方法

２－１　評価方針

本評価調査は、「JICA 事業評価ハンドブック（Ver.1）（2015 年 8 月）」に基づき、プロジェクト・デザイン・マトリックス（Project Design Matrix：PDM）を用いた評価手法に沿って実施された。JICA 事業の評価は、①プロジェクトの現状把握・検証を行い、②それらを DAC 評価 5 項目（「妥当性」「有効性」「効率性」「インパクト」「持続性」）による評価基準から判断し、③提言や教訓を導き出して次の段階にフィードバックするという 3 つの枠組みから構成されている。

また、本評価調査は、①JICA による国別の個別案件及び地域協働活動の評価並びに②個別案件の結果に基づく合同評価の 2 段階に分けて行った。第 1 段階では、国別の個別案件及び地域協働の活動について投入の実績、アウトプットやプロジェクト目標の達成状況と実施プロセスについて検証し、評価 5 項目の視点で分析を行い、プロジェクト残余期間にかかる提言を提示した。これらを取りまとめた国別の個別評価報告書（“Terminal Evaluation Report”）案を作成し、各国の実施機関と意見交換・協議を行い、同案の最終版を作成した。第 2 段階では、大洋州側（SPREP）と日本側が合同評価を行い、計 11 カ国の国別案件と地域協働活動の評価結果を総合的に分析したうえで、プロジェクト残余期間の提言並びに教訓を提示し、合同評価報告書（“Integrated Terminal Evaluation Report”）に取りまとめた。

２－２　調査項目

本評価調査では、表２－１に示した評価の枠組みを作成し、主な評価項目及び調査内容を確定し、各国別に評価グリッドを作成した。主な評価項目及び特徴的な視点については表２－１を参照されたい。

表２－１　終了時評価調査の評価の枠組み

<table>
<tr><th rowspan="3">大項目</th><th rowspan="3">小項目</th><th colspan="3">必要な情報（設問）</th></tr>
<tr><th colspan="2">個別案件</th><th rowspan="2">プロジェクト全体
（地域協働と各国の統合、その他追加的な視点）</th></tr>
<tr><th>地域（協働）</th><th>各　国</th></tr>
<tr><td rowspan="5">実績の検証</td><td rowspan="2">投入</td><td colspan="2">日本側投入実績　（計画との比較）</td><td></td></tr>
<tr><td>地域（SPREP）レベルの投入実績（計画との比較）</td><td>各国の投入実績（計画との比較）</td><td></td></tr>
<tr><td>アウトプット</td><td>地域協働アウトプットの産出状況（目標値との比較）</td><td>各国固有アウトプットの産出状況（目標値との比較）</td><td>地域廃棄物戦略優先課題に照らして再整理したアウトプット産出状況</td></tr>
<tr><td>プロジェクト目標</td><td>地域戦略への本プロジェクトの貢献状況（目標値との比較）
グッド･プラクティスの他対象国での適用状況（目標値との比較）</td><td>各国における廃棄物管理分野の人材育成状況（目標値との比較）各国固有課題の解決状況（目標値との比較）</td><td></td></tr>
<tr><td>上位目標</td><td>グッド･プラクティスの適用見込み（目標値との比較）</td><td>各国固有目標達成見込み（目標値との比較）</td><td></td></tr>
<tr><td rowspan="2">実施プロセス</td><td>活動の進捗状況</td><td>地域協働実施計画（Plan of Operations：PO）の進捗（計画どおりか､プロジェクト終了までに完了するか）</td><td>各国 PO の進捗（計画どおりか、プロジェクト終了までに完了するか）</td><td></td></tr>
<tr><td>技術移転の方法</td><td>地域協働の活動における技術移転の適切さ</td><td>技術移転の方法の適切さ</td><td>広域案件特有の技術移転の方法</td></tr>
</table>

実施プロセス	実施体制	地域協働案件実施体制(特に中間レビュー後）の適切さ	各国案件の実施体制（特に中間レビュー後）の適切さ	プロジェクト全体の実施体制（特に中間レビュー後）の適切さ
	プロジェクト管理	地域協働案件の意思決定プロセス・内部モニタリング体制等〔ステアリング・コミッティ・ミーティング（Steering Committee Meeting：S/C）含む〕PDM/PO 変更、JICA 本部と在外事務所、支所（または大使館）間の連携	各国案件の意思決定プロセス・内部モニタリング体制等（JCC 含む）PDM/PO 変更、JICA 本部と在外事務所、支所（または大使館）間の連携	プロジェクト全体の意思決定プロセス・内部モニタリング体制等
	中間レビュー提言への対応	中間レビューの提言への対応状況　（PDCA サイクルの一環）		プロジェクト・オフィス、SPREP、JICA に対する提言への対応状況
	プロジェクト内のコミュニケーション	地域協働実施機関間	各国実施機関内、実施機関間	
		SPREP とプロジェクト・オフィス専門家チーム間	各国実施機関と各国案件担当の専門家チーム間	プロジェクト・オフィス内（SPREP と専門家チーム）
		プロジェクト･オフィス専門家チーム内	各国案件担当の専門家チーム内	プロジェクト・オフィス専門家チームと各国案件担当専門家チーム間
	現地関連機関の連携	現地関連機関/ステークホルダーの連携		
	他プロジェクトとの連携	日本の他の援助スキーム、他のドナーとの連携体制の適切さ		
	その他の貢献・阻害要因	オーナーシップ、コミットメント等 広域案件ならではの創意工夫や広域案件特有の課題等		
妥当性	必要性	大洋州地域・SPREP のニーズとの合致	各国・実施機関のニーズとの合致	
	優先度	国際的な目的､地域政策との整合性	各国開発政策との整合性	
		日本の援助政策（対地域及び国別事業展開計画）との整合性		
	適切性	日本の技術の比較優位性、アプローチの適切性等		
	その他	中間レビュー以降のプロジェクトをとりまく環境（政策、経済、社会等）の変化		
有効性	プロジェクト目標の達成	プロジェクト目標の達成見込み（実績の検証結果）		
	因果関係	地域レベルの課題解決のロジックとしてプロジェクト目標とアウトプットの関係	各国の課題解決のロジックとしてプロジェクト目標とアウトプットの関係	プロジェクト全体（IRM）の論理構成
		外部条件の適切さ、外部条件の影響		
		プロジェクト目標達成を促進・阻害する要因		
効率性	アウトプットの産出	アウトプットの産出の適正さ（実績の検証結果）		
	因果関係	外部条件の適切さ、外部条件の影響		
	アウトプットに対する投入の適正さ	日本側の投入（質、量、タイミング）		
		地域（SPREP）からの投入（質、量、タイミング）	各国の投入（質、量、タイミング）	
	外部リソースの活用	外部リソースの活用状況（日本の他の援助スキームとの一体化、他のドナーとの連携）		
	その他の貢献・阻害要因	アウトプット達成を促進・阻害するその他の要因		

インパクト	上位目標達成見込	プロジェクト終了から 3～5 年後のプロジェクトの結果としての発現見込み、事後評価における検証可能性		
	因果関係	外部条件の適切さ、外部条件の影響の可能性		
	その他のインパクト	その他の正のインパクト		
		負のインパクト、その軽減措置		
持続性（見込み）	政策・制度面	次期廃棄物戦略（SPREP）での位置づけ	プロジェクトの効果持続に必要な政策支援・法制度整備	
	組織・財政面	SPREP の組織体制、廃棄物管理分野の予算､他ドナーの支援の状況等	プロジェクト後の関連機関との協力体制の継続 必要な予算・人員の確保	
	技術面	廃棄物管理分野の専門家リストに登録された人材等の活用方針や､技術向上のための研修計画の状況	C/P の技術能力 移転技術/成果品の現地における受容性移転技術/成果品の普及の仕組み プロジェクト後の供与機材の活用・維持管理	
	その他	社会文化環境面等、その他持続性に関する貢献・阻害要因		

２－３　データ収集手法

本調査では、現地調査における時間の制約が想定されたことから、事前準備段階において可能な限りの情報を収集した。

(1)　事前準備段階

評価グリッド並びに事前に入手した報告書、プロジェクト関連文書を基に、プロジェクト専門家、各国 C/P に対する質問票を作成・配付し、また、活動の進捗、指標達成状況に関する情報収集を行った。さらに、帰国中のプロジェクト専門家からも情報を収集した。

なお、本評価調査における大洋州側の合同評価者である SPREP に対しては、現地調査に先立ち TV 会議をもって、本事業の終了時評価調査の方針を説明した。

事前準備段階で収集した情報/資料
1)　討議議事録（R/D）、詳細計画策定調査報告書、プロジェクト事業進捗報告書、専門家業務完了報告書、コンサルタント業務従事月報、本終了時評価調査用に作成された各国別プログレス・レポート、S/C や国内支援委員会等の会議での発表資料及び議事録、国別の PDM/PO、プロジェクト・ニュースレター、その他プロジェクト作成の資料（投入記録等） 2)　活動の進捗状況、指標達成状況のモニタリング結果

(2)　現地調査

各国の現地調査では、最初に評価方針を説明し、主として実施機関の C/P、専門家、その他関係者〔住民、NGO、青年海外協力隊（Japan Overseas Cooperation Volunteer : JOCV）、リサイクル業者等〕への聞き取りを実施するとともに、時間の余裕があれば必要に応じて活動の現場（最終処分場、コンポスト・ヤード、市場等）も視察した。

現地で収集した情報/資料
1) 日本人専門家及び C/P に対する質問票の回答及び聞き取りの結果 2) 本プロジェクトの関係者（住民、NGO、JOCV、リサイクル業者等）への聞き取りの結果 3) 対象地域における現場視察（処分場、コンポスト・ヤード、学校、分別収集所等） 最終処分場等の施設、機材の活用状況の把握

２－４　評価の制約・限界

本評価調査では、短期間で対象国での調査・評価を実施するという時間の制約があった。そのため、現地調査では、プロジェクトの C/P 及び関係者のインタビューを優先的に行うこととし、現場視察は可能な範囲で実施した。また、時間的制約から、聞き取り結果や評価調査結果について実施機関と必ずしも十分な検討・協議時間を確保できなかった。その対応として、現地調査終了時に、各国の実施機関に対して一定の期間の猶予をもって、個別評価報告書（案）に対するフィードバックを依頼し、それらのフィードバックを反映して、9 月 25 日の S/C 前までに、個別評価報告書を確定した。また、ツバルについては、時間の制約から現地調査は行っていない。

第３章　プロジェクトの実績[6]

３－１　投入実績

各国別の R/D（及び PDM や PO）[7]に記載された投入計画に沿って、プロジェクトの実績を確認した。

３－１－１　日本側の投入

(1) 専門家派遣

2015 年 6 月までの専門家派遣期間の合計は 321.7 人/月であった。内訳は、プロジェクト・オフィスの長期専門家 120.9 人/月、ローカル専門家 47.2 人/月、短期専門家 153.6 人/月であった。専門家派遣の詳細は、表３－１を参照されたい。

表３－１　専門家派遣実績

派遣対象国	プロジェクト・オフィスの専門家派遣期間		プロジェクト・オフィスの専門家派遣人数			短期専門家		総計	
	長期専門家（人/月）	ローカル専門家（人/月）(1)	総括（長期専門家）	ローカル専門家	調整員（長期専門家）	派遣期間（人/月）	派遣人数	派遣期間（人/月）	派遣人数
ミクロネシア	1.8	0.7	1	1	3	33.3	3	35.8	8
フィジー	3.6	0.9	1	1	3	23.9	4	28.4	9
キリバス	0.6	0.0	1	0	2	10.9	1	11.5	4
マーシャル	1.3	0.5	1	1	2	9.5	3	11.3	7
パラオ	0.9	0.1	1	1	3	7.9	2	8.9	7
PNG	2.8	2.7	1	1	1	14.0	2	19.5	5
サモア	10.8	4.2	1	1	4	0.8	1	15.8	7
ソロモン	3.0	1.0	1	1	2	15.3	4	19.3	8
トンガ	1.0	1.6	1	1	2	14.3	1	16.9	5
ツバル	0.2	0.0	1	0	1	0.0	0	0.2	2
バヌアツ	3.3	1.0	1	1	2	9.9	4	14.2	8
地域協働	85.0	31.4	1	1	4	0.8	3	117.2	9
移動日(2)	6.6	3.1				13.0		22.7	0
総計	**120.9**	**47.2**				**153.6**		**321.7**	

出所：プロジェクト・オフィス作成資料

注記：(1) ローカル専門家の経費はローカル・コスト負担に含まれる。

(2) 移動日は域内の移動のみに費やされた人/月である。なお、日本から派遣対象国への移動は短期専門家の派遣期間人/月に含まれるが、長期専門家の派遣期間人/月には含まれていない。

(2) 研修員受入

表３－２に示すとおり、2015 年 6 月現在、19 名の C/P が本邦研修に参加した。詳細は、付属資料 1「合同評価報告書」ANNEX 3 の個別評価報告書を参照されたい。

[6] 3～5 章は、脚注を含め、基本的に付属資料の合同評価報告書 3～5 章の和訳であり、合同評価報告書にない脚注は「訳注」として区別する。なお、和訳に際し、単純誤記は訂正し、直訳で意味が通りにくい場合は、適宜意訳をしている。

[7] プロジェクト全体の PDM の枠組みについては、付属資料 1「合同評価報告書」ANNEX 1 及び国別の PDM については、ANNEX 3 の個別評価報告書を参照されたい。

表３－２　本邦研修リスト

	研修コース名	研修期間	C/P数	国別のC/P参加人数
1	「美ら島ババウもったいない運動プロジェクト」日本における資源ごみの第一次処理の研修	2012年8月4日～8月18日	2	サモア：1、 ミクロネシア（ヤップ）：1、
2	「フィジーを中心とした大洋州における志布志市ごみ分別モデルの推進（志布志モデル）」の日本における地域 3R 研修	2013年7月15日～7月30日	2	パラオ：2
3	J-PRISM地域研修－専門家養成研修	2015年5月25日～6月4日	15	バヌアツ：2、フィジー：4、PNG：3、トンガ：2、ミクロネシア：2、 パラオ：2

出所：プロジェクト・オフィス作成資料

なお、JICA 研修事業による課題別研修には 76 名の C/P が参加した。詳細は、項目４－２－８(1)を参照されたい[8]。

(3) 機材供与

技術移転のための機材として、日本側から総額約 25 万 5,000 米ドルが、キリバス、サモア、ソロモン、トンガ、バヌアツ及び地域協働の活動のために供与された。主な機材は、ウェイブリッジ、データ管理システム、シュレッダー、グラス・カッター、チェインソー等の処分場運営に活用されるものや、コピー機、コンピュータ、プリンター、プロジェクター等の事務機器もあり啓発活動や教材開発、報告書作成のために活用された。供与機材の詳細は、付属資料 1「合同評価報告書」ANNEX 3 の個別評価報告書を参照されたい。

(4) ローカル・コスト負担

2015 年 6 月までに、総額 262 万 8,000 米ドルが日本側より拠出され、プロジェクト活動実施のために使用された。各国別の主要経費項目の詳細を表３－３に示す。

表３－３　ローカル・コスト負担

	国　名	米ドル額	現地通貨額	通　貨
1	フィジー	106,247.32	222,673.62	フィジードル
2	PNG	106,972.41	273,125.88	キナ
3	ソロモン	142,876.04	1,123,499.98	ソロモンドル
4	バヌアツ	41,210.67	4,265,292.86	バツ
5	ミクロネシア	121,650.16	129,973.50	米ドル
6	キリバス	42,689.83	44,639.98	オーストラリアドル
7	マーシャル	34,214.06	37,471.21	米ドル
8	パラオ	14,434.37	15,336.51	米ドル
9	サモア	168,227.47	405,017.46	タラ
10	トンガ	118,719.96	226,877.01	パアンガ
11	ツバル	4,372.20	8,312.27	フィジードル
	地域協働	1,726,036.54	-	米ドル
	合計	2,627,651.14		

出所：プロジェクト・オフィス作成資料

[8] 本プロジェクトにおいては、地域協働の活動として研修が実施されており、それらの研修に多くの C/P が参加している。詳細は付属資料 1「合同評価報告書」ANNEX 3 にある地域協働の個別評価報告書を参照されたい。

主な経費は、交通費（特に航空運賃）、ローカル専門家傭上費、通信費、消耗品費等である。国別の詳細は付属資料 1「合同評価報告書」ANNEX 3 の個別評価報告書を参照されたい。

３－１－２　大洋州側の投入

(1) カウンターパート（C/P）の配置

C/P の異動、退職等に伴う再配置や活動の進展による C/P の追加配置があり、終了時評価調査時点は、表３－４に示すとおり合計 176 名が C/P として配置されている。国別の C/P 配置の詳細は付属資料 1「合同評価報告書」ANNEX 3 の個別評価報告書を参照されたい。

表３－４　各国の C/P の人数

	国　名	人　数
1	フィジー	35
2	PNG	17
3	ソロモン	24
4	バヌアツ	13
5	ミクロネシア	30
6	キリバス	7
7	マーシャル	17
8	パラオ	10
9	サモア	7
10	トンガ	10
11	ツバル	6
	合計	176

出所：プロジェクト・オフィス作成資料

(2) ローカル・コスト負担

プロジェクトが開始された 2011 年 2 月から 2015 年 6 月末までに、各国実施機関から総額で約 446 万 2,000 米ドルが拠出され、プロジェクト活動に活用された。国別のローカル・コスト負担の額を表３－５に示す。国別の詳細は付属資料 1「合同評価報告書」ANNEX 3 の個別評価報告書を参照されたい。

表３－５　大洋州側のローカル・コスト負担

	国　名	米ドル額	現地通貨額	現地通貨
1	フィジー	308,999	660,480	フィジードル
2	PNG	3,112,589	8,837,560	キナ
3	ソロモン	122,635	980,298	ソロモンドル
4	バヌアツ	1,055	114,960	バツ
5	ミクロネシア	339,286	339,286	米ドル
6	キリバス	3,362	4,608	オーストラリアドル
7	マーシャル	0	0	米ドル
8	パラオ	485,384	485,384	米ドル
9	サモア	84,842	200,246	タラ
10	トンガ	3,450	7,670	パアンガ
11	ツバル	0	0	フィジードル
	合計	4,461,602		

出所：プロジェクト・オフィス作成資料

(3) 土地、施設

大洋州各国より、それぞれ日本人専門家のための執務スペース、事務所用家具及び光熱費が提供されている。さらに、国によっては本プロジェクトの地域研修等に参加する C/P に対しての交通費、日当が現物支給の形態で提供された。

３－２　アウトプットの達成状況

個別のプロジェクトでは廃棄物地域戦略の優先課題にそれぞれ取り組んでいる。個別プロジェクトのアウトプットの達成状況を設定された指標に基づいて検証し、その結果を表３－６に取りまとめた。なお、この表は、各国がそれぞれ個別に設定したアウトプットの達成状況を示したものであり、域内における相対的なアウトプット達成状況を表すものではない。

全体的に、中間レビュー時以降、ほとんどすべての国において進展がみられた。総計51の設定されたアウトプットのうち41のアウトプットが終了時評価時点で達成/おおむね達成、またはプロジェクト完了までには達成の見込みであると判断された。特に啓発・教育/コミュニケーションの優先課題に取り組んだアウトプットはどの国においても高い達成レベルであった。一方で、他の優先課題におけるアウトプット達成状況は国によってさまざまであった。

表３－６　アウトプットの達成状況（終了時評価時の状況 /プロジェクト完了時の見込み）

アウトプット以下は12の個別プロジェクトで構成される。

	地域戦略の優先課題		地域協働※1	フィジー	PNG	ソロモン	バヌアツ	※2 ミクロネシア 国	コスラエ	ポンペイ	チューク	ヤップ	キリバス	マーシャル※3	パラオ	サモア	トンガ	ツバル
1	自立発展的な財務体制														M/M			
2	総合的廃棄物管理	2-1 3R/4R		M/M		M/M	P/P			P/P			P/P	(M/M) (M/M) N/P		P/F		P/P
		2-2 処分場	F/F		M/M	M/M	P/P		(F/F)	F/F	F/F	M/M		M/M	P/F	P/U	M/M	
		2-3 ごみ収集			M/M				P/P	P/P	M/M			M/M			M/M	
3	法整備																	
4	啓発・教育/コミュニケーション					P/M			F/F			M/M	M/M	(M/M)	M/M			
5	人材育成・能力強化 ※4		M/M P/P	F/F			F/F							(M/M)	M/M	M/F		
6	環境モニタリング																	
7	政策・計画策定・実施		F/F		P/M			M/M F/F	P/P	P/P	M/M	F/F		P/P	F/F		M/F	
8	廃棄物産業																	
*	地域戦略のモニタリング		P/P															

注記：※1 地域協働については、優先課題 5（人材育成・能力強化）に 2 つのアウトプットを設定した。
※2 ミクロネシアでは、優先課題ごとに国と州別に個別にアウトプットを設定しているため、判定も個別に行った。優先課題 7（政策・計画策定・実施）の国レベルで 2 つのアウトプットが設定された。
※3 マーシャルでは、優先課題 2-1 に 3 つのアウトプットが設定された。
※4 優先課題 5 は 1 つの PIC から他の PIC への人材育成・能力強化の活動である。

■判定基準

凡例	達成レベル	判定の内容
F	達成	設定されたすべての指標を達成した（目標値または期待された状態を 100%かそれ以上達成）。
M	おおむね達成	設定された主要な指標はすべて達成（目標値または期待された状態を 100%かそれ以上達成）。または、おおむね達成した（約 70%以上達成）。
P	部分的に達成	設定された主要な指標の一部を達成（ベースラインからの改善はあったものの、目標値または期待された状態の 70%以下の達成）。
N	未達成	達成された指標はない（ベースラインからの改善はなし）。
U	不明	指標の達成度判断に必要な完全なデータの入手が 2015 年 12 月になるため、プロジェクト完了時における達成見込みを判断することは困難。
（ ）	-	該当するアウトプット達成における本プロジェクトの貢献は部分的または間接的であった。

出所：終了時評価調査団

３－２－１　地域協働のアウトプットの達成状況

本項では、表３－６で示したアウトプット達成状況のうち、地域協働の活動について説明する。詳細は付属資料 1「合同評価報告書」ANNEX 3 の地域協働の個別評価報告書を参照されたい。

(1) 総合的廃棄物管理/処分場（優先課題 2-2）

本優先課題で期待されるアウトカムの概要	アウトプット	達成レベル（終了時評価時/完了時の見込み）
<適切な廃棄処分、処分場の改善> Solid waste that cannot be avoided, reused, recycled or composted are disposed using acceptable methods that have no negative impacts on human health and environment.	アウトプット 2：環礁低地での廃棄物管理に関しての研究がなされる	達成/達成

2013 年に、マーシャルにおけるパイロット地域で SPREP によるベースライン調査が実施された[9]。マーシャルでのごみ収集、3R、廃棄処分を含む環礁低地での廃棄物管理に関する提言がまとめられ、実施計画が策定された。これらの実施計画に沿った活動は 2017 年 5 月までにすべて完了する見込みである。

(2) 人材育成・能力強化 （優先課題 5）

本優先課題で期待されるアウトカムの概要	アウトプット	達成レベル（終了時評価時/完了時の見込み）
<廃棄物管理分野の人材育成> Skilled and trained people available in-country, who effectively manage solid waste management systems	アウトプット 1：研修やワークショップの実施を通して、固形廃棄物管理の人的資源が強化される	おおむね達成/おおむね達成
	アウトプット 3：廃棄物対策にかかる教訓・経験が PIC 諸国間で共有される	部分的に達成/部分的に達成

アウトプット 1 では、3R または処分場改善に関するワークショップや地域研修が計画どおり毎年開催された。準好気性埋立処分場運営管理手法や 3R 促進にかかる地域協働の活動もほぼ計画どおり実施された。カントリー・アタッチメント・プログラム、スタディ・ビジ

[9] このアウトプットに対する本プロジェクトの投入はわずかであったが、本プロジェクトの活動の一環として SPREP と J-PRISM 協働で実施された。

ットやトレーナー派遣等、南南協力の形式で能力強化が促進された。気候変動に適応する対策として災害廃棄物管理・予防の活動が追加されたが、ニーズに対応して適時であった。

囲み１　災害廃棄物処理にかかる活動の事例

・ ソロモン
2014 年に洪水が発生したため、ソロモンでは J-PRISM 主催でホニアラ災害廃棄物対策プロジェクト（J-PRISM Honiara Operations to promote Partnership and Enhancement for Managing Disaster Waste：J-HOPE）を通して災害廃棄物処理活動が行われた。バヌアツから 1 名の C/P とプロジェクト･オフィスからローカル専門家が支援に加わった。1 週間で、ラナディ処分場の修復を行った。流木などは薪にして活用し、各家庭においても災害廃棄物処理と 3R が推進されるよう啓発活動も行われた。

・ バヌアツ
2015 年 3 月にサイクロン「パム」の襲撃を受けたバヌアツでは、ポートビラ市役所、DEP（環境保護局）によって災害廃棄物処理活動が展開された。これらの活動は、プロジェクト・オフィスのローカル専門家、短期専門家、UNDP、ルーガンビル市役所配属のニュージーランドからのボランティア（VSA）及び日本の青年海外協力隊（JOCV）さらに、サンマ州配属の JOCV などの支援を受け、連携して行われた。また、ブッファ処分場に災害廃棄物用のスペースが設けられ、そこに災害によって発生した廃棄物が運びこまれた。グリーン・ウェイストは分類され、マルチへの活用のため、中央市場でごみの資源化活動に参加している有機農場関連会社に輸送された。災害廃棄物処理に関する啓発活動も行われた。さらにブッファ処分場では、増加する廃棄物処理のための小屋も建てられた。

標準的廃棄物調査手法の開発をめざしたアウトプット 3 は、SPREP と J-PRISM 共同での WHO の廃棄物管理ガイドブック改訂を通して、これまでの活動から得られた知見や教訓を対象国で共有することに上方修正された。その後、フィジーにおける専門家養成研修において、本ガイドブックの執筆には専門家養成研修に参加していた C/P 自身も主体的に参加することが効果的であるとの判断がなされた。ガイドブックのオーナーシップはそれを活用する C/P 自身にあり、執筆作業は彼らの能力強化にもつながるからである。ガイドブック執筆作業は C/P にとって予定外の追加的タスクとなったものの、担当の C/P が各自の担当部分の原稿案を作成中である。ガイドブックは 2015 年 12 月までには完成し、プロジェクト完了（2016 年 2 月）までに PIC 諸国間に共有できる見込みはある。

(3) 政策・計画策定・実施　（優先課題 7）

本優先課題で期待される アウトカムの概要	アウトプット	達成レベル（終了時評価時/ 完了時の見込み）
<国家廃棄物管理政策・戦略の策定と実施 及び進捗モニタリングによる実績の共有> PICTs[10] implement national waste management policies and strategies, which are based on accurate data, with monitoring systems established to report on performance.	アウトプット 4：PIC 諸国間の情報ネットワークが強化される	達成/達成

[10] PICTs：Pacific Island Countries and Territories の略称。SPREP メンバー国の 25 カ国のなかにはフランスや米国の領土（Territories）も含まれるため、地域戦略文書では PICTs と表記している。

SPREP のウェブサイトに J-PRISM のページが開設され[11]、本プロジェクトのニュースレターも計画どおり順次発行された[12]。本プロジェクト活動を通してトレーナーの経験を積んだ各国の C/P のデータベース〔大洋州人材育成データベース（Pacific Islands Database of Capacity Development Activities : PIDOC)〕が構築された。これらの情報ソースを活用して、PIC 諸国間の地域ネットワークが強化されつつある。今後はこれらの情報、データをさらなる C/P の能力強化に有効に活用していくことが期待される。

(4) 地域戦略（RS 2010）のモニタリング

本優先課題で期待される アウトカムの概要	アウトプット	達成レベル（終了時評価時/ 完了時の見込み）
優先課題には規定はない （本プロジェクトの地域戦略への貢献度の検証）	アウトプット 5：廃棄物地域戦略の進捗をモニタリングする域内の体制が確立される	部分的に達成/部分的に達成

2012 年以降、SPREP 自身や本プロジェクトも各国からのモニタリング情報入手に努めたものの、双方の努力だけでは手に負えず、対象国の更新情報の収集はできなかった。地域戦略（RS 2010）のレビューは次期地域戦略（Cleaner pacific 2025）策定にかかる作業の一環として実施され、「地域戦略の終了時評価（2010～2015 年)」として取りまとめられた。その際、各国のベースライン・データ等の廃棄物情報も取りまとめられたが、検証作業は今後行われる予定である。なお、新地域戦略では、戦略実施のモニタリングは活動の 1 つとして組み込まれた。

３－２－２　国別の個別プロジェクトの達成状況

本項では、表３－６で示したアウトプット達成状況のうち、国別の個別プロジェクトについて説明する。なお、詳細については、付属資料 1「合同評価報告書」ANNEX 3 個別評価報告書を参照されたい。

(1) 自立発展的な財務体制　（優先課題 1）

パラオが取り組んだ自立発展的な財務体制にかかるアウトプットは、プロジェクト完了までにおおむね達成される見込みである。

本優先課題で期待される アウトカムの概要	対象国	アウトプット	達成レベル（終了時評価時/ 完了時の見込み）
<廃棄物管理体制を維持するための自立発展的財務体制の確立> Solid waste management systems and programmes in PICs are financially self-sustaining.	パラオ	アウトプット 1：容器デポジットプログラム（持続的な財政システム）を管理する能力が強化される	おおむね達成/おおむね達成

<アウトプットの達成状況と主要指標の達成状況>

・パラオ：「容器デポジット・プログラム（持続的な財政システム）を管理する能力が強化される」はおおむね達成された。(a) 国の公共事業局廃棄物管理課（Division of Solid

[11] J-PRISM のウェブサイトは次のとおり。http：//www.sprep.org/j-prism/about-j-prism#

[12] 本プロジェクトのニュースレターである「Flash」も本プロジェクトのウェブサイトで随時公開されている。
http：//www.sprep.org/attachments/j-prism/Newsletter/Region/1st%20J-PRISM%20FLASH%20Apr2012_rev.pdf

Waste Management, Bureau of Public Works, MPIIC：SWM-BPW）では、2011 年にコロール州政府運営による輸入飲料の容器デポジット・プログラム（Beverage Container Deposit Fee Program）を開始して以来、飲料容器の買い戻し率をモニタリングしてきた。2014 年以降は、正式にモニタリング担当官を配置し、本プロジェクトや JOCV の活動の技術支援を受けて買い戻し率にかかるデータを蓄積し、公表してきた。また、（b）財務省との連携によって、リサイクル基金の収支が明確化されるようになった。その一方で輸入飲料容器からのデポジット額の明細や、買い戻し後の飲料容器の輸出による収入が分類整理されていないという課題が指摘された。

(2) 3R/4R （優先課題 2-1）

3R/4R の実践状況及びその成果としての廃棄物削減状況は、国によってさまざまである。

本優先課題で期待されるアウトカムの概要	対象国	アウトプット	達成レベル（終了時評価時/完了時の見込み）
< 3R/4R の実践による廃棄物量、廃棄処分量の減少> Reduce the amount of waste generated and landfilled through involvement of all sectors and local initiatives	フィジー	アウトプット 1：国家3R戦略が国全体で実施される	おおむね達成/おおむね達成
	ソロモン	アウトプット 1：3R 活動がホニアラとギゾで実践される	おおむね達成/おおむね達成
	バヌアツ	アウトプット 1：ごみ減量化のメカニズムが開発される	部分的に達成/部分的に達成
	ミクロネシア	アウトプット 3-4（ポンペイ）：CDL が改善される	部分的に達成/部分的に達成
	キリバス	アウトプット 1：家庭ごみ（特に庭ごみ）がごみ分別とチップ化によりリサイクルされる	部分的に達成/部分的に達成
	マーシャル	アウトプット 2：マジュロにてリサイクル・システムが改善される	（おおむね達成/おおむね達成）※1
		アウトプット 3：マジュロにてコンポスト・システムが改善される	（おおむね達成/おおむね達成）※1
		アウトプット 5：イバイにて廃棄物管理体制が改善される※2	未達成/部分的に達成
	サモア	アウトプット 1：ごみ減量化手段・実践がアーバン・エリアに導入・実施される	部分的に達成/達成
	ツバル	アウトプット 1：ごみ減量化のための指導員の能力が研修を通して強化される	部分的に達成/部分的に達成

注記：※1 マーシャルでのこれらのアウトプットに対する本プロジェクトの貢献は間接的である。
※2 マーシャルの本アウトプットの達成レベルは 3R/4R、処分場改善、ごみ収集、啓発活動、人材育成の分野での成果を総合的に判断して確定した。

<アウトプットの達成状況と主要指標の達成状況>

1) フィジー：「国家 3R 戦略が国全体で実施される」はおおむね達成された。（a）3R 関連の活動が対象地域（西部地域の 6 自治体とスバ市役所）に計画どおり導入された。（b）各自治体での 3R 関連の活動は進展しているものの、一部の活動については、各自治体による一層の努力が必要であると判断された。また環境局（Department of Environment：DOE）による経済的支援措置によって、国家 3R 戦略の実践がさらに他

の地域にも普及される見込みである。

2) ソロモン：「3R 活動がホニアラとギゾで実践される」はおおむね達成された。(a) 3R のコミュニケーション戦略が策定され、ホニアラとギゾで活用されている。(b) エコ/クリーンスクール・プログラムに参加した 12 の学校（ホニアラから 9 校、ギゾから 3 校が参加）が 3R のアクション・プランを作成した。(c) 5 つの 3R パイロット・プロジェクト（ホニアラで 3 プロジェクト、ギゾで 2 プロジェクト）が実施されている。(d) ごみ調査が 9 回（ホニアラで 5 調査、ギゾで 4 調査）実施されたが、そのうちごみの資源化/3R に関する分析的な報告書が作成されたのは、4 調査においてであった。本プロジェクト完了までに 4 つの報告書が作成される見込みである。

3) バヌアツ：「ごみ減量化のメカニズムが開発される」は部分的な達成にとどまった。(a) 中央市場で排出される有機ごみ/木質系ごみのほとんどは 2013 年 10 月からはマルチに利用されるようになり（囲み 2 参照）、(b) 国家廃棄物管理戦略及び実施計画（2011～2016 年）は 2011 年に SPREP と JICA の支援で策定された。一方で、(c) パイロット・プロジェクト（2014 年 11 月～2015 年 1 月に実施）を通して策定された空き缶収集のシステムは 2015 年 3 月からはうまく機能しなくなった。その要因として、空き缶の売り上げに関するコミュニティ内部での意見対立や、コミュニティやポートビラ市役所（Port Vila Municipal Council：PVMC）によるモニタリングが行われなかったことが挙げられた。

囲み 2　3R/4R 分野での事例

・ バヌアツ
2013 年以降、中央市場で排出される有機ごみ/木質系ごみのほとんどは、市場のスタッフが分類して、PVMC が有機農場の経営者に輸送し、そこでマルチとして再利用されるようになった。

4) ミクロネシア：「(ポンペイ州のアウトプット) CDL が改善される」は部分的な達成にとどまった。ポンペイでは、プロジェクトの後半になって、容器デポジット制度（Container Deposit Legislation：CDL）の活動をアウトプットに組み込んだ。CDL プログラム開始後 34 カ月の間（2012 年 6 月から 2015 年 8 月まで）でリサイクル・センターは 12 回運用されたが、消費者に還元するリサイクル基金の残高が十分ではなかったため、リサイクル・センターを毎月運用するという目標の達成には至らなかった。輸入飲料が港に陸揚げされた時点で輸入業者からデポジットを徴収するなどの法的措置（現行の法律では、デポジットは輸入飲料を最初に販売する時点で徴収するとされており、徴収漏れの原因となっている）はまだ実施されていない。一方で、財務部と環境保護局（Environmental Protection Agency：EPA）双方で財務情報の共有、対応すべき問題の分析などは本プロジェクトの支援で実施できるようになった。

5) キリバス：「家庭ごみ（特に庭ごみ）がごみ分別とチップ化によりリサイクルされる」は部分的な達成にとどまった。(a) 有機ごみ（グリーン・ウェイスト）の有効な再利用の方法を模索し、木質チップや薪にして活用することがキリバスのニーズにあった効果的な再利用の方法として開発され、自治体で実施されるようになり、グリーン・ウェイストのリサイクル量は増加しつつあるが、リサイクル率の目標値達成は困難である。なお、ベシオ自治体では有機ごみリサイクル活動を独立会計化するなどの工夫も導入され、今後も推進されていく見込みである。

6) マーシャル：「マジュロにてリサイクル・システムが改善される」及び「マジュロにてコンポスト・システムが改善される」はおおむね達成された。(a) シニアボランティアの活動支援を受けてマジュロ環礁廃棄物公社（Majuro Atoll Waste Company：MAWC）で 2008 年にリサイクル活動やコンポスト化が開始され、アルミ缶の収集数や堆肥の売り上げは増加している。本プロジェクトの貢献は間接的ではあるが、2011 年以降の数値は飛躍的に伸びている。その背景には、フィジーでの 3R 研修に C/P が参加し、そこで学んだことを基に EPA と連携して学校でのリサイクルとコンポスト化活動に組み入れたことで、リサイクル/コンポスト化についての市民の認知度が高まったことが挙げられる。「イバイにて廃棄物管理体制が改善される」は終了時評価時点では未達成であるが、プロジェクト完了までに部分的に達成される見込みである。(b) 関連の研修が延期になったことで、古紙燃料の生産計画案が作成されていないが、クワジェリン環礁地方政府（Kwajalein Atoll Local Government：KALGov）では、プロジェクト完了までには同計画案作成を開始する予定である。

7) サモア：「ごみ減量化手段・実践がアーバン・エリアに導入・実施される」は終了時評価時点では部分的な達成にとどまっているが、プロジェクト完了時までには達成される見込みである。(a) ごみ分別及び減量化のパイロット・プロジェクトには、7 つのコミュニティ、6 つの企業が空き缶やペットボトルの分類、グリーン・ウェイストのコンポスト化の活動に参加している。(b) ごみ減量化戦略を含む国家廃棄物管理戦略（2016～2025 年）の作成は進行している。戦略にはパイロット・プロジェクトでの中間結果が反映される見込みで、2015 年 9 月に協議された大洋州廃棄物汚染管理戦略（RS 2016-2025）を踏まえてまとめられる予定である。(c) CDL の政策枠組みについても策定中である。天然資源環境省（Ministry of Natural Resources and Environment：MNRE）は 2015 年 11 月末までに政府での審議にかける最終案を提出予定である。

8) ツバル：「ごみ減量化のための指導員の能力が研修を通して強化される」は部分的な達成にとどまった。(a) フィジーにおいて 2 名の C/P がごみ収集に関する研修を受け、ごみ処理や 3R についても学んだ。その結果、労働安全に関して改善がみられたが、この 2 名の C/P による知識や技術を共有する研修は実施されておらず、プロジェクト完了時までにも実施される予定はない。

(3) 処分場 （優先課題 2-2）

処分場に関するアウトプットは、主に処分場運営の改善を通し、本課題に取り組んだ国のほとんどにおいて、プロジェクト完了までに達成またはおおむね達成される見込みである。

本優先課題で期待されるアウトカムの概要	対象国	アウトプット	達成レベル（終了時評価時/完了時の見込み）
<適切な廃棄処分、処分場の改善> Solid wastes that cannot be avoided, reused, recycled or composted are disposed of using acceptable methods that have no negative impacts on human health and environment.	PNG	アウトプット 2 : 廃棄物処分場の施設と運営管理状況が改善される	おおむね達成/おおむね達成
	ソロモン	アウトプット 2 : ホニアラ及びギゾの廃棄物処分施設が改善される	おおむね達成/おおむね達成
	バヌアツ	アウトプット 2 : 既存の廃棄物処分場（ブッファとルーガンビル）が改善される	部分的に達成/部分的に達成
	ミクロネシア	アウトプット 2-3（コスラエ）：最終処分場が改善される	（達成/達成）※1
		アウトプット 3-3（ポンペイ）：処分場が改善される	達成/達成
		アウトプット 4-2（チューク）：最終処分場の改善と管理能力が向上する	達成/達成
		アウトプット 5-2（ヤップ）：最終処分場の改善と管理能力が向上する	おおむね達成/おおむね達成
	マーシャル	アウトプット 5 :（イバイにて廃棄物管理体制が改善される※2	おおむね達成/おおむね達成
	パラオ	アウトプット 4 : 最終処分場を管理する能力が向上する	部分的に達成/達成
	サモア	アウトプット 2 : タファイガタ処分場が地域の廃棄物処理施設として運営され、ヴァイアタ処分場が改善される	部分的に達成/部分的に達成またはそれ以上
	トンガ	アウトプット 1 : ババウの既存処分場施設が改善される	おおむね達成/おおむね達成

注記：※1 コスラエでは、本プロジェクトはこれらのアウトプットへの貢献は部分的である。
※2 マーシャルの本アウトプットの達成レベルは 3R/4R、処分場改善、ごみ収集、啓発活動、人材育成の分野での成果を総合的に判断して確定した。

<アウトプットの達成状況と主要指標の達成状況>

1) PNG :「廃棄物処分場の施設と運営管理状況が改善される」はおおむね達成された。（a）バルニ処分場の改修工事はおおむね完了。契約業者が予定どおり業務を遂行できれば、プロジェクト完了時までにはすべて終わる予定。また改修工事に付随する作業は PNG 側で 2016 年第 2 四半期までには完了する見込み。（b）処分場の運営管理者やオペレーター用に作成されたマニュアルは改修工事関連作業が終了した段階で見直され、更新される予定。

2) ソロモン :「ホニアラ及びギゾの廃棄物処分施設が改善される」はおおむね達成された。ホニアラでは、（a）ラナディ処分場の改修工事は 2015 年 10 月までに完了見込み。（b）改修工事完了までに運営管理マニュアルのドラフトも最終化される予定。さらに（c）2016 年度（1 月～12 月）の年間運営管理計画案は 2015 年 9 月には最終化され自治体に提出される見込み。ギゾでは、（a）処分場の改修工事はほぼ完了しているものの、予算の制約をうけてプロジェクト完了時までにすべては完了できない見込み。

（b）運営管理マニュアルはプロジェクト完了時までには作成される見込み。（c）2016 年度（4 月～3 月）の年間運営管理計画案、予算案は 2015 年 11 月中に作成して、西部州政府に提出される見込み。

3) バヌアツ：「既存の廃棄物処分場（ブッファとルーガンビル）が改善される」はおおむね達成された。（a）2014 年 6 月以降、処分場への搬入車両のデータは正規のフォーマットに記載されるようになり、月例報告書が作成されポートビラ市役所関連部署で回覧されている。（b）ブッファ処分場の改善/運営管理計画案が作成され、運営管理部分は既に実施されている。改善計画案の一部は災害廃棄物管理活動として J-PRISM の支援で実施された。予算不足もあり、改善計画案がプロジェクト完了までに実施できるかどうかについては不確実である。

4) ミクロネシア：4 つの州すべてで次のとおり、処分場が改善された。
- コスラエ：「最終処分場が改善される」は達成された。本プロジェクト実施以前にミクロネシア初の福岡方式（準好気性）で建設された処分場の運営維持管理が改善された。この改善に、本プロジェクトは研修を通して一部貢献した。
- ポンペイ：「処分場が改善される」は達成された。既存処分場の半分が福岡方式で改修された。
- チューク：「最終処分場の改善と管理能力が向上する」は達成された。仮処分場の設営（年内に稼働予定）と福岡方式による新処分場（環境影響評価を実施予定）の準備活動は部分的にではあるが、本プロジェクトの支援で実施された。
- ヤップ：「最終処分場の改善と管理能力が向上する」はおおむね達成された。既存処分場が福岡方式で改善された。JICA 専門家の技術支援があった。

5) マーシャル：「イバイにて廃棄物管理体制が改善される」はおおむね達成された。（a）プロジェクト開始前は、オープンダンピングの処分場でほぼ毎日野焼きが行われていた。看板を設置し有人体制を導入し、住民の意識喚起がなされた結果、野焼きは行われなくなった。プロジェクトによって金属、車両、一般ごみの選別が開始された。

6) パラオ：「最終処分場を管理する能力が向上する」は終了時評価時点では部分的な達成にとどまったが、プロジェクト完了時までには達成される見込みである。（a）本プロジェクト開始前、M ドック処分場は 2013 年には満杯となり使えなくなる見込みであった。2012 年から 2013 年にかけて、JICA 専門家の助言を受け、リサイクル基金を用いて堰堤を設置したことで、処分場の使用期限が 3 年間延長された。（b）さらに、新処分場の基本設計案（処分場のレイアウト）も作成された。（c）M ドック処分場閉鎖ガイドラインはプロジェクト完了前までに完成できる見込みである。

7) サモア：「タファイガタの処分場が地域の廃棄物処理施設として運営され、ヴァイアタの処分場が改善される」は部分的な達成にとどまった。（a）タファイガタ処分場の土地利用/開発計画が作成され、（b）2013 年 3 月に設置されたウェイブリッジ・シ

ステムによって処分場への搬入ごみが記録され毎月モニタリングされるようになった。(c) 浸出水処理システムが設置され、天然資源環境省（MNRE）は 2015 年 8 月から毎月モニタリングを実施しているが、天候条件の影響を受けてまだ十分なサンプルは抽出できていない。目視による確認では、浸出水のパラメーター（色、匂い、透過性）は飛躍的に改善されている。

8) トンガ：「ババウの既存処分場施設が改善される 」はおおむね達成された。(a) 既存の処分場は改善されたが、(b) 運営維持管理が必ずしもマニュアルに沿って行われておらず、終了時評価時点では、いくつかの課題が指摘された。一方で処分場運営経費は当初は本プロジェクトが一部負担していたが、現在は保健省がすべて賄っており、財務面での改善がみられた。

(4) ごみ収集 （優先課題 2-3）

ごみ収集に関するアウトプットはプロジェクト完了までにおおむね達成または部分的に達成される見込みである。ごみ収集改善計画案は作成されたものの、まだ実施に至っていない国もある。

本優先課題で期待されるアウトカムの概要	対象国	アウトプット	達成レベル（終了時評価時/完了時の見込み）
<効率的なごみ収集体制の確立> Well-managed, efficient, and self-sustaining waste collection systems introduced or upgraded in PICs.	PNG	アウトプット 2：ポートモレスビーのごみ収集が改善される	おおむね達成/おおむね達成
	ミクロネシア	アウトプット 2-2（コスラエ）：収集運搬が改善される	部分的に達成/部分的に達成
		アウトプット 3-2（ポンペイ）：収集運搬が改善される	部分的に達成/部分的に達成
		アウトプット 4-3（チューク）：一般廃棄物の収集サービスを改善する能力が向上する	おおむね達成/おおむね達成
	マーシャル	（アウトプット 5：イバイにて廃棄物管理体制が改善される）※1	おおむね達成/おおむね達成
	トンガ	アウトプット 2：ババウのごみ収集システムが改善される	おおむね達成/おおむね達成

注記：※1 マーシャルの本アウトプットの達成レベルは 3R/4R、処分場改善、ごみ収集、啓発活動、人材育成の分野での成果を総合的に判断して確定した。

<アウトプットの達成状況と主要指標の達成状況>

1) PNG：「ポートモレスビーのごみ収集が改善される」はおおむね達成された。(a) 2014 年は都市ごみの約 60%が収集された。2015 年の実績は最終回の合同調整委員会（Joint Coordinating Committee：JCC）で報告されることになっているが、2014 年にごみ収集の改善がなされていることから 2015 年の実績は上がっていることが見込まれる。タイムアンドモーションスタディが首都特別区委員会（National Capital District Commission：NCDC）によって年 2 回計画どおりに実施された。

2) ミクロネシア：コスラエ及びポンペイ：「収集運搬が改善される」は部分的な達成にとどまった。

チューク：「一般廃棄物の収集サービスを改善する能力が向上する」はおおむね達成された。(a) ごみ収集計画案が 3 の州で作成されたが、それが実施できたのはチューク州のみであった。ごみ収集はチューク州では州政府の管轄であるが、コスラエ州とポンペイ州では自治体の業務となっている。コスラエ州では、自治体との協議を行い、詳細計画が作成されることになっている。ポンペイ州では、有料ごみ袋を利用してごみ収集料金を徴収するための立法措置が進行中である。

3) マーシャル:「イバイにて廃棄物管理体制が改善される」はおおむね達成された。(a) 2014 年に料金徴収を含むごみ収集の改善案が作成されたが、まだ実施されていない。理由は、米国から供与された収集車の仕様をめぐり、KALGov と販売業者の間での受け取り交渉に時間を要したことによる。2015 年 9 月 3 日に車両の受け取りの合意が結ばれ、研修、ごみ収集の試験的運行、詳細スケジュール作成を経て、10 月 1 日（2016 年度）から改善案によるごみ収集が本格的に実施される見込みである。

4) トンガ：「ババウのごみ収集システムが改善される」はおおむね達成された。(a) コミュニティのボランティアによって、ごみ収集システムは計画どおりに実施され、(b) 目標値の 80%には届かなかったものの、ババウ島のほぼ 50%の世帯がこのごみ収集システムを活用できる状況である。ごみコミッティはごみ収集に関する情報発信、啓発に重要な役割を果たしていることから、州や町の行政担当官のリーダーシップのもとで、ごみコミッティとコミュニティの信頼関係を強固にしていくことが期待される。

囲み 3　段階的なプロセスを踏まえた合意形成

トンガでは、段階的なプロセスを踏まえたコミュニティの合意形成が大変効果的であった。プロジェクトでは最初にコミュニティで影響力のある人材、州や町の行政担当官を対象に、コミュニティによるごみ収集システムについて説明し、理解を求めた。その後ワークショップや会合を開催して、関係者に広くこのシステムの必要性と関係者がそれぞれの役割を理解してもらった。そして最後にコミュニティの住民のボランティアによる“ごみコミッティ”の設置を呼びかけることで、コミュニティのイニシアティブを醸成できた。

(5) 啓発・教育/コミュニケーション（優先課題 4）

本優先課題の啓発・教育/コミュニケーションに関連したアウトプットはプロジェクト完了までに、達成されるか、または達成の見込みがある。特に学校やコミュニティへの活動の導入を通して、実践が促進されている。

本優先課題で期待されるアウトカムの概要	対象国	アウトプット	達成レベル（終了時評価時/完了時の見込み）
<廃棄物管理への住民参加の促進> An informed and aware population who support and participate in waste management activities.	ソロモン	アウトプット 3：ソロモンにおいて廃棄物管理に係る教訓や経験が広められる	部分的に達成/おおむね達成
	ミクロネシア	アウトプット 2-4 （コスラエ）：啓発活動が推進され強化される	達成/達成
		アウトプット 5-3 （ヤップ）：ごみの啓発活動を実施する能力を向上する	おおむね達成/おおむね達成
	キリバス	アウトプット 2：学校プログラム実施を通じて固形廃棄物についての啓発が改善される	おおむね達成/おおむね達成
	マーシャル	アウトプット 4：マジュロにて学校リサイクル活動が導入される	（おおむね達成/おおむね達成）※1
		（アウトプット 5：イバイにて廃棄物管理体制が改善される）※2	おおむね達成/おおむね達成
	パラオ	アウトプット 3：「3R」の普及啓発を実施する能力が向上する	おおむね達成/おおむね達成

注記：※1 マーシャルでは、本プロジェクトによるこのアウトプットへの貢献は部分的である。
※2 マーシャルの本アウトプットの達成レベルは 3R/4R、処分場改善、ごみ収集、啓発活動、人材育成の分野での成果を総合的に判断して確定した。

<アウトプットの達成状況と主要指標の達成状況 >

1) ソロモン：「ソロモンにおいて廃棄物管理にかかる教訓や経験が広められる」は終了時評価時点では部分的な達成にとどまったが、プロジェクト完了時点ではおおむね達成される見込みである。(a) 国家廃棄物汚染抑制戦略案（2016～2025 年）は本プロジェクトでの実践や教訓を踏まえて 2015 年 10 月中に作成され、11 月に実施予定の国家廃棄物汚染抑制戦略のワークショップで議論され、プロジェクト完了までに最終化される見込みである。(b) プロジェクト活動を通して得られた 3R や処分場運営管理に関するグッド・プラクティスは 3 カ所の県レベルのセンターで共有された。11 月に実施されるワークショップですべての県の担当官に共有されることになっている。

2) ミクロネシア：

・コスラエ：「啓発活動が推進され強化される」は達成された。(a) プロジェクト開始前にコスラエ資源管理局（Kosrae Island Resources Management Authority：KIRMA）が実施していた学校を拠点にした啓発プログラムは、本プロジェクトによって計画どおりすべての小学校に導入された。

・ヤップ：「ごみの啓発活動を実施する能力を向上する」はおおむね達成された。(b) 環境保護局（EPA）と公共事業運輸局（Department of Public Works and Transportation, Yap：DPW&T）がコストのかからない形での啓発用教材を開発し、計画より多くのワークショップを実施した。ごみ収集の際には啓発活動も並行して実施すべきであるとの学びに基づき、EPA はごみ収集の活動の一環として、学校を拠点とした活動を開始した。

3) キリバス：「学校プログラム実施を通じて固形廃棄物についての啓発が改善される」はおおむね達成された。(a) クリーンスクール・プログラムはほぼ計画どおり実施さ

れ、対象地域の学校では廃棄物管理は徐々に認知されるようになってきている。モニタリング活動は主として①環境啓発、②有機ごみのコンポスト化、③ごみの分別リサイクルという 3 つの観点で行っているが、今後 C/P が定期的にモニタリングをして適切なアドバイスをしていけば、クリーンスクール・プログラムを通して、廃棄物管理への認知度はさらに高まる見込みである。

4) マーシャル：「マジュロにて学校リサイクル活動が導入される」はおおむね達成された。(a) 学校を拠点とした啓発活動は本プロジェクト実施前に既にマジュロとイバイで実施されており、マジュロにおける本プロジェクトの成果はベースライン調査の実施、2012 年の啓発用教材作成である。フィジーでの地域研修に参加した C/P のうち現在も活動に参加しているのは 1 名のみである。マジュロ EPA の C/P がイバイにおける学校での活動に参加したことで、マジュロでの学校を拠点とした活動への理解も深まった。一方、「イバイにて廃棄物管理体制が改善される」はおおむね達成された。(a) プロジェクト開始前は、学校訪問は 3 カ月に 1〜2 度行われる程度であったが、現在は毎月実施されている。学校での活動に関して、イバイ EPA 以外の実施機関も協力するようになった。

5) パラオ：「3R の普及啓発を実施する能力が向上する」はおおむね達成された。(a) 環境保護局（Environmental Quality Protection Board：EQPB）では 2014 年、2015 年のアースデイにすべての学校に対して啓発用教材を配付した。2013 年までは複数のステークホルダー〔住民教育啓発部会（Public Education and Enhancement Committee：PEEC）のメンバー組織として〕による意思決定が困難であったことから啓発活動が停滞していたが、2014 年に PEEC が解散してからは啓発活動が活発に行われるようになった。

(6) 人材育成・能力強化（優先課題 5）

本優先課題に関するアウトプットはプロジェクト完了までに達成される、またはおおむね達成される見込みである。知識や経験は国内、域内の関係者間で共有されている。

本優先課題で期待されるアウトカムの概要	対象国	アウトプット	達成レベル（終了時評価時/完了時の見込み）
<廃棄物管理分野の人材育成> Skilled and trained people available in-country, who effectively manage solid waste management systems	フィジー	アウトプット 2：フィジー3R モデルが研修プログラムを通して地域/国内に普及する	達成/達成
	バヌアツ	アウトプット 3： 国レベル及び地方自治体レベルの廃棄物管理能力の向上が図られる	達成/達成
	マーシャル	（アウトプット 5：イバイにて廃棄物管理体制が改善される）※1	おおむね達成/おおむね達成
	パラオ	アウトプット 5：「3R」、リサイクルのトレーニング・プログラムが策定される	おおむね達成/おおむね達成
	サモア	アウトプット 3：経験・教訓が国レベル、国際レベルで共有される	おおむね達成/達成

注記：※1 マーシャルの本アウトプットの達成レベルは 3R/4R、処分場改善、ごみ収集、啓発活動、人材育成の分野での成果を総合的に判断して確定した。

<アウトプットの達成状況と主要指標の達成状況>

1) フィジー :「フィジー3R モデルが研修プログラムを通して地域/国内に普及する」は達成された。(a) 合計 226 名が参加した地域研修や国内研修で、C/P はトレーナーとして活躍した。(b) C/P 自身で 9 種類の研修教材を開発し、(c) 国内研修を通してフィジー3R モデルはフィジーの中央地区や北部地区の自治体（J-PRISM 支援対象外）にも普及されつつある。(d) クリーンスクール・プログラムはキリバス、トンガ、ソロモンで導入され、域内にもフィジーの 3R モデルが普及されつつある。

2) バヌアツ :「国及び地方自治体レベルの廃棄物管理能力の向上が図られる」は達成された。(a) 2015 年 7 月に実施された州廃棄物管理年間計画ワークショップには 5 州から行政官が参加し、ごみの削減化を組み入れた州レベルの廃棄物管理年間計画を作成中である。(b) 州と市レベルの廃棄物管理年間計画のテンプレートも作成された。

3) マーシャル:「イバイにて廃棄物管理体制が改善される」はおおむね達成された。(a) 2013 年と 2015 年に 4R/3R に関する学校教師の研修が実施された。その際の講師は本プロジェクトの C/P（2013 年はマジュロ EPA と MAWC から、2015 年はマジュロ EPA とフィジーから）が担当した。2015 年の研修に参加した 15 名の教師は、学校長または主任教師であり、今後は彼らが自校の教師を指導することが期待されている。

4) パラオ :「3R、リサイクルのトレーニング・プログラムが策定される」はおおむね達成された。(a) 3R の研修マニュアル「パラオでの 3R プロモーション地域研修」を 2013 年に開発した。これらのマニュアルは地域協働の活動成果として、「大洋州廃棄物管理計画ガイドブック」として出版される計画である。2015 年には自治体の能力強化のため、「ごみ量・ごみ質調査の国内研修」を初めて実施した。

5) サモア :「経験・教訓が国レベル、国際レベルで共有される」は終了時評価時点ではおおむね達成であるが、プロジェクト完了時までに達成される見込みである。(a) ニュースレターは年 2 回発行され最低 1 つの関連文書が作成される予定。(b) 他の PIC 諸国の C/P や関係者のミッションを MNRE が 7 回受け入れた。(c) サモアでの活動成果は、地域/国際レベルの 5 つのワークショップにおいて、プレゼンテーションやカントリー・レポートという形式で発表された。

(7) 政策・計画策定・実施（優先課題 7）

この優先課題に取り組んだアウトプットの達成状況は国によってさまざまである。国家や州の廃棄物管理戦略の策定状況、それぞれの戦略実施計画のモニタリング能力によるところが大きい。

本優先課題で期待されるアウトカムの概要	対象国	アウトプット	達成レベル（終了時評価時/完了時の見込み）
<国家廃棄物管理政策・戦略策定と実施及び進捗モニタリングによる実績の共有> PICs implement national waste management policies and strategies, which are based on accurate data, with monitoring systems established to report on performance.	PNG	アウトプット 3:ポートモレスビー（首都特別区:NCD）の廃棄物管理にかかわる計画策定能力及びモニタリング実施能力が向上される	部分的に達成/おおむね達成
	ミクロネシア	アウトプット 1-1（OEEM）：国家廃棄物戦略が最終化される	おおむね達成/おおむね達成
		アウトプット 1-2（OEEM）：廃棄物管理に関する州間の情報共有が促進される	達成/達成
		アウトプット 2-1（コスラエ）：コスラエ州廃棄物管理戦略が最終化され、そのアクション・プランが策定される	部分的に達成/部分的に達成
		アウトプット 3-1（ポンペイ）：ポンペイ州廃棄物戦略が最終化され、そのアクション・プランが策定される	部分的に達成/部分的に達成
		アウトプット 4-1（チューク）：チューク州廃棄物管理戦略とアクション・プランの策定能力が強化される	おおむね達成/おおむね達成
		アウトプット 5-1（ヤップ）：ヤップ州廃棄物管理戦略とアクション・プランの策定能力が強化される	達成/達成
	マーシャル	アウトプット 1:国家廃棄物戦略が策定される	部分的に達成/部分的に達成
	パラオ	アウトプット 1:国家廃棄物管理計画（NSWMP）が最終化され、アクション・プランが改定される	達成/達成
	トンガ	アウトプット 3:ババウで長期的な固形廃棄物管理の基礎が確立する	おおむね達成/達成

<アウトプットの達成状況と主要指標の達成状況>

1) PNG：「ポートモレスビー（National Capital District：NCD）の廃棄物管理にかかわる計画策定能力及びモニタリング実施能力が向上される」は終了時評価時点では部分的な達成にとどまったが、プロジェクト完了までにおおむね達成される見込みである。（a）廃棄物管理計画が策定されつつあり、プロジェクト完了までに NCDC の評議会（board）での採択に提出し最終化される見込みである。（b）NCDC の廃棄物管理計画の実施のモニタリング能力が強化された（詳細は付属資料 1「合同評価報告書」ANNEX 3 の個別評価報告書を参照されたい）。

2) ミクロネシア：

環境危機管理局（Office of Environment and Emergency Management, FSM：OEEM）：「国家廃棄物戦略が最終化される」はおおむね達成された。OEEM では 2015 年 5 月に国家廃棄物管理戦略（2016～2020 年）と実施計画を完成したが、国家廃棄物管理戦略を構成するチューク州とヤップ州の廃棄物管理戦略の完成が遅れたことで予定より 4 年遅れた。

・OEEM：「廃棄物管理に関する州間の情報共有が促進される」は達成された。(a) 廃棄物管理戦略の情報共有は、①「ミクロネシアでの廃棄物管理の優良事例」や「浸出水のモニタリングガイドライン」という文書を作成して配付し、②毎年 1 回ミーティングの開催（国レベルと州レベルの JCC を指す。プロジェクト終了後は廃棄物委員会が JCC の役割を果たす予定）で促進された。また、③OEEM が、州レベルで環境管理部門に並ぶ重要な廃棄物管理関係者である公共事業部門を巻き込むようになったことは、特筆すべき変化である。

・コスラエ及びポンペイ：「州の廃棄物管理戦略が最終化される。そのアクション・プランが策定される」はいずれもおおむね達成された。国家及び州の廃棄物管理戦略の実施計画のモニタリングは連邦政府レベルでは OEEM、州レベルでは EPA や公共事業部門が担当している。コスラエ州とポンペイ州では、モニタリング委員会が年 3 回実施計画のモニタリングを行うことになっているが、複数の関係者間の調整が困難であったことで、達成されていない。

・チューク及びヤップ：「州廃棄物管理戦略とアクション・プランの策定能力が強化される」はチューク州ではおおむね達成し、ヤップ州では達成された。

3) マーシャル：「国家廃棄物戦略が策定される」は部分的な達成にとどまった。(a) 2014 年 9 月に、EPA は国家廃棄物管理戦略（2014～2018 年）及びアクション・プランの草案を大統領補佐大臣に提出したものの、プロジェクトによる再三の働きかけにもかかわらず、いまだに内閣の承認を得られていない。主席長官事務所（Office of Chief Secretary：OCS）が、本件の内閣での検討を早急に促す予定である。実施機関ではアクション・プランの案を実行に移しているが、モニタリングの頻度は計画を下回っている。

4) パラオ：「国家廃棄物管理計画が最終化され、アクション・プランが改定される」は達成された。(a) 2012 年に、国家廃棄物戦略が公共基盤・産業・商業省の大臣に承認され、実施計画は SPREP の支援で改訂された。パラオでは、新処分場建設計画や国家廃棄物管理計画を SPREP の支援で改訂する計画である。

5) トンガ：「ババウで長期的な固形廃棄物管理の基礎が確立する」は終了時評価時点では、おおむね達成されたが、プロジェクト完了までに達成される見込みである[13]。(a) 2012 年 1 月に作成されたババウ州の廃棄物管理計画案は 2015 年 7 月に最終化の見通しである。(b) プロジェクトの活動の進捗状況と課題の共有のため、毎年ババウ廃棄物管理コミッティのワークショップを実施している。第 6 回目のワークショップは 2015 年 11 月に実施予定で、その際にババウ廃棄物管理計画が承認される見込みである。

[13] 訳注：現地調査の段階では完了時は「おおむね達成される」と判断されたが、その後の精査で完了時までに「達成される」と判断された。表３－６（p.11）にも反映。

３－３　プロジェクト目標の達成状況

プロジェクト目標の達成状況は地域協働の活動に設定された指標、国レベルの共通指標と国別の固有の指標で検証した[14]。

プロジェクト目標	指　標	
大洋州地域廃棄物管理戦略（RS 2010）の実施を通して、大洋州島嶼国の廃棄物管理にかかる総合的基盤（人材と制度）が強化される	地域協働	1. SPREP が廃棄物地域戦略のレビュー（中間時と終了時）で検証する廃棄物地域戦略実施に対する本プロジェクトの貢献度合い
		2. 本プロジェクトを通して、他の対象国でも適用できるグッド・プラクティスが得られる
	国レベル	1. 廃棄物管理の特定の分野での専門性をもち、SPREP の専門家リストに登録された専門家の数
		2. 各国特有の課題が改善された状況を検証する指標（例：廃棄処分量の減少、一般ごみ・リサイクル品の収集率の向上、飲料水容器のリサイクル率の向上、処分場運営管理能力の向上、廃棄物管理分野の研修プログラムの確立等）

設定された指標の多くは達成、またはおおむね達成される見込みであり、アウトプットの実績を踏まえると、プロジェクト全体として、プロジェクト目標はプロジェクト完了までにおおむね達成される見込みであるといえる。個別案件のプロジェクト目標の達成見込みを表３－７にまとめた。

表３－７　プロジェクト目標の達成見込み

本プロジェクトは地域協働の活動と11の個別プロジェクトで構成される。																
大洋州地域廃棄物管理戦略の実施を通して、大洋州島嶼国の廃棄物管理にかかる総合的基盤（人材と制度）が強化される	地域協働	フィジー	PNG	ソロモン	バヌアツ	ミクロネシア					キリバス	マーシャル	パラオ	サモア	トンガ	ツバル
						国	コスラエ	ポンペイ	チューク	ヤップ						
	M	M	M	M	M	M	M	M	M	M	P	M	M	M	M	NA

■判定基準

凡例	達成度合い	説　明
F	達成	設定されたすべての指標を達成した（目標値または期待された状態を 100%かそれ以上達成）。
M	おおむね達成	設定された主要な指標はすべて達成（目標値または期待された状態を 100%かそれ以上達成）、または、おおむね達成した（約 70%以上達成）。
P	部分的に達成	設定された主要な指標は部分的に達成（ベースラインからの改善はあったものの、目標値または期待された状態の 70%以下の達成）。
NA	評価せず	達成状況は評価しない（各理由は表３－10 を参照のこと）。
（　）	-	プロジェクト目標達成における本プロジェクトの貢献は部分的または間接的。

出所：終了時評価調査団

[14] 「２－２　調査項目」で説明したとおり、プロジェクトは国レベルの個別案件と地域協働の活動で構成される。個別案件は JICA 専門家の支援のもと特定の課題に対処すると同時に主として研修という形式で行われる地域協働の活動の 2 つの側面から技術支援が行われる。

３－３－１　地域協働の活動の指標の達成状況

地域協働の指標 1	SPREP が廃棄物管理戦略のレビュー（中間時と終了時）で検証する廃棄物管理戦略実施に対する本プロジェクトの貢献度合い

本指標は達成された。SPREP が実施した地域戦略のレビューでは、地域戦略実施における本プロジェクトの高い貢献が確認された。本プロジェクトが支援した優先課題の項目のうち自立発展的な財務体制以外のすべての項目が、レビューでの貢献リストに挙げられた。特に総合廃棄物管理や人材育成の分野において、本プロジェクトの貢献が顕著であった。

地域協働の指標 2	本プロジェクト活動を通して得られたグッド･プラクティスが PIC 諸国で活用された数

本指標は部分的な達成にとどまった。また、プロジェクト完了時点においてもこの達成レベルに変化はないと思われる。表３－８に示すとおり、本プロジェクトの活動を通して、4 つのグッド・プラクティスが考案され実施された。そのうち項目 1「ババウ（トンガ）で開発されたコミュニティによるごみ収集システム」は既にソロモンのギゾで活用されている。

表３－８　本プロジェクトの活動を通して考案、実施されたグッド・プラクティス

1	ババウ（トンガ）で開発されたコミュニティによるごみ収集システム（2013年）
2	チューク州（ミクロネシア）で開発されたホーン・コレクション・システム（2013年）
3	フィジーで考案された家庭でのコンポスト化を支援するプログラム（2015年）
4	フィジーで考案されたクリーンスクール・プログラムへの財政支援プログラム（2015年）

出所：プロジェクト・オフィス作成資料

なお、表３－９に示すとおり、過去の JICA 技術協力の活動を通して開発、考案されたグッド・プラクティスが本プロジェクトの活動を通して広く域内に普及していることが確認されている。

表３－９　過去の JICA 技術プロジェクトの活動で考案され、本プロジェクトの活動を通して他の大洋州諸国に普及されたグッド・プラクティス

	グッド・プラクティス	考案国	普及事例数	普及都市（国）
1	クリーンスクール・プログラム	ナンディ（フィジー）	4	サウスタラワ（キリバス）、ホニアラ/ギゾ（ソロモン）、ババウ（トンガ）イバイ（マーシャル）
2	エコバッグ	ナンディ（フィジー）	1	ホニアラ（ソロモン）
3	ウェイブリッジ・システム	ラウトカ（フィジー）	1	サモア
4	市場ゴミのコンポスト化	ラウトカ（フィジー）	2	ポートビラ（バヌアツ）、ポートモレスビー（PNG）
5	準好気性への処分場改善	タファイガタ（サモア）	4	ババウ（トンガ）、ヤップ、ポンペイ（ミクロネシア）、ポートモレスビー（PNG）
6	CDL	コスラエ、ヤップ、（ミクロネシア） コロール（パラオ）	2	ポンペイ（ミクロネシア）、サモア
合計数			14	

出所：プロジェクト・オフィス作成資料

補足情報	技術レベルが向上したカウンターパートが各サブ・リージョンで増加

各サブ・リージョンでは、技術レベルが向上した C/P の数が増加している。彼らが国際会議に参加することで、本プロジェクトに対する国際的な認知度も上がってきている。

一方で、制度・組織面での能力強化については、本プロジェクト期間では大きな進展はみられなかった。

３－３－２　国レベルの指標

国レベルの指標 1	廃棄物管理の特定の分野での専門性をもち、SPREP の専門家リストに登録された専門家の数

本指標の情報源となった、SPREP のインベントリーとして構築された人材データベース（PIDOC）に登録されているトレーナー経験者は、本プロジェクトの活動でトレーナー経験を積んだ C/P であり、SPREP が正式に承認したトレーナーではないこと、各国の目標値（トレーナー人数）は PIDOC が作成される以前に決定されたものであり、トレーナーの定義は一定ではなかった（したがって、設定された目標値との整合性がない）ことから、プロジェクト目標の達成を検証する直接的な指標としては適切ではないと判断された。よって本指標は、参考情報として位置づけられた。これまでに延べ 70 名の C/P が、本プロジェクトが実施した国際レベル/地域レベル/国レベルでの研修やワークショップにトレーナーとして貢献した。

各国固有の指標 2	各国特有の課題が改善された状況を検証する指標

個別プロジェクトでは廃棄物地域戦略で示された優先課題に取り組んだ。処分場改善に取り組んだ国、ごみ収集システムの改善に取り組んだ国などさまざまである。それぞれの取り組みの結果を国別に設定された指標の達成度で検証し、表３－10 にまとめた。

表３－10　各国固有の指標のプロジェクト完了までの達成見込み

国　名	指　標	達成見込み
フィジー	フィジーによる地域研修プログラムが確立される。	達成
PNG	廃棄物管理戦略に基づき、最終処分場管理/ごみ収集サービスが改善される	評価せず（廃棄物管理計画の対象期間は プロジェクト終了後の2016～2020年）
	NCDCに廃棄物管理戦略に基づく最終処分場管理/ごみ収集サービス実施能力が備わる	達成
ソロモン	ごみの減量化にかかる5つの取り組みが5件導入される	達成
	ラナディ及びギゾ最終処分場が年次活動計画に基づき管理される	部分的に達成
	州の担当官が廃棄物管理の重要性を認識し、所属する州において、3Rや廃棄物管理を実施していく意思を有する	評価せず[15]

[15] 訳注：詳細は付属資料 1「合同評価報告書」の ANNEX 3 の個別評価報告書を参照。

バヌアツ	ブッファ及びルーガンビル最終処分場が年次活動計画に基づき管理される *（ブッファ最終処分場が年次活動計画に基づき管理される）*	部分的に達成
	1つ以上の州が、ごみの減量化及びコンポスト化を促進するアクション・プランを実施する *（1つ以上の州が、ごみの減量化促進を含む年間廃棄物アクション・プランを実施する）*	達成
ミクロネシア	各州の最終処分場が改善される	おおむね達成
	優良事例がミクロネシア全州に共有される	達成
キリバス	処分場の最終処分量（特に有機ごみ）が5%減少する	部分的に達成
マーシャル	優良事例がマジュロと他の環礁地方政府に共有される	おおむね達成
パラオ	輸入飲料容器の買戻し率が90%以上を維持する *（SWM-BPWがSWM-KSGと協力して容器デポジット・プログラムを適切に管理する）*	おおむね達成
サモア	廃棄物処分量が最低5%減少する *（2015年のタファイガタにおける月平均廃棄物処分量が、2013年に比較し、最低5%減少する）*	評価せず（目標年の中途であるため。2015年12月には評価可能。なお、評価時点では達成）
トンガ	50%以上の対象コミュニティで自立的にごみ収集が実施できている	達成
ツバル	ごみ収集と廃棄の業務が改善される	評価せず（関連の活動がほとんど実施されず、データもなし）

注記：該当の指標の意味合いが明確でなかったため、プロジェクト側との協議を通して確認した指標の定義をイタリック体で示した。

<プロジェクト目標の指標の達成状況>

1) フィジー：(a) 地域研修のトレーナーとしての経験を積み、C/P の多くの廃棄物管理分野の能力が強化された。過去の技術協力プロジェクトで既に実績があった 2 つの自治体以外の自治体も、各国のさまざまなニーズに見合った研修を実施すべくトレーナーとして活躍する機会を得た。このことは各自治体による研修実績が証明している。C/P は研修教材の開発も担当し、所属する自治体では処分場運営や堆肥づくり等の実習の場も提供している。環境局では国内の人材を優先するものの、これらの研修を今後も継続していく予定である。

2) PNG：(a) NCDC に廃棄物管理計画に基づく最終処分場管理/ごみ収集サービス実施能力が備わった。廃棄物管理計画自体、PNG で前例がなく、その実施には NCDC の能力が試されることになるが、次のような前向きな要因がある。すなわち、①廃棄物管理計画は本プロジェクトの教訓を反映した現実的な計画である。②本プロジェクトの活動を通して、NCDC の C/P の技術面の能力が強化された。③廃棄物管理計画には 5 年間の実施計画と予算見積りが含まれている。④同計画案は NCDC の廃棄物管理政策に基づき作成されていることから、上層部のサポートが期待でき、評議会（board）の承認が得られる見通しである。

3) ソロモン：本プロジェクトでは、(a) ごみ減量化に関して、①エコ・スクール/クリーンスクール・プログラム、②ごみ分別、③エコバッグ・キャンペーン、④ごみの拠点収集、⑤ごみ調査という 5 つの戦略を試験的に導入した。これらの戦略はプロジェクト終了後には、各管轄組織の本来業務に組み込まれる見込みである。

4) バヌアツ：(a) 評価時点で処分場は年次計画に沿って運営されているが、2015 年 9 月前半で処分場運営管理責任者（主要 C/P の 1 人）が整理解雇になるため、その後も処分場が計画どおりに運営されるかどうかについては不明である。(b) 5 州（及び 3 市）で、ごみ減量化を含む廃棄物管理年間計画を作成中である。2014 年策定の廃棄物管理法で必須条件となっていることから、2016 年度（1 月～12 月）はすべての県において廃棄物管理年間計画の実施が期待される。

5) ミクロネシア：(a) 4 つの州で処分場が改善された（詳細は項目３－２－２の(3)を参照のこと）。OEEM が冊子「ミクロネシアでの廃棄物管理の優良事例集 2015」を作成し、すべての州に配付し、優良事例が共有された。

6) キリバス：(a) 2 つの自治体での有機ごみ（グリーン・ウェイスト）のリサイクルで処分場の廃棄量は一定程度減少したが、2014 年で 0.15%、2015 年（7 月までの実績）は 0.21%であり、目標値の 5.0%には届かなかった。また、プロジェクト終了時までに目標値を達成できる見込みはない。

7) マーシャル：(a) マジュロでの活動の成果ではなく、地域協働と他の JICA の活動を通して得られた優良事例ではあるが、マジュロの C/P が、環境教育やリサイクルに関する研修のトレーナーとしてイバイにおいて指導を行った。このようなトレーナーの派遣はマジュロとイバイ双方にとって有益であった。

8) パラオ：(a) SWM-BPW ではコロール州政府の廃棄物管理室と協力して容器デポジット・プログラムを適切に管理できるようになった。

9) サモア：(a) 2015 年（1 月～6 月まで）におけるタファイガタ処分場の廃棄物処分量の月間平均は 2013 年と比較して 12.8%減少した（本プロジェクトの最後の JCC で、2015 年を通した月間平均データが発表される予定）。

10) トンガ：(a) 終了時評価時において、10 のコミュニティではごみコミッティメンバーにおけるごみ収集システムの利用が可能である。そのうち 8 つのコミュニティでは行政の直接的支援の必要もなく、コミュニティのみで自立的にごみ収集システムが機能、維持できるようになっている。

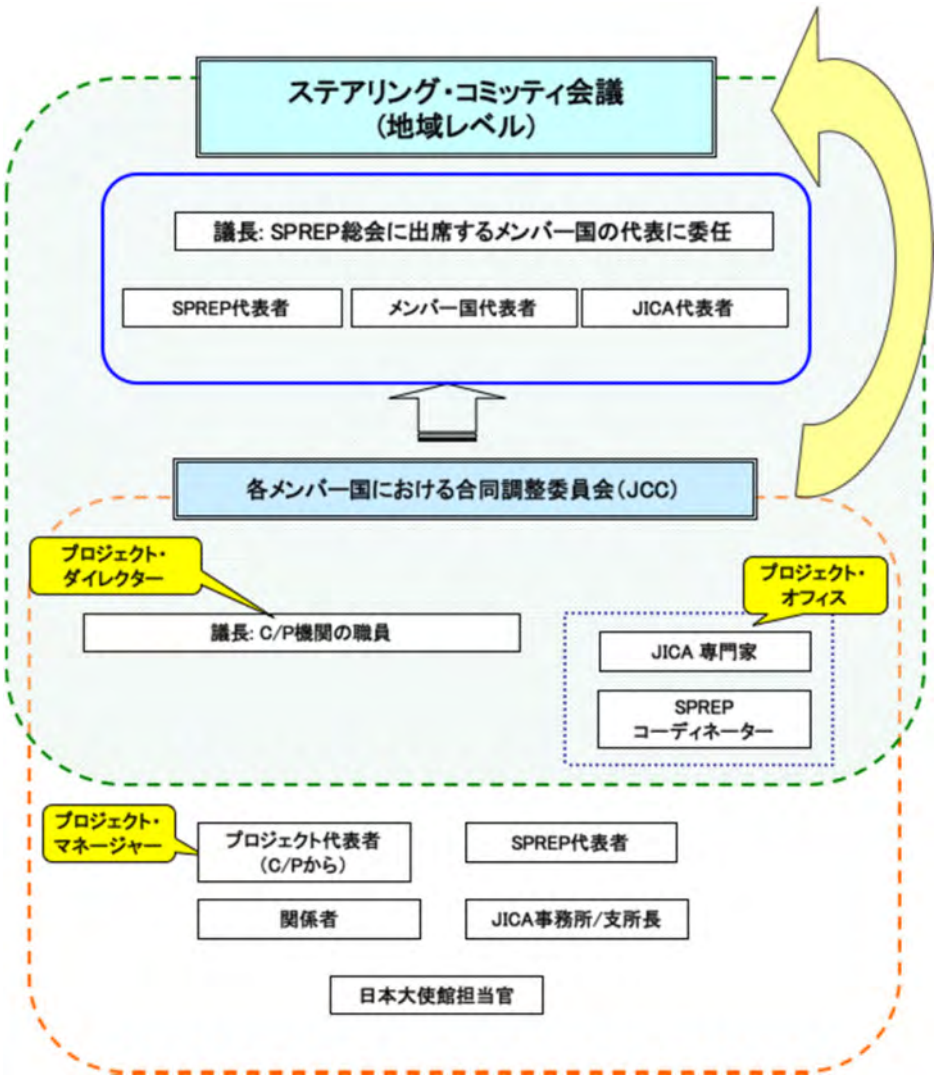
11) ツバル：(a) ごみ収集改善に関する情報はない。本プロジェクトでは限られた活動しか行っていないこと、データがないことから、プロジェクト目標の達成レベルを判断することは困難である。ツバルは、欧州連合開発基金 11 プログラム（2015～2020 年）が資金援助する廃棄物管理改善イニシアティブの対象国となっている。

第４章　プロジェクトの実施プロセス

４－１　J-PRISM 全体及び地域協働活動の実施プロセス

４－１－１　J-PRISM 全体/地域協働活動の実施体制

全体的な実施体制はプロジェクト開始時から変更されておらず（図４－１）、大きな支障なく機能してきた。



出所：The Regional Cooperative Framework for Promotion of Regional Initiative on Solid Waste Management（J-PRISM）, September 7, 2010

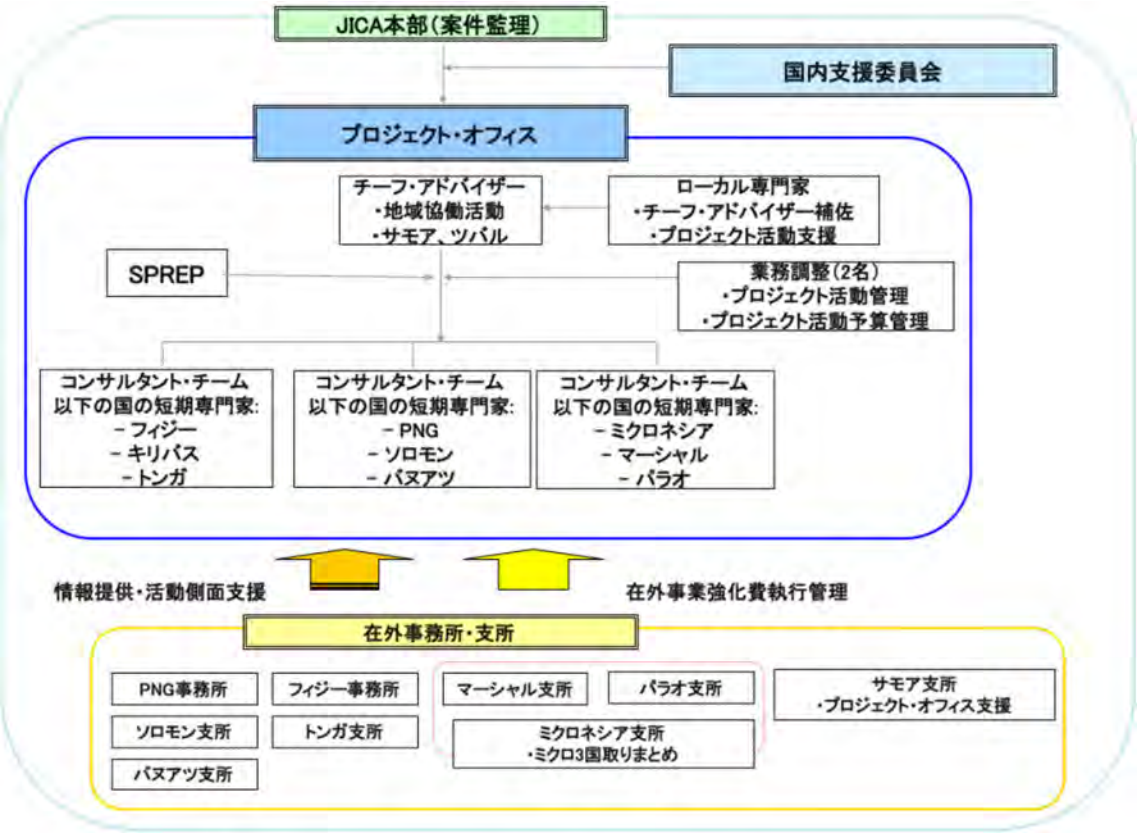
図４－１　J-PRISM の実施体制

日本側の実施体制は、中間レビュー後に変更があった。変更前は、PIC 各国に対して個別専門家が直接派遣されていたが、変更後は、サブ・リージョンにおおむね対応する 3 グループの国に対し、短期専門家からなる 3 つのコンサルタント・チームが派遣されている（図４－２）[16]。

[16] サモアとツバルについては、日本側の実施体制は中間レビュー前と変更がない。

この変更には、コンサルタント・チーム内で、短期専門家の柔軟な配置を可能にする等の利点があった。その一方で、ソロモン及びバヌアツにおいては、契約形態の変更により専門家の継続性が損なわれることになり、異なる専門家のアプローチの違いが C/P に戸惑いをもたらし、一定期間、活動の遅延を招いた。

また、地域協働及び国レベルの活動を促進・支援するために、プロジェクト・オフィスに 3 名の長期専門家/業務調整員が配置され、それぞれが、特定のサブ・リージョンを担当することになった。この結果、プロジェクト・オフィスによる個別プロジェクトへのより速やかな対応が可能になったが、プロジェクト・オフィスの専門家と各国に派遣されている短期専門家の役割分担は不明確なままだった。



出所：JICA 本部の文書に基づき終了時評価調査団が作成

図４－２　日本側の実施体制（変更後）

その他の問題として、サモアのプロジェクト・オフィスに配置されていたチーフ・アドバイザー（JICA 専門員）が、2014 年 6 月以降、JICA 本部に戻ったことにより、プロジェクト・オフィス内での意思決定により時間がかかるようになったことが挙げられる。なお、この問題に対応するため、テレビ会議、電子メール、電話の積極活用が図られた。

４－１－２　J-PRISM 全体/地域協働活動のプロジェクト管理

(1)　管理責任

J-PRISM 全体及び地域協働活動のプロジェクト管理は、プロジェクト・オフィスの主と

してチーフ・アドバイザー及び調整員によって行われており、各国の個別プロジェクトは、各国の C/P、サブ・リージョン担当の短期専門家、及び調整員によって行われた。

(2) 管理ツール

個別プロジェクトについては、固有の PDM 及び PO が利用され、更新されてきた。J-PRISM 全体については、機能している PDM がない[17]。プロジェクト・オフィスは、J-PRISM 全体の管理にあたり、個別プロジェクトの PDM 及び PO を利用するとともに、プロジェクト・オフィス内で作成した様式に投入・活動実績を取りまとめ、更新している。また、各国のプロジェクト・マネジャーから、年 2 回、活動実績と次期の計画を示した進捗報告書を受け取っているが、同報告書はモニタリング手段としてより、各国間の情報共有手段として使われている。

(3) ステアリング・コミッティ（S/C）[18]

S/C は、PIC の代表が参加する SPREP の年次総会のサイド・イベントとして開催されており、プロジェクトの全体的な進捗及び次期の全体的な計画が発表され、承認されてきた。S/C は、オブザーバー（他ドナーや総会参加者等）に J-PRISM の活動を共有する良い機会であった。しかし、S/C の開催時間（2 時間）が重要事項を協議するには不十分であること、また、SPREP 総会に参加する各国代表が必ずしも J-PRISM に関与しているわけではないことから、S/C は期待される役割を果たしてきたとはいえない。なお、2015 年 9 月に行われる第 5 回 S/C は、初めて、全日行われる予定である[19]。

４－１－３　プロジェクト・オフィス内のコミュニケーション

プロジェクト・オフィス内（JICA 専門家・SPREP）のコミュニケーションは、日々の会合、SPREP 廃棄物管理・汚染対策部（Waste Management and Pollution Control Division）の月例会議、及び年 1 回の S/C を通して行われてきた。JICA と SPREP のコミュニケーション/パートナーシップは、プロジェクトの進捗とともに着実に強化されてきた。SPREP は、本プロジェクトでの JICA と SPREP のそれぞれの役割について相互理解が深まったとコメントしている。また J-PRISM の技術協力アプローチが地域の能力向上に有効であると評価している。

４－２　各国個別プロジェクトの実施プロセス

４－２－１　活動の進捗（完了の見込み）

トンガ、フィジー、ミクロネシア、パラオ、及びマーシャルでは、ほとんどの活動が計画どおり実施され、プロジェクト終了までに完了する見込みである。一方、PNG、ソロモン、バヌアツ、及びサモアでは、プロジェクト前半、専門家の投入不足を含むさまざまな理由で進捗が遅れていたが（「５－３　効率性」参照）、後半は、C/P の努力と専門家のサポートにより、活

[17] 訳注：詳細計画策定時に、個別の PDM を統合した Integrated Reference Matrix が作成されたが、個別 PDM 変更を反映した更新はなく、プロジェクト管理には用いられなかった。

[18] R/D によれば、J-PRISM の S/C のメンバーは、委員長、各国案件のプロジェクト・ディレクター、SPREP 代表、日本政府代表、及び JICA 代表から構成される。SC に期待される役割は、①プロジェクトの運営方針策定、②RS（2010-2015）と調和のとれた 5 カ年実施計画及び年間活動計画のレビュー・承認、③進行中の活動の定期的なレビューと評価、④自立的な地域ネットワークの実現に関するアイデアのレビューと承認、及び⑤プロジェクトの目標達成に必要なその他の役割、である。

[19] 訳注：英文合同評価報告書作成時点。2015 年 9 月 26 日の S/C は全日実施された。

動が軌道に乗った。一部の活動はプロジェクト終了までに十分に完了しないものの、終了後に大洋州側だけで継続・完了される見込みである。ただし、バヌアツでは、主要実施機関（PVMC）の規模縮小に伴う主要 C/P（プロジェクト・マネジャーを含む）の整理解雇により、プロジェクト最終年度に進捗が再び停滞したため、活動が計画どおりに完了することはないと考えられる。また、キリバスにおいては、C/P の頻繁な交代及び不在が、活動の遅れをもたらした。

４－２－２　技術移転の方法

技術移転は、専門家の技術助言、OJT、パイロット・プロジェクト並びに地域協働活動下の地域/国内研修を通して行われており、大きな問題はみられなかった。研修成果としてのガイドブック作成（ミクロネシア OEEM）、パイロット・プロジェクトを通しての実地研修 （ミクロネシア、 マーシャル、及びパラオ）など、J-PRISM の C/P による実践を通じた技術習得アプローチ（learn-by-doing approach）は、C/P の技術力向上に貢献してきた。一部の国で、パイロット・プロジェクトや国内研修に国内他島の C/P を参加させたことは、研修員（受講者）・トレーナーとしてそれぞれ参加した C/P 双方の能力向上に有用であった。また、C/P のオーナーシップを最大限確保しつつ、必要な技術支援を行うアプローチは、例えば、ヤップの C/P には高く評価されていた。

４－２－３　実施体制

(1) 大洋州側

大きな問題はなかった。ミクロネシアでは、個々の州が特徴的な実施体制を有しており、プロジェクト・マネジャー以外に、各州にステート・プロジェクト・マネジャーが配置されたことが効果的であった。また、PNG では、プロジェクト・マネジャー/プロジェクト・コーディネーターの下、PDM のアウトプットごとにアウトプット・リーダーが任命されたことが、活動の円滑な実施に貢献した。マーシャルでは、多くの実施機関が関与しているが、組織ニーズが必ずしもプロジェクトと関連性があるわけではなく、実施機関間の役割・責任が不明確であるという問題を招いた。

(2) 日本側

日本側の実施体制は、プロジェクト後半に改善された。短期専門家の配置がより柔軟になり、それが効果的だとみなされれば、特定分野において、1 人の専門家がサブ・リージョン内の複数の州/国を担当することが可能になった。

４－２－４　プロジェクト管理

(1) JCC

総じて、大洋州側は意思決定プロセスに十分に参加してきた。JCC は年 1 回開催され、プロジェクトの全体的な方向性を示すのに有効であった。また、JCC では過去 1 年の進捗も報告された。

(2) 内部モニタリング

多くの JICA プロジェクトにおいて、定例会議は、内部モニタリングに効果的であるこ

とが証明されてきたが、J-PRISM 下の大部分のプロジェクトの当初デザインに、定例会議は含まれていなかった。フィジー及びソロモンでは、プロジェクト前半から、C/P の定例会議を通してモニタリングが行われた。定例会議では、各 C/P が前期の活動を報告し、次期の計画を紹介するが、これにより、全員が、担当外のアウトプットを含めたプロジェクトの進捗をフォローすることが可能になった。フィジーでは、定例会議は、6 つの自治体に所属する C/P たちを結びつけるうえでも効果的であった。ソロモンでは地域研修の参加者（候補者）選定の場としても使われ、透明性の確保につながった。PNG、バヌアツ、及びサモアでは、プロジェクト後半に、定例会議が導入され、モニタリングが強化された。ミクロネシア、パラオ、マーシャルでは、年 3 回、専門家が各国に派遣されたときにモニタリング会議が開かれたが、専門家不在時に C/P によるモニタリングは行われていない。また､マーシャルでは､首都マジュロでの会議に招かれていない離島イバイの C/P に対し、モニタリング結果が共有されないという問題があった。

(3) PDM と PO の活用

一部の国では、中間レビューにおける提言を受け、PDM と PO の活用度は改善された。例えば、フィジー、ミクロネシアでは自治体/州ごとに特定のターゲットを有する個別の PO が作成された。しかしながら、PDM は、どの個別プロジェクトにおいても、いまだに十分に活用されていない。モニタリングの責任者が必ずしも明確になっておらず、指標の進捗がしっかりとモニタリングされていない。さらに、一部の指標は、終了時評価時においても不明確であった〔間接的、目標値がない、判断基準が曖昧、達成不可能（外部条件の影響が大きい)、客観的な検証が困難等〕。また、詳細 PO や年間 PO も策定されてこなかった。これらの問題は、プロジェクトの関係者が、全体的な実施プロセスや PO に基づく進捗、また PDM のプロジェクト目標やアウトプットの期待される達成度について、共通の理解を有することを困難にしてきた。

(4) その他

バヌアツでは、2015 年 5 月の PVMC の規模縮小に伴い、プロジェクト・マネジャーを務めている C/P が解雇通告を受けており、以降、適切な意思決定能力/権限を有するプロジェクト・マネジャーが不在であることが深刻な問題である。当該 C/P は 8 月末に解雇になったが、後任のプロジェクト・マネジャーは評価時点では特定/任命されていない[20]。

４－２－５　プロジェクト内のコミュニケーション

プロジェクト内のコミュニケーションは、ほとんどの国において、活動の円滑な実施に十分であった。実施機関間の協力関係は、多くの国において、構築/強化された。定例 C/P 会議はコミュニケーションの促進にも効果的であった。C/P と専門家のコミュニケーションは、おおむね十分であったが、PNG、バヌアツ、ソロモンでは、専門家の頻繁な交代があり、C/P 側に暫時混乱をもたらした。トンガでは、ババウ州知事との円滑なコミュニケーションが全体的なプロジェクト活動の円滑な実施につながった。一方、バヌアツでは、PVMC の上層部と C/P との

[20] 訳注：バヌアツの評価時点（2015 年 9 月 4 日）。その翌週に、PVMC は助役をプロジェクト・マネジャーに任命している。

コミュニケーション不足が、上層部のプロジェクト活動への理解不足を招いた可能性がある。また、C/P 側のインターネット接続の困難さが、活動の円滑な実施を損なうことがあった。

４－２－６　現地ステークホルダーとの協力/連携

J-PRISM の活動は、表４－１に示すように、関連省庁、自治体、学校、大学、NGO、ウェイスト・ピッカー、コミュニティ、女性グループ、大規模ごみ排出事業者（ホテル、スーパーマーケット、市場等）、ごみ収集会社、資源ごみ回収会社、堆肥/マルチ生産者等、さまざまな現地ステークホルダーとの協力・連携の下、行われてきた（詳細は付属資料 1「合同評価報告書」の ANNEX 4 を参照されたい）。

表４－１　現地ステークホルダーのリスト

国	主要なステークホルダー
フィジー	教育省 及び学校、 ナンディ女性グループ、女性文化省、サンゴ礁沿岸のリゾートホテル、コンポスト生産者
PNG	ウェイスト・ピッカー、 セトルメントのコミュニティ、 民間企業、ゲレフ市場、リサイクリング会社、教師と生徒
ソロモン	ウェイスト・ピッカー （ホニアラ）、 資源ごみ回収会社（ホニアラ）、 リサイクル事業者（ギゾ）、コミュニティ・リーダー（ホニアラ、ギゾ）、女性グループ（ギゾ）、 教師と生徒（ホニアラ、ギゾ）、NGO（ホニアラ）、国立リファーラル病院（NRH）、ソロモン水道公社
バヌアツ	中央市場、有機農業会社（マルチ生産者）、コミュニティ（フレッシュウォーター地区）、資源ごみ回収会社、ハードウェア・センター
ミクロネシア	市役所 及び コンサベーション・ソサイエティ・オブ・ポンペイ （OEEM）、市役所（コスラエ）、リサイクリング会社、NGO、及び教育局（コスラエ、 ポンペイ）、 処分場運転の契約業者（ポンペイ）、 行政サービス局、ミクロネシア・カレッジ、 チューク女性評議会及び学生評議会（チューク）、 青年部、 学校及びリサイクリング会社（ヤップ）
マーシャル	OCS、 マーシャル・アイランド・コンサベーション・ソサイエティ、MOH、 クワジェリン環礁副主席長官事務所（ODCS）
パラオ	保健省（MOH）、 教育省（MOE）、 財務省（MOF）、EQPB
サモア	A ゾーンのゴミ収集業者、リサイクリング会社、コミュニティ・リーダー（ヴァイアラ村、アピア村）、STA
トンガ	リサイクリング会社、 MOE 及び学校

出所：C/P への聞き取り及び質問票

囲み４　ウェイスト・ピッカーとの協力/協調努力

・ PNG
PNG では、プロジェクト後半になって、ウェイスト・ピッカーとの協調が改善された。まず、2014 年に、バルニ最終処分場のウェイスト・ピッカーの現況を把握するために総合的な調査が行われ、人数、個人的属性（年齢、性別、出身地、教育、健康状態等）、扶養家族、生活環境、処分場での収集物、安全対策、ウェイスト・ピッキングを継続する意図等に関する情報が集められた。調査結果に基づき、プロジェクトは、処分場のコントラクターに対し、ウェイスト・ピッカーを雇用するよう働きかけた（14 名雇用）。また、NCDC は、それまで臨時職員として雇っていた 7 名のウェイスト・ピッカーを常勤職員とした。さらに、プロジェクトは、NCDC が実施機関である世銀の「都市部青年雇用プログラム（Urban Youth Employment Program）」と協議し、ウェイスト・ピッカーのコミュニティの青年に対し、2014 年半ばと 2015 年初めに職業訓練機会を提供した。2014 年 9 月、処分場で遊んでいたウェイスト・ピッカーの子ども 2 人が、コントラクターが再委託した業者の雇うブルドーザー運転手の不注意により死亡するという事故が起きた。同様の事故防止対策として、10 月にはバルニ安全計画が策定された。さらに、NCDC、コントラクター、ウェイスト・ピッカー代表から成るバルニ安全委員会が設置された。ウェイスト・ピッカーは、プロジェクトを通して改修された処分場の第 1 セルの開所式に参加した。

・ ソロモン（ホニアラ）
ラナディ最終処分場におけるウェイスト・ピッカーとの協調は始まったばかりである。2015 年 6 月、ウェイスト・ピッカーのコミュニティから保安員 2 名が雇用された。7 月には、現況把握のための調査が行われ、91 名（女性 57、男性 34）のウェイスト・ピッカーが特定された。8 月には、処分場改修工事開始に先立ち、安全啓発のための会合がもたれた。ウェイスト・ピッカーは協力的で、例えば、子どもたちを現場に連れてこなくなった。会議では、また、今後の窓口として、女性・男性それぞれにリーダーを選ぶよう求めた（男性グループはリーダーを決めたが、女性グループはまだ決められないでいる）。HCC は、改修工事完了後、ウェイスト・ピッカーの資源ごみ保管場所として、施設エリアの一部を割り当てる予定であり、これと並行するかたちで、ウェイスト・ピッカーの登録が計画されている。なお、施設エリアには、JICA 草の根技術協力事業により、倉庫が建設され、ペットボトルのプレス機が設置される見込みである（４－２－８表４－４（b）参照）。

４－２－７　J-PRISM 地域協働活動への参加

地域協働活動の研修は、カントリー・アタッチメント、スタディ・ビジット、トレーナー派遣等の形で行われており、C/P に対し、研修受講者やトレーナーとしての、さまざまな学びの機会を提供してきた。また、C/P だけでなく、他部署・他機関の職員や現地ステークホルダーも、研修受講者として地域協働活動に参加してきた（各国の詳細は付属資料 1「合同評価報告書」ANNEX 3 の個別評価報告書を参照されたい）。

研修受講者としては、表４－２のとおり、2015 年 6 月時点で、延べ 162 名の C/P 及びその他関係者 239 名が地域協働活動に参加している。

表４－２　地域協働活動に研修受講者として参加した延べ人数　（2015 年 6 月時点）

	フィジー	PNG	ソロモン	バヌアツ	ミクロネシア	キリバス	マーシャル	パラオ	サモア	トンガ	ツバル	合計
C/P	34	25	16	6	42	6	3	14	8	6	2	162
その他	108	31	39	8	9	23	0	0	21	0	0	239
合計	142	56	55	14	51	29	3	14	29	6	2	401

出所：プロジェクト・オフィス

また、トレーナーとしては、表４－３のとおり、2015 年 6 月時点で、延べ 70 名（実数 23 名）の C/P が地域協働活動に参加している。

表４－３　地域協働活動にトレーナーとして参加した C/P 数　（2015 年 6 月時点）

	フィジー	PNG	ソロモン	バヌアツ	ミクロネシア	キリバス	マーシャル	パラオ	サモア	トンガ	ツバル	合計
延べ人数	39	6	1	9	3	0	0	6	0	6	0	70
実人数	11	3	1	2	2	0	0	2	0	2	0	23

出所：プロジェクト・オフィス

さらに、サブ・リージョン・レベルの活動として、2015 年 8 月には、ソロモンでメラネシア・ワークショップが開催され、PNG、バヌアツ、ソロモンの C/P 及び関係者がグッド・プラクティスや経験を共有した。

４－２－８　他の日本のプロジェクト/国際プロジェクトとの連携

(1)　他の日本の援助スキームとの一体化アプローチ

J-PRISM は、表４－４に示すように、JICA の課題別研修事業、草の根技術協力事業、ボランティア事業、及び日本政府の草の根・人間の安全保障資金協力事業といった、日本の他の援助スキームとの一体化アプローチをとっている（各国の詳細は付属資料 1「合同評価報告書」ANNEX 3 の個別評価報告書を参照されたい）。

表４－４　その他の日本の援助スキームとの連携

<table>
<tr><th></th><th>スキーム</th><th>連携内容</th></tr>
<tr><td>(a)</td><td>JICA 課題別研修事業</td><td>2015 年 6 月時点で、延べ 76 名の C/P が、「廃棄物 3R・再資源化」「廃棄物総合管理及び 3R」「廃棄物管理技術」「廃棄物管理能力向上（応用、計画・政策編）」「地方自治体における廃棄物処理」「環境教育」「フィジーを中心とした大洋州における志布志市ごみ分別モデルの推進」「総合的な廃棄物管理」「準好気性埋立（福岡方式）処分場の設計・維持管理」等の研修コースを受講した。
<table>
<tr><th>フィジー</th><th>PNG</th><th>ソロモン</th><th>バヌアツ</th><th>ミクロネシア</th><th>キリバス</th><th>マーシャル</th><th>パラオ</th><th>サモア</th><th>トンガ</th><th>ツバル</th><th>合計</th></tr>
<tr><td>8</td><td>11</td><td>17</td><td>6</td><td>11</td><td>6</td><td>7</td><td>2</td><td>5</td><td>2</td><td>1</td><td>76</td></tr>
</table></td></tr>
</table>

(b) JICA 草の根技術協力事業

計 6 カ国（フィジー、ソロモン、バヌアツ、パラオ、サモア、及びトンガ）において、下表のとおり、草の根技術協力事業と連携が行われてきた。

事業名/実施団体	国	連携内容
「フィジーを中心とした大洋州における志布志市ごみ分別モデルの推進」（2011-2013）/志布志市	フィジー	2011 年 11 月、志布志プロジェクトと協力し、3R の地域研修を実施。
	バヌアツ	2013 年、志布志市で行われた研修に 2 名の C/P が参加。
「パラオ共和国における簡易型コンポストシステム推進」（2011-2013）/三重県、国際環境技術移転センター（ICETT）	パラオ	コロール州によるコンポスト改善への協力。
「美ら島ババウもったいない運動プロジェクト」(2011-2014)/那覇市、沖縄リサイクル運動市民の会	トンガ	2013 年、2014 年沖縄で行われたリサイクルの研修に、3 名の C/P が参加。
「サモアを中心とした大洋州における志布志市ごみ分別モデルの推進」（2014-2016）/志布志市	バヌアツ	2014 年、志布志市で行われた研修に、3 名の C/P が参加。
	サモア	ヴァイアタ村におけるごみ分別及びグリーン・ウェイストを利用したコンポスト推進に際し、志布志プロジェクトと連携。また、志布志市での研修に、2014 年に 1 名の C/P 名が参加。2015 年 10 月に現地ステークホルダー7 名が参加予定。
「New3R（リデュース、リユース、リサイクル＋リターン）の理念を踏まえた官民協働による家庭ごみの分別収集システム構築プロジェクト」(2014-2017)/特定非営利活動法人こども環境活動支援協会（LEAF）	ソロモン	ホニアラの月例 C/P 会議及び JCC に LEAF プロジェクトのメンバーを招き、情報共有、意見交換を実施。LEAF プロジェクトは、J-PRISM を通して建設されたラナディ最終処分場の施設エリアに、ペットボトルのプレス機を設置する予定。

(c) JICA ボランティア事業 （JOCV /SV）

計 8 カ国で、JICA ボランティア事業との連携が図られており、延べ 11 名の SV（主に環境行政、固形廃棄物管理分野）及び 30 名の JOCV （主に環境教育分野） が、プロジェクト活動に協力してきた。

	フィジー	PNG	ソロモン	バヌアツ	ミクロネシア	キリバス	マーシャル	パラオ	サモア	トンガ	ツバル	合計
SV	1	0	0	0	4	0	5	1	0	0	0	11
JOCV	7	0	4	5	8	0	3	1	1	1	0	30

(d) 草の根・人間の安全保障資金協力

計 5 カ国（フィジー、ソロモン、ミクロネシア、パラオ、及びマーシャル）において、草の根資金協力との連携により、以下の施設整備、機材供与が行われた。

・フィジー：スバ市役所へのシュレッダー及びコンポスト・ハウスの供与。
・ソロモン：ラナディ最終処分場における事務所兼研修センター及びフェンス建設（ホニアラ）。
・ミクロネシア：ごみ収集車供与（チューク、 ポンペイ）、廃棄物処理用車両供与（ポンペイ、 チューク、 コスラエ）、リサイクリング機材供与（ヤップ）、リサイクリング・センター改修（ポンペイ）、新規最終処分場建設（コスラエ、ヤップ*）。
*この新規最終処分場建設は、IMF 及び US コンパクト信託基金によっても支援された。
・パラオ：コンポスト施設及びリサイクリング・センター建設（コロール州）、ごみ分別ステーション建設（コロール州）、ごみ収集車供与。
・マーシャル：車輪付きごみ箱供与（マジュロ）、最終処分場のフェンス建設（イバイ）、廃棄物処分用重機供与（イバイ）。

(2) 他ドナーとの連携

J-PRISM は、表４－５に示すように、ほぼすべての国で、他ドナーと連携を行ってきた。

表４－５　他ドナーとの連携

	ドナー	連携内容
1.	アジア開発銀行（ADB）－オーストラリア国際開発庁（AusAID）	・バヌアツ：「ポートビラ都市開発プロジェクト（Port Vila Urban Development Project）」（下水・道路・衛生設備の改善を支援）において、ブッファ最終処分場における汚泥処理設備建設が含まれていることから、プロジェクトは、ブッファ最終処分場開発計画の策定にあたり、情報を交換した。
2.	AusAID	・トンガ：「統合的水・沿岸管理プロジェクト（Integrated Water and Coastal Management Project）」におけるカラカ最終処分場の四半期水質モニタリング。VEPA とともに、学校及びコミュニティにおけるごみ収集の意識啓発/促進を実施。
3.	オーストラリア政府	・ミクロネシア：ガラス粉砕機の提供（ヤップ）。
4.	GEF	・トンガ：「統合的水資源管理プロジェクト（Integrated Water Resources Management Project）」におけるカラカ最終処分場の四半期水質モニタリング。
5.	IMF	・ミクロネシア：新規最終処分場建設（ヤップ）。
6.	ニュージーランド政府	・ミクロネシア：ウェイブリッジ供与（コスラエ）。
7.	NZAID	・ソロモン：NZAID は、ラナディ最終処分場における 2014 年の洪水後の重機借り上げを支援し、2015 年には同処分場の施設エリアのフェンス建設費用を支援した。さらに、同処分場運転に必要なブルドーザーの調達手続きを開始している。このブルドーザー調達にあたっては、ソロモンに派遣されている短期専門家が、技術助言を行った。また、HCC の公共事業部に派遣されている NZAID の技術アドバイザーが、ホニアラの C/P の月例会議に招かれ、情報・教訓共有、意見交換が行われている。 ・キリバス：NZAID は「都市開発プログラム（Urban Development Programme：UDP）」での、ベースライン調査や意識調査の情報を共有した。双方のプロジェクトの効果的実施のために、互いのプロジェクトの会議に参加し、各プロジェクトの進捗について情報共有した。また、学校モニタリングでの活動車両を共有した。
8.	オイスカ	・フィジー：シガトカ市場の市場ごみをオイスカに輸送し、オイスカでは研修生がそれをコンポスト化する。そしてできたコンポストを販売用としてシガトカに輸送し、一部はオイスカでの野菜栽培用にも活用している。 オイスカは、クリーンスクール・プログラム、地域 3R 研修プログラム等においてもさまざまな技術支援を行った。
9.	SPREP	・パラオ：国家廃棄物管理計画（NSWMP）の改訂、ワークショップ、コロール州への wood chipper 供与。 ・マーシャル：国家廃棄物管理戦略（NSWMS）ドラフト策定支援、「マジュロ環礁統合廃棄物管理プロジェクト（Majuro Atoll Integrated Waste Management Project（2014-2017）」。
10.	台湾技術團	・キリバス：グリーン・ウェイストのリサイクルの効果的方法について情報共有した。土壌改良材として利用することを目的とした実験用のサンプル・コンポストを提供した。
11.	UNDP	・フィジー：UNDP はスバ市のホーム・コンポストに補助金プログラムを提供した。 ・バヌアツ：UNDP は、サイクロン「パム」の災害廃棄物処理において、プロジェクトと連携した。 ・パラオ：コロール州リサイクル・センターへのソーラー・パネル供与。
12.	ジェンダー平等と女性のエンパワーメントのための国連機関（UNWOMEN）	・PNG：プロジェクトは市場から出るグリーン・ウェイストのコンポスト化について、UNWOMEN に支援される NCDC の市場担当部署と協議を行っている。

13.	米国政府	・ミクロネシア/パラオ/マーシャル：ミクロネシア及びパラオにおける廃棄物管理コンパクト信託基金。マーシャル における EPA 及び MAWC の活動への資金援助。
14.	海外ボランティアサービス（VSA） *ニュージーランド	・バヌアツ：ルーガンビル市役所（LMC）に派遣された VSA ボランティア（2012 年～2015 年 6 月）は、空き缶収集システム構築・市場ごみのコンポスト化等、当初ルーガンビルで予定されていたプロジェクト活動の大部分をカバーした（これらの活動に対し、プロジェクトの投入は、短期専門家、ローカル・コストのどちらも非常に限定的であった）。また、サイクロン「パム」の災害廃棄物管理においても連携が行われ、VSA ボランティアは、PVMC 及び DEPC の C/P、並びに LMC 及びサンマ州に派遣中の JOCV とともに被災状況をチェックした。
15.	世界銀行	・PNG：プロジェクトは、NCDC が実施する世銀の「都市部青年雇用プログラム（Urban Youth Employment Program）」と連携し、ウェイスト・ピッカーのコミュニティの青年に対し、2014 年、2015 年に職業訓練機会を提供した。

４－２－９　その他の促進・阻害要因

(1) その他の促進要因

1) 組織的・財政的コミットメント

PNG 政府及び NCDC は十分なカウンターパート・ファンドを確保しており、バルニの処分場（オープン・ダンプ）の改善にあたって、財政的支障がなかった。

2) カウンターパート表彰制度

「年間ベスト・カウンターパート・チーム賞」及び「年間ベスト・カウンターパート賞」といったカウンターパート表彰制度が、C/P の意欲の継続・亢進につながった。〔「年間ベスト・カウンターパート・チーム賞」は、ソロモン（2011/12 年）、トンガ（2012/13 年）、ミクロネシア（2013/14）に授与[21]〕。

3) 2 段階のキャパシティ・アセスメント

各国において、個人レベル、組織レベルの 2 段階のキャパシティ・アセスメントが行われたが、固形廃棄物管理（SWM）にかかる C/P 及び実施機関の現行能力及び強化分野の把握に有用であった。なお、最終のキャパシティ・アセスメントが、2015 年末に予定されている。

4) 太平洋側と日本側の信頼関係

SPREP と JICA 並びに各国 C/P と専門家の信頼関係が、プロジェクトを通して構築・強化されたことが、活動の円滑な実施に貢献した。

(2) その他の阻害要因

JICA の技術協力に対する事前の理解不足：一部の国においては、プロジェクト開始当初、C/P が JICA 技術協力の概念に通じておらず、直接的な財政支援や機材供与はほとんどなく、技術移転と人材育成が中心であることを理解するのに、時間がかかった。

[21] 2014/15 年は、フィジーと PNG が受賞した。

第５章　評価５項目による評価結果

５－１　妥当性

必要性、優先度及びアプローチの適切性の観点において、本プロジェクトは引き続き妥当と評価される。

５－１－１　必要性

上位目標及びプロジェクト目標は、大洋州地域及び各国のニーズに照らして引き続き妥当である。国土が狭い大洋州地域の島嶼国において、廃棄物は観光や商業、食料供給、公衆衛生、自然環境などの面で、国家開発上の大きな問題となっていた。対象国は、土地や人口が限られていることによる国内市場の小ささ、地理的条件による孤立といった共通の特徴を数多くもっているが、経済発展・都市化や生活様式の近代化などに伴い輸入品から発生する廃棄物が増加しており、廃棄物管理が十分行われてこなかったことの影響がさらに悪化する懸念がある。したがって、廃棄物の適切な処分は対象国にとって重要な課題である。特に、廃棄物管理を担当する地方政府の能力強化は緊急に必要とされている。

５－１－２　優先度

本プロジェクトは、地域戦略、対象国の開発計画及び日本の援助政策と引き続き合致している。

(1) 地域戦略及び対象国の開発計画との整合性

まず、本プロジェクトはRS 2010との整合性がとられている。RS 2010は、大洋州地域における単一の対象セクター政策であり、すべての島嶼国と大半のドナーがRS 2010との整合性をとっている。次に、本プロジェクトは、対象国の国家またはセクター開発計画が、増加する廃棄物にかかる開発ニーズに対応すべく、廃棄物管理の強化に対する政府の継続的な取り組み・支援を掲げていることにかんがみ、妥当である。

(2) 日本の援助政策との整合性

本プロジェクトは日本の援助政策とも整合している。2015年5月に出された第7回太平洋・島サミット（Pacific Islands Leaders Meeting：PALM7）「福島・いわき宣言」では、廃棄物管理を含む環境問題への対応にかかる継続的な協力が再確認された。この宣言を受けて、JICAは環境・気候変動、災害リスク管理、廃棄物管理、教育、エネルギー安全保障、インフラの分野における援助を供与するとしている。加えて、JICAは地域レベルの課題解決、特に廃棄物管理及び環境・気候変動にかかる支援にも取り組むとしている。

５－１－３　手段としての適切性

(1) アプローチの適切性

本プロジェクトはRS 2010実施及び域内の活動に貢献してきた。「大洋州地域廃棄物管理戦略（2010～2015年）の終了時評価」によれば、C/Pによる実践を通じた技術習得（learning

by doing）という J-PRISM のアプローチは島嶼国の C/P たちの技術能力を高めるとともに彼らに達成感をもたらしており、今後拡大・適用されれば、最終的には島嶼国間で課題解決が一定程度自立的に継続できるレベルに至る可能性がある。

(2) 日本の技術の比較優位性

日本による援助は、廃棄物管理にかかる技術と日本の経験を移転することに比較優位がある。2000 年以降、JICA は JOCV/SV や技術協力プロジェクトといった各種スキームを活用し、対象国の廃棄物管理分野への支援を行っている。準好気性処分場の建設・運営技術やごみ質調査、タイムアンドモーションスタディなどのごみ調査手法の実施技術は、大洋州地域において適正な技術であると広く認知されている。技術面におけるこれらの比較優位は、対象地域のニーズに十分に応えるものである。

(3) ドナー間の分担

ドナーによる支援の効果を最大化し、重複を避けるべく、SPREP は EU、ADB、GEF、UNEP、JICA といった国際ドナーによる支援の調整と担当分野の割り振りに中心的な役割を果たしている。

５－２　有効性

プロジェクト目標達成の見込みとアウトプットの貢献状況から判断して、<u>本プロジェクトは比較的有効であると評価される</u>。

５－２－１　プロジェクト目標達成の見込み

「３－３ プロジェクト目標の達成状況」にて説明したように、今回使用した指標の現在の達成状況（大半が十分またはおおむね達成）及びアウトプット達成の進展状況から判断し、プロジェクト目標はプロジェクト完了時までにおおむね達成される見込みである。地域協働活動については、本プロジェクトの活動から生まれたグッド・プラクティス 4 つのうち、トンガのババウで始まったコミュニティ・ベースのごみ収集システム（Community-based Garbage Collection）がソロモンのギゾで導入された。また、フィジー、サモア、ミクロネシアにおける日本の過去の ODA プロジェクトから生まれたグッド・プラクティスが、他の対象国に数多く導入された。これらのグッド・プラクティスは本プロジェクトの地域協働活動を通して対象国に共有されたものである。地域協働活動では、2015 年 6 月時点で、計 23 名の C/P が廃棄物管理の 14 分野でトレーナーとして育成されている。対象国のほとんどで、プロジェクトの対象とした廃棄物管理の課題（最終処分場の管理やごみ収集など）についての改善がみられた。

５－２－２　アウトプットのプロジェクト目標への貢献

全体として、アウトプットはプロジェクト目標の達成に貢献するものとなっている。本プロジェクトを構成する 11 カ国の個別プロジェクトと地域協働活動は共通のプロジェクト目標（及び上位目標）を掲げているが、個別プロジェクトは各国固有の課題に取り組むため、RS 2010 の優先課題と連動したアウトプットをそれぞれ設定している。同時に、地域協働活動は主に研

修の形で各個別プロジェクトの目標達成を間接的に支援している。このようにして、本プロジェクト全体としては、域内の廃棄物管理能力の強化が図られている。

５－２－３　その他の促進・阻害要因

特になし。

５－３　効率性

アウトプット達成状況、アウトプット達成のための投入の適切さ及び地域協働活動や外部リソースの活用状況から判断して、本プロジェクトはおおむね効率的であると評価される。

５－３－１　アウトプット達成状況

「３－２　アウトプットの達成状況」に示したように、アウトプットは全体としてはおおむね達成された。

５－３－２　投入の適切さ

(1) 日本側

日本側投入はアウトプット達成におおむね適切であった。

1) 専門家派遣：おおむね適切

質的側面では、適正な経歴と関連の経験、十分な技術水準をもつ専門家が派遣された。ほとんどの専門家が、C/P の技術的な問い合わせに対し即時・的確に回答を提供できている。専門家派遣のタイミング及び量的側面については、対象国の多くで適切であったものの、派遣時期と他の JICA 研修コース実施時期の調整が十分にとられていないケースもあった。

一部の国では、専門家の派遣は特にプロジェクトの前半期に適切ではない面があった。PNG、ソロモン及びバヌアツでは、2011 年 12 月から 2012 年 10 月までの間、短期専門家が派遣されなかったために活動が停滞した。ソロモンとバヌアツではまた、日本側のプロジェクト実施体制変更の影響もあり専門家が何度も交代したことで技術支援のアプローチに混乱が生じ、やはり一部活動の遅れにつながった（もっとも、C/P は現行のアプローチが実践的と考えている）。サモアでは、プロジェクト事務所からさまざまな専門家が交代で派遣されたが、同国の個別プロジェクト専任の専門家は 2013 年 9 月まで派遣されなかった。さらに PNG では、プロジェクト前半期の専門家派遣が不十分だったために機材供与の必要性や仕様が設定された期日までに明確に確認されず、機材供与費が活用されないという結果を招いた。

2) 機材供与：おおむね適切

ソロモン、キリバス、サモア、トンガでは、機材はほぼ計画どおり供与され、プロジェクトの活動に効果的に活用された。

ウェイブリッジ・システムの供与が 3 カ国で計画されたものの、実際には 1 カ国（サ

モア）のみでの供与となった。バヌアツでは、同システムの導入が当初計画されたが、最終処分場に電力供給がなかったために実現しなかった。PNG では、ウェイブリッジ・システムへのニーズがプロジェクト後半期に確認されたが、設置が必要とされたサイトにかかる技術的問題が期間内に解決できなかったため、調達は行われなかった。なお、サモアではウェイブリッジ・システムのメンテナンス及び機器校正の能力・経験をもつ業者が存在しないため、調達機材の維持管理面に懸念がある。

3) 研修員受入：おおむね適切

本プロジェクトによる日本での研修機会は限られていたが、その 1 つであり 2015 年 5 月に沖縄で開催された「J-PRISM 地域専門家養成広域研修」は、参加した C/P から、廃棄物管理で主導的な役割を果たしていく自信を深めることができたと評価されている。同研修はプロジェクト最終年に実施されたため、研修成果はプロジェクトの活動にまだ反映されていない。

4) ローカル・コスト：適切

必要額が期間内に支出された。

(2) 大洋州側

全体として、大洋州側の投入はアウトプット達成におおむね適切であった。

1) C/P 配置：おおむね適切

質的側面としては、ほとんどの対象国にて関連する経歴及び経験をもった人員が配置された。PNG では、C/P の多くが廃棄物管理分野の学歴をもっていた。一方、一部の国では廃棄物管理に関連した経験がない C/P の配置もあったが、同僚や JICA 専門家の支援により活動を実施できるだけのレベルにまで追いつくことができた。

量的側面及び配置のタイミングはほとんどの対象国にておおむね適切であった。ミクロネシアでは、廃棄物管理を担当する同国の政府職員の大半が C/P として配置されたという意味で適切であった。一方、C/P が他の業務などで多忙であり本プロジェクトの活動に専念するのが困難なケースもあった。また別のケースでは、プロジェクト実施中の C/P の離職により同 C/P が所属する実施機関の能力強化が影響を受けた。

一部の国では、実施機関の廃棄物管理担当者の人数が不足しているため、C/P の人数が不十分であった（バヌアツ、サモア）。バヌアツではさらに、プロジェクト・マネジャーをはじめとする PVMC の主な C/P が 2015 年 5 月に整理解雇予告通知を受け、プロジェクトの活動の停滞を招いている。これらの C/P の後任者は、本評価（2015 年 9 月 4 日）時点で特定・指名されていない。

2) 施設の提供：おおむね適切

JICA 専門家のための事務所スペース及び電気・水道が提供された。しかしバヌアツでは、ウェイブリッジ・システムを供与するという本プロジェクトの当初計画が、電力供給が得られなかったため実現しなかった。

3) ローカル・コスト負担：おおむね適切

必要予算が配賦された。ローカル・コストの支出（ディスバース）は大半の国で計画どおりであったが、ディスバースが遅れ、活動の進捗に影響を来した国もあった。また、燃料（費）の不足が最終処分場やごみ収集にかかる活動の遅れの一因となった国もみられた。

好事例としては次のようなものがある。①PNG では、NCDC と PNG 政府〔国家計画モニタリング省（DNPM）を通し〕がバルニ最終処分場の改善費用を負担し、また NCDC は、C/P や関連職員をバヌアツにおける最終処分場管理域内研修（J-PRISM Regional Training on Landfill Management in Vanuatu、2011 年）及びフィジー・サモアにおける最終処分場管理スタディ・ビジット（J-PRISM Study Visit on Landfill Management in Fiji/Samoa、2012 年）に派遣し、その旅費を負担した。②ソロモンでは、西部州政府がトラクターを調達し、日本側が供与した付属品と合わせて最終処分場の運営に用いている。③ミクロネシアでは、OEEM が費用を負担して域内研修に追加の人員を参加させた。④パラオでは、SWM-BPW がリサイクル基金から、最終処分場改善や重機の購入などに必要な費用を十分に支出した。

５－３－３　J-PRISM の地域協働活動の各国レベルにおける活用

「４－２－７　J-PRISM 地域協働活動への参加」で述べたように、研修受講者として延べ 162 名、トレーナーとして延べ 70 名（実数は 23 名）の C/P が J-PRISM 実施のさまざまな地域協働活動に参加した。調査団が聞き取りを行った C/P の多くが、地域協働活動への参加により新たな知見、アイデア、技術、教訓を得たと答えた。それら C/P は、自身が学んだことを同僚と共有し、本プロジェクトの活動を通してそれを実行に移した。このような学びの環境は、C/P の技術能力の継続的な向上や参加者のモチベーション維持に役立った。

地域協働活動を通し、C/P の多くが本プロジェクトの活動から得た知見、アイデア、技術を適用（または適用を計画）している。表５－１はその例である。

表５－１　各国の個別プロジェクトにおける地域協働活動の結果の活用例

国	例
PNG	・3R/4R：C/P は域内研修を通して 3R の重要性を認識するようになり、PDM に 3R 促進の活動を追加するにあたりイニシアティブを発揮した。フィジーのクリーンスクール・プログラム及び市場コンポストがポートモレスビーの状況に即した形で導入された。 ・処分場：サモア及びバヌアツにおける、福岡方式（準好気性システム）を用いた最終処分場の改善が、ポートモレスビーの状況に即した形で導入された。
ソロモン	・3R/4R：フィジーのクリーンスクール・プログラム及びエコ・スクール・プログラムが、ホニアラ及びギゾの状況に即した形でパイロット的に導入された。 ・処分場：PNG 及びバヌアツにおける、福岡方式を用いた最終処分場の改善が、ホニアラで採用された。ホニアラの最終処分場のオペレーション・マニュアルは、バヌアツで作成されたマニュアルをベースに作成された。ギゾでは、トンガで作成されたマニュアルをベースにマニュアルが作成される予定である。 ・ごみ収集：バヌアツ及びトンガの収集ステーション・システム（ステーション/ドラム）がギゾにて適用された。 ・災害廃棄物管理：バヌアツにて J-HOPE を通して得られた経験や教訓が 2014 年の洪水後の災害廃棄物管理活動にて活用された。

バヌアツ	・3R/4R：フィジーの市場コンポスト活動が、ポートモレスビーの状況に即した形で導入された。 ・災害廃棄物管理：サイクロン「パム」後の災害廃棄物管理活動において、ソロモンの経験や教訓（J-HOPE）が活用された。
ミクロネシア	・処分場：ヤップの最終処分場管理研修にて学んだ技術が、ポンペイにおける準好気性処分場の建設にて採用された。またチュークの同様の処分場建設（計画中）においても採用される予定である。
キリバス	・3R/4R：フィジーのクリーンスクール・プログラムがサウスタラワの状況に即して導入された。
サモア	・3R/4R：MNRE は CDL の枠組みを策定中だが、これにはパラオにおける 3R 促進にかかる域内研修の結果が活用されている。C/P はごみ減量化、持続的な財務メカニズム、リサイクル用資源の回収における CDL の便益について学んだ。 ・処分場：フィジーにおけるウェイブリッジ管理及び、バヌアツにおける現地で入手可能な材料を用いたガス抜き管のシステムが適用された。
トンガ	・3R/4R：フィジーのクリーンスクール・プログラムがババウにて採用された。
ツバル	・処分場：フィジーで学んだ労働衛生の実践（作業員が作業中に手袋と靴を着用するなど）が市役所にて導入された。

出所：C/P への聞き取り及び質問票

５－３－４　外部リソースの活用

(1) 日本の他の援助スキームとの連携

効率性を最大化するために、本プロジェクトは課題別研修事業、草の根技術協力事業、ボランティア事業、草の根・人間の安全保障無償資金協力事業、ノン・プロジェクト無償資金協力事業といった日本の他の援助スキームを取り入れた、一体的アプローチをとった（詳細は「４－２－８　他の日本のプロジェクト/国際プロジェクトとの連携」を参照）。

課題別研修に関しては、本プロジェクトの枠（本邦研修）で日本での研修を受けた C/P の人数は 19 名に限られるが、これとは別に他の研修枠（課題別研修）で 76 名が日本での研修に参加した。いずれの課題別研修においても、参加者は知見、アイデア、技術、教訓を学んだ。もっとも一部の国の C/P からは、日本の廃棄物管理関連施設や技術は自国に適用するには先進的すぎるため、域内研修のほうがより効率的・効果的であるという意見が挙げられている。また、課題別研修では 1 日のセッションで扱うトピックが多すぎ、すべてを吸収するのが困難だったと感じている C/P もいる。

(2) 他ドナーとの協力・調整

本プロジェクトの活動実施にあたり、ADB、AusAID、オーストラリア政府、IMF、NZAID、ニュージーランド政府、オイスカ、台湾技術團、UNDP、UNWOMEN、米国政府、海外ボランティア機関〔VSA（ニュージーランド）〕、世界銀行などさまざまなドナーとの協力・調整が行われた（詳細は「４－２－８　他の日本のプロジェクト/国際プロジェクトとの連携」を参照）。

囲み 5　関係者の連携の好事例

・ ソロモン
ホニアラのラナディ処分場の改善工事は MECDM、MHMS、HCC、日本（草の根無償資金協力）、NZAID 及び本プロジェクトの費用共同負担にて実施された。

５－３－５　過去の援助からの蓄積の活用

本プロジェクトでは、パラオ「廃棄物管理改善プロジェクト」(2005 年 10 月～2008 年 10 月)、バヌアツ「ブッファ廃棄物処理場改善プロジェクト」(2006 年 9 月～2008 年 9 月)、フィジー「廃棄物減量化・資源化促進プロジェクト」(2008 年 10 月～2012 年 3 月）といった過去の JICA 技術協力プロジェクトから得られたノウハウや経験も役立った。これらのプロジェクトにて知識や技術を得た C/P は、J-PRISM の各国個別プロジェクト、地域協働活動のいずれにおいても重要な役割を果たした。

５－３－６　その他の促進・阻害要因

次のような阻害要因がみられた。

・域内研修に対する体系的なモニタリング評価の欠如：域内研修の体系的なモニタリング評価が行われておらず、能力強化のインパクトを客観的に測定できない。
・一部 C/P への技術移転の集中及び移転技術の共有の欠如：バヌアツ（PVMC）では、適任者がいないという理由から、技術移転はごく数名の C/P に対してのみ行われた。加えて、習得された知識、経験、技術は他の C/P や関連職員に十分共有されず、C/P が整理解雇となった際、PVMC 内には役割を引き継げる職員がいなかった。
・土地問題：ソロモンでは、最終処分場にかかる土地問題が 2012 年に発生したことで EIA が 2013 年 9 月まで遅れ、処分場改善工事の遅れを招いた。
・自然災害：2012 年にフィジーとサモア、2013 年にフィジー、2015 年にバヌアツをそれぞれ襲ったサイクロンが活動の進捗を妨げた。
・その他：ミクロネシア地域の対象国では、複数の最終処分場において覆土用の土が入手できず（島に存在する土が限られているため)、処分場運営計画を完全に実行できないという共通の問題がみられた。

５－４　インパクト

上位目標の達成見込みは個別プロジェクトによって異なるが、さまざまなプラスのインパクトが既に観察されている。マイナスのインパクトは確認されていない。

５－４－１　上位目標レベルのインパクト[22]

上位目標達成の見込みは個別プロジェクトによって異なる。一部の国では、設定されている指標の定義が不明確かまたは目標値の設定がなく、達成度見込みの判断が困難である。また、指標が達成されるかどうかは地域協働活動の持続性次第であり、各国ではコントロールできないというケースもある。表５－２に個々の評価の要約を示し、表の後にはプロジェクトごとの状況を記述している。

[22] 上位目標は、プロジェクトが達成に貢献する長期的な開発効果と定義され、プロジェクト完了後 3～5 年での達成が期待される。本プロジェクトの上位目標の達成年（目標年）は地域協働活動、各国個別プロジェクトいずれでも PDM に明記がないが、終了時評価調査団とプロジェクト関係者との間で「プロジェクト完了後 3 年」とすることを確認した。

表５－２　上位目標達成見込み

	指　標	上位目標達成見込み
地域協働活動	対象国における廃棄物管理の課題が当該対象国独自、または、他の対象国の協力で大洋州の域内で解決できるようになる。	比較的高い
フィジー	3Rがフィジー全土で実施される。	高い
PNG	ごみ減量化の重要性が理解され、2つ以上のごみ減量化スキームがNCDCにおいて実践される。	高い
ソロモン	最終処分場における資源ごみ及びグリーン・ウェイストの比率が減少する。	一定程度ある 〔基準値（ベースライン・データ）と目標値の欠如により正確な達成度の予測は行えなかった〕
バヌアツ	ポートビラとルーガンビルの最終処分場におけるごみ廃棄量がそれぞれ7%減少する。 *（ポートビラの最終処分場におけるごみ廃棄量が７％減少する）*	不明 （ごみ減量化の組織戦略がいまだ策定されていない）
ミクロネシア	少なくとも2つの訓練・教育活動がミクロネシアにより主催される。	一定程度ある （達成度合いは地域協働活動の持続性に左右され、ミクロネシアのコントロール可能範囲外）
キリバス	80%の家庭が庭ごみリサイクルに参加している。	低い
マーシャル	RMIで行われた優良事例が他の島嶼国に移転される。 少なくとも1つの訓練・教育活動がマーシャルにより主催される。	不明 （達成度合いは地域協働活動の持続性に左右され、マーシャルのコントロール可能範囲外）
パラオ	パラオのグッド・プラクティスが、共通の課題に取り組む他の島嶼国で実施される。	一定程度ある （目標値の欠如により正確な達成度の予測は行えなかった）
サモア	タウン・エリアの世帯の70%が3Rの実践と資源ごみの排出源分別を継続する。 *（2019年2月の時点で、ウポルのタウン・エリアの世帯の70％が 3Rと資源ごみの排出源分別を行っている）* 最低 3件の PPP 活動が実施される。 *（2019年に、ウポルのアーバン・エリアにおいて、最低3件のPPP活動が実施される）*	一定程度ある （一部指標データがいまだ入手できないため、正確な達成度の予測は行えなかった）
トンガ	カラカ処分場が適切に運営管理されている。 ババウ島の全世帯が収集サービスにアクセスできる。	一定程度ある （達成度合いはオペレーション・マニュアルに沿った運営ができるかにかかっている）

注記：十分な定義がなされていなかった指標については、担当プロジェクト・チームとの一連の協議を経て確認された定義を、カッコ内にイタリック体で示している。

＜指標達成の見込み＞

1) 地域協働活動：「準好気性手法を用いた最終処分場」「クリーンスクール・プログラム」「ごみ質調査」「コンポスト化」「災害廃棄物管理」など、島嶼国が 1 カ国でまたは他の島嶼国の協力で域内にて解決すべき廃棄物管理の分野の特定が、徐々になされている。

2) フィジー：3R の実践は、本プロジェクト完了後 3 年以内になされる見込みである。現在、3R は西部地区の 6 の自治体及びスバ市役所にて実践されている。本プロジェクトの対象地域以外の中央地区及び北部地区でも、国内研修や合同の定例会議といった一部の活動には参加しており、3R の一部実践も既になされている。このような積極的な動きはホーム・コンポスト補助金プログラム及び環境局のイニシアティブによるクリーンスク

ール・プログラムへの財政支援にも後押しされている。

3) PNG：本プロジェクト完了後 3 年間のうちに、NCDC が複数のごみ減量化スキームを実行する見込みは高い。まず、減量化策の 1 つとして、「健康、環境、意識、資源の効率性、思考」の改善のための 3R（3Rs for improvement of **H**ealth, **E**nvironment, **A**ttitude, **R**esource efficiency and **T**houghts：3R HEART）イニシアティブが 2014 年から試験的に導入されている。同イニシアティブは廃棄物管理計画（2016～2020 年）のアクション・プランに組み入れられ、廃棄物管理課（WMD）の 2016 年からの通常プログラムの一環として実施される予定である。また、市場から出るグリーン・ウェイストのコンポスト化パイロット・プロジェクトが準備中で、2015 年 9 月から 3 カ月間の試験的実施が予定されている。グリーン・ウェイストのコンポスト化も、廃棄物管理計画アクション・プランへの組み込みと、それによる 2016 年からの実施が期待されている。また、アクション・プランを現実的かつ実行可能なものとすべく、上記 2 つのパイロット・プロジェクトからの教訓を廃棄物管理計画の最終化に反映させる予定である。

4) ソロモン：最終処分場における資源ごみとグリーン・ウェイストの比率は、本プロジェクト完了後 3 年間である程度低下する見込みである。ホニアラ及びギゾの最終処分場では、本プロジェクトを通して導入されたごみ減量化スキームがプロジェクト完了後も継続・拡大する見通しであることから、資源ごみの比率の低下は可能である。グリーン・ウェイストについては、パイロット・プロジェクトが家庭ごみのコンポスト化をターゲットにしていること、かついまだ実施の初期段階であることから、比率が低下するかどうかは不確かである。

5) バヌアツ：ポートビラのごみ廃棄量がプロジェクト完了後 3 年間で 7%以上減少するかは不確かである。本プロジェクトでは、①中央市場における有機ごみの分別・コンポスト化及び②フレッシュウォーター地区における空き缶回収システムという 2 つのごみ減量化活動を導入した。中央市場での活動は継続が見込まれるが、ポートビラの他の市場は PVMC の管轄外であるため、同活動が拡大する可能性は低い。空き缶回収システムは現時点では機能しておらず、整理解雇通知を受けた担当 C/P の後任もいまだ特定・指名されていないため[23]、システムが立て直され・拡大されるかは不明である。加えて、PVMC はごみ減量化の組織戦略を有していない。

6) ミクロネシア：各州の C/P が島嶼国に研修できるテーマの候補としては、CDL 及び 10 年以上の準好気性処分場運営経験（コスラエ）、ごみ収集及び最終処分場の改善（ポンペイ）、ごみ収集（チューク）、最終処分場運営、啓発及び CDL（ヤップ）が挙げられる。OEEM は将来の必要性に応じ、そのような各州の動きを促進・支援する意思がある。しかし、これらのグッド・プラクティスが他の島嶼国に広められるかどうかは地域協働活動の持続性の有無に左右されると思われる。

[23] 訳注：バヌアツ評価時点（2015 年 9 月 4 日）。その翌週、当該 C/P は再雇用された。

7) キリバス：現時点のアウトプット及びプロジェクト目標の達成度からは、3 年以内に80%の世帯が庭ごみ（グリーン・ウェイスト）のリサイクルに参加するという目標を達成できる見込みは低い。

8) マーシャル：マジュロの啓発・教育活動及びイバイの環礁における統合的（十分な連携のとれた）廃棄物管理は、C/P が島嶼国に研修できるテーマの候補となり得る。しかし、前者の活動は本プロジェクト以外の要因で向上した部分が大きく、また後者は始まったばかりである。さらに、これらのグッド・プラクティスが他の島嶼国に広められるかどうかは地域協働活動の持続性の有無に左右されると思われる。

9) パラオ：パラオで実践されているグッド・プラクティスが類似の課題に取り組んでいる他の島嶼国にて実施される見込みは一定程度ある。M ドック処分場及び容器デポジット・プログラムは、パラオが他の島嶼国に研修できるテーマとして有望である。容器デポジット・プログラムについては、パラオのプログラムは他のミクロネシア諸国と比較して飲料容器当たりのデポジット額が高いが、廃棄物管理活動の資金を捻出できる、実際に機能している CDL の一例として、参照する価値がある。

10) サモア：

・2019 年にウポルのタウン・エリア世帯の 70%が 3R と資源ごみの排出源分別を行っているかどうかは、①関連データが入手できず、②収集方法がいまだ確定していないため、不確かである。パイロット・プロジェクトを通し、資源ごみの排出源分別（世帯レベル）が 7 村またはコミュニティ 475 世帯からなる A ゾーンにて推進されたが、パイロット・プロジェクトはいまだ実施中のため、分別を実行している世帯数の実績データは入手できていない。また、MNRE は資源ごみの収集法について別のアプローチ（ステーションでの収集）を模索中で、最も実用的なオプションはパイロット・プロジェクトの結果に応じてプロジェクト完了前に決定される見込みである。

・2019 年に、ウポルのアーバン・エリアにおいて、最低 3 件の官民連携（Public-Private Partnership：PPP）活動が実施される見込みは高い。促進要因としては、①資源ごみの分別がパイロット的に行われており、プロジェクト完了後に拡張される見込みが高いことと、②MNRE と報道機関のスタッフが JICA 草の根技術協力「サモアを中心とした大洋州における志布志市ごみ分別モデルの推進」の研修から戻った後に、両者の間で啓発への取り組みがなされると期待されること、及び③STA がホテルや海の家（fale）におけるグリーン・ウェイストのコンポスト化の推進に同意していること、が挙げられる。

11) トンガ：

・カラカ処分場が適切に運営されるのは、オペレーション・マニュアルに沿った運営ができるかどうかにかかっている。

・ババウのごみ収集システムにかかる現在の良好な実施状況を考えると、プロジェクト完了 3 年後に全世帯がごみ収集システムにアクセスできる見込みは高い。

５－４－２　その他のインパクト

表５－３に示すように、さまざまなプラスのインパクトが既に観察されている。今後、さらに多くのプラスのインパクトが見込まれる（詳細は付属資料 1「合同評価報告書」ANNEX 3 の個別評価報告書を参照されたい）。

表５－３　既に観察されたプラスのインパクト

	プラスのインパクト
J-PRISM 全体	・**ドナー調整の向上**：SPREP は域内活動の実施のみならず、ドナーによる域内の環境プロジェクトの調整に役割を果たしてきた。ドナー調整は、SPREP のイニシアティブにより中間レビュー後に大きく改善された。原則として、J-PRISM の業務調整担当者と他ドナーが参加して、月 1 回のドナー調整会議が開催されている。その他必要に応じ、J-PRISM の業務調整担当者は Pac Waste、GEFPAS などの他ドナーによるプロジェクトの会議にも出席している。このような相互参加により、情報共有及び役割分担や協力にかかる協議が行われてきた。他ドナーのプロジェクトに J-PRISM からローカル専門家を派遣して技術支援した事例もいくつかある。
地域協働活動	・**3R＋リターンの認知の向上**：3R＋リターンは、アジア 3R 推進フォーラムや国連小島嶼開発途上国会議（UNSIDS）にて受け入れられ、公式文書に明記されてきた。 ・**すべての島嶼国をつなぐプラットフォーム**：大洋州島嶼国は地理的に孤立していることから相互交流やネットワークの構築に制約があったが、地域協働活動がプラットフォームとして機能し、相互ネットワークの機会を提供し、情報共有が促進された。
フィジー	・**3R 推進の財政メカニズムの導入**：環境局自身のイニシアティブにより、3R 活動推進のための 2 つの財政メカニズムが試行され、効果を上げている。このことは、環境局が 3R 推進に高い優先度を付し強力にコミットしていることの現れである。今後、フィジーの 3R モデルが全国に普及することによる大きなインパクトが期待される。 ・**メディアによるコンポスト容器活用への意識喚起**：環境局のイニシアティブにより、ホーム・コンポスト補助金プログラムのためのテレビ・新聞広告が開始された。市役所の C/P からは、コミュニティは自らのイニシアティブでごみを減らし環境を大切にするようになったとの指摘があった。
PNG	・**最終処分場における火災発生数の減少**：バルニ処分場における火災は、NCDC による現場での監督が強化されて以降激減した。 ・**ウェイスト・ピッカーの雇用機会**：NCDC はウェイスト・ピッカーを臨時労働者として雇用していたが、雇用形態を常勤に切り替えた。コントラクターもウェイスト・ピッカーを現場スタッフとして雇用することを推奨された（14 名が雇用された）。また、世界銀行の都市部青少年雇用プログラム（Urban Youth Employment Program）との連携により、ウェイスト・ピッカーのコミュニティの若者に対し職業訓練機会が提供された（詳細は「囲み 4」参照）。 ・**最終処分場における健康リスクの減少**：終了時評価調査団による聞き取りにおいて、ウェイスト・ピッカーのコミュニティから雇用されているバルニ処分場の作業員は、2014 年に処分場の運営の本格的な改善が開始され、廃棄物に覆土がなされたことでハエが減少し、本プロジェクト以前に直面していた健康リスク（ごみの投棄やハエが媒介する病気）にプラスの変化があったと答えた。 ・**ごみ収集サービスのエンドユーザーとの対話の機会の増加**：ごみ量・ごみ質調査やタイムアンドモーションスタディなど本プロジェクトを通して導入されたフィールド調査により、サービス提供者（C/P）と利用者（一般市民、民間企業など）の間の対話の機会が増加し、現場のニーズや課題についての理解が深まった。調査の結果は収集サービスの向上に反映された。 ・**学校における「リデュース」と「リユース」の実践**：3R HEART パイロット・プロジェクトを通し、8 校のうち 6 校が「リデュース」及び「リユース」を導入済みである。なかには、3R HEART のオーナーシップをもち、費用の問題を理由に実施できないとする代わりに自費でアルミ缶やペットボトル用のカゴを作製した学校もある。一部の生徒は、家庭やコミュニティの不要品を学校に持ってきて、使えるものを作り出している。例えば、ウイスキーの瓶をカラフルな装飾品に作り替え、10 キナで販売するなどである。

ソロモン	・**最終処分場監督者の常勤ポストの創設**：HCC は最終処分場管理の重要性を認識し、2014 年 3 月に処分場監督の常勤ポストを創設した。 ・**ウェイスト・ピッカーの雇用機会**：2015 年 6 月以降、ラナディ最終処分場の 2 名の警備員がウェイスト・ピッカーのコミュニティから雇用されている。 ・**ごみ量・ごみ質調査の対象地域外への広がり**：環境・気候変動・災害対策省（MECDM）は本プロジェクトを通して移転された技術と知識を用い、3 州にてごみ量・ごみ質調査を実施した。 ・**月例ステークホルダー会議の導入**：保健・医療サービス省（MHMS）と MECDM は月例 C/P 会議の有用性を認識し、これと類似の月例ステークホルダー会議を開始した。同会議では、ゴールド・リッジ金鉱山開発のモニタリングを行っている。 ・**アルミ缶回収システムの構築**:ギゾではアルミ缶回収システムが構築された。ホニアラでは、ギゾ町役場（GTC）/西部州政府がアルミ缶をリサイクル目的で回収している女性を支援している。 ・（洪水災害の後の災害廃棄物管理については「囲み 1」を参照されたい）
バヌアツ	・**廃棄物管理法**：DEPC は、本プロジェクトを通して得た知識を活用し、2014 年に廃棄物管理法の法案を起草した。 ・**ホーム・コンポストの試験的導入**：環境保全保護局（DEPC）は、ポートビラで実施されたごみ量・ごみ質調査の分析結果からホーム・コンポストへのニーズを特定し、PVMC 及び農業農村開発局（DARD）と協力して 7 世帯を対象としたパイロット・プロジェクトを開始した。 ・**DEPC における資源ごみの分別収集**：DEPC はごみ減量化の重要性を認識し、JOCV の協力の下、自身の事務所における資源ごみ（ビン・缶）の分別を開始した。 ・**市場の清潔さの向上**：中央市場は、PVMC が有機ごみを分別収集し有機農業を営む企業に腐葉土の原料として運ぶようになってから、清潔さが向上した。 ・（サイクロン「パム」の後の災害廃棄物管理については「囲み 1」を参照されたい）
ミクロネシア	・**新たなごみ収集システムの導入**：本プロジェクトの活動は、新たな収集システムの導入によって自治政府のモチベーションを高めた（ポンペイ）。 ・**プロジェクトの経験の波及**：本プロジェクトの経験は、プロジェクト対象外の開発事業（チュークにおける仮処分場及び新たに建設する準好気性処分場など）でも活用された。
キリバス	・**廃棄物管理に対する意識の波及**：廃棄物管理に対する意識向上は学校だけにとどまらず、学校の先生や生徒を通して他にも波及している。環境保全局（ECD）の職員は、学校の生徒を通して保護者の意識も向上していると指摘している。
マーシャル	・**環境へのプラスのインパクト**：データは入手できないものの、イバイの C/P は、ごみ収集の改善及び最終処分場での野焼きの禁止による有害物質の発生減少が環境にプラスのインパクトを与えたと考えている。
パラオ	・**持続的な資金調達**：SWM-BPW は職員の追加雇用、啓発活動、最終処分場の改善（重機購入を含む）、リサイクル施設の追加建設などに、リサイクル基金をより有効に使えるようになった。 ・**新たな共同事業の創出**：本プロジェクトを通し国レベル（SWM-BPW）とコロール州（SWM-KSG）の廃棄物担当部署のインタラクションが活発化し、ガラス工芸プロジェクトなど新たな共同事業につながった。 ・**SWM-BPW における役職創出**：SMM-BPW に 5 つの常勤ポストが追加設置された（うち 3 名分は雇用済み）。
サモア	・**最終処分場におけるグリーン・ウェイストのコンポスト化**：食品加工企業及び公園から出るグリーン・ウェイストはタファイガタ処分場でコンポスト化されるようになり、廃棄物処理量の減少に貢献した。 ・**重量に応じたごみ処理料（tipping fee）の導入及び廃棄物搬入量の減少**：本プロジェクト以前、ごみ処理量は車両の種類によって設定されていたが、ウェイブリッジ・システムの導入により、搬入されるごみの量が測定できるようになった。搬入量報告書に基づき、重量に応じた新たな料金が 2015 年 1 月に導入された。新料金体系と処分場の営業時間は 2014 年 12 月にラジオとテレビで告知され、2015 年 1 月から現在まで実施されている。新料金体系導入後、廃棄物搬入量は急激に減少した（2014 年 9 月～12 月は月平均 758,863kg、2015 年 1 月～6 月は月平均 576,375kg）。なお 2015 年は不法投棄の報告はない。また、グリーン・ウェイストの主な発生源〔サモア観光局（STA）及びフガレイ市場（町で最大の市場）〕からタファイガタ処分場へのグリーン・ウェイストの搬入はなくなった。STA はグリーン・ウェイストをコンポスト化し街路の植栽への肥料に用いるようになった。 ・**市民の意識向上**：2015 年 5 月 27 日、7 月 30 日、8 月 13 日の新聞（Samoa Observer）に、ごみ分別・減量化のパイロット・プロジェクトに関する記事が掲載され、市民の啓発に貢献した。

トンガ	・**民間リサイクル会社による学校生徒への環境教育**：現在、GIO Recycling Company は同社リサイクル・センター及びカラカ処分場において、主に小学生に対する環境学習の機会を提供している。 ・**グッド・プラクティスの創出**：一部コミュニティでは、さまざまな「グッド・プラクティス」が観察された。例えば、ごみ委員会によるごみ収集作業やコミュニティ自身によるごみ収集活動費用の確保が挙げられる。本プロジェクトの「アウトリーチ」活動を通し、コミュニティ・エンパワーメントが強化された。 ・**破傷風感染率の低下**：タウン・オフィサーによれば、マタイカ・コミュニティにおける破傷風感染率は低下しているとのことであるが、ごみ収集によってまわりの環境が衛生的になったことがその要因の 1 つとも考えられる。

出所：プロジェクト報告書、JICA 専門家及び C/P への聞き取り及び質問票

５－５　持続性

地域協働活動及び各国の個別プロジェクトによって評価判断が分かれた。これに基づくと、本プロジェクトの効果の持続性は「中程度」から「高い」の間と評価される。

５－５－１　地域協働活動にかかる持続性

地域協働活動にかかる持続性には大きく 2 つの観点がある。1 つは廃棄物管理の分野における域内/南南協力一般は継続する見込みであり、この点での持続性は確保される見込みが高い。もう 1 つは、J-PRISM において日本側がこれまで行ってきた域内での研修やワークショップなどを SPREP が引き継いで、必要な人的・金銭的資源を配分するかという点だが、SPREP がそのためのドナー資金を長期的に確保できるかにかかっている。

(1) 政策面

廃棄物管理における南南協力一般、J-PRISM の地域協働活動の継続どちらに対しても、政策的な支援は確保される見込みが高い。新地域戦略案（CLEANER PACIFIC 2025 : Pacific Regional Waste and Pollution Management Strategy 2016-2025）が策定され、2015 年 9 月の SPREP 年次総会における採択が見込まれている[24]。J-PRISM の下で実施されてきた 3R＋リターンや域内協力・協働が同戦略のなかに基本理念として組み込まれている。また、SPREP の Pacific hazardous Waste Management（PacWaste）では、今後 12 カ月間でリサイクル実施者のネットワークを構築する予定である。

(2) 組織面

廃棄物管理における南南協力一般については、新地域戦略案（2016～2025 年）の戦略的アクションとして域内・各国内協力の促進が掲げられていることから、組織面での持続性は確保される見込みである。加えて、域内廃棄物管理委員会（クリーン・パシフィック・ラウンド・テーブル）の設置が上記 SPREP 年次総会にて採択される見込みである[25]。同委員会は、新地域戦略案（2016～2025 年）の進捗モニタリングを行うメンバー国と域外ドナー間のプラットフォームとして機能することが期待されている。

一方、J-PRISM のプロジェクト・オフィスが実施してきた地域協働活動については、その継続のための組織面での持続性に懸念がある。現在、SPREP の廃棄物管理分野の人員と

[24] 訳注：英文合同評価報告書作成時点。2015 年 9 月 25 日の年次総会にて採択済み。
[25] 訳注：英文合同評価報告書作成時点。2015 年 9 月 25 日の年次総会にて採択済み。

しては、廃棄物管理・汚染対策部（WMPC Division）に中核スタッフ（廃棄物管理アドバイザー）1 名が配置されているのみである。同課は増大しつつある廃棄物管理への需要に対応するべくリサイクル担当官のポジションを設けることを提案しているものの、いまだ実現には至っていない。現在の人員配置のままであれば、研修準備の事務作業などの面で、SPREP が J-PRISM 完了後に自力で活動を継続・拡大させるのは困難であると予想される。

(3) 財務面

廃棄物管理における南南協力一般については、財務面の持続性は確保される見込みである。増大しつつある廃棄物管理の需要に対応するため、SPREP は資金の確保に努めており、これまでに 1,700 万ユーロが欧州開発基金（European Development Fund : EDF）11（2017～2022 年）の下でプレッジされている。SPREP は予算の計画額と実際の調達額のギャップを埋めるための交渉の場として、クリーン・パシフィック・ラウンド・テーブルを活用することを計画している。しかしながら、上記の資金が J-PRISM の地域協働活動継続のためにどの程度活用できるかは不確かである。

(4) 技術面

技術面において、廃棄物管理における南南協力一般にかかる問題はないと考えられるが、SPREP が島嶼国間の南南協力推進などの域内メカニズムを維持する方法を引き続き模索することが重要である。

J-PRISM の地域協働活動の継続についても、技術面の持続性確保は可能である。地域協働活動が示したような域内の相互学習のメカニズムが持続すれば、本プロジェクトを通して移転された知識や技術が維持されると考えられる。

トレーナーを務めたことのある C/P の人数は増加している。2015 年 6 月時点で、7 カ国 23 名の C/P がトレーナーとして地域協働活動に参加した。域内トレーナーの養成研修（地域専門家養成研修）が 2014 年にフィジー、2015 年に沖縄で開催され、16 名の C/P が招へいされた。これらの C/P はプロジェクト・オフィスの専門家と協働で、現場指導、ワークショップ、研修などの際の参考資料としての島嶼国廃棄物管理ガイドブックを作成中である。このガイドブックは養成研修参加者が学んだ現場経験や教訓を反映しており、実践的で島嶼国のニーズに応える資料となることが期待されている。ガイドブックは本プロジェクトの完了前に最終化され実施機関に配分される予定である。さらに、J-PRISM のトレーナー及び研修の受講者を登録したデータベース（PIDOC）が SPREP のインベントリーとして構築されており、①廃棄物管理分野で南南協力に効果的な役割を果たすことができる域内のリソース・パーソンを探したり、②廃棄物管理の研修ニーズやニーズと実際のギャップを洗い出したりするのに役立つと思われる。PIDOC をより包括的・実用的なものとするため、他ドナーによる研修のデータも併せて入力することが検討されている。プロジェクト・オフィスと SPREP には、プロジェクト完了前に PIDOC の効果的な活用にかかる詳細を検討することが期待される。なお、地域協働活動の定期モニタリングと評価は行われていないが、これがあれば同活動のさらなる改善と PIDOC の充実につながったと思われる。

５－５－２　各対象国の個別プロジェクトにかかる持続性

各国の個別プロジェクトにかかる持続性は「中程度」から「高い」の間でばらつきがある。組織面と財務面の持続性に懸念がある国が多い。

(1) 政策・法律面

廃棄物管理活動の継続に対する政策的・法的支援はおおむね確保されると思われる。ほとんどの対象国で、廃棄物管理にかかる政策的・法的枠組みが存在しているか、本プロジェクトにより設置済みまたは設置予定である。例えば PNG では、国家的枠組みが存在していなかったことで、NCDC は自身の廃棄物管理政策・戦略・内部規則を策定するに至った。一方マーシャルでは、政府内に廃棄物管理に対する一般的な支持はあるものの、国家廃棄物戦略案はいまだ承認されておらず、廃棄物管理にかかる人材育成を明確に支持する政策文書もみられない。

(2) 組織面

組織面の持続性は国によりばらつきがあるものの、全体としては半数以上の対象国で確保されると考えられ、また持続性が低い国もない。実施機関の多くは、本プロジェクトで導入された活動を、プロジェクト中と同様の規模かまたは少なくとも部分的には継続していくだけの組織体制を有している。複数国に共通してみられたプラスの要素及び課題には次のようなものがある。

①プラスの要素：

・廃棄物管理にかかる組織戦略が存在していること。例えば、メラネシア諸国のほとんどで、実施機関は今後の廃棄物管理にかかる組織戦略をもっている。

・廃棄物管理の実施を担当する組織に廃棄物専任部署が存在していること。例えば PNG では、NCDC（地方自治体）には廃棄物管理専門の課が設けられている。ソロモンでは、HCC（地方自治体）が同様の部署を設置することを計画している。パラオでは、BPW（国レベルの公共事業担当部門）の廃棄物管理部署（SWM）が、ユニットから課へと昇格された。

・廃棄物管理を担当する人員が増加したこと。例えばフィジーでは、DOE（環境担当部門）はフィジーの 3R モデルを全国に普及させることに強くコミットし、人員を増強している。上述の HCC（ソロモン）や SWM-BPW（パラオ）も廃棄物管理担当官を追加的に雇用している。

②課題：

・廃棄物管理を担当する人員が不足していること。多くの実施機関が、本プロジェクトで導入された活動の継続に必要な人員の不足に直面している。例えばトンガでは、最終処分場の管理要員数に課題があり、プロジェクトで作成したオペレーション・マニュアルに沿った最終処分場運営体制を維持できるかどうかが懸念される。バヌアツでは、2015 年 5 月の PVMC 再編に伴い、廃棄物管理にかかる体制の規模縮小及び人員削減があった。

・本プロジェクトで創設されたメカニズムを継続する戦略・計画が欠如していること。例えばマーシャルでは、本プロジェクトで設置された C/P 会議（Counterpart Committee）による活動のモニタリングを今後どのように継続していくかの具体的計画が策定さ

れていない。

・その他の課題としては、職員の頻繁な交代、離職または整理解雇された職員の後継者となり得る人材がいないこと（バヌアツ他）、契約管理が不十分であるため、最終処分場の運営を委託された企業の継続性が不確かであること〔ポンペイ（ミクロネシア）他〕などが挙げられる。

(3) 財務面

全体的にみると、財務面の持続性は半数以上の対象国で確保されると考えられ、また持続性が低い国もない。もっとも、不確実な点が残る国もある。

①プラスの要素：

・廃棄物管理にかかる国家または地方の予算が増加していること。例えばトンガでは、最終処分場にかかる予算はすべて MOH が支出しており、2014 年以降その額は増加している。また環境・エネルギー・気候変動・災害管理・気象・情報・通信省（MEIDECC）がコミュニティ・ベースのごみ収集、クリーンスクール・プログラムに初めて予算を支出した。今後も必要な予算を配分することが期待されている。

・自己資金調達メカニズムを構築しつつあること。例えば、キリバスでは、廃棄物管理の独立採算システムをベシオ町役場に導入した。ベシオ町役場では機材を他の自治体にリースすることでも収入を得ている。パラオでは、容器デポジット・プログラムによるリサイクル基金が廃棄物管理活動に用いられている。

・その他の効果的なイニシアティブがあること。フィジーでは、環境局のイニシアティブでホーム・コンポストへの補助金及びクリーンスクール・プログラム実施への資金支援などを行った。

②課題：

・廃棄物にかかる国家予算が減少しているか不確実であること。例えばバヌアツでは、中心的な実施機関である PVMC が財政難に陥っていることから、必要予算が確保されるかどうかが不明な状況である。

・予算のディスバースが遅いこと。一部の国では、必要予算は配分されているものの、他の優先事項への流用や事務手続きの遅れによりディスバースが遅れがちである。

・将来の外部資金の見通しが不明であること。ミクロネシア及びマーシャルでは、予算の相当部分は米国コンパクト信託基金の環境セクター・グラントから支出されている。これらの国に共通する、同信託基金に関する将来の懸念として、①優先事項が変更され、廃棄物管理分野への安定的な資金配分がなされるかどうかが不確かであることと、②同信託基金が 2023 年に終了予定であることが挙げられる。

(4) 技術面

全体的にみると、技術面の持続性は半数以上の対象国で確保されると考えられ、また持続性が低い国もない。

①プラスの要素：

・本プロジェクトで達成された能力強化により技術面の持続性が向上したこと。本プロジェクトを通して移転された知識や技術のほとんどは、適切かつタイムリーなもので

あり、ほとんどの対象国で維持され得ると考えられる。例えばフィジーでは、C/P が 3R を現場で実践すると同時にトレーナーとして 3R の指導を行う機会があることで、より地元のニーズに即した指導ができ、その結果、指導をうける者にとっても受け入れやすく技術面の持続性の向上につながっている。C/P が作成した研修マニュアル及び教材は、J-PRISM の支援対象ではない自治体や 3R について関心のある他の関係者に対しても常に入手可能な状態となっている。

・組織内に、知識や技術を共有する仕組みがあること。例えばパラオでは、SWM-BPW は職員が研修などで学んだ事項を他の職員に共有するセッションを開始した。今後の定期的な開催が計画されている。

②課題：

・C/P の離職などにより移転技術が失われたこと。C/P の頻繁な交代や欠員は、技術移転を困難にするとともに、特に習得技術を組織内で共有する仕組みがない場合は技術面の持続性を損なう結果となっている。

・活動によっては、データ分析及び分析結果の廃棄物管理業務への活用についての技術移転がさらに必要であること。一部の国では、C/P の技術能力が向上したものの、残る課題として、ごみ調査の結果を分析し、その結果を廃棄物管理、最終処分場の運営及びマニュアルに基づいた運営のモニタリングに活用する能力・経験がいまだ限られている。また、パラオでは、容器デポジット・プログラムの関連機関における財務データの収集と集計が改善したが、データの分析と同プログラムの運営改善に向けた分析結果の活用にはさらなる向上の余地がある。

・供与機材のメンテナンスに課題があること。供与された機材は廃棄物管理活動の実施に不可欠であり、プロジェクト後も継続して十分に活用される見込みである。サモアでは、ウェイブリッジ・システムの定期メンテナンス及び緊急修理サービスを提供する現地企業がないことが大きな懸念となっている。システムの保証期間は終了しているにもかかわらず、メンテナンス・サービスと部品を提供できる企業が特定されていない。ウェイブリッジの校正経験を有する企業もいまだ特定されていない（現地には存在しない）。

(5) その他

パラオでは、海外から数多くの新技術（プラスチック油化、バイオガスなど）が持ち込まれる傾向があり、適正技術及び実行可能性の観点でコントロール及び調整するのが困難な状況となっている。

第６章　結論

６－１　総括

本評価調査によって、プロジェクトは着実に進捗していることが確認された。これらは、C/P の積極的な参加、現状に即した改善方法の選定と調整、本プロジェクトにより育成されたローカル専門家との連携（カントリー・アタッチメント、スタディ・ビジット、専門家派遣等）が大きな役割を果たした。この結果、廃棄物管理に係る能力向上とした本プロジェクトの目標は、プロジェクト期間中に達成される見込みであり、当初計画どおり 2016 年 2 月 2 日をもって本プロジェクトは終了する。他方、各国及び SPREP には本プロジェクト成果を持続させるためにも、継続実施、改善すべき事項が残されている。

2013 年に実施された中間レビュー調査における提言を実施したことによる結果として、本プロジェクト成果は 2014 年小島嶼開発途上国（SIDS）国際会議、日本の環境省によるアジア 3R フォーラム等の多くの国際会議にて発表された。これにより、複数国を対象とした広域プロジェクトの優良事例の 1 つといえる。

本プロジェクトにて取り入れ、実践している“Learn-by-doing”によるガイダンス/コーチング形式の技術指導は関係者により十分に理解され活用されていることを確認した。また、PacWaste 等の他のプログラムにおいても用いられ、さらには現行戦略からの学びとして新地域戦略案（2016～2025 年）のなかにおいても、言及されている。

６－２　プロジェクト終了後に実施、検討される事項

(1) 本プロジェクトにより育成されたローカル専門家のさらなる能力向上

フィジーと沖縄で 16 名の C/P を対象として将来の南南協力を実施すべく指導者育成研修が実施された。同研修により、地域人材のキャパシティの一層の向上が望めるとともに、廃棄物管理ガイドラインが作成、配付予定であるため、他の参加国への貢献も期待される。

このような地域人材及び各種資料の有効活用のため、域内研修の効率的な計画立案、管理、評価の仕組みをつくることが必要である。また、クリーンパシフィック円卓会議を活用した資金源を確保する取り組みもまた重要となる。

(2) 実施体制の改善

本評価調査の結果、各国、SPREP において政策面、組織・体制面、技術面、財政面での持続性に引き続き課題があることが確認された。例えば、主要 C/P の頻繁な異動、通常業務量過多、執務環境の悪さ等の理由により、必要な技術指導を実施できないケースがあった。また、廃棄物管理に関係する上位機関のコミットメントが不十分であることにより、技術指導に影響を及ぼした国もあった。本プロジェクト終了後の持続性の確保のためにも、これらの状況は改善される必要がある。

SPREP もまた、廃棄物管理分野においては技術面、財政面で不十分な体制である。本調査時点では、限られた予算で対象 21 カ国をカバーするのに廃棄物管理アドバイザーというひとり分のポストしか設置されていない。地域レベルの廃棄物管理改善を長期的に実現させるためには、これら SPREP の体制強化は必須である。

この結果、本プロジェクト成果を効果的に活用するために最大限の努力を払うことが重要

であり、また本評価調査結果を用いることで同成果を新しい地域廃棄物管理戦略に整合させることが必要である。

(3) 優良事例の地域内共有

本プロジェクトにより得られた優良事例は、他の大洋州地域へ拡大されることが期待される。この拡大を実現、促進させるために、優良事例を慎重に調査、分析し、対象国に適用しやすい方法としてまとめることが必要である。

(4) 各国における関係者間のコミュニケーション

廃棄物管理、3R 活動等が進むにつれて、活動の幅が広がり関係者が増えてくることが予想される。このため、本調査を活用して、積極的に現地レベルでの関係者間のコミュニケーションの促進を図ることが重要である。

(5) 廃棄物管理に係るデータの共有可能性

各国では J-PRISM 及び他の機関により作成されたごみ排出量等の廃棄物管理に係るデータを有している。SPREP 及び J-PRISM はこれらのデータを他の大洋州の国々と共有し、新しい取り組みを検討する際の参考材料とするなどの、有効利用の方法を検討することが望まれる。

第７章　提言

(1)　専門家データベースの活用方法を検討する。

本プロジェクトによる専門家データベース（PIDOC）が SPREP のデータベースとして作成された。他方、同データベースの今後の活用方法については明確になっていない。今後とも大洋州地域内でのローカル専門家の活用を想定すると、これらは有用なデータベースであることから、SPREP が中心となってこれらの活用法について検討を進める。

(2)　本終了時評価にてまとめられた提言の着実な実行

各国において、それぞれ本プロジェクト期間内に行うべき活動を提言としてまとめた。これらの実施は、本プロジェクト目標達成に寄与するのみならず、プロジェクト終了後の本プロジェクト成果の持続性の確保、向上につながることから、各国実施機関、専門家、各事務所・支所、プロジェクトオフィスにて連携をとりつつ進めていく。

(3)　JICA と SPREP 間のより一層密な情報共有の実施

各国の現場レベルで SPREP の活動がみえないとの意見を耳にする。このため、プロジェクトオフィスを中心とした JICA と SPREP の間で、一層の情報共有を進め、かつ JICA 関係者内でもそれらの情報を共有することで、現場レベルへも SPREP 活動の状況を伝えるよう配慮する。これにより、活動の重複を避けるとともに、より効果的な連携が可能となると思料する。

第８章　教訓

(1)　技術指導方法の高い適応性

実施機関の人員、能力等、あまり十分ではない大洋州諸国にとって、市民、民間企業、及びその他関係者を巻き込んで進めた 10 年以上にわたる協力の方法は、適正に機能していた。また、対象域内におけるローカル人材の活用、優良事例の共有等も効率的なプロジェクト実施に寄与した。加えて、各国の C/P 同士が教え合い、現況をシェアするような場を提供したことも、効率的な人材育成につながったといえる。

(2)　大洋州地域廃棄物管理戦略（RS 2010）への初期からの関与

RS 2010 作成時より JICA が関与したことで、SPREP と JICA 間でお互いの支援方法やスタンスを早い段階で共有することができた。このため、相互補完の関係を速やかに確立することにつながり、円滑なプロジェクト実施に寄与したといえる。

(3)　現場経験のあるトレーナーによる研修の効果

J-PRISM の C/P のほとんどは自治体職員であり現場での実務者である。このため、域内研修においてこれらの C/P が講師を務めると、説明する内容も実務に即した内容となるため、参加者たちにとっても有益かつ理解しやすいものとなるため、研修効果も高い。さらには、講師にとっても教える場を得ることで、定常化している業務を再確認する場となり、新たな気づきを得ることもできる。

(4)　ローカル専門家による災害廃棄物管理の実践

台風、洪水等による災害廃棄物が発生した場合、迅速な初動が重要となる。このため、本プロジェクトでは初期段階から日本人専門家に加えてローカル人材を活用して対応を行うことで、現場に近いところでの人材育成を並行して進めてきた。この結果、本プロジェクト期間内に人材が育成され、現場レベルでは他ドナーと協調しながら対応できるまでになった。

(5)　関連組織の上層部の巻き込み

実施機関を含む廃棄物管理の関連組織の活動を促進し、成果を発現させるためには、決定権、発言権を有する上層部の理解、積極的な巻き込みが重要である。このため、JCC 等を活用し、上層部に十分な情報提供を行うとともに、発言する場を提供するよう心がけることが必要である。

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ANNEX 3：(+) Region-wide

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(j) Tonga　(k) Tuvalu

ANNEX 4：List of JICA Experts

ANNEX 5：List of Local Stakeholders

ANNEX 6：List of Media Coverage of the Project

MINUTES OF MEETINGS
BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY
AND
SECRETARIAT OF THE PACIFIC REGIONAL ENVIRONMENT PROGRAMME
ON
JAPANESE TECHNICAL COOPERATION PROJECT
FOR
PROMOTION OF REGIONAL INITIATIVE
ON
SOLID WASTE MANAGEMENT (J-PRISM)

The Japanese Terminal Evaluation Team (hereinafter referred to as "the Team"), organized by Japan International Cooperation Agency (hereinafter referred to as "JICA"), headed by Naoki Mori, visited Pacific Island Countries (hereinafter referred to as "PICs"), from August 12 to September 25, 2015, for the purpose of conducting the terminal evaluation on the Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management (J-PRISM) (hereinafter referred to as "the Project") on the basis of the Regional Cooperative Framework signed on September 7, 2010.

During its stay in PICs, the Team assessed the achievements of the Project by conducting intensive survey and analysis of the activities, as well as having a series of discussions and interviews with the authorities concerned.

As a result of the discussions, both sides acknowledged the mattes in the Terminal Evaluation Report attached hereto.

Apia, Samoa 25 September, 2015

Mr. Naoki Mori
Leader
Japanese Terminal Evaluation Team
Japan International Cooperation Agency
(JICA)

Mr. David Sheppard
Leader
Pacific Terminal Evaluation Team
Secretariat of the Pacific Regional Environment Programme
(SPREP)

Attachment Integrated Terminal Evaluation Report

THE INTEGRATED TERMINAL EVALUATION REPORT ON JAPANESE TECHNICAL COOPERATION PROJECT FOR PROMOTION OF REGIONAL INITIATIVE ON SOLID WASTE MANAGEMENT IN PACIFIC ISLAND COUNTRIES (J-PRISM)

Apia, September 25, 2015

Joint Terminal Evaluation Team

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Abbreviation / Acronyms

ADB	Asian Development Bank
AFD	Agence Française de Développement (French development agency)
AusAID	Australian Agency for International Development
BCDFP	Beverage Container Deposit Fee Program
CA	Capacity Assessment
CCY	Currency
CDL	Container Deposit Legislation
C/P(s)	Counterpart Personnel
CSP	Clean School Program
EDF10	European Development Fund 10
EIA	Environmental Impact Assessment
EOP	End of the Project
EPA	Environmental Protection Agency
EU	European Union
FSM	Federated States of Micronesia
ILO	International Labor Organization
IMF	International Monetary Fund
JCC	Joint Coordinating Committee
JICA	Japan International Cooperation Agency
JOCV	Japan Overseas Cooperation Volunteer
J-AWARE	JICA's Activity on Waste Audit Research
J-PRISM	Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries
MOE	Ministry of Education
MoEJ	Ministry of Environment, Japan
MTR	Mid-term Review
NGO(s)	Non-Governmental Organization(s)
ODA	Official Development Assistance
OISCA	Organization for Industrial, Spiritual and Cultural Advancement
OJT	On-the-job Training
O&M	Operation and Maintenance
PALM	Pacific Islands Leaders Meeting
PCM	Project Cycle Management
PD	Project Director
PDM	Project Design Matrix
PIC(s)	Pacific Island Country(ies)
PIDOC	Pacific Islands Database of Capacity Development Activities
PIF	Pacific Islands Forum
PM	Project Manager
PNG	Independent State of Papua New Guinea
PO	Plan of Operation
3R	Reduce, Reuse, Recycle
4R	Refuse, Reduce, Reuse, Recycle
R/D	Record of Discussions
RMI	Republic of Marshall Islands
RS 2010	Pacific Regional Solid Waste Management Strategy (2010-2015)
S/C	Steering Committee Meeting
SPREP	Secretariat of the Pacific Regional Environment Programme
SV	Senior Volunteer
SWM	Solid Waste Management
TOR	Terms of Reference
UNCRD	United Nation Center for Regional Development
UNDP	United Nation Development Programme

USA	United States of America
WHO	World Health Organization
WMPC	Waste Management and Pollution Control

Federated States of Micronesia (FSM)

DT&I	Department of Transport and Infrastructure, Kosrae
DT&PW	Department of Transportation and Public Works, Chuuk
DPW&T	Department of Public Works and Transportation, Yap
EPA	Environmental Protection Agency
KIRMA	Kosrae Island Resources Management Authority
NSWMS	National Solid Waste Management Strategy
OEEM	Office of Environment and Emergency Management, FSM
DPW&T	Department of Public Works and Transportation, Yap
SSWMS	State Solid Waste Management Strategy
T&I	Transportation and Infrastructure, Pohnpei

Republic of Fiji (Fiji)

BTC	Ba Town Council
CBD	Commercial Business District
DLG	Department of Local Government
DOE	Department of Environment
FJD	Fiji Dollar
LCC	Lautoka City Council
NWMS	National Waste Management Strategy
NTC	Nadi Town Council
OHS	Occupational Health Safety
RTC	Rakiraki Town Council
SCC	Suva City Council
STC	Sigatoka Town Council
TTC	Tavua Town Council

Republic of Kiribati (Kiribati)

ALD	Agriculture and Livestock Division
AUD	Australian Dollar
BTC	Betio Town Council
ECD	Environment and Conservation Division
MELAD	Ministry of Environment, Lands and Agriculture Development
TTM	Taiwan Technical Mission
TUC	Teinainao Urban Council
UDP	Urban Development Programme

Republic of the Marshall Islands (RMI)

EPA	Environmental Protection Agency
KALGov	Kwajalein Atoll Local Government
MALGov	Majuro Atoll Local Government
MAWC	Majuro Atoll Waste Company
MICS	Marshall Islands Conservation Society
MLG	Majuro Atoll Local Government
MOE	Ministry of Education
MOH	Ministry of Health
MPW	Ministry of Public Works
NSWMS	National Solid Waste Management Strategy
OCS	Office of Chief Secretary
ODCS	Office of Deputy Chief Secretary
OEPPC	Office of Environmental Planning and Policy Coordination
PSS	Public School Services

Republic of Palau (Palau)	
BCDFP	Beverage container deposit fee program
BPW	Bureau of Public Works, Ministry of Public Infrastructure, Industries and Commerce
EQPB	Environmental Quality Protection Board
MOF	Ministry of Finance
MPIIC	Ministry of Public Infrastructure, Industries and Commerce
NSWMP	National Solid Waste Management Plan
PEEC	Public Education and Enhancement Committee
SWM-BPW	Division of Solid Waste Management, Bureau of Public Works, MPIIC
SWM-KSG	Solid Waste Management, Koror State Government
Independent State of Papua New Guinea (PNG)	
CEPA	Conservation and Environment Protection Authority (CEPA)
DEC	Department of Environment and Conservation
DNPM	Department of National Planning and Monitoring
GoPNG	The Government of Papua New Guinea
NCD	National Capital District
NCDC	National Capital District Commission
OS&H	Occupational Safety and Health
PGK	Papua New Guinean Kina
PMU	Project Monitoring Unit
WMD	Waste Management Division
Independent State of Samoa (Samoa)	
DEC	Division of Environment and Conservation
MNRE	Ministry of Natural Resources and Environment
PPP	Public-Private Partnership
STA	Samoa Tourism Authority
WST	Western Samoan Tala
Solomon Islands	
EHD	Environment Health Division
GTC	Gizo Town Council
HCC	Honiara City Council
MCT	Ministry of Culture and Tourism
MECDM	Ministry of Environment, Climate Change, Disaster Management & Meteorology
MHMS	Ministry of Health and Medical Services
MLHS	Ministry of Lands, Housing and Survey
SBD	Solomon dollar
SIG	Solomon Islands Government
WPG	Western Provincial Government
Kingdom of Tonga (Tonga)	
IWCM	Integrated Water and Coastal Management Project
IWRM	Integrated Water Resources Management Project
JFY	Japanese Fiscal Year
MEIDECC	Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications
MOH	Ministry of Health
TOP	Tonga Pa'anga
VEPA	Vava'u Environmental Protection Association

Tuvalu	
EDF11	European Development Fund 11
MHA	Ministry of Home Affairs
SWAT	Solid Waste Agency of Tuvalu

Republic of Vanuatu (Vanuatu)	
DARD	Department of Agriculture and Rural Development
DEPC	Department of Environmental Protection and Conservation
EHU	Environment Health Unit
GoV	The Government of Vanuatu
LMC	Luganville Municipal Council
LTC	Lenakel Town Council
MAQFF	Ministry of Agriculture, Quarantine, Forestry and Fisheries
MCC	Ministry of Climate Change
MLNR	Ministry of Land and Natural Resources
PAA	Priorities and Action Agenda
PVMC	Port Vila Municipal Council
PVUDP	Port Vila Urban Development Project
VCC	Vanuatu Chambers of Commerce
VSA	Volunteers Service Abroad (Volunteer scheme of New Zealand)
VUV	Vanuatu Vatu
WSB	Wan Smol Bag Theatre (Advocacy NGO)

1. INTRODUCTION

1-1 Objectives of the Terminal Evaluation

The objective of Terminal Evaluation on J-PRISM is to review the progress of activities and examine the achievements of each Output and the Project Purpose, to discuss the issues and concerns for the rest of the project period. The Terminal Evaluation Report will be agreed on the Implementing Agencies and to be summarized into the report.

The specific objectives of the Terminal Evaluation are outlined as follows:

（1）To exchange opinions with counterparts in order to assess the present situations, including progress and achievements, according to the project plan;

（2）To review the progress and the accomplishment of the Project in accordance with the five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact and Sustainability);

（3）To identify obstacles and/or facilitating factors that affected the implementation process;

（4）To discuss with counterparts the results of review and make necessary decisions, including revision of PDM for the remaining period of the Project;

（5）To draw the lessons learnt from the Project implementation;

（6）To summarize the results of the study in an Integrated Terminal Evaluation Report (ITER) and share this at the Steering Committee in order to contribute to the better understanding of the achievement of the Project outcome as well as the measures to be taken to further improvement and sustain the Project.

1-2 Members of the Terminal Evaluation Team

The Joint Terminal Evaluation Team (“the Team”) consist of the following members:

<Pacific Side>

	Name	Role/Responsibility	Position/Affiliation
1	Mr. David Sheppard	Leader	Director General, Secretariat of the Pacific Regional Environment Programme (SPREP)
2	Dr. David Haynes	Waste Management (1)	Director, Waste Management and Pollution Control Division, SPREP
3	Dr. Frank Griffin	Waste Management (2)	Hazardous Waste Management Advisor, Waste Management and Pollution Control Division, SPREP
4	Mr. Anthony Talouli	Waste Management (3)	Pollution Advisor, Waste Management and Pollution Control Division, SPREP
5	Ms. Ma BellaGuinto	Waste Management (4)	Solid Waste Management Advisor, Waste Management and Pollution Control Division, SPREP

<Japanese Side>

	Name	Role/Responsibility	Position /Affiliation	Period
1	Mr. Naoki MORI	Leader	Deputy Director General Global Environment Department, JICA	Sep. 20-25, 2015
Sub-Team 1				
2	Mr. Hideki SAWADA	Cooperation Planning (1) Fiji/Kiribati	Assistant Representative JICA Fiji Office	Aug. 12-19, Aug. 26-27, 2015
3	Mr. Shoichi IWATA	Cooperation Planning (2) Tonga	Project Formulation Advisor JICA Tonga Office	Aug. 20-25, 2015
4	Mr. Toru TAGUCHI	Cooperation Planning (3) Regional	Deputy Director, Environmental Management Team 1 Global Environment Department, JICA	Sep. 9-25, 2015
5	Mr. Atau KISHINAMI	Evaluation Analysis(A) Fiji/Kiribati/Tonga/Regional	Permanent Expert International Development Associates Ltd.	Aug. 12- Sep. 25, 2015
Sub-Team 2				
6	Mr. Daisuke HORIKOSHI	Cooperation Planning (4) PNG	Assistant Representative JICA PNG Office	Aug. 16-22, 2015
7	Ms. Keiko FUKUDA	Cooperation Planning (5) Solomon	Project Formulation Advisor JICA Solomon Office	Aug. 23-28, 2015
8	Ms. Yoko ASANO	Cooperation Planning (6) Vanuatu	Project Formulation Advisor JICA Vanuatu Office	Aug. 29 – Sep. 5, 2015
9	Mr. Tetsuji NAKASONE	Cooperation Planning (7) Samoa	Project Formulation Advisor JICA Samoa Office	Sep. 6-11, 2015
10	Ms. Yasuyo HIROUCHI	Evaluation Analysis(B) PNG/Solomon/Vanuatu/ Samoa	Permanent Expert International Development Associates Ltd.	Aug. 15- Sep .25, 2015
Sub-Team 3				
11	Mr. Hirohisa WATANABE	Cooperation Planning (8) FSM	Project Formulation Advisor JICA FSM Office	Aug. 13-18, Aug. 26 - Sep. 4, 2015
12	Mr. Nobuaki MATSUI	Cooperation Planning (9) Palau	Chief Representative JICA Palau office	Aug. 19 - 25, 2015
13	Ms. Yoko ONUMA	Cooperation Planning (10) RMI	Special Advisor Environmental Management Team 1 Global Environment Department, JICA	Sep. 5 - 11, 2015
14	Ms. Takako HARAGUCHI	Evaluation Analysis（C） FSM/RMI/Palau	Permanent Expert International Development Associates	Aug. 15 - Sep. 26, 2015

1-3 Schedule of the Terminal Evaluation

The development of the study framework and preparation of the field study started in the middle of July and the field evaluation study was conducted from August 12, 2015 to September 25, 2015. The evaluation study was implemented in two steps. First, the evaluation was conducted for each of the individual projects (11 country project and Region-wide Activities) by three sub- teams. Then, the integrated results of the individual studies were jointly evaluated by Pacific side and Japanese side. The results of he Joint Evaluation were summarized in the ITER, which was finalized on September 25 through a series of

discussions. The detailed schedule of individual projects is attached separately to each individual Terminal Evaluation Report (ANNEX 3).

2. OUTLINE OF THE PROJECT AND EVALUATION FRAMEWOFK

2-1 Background of the Project

In order to improve waste management in PICs, SPREP and JICA have been working together for the last ten years since the first dispatch of JICA expert to SPREP in the year 2000. The partnership has been enhanced especially through JICA's previous technical cooperation project on "Solid Waste Management Project in the Oceania Region", which was based in Samoa and was implemented from 2006 to 2010. One of the remarkable achievements in the region resulting from the joint assistance of SPREP and JICA is the development of the Pacific Regional Solid Waste Strategy (RS 2010) after a series of consultation in 2009. The RS 2010 was unanimously adopted as the guiding principle for the region at the annual SPREP Meeting in November 2009.

In response to the request from PICs for continued assistance of Japan, JICA launched a new regional project, entitled J-PRISM, from February 2011 to February 2016. J-PRISM has been implemented in eleven (11) PICs[1], namely, FSM, Fiji, Kiribati, RMI, Palau, PNG, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu. In addition to the above countries, Cook Islands, Nauru and Niue have been invited to participate in regional and/or sub-regional activities.

2-2 Objective of the Project

The Overall Goal, the Project Purpose and the Outputs written in the current PDM are as follows:

(1) Overall Goal

Sustainable management of solid waste in the Pacific Region is enhanced.

(2) Project Purpose

Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through the implementation of RS 2010.

2-3 Framework of Project Implementation

The Project consists of 11 individual country projects implemented by each PIC and the Region-wide Activities as shown in Table 1. All of these projects/activities contribute to the implementation of the RS

[1] Note that all the eleven countries mentioned are SPREP members and are referred to as "the Project Member countries" of the J-PRISM.

2010[2].

Table 1: Framework of the Project

Overall Goal			Sustainable management of solid waste in the Pacific Region is enhanced.											
Project Purpose			Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS 2010)											
Outputs are divided into 12 individual projects														
Priorities in RS 2010			Regional	Fiji	PNG	Solomon	Vanuatu	FSM	Kiribati	RMI	Palau	Samoa	Tonga	Tuvalu
1	Sustainable Financing													
2	Integrated SWM	2-1 3R/4R												
		2-2 Waste Disposal												
		2-3 Waste Collection												
3	Legislation													
4	Awareness/Communication/ Education													
5	Capacity Building													
6	Environmental Monitoring													
7	Policy, Planning and Performance													
8	Solid Waste Industry													
*	Monitoring of RS 2010													

Note: Colored cells under each PIC indicate the area of outputs/activities assisted by J-PRISM.

2-4 Method of the Terminal Evaluation

Evaluation study was conducted based on the Framework of the Terminal Evaluation (See ANNEX 2).

2-4-1 Data Collection Methods

The Team collected the data and information through document analysis, questionnaire surveys and interview with the C/Ps, JICA experts, and local stakeholders. The Team also conducted the field observation of some project sites.

2-4-2 Items of Analysis

The Team assessed the Project from the following viewpoints.

(1) Accomplishment of the Project

Accomplishment of the Project was assessed in terms of the Inputs, the Outputs, and the Project Purpose in comparison with what was planned and with the Objectively Verifiable Indicators of the current PDM.

[2] See ANNEX 1 for Integrated Reference Matrix which is a consolidated format of PDMs for all individual projects and Region-wide activities.

(2) Implementation Process

The implementation process of the Project was also assessed from various viewpoints, such as progress of activities, methods of technical transfer, implementation system, monitoring, project management, and communications among stakeholders to see if the Project has been managed properly as well as to identify obstacles and/or facilitating factors that have affected the accomplishment of the Project.

(3) Evaluation based on the Five Evaluation Criteria

The Team also assessed the results of Project using five evaluation criteria.

1) Relevance

The extent to which the Project Purpose and the Overall Goal are consistent with the government development policy of each PIC as well as the development assistant policy of Japan, and needs of beneficiaries in each PIC respectively.

2) Effectiveness

The extent to which the Project has achieved its purpose, clarifying the relationship between the Project Purpose and Outputs.

3) Efficiency

The extent to how economically resources/inputs (funds, expertise, time, etc.) are converted to results/outputs with particular focus on the relationship between inputs and outputs in terms of timing, quantity and quality.

4) Impact

Project effect on the surrounding environment in terms of policy/institutional, technical, socio-economic, cultural, and environmental factors. Project impacts are to be viewed from cross-cutting aspects according to positive or negative effects.

5) Sustainability

Sustainability of the Project is assessed from the standpoint of policy/institutional, organizational, financial, technical and social aspects, by examining the extent to what the effects of the Project will be sustained or expanded after the assistance is completed.

2-5 Limitation of the Study

Due to the limited time available for the field study in each PIC, interviews with C/Ps and those connected

with the Project were mainly focused on the C/Ps and observation of the project sites were carried out only if time permitted. For the same reason, it was difficult for the Team to allocate sufficient discussion time with the concerned agencies. Therefore, at the end of the field study, the Team requested the Implementing Agencies of each PIC to provide comments on the draft version of the Terminal Evaluation Report in a given time, and their comments were reflected on the final Terminal Evaluation Report produced just before the Steering Committee Meeting on September 25, 2015. As for Tuvalu, the field study itself was not carried out due to time constraints.

3. ACCOMPLISHMENTS OF THE PROJECT

3-1 Inputs

The Team reviewed the accomplishments of the Project in accordance with the plan described in the R/D (including the PDM and the PO) for each PIC.

3-1-1 Japanese Side

(1) Dispatch of JICA Experts

As of June 2015, total of 321.77 MM of JICA experts have been dispatched (long-term experts of the Project Office-120.9MM; a local expert of the Project office-47.2MM; short-term experts-153.6MM) as shown in Table 2.

Table 2: Dispatch of JICA Experts

Name of PICs	Total (JFY 2010 to June 2015)								
	Project Office (MM)	Local Expert (1) (MM)	Long-term Experts (Nmber)			Short-term Experts (MM)	Number of Experts	Total by Country (MM)	Total Number of Experts involved
			Chief Advisor	Local Expert	Coordinators				
Federated States of Micronesia	1.8	0.7	1	1	3	33.3	3	35.8	8
Repuclic of Fiji	3.6	0.9	1	1	3	23.9	4	28.4	9
Republic of Kiribati	0.6	0.0	1	0	2	10.9	1	11.5	4
Republic of the Marshall Islands	1.3	0.5	1	1	2	9.5	3	11.3	7
The Republic of Palau	0.9	0.1	1	1	3	7.9	2	8.9	7
Independent State of Papua New Guinea	2.8	2.7	1	1	1	14.0	2	19.5	5
Independent State of Samoa	10.8	4.2	1	1	4	0.8	1	15.8	7
Solomon Islands	3.0	1.0	1	1	2	15.3	4	19.3	8
Kingdom of Tonga	1.0	1.6	1	1	2	14.3	1	16.9	5
Tuvalu	0.2	0.0	1	0	1	0.0	0	0.2	2
Republic of Vanuatu	3.3	1.0	1	1	2	9.9	4	14.2	8
Region-wide Activities	85.0	31.4	1	1	4	0.8	3	117.2	9
Travel Days (2)	6.6	3.1				13.0		22.7	0
Total	**120.9**	**47.2**				**153.6**		**321.7**	

Notes:
(1) Cost of local expert is included in the Local Cost Support.
(2) Travel days is the M/M solely used for travelling within the region. The M/M for lravelling between Japan and assigned countries are excluded from this table on long-term experts, and included in M/M in respective assigned countries on short-term experts.

Source: Project Office

(2) Training in Japan

As of June 2015, total of 19 C/Ps have participated in the training in Japan as shown in Table 3 (For details, see ANNEX 3).

Table 3: List of Training in Japan

	Title of Training Course	Period	Number of C/Ps	Remarks
1	Great Vava'u and Okinawa Mottainai Movement Project	August 4 to 18, 2012	2	Samoa (1), Yap (1)
2	Promotion of Shibushi Model from the Republic of the Fiji Islands to Pacific Island Countries	July 15 to 30, 2013	2	Palau (2)
3	J-PRISM Regional Training for Trainers	May 25 to June 4, 2015	15	Vanuatu (2), Fiji (4), PNG (3), Tonga (2), FSM (2), Palau (2)

Source: Project Office

For reference, cumulative total of 76 C/Ps have been also trained in Japan through JICA Training Dialogue Program (See Section 4-2-8 (1)).[3]

(3) Provision of Equipment

Equipment and machinery, equivalent to approximately US$255,000, have been provided to some countries (i.e. Kiribati, Samoa, Solomon Island, Tonga, and Vanuatu) as well as for Region-wide Activities. Major equipment includes the weighbridge and computerized data management system, shredder, grass cutter and chainsaw used at the landfill. Office equipment such as photocopier, computers, laser printers, projector, etc., have been also provided to assist with awareness raising activities and to facilitate the development of materials and reporting. (For details, see ANNEX 3).

(4) Local Cost Support

In order to carry out the project activities, total amount of approximately US$2,628,000 was disbursed from Japanese side up to the end of June 2015. The cost breakdown by each PIC is shown in Table 4. Major cost items include the transportation cost (especially airfare), employment fee for local consultants, communication, consumable goods, etc. (For details, see ANNEX 3).

Table 4: Local Cost Support by JICA for Each PIC

	PICs	Currency (CCY)	Amount in Local CCY	Equivalent in US$
1	Fiji	Fiji Dollar	222,673.62	106,247.32
2	PNG	Kina	273,125.88	106,972.41
3	Solomon Islands	Solomon Dollar	1,123,499.98	142,876.04
4	Vanuatu	Vatu	4,265,292.86	41,210.67
5	FSM	US Dollar	129,973.50	121,650.16
6	Kiribati	Australian Dollar	44,639.98	42,689.83
7	Marshall Islands	US Dollar	37,471.21	34,214.06
8	Palau	Us Dollar	15,336.51	14,434.37
9	Samoa	Tala	405,017.46	168,227.47
10	Tonga	Pa'anga	226,877.01	118,719.96

[3] Under J-PRISM, most of the trainings for C/Ps have been carried out through the Region-wide Activities. For the details of Region-wide Activities, see ANNEX 3 (+).

11	Tuvalu	Fiji Dollar	8,312.27	4,372.20
*	Region-wide	US Dollar	1,726,036.54	1,726,036.54
			Total	US$2,627,651.14

Source: Project Office

3-1-2 Pacific Side

(1) Allocation of Counterpart Personnel

In the process of implementation, some C/Ps were additionally assigned to carry out the project activities or to replace those retired or transferred. At the time of the Terminal Evaluation, total of 176 Management and Technical C/Ps are assigned as shown in Table 5. (For the detailed list of C/Ps by each PIC, see ANNEX 3).

Table 5: Number of C/Ps by Each PIC

	PICs	C/Ps
1	Fiji	35
2	PNG	17
3	Solomon Islands	24
4	Vanuatu	13
5	FSM	30
6	Kiribati	7
7	Marshall Islands	17
8	Palau	10
9	Samoa	7
10	Tonga	10
11	Tuvalu	6
	Total	176

Source: Project Office

(2) Local Cost Sharing

In order to carry out the activities in each PIC, the total amount of approximately US$ 4,462,000 was disbursed from PICs for the period of February 2011 to June 2015 as shown below. (For details in each PIC, see ANNEX 3).

Table 6: Local Cost Sharing by Each PIC

	PICs	Name of Currency	Amount in Local CCY	Equivalent in US$
1	Fiji	Fiji Dollar	660,480	308,999
2	PNG	Kina	8,837,560	3,112,589
3	Solomon Islands	Solomon Dollar	980,298	122,635
4	Vanuatu	Vatu	114,960	1,055
5	FSM	US Dollar	339,286	339,286
6	Kiribati	Australian Dollar	4,608	3,362
7	Marshall Islands	US Dollar	0	0
8	Palau	Us Dollar	485,384	485,384
9	Samoa	Tala	200,246	84,842
10	Tonga	Pa'anga	7,670	3,450
11	Tuvalu	Australian Dollar	0	0
			Total	US$4,461,602

Source: Project Office

(3) Land and Facilities

In each PIC, office space with utilities and some furniture for JICA experts to carry out activities have been

provided. Furthermore, in-kind contributions, such as transportation and daily allowances for C/Ps have been expensed in some of PICs.

3-2 Outputs

Each of individual projects separately tackles particular issues, which are linked with priority items of the RS 2010. The achievement level of the Outputs of each of individual projects is basically examined by the set indicators, and the results are summarized in Table 7. It should be noted that this table shows the achievement of what was planned in each country, not relative judgment across the region.

Overall, progress has been made since the MTR in almost all countries. 41 out of the total 51 Outputs have been fully or mostly achieved or are likely to be achieved by the end of the Project. The degree of achievement is high in all individual projects in the area of Awareness/Communication/Education, while it varies in other priority items.

Table 7: Achievement Level of the Outputs (Current Level /Likelihood by the End of the Project)

Outputs of J-PRISM are divided into Region-wide activities and 11 individual country projects																		
			Region-wide Activities (i)	Fiji	PNG	Solomon	Vanuatu	FSM (ii)					Kiribati	RMI (iii)	Palau	Samoa	Tonga	Tuvalu
Priorities in RS 2010								N	K	P	C	Y						
1	Sustainable Financing														M/M			
2	Integrated SWM	2-1 3R/4R		M/M		M/M	P/P			P/P			P/P	(M/M) (M/M) N/P		P/F		P/P
		2-2 Waste Disposal	F/F		M/M	M/M	P/P		(F/F)	F/F	F/F	M/M		M/M	P/F	P/?	M/M	
		2-3 Waste Collection			M/M				P/P	P/P	M/M			M/M			M/M	
3	Legislation																	
4	Awareness/ Communication/ Education					P/M			F/F			M/M	M/M	(M/M)	M/M			
5	Capacity Building (iv)		M/M P/P	F/F			F/F							(M/M)	M/M	M/F		
6	Environmental Monitoring																	
7	Policy, Planning and Performance		F/F		P/M			M/M F/F	P/P	P/P	M/M	F/F		P/P	F/F		M/F	
8	Solid Waste Industry																	
*	Monitoring of RS 2010		P/P															

Notes: (i) As for Region-wide Activities, two outputs were carried out under the priority item 5 (Capacity Building).
(ii) As for FSM, some of outputs are carried out independently each state. Therefore, multiple rating scores are shown in priority item.
N=National, K=Kosrae, P=Pohnpei, C=Chuuk, Y=Yap
Also, two outputs were carried out under the priority item of 7 (Policy, Planning and Performance).
(iii) In RMI, three outputs were carried out under the priority item of 2-1 (3R/4R).
(iv) The priority item 5 is to contribute to the capacity building of PIC members by other PIC members.

Legend

Mark	Degree of achievement	Description
F	Fully achieved	All indicators are fully achieved (100% or higher degree of achievement of the targets/expected states).
M	Mostly achieved	Major indicators are either fully achieved (100% or higher degree of achievement of the targets/expected states) or mostly achieved (roughly 70%-100% or higher degree of achievement of the targets/expected states).
P	Partly achieved	Major indicators are partly achieved (progress is made from the baseline but it is not reaching roughly 70% of the targets/expected states)
N	Not achieved	No indicators are achieved (no progress is made from the baseline).
?	Uncertain	Degree of achievement at the end of the Project cannot be forecasted because the complete data will be available in December 2015.
NA	Not assessed	Degree of achievement was not assessed.
( )	-	This Project partly or indirectly contributed to the achievement of the concerned Output.

Source: Terminal Evaluation Team

3-2-1 Outputs of Region-wide Activities

This section explains the degree of achievement for Region-wide Activities as summarized in Table 7. For more details, see the Results of Terminal Evaluation for Region-wide Activities in Annex 3(+).

(1) Waste Disposal (Priority item 2-2)

Expected Outcome under RS 2010	Output	Degree of Achievement Current/EOP
Solid waste that cannot be avoided, reused, recycled or composted are disposed using acceptable methods that have no negative impacts on human health and environment.	Output 2: Waste Management options for atoll are studied.	Fully/Fully

In 2013, the baseline survey was conducted in RMI as a pilot site by SPREP[4]. An implementation plan for all recommended options for integrated atoll waste management including waste collection, 3R and waste disposal in RMI has already been developed. It is expected that all activities using recommended options are to be completed by May 2017.

(2) Capacity Building (Priority item 5)

Expected Outcome under RS 2010	Outputs	Degree of Achievement Current/EOP
Skilled and trained people available in-country, who effectively manage solid waste management systems	Output 1: Human capacity of SWM is strengthened through trainings and workshops	Mostly/Mostly
	Output 3: Knowledge experience and lessons through the project and the past assistance are shared among PICs	Partly/Partly

For Output 1, workshop/training for 3R/landfill management has been conducted every year as planned. Region-wide activities in landfill improvement using semi-aerobic methods and 3R promotion have been

[4] Although strictly speaking, Inputs of the Project were limited, both SPREP and J-PRISM conducted the above-mentioned activities as a part of the J-PRISM activities.

conducted mostly as planned. South-to-south cooperation in the form of country attachment, study visits and trainer dispatch program have promoted the capacity development. Furthermore, activities for the disaster waste prevention and management as measures for adaptation to climate change were carried out to timely respond to the needs of disaster waste prevention and management.

Box 1: Examples of Post-Disaster Waste Management Activities

- Solomon Islands: After the flood in April 2014, post-disaster waste management activities were carried out through J-HOPE organized by J-PRISM. A C/P from Vanuatu and a JICA Long-term Expert from the Project Office in Samoa assisted the activities. Restoration of Ranadi landfill was carried out in one week. Utilization of the flood wood for firewood was promoted. Public awareness on post disaster waste management at household level was encouraged.
- Vanuatu: After the Cyclone Pam in March 2015, post-disaster waste management activities were carried out by the C/Ps of PVMC and DEPC in coordination with experts from the Project Office in Samoa, short-term Experts, UNDP, a VSA volunteer assigned to LMC, and JOCVs assigned to LMC and Sanma Province. As part of the post-disaster waste management activities of J-PRISM, an open space for disaster waste was created at Bouffa landfill. The disaster waste was collected and transported to the space. Green wastes were separated as much as possible, which were transported to the organic farming company, involved in waste minimization activities at Central Market, for utilization as mulch. Public awareness activities were carried out on management of disaster wastes. In addition, a new cell was constructed at Bouffa landfill to deal with the increased waste.

Output 3 was first intended to develop the standardized waste audit program. However, this intention was upwardly rephrased to include the work to revise the WHO's Solid Waste Management Guidebook by both SPREP and J-PRISM. In order to enhance the capacity of C/Ps and to encourage their ownership of the Guidebook, it was finally determined that experienced C/Ps who attended the Trainings of Trainers in Fiji 2014 share the responsibilities to write up the Guidebook with the support of SPREP and J-PRISM experts. Although this work is totally additional and burden to these C/Ps, they have prepared the final draft and it is expected that the Guidebook will be completed by December 2015. The Guidebook will be distributed to Implementing Agencies by the end of the Project.

(3) Policy, Planning and Performance (Priority item 7)

Expected Outcome under RS 2010	Output	Degree of Achievement Current/EOP
PICTs[5] implement national waste management policies and strategies, which are based on accurate data, with monitoring systems established to report on performance.	Output 4: Regional network among PIC countries is strengthened.	Fully/Fully

[5] PICTs: Pacific Island Countries and Territories

J-PRISM webpage was developed and project newsletters were issued as planned. Furthermore, the directory of trainers called the PIDOC is now available. Regional network among PIC using these information has been strengthened. As for the directory of trainers, it is necessary to continue how these data should be utilized to encourage C/Ps for their capacity development.

(4) Monitoring of RS 2010

Expected Outcome under RS 2010	Outputs	Degree of Achievement Current/EOP
(Not included in the RS 2010)	Output 5: Regional system to monitor the RS 2010-2015 is established.	Partly/Partly

Despite efforts made by SPREP and J-PRISM from 2012 onwards, there have been substantial difficulties to obtain annual monitoring data, which is outside of control of both parties. This has made it difficult to obtain up-to-date information from participating PICs. A review of the RS 2010 has been completed as part of the Cleaner Pacific 2025 development and the document of "Terminal Evaluation of the Pacific Regional Solid Waste Management Strategy (2010-2015)" was completed. Also, draft country waste profile, which contains the baseline information, has been developed. However, this has yet, to be validated by each country. In the new Regional Strategy, the monitoring of regional strategy is included as one of the activities to be implemented.

3-2-2 Outputs of Individual Project in Each PIC

This section explains the degree of achievement of related projects of PICs as summarized in Table 7. For details, see the Terminal Evaluation Report for each PIC in ANNEX 3.

(1) Sustainable Financing (Priority item 1)

The Output for Sustainable Financing would be mostly produced by the end of the Project in Palau.

Expected Outcome under RS 2010	PIC	Outputs	Degree of Achievement Current/EOP
Solid waste management systems and programmes in PICs are financially self-sustaining.	Palau	Output 1: Capacity to manage the beverage container deposit fee program (sustainable financing system) is enhanced	Mostly/Mostly

<Progress of Major Indicators for the Output>

- Palau: (a) The national SWM-BPW had monitored redemption rate since the start of the beverage container deposit fee program operated by Koror State in 2011. Since 2014 when a monitoring officer was assigned, SWM-BPW has compiled and publicized the data with technical assistance under this Project and with the help of a JOCV. (b) Also, with enhanced coordination with Ministry

of Finance under this Project, revenue and balance of the Recycling Fund became clear, while breakdown of deposit from imported containers and revenue from redeemed beverage containers is not clearly sorted at this moment.

(2) 3R/4R (Priority Item 2-1)

The degree of production of the Outputs for 3R/4R varies by country mainly depending on the progress of waste minimization.

Expected Outcome under RS 2010	PIC	Outputs	Degree of Achievement Current/EOP
Reduce the amount of waste generated and landfilled through involvement of all sectors and local initiatives	Fiji	Output 1: National 3R strategy has been widely implemented in Fiji.	Mostly/Mostly
	Solomon	Output 1: 3R activities are practiced in Honiara and Gizo	Mostly/Mostly
	Vanuatu	Output 1:Waste minimization mechanisms are developed	Partly/Partly
	FSM	Output 3-4 (Pohnpei): CDL system is improved	Partly/Partly
	Kiribati	Output 1: Household waste, especially organic waste is minimized through establishment and promotion of compost.	Partly/Partly
	RMI	Output 2: Recycling system is improved in Majuro	(Mostly/Mostly)*
		Output 3: Composting system is improved in Majuro	(Mostly/Mostly)*
		Output 5: Solid waste management system is improved in Ebeye**	Not achieved/Partly achieved
	Samoa	Waste Minimization measures and practices are introduced and implemented at the urban areas	Partly/Fully
	Tuvalu	Output 1: Capacity of operators and field workers is increased through training.	Partly/Partly

Notes: * In RMI, the Project indirectly contributed to the achievement of these Outputs.
** Degree of achievement of this Output in RMI is a combined judgment of 3R/4R, Waste Disposal, Waste Collection, Awareness/Communication/Education and Capacity Building

<Progress of Major Indicators for the Outputs for Each PIC>

- Fiji: (a) All six councils of the Western Division plus SCC are implementing some components of 3R. (b) Each council has made progresses but need more efforts to sustain some activities. It is expected that combined with effective national financial mechanism introduced by DOE, national 3R strategy will be expanded further.
- Solomon Islands: (a) Communication strategy for 3R has been developed and utilized (Honiara and Gizo). (b) Twelve schools (9 in Honiara and 3 in Gizo) that participated in Eco/Clean School Program have developed 3R action plans. (c) Five 3R pilot projects (3 in Honiara and 2 in Gizo) have been implemented. (d) Nine waste surveys (5 in Honiara and 4 in Gizo) have been conducted but only four analytical reports have been developed for utilization in waste minimization/3R. It is expected four more reports would be developed by the end of the Project.

- Vanuatu: (a) Most of the organic/green wastes generated in Central Market have been utilized for mulch since October 2013 (See Box 2). (b) The Vanuatu National Waste Management Strategy and Action Plan (2011-2016) was prepared with the support from SPREP and JICA in 2011. (c) Collection system of cans, developed through a pilot project (November 2014 to January 2015), has not been functioning since March 2015 primarily due to internal conflicts in the communities over the sales, and lack of monitoring by both communities and PVMC.
- FSM: (a) In Pohnpei, an Output on CDL was added in the latter half of the Project. The Recycling Centers opened 12 times during a total of 34-month period from the commencement of the CDL program in June 2012 to August 2015. The target of opening the Center every month was not fulfilled due to insufficient balance of the Recycling Fund to refund the deposit to consumers. Law amendment such as for collection of tax (deposit) from importers upon landing on the port (under the current law it is collected at the first sale, causing failures to fully collect deposit) has not been attained yet, while sharing of financial data between the financial department and EPA and analysis of issues have started under this Project.
- Kiribati: (a) Having explored the effective measures for green waste recycling, the project has now identified making wooden chips, firewood as more appropriate for the needs of Kiribati. With the independent accounting system in place at BTC, it is expected that green waste recycling activities will be further promoted.
- RMI: (a) In Majuro, MAWC started recycling and composting in 2008 with help of a SV. The number of collection of aluminum cans and sales of compost is generally increasing. This Project indirectly contributed to this increase: the figures significantly increased after 2011, when a C/P attended the 3R training in Fiji under this Project, and incorporated the topic of recycling/composting in school visits in collaboration with EPA based on what he learned in the training, which enhanced visibility of the recycling/composting program to the public. (b) In Ebeye, a plan for production of paper fuel has not been drafted due to postponement of related training; KALGov is planning to start drafting the production plan by the end of this Project.
- Samoa: (a) Seven communities and six businesses participate in segregation of cans and plastic bottles and/or composting from green wastes under the pilot project for waste segregation/minimization. (b) Development of draft National Solid Waste Management Strategy (2016 - 2025), including waste minimization strategy, is ongoing. The Strategy would incorporate the interim results of the pilot project and would be aligned with the "Pacific Regional Waste and Pollution Management Strategy" discussed in September 2015. (c) Development of draft policy framework for CDL is also ongoing. MNRE plans to submit the final drafts to the Cabinet for endorsement by the end of November 2015.
- Tuvalu: (a) Two C/Ps received trainings on garbage collection system in Fiji and learned about waste disposal and 3R as well. Although there were some improvements identified in terms of occupational safety, no training to expand the knowledge and skills to field workers was done by

these C/Ps.

Box 2: Examples in the field of 3R/4R

- Vanuatu: Since October 2013, most of the organic/green wastes generated in Central Market have been separated by the market staff, which have been picked up by PVMC and have been transported to a private organic farming company, which produces mulch using the organic/green wastes.

(3) Waste Disposal (Priority Item 2-2)

The Outputs for Waste Disposal would be fully or mostly produced, mainly through improvement of operation of landfills, by the end of the Project in most countries that addressed this issue.

Expected Outcome under RS 2010	PIC	Outputs	Degree of Achievement Current/EOP
Solid wastes that cannot be avoided, reused, recycled or composted are disposed of using acceptable methods that have no negative impacts on human health and environment.	PNG	Output 2: Solid waste disposal facility and operation is improved	Mostly/Mostly
	Solomon	Output 2: Waste disposal system is improved in Honiara and Gizo	Mostly/Mostly
	Vanuatu	Output 2: Existing waste disposal sites (Bouffa and Luganville) are improved	Partly/Partly
	FSM	Output 2-3 (Kosrae): Waste disposal is improved	(Fully/Fully)*
		Output 3-3 (Pohnpei): Final waste disposal site is improved	Fully/Fully
		Output 4-2 (Chuuk): Capacity to improve and manage final disposal site is enhanced	Fully/Fully
		Output 5-2 (Yap): Capacity to improve and manage final disposal site is enhanced	Mostly/Mostly
	RMI	(Output 5: Solid waste management system is improved in Ebeye)**	Mostly/Mostly
	Palau	Output 4: Capacity to manage the final landfill site is enhanced	Partly/Fully
	Samoa	Tafaigata is operated as a regional waste disposal facility with improvements at Vaiaata in place	Partly/Partly or more
	Tonga	Output 1: The existing solid waste disposal facility and operation in Vava'u is improved.	Mostly/Mostly

Notes: * In Kosrae, the Project partly contributed to the achievement of these Outputs.
** Degree of achievement of this Output in RMI is a combined judgment of 3R/4R, Waste Disposal, Waste Collection, Awareness/Communication/Education and Capacity Building.

<Progress of Major Indicators for the Outputs for Each PIC>

- PNG: (a) Construction work for upgrading Baruni landfill has been mostly completed and is expected to be almost completed by the end of the Project, assuming that contractor fulfills his responsibilities. The construction of the remaining ancillary parts will be continued by the PNG side, which is likely to be completed by the second quarter of 2016. (b) An O&M manual has been developed, which has been utilized for supervising the contractor/operators. The manual would be

updated once the construction of the remaining part is completed.

- Solomon Islands:
  - (a) In Honiara, rehabilitation of Ranadi landfill is expected to be completed in October 2015. (b) A draft operation manual would be finalized in time for the completion of the rehabilitation. (c)A draft annual operational plan for FY 2016 (January-December) would be finalized in September 2015 for submission to the Council for review.
  - (a) In Gizo, rehabilitation of landfill has been almost completed but will not be fully completed by the end of the Project due to budget constraints. (b) An operational manual is likely to be prepared by the end of the Project. (c) An operational plan, including the annual schedule and budget for FY 2016 (April-March), is expected to be developed in November 2015 for submission to the WPG for review.
- Vanuatu: (a) Since June 2014, the daily data of the incoming vehicles are manually recorded on the approved formats and a monthly report is prepared for circulation within PVMC. (b) A development and operational plan for Bouffa landfill has been prepared. Operation part of the plan has been implemented. Development part of the plan has been partly implemented through support of post-disaster management activities of J–PRISM. It is uncertain if the remaining would be implemented before the end of the Project due to lack of budget.
- FSM: The state landfills were improved in all four states as follows:
  - Kosrae: Operation and maintenance of the first Fukuoka method (semi-aerobic) landfill in FSM (constructed before J-PRISM) was improved partly owing to training under J-PRISM.
  - Pohnpei: Half of the existing dumpsite was rehabilitated to Fukuoka method landfill.
  - Chuuk: The existing dumpsite was improved; preparation of the interim site (to be operational within this year) and the new landfill using Fukuoka method (EIA is to be conducted) is partly supported under J-PRISM.
  - Yap: The existing dumpsite was improved to Fukuoka method landfill; the new landfill using Fukuoka method was constructed with technical support from JICA experts.
- Palau: (a) Before the Project, M-Dock landfill would have become full in 2013. In 2012-2013, construction of dykes and other improvement works extended the period of operation of the landfill for 3 years with technical advice from the JICA experts (construction cost was expensed from the Recycling Fund). (b) Also, a basic concept plan (site layout plan) of the new landfill was developed. (c) A guideline for closure of the M-Dock landfill is being developed and will be completed by the end of the Project.
- RMI: (a) In Ebeye, burning in the open dumping had been practiced almost every day before the Project. It stopped after installation of signboards, introduction of manned operation, etc., which enhanced awareness of people. Also, segregation of metal, vehicles and general waste has been started under the Project.
- Samoa: (a) Tafaigata Land Use and Development Plan have been prepared. (b) The incoming waste

data has been recorded and monitored monthly, using the weighbridge system installed in March 2013. (c) Leachate treatment system has been installed. MNRE started monthly monitoring in August 2015 but has not been able to collect the enough samples due to weather conditions. According to the visual check, physical parameters of the leachate (color, smell and transparency) were greatly improved.

- Tonga: (a) The existing dumpsite was fully rehabilitated, however, it has not been fully operated in accordance with operation manuals and some concerns regarding landfill management were pointed out at the time of terminal evaluation. It should be well noted that the financial situation has been improved with the commitment of MOH.

Box 3: Step-by-step procedures for consensus building

- In Tonga, step-by-step procedures to build consensus among community people has proven to be very effective. The Project first introduced the idea of garbage collection system to the District/Town Officers, influential leaders of the community. Workshop and meetings have served to get all the relevant stakeholders to be aware about the real needs and their part of responsibilities to carry out the activities. And the establishment of VEVE committee has fostered their initiatives.

(4) Waste Collection (Priority Item 203)

The Outputs for Waste Collection would be mostly or partly produced by the end of the Project. In some countries, waste collection improvement plans have been developed but they have not reached the implementation stage yet.

Expected Outcome under RS 2010	PIC	Outputs	Degree of Achievement Current/EOP
Well-managed, efficient, and self-sustaining waste collection systems introduced or upgraded in PICs.	PNG	Output 2: Waste collection in Port Moresby is improved	Mostly/Mostly
	FSM	Output 2-2 (Kosrae): Collection of general waste is improved	Partly/Partly
		Output 3-2 (Pohnpei): Collection of general waste is improved	Partly/Partly
		Output 4-3 (Chuuk): Capacity to improve collection of general waste is enhanced	Mostly/Mostly
	RMI	(Output 5: Solid waste management system is improved in Ebeye)*	Mostly/Mostly
	Tonga	Output 2: Solid waste collection service in Vava'u is improved.	Mostly/Mostly

Note: * Degree of achievement of this Output in RMI is a combined judgment of 3R/4R, Waste Disposal, Waste Collection, Awareness/Communication/Education and Capacity Building.

<Progress of Major Indicators for the Outputs for Each PIC>

- PNG: (a) About 60% of the generated municipal waste was collected in 2014. The updated

coverage (2015) shall be reported to final JCC. The coverage is likely to be higher in 2015 since measures for improvement of waste collection have been introduced since 2014. (b) Time-and-motion study has been conducted by NCDC itself biannually as planned.

- FSM: (a) Waste collection plans were drafted in all three states, but it was only in Chuuk state where the plan has been actually implemented. While collection is carried out by the state in Chuuk, it is a job of municipalities in Kosrae and Pohnpei. In Kosrae, further discussions with municipalities and detailed planning are awaited. In Pohnpei, legislation of the new fee collection system using prepaid bags is underway.
- RMI: (a) In Ebeye, an improvement plan on waste collection including the fee collection mechanism was drafted in 2014. The plan has not been implemented yet due to prolonged negotiation on acceptance of compactor trucks donated by the United States between KALGov and the vendor, due to specification mismatch. An agreement on acceptance of the vehicles was concluded in 3 September 2015, and after training, trial collection and detailed time scheduling, the full implementation of the improvement plan is to be commenced in 1 October (i.e. from FY 2016).
- Tonga: (a) With voluntary initiatives, community-based garbage collection system has been implemented as planned, and approximately 50% of all households in Vava'u have access to the system. Since VEVE[6] committee is taking an important role for delivery of necessary information on their garbage collection, it is necessary to firmly establish the trust relationship between VEVE committee and residents with the strong leadership and commitment of District and Town Officers.

(5) Awareness/Communication/Education (Priority Item)

The Outputs for Awareness/Communication/Education would be fully or mostly produced by the end of the Project, mainly through introduction/expansion of school- or community-based awareness programs.

Expected Outcome under RS 2010	PIC	Outputs	Degree of Achievement Current/EOP
An informed and aware population who support and participate in waste management activities.	Solomon	Output 3: Lessons and experiences learnt are disseminated in Solomon Islands	Partly/Mostly
	FSM	Output 2-4 (Kosrae): Awareness raising is improved	Fully/Fully
		Output 5-3 (Yap): Capacity to conduct awareness activities for SWM is raised	Mostly/Mostly
	Kiribati	Output 2: Community awareness on solid waste is improved.	Mostly/Mostly
	RMI	Output 4: School-based recycle system is introduced in Majuro	(Mostly/Mostly)*
		(Output 5: Solid waste management system is improved in Ebeye)**	Mostly/Mostly
	Palau	Output 3: Capacity to conduct awareness- raising on 3R is enhanced	Mostly/Mostly

[6] VEVE means "waste" in Tonga language.

Note: * In RMI, the Project partly contributed to the achievement of this Output.
** Degree of achievement of this Output in RMI is a combined judgment of 3R/4R, Waste Disposal, Waste Collection, Awareness/Communication/Education and Capacity Building.

<Progress of Major Indicators for the Outputs >

- Solomon Islands: (a) Draft National Waste Management and Pollution Control Strategy (NWMPCS) (2016-2025) will be prepared in October 2015, incorporating the lessons and experiences learned from the Project. The draft will be discussed at the NWMPCS workshop planned in November 2015 and is expected to be finalized by the end of the Project. (b) Good practices on 3R and landfill management identified through the project activities have been shared in three provincial centers so far. The good practices will be shared with all the provincial officers at the NWMPCS workshop in November, too.
- FSM: (a) In Kosrae, the school-based awareness program KIRMA had implemented before the Project covered all elementary schools under this Project as planned. In Yap, EPA and DPW&T developed low-cost awareness materials and conducted more workshops than planned. In addition, EPA started a school-based program started in Chuuk as part of the activities for waste collection, based on the finding that waste collection should accompany awareness-raising.
- Kiribati: (a) CSP has been carried out mostly as planned and awareness on solid waste has been steadily progressed in schools. Monitoring are conducted mainly in 3 components, i) environment awareness, ii) compost from organic waste, and iii) waste separation and recycling. With the periodical monitoring and proper advices by C/Ps, their awareness on solid waste through CSP will be further improved.
- RMI: (a) School-based awareness activities have been conducted in Majuro and in Ebeye since before this Project. (a) Major product of this Project in Majuro is limited to a baseline study, preparation of awareness materials in 2012, and a regional training in Fiji, and only one of the trainee C/Ps remains at present. Even so, involvement of the current C/P from EPA in educational activities in Ebeye enhanced her understanding of and commitment in educational activities in Majuro. (b) In Ebeye, frequency of school visits increased from 1-2 times/quarter before this Project to every month at present, and cooperation with the implementing agencies in education activities started.
- Palau: (a) EPA prepared and distributed awareness materials to all schools in the Earth Day events in 2014 and 2015, but the target of visiting all schools was partly achieved because until 2013, the awareness activities were stagnant due to difficulties in decision-making through the multi-stakeholder PEEC. The awareness activities increased rapidly after resolution of PEEC in 2014.

(6) Capacity Building

The Outputs for Capacity Building would be fully or mostly produced by the end of the Project, mainly

through sharing of knowledge and experiences among stakeholders in a country or internationally.

Expected Outcome under RS 2010	PIC	Outputs	Degree of Achievement Current/EOP
Skilled and trained people available in-country, who effectively manage solid waste management systems	Fiji	Output 2: Fiji 3R model is disseminated to the Region/Country through training program	Fully/Fully
	Vanuatu	Output 3: Capacities for waste management at the national and local government level are enhanced	Fully/Fully
	RMI	(Output 5: Solid waste management system is improved in Ebeye)*	Mostly/Mostly
	Palau	Output 5: Training program on 3R/SWM is developed	Mostly/Mostly
	Samoa	Output 3: Experiences and lesson learnt are shared in both national and international levels	Mostly/Fully

Note: * Degree of achievement of this Output in RMI is a combined judgment of 3R/4R, Waste Disposal, Waste Collection, Awareness/Communication/Education and Capacity Building.

<Progress of Major Indicators for the Outputs>

- Fiji: (a) C/Ps of the Project have contributed as trainers to the regional/in-country trainings where 226 persons participated all told. (b) They have developed nine kinds of training materials by themselves. (c) Through these trainings, Fiji 3R model is in the process for dissemination to J-PRISM non-targeted councils in the Central and Northern Division. In terms for other PICs, (d) CSP has been introduced to Kiribati, Tonga and Solomon Island by now.
- Vanuatu: (a) During the workshop for annual provincial SWM plan in July 2015, officers from 5 provinces resolved to include waste minimization schemes in their respective plans they are now preparing. (b) A template for the annual SWM plan at provincial and municipal level has been prepared.
- RMI: (a) Two teachers training courses on 4R/3R were held in 2013 and 2015. The instructors were C/P of this Project (EPA-Majuro and MAWC in 2013 and EPA-Majuro and Fiji in 2015). The 15 teachers trained in 2015 are schoolmasters or head teachers of all schools. The Project expects them to train teachers of their schools.
- Palau: (a) Manuals for the 3R training were developed for the "Regional Training on Promotion of 3R in Palau" in 2013 (a Region-wide Activity of J-PRISM). The Project is planning to publish these manuals in the "Pacific Guidebook of SWM Planning" as a Region-wide Activity. In 2015, an in-country training "In-country training for Waste Amount Composition Survey (WACS)" was conducted for capacity development of municipalities for the first time.
- Samoa: (a) Newsletters are produced twice a year and at least one relevant document is going to be produced. (b) Seven overseas missions of PIC counterparts and national stakeholders are hosed by MNRE. (c) Samoa's experiences have been presented at five regional and international workshops in the form of oral presentation and/or country report.

(7) Policy, Planning and Performance

The degree of production of the Outputs for Policy, Planning and Performance varies by country, depending on the progress of development of NSWMS/SSWMS and capacity for monitoring of the Action Plans of the respective Strategies.

Expected Outcome under RS 2010	PIC	Outputs	Degree of Achievement Current/EOP
PICs implement national waste management policies and strategies, which are based on accurate data, with monitoring systems established to report on performance.	PNG	Output 3: Capacity of planning and monitoring of Solid Waste Management in Port Moresby (National Capital District: NCD) is increased	Partly/Mostly
	FSM	Output 1-1 (OEEM): The NSWMS is finalized.	Mostly/Mostly
		Output 1-2 (OEEM): Information sharing of SWM is enhanced among states	Fully/Fully
		Output 2-1 (Kosrae): The SSWMS in Kosrae is finalized. Action Plan is developed.	Partly/Partly
		Output 3-1 (Pohnpei): The SSWMS in Pohnpei is finalized. Action Plan is developed.	Partly/Partly
		Output 4-1 (Chuuk): Capacity to prepare SSWMS of Chuuk and action plan is developed	Mostly/Mostly
		Output 5-1 (Yap): Capacity to prepare SSWMS of Yap and action plan is developed	Fully/Fully
	RMI	Output 1: NSWMS is implemented	Partly/Partly
	Palau	Output 1: NSWM Plan is finalized and Action Plan is revised.	Fully/Fully
	Tonga	Output 3: Framework and system for long-term Solid Waste Management in Vava'u is established.	Mostly/Fully

<Progress of Major Indicators for the Outputs>

- PNG: (a) SWM Plan is being developed, which would be finalized for submission to the NCDC Board for adoption by the end of the Project. (b) NCDC has developed capacity necessary for monitoring of implementation of SWM (For details, see ANNEX 3 (b)).
- FSM: (a) OEEM completed its first NSWMS 2016-2020 and the Action Plan in May 2015, four years behind the schedule due to delays in completion of SSWMSs, constituents of the NSWMS, in Chuuk and Yap. Annual monitoring of the Action Plans for the NSWMS and SSWMSs, respectively, were begun by OEEM at the federal level and by EPAs/KIRMA and public works departments at the state level, though in Kosrae and Pohnpei, the target of monitoring the Action Plans by the Monitoring Committee three times a year was not achieved due to difficulties in multi-stakeholder coordination.
- FSM: (a) Information sharing on SWM was enhanced by means of (i) development and distribution of documents, namely, "Good Practices for Solid Waste Management in the FSM 2015" and the first national "Monitoring Guideline of the Leachate", and (ii) holding annual meetings (national and state-wise JCC, which is to be replaced by Waste Committee meetings after project

completion). A significant change regarding (ii) is that OEEM came to involve state public works departments, the key stakeholders in SWM besides state environmental agencies.

- Palau: (a) In 2012, NSWMP was endorsed by Minister of MPIIC in 2012 and the Action Plan was revised with SPREP. Following recent improvement in SWM in Palau such as and the new landfill construction plan, a revision of NSWMP is planned in 2015 with help of SPREP.
- RMI: (a) In September 2014, OEPPC submitted the draft NSWMS (2014-2018) with the draft Action Plan to Minister in Assistance to the President, but it has not been submitted to the cabinet for approval yet, in spite of repeated approaches by the Project. OCS intends to bring this matter to the cabinet as soon as possible. Meantime, the implementing agencies started implementing the draft Action Plan, but frequency of monitoring has not been as planned.
- Tonga: (a) Solid Waste Management Plan was drafted for Vava'u in January 2012. It is in the process of finalization as of July 2015. In order to share the progress of project activities and issues to be considered, (b) workshops for Vava'u SWM Committee were held almost every year. The Project is planning to have the 6th workshop in November 2015 to obtain approvals for the finalized the Vava'u Solid Waste Management Plan.

3-3 Project Purpose

The prospects of achieving the Project Purpose have been assessed by two indicators for the regional level, and one common indicator and country specific indicator(s) for national level[7].

Project Purpose	Indicators	
Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS 2010)	Region-wide Activity	1 Level of contributions by the project to the RS 2010 implementation
		2. Total number of good practices which can be applied in other PICs is generated through the activities of the projects.
	National	1. Number of experts (Trainers) in the relevant field of SWM listed in the SPREP inventory
		2. Progress of issues separately undertaken by each PIC

Overall, it is likely that the Project Purpose will be mostly achieved by the end of the Project, considering the current achievement level of the valid indicators, majority of which have already been fully or mostly achieved, and the ongoing progress of production of the Outputs.

The prospects for achievement of the Project Purpose for the individual country projects are summarized in Table 8.

[7] As explained in "2-3 Framework of the Project Implementation", the Project consists of both individual projects by each PIC and the Region-wide Activities. Individual projects have been assisted in two ways, by the technical assistance of JICA experts to tackle with the particular issues of its own, and by the Region-wide Activities, mainly in the form of trainings.

Table 8: Prospect of Achievement of the Project Purpose

J-PRISM consists of Region-wide activities and 11 individual country projects															
Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS 2010)	Region-Wide Activities	Fiji	PNG	Solomon	Vanuatu	FSM (iii)					Kiribati	Marshall	Palau	Samoa	Tonga	Tuvalu
						N	K	P	C	Y						
	M	M	M	M	M	M	(M)	M	M	M	P	M	M	M	M	NA

Legend

	Degree of achievement	Description
F	Fully achieved	All indicators are fully achieved (100% or higher degree of achievement of the targets/expected states).
M	Mostly achieved	Major indicators are either fully achieved (100% or higher degree of achievement of the targets/expected states) or mostly achieved (roughly 70%-100% or higher degree of achievement of the targets/expected states).
P	Partly achieved	Major indicators are partly achieved (progress is made from the baseline but it is not reaching roughly 70% of the targets/expected states)
N	Not achieved	No indicators are achieved (no progress is made from the baseline).
NA	Not assessed	Degree of achievement was not assessed.
( )	-	This Project partly or indirectly contributed to the achievement of the Project Purpose.

Source: Terminal Evaluation Team

3-3-1 Indicators for Region-wide Activities

Region-wide Indicator 1	**Level of contributions by the project to the RS 2010 implementation**

This Indicator has already been fully achieved. The review of RS 2010 conducted by SPREP has identified the high level of J-PRISM contribution to the implementation of RS 2010. In all thematic areas assisted by J-PRISM except the sustainable financing, contributions of J-PRISM has been listed up. Especially, in the areas of integrated SWM and capacity building, J-PRISM contribution is concentrated. Level of contribution by the Project to the RS 2010 implementation is judged as high.

Region-wide Indicator 2	**Total number of good practices, which were generated through project activities in each PICs, have been widely practiced in other PICs**

This Indicator has been partly achieved, and the achievement level would be the same at the end of the Project. There are four good practices originated through J-PRISM activities (Table 9). One of these practices, the Community-based Garbage Collection System originated in Vava'u, Tonga has been already introduced to Gizo, Solomon Island. It is expected that other three good practices, such as horn collection system, home composting subsidy program and financial assistance program for CSP will be expanded to other PICs in the near future.

Table 9: Identified Good Practices Originated through J-PRISM Activities

1	Community garbage collection system developed in Vava'u, Tonga, 2013
2	Horn collection system developed in Chuuk State, FSM, 2013
3	Home composting subsidy program, Fiji, 2015
4	Financial assistance program for Clean School Program introduced, Fiji, 2015

Source: Project Office

<For reference>

Although good practices originated through J-PRISM have not yet expanded as expected, many of good practices originated from previous projects have much expanded in the region as shown in Table 10.

Table 10: Good Practices from Previous Project applied/being applied in Other PICs

	Cases of Good Practice	Origin	No	Adapted city / Town (PIC) under J-PRISM
1	Clean School Program	Nadi, Fiji	4	South Tarawa (Kiribati), Honiara/Gizo (Solomon Island), Vava'u (Tonga), Ebeye (RMI)
2	Eco-Bag	Nadi, Fiji	1	Honiara (Solomon Islands)
3	Weighbridge system	Lautoka, Fiji	1	Samoa
4	Market Compost	Lautoka, Fiji	2	Port Vila (Vanuatu), Port Moresby (PNG)
5	Semi-aerobic landfill	Tafaigata, Samoa	4	Vava'u (Tonga), Yap, Pohnpei (FSM) Honiara (Solomon Island), Port Moresby (PNG)
6	Container Deposit Legislation	Kosrae, FSM Koror, Palau Yap, FSM	2	Pohnpei (FSM), Samoa
Total			14	

Source: Project Office

Supplementary Information	**Number of key C/Ps in the respective sub-region who have refined their technical expertise (increase)**

The number of key C/Ps in the respective sub-region who have refined their technical expertise has been increasing. Their exposure to the international conference has helped to improve the international profile of what J-PRISM have done. In terms of institutional and organization capacity base, not much progress have been identified during the study.

3-3-2 Indicators for Individual Country Project

Country-specific Indicator 1	**Number of experts (trainers) in the relevant field of SWM listed in the SPREP inventory**

The Indicator was not used as a direct measure of the Project Purpose for the following reasons: (i) while the PIDOC, the existing database, is an inventory of SPREP, the persons listed are trainers recognized by J-PRISM but not considered as officially certified trainers by SPREP; and (ii) the target

values are not valid as they had been determined before the introduction of PIDOC (thus not consistent with the number of trainers listed in it).

For reference, cumulative total of 70 C/Ps (net total of 23 C/Ps) have participated in the international/regional/country training and workshops organized by J-PRISM as trainers and thus listed in the PIDOC.

Country-specific Indicator 2	**Progress of issues separately undertaken by each PIC**

As described under the Evaluation Policy, the Project has assisted each PIC to address their own specific SWM issues. Some of PICs have sought to strengthen landfill management, others to improve the waste collection system, etc. In order to assess the prospects of such challenges, the Team reviewed the status of the Country-specific Indicator(s) and summarized the results in the Table 11.

Table 11: Prospects of Achievement of the Country-specific Indicators for the Project Purpose by the End of the Project

	Indicator	Prospect
Fiji	Regional training program organized by Fiji is established.	Fully
PNG	Landfill management/collection services are implemented according to the SWM Plan	Not assessed (Period of SWM Plan is 2016-2020)
	NCDC is ready to implement landfill management/collection service according to the SWN Plan	Fully
Solomon Islands	5 initiatives on waste minimization introduced	Fully
	Ranadi and Gizo landfill are managed as planned in Annual Operational Plan	Partly
	Provincial officers recognize the importance of 3R and SWM and are willing to promote 3R and SWM in their respective provinces	Not assessed
Vanuatu	Bouffa and Luganville landfill are managed as planned in the Annual Operation Plans *("Bouffa landfill is managed as planned in the Annual Operation Plan")*	Partly
	One or more provinces implemented their respective action plan to promote minimizations and composting in respective provinces. *("One or more provinces implemented their respective annual SWM action plans in the respective provinces, which include promotion of waste minimization")*	Fully
FSM	Improvement of State landfill in each state	Mostly
	Good practice developed from one state is shared with all the states of FSM	Fully
Kiribati	Volume of disposal waste at landfill sites is reduced by 5%	Partly
RMI	Good practices and experience are shared among Majuro and other Atoll Local Governments	Mostly
Palau	% of amount of containers redeemed out of imported beverage containers maintained 90% or above *("The beverage containers deposit fee program is properly managed by SWM-BPW in collaboration with SWM-KSG")*	Mostly
Samoa	Amount of waste disposal is decreased by at least 5% *("In 2015, monthly average of amount of waste disposal at Tafaigata is decreased by at least 5% compared with 2013")*	Not assessed (So far, fully achieved)
Tonga	More than 50% of target communities operate and maintain the garbage collection system with a minimum support from the government.	Fully

Tuvalu	Improved operation of waste collection	Not assessed

Note: For those Indicators which are not specific enough, definition confirmed through a series of discussions with the respective Project Team is shown in Italics the parenthesis.

< Progress of Indicators for the Project Purpose>

- Fiji: (a) Through opportunities to contribute as a trainer in the Region-wide training program, a number of C/Ps have enhanced the capacity of SWM in the fields. Besides two councils which have accumulated experiences through the 3R project, other councils started to conduct trainings to meet the diversified demand of each PIC. This is proven by the number of trainings conducted by each council. C/Ps have also been able to develop the training materials and have performed as trainers many times. They can also provide the site for trainings, such as for landfill management and compost making, etc. DOE is considering continue trainings of these kinds with high priority for the country.
- PNG: (a)NCDC is ready to implement landfill management/collection service according to the SWN Plan. Since the SWM plan is the first of its kind in the country, its implementation may be challenging; but promoting factors include the followings: (i) the SWM plan is a realistic plan reflecting the lessons learned through the Project; (ii) technical capacity of NCDC has been enhanced for implementation; (iv) the plan will include a five-year action plan with estimated budget; and (vi) the plan is expected to have support from the senior management since it is based on the NCD Waste Policy and it will be adopted by the Board before its implementation.
- Solomon Islands: (a)Through the Project, five initiatives on waste minimization have been introduced on pilot basis: (i) eco school program/clean school program; (ii) waste segregation; (iii) eco bag campaign; (iv) waste collection station system; and (v) waste audit. All of these five initiatives are expected to be incorporated in the regular programs of the respective responsible organizations after the end of the Project.
- Vanuatu: (a) So far, the landfill has been operated as planned in the annual plan for the operation works (2015). It is uncertain if the operation will be continuously implemented as planned once the service of C/P in charge of the landfill management is terminated in early September 2015. (b) In five provinces (and three municipalities), preparation of the respective annual SWM plan, including waste minimization scheme, is ongoing. It is expected that all the provinces will start implementing their respective annual SWM plans in FY 2016 (January-December), considering that it is the requirement of the Waste Management Act.
- FSM: (a) The state landfills were improved in all four states (see “3 Waste Disposal” of “3-2-2 Outputs of Individual Project of Each PIC”). For sharing of good practices, OEEM developed a booklet “Good Practices for Solid Waste Management in the FSM 2015” and distributed to all states.
- Kiribati: (a) Green waste recycling at two councils has contributed to the reduction of disposal waste volume at landfill sites. However, the percentage of reduction for disposal waste at landfill

sites (South Tarawa) is 0.15% for 2014 and 0.21% for 2015 (up to July) and the target recycle rate of 5.0% has not been met by now. And it is less likely to be achieved by the end of the Project.

- RMI: (a) Good practices in Majuro, though they are not the outcomes of the Project in RMI but outcomes of the Region-wide Activities and other JICA assistance, were shared to Ebeye by means of dispatch of C/P in Majuro to Ebeye for trainers/resource persons in environmental education and recycling. Such dispatch mutually benefited the C/P in both Majuro and Ebeye.
- Palau: (a) SWM-BPW became able to properly manage the beverage containers deposit fee program in collaboration with SWM-KSG (see "1) Sustainable Financing" of "3-2-2 Outputs for Individual Project of Each PIC").
- Samoa: (a) So far, monthly average of amount of waste disposal at Tafaigata in 2015 (January-June) is decreased by 12.8% compared with 2013 (Updated data will be reported to the final JCC).
- Tonga: (a) Currently, 10 communities have access to garbage collection system run by the VEVE committee members. Out of those, eight communities can independently operate and maintain the garbage collection system without direct support from the governmental agencies through monitoring.
- Tuvalu: (a) There is no data available for the improved operation of waste collection. Given the minimum level of activities done so far and non-availability of data, it is difficult to assess the degree of achievement of the Project Purpose. (Tuvalu is now the recipient of a major waste management improvement initiative funded by the EDF11 programme 2015-2020).

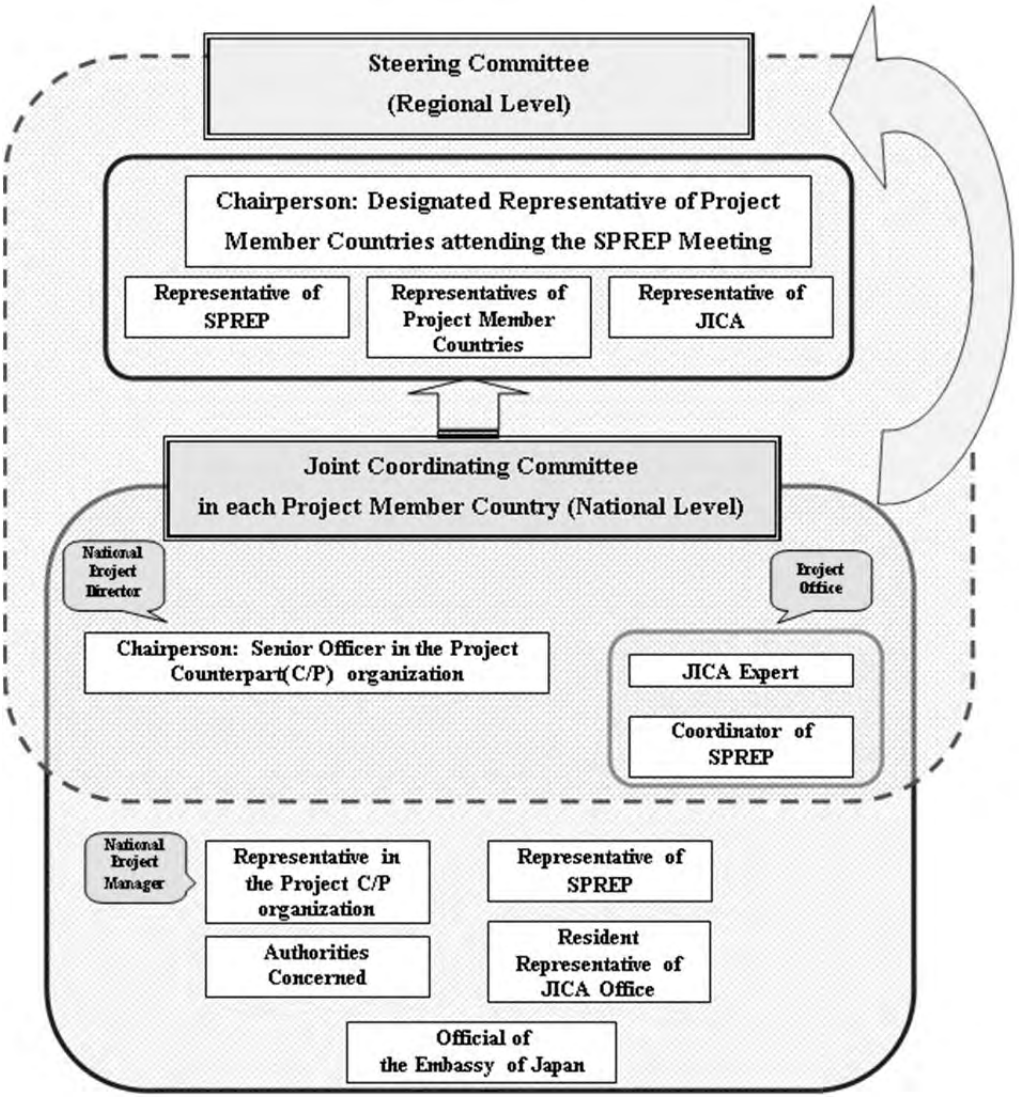
4. PROJECT IMPLEMENTATION PROCESS

4-1 Implementation Process of J-PRISM as a Whole and the Region-wide Activities

4-1-1 Implementation System of the Project as a whole/ Region-wide Activities

The overall implementation system of the Project has not been changed basically since the commencement of the Project (Figure 1). It has been functioning without serious problems.

Figure 1: Project implementation system



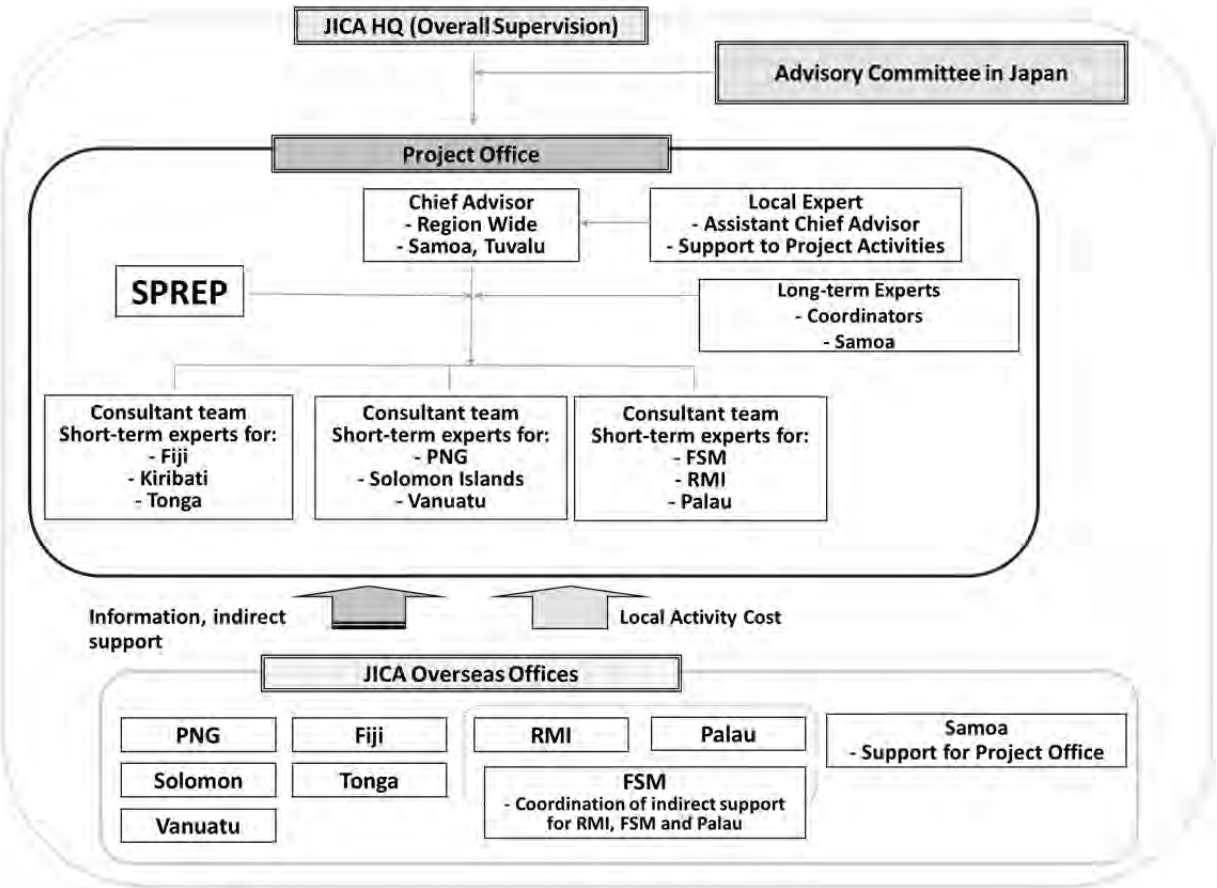
Source: The Regional Cooperative Framework for Promotion of Regional Initiative on Solid Waste Management (J-PRISM), September 7, 2010

Regarding the Japanese side, the implementation system has been reformed after the Mid-term Review. Instead of directly assigning independent experts to the respective PICs, three groups of consultant teams

consisting of short-term experts are dispatched to cover three groups of countries that are roughly divided by sub-regions (Figure 2)[8]. These changes had advantages such as enabling more flexible assignment of short-term experts within a consultant team based on necessity for technical assistance, while continuity of assigning the same expert was affected by a change in contractual status in some countries (Solomon Islands and Vanuatu), which has caused a confusion in approach among the C/Ps and has led to delay in the progress of activities to some extent.

In addition, each of the three long-term experts/coordinators of the Project Office, responsible for facilitation and support of both regional and national activities, has been assigned a particular sub-region. As a result, closer responses to individual country projects by the Project Office became possible, while there remained unclear division of responsibilities between the Project Office and short-term experts.

Figure 2: Implementation system of the Japanese side



Source: Prepared by Terminal Evaluation Team based on a document of JICA HQ.

As another issue, since June 2014, the Chief Advisor, who had been assigned in the Project Office in Samoa,

[8] The Japanese-side implementation systems for Samoa and Tuvalu remained the same as those before the mid-term review.

has been stationed in Tokyo. It was pointed out that there have been some difficulties in the Project Office as it has taken more time for decision making. Attempts have been made to overcome such difficulties through making full use of teleconference, e-mails and phone calls.

4-1-2 Project Management for the Project as a whole/ Region-wide Activities

Management responsibility. Management of the Project as a whole and of the Region-wide Activities is carried out by the Project Office mainly by the Chief Advisor and the Coordinators, while management of each of the eleven individual country projects is conducted separately in each PIC by C/Ps, short-term experts and the Coordinators in charge of the concerned sub-region group.

Management tool. Country-specific PDMs and POs are used and updated in each of individual projects, while there is no working PDM for the project as a whole. The Project Office has managed the overall Project using PDM and PO of individual projects and by compiling and updating information on Inputs and activities in designated formats created within the Project Office. The Project Office receives the Progress Reports on the project activities and plan for next term twice a year from the Project Managers of individual PICs, but the Reports is used for information sharing among member countries rather than for monitoring.

Steering Committee (SC)[9]. The overall progress of the Project and general plan for next term is presented and endorsed at the SC meeting that is held as a side event of the annual SPREP General Meeting attended by the representatives of PICs. It is a good opportunity to inform observers, including other donors and participants in the General Meeting, of J-PRISM activities. However, due to the fact that two hours are not sufficient to discuss important issues and those representatives of PICs may not necessarily be involved in the J-PRISM activities, the outcome of the meeting have not been up to expectations. It is noted that the J-PRISM plans to spend a whole day to have the 5th SC meeting for the first time in September 2015.

4-1-3 Communication within the Project Office

Communication within the Project Office is through daily conversations, monthly meetings of the Waste Management and Pollution Control Division of SPREP and through the annual SC meeting. Communication/partnership between JICA and SPREP has been gradually strengthened as the project implementation has progressed. SPREP commented that mutual understanding regarding the

[9] The Steering Committee of the Project is composed of the Chairperson, the Project Directors of each Project Member Country, a representative of SPREP, a representative of the Government of Japan and presentative of JICA. The functions of the Committee has the following functions: (i) to formulate policies for the operation of the Project: (ii) to review and approve a five year plan implementation plan which is harmonized with the RS (2010-2015) and annual activity plans: (iii) to periodically review and evaluate on-going activities: (iv) to review and approve ideas for the realization of a self-reliant and self-sustaining Regional Network: (v) to perform other relevant functions that my be necessary to achieve the objectives of the Project.

responsibilities of each side has been well recognized and SPREP appraised the technical cooperation approach utilized by J-PRISM as effective for the capacity development in the region.

4-2 Implementation Process in Individual Project in Each PIC

4-2-1 Progress of Activities

In some countries, most of the activities have been carried out as planned and will be completed by the end of the Project (Tonga, Fiji, FSM, Palau, and RMI). The progress was slow in the other countries in the first half of the Project due to various reasons (see "5-3 Efficiency"), but the activities got on track in the second half in most of them with efforts of the C/Ps and support of JICA Experts (PNG, Solomon Islands, Vanuatu, and Samoa). Some activities cannot be completed fully before the end of the Project but they are likely to be completed after the end of the Project by the Pacific sides. In Vanuatu, however, the progress became slow again in the final year primarily due to the redundancy of the main C/Ps of the main Implementing Agency (PVMC), including the Project Manager. It is unlikely that the planned activities would be completed as scheduled. In Kiribati, frequent change and absence of C/Ps have caused some delays of project activities.

4-2-2 Methods of Technical Transfer

Technical transfer has been carried out by means of technical advice and OJT by JICA experts and pilot projects as well as various regional and in-country training courses/workshops organized under Region-wide activities of J-PRISM. No major problems have been observed. The Learn-by-doing approach of J-PRISM has contributed to enhancement of the technical capacity of the C/Ps. Notable means of technical transfer include preparation of a guidebook as a product of a training (OEEM-FSM) and hands-on training in a form of a pilot project (FSM, RMI, and Palau). Involvement of C/Ps from other islands in trainings and pilot projects was an appropriate means of capacity development of both C/Ps who were trained and who were dispatched as trainers. In Yap, the approach to provide necessary technical assistance while ensuring maximum ownership on C/Ps is highly appreciated by C/Ps.

4-2-3 Implementation System

Pacific side. No major problems have been observed. In FSM, where individual states have distinct implementation systems, State Project Manager is assigned in each state besides the Project Manager. In PNG, appointment of Output Leaders under the Project Manager/Project Coordinator has contributed to smooth implementation of the Project. In RMI, however, involving a number of implementing agencies, whose organizational needs are not necessarily relevant with the Project, has caused unclear division of roles and responsibilities among them.

Japanese side. The implementation system on the Japanese side was improved in the latter half of the project period, in which assignment of the short-term experts became more flexible, so that an Expert can cover other states/countries than those originally assigned in certain subjects of cooperation if considered effective.

4-2-4 Project Management

JCC. In general, the Pacific side has participated in decision making process duly. In most of the countries, JCC has been held annually, which has been effective in giving overall guidance and direction of the Project. Progress of the past year has been reported.

Internal monitoring. As an internal monitoring system, regular meeting is proven effective in many JICA projects; but it was not included in the initial design of most of the projects under J-PRISM. In Fiji and Solomon Islands, the Project has been monitored through regular C/P meetings, where all members report their activities in the past period and introduce their plan for the coming period, so that everyone follows-up not only underperforming Outputs but all others. In Fiji, the regular meetings were effective in connecting many C/Ps separately assigned in six (6) councils. In Solomon Islands, the C/P meeting was also useful in selecting candidates for regional training, which has ensured transparency. In some countries, the project monitoring was enhanced in the second half through introduction of the regular C/P meetings (PNG, Vanuatu, and Samoa). In other countries, monitoring meetings were held 3 times a year when JICA Experts were dispatched to the respective countries (FSM, Palau, and RMI). But monitoring has not been conducted by the C/Ps during the absence of the experts. In addition, the results of the monitoring were not shared with the C/Ps (from Ebeye) who were not invited to the meetings in Majuro, RMI.

Utilization of PDM and PO. In response to a recommendation to some countries to better utilize PDM and PO, the degree of utilization of these documents have been improved. In Fiji and FSM, PO was broken down to council-wisestate-wise PO with each target specific to each council/state. The PDM, however, has not been fully utilized yet. Progress of the Objectively Verifiable Indicators has not been closely monitored by the Project, partly due to insufficient assignment of those who should be in charge of monitoring. Furthermore, some indicators are not well defined, e.g., they are indirect, lack of target value, not attainable (largely affected by external factors) and difficult to measure. Also, detailed PO and annual PO have not been prepared, which has made it difficult for all those concerned to have common understanding of the overall implementation process and progress of the Project based on the PO as well as expected achievement level of the Outputs and the Project Purpose of the PDM.

Others. In Vanuatu, absence of the Project Manager with relevant decision making power and authority has been a serious problem since May 2015. At the time of the evaluation, the new Project Manager was not yet identified/appointed.

4-2-5 Communication within the Project

In most of the countries, communication within the Project has been sufficient for smooth implementation of the Project. The collaborative relationship has been developed and/or enhanced among Implementing Agencies in many countries. The regular C/P meetings have facilitated the communication.

Communication between the C/Ps and the JICA expert team has been generally sufficient although frequent change of JICA Experts created some confusion for the C/Ps for some time in PNG, Solomon Islands, and Vanuatu. In case of Tonga, effective communication with the Governor has resulted in the successful implementation of project activities overall. On the other hand, in Vanuatu, insufficient communication between the C/Ps and the senior management of PVMC may have led to insufficient understanding of the senior management about the project activities.

Difficulties of internet access among C/Ps have likely adversely impacted the implementation process.

4-2-6 Collaboration/coordination with Local Stakeholders

The activities have been carried out in collaboration/coordination with various local stakeholders, including the relevant ministries, local authorities, schools, colleges/universities, NGOs, waste pickers, communities, women's groups, large waste generators (hotels, supermarkets, markets, etc), waste collection companies, recyclable collection companies, compost/mulch producers, etc. as shown in Table 12.

Table 12: List of Local Stakeholders (For details, see ANNEX 4)

Country	Major Stakeholders
Fiji	MOE and schools, Nadi Women's Group, Ministry of Women and Culture, Fijian Resort in Coral Coast Areas, manufacturer of compost
PNG	Waste pickers, settlement community, private business, Gerehu Market, recycling companies, teachers and students
Solomon Islands	Waste pickers (Honiara), a recyclable collection company (Honiara), a recycler (Gizo), community leaders (Honiara, Gizo), women's group (Gizo), teachers and students (Honiara and Gizo), NGO (Honiara), National Referral Hospital ,Solomon Waters
Vanuatu	Central Market, an organic farming company (mulch producer), communities (Freshwota Ward), a recyclable collection company, a hardware center
FSM	Municipal governments & Conservation Society of Pohnpei (OEEM), municipal governments (Kosrae), a recycling company, an NGO & Department of Education (Kosrae, Pohnpei), a contractor for landfill operation(Pohnpei), Department of Administrative Services COM-CRE, Chuuk Women's Council, and Student Council(Chuuk), Youth Group, schools and a recycling company (Yap)
RMI	Office of Chief Secretary, Marshall Islands Conservation Society, MOH, Office of Deputy Chief Secretary of Kwajalein Atoll
Palau	MOH, MOE, MOF, EQPB
Samoa	Waste collection company for Zone A, a recycling company, community leaders of Vaiala and Apia Villages, STA
Tonga	A recycling company, MOE and schools

Source: Interviews and questionnaires with C/Ps.

Box 4: Coordination/Collaboration effort with Waste Pickers

- In PNG, coordination with the waste pickers has been improved in the second half of the Project. A comprehensive survey was conducted in 2014 to understand the current situation of waste pickers. Information such as the number of waste pickers, personal attribution (such as age, gender, education, health, origin etc), their dependence, their living conditions, materials they collect, safety at the site, their intention to continue waste picking, etc. was collected. Based on the results of the survey, the Project team has encouraged the contractor to employ waste pickers as their site staff (14 employed). NCDC used to employ some waste pickers as casual labor. Their employment status has been changed to permanent (7 permanent staff). In September 2014, two children belonging to the waste pickers, who were playing at the foot of the waste slope at the waste disposal area, died from an accident caused by carelessness of a bulldozer operator hired by the contractor's subcontractor. To prevent another tragic accident, Baruni Safety Plan was prepared in October 2014. Baruni Safety Committee has been established, which consists of NCDC, the contractor, and representatives of waste pickers, too. The Project team discussed with the Urban Youth Employment Program to provide job training opportunities for youth from the waste picker's communities in the middle of 2014 and early 2015. The waste pickers have participated in the inauguration ceremony for Cell 1 of the Baruni landfill.

- In Honiara in Solomon Islands, coordination with the waste pickers has just started at the Ranadi landfill. Two security guards were hired from the waste picker's community in June 2015. A survey was conducted in July 2015 to understand the current situation of the waste pickers. Total of 92 waste pickers (57 women and 35 men) are identified through the survey. Prior to the start of the rehabilitation work, a meeting was held to raise construction safety awareness in August 2015. The waste pickers have been cooperative. For example, they have stopped bringing the children with them. During the meeting, women and men were asked to identify the respective leaders. Men's group has identified one. Women's group has yet to identify one. Once the rehabilitation is completed, HCC plans to allocate a certain section of the facility area for the waste pickers to store the recyclables. In parallel, registration of the waste pickers is planned. It is noted that, in the facility area of the landfill, construction of a warehouse and installation of a machine for compressing plastic bottles is planned through a JICA Partnership Program ("Establishing Separate Collection System of Household Waste in Cooperation with Public and Private Sectors Based on a New 3Rs（Reduce, Reuse, Recycle and Return Concept"）.

4-2-7 Participation in the Region-wide Activities of J-PRISM

Trainings under the Region-wide Activities have provided the C/Ps with the various learning opportunities in the form of Country Attachment Program, Study Visit Program, Trainer Dispatch Program, etc., not only as trainees but also as trainers. In addition, officers from the relevant departments/organizations and the local stakeholders have participated in the Region-wide Activities as trainees. (For details in each country, see ANNEX 3).

As of June 2015, cumulative total of 162 C/Ps and 239 others have participated in the Region-wide Activities as shown in Table 13.

Table 13: Cumulative Number of Participants (as trainees)
in the Region-wide Activities of J-PRISM (as of June 2015)

	Fiji	PNG	Solo-mon	Vanu-atu	FSM	Kiribati	RMI	Palau	Samoa	Tonga	Tuvalu	Total
C/Ps	34	25	16	6	42	6	3	14	8	6	2	162
Others	108	31	39	8	9	23	0	0	21	0	0	239
Total	142	56	55	14	51	29	3	14	29	6	2	401

Source: Project Office

As of June 2015, cumulative total of 70 C/Ps (net total of 23 C/Ps) have participated in the Region-wide Activities as trainers as shown in the table below.

Table 14: Number of C/Ps Participated as Trainers
in the Region-wide Activities of J-PRISM (as of June 2015)

	Fiji	PNG	Solo-mon	Vanu-atu	FSM	Kiribati	RMI	Palau	Samoa	Tonga	Tuvalu	Total
Cumulative Total	39	6	1	9	3	0	0	6	0	6	0	70
Net total	11	3	1	2	2	0	0	2	0	2	0	23

Source: Project Office

In addition, Melanesian workshop was held from August 5-7, 2015 where J-PRISM C/Ps and related officers from PNG, Vanuatu and Solomon shared the good practices and experiences.

4-2-8 Coordination with Other Japanese and International Projects

(1) Holistic Approach with Other Schemes of Japanese Assistance

J-PRISM has used a holistic approach involving other schemes of Japanese assistance, including Training and Dialogue Program, JICA Partnership Programs, JICA Volunteer Scheme, Grant Assistance for Grass-root Human Security Project, and Non Grant Aid Project. (For details in each PIC, see ANNEX 3).

<table>
<tr><th></th><th>Scheme</th><th>Coordination</th></tr>
<tr><td>(a)</td><td>Training and Dialogue Program of JICA</td><td>As of June 2015, cumulative total of 76 C/Ps have participated in the Training and Dialogue Programs in Japan on “Waste Management and 3R (Reduce, Reuse, and Recycle) Policies”, “Waste Management Techniques”, “Enhancement of Solid Waste Management Capacity (Advance, Planning & Policy)”, “Solid Waste Management by Local Government”, “Environment Education”, “Promotion of Shibushi Model”, “Comprehensive Waste Management”, “3R Waste Management”, and “Design and Maintenance of Semi Aerobic Landfill Site”.
<table>
<tr><th>Fiji</th><th>PNG</th><th>Solo-mon</th><th>Vanu-atu</th><th>FSM</th><th>Kiribati</th><th>RMI</th><th>Palau</th><th>Samoa</th><th>Tonga</th><th>Tuvalu</th><th>Total</th></tr>
<tr><td>8</td><td>11</td><td>17</td><td>6</td><td>11</td><td>6</td><td>7</td><td>2</td><td>5</td><td>2</td><td>1</td><td>76</td></tr>
</table></td></tr>
</table>

(b) JICA Partnership Program

In some countries, the Project has coordinated with a JICA Partnership Program as shown in the table below.

JICA Partnership Program	Country	Type of coordination
"Establishing Separate Collection System of Household Waste in Cooperation with Public and Private Sectors Based on a New 3Rs（Reduce, Reuse, Recycle and Return Concept" conducted by Learning and Ecological Activities Foundation for children (LEAF)	Solomon Islands	Information are shared and levies are exchanged. LEAF has been invited to monthly C/P meetings in Honiara and JCC. LEAF plans to construct a warehouse in the facility area of Ranadi landfill, constructed through J-PRISM, in which installation of a machine for compressing plastic bottles is planned.
"Promotion of Shibushi model -waste minimization without incineration- from the Republic of Fiji to pacific island countries (Shibushi Program)" conducted by Shibushi City	Fiji	3R regional training was conducted in November 2011 by Fiji side in collaboration with Shibushi Program.
	Vanuatu	2 C/Ps participated in training conducted under Shibushi Project in 2013
"Promotion of Shibushi Model (Waste Minimization without Incineration) from Samoa to Pacific Island Countries (Shibushi Project)" conducted by Shibushi City.	Vanuatu	3 C/Ps participated in training conducted under Shibushi Project in 2014.
	Samoa	The Project has collaborated with Shibushi Project in promotion of waste segregation and composting using green wastes at Vaiala village. In addition, a C/P from WMS/DEC participated in a training conducted under Shibushi project in 2014 and 7 stakeholders will participate in the training in October 2015.
"Integrated Programme for Environmental-friendly Compost System in the Republic of Palau" conducted by Mie Prefecture and International Center for Environmental Technology Transfer (ICETT)	Palau	The Project has collaborated with the Partnership Program in improvement of composting operated by Koror State.
"Great Vava'u and Okinawa Mottainai Movement Project" conducted by Okinawa Citizen Recycling Movement	Tonga	So far, 3 C/Ps participated in Training on recycling in Okinawa in 2013 and 2014.

(c) JICA Volunteer Scheme (JOCV /SV)

So far, cumulative total of 11 SV (mostly in the fields of environmental administration and solid waste management) and 30 JOCV (mostly in the fields of environmental education) have collaborated with the Project.

Type	Fiji	PNG	Solo-mon	Vanu-atu	FSM	Kiribati	RMI	Palau	Samoa	Tonga	Tuvalu	Total
SV	1	0	0	0	4	0	5	1	0	0	0	11
JOCV	7	0	4	5	8	0	3	1	1	1	0	30

(d) Grant Assistance for Grass-root Human Security Project

- Fiji: Provision of shredder and compost house were funded for SCC.
- Solomon Islands: Construction cost for an administration office cum training center at Ranadi landfill site as well as fence was funded (Honiara).
- FSM: Provision of vehicles for waste collection (Chuuk, Pohnpei), vehicles for waste disposal (Pohnpei, Chuuk, Kosrae) and recycling equipment (Yap), renovation of a recycling center (Pohnpei), and construction of a new landfill (Kosrae, Yap*) were funded. *This new landfill is supported by IMF &US Compact Trust Fund as well.
- Palau: Construction of a composting facility and recycling center of Koror State, construction of a waste segregation station in Koror State, and provision waste collection vehicles were funded.
- RMI: Provision of wheelie bins (Majuro), construction of fences of the landfill site (Ebeye) and provision of heavy equipment for waste disposal (Ebeye) were funded.

(e) Non Project Grant Aid

- Tonga: Non Project Grant Aid for Provision of Industrial Product was conducted in 2011 and excavator to MOI (the project is supported by lease of excavator to pushing the waste at Kalaka landfill) was provided.

(2) Coordination with Other Donors

In almost all countries, the Project has coordinated with other donors in implementing the activities as shown in the table below.

	Donor	Name of Project / Contents of Collaboration
1.	ADB-AusAID	• Vanuatu: ADB/Aus-AID is co-financing with the Government of Vanuatu "Port Vila Urban Development Project" that would improve drainage, roads, and sanitation systems in Port Vila. This Project includes construction of sludge treatment facilities at Bouffa landfill. The Project has exchanged information with them when preparing the development plan for Bouffa landfill.
2.	AusAID	• Tonga: Water quality monitoring at Kalaka Landfill on a quarterly basis with Integrated Water and Coastal Management Project (IWCM). Awareness raising/ promotion of garbage collection at school and community with VEPA.
3.	Australian Government	• FSM: Provision of glass crusher (Yap).
4.	GEF	• Tonga: Water quality monitoring at Kalaka Landfill on a quarterly basis with Integrated Water Resources Management Project (IWRM).
5.	IMF	• FSM: Construction of a new landfill (Yap).
6.	New Zealand Government	• FSM: Provision of a weigh bridge (Kosrae).
7.	NZAID	• Solomon Islands: NZAID has supported to rent heavy equipment at Ranadi disposal site after the flooding in 2014. NZAID has contributed to construction of the facility area of Ranadi landfill by financing cost for fence.Technical Advisor assigned to Work Division of HCC is invited to monthly C/P meetings in Honiara. Information and lessons are shared and views are exchanged. NZAID has started procurement process of a dozer necessary for operation of Ranadi landfill. A JICA short-term Expert has provided a technical advice on the matter. • Kiribati: NZAID implemented Urban Development Programme (UDP). Information regarding baseline survey as well as opinion survey was shared. Information sharing of the progress of each project was made at the meetings of both sides to implement both projects effectively. In addition, school monitoring has been conducted in collaboration by sharing the vehicles.
8.	OISCA	• Fiji: The green waste collected from the Sigatoka Market is sent to OISCA to be made into compost. OISCA returns the compost made by students for sale to Sigatoka and OISCA can use the compost for their vegetable cultivation purpose. OISCA also provided the technical assistance in many ways, in Clean School Program, Regional 3R training program, etc.
9.	SPREP	• Palau: Revision of NSWMP; workshops; wood chipper to Koror State. • RMI: Assistance in drafting of NSWMS; Majuro Atoll Integrated Waste Management Project (2014-2017). Regional: Steering Committee for SPREP solid waste management training course.
10.	Taiwan Technical Mission (TTM)	• Kiribati: Information has been shared for the effective way of green waste recycling. Experiment of the sample compost was prepared by the Project to be utilized as soil conditioner.
11.	UNDP	• Fiji: UNDP has provided the subsidy program for home compost of Suva City. • PNG: The Project has coordinated with UNDP in post-disaster waste management of Cyclone Pam. • Palau: Solar panels for the Recycle Center in Koror State.
12.	UNWOMEN	• PNG: The Project team has been discussing with the Market Division of NCDC supported by UNWOMEN on composting of the green waste produced by the markets.
13.	USA	• FSM/Palau/RMI: Compact Trust Fund for solid waste management in FSM and Palau and for financial support for operating activities of EPA and MAWC in RMI.
14.	Volunteer Service Abroad (VSA)	• Vanuatu: A VSA volunteer, assigned to LMC from 2012 to June 2015, covered most of the activities for LMC originally planned in the Project, including collection system of cans and market waste composting, while inputs from the Project for the activities at LMC were very limited in terms of assignment of short-term Experts and provision of local costs. In addition, the Project has coordinated with the VSA volunteer in post-disaster waste management of Cyclone Pam. She checked on the damage situation together with the C/Ps of PVMC and DEPC, and JOCV volunteers assigned to LMC and Sanma Province.
15.	World Bank	• PNG: The Project team discussed with the World Bank's Urban Youth Employment Program implemented by NCDC to provide training opportunities for youth from the waste picker's communities. Job training were conducted in the middle of 2014 and early 2015. • Samoa: The Project Office provided information to IFC to assist in planning for PPP/ Privatization Project for Samoa.

4-2-9 Other Promoting and Inhibiting Factors

(1) Other promoting factors:

- Strong organizational and financial commitment: The GoPNG and NCDC have committed counterpart funding so that the Project team have been able to improve the Baruni dumpsite without financial impediment.
- The Counterpart Team Award System: The Counterpart Award System to honor "Best Counterpart Team of the Year" and "Best Counterpart of the Year" has served to encourage C/Ps as well as to keep them motivated. The Best Counterpart Team of the Year was awarded to Solomon Islands (2011/12), Tonga (2012/13), and OEEM/FSM (2013/14).
- Two-stage capacity assessment: In each country, capacity assessment has been conducted in two stages: individual level and organization level. This was helpful to identify the current capacity of both C/Ps and organization regarding SWM, as well as areas to be improved further. The final capacity assessment is planned at the end of 2015.
- Trust relation between Pacific and Japanese sides: Trust relation between SPREP and JICA as well as the C/Ps of the respective countries and JICA experts has been enhanced through the Project, which has facilitated smooth implementation of the Project.

(2) Other inhibiting factors:

- Unfamiliarity with the concept of technical cooperation of JICA: The C/Ps in some countries were not familiar with the concept of the technical cooperation project of JICA. Therefore, it took some time for them to realize that there was little direct financial support and/or equipment involved in this Project, but rather, technology transfer and capacity development was the core of the Project.

5. RESULTS OF EVALUATION BY FIVE CRITERIA

5-1 Relevance

The Project is evaluated to be still relevant in terms of necessity, priority and appropriateness of its approach.

5-1-1 Necessity

The Overall Goal and the Project Purpose are still relevant with the needs of the region and the respective PICs. For small island countries in the Pacific region, solid waste has become a major concern with the potential to cause negative impacts on national development activities, including tourism and trade, food supplies, public health and the environment. The PICs have a number of common characteristics, such as their small domestic markets due to limited land areas and populations, isolation because of geographical settings, etc. The threat arising from poor SWM of the PICs is made worse due mainly to the increase of waste generated from imported goods as a result of economic and urbanization growth as well as the modernization of life style. Therefore, proper disposal of solid waste is a crucial concern for the PICs; especially it is urgently needed for the PICs to strengthen the capacities of local authorities who are responsible for waste management in the (local) government area.

5-1-2 Priority

The Project is still consistent with the regional strategies and PICs' national development plans as well as Japanese ODA policy.

(1) Consistency with the Regional Strategies and PICs' National Development Plans

First, the Project has been aligned with the RS 2010 which is the single sector policy of the SWM for the region and with which all of PICs as well as most of donors have aligned. Second, the Project is relevant with the national or sector development plans of the PICs which set out the governments' continuous commitment and support to strengthening SWM in order to respond to development needs to cope with the increasing waste.

(2) Consistency with Japanese ODA Policy

The Project is consistent with the Japanese ODA policy. In the PALM 7 Fukushima 'Iwaki' Declaration on May 2015, in which continuous cooperation to address environmental issues, including waste management was reaffirmed. JICA follows this declaration by providing assistance in the areas of environment and climate change, disaster risk management, SWM, education, energy security and infrastructure. In addition, JICA endeavors to provide assistance to solve region-wide issues, particularly in SWM, environment and climate change.

5-1-3 Appropriateness as Means

(1) Appropriateness of Approach

The Project has been contributing to the implementation of the RS 2010 and regional activities. In "Terminal Evaluation of the Pacific Regional Solid Waste Management Strategy (2010-2015)", it is stated that this learn-by-doing approach by J-PRISM develops the technical capacity of Pacific islanders, engenders pride in accomplishments, and if replicated sufficiently, may ultimately lead to a degree of self-sufficiency in PICs.

(2) Comparative Advantages of Japanese Technology

Japanese assistance has its comparative advantages in transferring the technologies and Japan's experiences in SWM. Since 2000, JICA has assisted in the field of SWM for these PICs utilizing the various schemes of Japanese assistance such as JOCV/SVs as well as the technical cooperation projects. Technologies to construct and operate semi-aerobic landfills and to conduct the studies such as waste audit and time-and-motion study have been widely recognized as appropriate in the Pacific region. These comparative advantages in technical aspects have greatly met the needs of the target population of the region.

(3) Demarcation among Donors

In order to maximize the benefits of donor's contribution, not to duplicate the work, SPREP has taken the key role to coordinate and demarcate the assistances of international donors such as EU, AFD, GEF, UNEP and JICA.

5-2 Effectiveness

<u>The Project is evaluated to be relatively effective</u> considering the prospects for achievement of the Project Purpose and contribution of the Outputs to the achievement.

5-2-1 Prospects of Achieving the Project Purpose

As explained in "3-3 Project Purpose", it is likely that the Project Purpose will be mostly achieved by the end of the Project, considering the current achievement level of the valid indicators, majority of which have already been fully or mostly achieved, and the ongoing progress of production of the Outputs. In the Region-wide Activities, among the four good practices that originated from activities of the Project, Community-based Garbage Collection developed in Vava'u, Tonga has been adopted in Gizo, Solomon Islands. Also, a number of good practices that had been developed in previous Japanese ODA projects in Fiji, Samoa and FSM have been introduced to other PICs. These good practices have been shared to PICs as Region-wide Activities of this Project, through which a total 23 C/Ps have been developed as trainers in

the 14 technical areas of SWM as of June 2015. In most of the PICs, significant improvement has been observed in the targeted SWM issues such as landfill management and waste collection.

5-2-2 Contribution of the Outputs to the Project Purpose

Overall, the Outputs have contributed to achievement of the Project Purpose. The Project consists of 11 individual projects and the Region-wide Activities. Nominally, all 11 individual country projects and Region-wide Activities share the same Project Purpose (and the Overall Goal). Each of individual projects separately tackles particular country issues under the respective Outputs, which are linked with priority items of the RS 2010. At the same time, the Region-wide Activities provide the indirect support to each project, mainly in the form of training. As a whole, the Project collectively strives to strengthen the capacity development of SWM within the region.

5-2-3 Other Promoting and Inhibiting Factors

Specific factors have not been identified.

5-3 Efficiency

The Project is evaluated to be mostly efficient considering the production level of the Outputs, appropriateness of the Inputs in producing the Outputs, and the degree of utilization of the Region-wide Activities and external resources.

5-3-1 Production Level of the Outputs

Overall, the Outputs have been mostly produced as described in "3-2 Outputs".

5-3-2 Appropriateness of the Inputs

(1) Japanese Side

The Japanese Inputs have been mostly appropriate for production of the Outputs.

Dispatch of JICA Experts: Moderately appropriate.

In terms of quality, the experts with adequate background, relevant experiences and sufficient technical level have been dispatched. Most of them are accessible and ready to answer the technical questions made by the C/Ps. In terms of timing and quantity, in the majority of the countries, dispatch of JICA experts has been mostly appropriate. There were some issues such as insufficient coordination between the timing of dispatch of a short-term Expert and other JICA training course, however.

In some countries, dispatch of JICA experts was not appropriate especially in the first half of the Project. Absence of short-term experts from December 2011 to October 2012 led to stagnation of the activities in

PNG, Solomon Islands and Vanuatu. Frequent change of experts in Solomon Islands and Vanuatu, caused partly by the change of the Japanese implementation system, resulted in confusion in approach, which also led to delay in some of the activities (it is noted that the C/Ps consider the current approach practical). Assignment of short-term Experts in remote islands has been limited, too. In Samoa, various Experts from the Project Office supported the Project in relay but an expert specifically attached to the Project was not assigned until September 2013. It should be also noted that, in PNG, due to insufficiency of dispatch of the expert in the first half of the Project, the need for equipment, specification etc, could not be clearly identified in time, which resulted in non-utilization of the budget for equipment.

Provision of Equipment: Mostly appropriate.

The equipment has been provided to Solomon Islands, Kiribati, Samoa, and Tonga mostly as planned. The equipment has been effectively utilized for the Project activities.

Provision of weighbridge system was planned for three countries; but the system was procured only in one country (Samoa). In Vanuatu, the system originally planned in the Project was introduced due to lack of electrical supply to the landfill site. In PNG, the need for the weighbridge system was identified in the second half of the project period. The system, however, was not procured since there were technical problems related to the identified installation site, which were not resolved in time. It is noted that maintenance of the weighbridge system is a concern in Samoa since a company with capacity/experiences for its maintenance and calibration does not exist in the country.

Training in Japan: Mostly appropriate.

Although opportunity of training in Japan under this Project was limited, "J-PRISM Regional Training for Trainers" held in Okinawa in May 2015, one of such opportunities, was particularly appreciated by the C/Ps who attended it as the one that gained their confidence in performing leading roles in SWM. Since the training was conducted in the final year of project implementation, the results have not been applied in the project activities yet. However, the experiences of other PICS shared at the training, for example, has encouraged a PNG C/P to pursue the activities that have not yet been implemented in the country, including community participation and pre-paid bag system.

Local Cost: Appropriate.

Necessary amount of local cost has been disbursed in time.

(2) Pacific Side

Overall, the Inputs by the Pacific side have been mostly appropriate in producing the Outputs.

Assignment of Personnel: Mostly appropriate.

In terms of quality, in most of the countries, the personnel with the relevant background and experiences have been assigned to the Project. In PNG, many C/Ps have an academic background in the field of SWM. In some countries, on the other hand, some C/Ps did not have previous experiences in waste management but they have managed to catch up with the activities with support of their colleagues and JICA experts.

In terms of quantity and timing, assignment of the C/Ps has been mostly appropriate in most of the countries. In FSM, it was appropriate in a sense that most relevant officers in charge of SWM were assigned as C/Ps. It is noted that the C/Ps are sometimes too busy with other duties/engagements to concentrate on the Project activities. In some cases, change or leaving of some C/Ps during the project implementation period affected capacity development of the implementing agencies they belonged to.

In some countries, the number of C/Ps has been insufficient primarily due to shortage of staff for waste management in the Implementing Agencies (Vanuatu and Samoa). Moreover, all of the main C/Ps of PVMC, including the Project Manager, received redundancy letters in May 2015, which have resulted in stagnation of the project activities. Their successors were not identified/appointed at the time of the evaluation.

Provision of Facilities: Mostly appropriate.

Office space and utilities necessary for JICA experts have been provided. In Vanuatu, however, a weighbridge system, originally planned in the Project, could not be introduced due to lack of electricity supply.

Local Cost: Mostly appropriate.

Necessary budget has been allocated. While local costs were disbursed mostly as planned in the majority of the countries, there were delays in releasing the fund in other countries, which have affected the progress of some activities. In some countries, an issue of lack of (cost for) fuel was sometimes found as a cause for delays in landfill or waste collection-related activities.

Notable cases include: (i) NCDC and the GoPNG through DNPM have borne the cost for upgrading Baruni landfill, and NCDC has sent the C/Ps and the related officers to J-PRISM Regional Training on Landfill Management in Vanuatu (2011) and J-PRISM Study Visit on Landfill Management in Fiji/Samoa (2012); (ii) WPG-Solomon Islands has procured a tractor, which has been utilized for landfill operation, together with an attachment provided by the Japanese side; (iii) OEEM-FSM sent additional C/P(s) and the relevant officers to regional trainings using their local cost; and (iv) SWM-BPW of Palau provided sufficient cost for improvement of the landfill, purchase of heavy equipment, etc., from the Recycling Fund.

5-3-3 Utilization of Region-wide Activities of J-PRISM at Country Level

As explained in "4-2-7 Participation in the Region-wide Activities of J-PRISM", cumulative total of 162 C/Ps as trainees and 70 C/Ps (net total 23 C/Ps) as trainers participated in the various Region-wide Activities organized by the J-PRISM. A number of C/Ps interviewed by the Team commented that they gained new insights, ideas, skills, and lessens from all of the activities they participated in. Most of the C/Ps have shared what they learned to their colleagues and apply them in the Project. Such learning environments have contributed to the continual upgrade of the technical capacity of C/Ps and help to keep participants motivated as well.

Through the Region-wide Activities, many C/Ps have applied/are applying/plan to apply the acquired insights/ideas/skills in the Project activities. Examples are shown in Table 15.

Table 15: Examples of Utilization of the Results of Region-Wide Activities in Individual Country Projects

Country	Examples
PNG	• 3R/4R: The C/Ps became aware of the importance of 3R through the regional training and took initiative in adding a new activity for promotion of 3R in the PDM. Clean School Program in Fiji and market composting operation in Fiji have been adapted in the context of Port Moresby. • Waste disposal: Landfill improvement using Fukuoka methods (semi-aerobic landfill system) in Samoa and Vanuatu has been adopted in the context of Port Moresby.
Solomon Islands	• 3R/4R: Clean school program and eco-school program in Fiji have been adopted in the context of Honiara and Gizo on pilot basis. • Waste disposal: Landfill improvement using Fukuoka methods in PNG and Vanuatu has been adapted for use in Honiara. A draft operational manual for Honiara landfill has been prepared based on the manual prepared in Vanuatu. A manual for Gizo landfill will be prepared based on the manual prepared in Tonga. • Waste collection: Collection station system (stations/ drums) in Vanuatu and Tonga has been adapted for use in Gizo. • Post-disaster waste management: Through J-HOPE, experiences and lessons learned in Vanuatu were utilized in post-disaster waste management activities of the flood in ***.
Vanuatu	• 3R/4R: Market compost activities in Fiji have been adopted in the context of Port Moresby. • Post-disaster waste management: During post-disaster waste management activities of Cyclone Pam, the experiences and lessons learned in Solomon Islands (i.e. J-HOPE) were utilized.
FSM	• Waste disposal: Techniques learned from the landfill management training in Yap was used for development of a semi-aerobic landfill in Pohnpei and planning of the same in Chuuk.
Kiribati	• 3R/4R: Clean school program in Fiji have been adopted in the context of South Tarawa, Kiribati.
Samoa	• 3R/4R: MNRE is developing a framework for CDL, utilizing the results of regional training on promotion of 3R in Palau. The C/P leaned the benefit of CDL for waste minimization, development of sustainable financial mechanism, and recovery of materials for recycling. • Waste disposal: Weighbridge management in Fiji and utilization of locally available material for gas vent system in Vanuatu have been adopted. OS&H
Tonga	• 3R/4R: Clean School Program in Fiji has been adopted in Vava'u, Tonga.
Tuvalu	• Waste Collection: Occupational safety practice learned in Fiji, such as that workers wear gloves and shoes at work, was introduced in city council.

Source: Interviews and questionnaires with C/Ps.

5-3-4 Utilization of External Resources

(1) Coordination with other schemes of Japanese assistance

In order to maximize the efficiency, J-PRISM has used a holistic approach involving other schemes of Japanese assistance: JICA Training and Dialogue Program, JICA Partnership Program, JICA Volunteer Scheme, Grant Assistance for Grass-root Human Security Project and Non Grant Aid of the Government of Japan (For details, see "4-2-8 Coordination with Other Japanese and International Projects").

Training and Dialogue Program of JICA in Japan. While the number of C/Ps trained in Japan under J-PRISM is limited to 19 persons, as many as 76 C/Ps have participated in the Training and Dialog Program in Japan. The training participants have gained new insights, ideas, skills, and lessens from all of the Training and Dialogue Program they participated in. The C/Ps in some countries, however, are in an opinion that regional training would have been more efficient and effective since the SWM facilities and the related techniques in Japan are too advanced for them to apply in their countries. Some C/Ps felt that too many topics were squeezed in a day's session so that it was difficult to absorb everything.

(2) Collaboration/Coordination with Other Donors

In implementing the activities, the Project has collaborated/coordinated with various donors, including ADB, AusAID, Australian Government, IMF, NZAID, New Zealand, OISCA, Taiwan Technical Mission, UNDP, UNWOMEN, USA, Volunteer Service Abroad (VSA), World Bank. (For details, see "4-2-8 Coordination with Other Japanese and International Projects").

Box 5: Good Example of Collaboration among Stakeholders

- Solomon Islands: Part of the rehabilitation work for Ranadi in Honiara landfill was implemented through cost-sharing among MECDM, MHMS, HCC, and the Government of Japan through Grassroots Grant aid scheme, NZAID, and J-PRISM.

5-3-5 Utilization of Assets Accumulated through Previous Assistances

The Project also benefitted from the know-how and experiences from JICA technical cooperation projects conducted in the past, such as "The Project for Improvement of Solid Waste Management in the Republic of Palau (Oct. 2005 – Oct. 2008)", "Improvement of Bouffa Landfill" (Sep. 2006 -Sep. 2008) in Vanuatu, and "Waste Minimization and Recycling Promotion Project in the Republic of the Fiji Islands (Oct. 2008 to Mar. 2012)". Those C/Ps who acquired knowledge and skills through these projects have played pivotal roles in the specific projects of their respective countries as well as the Region-wide Activities of J-PRISM.

5-3-6 Other Promoting and Inhibiting Factors

Some inhibiting factors have been identified.

- Lack of systematic monitoring and evaluation of regional trainings: Systematic monitoring and evaluation have not been conducted for regional trainings so that the impact on the capacity development could not be objectively measured.
- Concentration of technical transfer to the limited C/Ps and insufficient sharing of the transferred techniques: In Vanuatu (at PVMC), technical transfer has been focused on a few C/Ps primarily because of lack of suitable personnel. In addition, the acquired knowledge, information, experiences, and skills have not been sufficiently shared with the other C/Ps and other relevant staff in the organization. When these C/Ps were redundant, no staff in PVMC were ready to take over their roles.
- Land issue: A land issue for the landfill, which came out in the end of 2012, resulted in suspension of the EIA process until September 2013 and therefore caused a delay in its rehabilitation (Solomon Islands).
- Natural disaster: The cyclones which hit Fiji and Samoa in 2012, Fiji in 2013, and Vanuatu in 2015 have adversely affected the progress of the activities.
- Others: In Micronesian countries, some landfills had a common difficulty in finding soil for covering to fully implement the operation plans due to limited existence of soil in islands.

5-4 Impact

5-4-1 Impact at Overall Goal Level[10]

Likelihood of achievement of the Overall Goal varies by individual project. It is difficult to assess the degree of likelihood in some countries as the designated Indicators are not clearly defined and/or lacking target values. Likelihood of achievement of some Indicators will depend on the sustainability of the Region-wide Activities, which is beyond the control of the respective country. Table 16 shows a summary of individual evaluations, which is followed by project-specific descriptions.

Table 16: Likelihood of Achievement of Overall Goal

	Indicator	Likelihood of achievement of the Overall Goal
Region-wide Activities	Issues on SWM of a PIC is resolved by itself or with the collaborative assistance of other PICs.	Relatively high
Fiji	3R is practiced nation-wide.	High
PNG	The importance of waste minimization is understood and more than one waste minimization scheme is practiced in NCDC.	High

[10] The Overall Goal is defined as a long-term development effect to which the Project would contribute, which is expected to be attained in three to five years after completion of the Project. It was confirmed between the Terminal Evaluation Team and the Project that the target year of the Overall Goal, which has not been specified in the PDM of each of the Region-wide Activities and the individual country project, is three years after project completion.

Solomon Islands	Proportion of recyclables and green waste disposed of at the landfill is decreased.	To a certain extent (The exact degree could not be forecasted due to lack of target value and baseline data).
Vanuatu	Amounts of waste disposal at Port Vila and Luganville landfills are decreased by at least 7% respectively. *("Amounts of waste disposal at Port Vila are decreased by at least 7%")*	Uncertain (Organizational strategy for waste minimization is yet to be developed).
FSM	At least more than 2 trainings/workshops in the region which is conducted by facilitators/trainers from FSM.	To a certain extent (Degree of achievement will depend on sustainability of Region-wide Activities, which is beyond control of FSM)
Kiribati	80% of household engaged in the green waste recycling.	Low
RMI	Good practices conducted in RMI are implemented in other island countries tackling with common issues. At least one training/workshop in the region which is conducted by facilitators/trainers from Marshall Islands.	Uncertain (Degree of achievement will depend on sustainability of Region-wide Activities, which is beyond control of RMI)
Palau	Good practices conducted in Palau are implemented in other island countries tackling with common issues.	To a certain extent (The exact degree could not be forecasted due to lack of target value).
Samoa	70% of household of town area continue the 3R practice and segregation of recyclable materials at source. *("In February 2019, 70% of households of town area of Upolu conduct the 3R practices and segregation of recyclable materials at source").* At least 3 PPP activities are implemented. *("In 2019, at least 3 PPP activities are implemented in urban area of Upolu")*	To a certain extent (The exact degree could not be forecasted because the relevant data is yet to be available for one of the Indicators)
Tonga	Kalaka landfill has been properly operated. All households in Vava'u have access to garbage collection system.	To a certain extent (Degree of achievement will depend on operation in accordance with operation manual)

Note: For those Indicators which are not specific enough, definition confirmed through a series of discussions with the respective Project Team is shown in Italics the parenthesis.

<Likelihood of Achievement of the Indicators>

- Region-wide Activities: Specific areas of SWM, in which the issues of SWM of a PIC are resolved by itself or intra-regionally with the collaborative assistance of other PICs, have been gradually identified. Those areas include 'Waste Disposal with semi-aerobic methods', 'Clean School Program', 'Waste Characteristic Survey', 'Compost Making', and 'Disaster Waste Management'.
- Fiji: It is likely that 3R is practiced nation-wide in three years after completion of the Project. Currently 3R has been practiced in all six (6) councils of the Western Division plus SCC. Non-targeted councils in the Central and Northern Divisions have also been involved in some activities, such as in-country trainings and joint meetings and some 3R components have been already practiced at these councils. This positive movement has also been supported by both the Home Compost Subsidy Program and the financial assistant to CSP under the initiative of DOE.
- PNG: It is likely that more than one waste minimization scheme is practiced by NCDC in three years after the end of the Project. As a waste minimization measure, 3R HEART initiative has been introduced on a pilot basis since 2014. 3R HERAT will be included in the action plan of SWM plan

(2016-2020) and will be practiced as part of the regular program of WMD from 2016. Preparation a pilot project for composting market green waste is ongoing and the pilot project is expected to start from September 2015 for three-month trial basis. Green waste composting is also expected to be included in the action plan of SWM plan so that it would be practiced from 2016. Lessons learned from the pilot projects will be reflected in finalization of the SWM plan so that its action plan should be realistic and feasible.

- Solomon Islands: It is likely that proportion of recyclables and green waste disposed of at the landfill will be decreased to a certain extent in three years after the end of the Project. It is possible that proportion of recyclables disposed of at the landfills at Honiara and Gizo will be decreased because waste minimization schemes introduced through the Project are likely to continue and expand after the end of the Project. For green waste, it is uncertain if the proportion will be decreased since the pilot project focuses on composting at household level and is still at preliminary stage.
- Vanuatu: It is uncertain whether the amounts of waste disposal at Port Vila will ba decreased by at least 7% in three years after the end of the Project. Two waste minimization activities have been introduced through the Project: one for separation and composting of organic wastes at Central Market and the other for collection system for cans in Freshwota Ward. The activity at the market is likely to continue but there is little scope for expansion as the other markets in Port Vila are outside jurisdiction of PVMC. Collection system for cans is not functioning at the moment. It is uncertain if the system will be rebuilt and will become ready for expansion as the officer in charge has not been identified/appointed yet. In addition, PVMC does not have a strategy for waste minimization, which is supposed to be incorporated in the conceptual plan of the annual SWM plan to be submitted to DEPC as per the Waste Management Act.
- FSM: The candidates of the theme that C/P in each state could instruct to PICs include CDL and management experience of semi-aerobic landfill for more than ten years (Kosrae), waste collection and improvement of landfill sites (Pohnpei), waste collection (Chuuk) and landfill management, awareness and CDL (Yap). OEEM is willing to facilitate the states' efforts should the need arise in the near future. However, likelihood of dissemination of those good practices to other PICs will depend on sustainability of the Region-wide Activities.
- Kiribati: It is not likely that 80% of household will be engaged in the green waste recycling within three years, considering the current degree of achievements at the Outputs and the Project Purpose.
- RMI: The awareness/educational activity in Majuro and integrated (well-coordinated) SWM in an atoll in Ebeye can be a candidate of the theme that C/P could instruct to PICs. However, the former is not much attributed to this Project, and the latter has just started. Also, likelihood of dissemination of those good practices to other PICs will depend on sustainability of Region-wide Activities.
- Palau: It is likely that good practices conducted in Palau will be implemented in other island

countries tackling with common issues to a certain extent. The good management of the M-Dock landfill site and the beverage container deposit fee program are candidates of the themes that Palau can share in other island countries. Regarding the latter case, although the Palau's beverage container deposit fee program is different from other Micronesian countries in that the amount of deposit per beverage container is higher, it is worth showing an example of a working CDL that generates funds for SWM activities.

- Samoa:
  - It is uncertain if 70% of households of town area of Upolu will conduct the 3R practices and segregation of recyclable materials at source in 2019 because (i) the relevant data is yet to be available and (ii) the collection method is yet to be determined. Through the pilot project, segregation of the recyclable materials at source (at household level) has been promoted in Zone A, consisting of 7 villages/communities with 475 households. The actual number of household, which practice the segregation, is yet to be available because the pilot project is still ongoing. Moreover, MNRE is exploring a different approach regarding collection methods of recyclable materials (i.e. station collection). Depending on the outcome of the pilot project, most practical option would be decided by the end of the Project.
  - In 2019, at least 3 PPP activities are likely to be implemented in urban area of Upolu. Promoting factors are as follows: (i) segregation of recyclable materials is ongoing on pilot basis, which is likely to be expanded after the end of the Project: (ii) official arrangements for awareness raising expected be developed between MNRE and Media companies after their staff come back from the training organized under a JICA Partnership Program "Promotion of Shibushi Model (Waste Minimization without Incineration): and (iii) STA has agreed to promote green waste composting at hotels and beach houses (fales).
- Tonga:
  - It is uncertain if the Kalaka landfill has been properly operated. This will depend on whether the landfill operation will be carried out in accordance with the operation manual.
  - It is likely that all households in Vava'u will have access to garbage collection system in three years after completion of the Project considering the steadily progress of current implementation status.

5-4-2 Other Impacts

Various positive impacts have been observed already as shown in Table 17. More positive impacts are foreseen. (For details, see ANNEX 3)

Table 17: Positive Impacts Observed Already

	Positive Impacts
J-PRISM as a whole	➢ Enhancement of donor coordination: SPREP has been playing the role of implementer as well as coordinator for the regional donor-assisted environmental projects. After the mid-term review, donor coordination has been much improved with the SPREP's initiative. In principle, donor coordination meeting is held every month in which J-PRISM coordinators and other donors take part. Beside that whenever available, J-PRISM coordinators also sit in other donors' project meetings, such as PacWaste, GEFPAS, etc. Through mutual participation among them, information sharing and discussions for demarcation and collaboration have been facilitated. There have been several cases to which J-PRISM has provided technical assistance by sending local experts.
Region -wide Activities	➢ Enhancement of recognition of 3R +Return: 3R +Return has been well accepted and stated in the official documents of Regional 3R Forum in Asia and the Pacific and International Conference on Small Island Developing States (UNSIDS). ➢ Serving as the platform where all PICs can be connected together: Due to the geographical isolation of PICs, there was limited opportunity for PICs to network with each other. However, Region-wide activities have opened up the opportunities to connect them together for knowledge sharing
Fiji	➢ Introduction of financial mechanism for 3R promotion: With the own initiative of DOE, two kinds of effective financial mechanisms to promote 3R activities have been implemented on trial basis. This shows the strong commitment of DOE to proceed the 3R promotion with high priority. And it is expected to have large impact on dissemination of Fiji 3R model nationwide. ➢ Raising public awareness about compost bins by media: With the initiative of DOE, TV and press advertisement started in August 2015 to raise public awareness about subsidized compost bins. It was pointed out by C/Ps of councils that communities are now taking own initiative to reduce waste and take care of the environment.
PNG	➢ Decrease of incidents of fires at the landfill: Incidents of fires at Baruni landfill have been drastically decreased since on-site supervision by NCDC staff was enhanced. ➢ Employment opportunities for waste pickers: NCDC used to employ some waste pickers as casual labor. Their employment status has been changed to permanent. The contractor was also encouraged to employ waste pickers as their site staff (14 employed). Job training opportunities for youth from the waste picker's communities have been in coordination with the Urban Youth Employment Program/World Bank. (See Box 4 for details) ➢ Decreased health risks at the landfill: A Baruni worker from waste picker's community, interviewed by the Evaluation Team, noticed the positive change in the health risks they used to face before the Project, such as waste littering and disease carried by flies. Since improvement of operation started in full-scale in 2014, wastes are covered by the soil so that the flies are less. ➢ Increased opportunities for dialogue with the end users of the waste collection service: Field studies introduced through the Project, such as waste audit and time-and-motion studies, have increased opportunities for dialogue between service providers (C/Ps) and end users (general public, private business, etc.) , which have deepen the understanding of what the needs and issues are on the ground. The results have been reflected in improvement of the collection services. ➢ Practice of "reduce" and "reuse" at school: Through 3R HEART pilot projects, 6 out of 8 schools have already applied "reduce" and "reuse" at schools. Some of the schools take ownership of the 3R HEART and even use their own money to build cages for aluminum cans and pet bottles rather than giving excuses of financial problems. Some students brought unwanted items in the house/community to schools and made them into something useful. For example, bottles of whiskey have been turned into colorful decorative items and sold for PGK10.
Solomon Islands	➢ Creation of a permanent position for a landfill supervisor: Recognizing the importance of landfill management, HCC created a permanent position for a landfill supervisor in March 2014. ➢ Employment opportunities for waste pickers: Two security guards for Ranadi landfill have been employed from the waste picker's community since June 2015. ➢ Waste audits extended outside the Target Area: Three waste audits have been conducted by MECDM in three provinces, utilizing the skills and knowledge transferred through the Project. ➢ Introduction of a monthly stakeholder meeting: Recognizing the usefulness of the monthly C/P meeting, MHMS and MECDM have initiated a monthly stakeholder meeting similar to the C/P meeting for monitoring of development activities of Gold Ridge mines. ➢ A return system of aluminum can developed: In Gizo, a return system of aluminum cans is

	developed. GTC/WPG supports a woman collecting aluminum cans for recycling in Honiara. ➢ (See Box X for post-disaster waste management after the flood)
Vanuatu	➢ Development of Waste Management Act: Waste Management Act of 2014 was developed by DEPC, utilizing the knowledge acquired through the Project. ➢ Introduction of home composting on pilot-basis: Based on the analytical results of the waste characterization study conducted in Port Vila, DEPC has identified the needs for home composting. DEPC initiated a pilot project in collaboration with PVMC and DARD, targeting 7 households. ➢ Separation and collection of recyclables at DEPC: Recognizing the importance of waste minimization, DEPC has started separation and collection of recyclables (cans and bottles) at their office in collaboration with the JOCV volunteer. ➢ Cleaner market: Central Market has become cleaner since organic wastes are separated and collected by PVMC for transportation to an organic farming company for mulch. ➢ (See Box X for post-disaster waste management after Cyclone Pam)
FSM	➢ Introduction of new collection system: The Project activity motivated municipalities by introduction of the new collection system (Pohnpei) ➢ Transfer of Project experiences: Enhancement of experiences from this Project has been used for development projects that are outside the scope of this Project (e.g. development of the interim site and the new semi-aerobic landfill site in Chuuk).
Kiribati	➢ Extension of awareness about SWM: Awareness regarding SWM for school teachers and students is not confined only at schools. An officer of ECD pointed out that parents are getting aware of the issue through their children.
RMI	➢ Positive environmental impacts: In Ebeye, although data could not be collected, C/P consider positive environmental impact may have been produced, such as improvement of quality of surroundings due to better collection and reduction of toxic substance due to elimination of burning on the landfill.
Palau	➢ Sustainable funding: SWM-BPW became able to better use the Recycling Fund for their activities such as hiring of additional staff, awareness activities and improvement of the landfill including purchase of heavy vehicles, and construction of additional recycling facility. ➢ Creation of new joint initiative: Interaction of the national (SWM-BPW) and Koror State (SWM-KSG) that was promoted through this Project led to new joint initiatives such as glass craft projects. ➢ Creation of posts at SWM-BPW: Additional five permanent job posts have been created in SWM-BPW (three of which have been filled).
Samoa	➢ Composting green wastes at the landfill: Green wastes from food processing companies and parks have been composted at Tafaigata landfill, which has contributed to decrease of the amounts of the waste disposal. ➢ Introduction of tipping fee based on the weight and decrease of the incoming wastes: Before the Project, tipping fee was set according to the vehicle type. Through introduction of the weighbridge system, the weight of incoming wastes became available. New tipping fee based on the weight has been introduced since January 2015 on the basis of the report of the incoming wastes. The new tipping fees and operating hours were publicly announced on radios and televisions in December 2014 and enforced in January 2015 until now. After introduction of the new tipping fee, the incoming waste has been decreased drastically (758,863 kg/month from Sep/Dec 2014 to 576,375kg/month from Jan/Jun 2015). It is noted that illegal dumping has not been reported in 2015. The major producers of green wastes (i.e. STA and Fugalei Market (the biggest market in town)) stopped taking the green wastes to the Tafaigata landfill. STA has started composting the green wastes for utilization as fertilizers for street planting. ➢ Increased public awareness: A newspaper (“Samoa Observer”) published articles on the pilot project activities on waste segregation/minimization in May 27, July 30, and August 13, 2015, which has contributed to promotion of public awareness.
Tonga	➢ Environmental education for student by private recycling company: At present, GIO Recycling Company provides students mainly from the primary schools with learning opportunities of recycling at its recycling center and Kalaka landfill. ➢ Generation of good practices: In some communities, various “good practices” have been observed, i.e. picking up rubbish in the area during collection work by VEVE committee, sufficient operation cost secured by communities. Community empowerment has been strengthened through ‘outreach’ activities done by the Project. ➢ Reduction of infection rate of tetanus: The Town Officer commented at the interview that the infection rate of tetanus has been reduced in Mataika Community. This could be the one of ripple effects of the garbage collection which may contribute to make the environment hygienic.

Sources: Project reports; Interviews and questionnaires with JICA Experts and C/Ps.

5-5 Sustainability

Sustainability of effects of this Project is evaluated to be medium to high, based on mixed judgment for the Region-wide Activities and the individual country projects.

5-5-1 Sustainability for Region-wide Activities

Sustainability of the Region-wide Activities is twofold. On one hand, in terms of the likelihood of continuity of regional/south-south cooperation in general in the field of SWM, sustainability is likely to be secured. On the other hand, there is an issue of whether SPREP would be able to allocate necessary human and financial resources to take over the Region-wide trainings/workshops, etc. of J-PRISM, which have been carried out by the Japanese side to date. This would be dependent on SPREP securing long-term dedicated donor funding for this purpose.

(1) Policy aspects

Policy supports for both south-south cooperation in general in SWM and continuation of the Region-wide Activities of J-PRISM are likely to continue. The draft new Regional Strategy (CLEANER PACIFIC 2025: Pacific Regional Waste and Pollution Management Strategy 2016-2025) has been developed, which is expected to be adopted by the annual SPREP General Meeting in September 2015. What have been practiced under J-PRISM, such as 3R + Return and regional cooperation and collaboration, have been incorporated into the draft strategy as guiding principles. The SPREP PacWaste will develop a recyclers network over the next 12 months.

(2) Organizational aspects

Organizational sustainability of south-south cooperation in general in SWM is likely to be secured since promotion of regional and national cooperation is included in the Strategic Actions of SPREP in the draft Regional Strategy (2016-2025). In addition, establishment of Regional Waste Management Committee (namely, Clean Pacific Round Table) is expected to be adopted by the coming SPREP General Meeting. The committee is expected to serve as platform between PIC member countries and external donors to monitor the progress of implementation of the Regional Strategy (2016-2025).

On the other hand, there is a matter of concern on organizational sustainability of continuation of Region-wide Activities of J-PRISM, which have been managed by the Project Office. At present, only one core staff (i.e. SWM advisor) is assigned in the field of SWM under the WMPC Division at SPREP. In order to cope with the increasing demands of SWM, WMPC Division has been proposing to create a position for a recycling officer but has not been able to secure the position yet. With current staffing, SPREP may face some difficulties to continue and enhance activities for themselves, including logistical

tasks for trainings, etc., after the completion of J-PRISM.

(3) Financial aspects

Financial sustainability of south-south cooperation in general in SWM is likely to be secured. In order to cope with the increasing demands of SWM, SPREP has made effort to secure funding. So far, 17 million EURO has already been pledged under EDF 11 (2017-2022). SPREP plan to utilize Clean Pacific Round Table to negotiate about funding in order to fill the gap between the planned budget and actual funding.

It is uncertain, however, to what extent the above-mentioned funds could be utilized for continuation of Region-wide Activities of J-PRISM,

(4) Technical aspects

Technically, no problem is anticipated for south-south cooperation in general in SWM. It is important for SPREP to explore the way to maintain the regional mechanism, such as to promote the south-to-south cooperation among PICs.

Technical sustainability of continuation of Region-wide Activities of J-PRISM is possible. Knowledge and technologies transferred through the Project are likely to be maintained and disseminated if the regional mechanism for mutual learning demonstrated though Region-wide Activities is sustained.

The number of C/Ps with the experiences in training others has been increasing. As of June 2015, net total of 23 C/Ps from 7 countries have participated in the Region-wide Activities as trainers. Regional Trainings for Trainers were conducted in Fiji in 2014 and in Okinawa in 2015, to which 16 C/Ps were invited. In collaboration with the TOT participants, a guidebook for SWM in PICs is being developed as reference material for on-site training, workshops, training, etc. Since the hands-on experiences and the lessons learned by the TOT participants will be reflected, the guidebook is expected to be practical and relevant with the needs of PICs. The guidebook is expected to be finalized and distributed to the Implementing Agencies before the end of the Project. Moreover, the database of trainers and trainees of J-PRISM, known as PIDOC, has been developed as an inventory for SPREP, which would be useful for (i) identification of resource persons for SWM in the region, who can play an effective role in south-south cooperation; and (ii) identification of training needs and gaps for SWM. Incorporation of the training data from other donors is being discussed to make PIDOC more comprehensive and practical. The details about effective utilization of PIDOC are expected to be elaborated by the Project Office and SPREP before the end of the Project. It is noted that periodic monitoring and evaluation have not been conducted for Region-wide Activities, which would have been useful for improving the activities further and could have enriched PIDOC.

5-5-2 Sustainability for Individual Project in Each PIC

Sustainability of individual country projects varies between medium to high. In many countries, there are matters of concern on organizational and financial aspects of sustainability.

(1) Policy and legal aspects

Policy and legal support would generally be secured for continuation of SWM activities. In most of the countries, policy and legal frameworks to support SWM exist or were/will be established through the Project. For example, in PNG, lack of national frameworks has driven NCDC to develop its own policy, strategy, by-laws regarding waste management. In RMI, on the other hand, although there is a general support of SWM in the government, the draft NSWMS has not been endorsed yet, and clear policy documents that support human resource development in SWM are not found.

(2) Organizational aspects

Organizational sustainability varies by country, but overall, it would be secured in majority of the countries and there would be no country where organizational sustainability is low. Most Implementing Agencies have organizational settings and personnel to manage to continue the activities introduced under this Project at a full or at least partial scale. Some common positive aspects and challenges observed include the followings:

Positive factors:

- **Organizational strategies in SWM exist.** For example, in most of the Melanesian countries, Implementing Agencies have their respective organizational strategies for SWM in future.
- **Dedicated organizational units exist within the implementation bodies of SWM.** For example, in PNG, NCDC (a local government unit) has a division dedicated to waste management. In Solomon Islands, HCC (a local government unit) plans to create a similar one. In Palau, SWM of BPW (national public works bureau) was upgraded from a unit to a division.
- **Manpower in SWM has been increased.** For example, in Fiji, strong commitment of DOE (an environmental department) to disseminate Fiji 3R model to nationwide and increased manpower have been observed. The above-mentioned HCC and SWM-BPW in Palau also recruited additional SWM officers.

Challenges:

- **Manpower in SWM is insufficient.** Many implementing agencies are facing or will face insufficient manpower to continue the activities introduced under the Project. For example, in Tonga, there are some concerns to maintain the proper landfill operation system in accordance with

the developed operation manual as the number of workers for operating landfill management still needs further improvement. In Vanuatu, organizational structure and human resource for SWM have been downsized since the restructuring of PVMC in May 2015.

- **Lack of strategies/plan to continue an implementation mechanism created under the Project.** For example, in RMI, there is no concrete plan on how to continue monitoring of the activities that have been carried out by the Counterpart Committee created under this Project.
- Other challenges include frequent change of officers, no or absence of qualified of successors of officers who left jobs/were redundant (Vanuatu, etc.), and uncertainty of continuation of a contractor for landfill operation due to insufficient contract management (Pohnpei, FSM, etc.).

(3) Financial aspects

Overall, financial sustainability would generally be secured in majority of countries and there would be no country where financial sustainability is low, while uncertainty remains in some countries.

Positive factors:

- **National or local SWM budget is increasing.** For example, in Tonga, the landfill has been fully funded by the MOH with increased budget since 2014.
- **Self-financing mechanisms have been established.** For example, in Fiji, financial mechanisms on Home Compost Subsidy and CSP were introduced by DOE. In Tonga, MEIDECC is expected to allocate necessary budget for promotion of community-based garbage collection, CSP and trainings. In Kiribati, independent accounting system on SWM has been introduced in BTC which has also obtained financial benefit by leasing its equipment to other councils. In Palau, the Recycle Fund of the container beverage deposit fee program is utilized for SWM activities.

Challenges:

- **National SWM budget is declining or uncertain.** For example, in Vanuatu, it is uncertain if the necessary budget will be secured since the PVMC, the main implementing agency, has gone through financial difficulties.
- **Disbursement of budget is slow.** In some countries, necessary budget has been allocated but its disbursement has been often delayed due to diversion to other priorities and delay in administrative procedures.
- **External funding is uncertain in the future.** In FSM and RMI, considerable portion of budget of many Implementing Agencies comes from the Environmental Sector Grant of the US Compact Trust Fund. A common future concern is on the Compact Trust Fund, namely, (i) uncertainty on constant allocation of the Fund depending on changing priority, and (ii) termination of the current Compact in 2023.

(4) Technical aspects

Overall, technical sustainability would generally be secured in majority of countries, and there would be no country where technical sustainability is low.

Positive factors:

- **Capacity development attained under this Project has enhanced technical sustainability.** Most of knowledge and technologies transferred through the Project are appropriate and timely. In most of the countries, they are very likely to be maintained. For example, in Fiji, combination of 3R implementation in the actual settings and its practice as trainers has made their expertise more adaptable for local needs and thus easier to be sustained. Training manuals and materials developed by C/Ps have been always made available for J-PRISM non-targeted councils as well as other stakeholders who want to learn about 3R by themselves.
- **There is a mechanism to share knowledge and skills within an organization.** For example, in Palau, SWM-BPW has started sessions to share what some staff members learned from training, etc. with other staff members. Regular holding of such sharing session is planned.

Challenges:

- **Transferred techniques were lost with leaving of C/Ps.** Frequent change and absence of C/Ps have made technical transfer somewhat difficult and negatively affected the technical sustainability especially when there is no mechanism to transfer the acquired techniques to colleagues within an organization.
- **Some activities require further capacity and experiences of data analysis and its utilization in SWM operation.** While technical capacity of the C/Ps has been enhanced, in some countries, there are still remaining issues such as limited capacity/experiences for analysis and utilization of the results of the waste surveys in improvement of SWM and operation of landfill and its monitoring based on the manual. Also, in Palau, the agencies related to the container beverage deposit fee program became able to better collect and compile the financial data, while analysis of them and use of the analysis results to operation of the deposit fee program could be further improved.
- **Operation and maintenance of the equipment provided is an issue.** The provided equipment is essential for implementation and management of SWM activities so that they are likely to be utilized fully continuously. Maintenance of weighbridge system is a serious concern in Samoa since no local company can provide regular and emergency maintenance for the system. Though the warranty has been expired, a company which can provide the maintenance service and spare parts is yet to be identified. A company with relevant experience on scale calibration, which does not exist in Samoa, is yet to be identified, either.

(5) Others

In Palau, there is a tendency that a lot of new technologies are brought from abroad (e.g. plastic oil, biogas) that are difficult to control/coordinate in terms appropriateness of technology and feasibility.

6. CONCLUSION

6-1 Overall

The Assessment indicated that the Project steadily made progress in each country through the proactive participation of the C/Ps in each country, selection and adjustment of the ways that on ground interventions occurred to make them appropriate to the actual situation on the ground and cooperation with the local experts trained by the J-PRISM through south-south cooperation, such as Country attachments, Study visits and a Trainer dispatch program. Consequently, the Project Purpose of strengthening capacity in SWM is expected to be mostly achieved at the end of the cooperation period, and therefore, the Project shall be completed on 2 February, 2016 as planned. There, however, still remain some significant issues in each country and for SPREP to be improved and secured to sustain the effect of the Project after the Project period concludes.

It is also noted as an achievement by following the recommendations proposed in the mid-term evaluation in 2013, the outcome of the Project was presented at international conferences, e.g. UNSIDS (United Nations Small Islands Developing States) in 2014, and 3R forums held by the Ministry of Environment in Japan. Therefore, it could be concluded that this Project is one of the good practices of Region-wide cooperation covering several counties.

It was observed that the training by coaching and guidance based on the “learning by doing” method, as is the J-PRISM’s technical cooperation approach, was able to be validated and adopted by the stakeholders. This method has been practically used in other programs, such as PacWaste and GEFPAS programmes. In addition, this approach will be also described in the new regional strategy 2016 – 2025 as one of the lessons learnt from the previous regional strategy.

6-2 Issues to be considered and implemented after the Project

(1) Expectation of further improvement by the local experts trained by J-PRISM

Two trainers’ training programs for 16 targeted C/Ps were conducted in Labasa, Fiji and in Okinawa, Japan in anticipation of organizing south-south cooperation in the future. It enabled local experts to improve their capacity more and also so that guidebook on SWM in PICs with good practices will be developed locally and be shared among the participant countries.

For the further utilization of these local resources, such as local experts and materials, it could be suggested to establish a well-organized system to plan, monitor and evaluate the intra-regional training programme, and to secure its financial arrangement through a certain mechanism, such as the Clean Pacific Round Table.

(2) Capacity of implementing agencies

According to this terminal evaluation, project sustainability in individual countries and via SPREP interventions is partly insufficient in policy and institutional, organizational, technical and financial aspects. It was, for example, specifically assessed that necessary technical transfers were not accomplished properly in some implementing agencies due to reasons such as frequent changes in personnel, personnel capacity of the agencies, too many competing job priorities, and poor organized working environments. It was also found in some cases that such conditions are affected by commitment of high level authorities of the governments in SWM. In order to ensure continuous use of the Project's output, these conditions should be also addressed and improved.

SPREP has very limited technical and financial capacity in the solid waste area. Currently, there is only one core position (a Solid Waste Management Adviser) covering all 21 member countries and operating on a very limited budget. This capacity needs to be increased if long-term improvements are to be made in regional WSM practices.

It could be, therefore, important to make maximum efforts, to continue the effective use of the Project's outputs and they need to be adjusted to the new regional strategy in SWM by utilization of the results of this evaluation

(3) Dissemination of the Good Practices in the Region

The good practices developed by the Project are expected to be expanded in other PICs. In order to promote its process, the key factors that contributed to the success of the good practices should be carefully studied and analyzed to develop suitable measures to apply to the target countries.

(4) Communication among stakeholders concerned in individual countries.

With expansion of the activities on SWM and 3R, the number of stakeholders might increase. Therefore, the establishment of the network among the stakeholders at local and regional levels in each country should be promoted using the stakeholder's list in the terminal evaluation report, in order to compliment the role of the local administration.

(5) Sharing the information and data in SWM in PICs

Most of PICs have the data in SWM, such as volume of waste generated per day, the contents of the household waste, made by J-PRISM and/or the relevant agencies in each county. SPREP and JICA should consider sharing this data among PICs. This data could help SPREP and other related agencies to develop new activities/projects in SWM

7. RECOMMENDATIONS

Recommendation for the remaining period

(1) Utilization of trainers and trainees database

The database of waste management practitioners has been created as a PIDOC in the Project to identify the training needs and gaps, and the resource persons who could play important roles for south-to-south cooperation in SWM. However, the purpose of its use is still unclear. Therefore, SPREP and JICA need to agree on the way of utilization of the database.

(2) Following-up recommendations in each country and SPREP

It could be significantly suggested that implementing agencies in each country and SPREP with support of the Project Office in Samoa follow up recommendations proposed by the Terminal Evaluation (For details, see ANNEX) within the remaining project period. Final result of these follow up activities should be reported in the last JCC to be held in each country and in the meeting between SPREP and JICA at the Project completion.

(3) Communication between SPREP and the Japanese side

Through the close communication and sharing information among SPREP, JICA Headquarters, JICA overseas offices and J-PRISM Project Office in Samoa, JICA experts and C/Ps are able to be aware of the SPREP's activities in individual country so that they can integrate their activities with SPREP's ones on the ground. This integration could also make the implementation process more efficient and produce synergistic effects between both activities.

8. LESSONS LEARNED

(1) Cooperation approach applicable to PICs

The continuous effort of capacity development involving citizens, private companies and other organizations more than 10 years could effectively function as the development process for PICs under relatively limited capacity of the local government.

It has also contributed the efficiency of the Project that various resources such as local experts trained by J-PRISM and good practices, were shared in the target countries. Additionally, by creating the common platform or occasions where C/Ps from different countries can exchange their ideas, experience and skills, they could learn each other very quickly and at high level, because they have quite similar situation and environment in PICs.

(2) Collaboration from the initial stage of RS 2010

JICA has been in partnership with SPREP in the waste management area since the year 2000. It has been highly effective for JICA, who usually emphasizes on the technical assistance on the ground, and SPREP, who works at the regional and policy levels, to exchange ideas and concepts of their cooperation approaches from the initial stage of drafting the regional SWM strategy 2010. With this collaboration at early stage, both SPREP and JICA could mutually understand their cooperation approaches, demarcate the responsibilities in SWM and smoothly implement the Project. This good collaboration leads to better coordination with other donor agencies in implementation of J-PRISM.

(3) Capacity development of the trainers who have the experiences as practitioners

Most of C/Ps of the Project are the staff of local authorities ordinary working on SWM on the ground. The Project gave them the opportunities to deliver lectures related with their experiences in SWM to other C/Ps. They could teach them in the practical way so that the participants could learn it more easily connecting to their work. Furthermore, this experience as lecturers gave them a good opportunity to brush up their knowledge and skills.

(4) Disaster waste management by the local experts trained by J-PRISM

JICA has carried out post-disaster pilot activities on bulky waste disposal in Samoa, Fiji, Vanuatu and other countries by local experts using experience gained from Samoa's tsunami activities in the previous JICA project in 2009. Through these experiences, J-PRISM immediately tried to train the local experts to dispatch them as soon as the case happens. This could be one of the key factors which minimize effects by the disaster waste in PICs, including Solomon Islands and Vanuatu.

(5) Necessity of high level commitment

High level to achieve the commitment by the senior and high level personnel in supporting SWM activities would be a promoting factor for achieving outcomes. Therefore, the implementation system could be designed in a way that such senior/high level personnel have opportunity to have enough information on the project activities (such as through involving them in SC/JCC and/or as C/Ps depending on the situation of the country).

ANNEX 1

Project Design Matrix (IRM: Integrated Reference Matrix)
(Updated by the Terminal Evaluation Team based on the latest PDMs of the individual projects)

Integrated Reference Matrix (Region-wide PDM and National level PDMs are combined to show the consolidated performance of all 12 projects.)

Project Title: Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Target Group : C/Ps of 11 PICs※ | Final Beneficiaries: Citizens of all 11 PICs | **At the time of Terminal Evaluation, Sep. 2015**

Implementing Agency: SPREP and C/P agencies of 11 PICs | Target Area: 11 PICs | Project period: January, 2011 - December, 2015 (5 years)

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal			
Sustainable management of solid waste in the Pacific Region is enhanced	1. Good SWM practices are applied. (e.g. Issues on SWM of a PIC is resolved by itself or with the collaborative assistance of other PICs.)【Regional】 2. Prospect of achieving the outcome indicators set for the Overall Goal level at national level.【National】	National performance audit report Regional meetings (reported by each PIC)	
Project Purpose			
Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	1. Level of contributions by the project to the RS2010 implementation.【Regional】 2. Total # of good practices which were generated through project activities in each PICs, have been widely practiced in other PICs.【Regional】 3. Total # of experts(trainers) who are listed in the SPREP inventory.【National】 4. Achievement results of outcome indicators set for the Project Purpose at the national level.【National】	Mid-term review /terminal evaluation of RS2101 reported by SPREP Newsletters, website and other related reports produced by SPREP SPREP (PIDOC) Regional meetings (reported by each PIC)	1. Natural disaster would not drastically affect the collaboration among PICs and SPREP. 2. Political changes of PICs would not drastically affect the collaboration among PICs and SPREP.

Followings show the framework of RS2010 with actions addressed by the project under each priority item. The contribution by individual project is broken down in the next page.

Framework of RS2010

#	Priorities			Actions addressed by the Project out of all Actions led by SPREP	Actions addressed by the Project out of all Actions led by Coordinating Agencies (CAs) of PICs	PICs contributing to the RS2010 implementation
1	Sustainable Financing				2. Formulate a plan to implement appropriate economic instruments in each PIC	Palau
2	Integrated SWM	2-1	3Rs/4Rs		5. Develop national 4R strategies.	Fiji, Solomon, Vanuatu, FSM(Pohnpei), Kiribati, Marshall, Samoa, Tuvalu
		2-2	Waste Disposal	10. Research and develop suitable disposal techniques for different situations. 11. Develop regional options for managing difficult wastes.	8. Improve existing disposal sites. 9. Develop new landfills.	Region-wide, PNG, Solomon, Vanuatu, FSM (all states), Marshall (Ebyeye), Palau, Samoa, Tonga
		2-3	Waste Collection		12. Develop an action plan for improving the waste collection service.	PNG, FSM (Kosrae, Pohnpei, Chuuk), Marshall, Tonga
3	Legislation				15. Develop and implement enforcement plans in each country. 16. Engage the office of the Attorney General in each PICT	
4	Awareness/Communication/Education				18. Develop a national integrated communication strategy which encompasses social marketing 21. Activate and implement existing education/awareness plans	Solomon, FSM (Kosrae, Yap), Kiribati, Marshall, Palau
5	Capacity Building			26. Conduct an annual training course in municipal solid waste management 28. Develop a country attachment scheme. 29. Develop a solid waste training programme in conjunction with regional institutions. 30. Develop and maintain a regional inventory of skilled people.	23. Assess capacity gaps for solid waste management in PICTs 25. Implement capacity building programmes, to address capacity gaps	Region-wide, Fiji, Vanuatu, Marshall (Ebyeye), Palau, Samoa
6	Environmental Monitoring				31. Develop environmental monitoring plan	
7	Policy, Planning, Performance			34. Strengthen regional coordination of solid waste management.	33.Develop national waste management policy, strategy and action plan	Region-wide, PNG, FSM (all states), Marshall, Palau, Tonga
8	Solid Waste Industry				37. Implement institutional and economic incentives, and subsidies based on market condition which encourage private sector involvement. 38. Provide information and data on the solid waste sector to increase awareness of viable	
*	Monitoring system of RS2010				Monitoring system of Regional Strategy 2010 is established.	Region-wide

※In addition to these 11 PICs, the Republic of Nauru, Niue and Cook Islands will also be assisted in the form of providing trainings and workshops.

Integrated Reference Matrix (Region-wide PDM and National level PDMs are combined to show the consolidated performance of all 12 projects.)

Project Title: Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Region-wide contribution	Contributions by each PICs
Indicators of the Overall Goal	
1. Good SWM practices are applied. (e.g. Issues on SWM of a PIC is resolved by itself or with the collaborative assistance of other PICs.)	2-1 3R is practiced nation-wide 2-1 The importance of waste minimization is understood and more than one waste minimization scheme is practiced in NCDC. 2-1 Proportion of recyclables and green waste disposed of at the landfill is decreased. 2-1 60% of registered experts(trainers) on SPREP list will participates as trainers at least one workshop and/or training in region and/or in-country should there be an opportunity for them to 2-1 At least more than 2 trainings/workshoips in the region which is conducted by facilitators/trainers from FSM. 2-1 80% of household engaged in the green waste recycling. 2-1 Good practices developed in RMI are implemented in other island countries tackling with common issues. 2-1 Good practices conducted in Palau are implemented in other island countries tackling with common issues. 2-1 70% of household of town area continue the 3R practice and segregation of recyclable materials at source. 2-2 Amounts of waste disposal at Port Vila and Luganville landfills are decreased by at least 7% respectively. 2-2 At least one training/workshoip in the region which is conducted by facilitators/trainers from Marshal Islands. 2-2 At least 3 PPP activities are implemented.
Indicators of the Project Purpose	
1. Level of contributions by the project to the RS2010 implementation. 2. Total # of good practices which were generated through project activities in each PICs, have been widely practiced in other PICs.	
	3-1 15 experts(trainers) in the SPREP inventory 3-1 4 experts(trainers) are listed in the SPREP inventory 3-1 5 experts(trainers) are listed in the SPREP inventory 3-1 3 experts(trainers) are listed in the SPREP inventory 3-1 4 experts(trainers) in the field of integrated solid waste management are listed in the SPREP inventory 3-1 2 experts(trainers) in 2 field are listed in the SPREP inventory 3-1 6 experts(trainers) are listed in the SPREP inventory 3-1 5 experts (Trainers) in the field of 3R/beverage container 3-1 2 experts(trainers) are listed in the SPREP inventory. 3-1 6 experts(trainers) are listed in the SPREP inventory 3-1 # of experts(trainers) are listed in the SPREP inventory
	4-1 Regional training program organized by Fiji is established. 4-1 Landfill management/collection services are implemented according to the SWM plan. 4-1 5 initiatives on waste minimization introduced. 4-2 Ranadi and Gizo landfill are managed as planned in Annual Operation Plans. 4-3 Provinvial officers recognize the importance of 3R and SWM and are willing to promote 3R and SWM in their respective provinces. 4-1 Bouffa and Luganville landfill are managed as planned in the Annual Operation Plans 4-2 One or more provices implemented their respective action plan to promote minimization and composting in respective provinces 4-1 Improvement of State landfill in each state. 4-2 Good practice developed from one state is shared with all the states of FSM. 4-1 Volume of disposal waste (especially organic waste) is reduced by 5 %. 4-1 Good practices and experience are shared among Majuro and other Atoll Local Governments. 4-1 % of amount of containers redeemed out of imported beverage containers maintained 90% or above. 4-1 Amount of waste disposal is decreased by at least 5 %. 4-1 More than 50% of target communities operate and maintain the garbage collection system with minimum support from the tovernment. 4-1 Improved operation of waste collection

Outputs under the Region-wide project and the project by each PIC.

#	Region-wide	Fiji	PNG	Solomon	Vanuatu	FSM: National	FSM: Kosrae	FSM: Pohnpei	FSM: Chuuk	FSM: Yap	Kiribati	Marshal Islands	Palau	Samoa	Tonga	Tuvalu
1													1: Capacity to manage the beverage container deposit fee program (sustainable financing			
2-1		1: National 3R strategy has been widely implemented in Fiji.		1. 3R (Reuse, Reduce and Recycle) activities are practiced in Honiara and Gizo.	1: Waste minimization mechanisms are developed.			3-4) CDL system is improved.			1. Household waste, especially green waste is recycled through waste separation and chipping.	3: Compostin g system is improved in Majuro.		1: Waste Minimization measures and practices are introduced and implemented at the urban areas.		1: Capacity of operators and field workers is increased through training.
2-2	2: Waste management options for atoll are studied.		1:Solid waste disposal facility and operation is improved	2. Waste disposal system is improved in Honiara and Gizo.	2: Existing waste disposal sites (Bouffa and Lugaville) are improved.		2-3) Waste Disposal is improved.	3-3) Final Waste Disposal site is improved.	4-2) Capacity to improve and manage the final disposal site is enhanced.	5-2) Capacity to improve and manage the final disposal site is enhanced.			5. Solid waste management system is improved in Ebyeye.	4: Capacity to manage the final landfill site is enhanced.	2: Tafaigata is operated as a regional waste disposal facility with improvements at Vaiaata in place.	1: The existing solid waste disposal facility and operation in Vava'u is improved.	
2-3			2: Waste collection in Port Moresby is improved				2-2) Collection of General Waste is improved.	3-2) Collection of General Waste is improved.	4-3) Capacity to improve the collection of general waste is improved.			2: Recycling system is improved in Majuro.				2: Solid waste collection service in Vava'u is improved	
3																
4				3: Lessons and experiences learnt are disseminated in Solomon Islands.			2-4) Awareness Raising is improved.			5-3) Capacity to conduct awareness activities for SWM is raised.	2. Community awareness on solid waste is improved through Clean School Program.	4. School-based recycle system is introduced	5. Solid waste management system is improved in Ebyeye.	3: Capacity to conduct Awareness-raising on 3R is enhanced.			
5	1: Human capacity of SWM is strengthened through trainings and workshops. 3: Knowledge experience and lessons through the project and the past assistance are shared among PICs.	2. Fiji 3R model is disseminated to the Region/Country through training program.			3: Capacities for waste management at the national and local government level are enhanced.									5: Training program on 3R /SWM is developed.	3. Experiences and lessons learnt are shared in both national and international levels.		
6																
7	4: Regional network among PIC countries is strengthened.		3: Capacity of planning and monitoring of Solid Waste Management in Port Moresby (National Capital District: NCD) is increased			1-1) NSWMS in FSM is finalized 1-2) Information sharing of SWM is enhanced among states.	2-1a) The SSWMS in Kosrae is finalized. 2-1b) Action plan is developed.	3-1) The SSWMS in Pohnpei is finalized.	4-1) Capacity to prepare the SSWMS of Chuuk and Action Plan is developed.	5-1) Capacity to prepare the SSWMS of Yap State and Action Plan is developed.		1. NSWMS is implemented.		2. National Solid Waste Management Plan (NSWMP) is finalized and Action Plan is revised.		3: Framework and system for long-term Solid Waste Management in Vava'u is established	
8																
*	5: Regional system to monitor the RS2010-2015is established.															

(IRM Continued)

ANNEX 1

ANNEX 2

Framework of Terminal Evaluation

	Items of investigation	Evaluation questions/ Necessary information		
		Individual projects		J-PRISM as a whole (Synthesis of evaluation results of individual projects with the following additional perspectives)
		Region-wide activities (SPREP)	Country projects (PICs)	
Accomplishment	Inputs	Actual inputs from Japanese side (comparison with plan)		
		Actual inputs from SPREP-side (comparison with plan)	Actual inputs from partner country side (comparison with plan)	
	Outputs	Degree of production of region-wide outputs (comparison with target values)	Degree of production of country-specific outputs (comparison with target values)	Degree of production of outputs reorganized in the light of priority issues of Regional Solid Waste Management Strategy
	Project Purpose	Contribution of this Project to Regional Solid Waste Management Strategy (comparison with target values) Application of good practices in other PICs (comparison with target values)	Situation of human resource development in solid waste management in each country (comparison with target values) Degree of resolution of country-specific issues (comparison with target values)	
	Overall Goal	Prospects for application of good practices (comparison with target values)	Prospects for achievement of country-specific goals (comparison with target values)	
Implementation Process	Progress of activities	Progress of region-wide Plan of Operations (PO) (conformity with plan; likelihood of completion by the end of Project)	Progress of country PO (conformity with plan; likelihood of completion by the end of project)	
	Technical transfer	Appropriateness of technical transfer in region-wide activities	Appropriateness of technical transfer	Distinctive ways of technical transfer of J-PRISM as a whole
	Project implementation system	Appropriateness of implementation system for region-wide activities (esp. after Mid-term Review)	Appropriateness of implementation system (esp. after Mid-term Review)	Appropriateness of implementation system of J-PRISM as a whole (esp. after Mid-term Review)
	Project management	Decision-making process, internal monitoring system (including Steering Committee); modification of PDM/PO; coordination with JICA HQs, overseas offices and Rep offices (and Japanese embassies)	Decision-making process, internal monitoring system (including JCC); modification of PDM/PO; coordination with JICA HQs, overseas office/rep office (and Japanese embassy)	Decision-making process, internal monitoring system, etc. of J-PRISM as a whole
	Responses to recommendations of Mid-term Review	Situation of responses to recommendations made in Mid-term Review (as part of PDCA cycle)		Situation of responses to recommendations addressed to Project Office, SPREP and JICA
	Communication within the Project	Among implementing agencies of region-wide activities	Within individual implementing agencies and among them in each country	
		Between SPREP and expert team of Project Office	Between implementing agencies and expert team for each country	Within Project Office (SPREP and expert team)
		Within expert team of	Within expert team for each	Between expert team of

ANNEX 2

	Items of investigation	Evaluation questions/ Necessary information		
		Individual projects		J-PRISM as a whole (Synthesis of evaluation results of individual projects with the following additional perspectives)
		Region-wide activities (SPREP)	Country projects (PICs)	
		Project Office	country	Project Office and expert team for each country
	Coordination with related organizations in target area	Coordination with related organizations/stakeholders in target area		
	Coordination with other projects	Appropriateness of other assistance schemes of Japan and other donors		
	Other promoting/ inhibiting factors	Ownership, commitment, etc. Creative approaches and issues, etc. that are special to region-wide projects		
Relevance	Necessity	Consistency with needs of Pacific region and SPREP	Consistency with needs of each country and implementing agency	
	Priority	Consistency with international objectives and regional policies	Consistency with development policies of each country	
		Consistency with Japan's ODA policy (region-wise and country-wise)		
	Suitability as a means	Comparative advantages of Japan's technology, appropriateness of approaches, etc.		
	Others	Changes after Mid-term Review in environment surrounding the Project (policy, economy, society, etc.)		
Effectiveness	Achievement of Project Purpose	Likelihood of achievement of Project Purpose (result of "Accomplishment" above)		
	Causal relationship	Relationship between Project Purpose and Outputs as a logical sequence to address region-level issues	Relationship between Project Purpose and Outputs as a logical sequence to address country-specific issues	Logical composition of J-PRISM as a whole
		Appropriateness of Important Assumptions and influence of insufficient fulfillment of Important Assumptions		
		Promoting and inhibiting factors in achieving Project Purpose		
Efficiency	Production of Outputs	Appropriateness of production of Outputs (result of "Accomplishment" above)		
	Causal relationship	Appropriateness of Important Assumptions and influence of insufficient fulfillment of Important Assumptions		
	Appropriateness of Inputs vis-à-vis Outputs	Inputs from the Japanese side (quality, quantity, timing)		
		Inputs from the region (SPREP) (quality, quantity, timing)	Inputs from each country (quality, quantity, timing)	
	Utilization of external resources	Situation of utilization of external resources (integration with Japanese assistance schemes other than J-PRISM; cooperation with other donors)		
	Other promoting and inhibiting factors	Other factors that promoted or inhibited the production of Outputs		
Impact	Prospects for achievement of Overall Goal	Likelihood of achievement of Overall Goal in 3-5 years after project completion and as a result of this Project; verifiability of achievement of Overall Goal in ex-post evaluation		
	Causal relationship	Appropriateness of Important Assumptions and influence of insufficient fulfillment of Important Assumptions		

ANNEX 2

	Items of investigation	Evaluation questions/ Necessary information		
		Individual projects		J-PRISM as a whole (Synthesis of evaluation results of individual projects with the following additional perspectives)
		Region-wide activities (SPREP)	Country projects (PICs)	
	Other impacts	Other positive impacts		
		Negative impacts; countermeasures against negative impacts		
Sustainability (Prospects)	Political and systematic aspects	Status of this Project in Solid Waste Management Strategy (SPREP) in the next term	Policy support and legal development necessary for continuation of effects of the Project	
	Organizational and financial aspects	Organizational structure of SPREP; budget for solid waste management; situation of assistance from other donors; etc.	Likelihood of continuation of cooperative relationship with related organizations after project completion; degree of securement of necessary budget and personnel	
	Technical aspect	Policy of utilizing human resources such as those registered in the expert list in solid waste management; training plan for technical enhancement	Technical capabilities of partner (counterpart) personnel Adaptability of transferred technology and products of the Project in each country; mechanism to disseminate products of the Project Likelihood of use and maintenance of equipment provided under this Project after project completion	
	Others	Other promoting and inhibiting factors to sustainability such as social, cultural and environmental contexts		

Terminal Evaluation Report for the Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Region-wide Activities

Date: September 11, 2015

I. Project Outline and Evaluation Policy

(1) Project Outline	
Background	For the purpose of human and institutional capacity development of the Solid Waste Management, J-PRISM has been launched by JICA with the partnership of SPREP through the implementation of "Pacific Regional Solid Waste Management Strategy 2010-2015 "(hereinafter as "RS 2010"). The project consists of eleven (11) sub-projects for each PIC to tackle with their own priority issues on solid waste management and the region-wide activities to consolidate the efforts made by PICs as well as to expand their achievements within the region.
Summary of the Project	(See Attachment 1 and 2 for details)
-Overall Goal	Sustainable management of solid waste in the Pacific Region is enhanced
-Project Purpose	Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)
-Priorities in RS2010	**Outputs**
2-2 Waste Disposal *5 Capacity Building* *7 Policy Planning, Performance Monitoring of RS2010*	Output 2: Waste management options for atoll are studied. Output 1: Human capacity of SWM is strengthened through trainings and workshops Output 3: Knowledge experience and lessons through the project and the past assistance are shared among PICs Output 4: Regional network among PIC countries is strengthened. Output 5: Regional system to monitor the RS2010-2015 is established.
Project Duration	Five years from February 2011 to February 2016
Implementing Agency	SPREP and 11 Pacific Island Countries
Target Group	All C/P members of 11 PICs (as of August 2015, total number of C/Ps is 185)
Target Area/ Target Population	11 PICs with the total population of approximately 1,304,978 *For specific target area and target population for each PIC, see TER of individual project
(2) Evaluation Policy	
General Objectives	1) To verify the accomplishments of the Project compared to those planned; 2) To identify promoting and/or inhibiting factors that have affected the project implementation process; 3) To analyze the Project in terms of the five evaluation criteria (i.e. Relevance, Effectiveness, Efficiency, Impact, and Sustainability); 4) To discuss the results of evaluation and solutions for problems that may be observed through the evaluation together with the personnel concerned with the Project and make necessary suggestions.
Member of Terminal Evaluation Team	

	Title	Name	Position/Organization
*	Cooperation Planning	Mr. Toru Taguchi	Assistant Director, Environmental Management Division I, Global Env. Dep., JICA
*	Evaluation Analysis	Mr. Atau Kishinami	Permanent Expert, International Development Associates, Ltd.,

*Members participating in the evaluation study in the country.

Period of Evaluation Study in the Country	5 days from Sep. 7 to Sep.11, 2015 (See Attachment 3 for details)
Methodology	The region-wide activities provide a lot of opportunities for C/Ps of all PICs to enhance their capacity through various forms of trainings /workshops. They also serve as a platform for PIC members to mutually exchange the knowledge and experiences, so

	that they can learn and teach each other. JICA Terminal Evaluation Team collected the information through document analysis, questionnaire survey, and interviews with concerned officers in SPREP and JICA experts as well. Based on the results of the evaluation, the Team prepared a draft report and finalized it through discussions with the officers concerned with the Project.
Limitation	None

II. Accomplishment and Implementation Process of the Project

(1) Inputs (as of June 2015)

<Japanese Side>
(see attachment 4)

1) Dispatch of JICA Experts :9 experts (139.9 M/M in total)
- 5 Long-term Experts of Project Office (85.0 M/M)
  1 Chief Advisor from Feb.2011
  *As of Jun 2014, chief advisor is in Tokyo base.
  4 Project Coordinators
  (Their fields of expertise are training program development, capacity development of SWM/training plan)
- 3 Short-term Experts (for regional trainings) (0.8 M/M)
- 1 Local Expert (31.4 M/M)
  (Cost of this Local Expert is included in local cost supports)
- Travel days (22.7 M/M)
  Travel days is the M/M solely used for travelling within the region. The M/M for travelling between Japan and assigned countries are excluded from the M/M of long-term experts, and included in M/M in respective assigned countries on short-term experts. These travel days are adjusted by adding as inputs to the Region-wide Activities.

2) Trainings conducted
   Various types of regional trainings were conducted.
   (see Attachment 4-2)
3) Provision of Equipment : WST48,772 (US$20,664)
   Office Equipment, Visual Aid, etc.
4) Local cost supports: US$1,726,036
   Air fare, Travel Allowance and others

<Pacific/SPREP Side>
(see attachment 5)

1) Allocation of Counterpart: 2 Project Coordinators
   1 from Feb. 2011 to Jun. 2014 from SPREP
   1 from Oct. 2014 up to now from SPREP
   The gap was due to a staff resignation.

2) Project management costs
   Approximately for US$210,000 for manpower cost for activities provided by SPREP and in-kind contribution to regional activities.

Note: Division Director and Pollution Advisor of SPREP also worked closely with the J-PRISM team over the 5 year period to improve Pacific SWM.

(2) Outputs

Output 1: Human capacity of SWM is strengthened through trainings and workshops.

Degree of achievement[1]: Mostly achieved.

Indicator	Results
1.1 At least, one workshop/training every year for 3R and landfill management is conducted.	The project conducted the workshop / training every year for either 3R or landfill management as shown below. This indicator has been fully achieved.

Table 1: List of workshop/training for 3R /landfill management

Year	Name of workshop/ training
2011	Training for landfill management in Vanuatu
2012	3R workshops in Fiji
2013	3R workshop in Palau Training for landfill management in Yap, FSM Training for landfill management in Pohnpei, FSM
2014	Training for landfill management in Labasa, Fiji

Source: Project

[1] *Degree of achievement of each output/Project Purpose is judged based on the achievement level of indicators set for each Output/Project Purpose. Ratings used for this judgment are four levels, such as "Fully achieved", "Mostly achieved", "Partly achieved", "Not achieved."*

1.2 At least 10 good practices of 3R are reported.	3R related activities have been carried out and four (4) good practices originated through the activities of J-PRISM are identified. This indicator has been partly achieved. Table 2: Identified good practices originated through J-PRISM activities 1 Community garbage collection system developed in Vava'u, Tonga, 2013 2 Horn collection system developed in Chuuk State, FSM, 2013 3 Home composting subsidy program, Fiji, 2015 4 Financial assistance program for Clean School Program introduced, Fiji, 2015 Source: Project In addition to the above cases, it is well noted that 3R related good practices originated from previous project were implemented in the different location of the country by effectively adapting to the local needs are shown below. Table 3: Good practices replicated in other part of the country No. / Type of good practice / Country / Number of cases 1 / Market composting / Fiji / 3 2 / Segregation of disaster waste / Fiji / 2 3 / Clean School Program / Fiji / 5 4 / Post cyclone/flood waste management / Samoa / 1 Source: Project
1.3 At least 10 good practices of semi-aerobic landfills are reported.	Throughout the project activities, seven (7) landfills have been improved using semi-aerobic method and it was reported that five of them have been maintained in the good condition. It is expected that existing landfill in Solomon Island will be improved using semi-aerobic method by the project completion. Landfill sites in Chuuk and Sigatoka were improved without using semi-aerobic method. Table 4: List of good practices of semi-aerobic landfill No. / Landfills improved using semi-aerobic method 1 Kalaka landfill in Vava'u, Tonga 2 Yap state landfill in Yap State, FSM 3 Dekehtik Dumpsite in Pohnpei State, FSM 4 Namara landfill in Labasa, Fiji 5 Vaiaata Landfill, Samoa 6 Baruni Landfill, PNG 7 M-dock Landfill, Palau Source: Project [Note on interpretation of this indicator] According to the Project, the semi-aerobic method is considered to be a good practice for improving the landfill. Therefore, this Indicator should be interpreted to be "*At least 10 cases of which existing landfills have been improved using semi-aerobic method are reported.*" The indicator with this interpretation has mostly achieved. Since the landfill management requires proper operation and maintenance and constant funding, follow-up trainings for landfill management will be useful.
1.4 At least 10 good practices of south-to-south (country-to-country, local-to-local) assistance/ cooperation are reported.	Throughout the project activities, various types of south-to-south assistance/cooperation in the form of Country Attachment, Study Visit and Trainer Dispatch Programs have been carried out. Following explains the outline of each type of south-to-south cooperation. Table 5: Outlines of south-to-south cooperation by type Types / Definition / Example Country attachments / Staff members working for a waste management related organization in PIC are sent to a counterpart organization in another PIC for about one to two weeks to learn specific skills and knowledge and expertise / -Trainee of Solomon Island sent to Vanuatu on Landfill operation and management -Trainee of Tuvalu sent to

	through on-the-job training.	Fuji on waste collection and 3R
Study visits	Host country organization plans a range of site visits and lectures that respond to the need of the partner countries. OJT elements is limited, given its short duration for a few days.	-Trainee of Solomon Island and Tonga visited Fiji on 3R and Educational programs.
Trainer dispatch program	Local experts who gained technical skills through previous JICA projects play major roles as facilitator or trainers. They are dispatched from resource countries to target countries to introduce programs or provide technical advice and coaching.	-Trainers of Fiji sent to Kiribati ad Solomon Islands on Educational programs at school (Teacher's Workshop) -Trainers of Fiji sent to RMI for Teachers Workshop.

Source: Description on Research Paper, "Case Study of Regional Mutual learning and Discovery towards an Effective Solid Waste Management in the Pacific" by Mr. Hiromichi Kano and Mr.Shunichiro Honda, JICA

[Note on interpretation of this indicator]
According to the Project, what is meant by good practices of south-to-south assistance/cooperation is above three types of cooperation carried out under J-PRISM.
Therefore, this Indicator should be interpreted to be *"At least 10 cases of which any of three types of cooperation; Country Attachment, Study Visit and Trainer Dispatch are reported."*

At the time of Terminal Evaluation, total of seventeen (17) cases of this kind of cooperation were completed as shown below. The indicator with this interpretation has been fully achieved.

Table 6: List of south-to-south assistance/cooperation

Types of cooperation	2011	2012	2013	2014	2015	**Total**
Country Attachment	1	2		3		**6**
Study Visit	1	1		3	1	**6**
Trainer Dispatch Program		2	1	1	1	**5**
Total by year	**2**	**5**	**1**	**7**	**1**	**17**

Source: Project

In order to further improve the south-to-south cooperation and ensure that these cooperation contribute to the capacity development of those trained, it is essential to follow-up the training results.

1.5 # of cases of improved occupational health practices	Throughout the project activities, in the field of occupational health, one case of improvement is reported. ILO Regional Workshop was organized by J-PRISM in collaboration with SPREP in 2013 in Samoa. After the training of Occupational Safety and Health in 2013, it was reported that the private recycling company (Pacific Recycler) has improved the working environment according to what was suggested by the training. No other cases of improved occupational health practices have been reported. This indicator has been partly achieved. SPREP conducted uLABs* occupational health and safety training in Kiribati, RMI, Palau, Tonga and Wallis and Futuna to help improve workers safety in 2015. In order to promote the occupational health practice, it is essential to follow-up the training results. Note: Used lead acid batteries.
(Supplemental Information) Disaster waste prevention and management as measures for adaptation to	In order to cope with increasing demand of disaster waste prevention and management, J-PRISM and SPREP collaborated to carry out following activities. Emergency response pilot projects on post-disaster waste management were carried out in Ba (Fiji) and Samoa in 2012, Lautoka Fiji) in 2013, Honiara

climate change	(Solomon Islands) in 2014, Port Vila (Vanuatu) in 2015. J-PRISM assisted the pilot project for adaptation to Climate Change by AUSAID by local expert in Labasa (Fiji). SPREP, with the assistance of J-PRISM, developed the Guidelines for Post Disaster Waste Management for Fiji which is expected be endorsed by the next Fiji National Disaster Council Meeting. SPREP also developed a brief outline of Disaster Waste Management Project in Vanuatu in connection with the recent devastation caused by Cyclone Pam. There is a need to regionalize the guidelines to provide other PICTs with more planned and integrated approaches for dealing with disaster wastes.

Workshop/training for 3R/ landfill management has been conducted every year as planned. Target number of cases of south-to-south cooperation has been fully achieved. Target number of cases of landfill improvement using semi-aerobic methods, 3R and improved case of occupational health have been mostly or partly achieved. Activities for the Disaster waste prevention and management as measures for adaptation to climate change were effectively carried out to timely respond to the needs of disaster waste prevention and management.

In light of the above, Output 1 "Human capacity of SWM is strengthened through trainings and workshops" has been mostly achieved.

Output 2: Waste management options for atoll are studied.	Degree of achievement: Fully achieved

Indicator	Results
2.1 Recommended plans are developed for waste collection, 3R and waste disposal	In 2013, the baseline survey was conducted in Marshall Island (RMI) as a pilot project by SPREP. An implementation plan for all recommended options for integrated atoll waste management including waste collection, 3R and waste disposal in RMI has already been developed. This indicator has been achieved. Note: Although strictly speaking, inputs of the Project were limited, both SPREP and J-PRISM conducted the above-mentioned activities as a part of the J-PRISM activities.

In light of the above, Output 2 "Waste management options for atoll are studied" has been fully achieved.
It is expected that all activities using recommended options is to be completed by May 2017.

Output 3: Knowledge experience and lessons through the project and the past assistance are shared among PICs.	Degree of achievement: Partly achieved

Indicator	Results
3.1 Guidance materials printed and distributed.	It was intended to just develop the standardized waste audit program, such as waster characterization study under Output 3. However, it was rephrased upwardly to include the work to develop a regional solid waste management guidebook based on WHO textbook issued in 1996. It is planned that SPREP and J-PRISM share the work to complete a practical guidebook. However, in order to enhance the capacity of C/Ps and to encourage their ownership of guidebook, it was decided that experienced C/Ps who attended the Trainings of Trainers in Fiji 2014 share the responsibilities to write them up with the support of SPREP and J-PRISM experts without modifying this indicator. Another workshop of trainings of trainers was held during May and June in 2015 in Okinawa for the purpose of strengthening their capacity as trainers and preparing the draft of guidebook. Each C/P takes some part in charge and has been preparing the final draft. Although this work is totally additional and burden to C/Ps, they are now working hard to complete the draft. [Note on interpretation of this indicator] According to the Project, what is meant by this indicator is to develop the guidance. Therefore, this Indicator should be interpreted to be *"Guidance materials of solid waste*

	management is developed". The indicator with this interpretation has been mostly achieved.
3.2 11 PICs to which guidance materials are disseminated.	As explained above, guidebook is now in the process of preparation and it is expected that the guidebook will be completed by December, 2015. In order to disseminate the use of guidebook, it is less likely to be done by the project completion. This indicator has been partly achieved. It is well noted that apart from this guideline, hazardous waste management guidance (asbestos, e-waste, used oil and health care waste) has been completed and distributed by SPREP.

In light of the above, Output 3 "Knowledge experience and lessons through the project and the past assistance are shared among PICs" is partly achieved.

Output 4: Regional network among PIC countries is strengthened.	Degree of achievement: Fully achieved.

Indicator	Results
4.1 J-PRISM page is developed under SPREP website.	Project Office worked hard to develop J-PRISM webpage under SPREP website. The work was completed and live web page is now available as the following site. http://www.sprep.org/j-prism J-PRISM page introduces the outline of the Project, News and Events done, Regional Activities, Country Profiles of member PICs and Report and Materials produced through project activities. This indicator has been fully achieved.
4.2 Newsletter is issued at least twice a year.	Project Office periodically prepared the J-PRISM Newsletter "Flash" which features activities in Pacific region. Up to now, nine (9) issues including special edition, of J-PRISM "Flash" were distributed. SPREP also issued three (3) newsletters every year. This indicator has been fully achieved. It is expected that editing capacity is strengthened in the future.
4.3 Directory of trainers is available before the Steering Committee Meeting in 2015.	SPREP IT Services, in collaboration with J-PRISM, produced and maintained the database for trainers, which is called the Pacific Islands Database of Capacity Development Activities (PIDOC). This directory of trainers lists up J-PRISM trainers who have experiences of training others for respected field of Solid Waste Management at regional/sub-regional /in-country workshops/training since the beginning of J-PRISM up to the end of July 2015. Recognition as a trainer is limited to J-PRISM at this time since the PIDOC covers workshops/training conducted only under J-PRISM. Therefore, person listed in PIDOC are certified as trainers by J-PRISM, but currently not considered as officially certified trainers by SPREP. This indicator has been fully achieved. It should be thoroughly discussed between J-PRISM and SPREP to explore the best way to utilize these data for strengthening Human and institutional capacity base for sustainable solid waste management in the Pacific Region.

J-PRISM webpage was developed, Newsletter was issued as planned. Directory of trainers is now available. These information sharing mechanism has been promoting the regional network among PICs. As for the Directory of trainers, it is necessary how these data should be utilized to encourage C/Ps for their capacity development.

In light of the above, Output 4 "Regional network among PIC countries is strengthened" is fully achieved.

Output 5: Regional system to monitor the RS2010-2015 is established.	Degree of achievement: Partly achieved.

Indicator	Results
5.1 Monitoring results are periodically reported from PICs compiled by SPREP and presented to the SPREP meeting (Steering Committee Meeting commencing 2014 and 2015)	The J-PRISM Steering Committee meeting have been undertaken since 2011. Despite efforts made by SPREP and J-PRISM from 2012 onwards, there have been substantial difficulties to obtain annual monitoring data, which is outside of control of both parties. This has made it difficult to obtain up-to-date information from participating PICs. In 2015, country profiles were prepared documenting as far as possible the current waste and pollution management status of 21 PICs as part of the Cleaner Pacific 2025 development via distributing questionnaires. This indicator has been partly achieved.
5.2 Recommendations and baseline information is established for on-going waste management in the Pacific Region.	An assessment of the RS2010-2015 has been completed as part of the Cleaner Pacific 2025 development and the document of "Terminal Evaluation of the Pacific Regional Solid Waste Management Strategy (2010-2015)" was completed. And draft country profile which includes the baseline information has been developed, but has to be validated by each country. This indicator has been mostly achieved.

In light of the above, Output 5 "Regional system to monitor the RS2010-2015 is established" is partly achieved. In the new Regional Strategy, the monitoring of regional strategy is included as one of activities to be implemented. Progress reports are planned to be communicated through the Pacific Regional Waste and Pollution Management Round Table.

(3) Project Purpose

Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	Degree of achievement: Mostly achieved

Indicator	Results
1. Level of contribution by the project to the RS2010 implementation	Terminal Evaluation of the Pacific Regional Solid Waste Management Strategy (2010-2015)" conducted by SPREP has identified the high level of contribution by the J-PRISM. Brief summary of J-PRISM contribution is extracted in the below table.

Table 7: Brief summary of J-PRISM contribution to RS2010

#	Thematic area		Contents
1	Sustainable Financing		J-PRISM contribution was not mentioned.
2	Integrated SWM		Significant regional progress made with implementation of J-PRISM and other donors' contribution.
		3R/4Rs	・CDL in Palau, FSM. ・Lessons learned shared through trainings and workshops ・Organic waste management implemented in Fiji, Kiribati, RMI and PNG. ・General 3R promotion in FSM, Fiji, Kiribati, RMI, Samoa, Solomon Islands and Vanuatu.
		Waste Disposal	・Waste disposal services improved in Fiji, FSM and Palau with the equipment secured through Grassroots Grants program ・Regional guide to semi-aerobic landfill construction and monitoring published and disseminated. ・Urban waste disposal sites improved in FSM, RMI, Palau, PNG Samoa, Solomon Islands, Tonga and Vanuatu. ・Chief advisor provided critical advice on best practice atoll waste management in RMI
		Waste Collection	・Waste collection services improved in FSM, RMI, PNG and Tonga
3	Awareness,		・Awareness activities are integrated into ongoing SPREP project

	Communication & Education	including J-PRISM. ・National Clean Pacific awareness campaign are integrated into ongoing J-PRISM.
4	Capacity building	・As integral components, J-PRISM provided training more than 260 persons from 12 PICs in key aspects of SWM through national, sub-regional, regional and extra-regional training/workshops and attachment programs. ・Participations in the Regional 3R Forum in Asia and Pacific Islands. ・Two Trainers' Training conducted for 14 targeted officers for the future strengthening of South-South cooperation. ・A database of capacity building in PICTs developed at SPREP to monitor and report on progress in regional capacity development.
5	Policy, Planning, Performance	・Contribution with critical information to the healthcare waste management strategy. ・A draft national 3R policy developed in Fiji.
6	Solid Waste Industry (not directly included in J-PRISM component)	・Participation in an Eco-island Symposium in Okinawa helped to develop capacities of private waste recyclers in Tonga, Samoa, Fiji and FSM.

Source: Terminal Evaluation of the Pacific Regional Solid Waste Management Strategy (2010-2015)

In all thematic areas assisted by J-PRISM except the sustainable financing, contributions of J-PRISM has listed up. Especially, in the areas of integrated SWM and capacity building, J-PRISM contribution is concentrated. Level of contribution by the Project to the RS implementation is judged as high. This indicator has been fully achieved.

2. Total # of good practices, which were generated through project activities in each PICs, have been widely practiced in other PICs.

As explained under Output 1, indicator 1-2, there are four (4) good practices originated through J-PRISM activities. One of these practices, the Community-based Garbage Collection System originated in Vava'u, Tonga has already been introduced to Gizo, Solomon Island. It is expected that other three good practices originated through J-PRISM activities, such as horn collection system, home composting subsidy program and financial assistance program for CSP will be expanded to other PICs in the near future. This indicator is partly achieved.

It is well noted that there are many cases identified that good practices originated from the previous projects have been widely expanded through J-PRISM project activities in the region as shown below.

Table 8: Good practices originated from previous projects applied/being applied in other PICs

	Cases of Good Practice	Origin	No.	Adapted city / Town (PIC) Under J-PRISM
1	Clean School Program	Nadi, Fiji	4	South Tarawa (Kiribati) Honiara/Gizo (Solomon Island), Vava'u (Tonga) Ebeye (RMI)
2	Eco-Bag	Nadi, Fiji	1	Honiara (Solomon Islands)
3	Weighbridge system	Lautoka, Fiji	1	Samoa
4	Market Compost	Lautoka, Fiji	2	Port Vila (Vanuatu), Port Moresby (PNG)
5	Semi-aerobic landfill	Tafaigata, Samoa	4	Vava'u (Tonga) Yap (FSM), Pohnpei,(FSM) Port Moresby (PNG)
6	Container Deposit Legislation	Kosrae, FSM Koror, Palau Yap, FSM	2	Pohnpei (FSM), Samoa
		Total	14	

Source: Project

(Supplemental Information) Enhancement of capacity as Trainers

Two Trainers' Training conducted for 14 targeted C/Ps for the future strengthening of South-South cooperation. According to the questionnaire

<table>
<tr><td></td><td>survey conducted by Terminal Evaluation Team, all of those responded (9 out of 14 C/Ps) have expressed their will to further enhance knowledge and skills to train other colleagues and have identified what was done through regional trainings very useful. Some supporting comments are extracted below.
- Three respondents raised ‘learning on implementing on a piloting scale first and improving step by step’ as new insights acquired through training.
- Three respondents raised ‘learning different good practices implemented in other countries which can be applied in my country’ as new insights through training.
- In terms of training program, six respondents raised ‘to share one’s skills, knowledge and experiences with others’ as an encouragement and two respondents raised ‘constructive comments by fellow participants really motived them to be better trainers’.

A total of 56 Pacific officers working for waste management were trained as Training of Trainers (TOT) in solid and hazardous waste management as part of the on-going GEFPAS hazardous waste management programme.</td></tr>
<tr><td>(Supplemental Information) Presentation to the International Conference</td><td>Projects made much effort to publicize major findings and innovative approaches practiced in each PIC, by means of conference presentation in international symposium and meetings. Exposure to these international conferences for C/Ps to make presentations and to discuss concerned issues helped their capacity development as well.

Table 9: List of international symposium/meetings participated
<table><tr><th>Year</th><th>International Symposium / Meetings</th></tr><tr><td>2012</td><td>Eco-island Symposium in Okinawa</td></tr><tr><td>2013</td><td>International Conference, 3R Forum in Vietnam</td></tr><tr><td>2014</td><td>International Conference, 3R Forum in Indonesia</td></tr><tr><td>2014</td><td>UNSIDS Conference in Samoa</td></tr><tr><td>2015</td><td>International Conference, 3R Forum in Maldives</td></tr></table>Source: Project</td></tr>
<tr><td>(Supplemental Information) Counterpart Award System</td><td>The Counterpart Award System to honor “Best Team” and “Best Counterpart” conducted every year since 2012 at the Steering Committee Meeting has served as to encourage C/Ps as well as to keep them motivated.</td></tr>
<tr><td>(Supplemental Information) Institutional and organizational capacity development</td><td>It is identified that implementing agencies of some PICs have demonstrated the initiatives to proceed the activities, such as in Fiji and Solomon Islands, Setting the legal framework to promote 3R is in the process in Fiji as well. However, there have been still much rooms for improvement in terms of organizational and institutional capacity development.</td></tr>
</table>

Contribution of J-PRISM to the implementation of Regional Strategy has been confirmed and appreciated by SPREP. Although good practices originated through J-PRISM have not yet expanded as expected, many of good practices originated from previous projects have much expanded in the region. The number of key C/Ps in the respective sub-region who have refined their technical expertise has been increasing. Their exposure to the international conference has helped to improve the international profile of what J-PRISM have done. In terms of institutional and organization capacity base, not much progress have been identified during the study.

In light of the above, the Project Purpose has been mostly achieved.

(4) Implementation Process

・Method of Technical Transfer / Implementation system

After the mid-term review, implementation system has been reformed from directly assigning independent experts to conduct technical transfer in respective PICs to contracting out three groups of consultant teams to cover three sub-regions, Melanesian, Polynesian and Micronesian region. In addition, three project coordinators have been assigned to each sub-region to monitor and support the consultant team. It was reported that the change of implementation system has facilitated the technical transfer since C/Ps have been well supported. However, it was identified through questionnaire that technical transfer could be better if the demarcation of role and responsibilities between coordinators and consultant team was clearly defined.

・Monitoring System

Between SPREP and J-PRISM, progress has been mutually reported before the Steering Committee Meeting. Progress monitoring within J-PRISM has been done separately in each sub-region by both of consultant team and a coordinator assigned to the sub-region. It was pointed out during the study that more systematic flow of progress monitoring should be practiced in all sub-regions.

Progress monitoring within SPREP is effectively carried out. In order to formulate the policy and direction of environmental projects, an annual planning meeting is organized with attendees of all concerned officers at SPREP. Divisional meeting of WMPC is held on a monthly basis at which J-PRISM project office can exchange information about the progress of activities with other donor's projects. Technical and rather specific issues are discussed between SPREP's solid waste management advisor and J-PRISM at the SWM meeting which is also held on a monthly basis.

・Decision making Process

Since June, 2014, the chief advisor has been stationed in Tokyo. It was pointed out that there have been some difficulties in the project office as it has taken more time for decision making. Attempts have been made to overcome such difficulties through making full use of teleconference, e-mails and phone calls.

・Project Management

Steering Committee Meeting is held as the side event of the SPREP General Meeting attended by representatives of PICs. It is a good opportunity to inform observers, including other partners/donors and participants in the General Meeting, of J-PRISM activities and to help reducing the transaction cost as well. However, due to that two hours are not sufficient to discuss important issues and those representatives of PICs may not necessarily be involved in the J-PRISM activities, the outcome of the meeting have not been up to the expectations. The project plans to spend a whole day to have the 5th Steering Committee Meeting for the first time.

・Coordination among Donors/Partners

SPREP has been playing the role of implementer as well as coordinator for the regional donor-assisted environmental projects. After the mid-term review, donor/partner coordination has been much improved with the SPREP's initiative. In principle, donor/partner coordination meeting is held every month in which J-PRISM coordinators and other donors/partners take part. Beside that whenever available, J-PRISM coordinators also sit in other donors'/partners' project meetings, such as PacWaste, GEFPAS, etc. Through mutual participation among them, information sharing and discussions for demarcation and collaboration have been facilitated. There have been several cases to which J-PRISM has provided technical assistance by sending local experts.

・Partnership (between SPREP and JICA)

Partnership with SPREP has been strengthened further after the mid-term review. SPREP commented that mutual understanding regarding the responsibilities of each side has been well recognized and SPREP appraised the technical cooperation approach by J-PRISM as effective for the capacity development in the region. Partnership between SPREP and JICA should be further enhanced and both should play the key role to establish a mechanism of effective cooperation among all other donors/partners.

・Communications

It was reported during the study that change of personnel in charge of the project at some JICA overseas offices

have resulted in the change of manner of assistance toward the project activities. This has made the project repeatedly confirm the administrative procedures with JICA overseas offices to ensure the mutual understanding and to reconstruct the relationship.

・Coordination with Other Japanese and International Projects

1) Holistic approach with other schemes of Japanese assistance

#	Scheme	Type of coordination
1	JICA partnership program	"Promotion of Shibushi model -waste minimization without incineration- from the Republic of Fiji to pacific island countries (Shibushi Program)" 3R Regional Training in collaboration with Shibushi Program Nov. 2011 3R Shibushi City Training Program
2	Data collection survey	Study on reverse logistics in the Pacific Islands in 2012.
3	Eco-island Symposium held in Okinawa, May 2012.	An international symposium jointly sponsored by JICA and Okinawa Prefecture as a side event to PALM6. C/Ps of Fiji, FSM, Palau, Samoa, and Tonga, as well as J-PRISM experts introduced J-PRISMs initiatives and exchanged opinions on the preservation of island environments.

2) Collaboration with other donors

#	Donor	Type of coordination
1	European Union (EU) (European Development Funds : EDF10)	SPREP has implemented a regional project for tackling e-waste (electric and electronic waste), medical (health-care) waste, asbestos, and waste management in atoll.
2	Global Environment Facility (GEF) and United Nations Environment Program (UNEP)	SPREP has been implementing a five year regional project targeting the reduction of adverse impact from persistent organic pollutants.
3	International Labor Organization (ILO)	Trainings on Occupational Safety and Health was held in PNG in 2011, and Training of Trainers on OSH was held in Samoa in July 2013
4	L'Agence Francaise de Development (AFD)	Regional project to develop and implement education and training programs for regional waste managers at Fiji National University and build waste oil collection system in the region. C/Ps of J-PRISM participated in the Trainings on "Regional Solid Waste Management Initiative "
5	United Nation Center for Regional Development (UNCRD) and the Ministry of the Environment, Japan	The fourth Regional 3R Forum in Asia in March 2013 3R Forum in Indonesia in 2014 3R Forum in Maldives in 2015

III. Results of Analysis from the Viewpoints of Five Evaluation Criteria

(1) Relevance

Evaluation: Relevance of the Project is still high.

The relevance of the Project is considerably high for the following reasons.

1) Necessity

For small island countries in the Pacific region, solid waste management has become a major concern with the potential to cause negative impacts on national development activities, including tourism and trade, food supplies, public health and the environment. The threat arising from poor solid waste management of these PICs is made worse due mainly from the increase of waste generated from imported goods as a result of economic and urbanization growth as well as the modernization of life style. Therefore, proper management and disposal of solid waste is a crucial concern for these PICs, especially it is urgently needed for PICs to strengthen the capacities of municipalities who are responsible for waste management.

2) Priority

Waste Management is stated in development strategies as one of the priority issues to be improved in respective country. Project is highly relevant with the Development Policies of all PICs which set out the governments' continuous commitment and support to strengthening SWM. And, the Project has been aligned with the Pacific Regional Solid Waste Management Strategy 2010-2015 (RS2010) which is the single sector policy of the SWM for the region and to which all of PICs as well as most of donors have aligned. Under the new strategy of Cleaner Pacific 2025, solid waste management is still considered as one of the priority issues.

3) Consistency with Japanese ODA policy
The Project is consistent with the Japanese ODA policy. In the Seventh Pacific Islands Leaders Meeting (PALM 7) Fukushima 'Iwaki' Declaration on May, 2015, in which continuous cooperation to address environmental issues, including waste management was reaffirmed. JICA follows this declaration by providing assistance in the areas of environment and climate change, disaster risk management, solid waste management, education, energy security and infrastructure. In addition, JICA endeavors to provide assistance to solve region-wide issues, particularly in solid waste management, environment and climate change.

4) Suitability as a means
J-PRISM has been contributing to the implementation of the RS 2010 and regional activities. The J-PRISM's technical cooperation approach, which provides financial and in-country technical support and guidance/coaching to C/Ps of PICs who are directly responsible for implementing the agreed work programmes has been appraised as effective. In the review report of regional strategy (RS2010), it is stated that this learn-by-doing approach by J-PRISM develops the technical capacity of Pacific islanders, engenders pride in accomplishments, and if replicated sufficiently, may ultimately lead to a degree of self-sufficiency in PICs.

5) Demarcation among donors
In order to maximize the benefits of donor's contribution, not to duplicate the work, SPREP has taken the key role to coordinate and demarcate the assistances of international donors such as EU, AFD, GEF, UNEP and JICA.

(2) Effectiveness

Evaluation: Effectiveness is relatively high.

1) Achievement of Project Purpose
As explained above, the Project Purpose has been mostly achieved and it is ensured that human capacity base for the sustainable solid waste management in the Pacific Region has been strengthened. In terms of institutional capacity, it is identified that implementing agencies of some PICs have demonstrated the initiatives to proceed the activities, however there has been still much rooms for improvement.

2) Contribution of Outputs to Project Purpose
Each output has been contributing to the achievement of the Project Purpose in the following manner. Output 1 and Output 3 have been directly contributing to the capacity development of C/Ps in the form of training and development of guideline. Output 2 and 4 have indirectly contributing to the capacity development by solidifying the foundation of waste management options for atoll and facilitating the horizontal connection within PICs through various communication channels. All these four Outputs are providing the learning opportunities for C/Ps either directly or indirectly, while Output 5 is to provide the objective viewpoints whether the implementation of the RS 2010 is progressed as intended in each category item.

3) Other promoting/inhibiting factors

・<u>Promoting factors</u>
Trust relationship between JICA and SPREP as well as J-PRISM experts and C/Ps of respective countries has firmly established through both J-PRISM and its preceding cooperation since 2000.

Learn-by-doing approach has enhanced the technical capacity of C/Ps and had engendered pride in accomplishments. At the same time, the opportunities to share their achievement or train others in the regional trainings /workshops have further motivated them to learn. Combination of learn-by-doing practices at work and outputs them through regional trainings helps them to really digest what they have acquired.

The project has provided the competition in a constructive way in the form of Counterpart Award System. To give award to "Best Team" and "Best Counterpart" has served as to encourage C/Ps as well as to keep them motivated.

・<u>Inhibiting factors</u>
It was identified that no systematic monitoring and evaluation of regional trainings have been practiced. So the level of capacity development cannot be objectively measured. It is recommended that evaluation of regional trainings should be systematically carried out and the results should be periodically reflected to the trainer's

database, PIDOC. So that each C/P will have a better sense of technical capacity by oneself.

(3) Efficiency

Evaluation: Efficiency is relatively high.

1) Production of Outputs

In general, the achievement levels of Output 1, 2 and 4 are mostly appropriate as planned. As for Output 3, production is somewhat limited. This is partly due to the upward change of target level of indicator. As for Output 5, monitoring of RS2010 has been partly achieved as SPREP has had some difficulties to allocate manpower and funds.

2) Appropriateness of Inputs

・Pacific/SPREP side

Inputs from Pacific/ SPREP side are mostly appropriate.

・Japanese side

Inputs of the Japanese side are mostly appropriate in terms of quantity, quality and timing. However, the demarcation of role and responsibilities between coordinators and consultant team should have been well defined. It was pointed out that there has been some difficulties in the project office as it has taken more time for decision making while chief advisor is stationed in JICA headquarter.

3) Utilization of external resources

Regional 3R training in Fiji carried out in collaboration with JICA partnership programs with Shibushi Municipality has proven to be effective, some consideration should be given to the logistic arrangement in the future. Collaboration with several donors such as EU, AUSAID have generated the positive outcomes under the project of PacWaste and GEFPAS and landfill reconstruction at Labasa.

4) Other promoting/inhibiting factors

Promoting Factors

With the SPREP's initiative, donor coordination has been much improved after the mid-term review and information sharing and discussions for demarcation and collaboration among donors have been facilitated.

Inhibiting Factors、

Progress monitoring within J-PRISM has been done separately in each sub-region by both of consultant team and a coordinator assigned to the sub-region. It was pointed out during the study that more systematic flow of progress monitoring should be practiced in all sub-regions.

(4) Impact

Evaluation: Positive impacts were observed and no negative impact was observed.

1) Impact at Overall Goal level

The impact of the Project to the Overall Goal "Sustainable management of solid waste in the Pacific Region is enhanced" is expected to be generated. Specific areas of solid waste management, in which the issues of solid waste management of a PIC is resolved by itself or intra-regionally with the collaborative assistance of other PICs, have been gradually identified. Those areas include "3R/4R, Waste Disposal with semi-aerobic methods, Clean School Program, Waste Characteristic Survey, Compost Making, and Disaster Waste Management.

2) Other impacts

Furthermore, the following impacts by the Project have been observed during the study.

- Positive impacts

3R +Return has been well accepted and stated in the official documents of Regional 3R Forum in Asia and the Pacific and International Conference on Small Island Developing States (UNSIDS).

- Negative impacts

No negative impact was observed at the time of Terminal Evaluation.

(5) Sustainability

Evaluation: Sustainability of effects of this Project is expected to be enhanced.

1) Policy and institutional aspects

The new regional strategy, CLEANER PACIFIC 2025: Pacific Regional Waste and Pollution Management Strategy 2016-2025 has been developed. What have been practiced under J-PRISM, such as 3R + Return and regional cooperation and collaboration have been much incorporated into this new strategy as guiding principles. Political and institutional sustainability is likely to be secured.

2) Organizational aspects

In order to cope with the increasing demands of SWM, it is anticipated that the position of recycling officer under the Waste Management and Pollution Control (WMPC) will be secured. Regional Waste Management Committee (namely, Clean Pacific Round Table) is expected to be established. This committee serves as platform between PIC member countries and external donors to monitor the progress of implementation of new regional strategy and to utilize human resources listed under PIDOC. At present, only one (1) officer is assigned in the field of Solid Waste Management at SPREP and therefore, SPREP may face some difficulties to continue managing enhancing activities, including logistical tasks for trainings, etc., after the completion of J-PRISM.

3) Financial aspects

In order to cope with the increasing demands of SWM, the SPREP has made effort to secure funding. 17 million EURO has already been pledged under EDF 11 (2017-2022). Clean Pacific Round Table will be fully used for negotiation of funding in order to fill the gap between the planned budget and actual funding.

4) Technical aspects

It is confirmed that most of knowledge and technologies transferred through the project activities is very likely to be maintained. The number of C/Ps who obtained the trainer capacity has been increasing and development of guidelines and resource materials have also been progressed. It is, therefore, very important for SPREP to explore the way to maintain the regional mechanism, such as to promote the south-to-south cooperation among PICs. Furthermore, it should be thoroughly discussed between J-PRISM and SPREP to explore the best way to utilize database of human resources, PIDOC for strengthening human and institutional capacity base for sustainable solid waste management in the Pacific Region.

IV. Conclusion

The results of this evaluation based upon the five evaluation criteria are as follows:

- Relevance is considerably high.
- Effectiveness and Efficiency are relatively high.
- Positive impacts were observed and no negative impact was observed.
- Sustainability of effects of this Project is expected to be enhanced.

With these results of the five evaluation criteria said above and the level of achievement of each Output, it could be concluded that the Project purpose is expected to be mostly achieved by the end of the cooperation period.

<u>Follow-up status of recommendations of the Mid-term review reports</u>

- The Project made much effort to publicize major findings and innovative approaches practiced in each PIC, by means of conference presentation in international symposium, seminars and meetings, of which the number is more than 4 international conference and symposiums.

- The Project, in cooperation with SPREP, invited the media to present the regional events of the Project.

- The web pages of J-PRISM has been fully utilized to share updated achievements of each PIC and regional activities and technical information of SWM.

- 3R+Return has been well accepted and stated in the official documents of International Conference on Small Island Developing States (UNSIDS)

- Face to face meeting at the senior level of JICA and SPREP is held once a year.

It is noted that the following issues need to be addressed by SPREP after the project completion in order to ensure the effects of the Project.

1. Evaluation of regional trainings should be systematically carried out and the results should be periodically reflected to the trainer's database, PIDOC.
2. The progress of the activities in each county should be monitored through the country profiles whenever possible.
3. In order to cope with the increased demands for regional improvements in SWM, SPREP is requested to continue its effort to secure funds for this purpose, to maintain updated information on knowledge and technologies transferred through the Project for technical aspects, and to establish the Regional Waste Management Committee (Clean Pacific Round Table) for organizational aspects, once Cleaner Pacific 2025 is approved.

V. Recommendations for the remaining period

For SPREP

1. Update and finalize the draft country profiles on solid waste management of each SPREP member country.
2. Clarify the functions of the Clean Pacific Round Table
3. Explore the best ways of systematic use of the database of human resources, PIDOC, to improve evaluation feedback and its routine use concerning trainings conducted by SPREP into PIDOC
4. Promote south-to-south cooperation through discussions between SPREP and J-PRISM, including the effective utilization of PIDOC

For J-PRISM Project Office

1. Make maximum effort to complete the Guidance materials of solid waste management by the end of the Project
2. Assess the regional trainings and analyze the contributing/inhibiting factors to improve the future trainings

For JICA Headquarters

1. JICA, in collaboration of SPREP, should consider the measures maintain and strengthen the initiatives for south-to-south cooperation in order to promote sustainable waste management in the region^ after the completion of the Project.
2. To ensure adequate J-PRISM staff are retained over the project finalization and transition period to ensure as far as possible that all project deliverables are met and that a smooth transition to any new programme occurs.

Attachment:

1. Project Design Matrix (PDM Version 3)
2. Plan of Operation (PO Version 3)
3. Schedule of Terminal Evaluation
4. Record of Japanese Inputs
   - 4-1 Dispatch of Experts
   - 4-2 List of Workshop, Seminars and Trainings conducted by the Project
   - 4-3 List of Machinery and Equipment provided by Japan
   - 4-4 Local cost
5. Record of Pacific/SPREP Inputs
   - 5-1 List of Counterpart personnel
   - 5-2 Local cost

Project Design Matrix (PDM) - Region-wide

PDM: Version.3

Project Title: Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

As of October 2014 approved by S/C

Target Group : C/Ps of 11 PICs※

Final Beneficiaries: Citizens of all 11 PICs

Project period: 5 years

Implementing Agency: SPREP and C/P agencies of 11 PICs

Target Area: 11 PICs

Narrative Summary	Objectively Verifiable Indicators	Means of Verifications	Important Assumptions
Overall Goal			
Sustainable management of solid waste in the Pacific Region is enhanced.	Good SWM practices are applied. (e.g. Issues on SWM of a PIC is resolved by itself or with the collaborative assistance of other PICs.)	National performance audit report	
Project Purpose			
Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010).	1. Level of contributions by the project to the RS2010 implementation 2. Total # of good practices, which were generated through project activities in each PICs, have been widely practiced in other PICs	Mid-term review /terminal evaluation of RS2101 report by SPREP Newsletters, website and other related reports produced by SPREP	1. Natural disaster would not drastically affect the collaboration among PICs and SPREP. 2. Political changes of PICs would not drastically affect the collaboration among PICs and SPREP.

#	Priorities under RS2010	Outputs	Objectively Verifiable Indicators	Means of Verifications
1	Sustainable Financing			
2-1	3Rs/4Rs			
2-2	Waste Disposal	**Output 2:** Waste management options for atoll are studied.	2-1 Recomended plans are developed for waste collection, 3R and waste disposal	SPREP/JICA
2-3	Waste Collection			
3	Legislation			
4	Awareness/Communication/ Education			
5	Capacity Building	**Output 1:** Human capacity of SWM is strengthened through trainings and workshops.	1-1. At least one workshop/training every year for 3R and landfill management is conducted. 1-2. At least 10 good practices of 3R are reported. 1-3. At least 10 good practices of semi-aerobic landfills are reported. 1-4. At least 10 good practices of south-to-south (country-to-country, local-to-local) assistance/cooperation are reported. 1-5. # of cases of improved occupational health practices	SPREP/JICA
		Output 3: Knowledge experience and lessons through the project and the past assistance are shared among PICs	3-1 Guidance materials printed and distributed. 3-2 11 PICs to which guidance materials are disseminated	
6	Environmental Monitoring			
7	Policy,Planning, Performance	**Output 4**: Regional network among PIC countries is strengthened.	4-1 J-PRISM page is developed under SPREP website 4-2 Newsletter is issued at least twice a year. 4-3 Directory of trainers is available before the Steering Committee Meeting in 2015.	SPREP/JICA
8	Solid Waste Industry			
*	Monitoring system of RS2010	**Output 5:** Regional system to monitor the RS2010-2015is established.	5-1 Monitoring results are periodically reported from PICs compiled by SPREP and presented to the SPREP meeting (Steering Committee Meeting commencing 2014 and 2015) 5-2 Recommendations and baseline information is established for on-going waste management in the Pacific Region.	SPREP/JICA

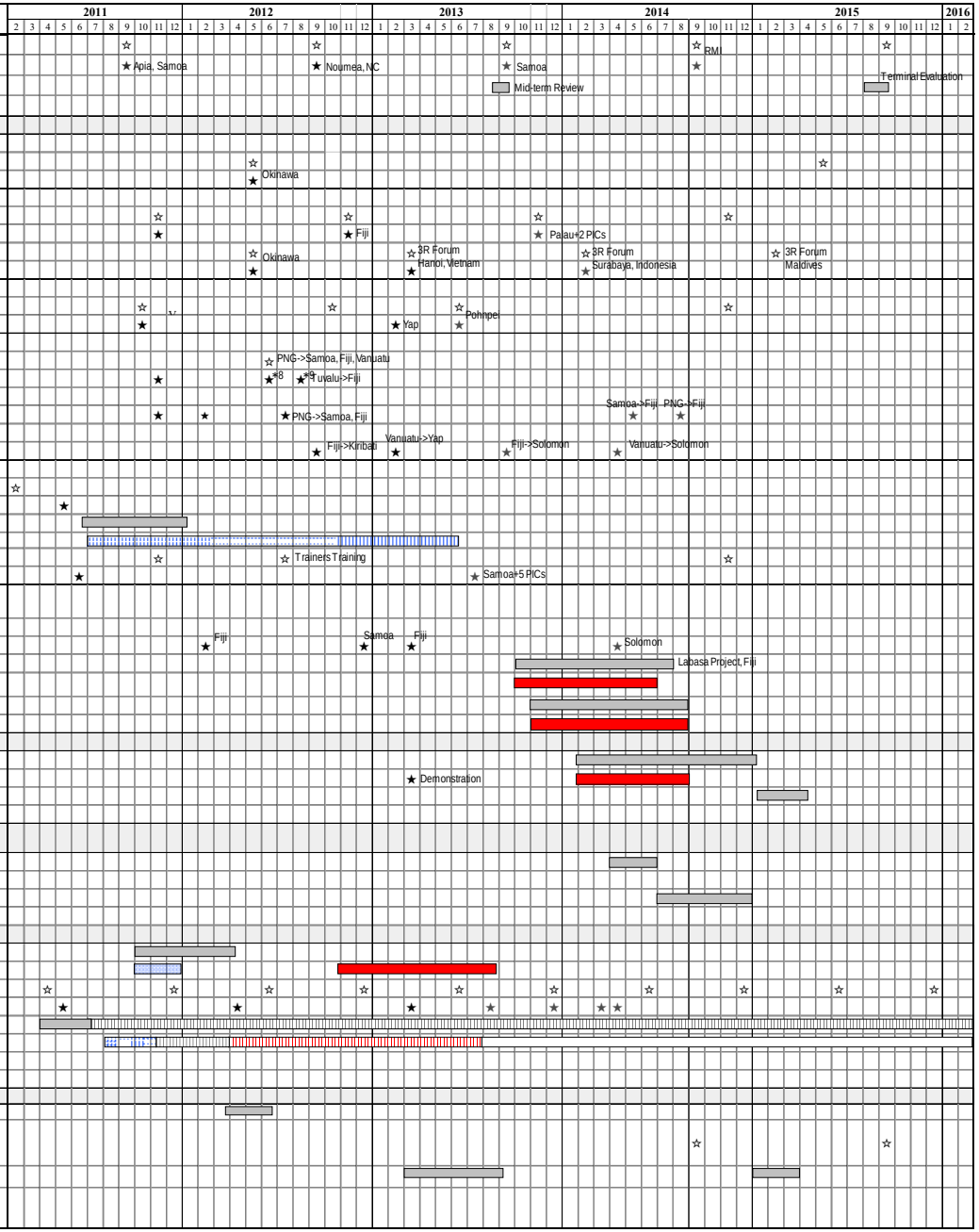
Activities	Inputs		Pre-condition
Please see PO for details.	Japanese Side	SPREP	
	Dispatch of JICA experts Provision of equipment and materials Provision of Regional, sub-regional and in-country workshops / training Loca cost support	Assignment of a Project Coordinator Logistical support (including allocation of office space) Facilitation of regional and in-country training and workshops	All 11 PICs are committed to the collaboration among them.

※In addition to these 11 PICs, the Republic of Nauru, Niue and Cook Islands will also be assisted in the form of providing trainings and workshops.

Plan of Operation (PO) - Region-wide

PO Region-wide Version 3 (Approved by S/C, October, 2014)

Outputs and Associated Activities		Indicators for Outputs	Agencies in charge
SCC/Eva	Steering Committee (☆ Planned, ★ Actual)		
	Evaluation Studies (Planned, Actual)		
OUTPUT 1:	**Human capacity on SWM is strengthened through trainings and workshops.**		
1-1	Eco-island concept	1-1. At least one workshop/training every year for 3R and landfill management is conducted. 1-2. At least 10 good practices of 3R are reported. 1-3. At least 10 good practices of semi-aerobic landfills are reported. 1-4. At least 10 good practices of south-to-south (country-to-country, local-to-local) assistance/cooperation are reported. 1-5. # of cases of improved occupational health practices	JICA
1-1-1	Conduct the trainings in Japan on Eco-island concepts		
1-2	3R concept		JICA
1-2-1	Conduct the sub-regional training/workshop on 3R		
1-2-2	Hold the regional meeting to promote 3R in the Pacific region *(combined with Activity 1-1-0)*		
1-3	Semi-aerobic landfills management		JICA
1-3-1	Conduct sub-regional training/workshop on semi-aerobic landfill management in Samoa or other countries		
1-4	Country Attachment/Assistance Program		JICA
1-4-1	Develop and conduct the country attachment program		
1-4-2	Develop and conduct the study visit program		
1-4-3	Develop and conduct the trainer dispatch program		
1-5	Occupational health and safety issues		JICA/ILO
1-5-1	Investigate and practice the occupational health & safety issues in SWM in collaboration with ILO		
1-5-2	Develop a manual (WARM+) for waste disposal sites		
1-5-3	Conduct the training/workshop to share the lessons on occupational health & safety issue on SWM		
1-6	Disaster waste prevention and management as measures for adaptation to climate change		JICA/SPREP
1-6-1	Plan and implement pilot project(s) to quickly respond to the disaster waste and compile reports		
1-6-2	Plan and implement pilot project(s) to integrate climate change adaptation into waste management and compile reports		
1-6-3	Conduct a literature study and develop draft guidelines for Post Disaster Waste Management		
OUTPUT 2:	**Waste management options for atoll are studied**		SPREP/JICA
2-1	Review the current practice on waste management options(To be done in collaboration with SPREP)	2-1 Recomended plans are developed for waste collection, 3R and waste disposal	
2-2	Develop a draft conceptual plan for atoll islands (To be done in collaboration with SPREP)		
OUTPUT 3:	**Knowledge, experience and lessons through the project and the past assistance are shared among PICs**		SPREP/JICA
3-1	Review the currently available materials	3-1 Guidance materials printed and distributed 3-2 11 PICs to which guidance materials are disseminated	
3-2	Develop draft guidance materials for Decision-Makers and Practitioners		
OUTPUT 4:	**Regional network among PIC countries is strengthened**		SPREP/JICA
4-1	Develop the *Project* page in the SPREP web-site	4-1 J-PRISM page is developed under SPREP website 4-2 Newsletter is issued at least twice a year. 4-3 Directory of trainers is available before the Steering Committee Meeting in 2015.	
4-2	Issue the Newsletter on SWM twice a year with contribution from 2 PICs		
4-3	Develop and maintain the project map on SWM		
4-4	Facilitate donor coordination and report annually on donor activity in the area of solid waste management		
OUTPUT 5:	**Regional system to monitor the RS2010-2015 is established**		SPREP
5-1	Establish annual reporting and feedback mechanism from PICs and SPREP	5-1 Monitoring results are periodically reported from PICs compiled by SPREP and presented to the SPREP meeting (Steering Committee Meeting commencing 2014 and 2015) 5-2 Recommendations and baseline information is established for on-going waste management in the Pacific Region.	
5-2	Conduct the review of the RS2010-2015 (at the time of mid-term / terminal evaluation of J-PRISM)		



JICA Terminal Evaluation for
The Japanese Technical Cooperation Project
for Promotion of Regional Initiative
on Solid Waste Management in Pacific Island Countries (J-PRISM)

Field Survey Schedule

Date		Schedule	Venue
6 Sep.	Sun.	01:50 Arrival of Mr. Atau Kishinami (FJ253)	Apia
7 Sep.	Mon.	9:00 Courtesy Call to JICA Samoa Office 10:00 Meeting with Project Office 11:00 Interview with Project expert Mr. Makoto Tsukiji 13:00 Kick –Off meeting at Waste Management and Pollution Control (WMPC) With Dr. David Haynes, Mr. Anthony Talouli	Main Conference Room Project Office
8 Sep.	Tue.	9:00 Interview with Project expert Mr. Faafetai Sagapolutele 10:30 Interview with SPREP individually Dr. David Haynes, Director of WMPC Mr. Stewart Williams, Pac Waste Project Manager Ms. Lusiana Ralogaivau, GEF - Project Coordinator Mr. Anthony Talouli, Pollution Adviser Data analysis and collection of supplemental information	
9 Sep.	Wed.	Preparation of RW Terminal Evaluation Report (RW TER) 17:00 Interview with Project expert Ms. Reiko Shindo	
10 Sep.	Thurs.	Preparation of RW TER 13:00 Internal Meeting of Evaluation Team	
11 Sep.	Fri.	Preparation of RW TER 13:00 Meeting with WMPC Wrap-up: Finalize RW TER Dr. David Haynes, Mr. Anthony Talouli	
12 Sep.	Sat.		
13 Sep.	Sun.		
14 Sep.	Mon.	11:00 Courtesy Call to Director General of SPREP Mr. David Sheppard 13:00 Interview/Meeting with Ms. Ma Bella Guinto Reflect comments on RW TER	Main Conference Room Project Office
15 Sep.	Tue.	15:00 Interview/Meeting with Dr. Frank Griffin Reflect comments on RW TER	Project Office
16 Sep.	Wed.	14:00 Interview/Meeting with Ms. Ayako Yoshida Reflect comments on RW TER	

4-1. Dispatch of Experts

	Long-term Experts from Project Office	Short-term Experts	Local Expert(1)	Total
Region-wide Activities	85.0 MM	0.8 MM	31.4 MM	117.2 MM
			Adjustment of Travel days(2)	22.7 MM
			Total	**139.9 MM**

Note:

(1) Cost of Local Expert is included in Local Cost Support.

(2) Travel days is the M/M solely used for travelling within the region. The M/M for travelling between Japan and assigned countries are excluded from the M/M of long-term experts, and included in M/M in respective assigned countries on short-term experts. These travel days are adjusted by adding as inputs to the Region-wide Activities.

4-2. List of Workshop, Seminars and Trainings conducted by the Project

Workshop/Seminar/ Training	Type	Venue	Period	Purpose	# of participant	Country of Participants													
						FSM	Fiji	Kiribati	RMI	Palau	PNG	Samoa	Solomon Islands	Tonga	Tuvalu	Vanuatu	*Cook Islands*	*Nauru*	*Niue*
OS&H Training in Waste Collection in PNG, 2011	Sub-regional training	Papua New Guinea	2 to 3 June 2011	The purpose of the Workshop on Occupational Safety and Health in Waste Management (using WARM/WARM II approach) is to build capacity in the participating countries to address safety and health in the waste management chain and to ensure safer and healthier workplaces with a view to reducing occupational accidents and diseases (impact on health).	37						37								
Regional Training on Landfill Management Vanuatu 2011	Regional training	Vanuatu	10 to 14 October 2011	The training is designed for whom works in the landfill site daily or manages the landfill operation aiming that they understand basically about semi-aerobic system.	13		2				3	1	2			5			
Country Attachment training in Vanuatu from Solomon, 2011	Country Attachment	Vanuatu	5-12 December 2011	Field visit and observation of Bouffa landfill (semi-aerobic system) • Explanation and discussion of semi-aerobic structure • Bulldozer operations and maintenance • Excavator operation and maintenance • Excavator operation and maintenance • Excavator operation and maintenance Excavation works	1								1							
Study Visit for Weighbridge Management & 3R in Fiji from Samoa	Study Visit	Fiji (Lautoka)	7 - 9 December 2011	To learn how Lautoka City successfully manage the waste data recording system.	3							3							
Clean Pacific 2012 Campaign	Regional training	Fiji (Nadi)	13-17February 2012	At least one Pacific Islander (Waste and Pollution Champion) from the 14 Pacific Island Countries (PICs) trained in relevant aspects of waste management and pollution control (waste auditing, composting and other practical measures for the 3Rs, etc).	12		4	1		1	1	1		1		1	1	1	
Clean School Program Workshop - Feb 2012 (Fiji)	Regional training	Fiji	23 February 2012	J-PRISM counterparts from Tonga and Solomon joined to the workshop which is aimed to help teachers in the Western regions of Fiji gain practical knowledge on how to manage waste at schools and start implementing various waste reduction activities. J-PRISM counterparts are expected to learn 3R activities in Nadi and to adopt this program in their home countries.	118		115						2	1					
Study Visit in Vanuatu, Samoa and Fiji from PNG, 2012	Study Visit	Fiji, Samoa, Vanuatu	13 May to 5 June 2012	To learn design and management of landfills in PICs. PNG was planning to rehabilitate the dumpsite	1						1								
Study Visit in Samoa and Fiji from PNG, 2012	Study Visit	Fiji Samoa	27 May to 5 June 2012	To learn good examples in the PICs. PNG was planning to rehabilitate the dumpsite	5						5								
Country Attachment in Fiji from Tuvalu, 2012	Country Attachment	Fiji	8-14 August 2012	To observe waste collection system in Lautoka and also to work very closely with LCC staff on-the-job training basis.	2										2				

Workshop/Seminar/ Training	Type	Venue	Period	Purpose	# of participant	Country of Participants													
						FSM	Fiji	Kiribati	RMI	Palau	PNG	Samoa	Solomon Islands	Tonga	Tuvalu	Vanuatu	*Cook Islands*	*Nauru*	*Niue*
Clean School Program/Trainer Dispatch (Fiji - Kiribati 2012)	Trainer Dispatch	Kiribati	17 - 19 September 2012	To initiate Clean School Program in Kiribati schools.	26			26											
3R Regional Training, Fiji in 2012	Regional training	Fiji	19-23 November 2012	To disseminate Fiji's 3R model including their good practices and lessons learnt.	14		8	1	1			1	2			1			
Landfill Management Training in Yap, FSM, 2013	Regional training	FSM (Yap)	20-23 February 2013	For the purpose of increasing the capacities of the human resources and institutions, that are responsible for Solid Waste Management in each country, and contributing to achievement of the goal of the Regional Strategy 2010-2015.	20	18				2									
Pilot Project for Rehabilitation of landfill, Pohnpei, 2013	Sub-regional training	FSM (Pohnpei)	17-28 June 2013	Capacity Development for officers in charge on rehabilitation work and operational management of landfill through the demonstration conducted by J-PRISM Experts	18	16			2										
Training of Trainers' Workshop on Occupational Safety and Health	Regional training	Samoa	8-12 July 2013	To build capacity in the participating countries to address safety and health in the waste management chain and to ensure safer and healthier workplaces with a view to reducing occupational accidents and diseases (impact on health).	28		3				1	20	1			2		1	
Trainer dispatch programme-Eco School programme in Solomon	Trainer Dispatch	Solomon Islands	26-27 September 2013	To expand the program	40								40						
Regional Training on Promotion of 3R in Palau	Regional training	Palau (Koror)	4 - 7 November 2013	This Regional Training aims at sharing, improving and promoting 3R activity in PICs, especially focused on the CDL being operated in the Micronesia region and various ways of composting organic waste as effective approaches to sustainable waste management following the concept of "Return."	22	14				6		2							
Post Disaster Waste Mangament Project in Honiara (J-HOPE)	Trainer Dispatch	Solomon Is (Honiara)	15-21 April 2014	The proposed pilot project will not only restore the dump site but incorporate and demonstrate appropriate practices and measures to manage the disaster waste in an economical and environmentally acceptable manner. This pilot project will also provide MECDM and HCC with good experiences under the guidance of a local expert from Vanuatu, which promotes partnership among Pacific Island Countries (PICs) to share the expertise, experience and lessons learned.	5								4			1			
Country Attachment in Labasa Fiji from Solomon, 2014	Country Attachment	Fiji	14-21 June 2014	To learn skills and experiences in Labasa, Fiji	1								1						
Study vist Program in Lautoka, Fiji, 2014	Study Visit	Fiji	16-21 June 2014	To learn the data management using weighbridge system in Lautoka	1							1							

Workshop/Seminar/ Training	Type	Venue	Period	Purpose	# of participant	Country of Participants													
						FSM	Fiji	Kiribati	RMI	Palau	PNG	Samoa	Solomon Islands	Tonga	Tuvalu	Vanuatu	*Cook Islands*	*Nauru*	*Niue*
Study Visit in Fiji from Kiribati, 2014	Study Visit	Fiji	9 July 2014	To study a disposal method on the coast on their way back to Kiribati from Japan, where they have been participating a training program in Japan.	1			1											
Study visit for 3R programs in Fiji from PNG, 2014	Study Visit	Fiji	25 -29 Aug 2014	To learn about the good practices of market composting in Fiji in order to make a plan for market composting in PNG	1						1								
Regional Training for Trainers 2014	Regional training	Fiji (Labasa)	17-21 November 2014	The primary objective of JICA technical cooperation is to develop / increase the capacity of counterparts and their organizations in order to respond to problems associated with solid waste management by themselves.	16	1	6			1	3		1	2		2			
Study Visit in Fiji from Palau, 2014	Study Visit	Fiji	24- 25 Nov 2014	To learn the integrated waste management in Lautoka, Nadi and Sigatoka	1					1									
Study Visit in Tonga from Solomon, 2015	Study Visit	Tonga	29 Jan -9 Feb 2015	To adapt and expand the lessons learnt from Vava'u to Gizo (From Vava'u Model to Gizo Model) To share information each other for the future collaboration	1								1						
Country Attachment in Labasa Fiji from PNG, 2015	Country Attachment	Fiji (Labasa)	9-10 March 2015	To learn skills and experiences in Labasa, Fiji	1						1								
Regional Training - Okinawa, Japan (May. 2015)	Regional training	Japan (Okinawa)	25 May - 4 June 2015	The objective of this training is to strengthen and enrich expertise in operation of selected participants among Pacific island countries through drafting Regional Waste Management Textbook and to solidify a network of professionals in the region.	15	2	4			2	3			2		2			

4-3. List of Machinery and Equipment provided by Japan

Utilization: A=Fully B=Moderatly, C=Partly, D= Not at all
Management: A=Appropriate B=Fair C=Innapropriate

When delivery	No.	Country	Item	Maker/Model etc.	Qty.	Price in local currency $	Currency	In US$*	Responsible Section/Organization	Utilization	Management
Mar. 2011	1	Project Office	Computer Monitor	PHILIPS 244E2	3	WST 9,170.00	Samoan Tala (WST)	3,885.24	J-PRISM Project Office at SPREP	A	A
Mar. 2011	2	Project Office	Lap top Computer	TOSHIBA SatPro L630	1	WST 4,090.00		1,732.89	J-PRISM Project Office at SPREP	damaged	damaged
Mar. 2011	3	Project Office	Printer	hp CLR Laserjet CP5225dn	1	WST 6,980.00		2,957.36	J-PRISM Project Office at SPREP	A	A
Sep. 2011	4	Project Office	Lap top Computer	HP ProBook 4520s	1	WST 3,150.00		1,334.62	J-PRISM Project Office at SPREP	A	A
Jan. 2012	5	Project Office	Photo Copier	RICOH Aficio MP2852	1	WST 11,950.00		5,063.10	J-PRISM Project Office at SPREP	A	A
May. 2012	6	Project Office	Computer Monitor	DELL Ultra Sharp U2410 Monitor	1	WST 990.00		419.45	J-PRISM Project Office at SPREP	A	A
Jun. 2013	7	Project Office	Lap top Computer	HP ProBook 4430s	1	WST 3,195.00		1,353.69	J-PRISM Project Office at SPREP	A	A
Aug. 2013	8	Project Office	Hard Disk Drive	Touro 1TB 2.5" Touro Mobile USB 3.0 External HDD	1	WST 399.00		169.05	J-PRISM Project Office at SPREP	A	A
Mar. 2014	9	Project Office	Security Box	First Alert 2087DF	1	WST 2,200.00		932.12	J-PRISM Project Office at SPREP	A	A
Mar. 2014	10	Project Office	Lap top Computer	TOSHIBA Portege R700	1	WST 2,999.00		1,270.65	J-PRISM Project Office at SPREP	A	A
Mar. 2014	11	Project Office	Degital Camera	Canon Powershot D20	1	WST 899.00		380.90	J-PRISM Project Office at SPREP	A	A
Mar. 2014	12	Project Office	Projector	Epson EB-W18	1	WST 2,750.00		1,165.15	J-PRISM Project Office at SPREP	A	A
						WST 48,772.00		$20,664.21			

*(For Feb. 2011-July2013) Exchange rate from local currency to US Dollar refers to OANDA as of 1st August, 2013. 1WST= US$0.42369

*(For Aug. 2013-June2015) Exchange rate from local currency to US Dollar refers to OANDA as of 1st July, 2015. 1WST= US$0.42369

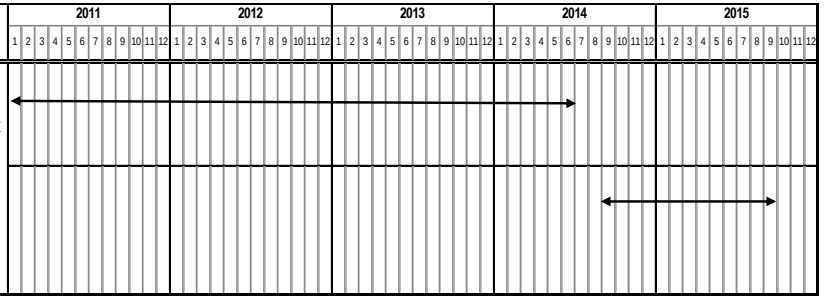
4-4. Local Cost

Country	Sub Category	Air Fare	Travel Allowance	Contract with Local Based Consultant	Contract with Local Based NGO	Contract		Fees and honorarium (non-staff)	Refreshments	Miscellaneous	Total				Notes
						Contracts over 500,000 yen	Commission Contract (others)				In local currency	Local Currency	In Japanese Yen*1	In USD *2	
Region-wide	Micronesia based	64,699.38	11,117.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75,816.88	US Dollar	¥7,326,889.68	US$66,434.06	Airfare for JICA Experts to travel around the Micronseian region.
	Fiji based	65,164.08	32,171.81	0.00	0.00	0.00	66,089.03	74.40	4,223.58	4,547.68	172,270.58	Fiji dollar	¥8,719,906.96	US$83,821.68	Airfare for JICA Experts to travel between Fiji and Kiribati & Tonga, travel expenses of participants to a reginaol training in Fiji, etc.
	Tuvalu based	22,651.18	6,550.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29,202.07	Fiji dollar	¥1,506,827.00	US$15,360.11	Travel expenses of CPs to attend 3R forum
	Marshall based	18,605.79	5,067.48	0.00	0.00	0.00	0.00	0.00	2,906.57	1,856.60	28,436.44	US Dollar	¥2,941,601.73	US$25,568.41	Travel expenses of CPs to attend 3R forum, cost for regional activities for porject office, etc.
	Palau based	1,088.00	16,330.66	0.00	0.00	0.00	0.00	0.00	1,249.05	3,134.50	21,802.21	US Dollar	¥2,215,107.99	US$18,252.21	Cost for regional activities for porject office, etc.
	PNG based	45,741.32	14,595.07	0.00	0.00	0.00	0.00	0.00	0.00	11,655.84	71,992.23	Kina	¥3,242,866.58	US$29,313.64	Travel expenses of CPs to attend 3R forum, cost for regional activities for porject office, etc.
	Solomon based	96,837.00	98,307.01	0.00	0.00	0.00	0.00	0.00	0.00	243,597.00	438,741.01	Solomon Islands Dollar	¥6,473,524.72	US$54,690.93	Cost for regional activities for porject office, etc.
	Tonga based	12,147.00	10,090.00	0.00	0.00	0.00	0.00	0.00	0.00	640.00	22,877.00	Tonga Pa'anga	¥1,289,880.14	US$10,405.61	
	Vanuatu based	1,178,350.00	1,623,464.00	0.00	0.00	0.00	0.00	96,300.00	218,950.00	5,340,729.00	8,457,793.00	Vanuatu Vatu	¥9,356,955.99	US$80,898.96	Travel expenses of participants to a reginaol training in other countries, cost for regional activities for project office, etc.
	Samoa Project Office based	1,036,867.63	840,464.01	434,558.85	0.00	95,000.00	0.00	97,528.55	22,336.27	479,884.30	3,006,639.61	Samoan Tala	¥136,993,727.08	US$1,254,636.37	Cost for regional activite suc as travel expenses for Experts to travel around the region, regional trainings
	Samoa Rregional Strategy budget	110,417.60	79,653.18	0.00	0.00	0.00	0.00	0.00	3,200.00	3,366.20	196,636.98	Samoan Tala	¥10,741,688.31	US$86,654.47	
	Total	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00	N/A		¥190,808,976.17	US$1,726,036.54	

Note 1) JICA's official rate – from local CCY to Japanese yen,
2) Exchange rate from Japanese Yen (JPY) to US Dollar:
For JFY2010-July 2013: JICA's official rate of August 2013 (USD1=JPY98.10)
For Aug2013-June 2015: JICA's official rate of June 2015 (USD1=JPY123.96)

5-1. List of Counterpart Personnel

#	Name	Assigned Period	Position	Organization	Activities in charge
1	Ms. Esther Richards	Feb. 2011 to Jun.2014	Solid Waste Management Adviser	SPREP	Support to countries to help develop or revise national waste management strategies and policy, development of the regional waste and pollution management strategy (Cleaner Pacific 2025), provision of advice on project implementation, assistance with national waste management training programmes and conferences. Development of waste management related reports.
2	Ms. Ma Bella Guinto	Oct. 2014 -	Solid Waste Management Adviser	SPREP	



5-2 Local Cost

Approximately for US$210,000 for manpower cost for activities provided by SPREP and in-kind contribution to regional activities.

Division Director and Pollution Advisor of SPREP also worked closely with the J-PRISM team over the 5 year period to improve Pacific SWM.

Terminal Evaluation Report for the Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Republic of Fiji

Date: 4th September 2015

I. Project Outline and Evaluation Policy

(1) Project Outline	
Background	Based on the successful implementation of 3R (Reduce, Reuse, Recycle) promotion in Lautoka City Council (LCC) and Nadi Town Council (NTC) by the technical cooperation project for "Waste Minimization and Recycling Promotion Project" from Oct. 2008 to Mar. 2012, J-PRISM has started to expand 3R promotion to other municipalities of Fiji, particularly in the Western Division. In this expansion stage, Counterpart personnel (C/P) of implementing agencies of Department of Environment (DOE), LCC and NTC are expected to serve as a driving force to improve the situation of solid waste management, especially on 3R of other municipalities in Fiji as well as other PICs.
Summary of the Project	(See Attachment 1 and 2 for details)
-Overall Goal	Sustainable management of solid waste in the Pacific Region is enhanced
-Project Purpose	Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)
-Priorities in RS 2010	**Outputs**
2-1 3R/4R	1) National 3R strategy has been widely implemented in Fiji.
5 Capacity Building	2) Fiji 3R model is disseminated to the Region/Country through training program.
Project Duration	Five years from 2 February 2011 to 1 February 2016
Implementing Agency	Department of Environment (DOE), Department of Local Government (DLG) Ministry of Local Government, Housing and Environment, Lautoka City Council(LCC), Nadi Town Council(NTC),Ba Town Council (BTC) Sigatoka Town Council (STC), Tavua Town Council (TTC), Rakiraki Town Council (RTC), Suva City Council (SCC)
Target Group	C/Ps of DOE, LCC, NTC, BTC, STC, TTC, RTC, SCC
Target Area/Target Population	Republic of Fiji Citizens of Fiji (approximately 887,000 population as of 2014, World Bank)
(2) Evaluation Policy	
Objectives	1) To verify the accomplishments of the Project compared to those planned; 2) To identify promoting and/or inhibiting factors that have affected the project implementation process; 3) To analyze the Project in terms of the five evaluation criteria (i.e. Relevance, Effectiveness, Efficiency, Impact, and Sustainability); 4) To discuss the results of evaluation and solutions for problems that may be observed through the evaluation together with the personnel concerned with the Project and make necessary suggestions.

Member of Terminal Evaluation Team

	Title	Name	Position/Organization
	Cooperation Planning (Overall)	Mr. Toru Taguchi	Deputy Director Environmental Management Term 1 Environment Management Group Global Environment Department, JICA
*	Cooperation Planning (Fiji)	Mr. Hideki Sawada	Assistant Resident Representative JICA Fiji Office
*	Evaluation Analysis	Mr. Atau Kishinami	Permanent Expert International Development Associates Ltd.

	Note: Members participating in the evaluation study in the country
Period of Evaluation Study in the Country	7 days from 13 Aug to 19 Aug, 4 days from 1 Sep to 4 Sep, 2015 （See attachment 3 for details）
Methodology	JICA Terminal Evaluation Team collected the information through document analysis, questionnaire survey and interviews with officers concerned with the Project, JICA experts, C/Ps of DOE, LCC, NTC, BTC, STC, TTC, RTC and SCC. The Team also conducted field observation of project sites. Based on the results of the evaluation, the Team prepared a draft report and finalized it through discussions with the personnel concerned with the Project.

II. Accomplishment and Implementation Process of the Project

(1) Inputs (as of June 2015)

<Japanese Side>
(See attachment 4)
1) Dispatch of JICA Experts : 9 experts (28.4 M/M)
   - 4 Short-term Experts (23.9 M/M)
   - 4 Long-term Experts from Project Office (3.6 M/M)
   - 1 Local Expert (0.9 M/M)
     (Cost of this Local Expert is included in Local Cost support)
2) Training in Japan: 4 persons
   - Training course for "J-PRISM Regional Training for Trainers" (2 C/Ps from LCC, 1 C/P from NTC)

   Note: 1 C/P of regional activities from Labasa Town Council attended " J-PRISM Training for Trainers"
3) Provision of equipment : none
4) Local cost support: FJD222,673 (US$106,247)
   (as of July, 2015)
   - Cost for Travel Allowance, Office Equipment, Printing, Office Supplies, etc.

<Fiji Side>
(See attachment 5)
1) Assignment of National Project Director (PD), Project Manager (PM) and C/Ps: 35 persons
   (at the time of Terminal Evaluation)
   - Management CP – 11 (2 from DOE, 1 from each of LLC, NTC, STC, BTC, TTC and 2 from each of RTC and SCC)
   - Technical CP – 24 (6 from DOE, 7 from LLC, 2 from NTC, 2 from BTC, 2 from TTC and 4 from SCC)
2) Local cost sharing: FJD660,480 (US$308,999)
   - Cost for travel expenses, documentation, goods/materials, etc.
3) Land, facilities
   - Office space with utilities for JICA experts

(2) Outputs

Output 1: National 3R strategy has been widely implemented in Fiji. — Degree of achievement: Mostly achieved

Indicator	Results
1.1 100% of councils have been implementing the 3R promotion in the Western Division.	Under J-PRISM, the project has been assisting six (6) councils in the Western Division and Suva City Council in the Central Division for 3R promotion. On the first JCC in Feb. 2012, it was planned that 3R promotion would gradually be expanded to other councils in the Central and Northern Divisions. However, on the 3rd JCC in Mar. 2014, it was agreed that remaining councils in the Central and Northern Divisions will not be directly involved, but will be supported through local, regional and overseas training on waste management. The main reasons of this change were the budget limitation and the limited input from Japanese side. At the same time, some councils had some difficulties to carry out activities as planned. So the project decided not to proceed the expansion to other councils Having incorporated the recommendations received at the mid-term review, the project made some modifications to the Plan of Operation (PO) at the council level in order to make the progress monitoring easier for all councils toward their individual targets. Each council prepared its own PO and appointed one staff as "Project Manager" being responsible for supervising project implementation, and the other as "3R Officer" responsible for implementing 3R planned activities. As of August 2015, all six (6) councils (100%) of the Western Division plus Suva City Council are implementing some components of 3R promotion as summarized in table 1 "Components of 3R promotion practiced by councils".

This indicator was fully achieved.

Table 1: Components of 3R promotion practiced by councils

3R Components	LCC	NTC	STC	BTC	TTC	RTC	SCC
1. Home Composting	●	●	★	★	★	★	◆⇒★
2. Market Waste Composting	●		●	●			●
3. Separate Collection of Recyclables	●	●					◆
4. Clean School Program	●	●	●	●	●	●	◆⇒★
5. Landfill Improvement	●		●				
6. Data Collection on Solid Waste and its Management						●	●
7. Promotion of Eco-bags	◆	●					◆
8. Reduction of Hotel Waste			●				

Note: ●Activities were incorporated into PO as of 2014, ★Added to the PO as of 2015, ◆Independently conducted

1.2 Targeted components of 3R promotion for each council have been steadily progressed.

Based on the PO developed by themselves, seven (7) councils have been carrying out activities to achieve the targets set by themselves. Progress of each council has been summarized in the Table 2 and Progress of Activities for DOE and progresses of 3R promotion by target councils are explained in detail in the attachment 6.

Overall, each council has made some progress in given component. Market waste compost has been mostly progressed as planned. As for home compost, LCC and NTC has had difficulties to continue their own subsidy program to fulfill their target partly due to the drastic price rise of compost bins. In RTC and BTC, monitoring activities were not enough. As for the separate collection of recyclables, legislation and/or the incentive for recycling is required in order to improve the participation rate. Clean School Program has been implemented mostly as planned, however, much efforts are needed for school monitoring. For landfill improvement, continuous efforts are needed for STC in operation and maintenance. Promotion of Eco-bags has been newly started by LCC and SCC with the support of JOCV/SVs. Limited progresses of some components for STC, BTC are partly due to the temporary absence, or transfer of C/Ps, it is expected that sufficient manpower should be continuously allocated to carry out 3R activities.
This indicator has been mostly achieved.

Table 2: Progress of 3R promotion practiced by each council

3R Components	LCC	NTC	STC	BTC	TTC	RTC	SCC
1. Home Composting	△	△	◎	△	○	△	○
2. Market Waste Composting	◎		△	○			◎
3. Separate Collection of Recyclables	△	◎*					◆
4. Clean School Program (CSP)	◎	◎	△	△	◎	○	○
5. Landfill Improvement	◎		△				
6. Data Collection on SW and its Management						○	○
7. Promotion of Eco-bags	◆	△					◆
8. Reduction of Hotel Waste			△				

◎=Set targets have already been fulfilled, ○=Set targets will be fulfilled by the project completion,
△=Need more efforts, ◆=independently conducted by themselves
Note: For NTC, separate collection recyclables for CBD areas is going to be handled by recycling companies.)

(Supplemental Information) Effective National Financial Mechanism to promote 3R activities implemented by councils

With the initiative of DOE, following effective financial mechanism to promote 3R activities has been implemented on trial from April 2015 to December 2015.

1) Home Compost Subsidy Program
Home compost was first introduced to LCC and NTC in the previous "3R Project". Both councils have independently set up the subsidy for the community to promote home compost since then. (SCC has also promoted the home compost with the support of UNDP.) Their experiences and studies done led them to the conclusion that home compost is one of the most effective measures to reduce waste (possible waste reduction is estimated as 25%), and is easily adapted to the

	way of life in Fiji. Thus, demands of home compost have increased from other councils as well. At the 3rd JCC held in March 2014, the home compost subsidy program was proposed and finally it was materialized. The budget for Home Compost Subsidy Program is FJD16,744 in 2015. 2) Financial Assistant for Clean School Program CSP was first introduced as one of activities of JOCV assigned to NTC in 2010. With the successful implementation and its positive outcome on environmental education at schools, CSP has been well adapted and expanded to many schools of seven councils in collaboration with schools and the Ministry of Education (MOE). In order to further promote and support CSP, sponsorship to annual CSP award ceremony, awareness materials and training will be financially assisted by DOE. The budget for Home Compost Subsidy Program is FJD2,950 in 2015.
(Supplemental Information) Effective networking through bi-monthly * joint meetings	Bi-monthly joint meeting have provided effective networking amongst councils for better capacity building and good opportunities for both DOE and councils to monitor the progress and discuss for the betterment. This networking opportunity has contributed to the trust relationship between DOE and councils. Furthermore, it has opened for J-PRISM non-targeted councils and health inspectors of Rural Local Authorities, who are in charge of SWM in rural areas as well. Note: Joint meetings is now held on a quarterly basis by which the demands of monitoring and financing the meeting to be met.

As of August 2015, all six (6) councils (100%) of the Western Division plus Suva City Council are implementing some components of 3R promotion according to the PO developed by themselves. Each council has made progresses but need more efforts to sustain some activities. Combined with effective national financial mechanism, 3R has been expanded further.

In light of the above, Output 1 "National 3R strategy has been widely implemented in Fiji" is Mostly achieved.

Output 2: Fiji 3R model is disseminated to the Region/Country through training program.	Degree of achievement: Fully achieved

Indicator	Results
2.1 Training manuals/material	Fiji C/Ps contributed as trainers for regional and in-country trainings. They developed presentation (power points), hands-out and contributed to the summary report as well. These materials have always been utilized in the trainings as well. It is confirmed by J-PRISM experts, Fiji C/Ps have sufficient capacity to develop training manuals and materials by themselves. Therefore, it is considered that the indicator has been fully achieved. The list of training materials developed by Fiji C/Ps is shown below. Table 3: Training materials prepared by Fiji C/Ps No. | Presentation Power point - Contents | Prepared by 1 | Composting presentation for Clean Pacific Workshop, 2012 | LCC 2 | Overview of 3R project | LCC 3 | Overview of VDS operation and management system 2011 | LCC 4 | SWM management system | LCC 5 | NTC CSP, Eco-school, Honiara City Council | NTC 6 | Shibushi 3R Regional Training | BTC, LCC, STC 7 | Weighbridge Training | LCC 8 | Market project for PNG | SCC 9 | Clean School Program Management | NTC Source: Project report
2.2 # of training conducted and # of participants	Fiji C/Ps contributed as trainers in various fields of solid waste management. 1) In-country training

Fiji C/Ps trained those who would engage in 3R activities by conducting the in-country training. The total number of 109 participants was trained in the field of SWM. Details of training are as shown below.

Table 4: In-country Training conducted by Fiji C/Ps

No.	Title of Training Program	Participants	No.
1	Teacher's Workshop at Ba, Mar.2013	Teachers of Ba Town	11
2	Solid Waste Management Data at Suva, Feb. 2014	Officers of councils in the Central Division	10
3	Teacher's Workshop at Rakiraki, Mar.2014	Teachers of Rakiraki Town	12
4	Compost Training at Sigatoka, Oct. 2014	Compost makers in the Central Division	11
5	Clean School Program and Home Composting Subsidy Program Launching and Technical Workshop at Nadi, Apr. 2015	National government (MLGHE, DOE, MOE) Officers of 16 councils, Local Authorities	52
6	How to make a plan of market compost project at Suva, Jun.2015	Health Inspectors of Rural Authority Office, officers of councils of Central Division and 2 Local Authority Offices	13
		Total	109

Source: Project report

2) Trainings for other PICs

From Dec. 2011 to July 2015, with the assistance of J-PRISM Project Office and J-PRISM experts, Fiji C/P conducted 15 trainings for C/Ps in the region as shown below and the total number of 117 participants including C/Ps of other PICs received trainings in nine (9) areas of Solid Waste Management. These trainings were carried out by combined efforts of councils. Following table explains the titles and number of trainings and participants.

Table 5: Trainings for other PICs conducted by Fiji C/Ps

No.	Title of Training Program	No.of Participants
1	Weighbridge Management Training for Samoa, Dec. 2011	3
2	Clean Pacific Campaign Training & Workshop, Feb. 2012	9
3	Study Visit for Solomon & Tonga, Feb. 2012	4
4	Study Visit for Landfill management for PNG, May 2012	1
5	Study Visit for Waste Management for PNG, Jun. 2012	5
6	Country Attachment in Fiji from Tuvalu, Aug. 2012	2
7	Clean School Program/Trainer Dispatch (Fiji – Kiribati) Sep.2012	2
8	3R Regional Training in Fiji, Nov. 2012	22
9	Trainer dispatch programme- Eco School programme in Solomon Island, Sep.2013	39
10	3R Regional Workshop in collaboration with Shibushi, Nov.2013	22
11	Study visit - Waste data management (Samoa x 1), May 2014	1
12	Site visit - 3R program (Kiribati x 1), Jul.2014	1
13	Site visit - Market waste composting (PNG x 1), Aug. 2014	1
14	Site visit - 3R program (Palau x 1), Nov. 2014	1
15	Study Visit - CSP (Solomon, Tonga, PNG), Jul. 2015	4
	Total	117

Source: Project report

Considering the number of trainings and the number of participants for in-country and for other PICs, it is comprehensible that Fiji C/Ps are capable to carry out these volume of trainings and skills and knowledge to implement Fiji 3R model are extended through these trainings. This indicator is considered to be fully achieved.

Fiji C/Ps have contributed as trainers to the regional / in-country trainings where 226 persons were participated all told. They have developed nine kinds of training materials by themselves. Through these trainings, Fiji 3R model is in the process for dissemination to J-PRSM non-targeted councils in the Central and Northern Division. In terms for other PICs, CSP has been introduced to Kiribati, Tonga and Solomon Island by now.

In light of the above, Output 2 "Fiji 3R model is disseminated to the Region/Country through training program", was fully achieved.

In order to ensure the outcome of the trainings, follow-up or monitoring of training results is recommended.

(3) Project Purpose

Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	Degree of achievement: Mostly achieved

Indicator	Results
1. 15 of experts (Trainers) in the SPREP inventory[1]	Experienced Fiji C/Ps have worked as trainers since the inception of J-PRISM. And their capacity has further been enhanced, especially through participation of regional training activities as trainers. This achievement is proven by the PIDOC, SPREP inventory in which twenty-one (21) trainer's experiences are listed in the following eight (8) fields.

Table 6: Trainer's experiences by Fiji C/Ps listed in PIDOC

No.	Training Field of Solid Waste Management	No. of Trainer's experiences
1	Waste Generation/Characterization Study	1
2	Integrated SWM Planning/Management	1
3	Waste Collection & Transportation Landfill Design	3
4	Landfill Improvement/Rehabilitation/construction	2
5	Organic Waste Utilization	4
6	Weighbridge data management	1
7	School/Community Program	8
8	Occupational Safety & Health in SWM	1
	Total	21

Source: Project report

(Supplemental Information) Capacity Assessment	According to the Capacity Assessment (CA) conducted by the Project, it is assured that both organizational capacity and C/Ps' individual capacity have been strengthened. CA revealed the increased confidence in C/P's ability to implement 3R activities. And the mechanism of joint meetings established among council and DOE have further encouraged them to learn each other and to work forward under "joint-ownership of 3R activities".
(Supplemental Information) Trainings of Trainers	Some C/Ps have trained other C/Ps in PICs in trainer dispatch program as well as study visit program. Three (3) C/Ps*participated in the Regional Training for Trainers, both in Fiji, 2014 and in Okinawa, 2015 and they have acquired advanced knowledge and skills. The performance as trainers of some Fiji C/Ps have been highly evaluated at the Training. Note: One C/P for regional activities from Labasa Town Council attended the training.
2. Regional training program organized by Fiji is established.	Through opportunities to contribute as a trainer in the regional training program, many C/Ps have enhanced the capacity of SWM in the fields. These fields are "Home composting", "Market Waste Composting", "Green Waste Recycling", "Clean School Program", "Recyclable Collection", "Landfill Management", "SWM/3R General", "Waste Collection", and "Occupational Health Safety (OHS)". Besides NTC and LCC, which have accumulated

[1] *This indicator was not used as a direct measure of the Project Purpose for the following reasons;(I) While PIDOC, the existing database, is an inventory of SPREP, the persons listed are trainers certified by J-PRISM but not considered as officially certified trainers by SPREP, (ii) the target values are not valid as they had been determined before the introduction of PIDOC (thus not consistent with the number of trainers listed in it.) Accordingly, the degree of achievement of the Project Purpose was judged in a comprehensive manner with the other indicators and supplementary information (where necessary), while referring to this indicator as reference information.*

experiences through 3R Project, other councils started to conduct trainings to meet the diversified demand of each PIC. This is proved by the number of trainings conducted by each council as shown on the Table 7.

Table 7: Number of training experiences in SWM by each council

Councils contributed to trainings	Fields of training in the Solid Waste Management									TOTAL
	Home Composting	Maret Waste Composting	Green Waste Recycling	Clean School Program	Recyclable Collection	Landfill Management (incl. weighbridge)	SWM/3R General	Waste Collection	OHS	
LCC	7	11	9	2	3	11	8	1	1	53
NTC	4			8	3		3			18
STC		3				2	1			6
SCC		1								1
BTC							1			1
DOE							2			2
OISCA*		4								4
TOTAL	11	19	9	10	6	13	15	1	1	85

Source: Project report

Note: OISCA (Organization for Industrial, Spiritual and Cultural Advancement-International) is the NGO collaborating with J-PRISM.
Above table intends to show how each council contributed as trainers in each field.

With the assistance of J-PRISM Project Office J-PRISM expert, Fiji C/Ps have been able to develop the training materials and have performed as trainers many times. They can also provide the site for trainings, such as for landfill management and compost making, etc. These opportunities as trainers have greatly contributed to enhance C/Ps capacity not only as capable officers of the councils, but also as trainers of SWM.

It is expected that hands-on expertise of these C/Ps would lead to establishing the Fiji way of training. DOE is considering to continue trainings of this kinds with high priority for the country. This indicator has been fully achieved.

Implementation of 3R components has gradually been progressed in target councils. With continuous efforts by each council, their targets will be met. Fiji C/Ps have made much contribution to the dissemination of 3R model in country as well as for other PICs through various types of trainings. This has been well proven by achievements of their training capacity.

In light of the above, the Project Purpose has been mostly achieved.

(4) Implementation Process

・Method of Technical Transfer

Technical transfer has been more or less progressed smoothly.

Absence of C/Ps in BTC and TTC during April to September in 2014 made the technical transfer somewhat difficult which caused the delay of activities for some time. This is partly due to that the vacancy at councils was not filled on time. However, such delays of activities were caught up by now with the efforts of C/Ps. Although the limited time given to each J-PRISM experts has sometimes made it difficult to fully accommodate the needs of C/Ps, communication between C/Ps and J-PRISM experts have been taken through e-mails and phones to make up for such limitation.

・Implementation System

It was once pointed out during the mid-term review that the original PDM and PO may not have clearly laid out what the project intended to do. Thus, with the consultation of J-PRISM experts, Fiji C/Ps prepared the individual PO for the councils and each step of the activities as well as targets have been clarified. As a result, implementation system of the Project has been much improved after the mid-term review. Major change is that each council has their own PO with individual target set, and they implement activities by combined efforts of a project manager and a 3R officer newly assigned for 3R promotion. Moreover, with the initiative of DOE, the progress monitoring of each council has also become effective through bi-monthly joint meeting. It was pointed out, however, there was a room for improvement by incorporating clear and detailed steps of activities.

・Project Management

Joint Coordinating Committee (JCC) has also effectively functioned to review the outcome and to discuss the issues to be addressed. It has been well connected with the improved implementation system, and decisions made at JCC have been timely followed up. In this respect, DOE has also played an important role to advance process toward the resolution.

・Communication within the Project

Communication between J-PRISM experts and C/Ps has been well managed through emails when they are not in county or they are in other locations in Fiji. DOE Western Office has also made an important role to bridge the connection and communication among DOE and councils.

・Collaboration with Local Stakeholders

No.	Stakeholder	Type of coordination
1	MOE and schools	Implementation of CSP. J-PRISM established the partnership with MOE to realize the DOE's financial assistant to CSP,
2	Nadi Women's Group	Support NTC in preparing the Eco-bag
3	Ministry of Women and Culture	Garment Manufacturing Industry on Eco- Bag project for NTC
4	Fijian Resort in Coral Coast Areas	Hotel waste minimization pilot project in Sigatoka from March 2014 to six months. Lessons learned from pilot project is expected to be disseminated to all hotels in Coral Coast Areas
5	Rotomould (Fiji) Ltd	Manufacturer of compost bin has assisted DOE and council (LCC/NTC) by providing the compost bin with discount price.(approximately 30% discount)

・Participation in Region-Wide Activities of J-PRISM

No.	Title	Type of activity	No. of C/P attended
1	Regional Training on Landfill Management, in Vanuatu, Oct. 2011	Regional Training	2
2	Clean Pacific 2012 Campaign, Fiji, Feb. 2012	Regional Training	4
3	Clean School Program Workshop in Fiji, Feb. 2012 (115 participants from Fiji, 2 C/P from Solomon and 1 C/P from Tonga)	Regional Training	3
4	Clean School Program in Kiribati, Sep. 2012 (26 teachers in Kiribati participated)	Trainer Dispatch	1
5	3R Regional Training in Fiji, Nov. 2012	Regional Training	15
6	Training of Trainers' Workshop on Occupational Safety and Health in Samoa, July 2013	Regional Training	3
7	Regional Training for Trainers in Fiji (Labasa), Nov. 2014	Regional Training	3
8	Regional Training for Trainers – Okinawa, Japan May 2015	Regional Training	3

・Coordination with Other Japanese and International Projects

1) Holistic approach with other schemes of Japanese assistance

No.	Scheme	Type of coordination
1	JOCVs in the field of Environmental Education	Seven (7) JOCVs and one SV have been working in collaboration with J-PRISM in the field of Clean School Program, Market Compost, Promotion of Eco Bag, etc. They have been assigned to J-PRISM targeted Councils. SCC (1 JOCVs), NTC (2), STC (2), BTC (1), RTC (1) and 1 SV for SCC Note: 3 JOCV were assigned for currently non-targeted councils, such as Labasa Town Council, Lami Town Council and Nasinu Town Council.
2	JICA partnership program	"Promotion of Shibushi model -waste minimization without incineration- from the Republic of Fiji to pacific island countries (Shibushi Program)" 3R Regional Training in collaboration with Shibushi Program Nov. 2011 3R Shibushi City Training Program Shibushi experts visits to Fiji for technical assistance
3	Grant Assistance for Grass-Roots Human Security Projects	Provision of shredder and compost house for SCC
4	Group and Region-focused Training in Japan	-1 C/P for Solid Waste Management by Local Government (F) (Pacific Region), 2011 -1 C/P for Solid Waste Management Technique (A) , 2012 - 3 C/Ps for Promotion of Shibushi Model (Waste Minimization without incineration) from Fiji to Pacific Island Countries, 2013* (*) in addition, 1 market master for STC, 1 operator for VDS, LCC attended the training - 1 C/P for Enhancement of Solid Waste Management Capacity (Advance, Planning and Policy) 2014 - 1C/P for Environmental Education, 2014 -1 C/P for Enhancement of Solid Waste Management Capacity (Advance, Planning and Policy) 2015

2) Collaboration with other stakeholders

No.	Stakeholders	Type of collaboration
1	OISCA (NGO) Market Green Waste Composting in Sigatoka	The green waste collected from the Sigatoka Market is sent to OISCA to be made into compost. OISCA returns the compost made by students for sale to Sigatoka and OISCA can use the compost for their vegetable cultivation purpose. OISCA also provided the technical assistance in many ways, in Clean School Program, Regional 3R training program, etc.
2	United Nations Development Program (UNDP)	UNDP has provided the subsidy program for home compost of Suva City.

III. Results of Analysis from the Viewpoints of Five Evaluation Criteria

(1) Relevance

Evaluation: Relevance of the project is high.

This project was highly relevant with the Fiji National Solid Waste Management Strategy 2011 – 2014 with the vision being "informed and responsible communities to sustainable solid waste management". Under the Green Growth Framework, which intends to supports and complements national development plan, the 2010-2014 Roadmap for Democracy and Sustainable Socio-Economic Development, the environmental priorities for the country is highlighted. And the waste management is the one of eight thematic areas in which DOE is responsible for developing the strategy and action.

The project is also highly relevant with the development needs of Fiji. Urbanization, population growth, increasing prosperity, commercial and industrial development, tourism, and most other forms of development have all contributed in varying ways to increasing quantities of solid wastes. Therefore, the solid waste management should be considered as priority issues and should be well taken care of.

The project is also consistent with the Japanese ODA Policy in which the environment and climate control is one of the high priority issues.

(2) Effectiveness

Evaluation: Effectiveness of the project is high.

1) Achievement of Project Purpose

As mentioned above, the Project Purpose has been mostly achieved. With combined efforts of DOE and councils, some of 3R activities have been steadily progressed in Fiji and some components such as CSP has been further disseminated to other PICs through training programs. As a result, the capacity of C/Ps have greatly improved and they have served as major contributors as trainers not only in the country, but also out of the country for other PICs.

2) Contribution of Outputs to Project Purpose

Two outputs have been contributing to achieving the Project Purpose in the following manner. Under Output 1, seven councils have been implementing the 3R activities according to their individual plans with the effective implementation mechanism in the form of joint meetings supported by DOE. At the same time, under Output 2, C/Ps of these councils have practiced their knowledge and skills as trainers to disseminate Fiji 3R model both in and out of the country. Both Outputs have eventually served to enhance hands-on expertise of these C/Ps and would lead to establishing the Fiji way of training. Two Outputs have been effectively connected each other in clear logical framework to generate expected outcome.

3) Other promoting/inhibiting factors

・Promoting factors

Accumulated assets created by the previous technical cooperation "3R Project" have effectively been utilized to facilitate the project implementation.

Combination of 3R implementation in the actual settings (Output 1) and the training opportunities as trainers with a better understanding of the benefit of practice (Output 2) have provided the effective learning environment for Fiji C/Ps. Thus, their hands-on expertise have been intensified throughout the process.

(3) Efficiency

Evaluation: Efficiency of the project is relatively high.

1) Production of Outputs

The Outputs have been fully or mostly produced as planned. Progresses of 3R implementation in targeted councils are expected to be facilitated with the effective monitoring and financial mechanism by DOE.

2) Appropriateness of Inputs

・Fiji side

Inputs of the Fiji side are mostly appropriate except the temporary absence of C/Ps in some councils which has caused the delays of some activities.

・Japanese side

Inputs of the Japanese side are mostly appropriate in terms of quantity, quality and timing. It is well noted that that training conducted through C/Ps, who received technical training from J-PRISM, have increased capacity development of C/Ps.

3) Utilization of external resources

It was identified that effective utilization of external resources has increased the efficiency of the Project.

The project has made a good use of other scheme of Japanese assistance. JOCVs in the field of environmental education assigned to some of targeted councils have efficiently collaborated with the project activities. Their achievement has been well sustained in the form of Clean School Program, Eco-bag, Market Composting, etc. Provision of shredder and construction of compost yard for SCC under the Grant Assistance for Grass-Roots

Human Security Projects has facilitated project activities in respective councils.

Effective linkage with local stakeholders has generated the synergy effects. The project has collaborated with Nadi Women's Group, Ministry of Women and Culture and fabric factories to work out for eco-bag promotion. It should be well noted that the DOE's financial assistance to CSP has been based on the effective collaboration with and dedicated support from the teachers and MOE since CSP was initiated in 2010. The project has also made the substantive linkages with private companies, such as resort hotels of coastal area for hotel waste minimization, and compost bin manufacturers as well.

Finally, one of the major contributors as OISCA (NGO) with which market green waste composting was initiated. The green waste collected from the Sigatoka Market is sent to OISCA to be made into compost. OISCA returns the compost made by their students for sale. OISCA has provided the technical expertise of compost making as trainers in the training program by both regional and in-country as well.

4) Other promoting/inhibiting factors

・Promoting factors

Implementation system by having each council independently prepare the PO with individual target set has helped them to identify the progress and challenges and to act for the betterment. And the mechanism of joint meetings established among council and DOE have themselves to learn each other and to work forward under "joint-ownership of 3R activities"

・Inhibiting Factors

The temporary absence and unavailability of C/Ps in some councils resulted in the delay of some activities.

(4) Impact

Evaluation: Impact of the project is expected to be relatively large.

1) Impact at Overall Goal level

Considering the current degree of achievement of Outputs and Project Purpose, the likelihood of achieving the overall goal for Fiji is high.

Currently 3R has been practiced in all six (6) councils of the Western Division plus Suva City Council. Non-targeted councils in the Central and Northern Division have also been involved in some activities, such as in-country trainings and joint meetings and some 3R components have been already practiced at these remaining councils as of August 2015. This positive movement has also been supported by the Home Compost Subsidy Program as well as the financial assistant to CSP with the initiative of DOE.

2) Other impacts

・Positive impacts

With the own initiative of DOE, two kinds of effective financial mechanisms to promote 3R activities have been implemented on trial basis. This shows the strong commitment of DOE to proceed the 3R promotion with high priority. And it is expected to have large impact on dissemination of Fiji 3R model nationwide.

With the initiative of DOE, TV and press advertisement started in August 2015 to raise public awareness about subsidized compost bins. It was pointed out by C/Ps of councils that communities are now taking own initiative to reduce waste and take care of the environment.

・Negative impacts

No negative impact was observed.

(5) Sustainability

Evaluation: Sustainability of the effects of this Project is likely to be secured by continuous efforts of councils under the leadership of DOE.

1) Policy and institutional aspects

Environmental priorities for the country are highlighted under the Green Growth Framework and waste

management is the one of eight thematic areas. According to the Minister of Local Government, Housing and Environment, setting the legal framework is considered as top priority in the waste management. All of these ensure the strong commitment of the government of Fiji and their continuous support toward waste management is expected. In that aspect, the National Waste Management Strategy is in the process of revision and National 3R policy is being finalized. They should be approved and endorsed soon.

2) Organizational aspects

Strong commitment of DOE to disseminate Fiji 3R model to nationwide and increased manpower is the positive aspect of organizational sustainability. Having appointed a project manager and a 3R officer in each council has been considered as productive approach for continuation of 3R activities. Both DOE and council should continue the effective mechanism of monitoring through joint meeting by mutually recognizing the joint ownership of 3R promotion. Fiji government is considering the establishment of Waste Management Authority which is the public entity being in charge of overall waste management and its feasibility study is going to be carried out. It is recommended that high level of consideration should be given to merge what is currently practiced by DOE and councils with new establishment before it is materialized.

3) Financial aspects

Financial mechanisms on Home Compost and CSP introduced by DOE are expected to serves as an effective tool to improve the financial sustainability. However, 3R activities and landfill management require daily monitoring and constant funding. Therefore, it is recommended that DOE and each council continuously secure the necessary budget. It is also recommended that DOE would consider the funding mechanism to generate monetary income such as through container deposit scheme as well.

4) Technical aspects

It is confirmed that most of knowledge and technologies transferred through the Project activities are appropriate and timely in the context of Fiji. Combination of 3R implementation in the actual settings and its practice as trainers have made their expertise more adaptable for local needs and thus easier to be sustained. Training manuals and materials developed by C/Ps have been always made available for other non-targeted councils as well as other stakeholders who want to learn about 3R by themselves. With the sufficient financial and logistical support to continuously provide the training opportunities for C/Ps as trainers and those concerned officers of councils as trainees, technical sustainability will be much enhanced.
It should be noted that C/Ps have acquired skills and knowledge through trainings in Japan and that some of these skills and knowledge, however, have not fully been applied in Fiji. Measures to utilize them should be considered, e.g. cooperation with recycling company and export (return) of recyclable materials.

5) Social aspects

Some activities of 3R, such as separate collection of recyclable require the behavior change of the people. Such habitual change cannot be done overnight, and even the person once adapted such changes, he/she may discontinue it without any particular reasons. Therefore, continuous awareness raising and monitoring of the activities by DOE and councils are essential.

IV. Conclusion

Relevance of the project is still high. Waste management is one of the priority issues under the Green Growth Framework. Effectiveness of the project is also high. Capacity of C/Ps has been further strengthened through the 3R implementation in the actual setting and training opportunities as trainers.
Efficiency of the Project is relatively high as utilization of external resources has well practiced and progress monitoring has been systematically done by joint meeting. C/Ps for 3R activities should be continuously assigned. Impact of the project is expected to be large and Fiji 3R model will be disseminated nationwide in some years to come.
Sustainability in policy and technical aspects are likely to be secured. In organizational aspect, it is recommended that both DOE and council should continue the effective mechanism of monitoring through joint meeting by mutually recognizing the joint ownership of 3R promotion. For the financial sustainability, it is recommended that DOE and each council continuously secure the necessary budget and DOE should consider

the funding mechanism to generate monetary income as well.

Based on the above-mentioned findings and evaluation, the evaluation team considers it appropriate that this Project be completed as planned.

V. Recommendations for the remaining period

To Ministry of Local Government, Housing and Environment

Establishment of Legal Framework

- The legal framework should be established by utilizing outcomes of J-PRISM as stated by the Minister.

Finalization of NWMS and 3R Policy

- It is essential that the National Waste Management Strategy, which is in the process of revision, is to be finalized before the completion of J-PRISM. It is also desirable that National 3R policy is to be finalized before the completion of J-PRISM.

Collaboration among Relevant Agencies

- As the councils are responsible for waste management in town boundary, it is recommended to strengthen collaboration between DOE and Ministry of Agriculture and Rural Development.
- Ministry of Health, Ministry of Education and Ministry of Local Government, Housing and Environment should continue the cooperation in terms of promotion of 3R.

To DOE

Continuation of Regular Meeting with Councils

- Thanks to the regular meeting between DOE and targeted councils, information as well as practical experiences have been exchanged and mutual understandings among them has been strengthened. It is strongly recommended that DOE should continue this regular meeting, including non-targeted councils.

Collection and Analysis of Council Report

- DOE should enhance the positive outcomes generated by the implementation of J-PRISM by continuous collection and analysis of the monitoring reports from councils as well as by continuous site visits, interviews and observations in order to feed back for the future activities.

Systematic Transfer of Skills and Knowledge

- It is desirable that DOE, in cooperation with councils, conducts refresher trainings to make sure skills and knowledge transferred by J-PRISM are acquired, maintained, and used by C/Ps. It is also expected that these skills and knowledge are systematically expanded to other councils to enhance overall capacity of relevant authorities.

To Each Council

Submission of Reports

- The councils should submit reports as DOE requests.

Share of Information

- Councils should share information of with DOE, especially in terms of training, e.g. number of participants, contents, date, and it also should share training materials used in trainings.

To J-PRISM experts

Drawing Lessons Learned

- It is highly recommended that experts analyze the promoting and inhibiting factors, which affect the degree of achievement in each council, considering the conditions of each council (e.g. size, population, geography, etc.). These factors should be carefully clarified, analyzed and categorized in order to expand good practices as well as to prevent negative occurrence (e.g. fire at the disposal site in Sigatoka) under the similar conditions in the future.

To Project Office

Strengthening of Management System

- Fiji has conducted 15 training programs with more than 100 trainees from PICs. The C/Ps who trained in Fiji

should feed back to host organizations about their activity implementation. The Project Office should support the strengthening of management system by transferring the responsibilities to the DOE and councils so that they can conduct follow-up training and also sharing information among relevant organizations.

To JICA Fiji Office

Corporation among Different Programs

- In Fiji, collaboration with JOCV program and Grant Assistance for Grass-Roots Human Security Project is widely implemented as practiced in SCC. Strategic design for cooperation should be established between different programs to consolidate partnership.

Attachment:

1. Project Design Matrix (PDM Version 2)
2. Plan of Operation (PO Version 3)
3. Schedule of Terminal Evaluation
4. Record of Japanese Inputs
   4-1 Dispatch of Experts
   4-2 Training in Japan
   4-3 List of Machinery and Equipment provided by Japan
   4-4 Local cost
5. Record of Fiji Inputs
   5-1 List of Counterpart personnel
   5-2 Local cost
6. Progress of activities by DOE and progresses of 3R promotion by target councils

Attachment 1: Project Design Matrix (PDM) - Fiji

PDM: Version 2

Project Title: Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Target Group : C/Ps of DOE, LCC, NTC, STC, BTC, TTC, RTC, SCC

Final Beneficiaries: Citizens of Fiji

Project period:5 years

Implementing Agency: DOE, DoLG, LCC, NTC, STC, BTC, TTC, RTC, SCC

Target Area: The Republic of the Fiji Islands

Date issued: 3rd Mar., 2014

Narrative Summary	Objectively Verifiable Indicators	Means of Verifications	Important Assumptions
Overall Goal			
Sustainable management of solid waste in the Pacific Region is enhanced.	3R is practiced nation-wide	Monitoring reports of National Waste Management Strategy[3]	
Project Purpose			
Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	1. 15 of experts (Trainers) in the SPREP inventory 2. Regional training program organized by Fiji is established.	SPREP (Regional inventory of skilled people) Regional training program	1. Natural disaster would not drastically affect the collaboration among PICs and SPREP. 2. Political changes of PICs would not drastically affect the collaboration among PICs and SPREP.

#	Priorities under RS2010	Outputs	Objectively Verifiable Indicators	Means of Verifications	Important Assumptions
1	Sustainable Financing				1. Political change in Fiji will not drastically affect the project implementation.
2-1	3Rs/4Rs	**Output 1**: National 3R strategy[1] has been widely implemented in Fiji.	1-1. 100% of councils[2] have been implementing the 3R promotion in the Western Division. 1-2. Targeted components of 3R promotion for each council has been steadily progressed	1-1 3R annual monitoring reports from councils and rural authorities 1-2 Same as above	
2-2	Waste Disposal				
2-3	Waste Collection				
3	Legislation				
4	Awareness/Communication/ Education				
5	Capacity Building	**Output 2:** Fiji 3R model is disseminated to the Region/Country through training program.	2-1 Training manuals/materials 2-2 # of trainig conducted and # of participants	2-1 Developed manuals/materials 2-2 Participants lists	
6	Environmental Monitoring				
7	Policy,Planning, Performance				
8	Solid Waste Industry				
*	Monitoring system of RS2010				

Activities	Inputs: Japanese Side	Inputs: Fiji side	Important Assumptions	Pre-condition
Please see PO for details.	Dispatch of JICA experts Provision of equipment and materials Provision of Regional, sub-regional and in-country workshops / training Local cost support	Assignment of National PD/PM and CPs Local Costs Sharing Provision of necessary land/facility, work space	1.Counterpart personnel keep working in the field of SWM. 2. Disasters, such as severe rain storm will not drastically affect the progress of project activities. 3. Necessary budget to carry out activities is allocated by the government.	

1): National 3R strategy is regarded as National 3R policy and National SWM strategy (2011 -1014)

2): 100% of councils means six (6) councils of the Western Division including LCC, NTC, STC, BTC, TTC, RTC

3): Fiji National Solid Waste Management Strategy 2011-2014 will be replaced with "National Waste Management Strategy" (a name that has been assumed temporarily)

PO - FIJI

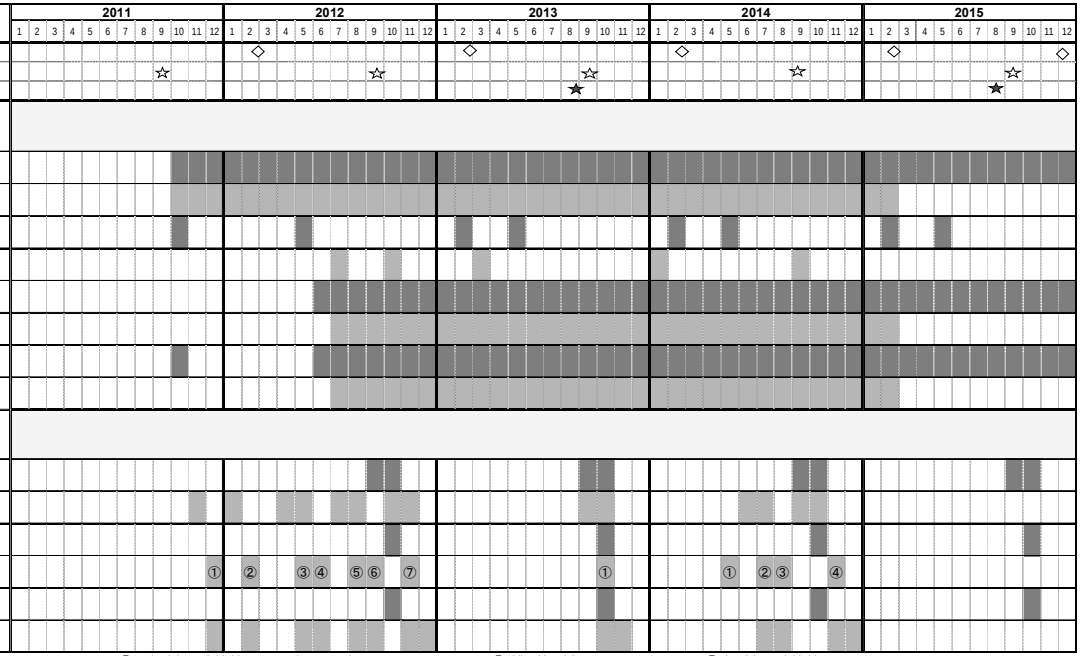
Term: 2011 ～ 2015 (5years)

Version 3

Indicator for Project Purpose: 1-1. 15 of experts (Trainers) in the SPREP inventoryx
1-2. Regional training program on 3R organized by Fiji is established

Date issued: 3rd Mar., 2015

Outputs and Associated Activities		Indicators for Outputs	Person in-charge	Progress
JCC/SC/Eva	JCC ◇			
	Steering Committee ☆			
	Evaluation Studies ★			
OUTPUT 1:	**National 3R strategy1) has been widely implemented in Fiji.**	1-1 100% of councils have been implementing the 3R promotion in the Western Division 1-2 Targeted components of 3R promotion for each council has been steadily progressed.		
1-1	Prepare the action plan for implementation of national 3R strategy			Planned
				Actual
1-2	Conduct training of 3R to be implemented			Planned
				Actual
1-3	Implementing action plans in selected councils through pilot projects			Planned
				Actual
1-4	Monitor the progress of 3R implementation in Fiji			Planned
				Actual
OUTPUT 2:	**Fiji 3R model is disseminated to the Region/Country through training program.**	2-1 Training manuals/materials 2-2 # of trainig conducted and # of participants		
2-1	Develop the training program on 3R to be used at the regional training/workshop	* This activity is also included in the Region-wide PO		Planned
				Actual
2-2	Conduct the training for regional training /workshop (This includes in-country training conducted in other countries)			Planned
				Actual
2-3	Evaluate the training / revise the training program with feedbacks			Planned
				Actual



1): National 3R strategy is regarded as National 3R policy and National SWM strategy (2011 - 1014)
2): 100% of councils means six (6) councils of the Western Division including LCC, NTC, STC, BTC, TTC, RTC
3): Fiji National Solid Waste Management Strategy 2011-2014 will be replaced with "National Waste Management Strategy" (a name that has been assumed temporarily)

①Study visit - Weighbridge system (Samoa x 3),
②Study visit - 3R program (Solomon x 2, Tonga x 2),
③Study visit - Dumpsite management (PNG x 1),
④Study visit - Waste Management (PNG x 5),
⑤Country attachment program (Waste Collection (Tuvalu x 2)
⑥Trainer delivery - Clean School Program (2 trainers to Kiribati)
⑦Regional Training (J-PRISM/Shibushi) (Region x 11, Fiji x 11)

①Shibushi Training (DoE, LCC, NTC, STC, RTC, Nausori, Nasinu, SCC, USP, etc)

①Site visit - Weighbridge sysstem (Samoa x 1)
②Site visit - 3R program (Kiribati x 1)
③Site visit - Market waste composting (PNG x 1)
④Site visit - 3R program (Palau x 1)

JICA Terminal Evaluation for
The Japanese Technical Cooperation Project
for Promotion of Regional Initiative
on Solid Waste Management in Pacific Island Countries (J-PRISM)

Field Survey Schedule

Date		Schedule		Stay
12 Aug.	Wed.	18:30	Leave Narita for Auckland (NZ090)	In flight
13 Aug.	Thurs.	08:20	Arrival at Auckland from Narita	Lautoka
		09:45	Leave Auckland for Nadi (NZ052)	
		12:45	Arrival at Nadi from Auckland (NZ052)	
			Move to Lautoka	
14 Aug.	Fri.	09:00	Visit Lautoka City Council- Interview with CPs	Lautoka
			Mr. Gyneshwar Rao, Mr. Rouhit Singh, Mr. Shalend P Singh, Mr. Wally Pauu and Mr. Mithun Prasad	
		15:00	Visit Vunato Dump Site (Board)	
			Interview Mr. Anjay Kumar and Mr. Sheik Mohammed Saidil Ali Shaib	
		16:15	Visit Communal Recycling Center	
15 Aug.	Sat.	12:00	Interview with JICA experts (Ms. Yurie Sakai and Mr. James McLean)	Lautoka
16 Aug.	Sun.	09:00	Data collection from JICA expert (Ms. Yurie Sakai)	Lautoka
		17:00	Meeting with Ms. Yurie Sakai and Ms. Reiko Shindo	
17 Aug.	Mon.	07:30	Move from Lautoka to Rakiraki	Lautoka
		10:00	Visit Rakiraki Town Council - Interview with CPs	
			Mr. Rakesh Chandra, CEO	
		11:30	Move from Rakiraki to Ba	
		12:30	Visit Ba Town Council - Interview with CPs	
			Mr. Dip Narayan, CEO and Ms. Ronika Mishra	
18 Aug.	Tue.	07:30	Move from Lautoka to Tavua	Nadi
		09:00	Visit Tavua Town Council - Interview with CPs	
			Ms. Temalesi Henfiro, CEO and Mr. Alvines Prasheel Kumar	
		10:30	Move from Tavua to Lautoka	
		12:00	Visit DOE (Western Office) - Interview with CPs	
			Ms. Senivasa Waqairamasi and Ms. Kelera Tokalau	
		16:00	Move to Nadi	
19 Aug.	Wed.	09:50	Interview with CPs of Nadi Town Council at Hexagon Hotel	Nadi
			Mr. Robin Ali, SA and Mr. Rajeshwar Raji	
		11:00	Visit Nadi Town Council - Interview with CP, Ms. Nafiza Ali	
		15:00	Interview with JICA expert, Ms. Keiko Kani	
			Data Analysis	
20 Aug.	Thurs.	07:10	Leave Nadi for Nuku Alofa (FJ211)	
25 Aug.	Tue.	20:20	Arrival at Nadi from Nuku Alofa (FJ210)	Nadi
26 Aug.	Wed.		Data Analysis	Nadi
			Preparation of Evaluation Report (Kiribati TER and Fiji TER)	
27 Aug.	Thurs.	08:00	Leave Nadi for Tarawa (FJ231)	
31 Aug.	Mon.	15:00	Arrival at Nadi from Tarawa (FJ230)	Nadi
1 Sep.	Tue.	08:30	Move to Sigatoka	Suva
		10:00	Visit the Fijian Resort (Hotel 3R Project) - Interview with a stakeholder	
			Ms. Mereoni Mataika, Service Manager of Marine Sanctuary	
		10:50	Visit Sigatoka landfill	
		11:15	Visit Sigatoka Town Council - Interview with CPs	
			Mr. Tulsi Ram, CEO and Ms. Salanieta Kerekerelevu	
			Interview Mr. Ryoichi Koga (JOCV)	
		12:10	Move from Sigatoka to Suva	
		14:30	Visit Suva City Council - Interview with CPs	
			Mr. Bijay Chand, Acting CEO, Ms. Josefini Koroi, Acting Director Health Services, Mr. Naresh Narayan and	
			Mr. Robert Randolf	
		15:30	Visit the compost yard	
2 Sep.	Wed.	10:00	Visit DOE and interview with CPs	Suva
			Mr. Aminiasi Qareqare, Acting Director (National Project manager)	
			Ms. Laisani Lewanavanua, Ms. Mere W. Leba and Ms. Laisa Matagi	
		14:30	Courtesy Call to Mr. Praveen Bala, Minister for Local Government, Housing and Environment and	
			Mr. Samuela Namosimalua, Permanent Secretary, Ministry of Local Government, Housing and Environment	
		16:00	Internal meeting at JICA Fiji Office	
3 Sep.	Thurs.	08:30	Internal meeting for drafting of evaluation report	Suva
		14:30	Internal meeting for finalization of evaluation report	
4 Sep.	Fri.	10:30	Meeting with DOE to discuss on the evaluation report	Suva
			Ms. Laisani Lewanavanua and Ms. Mere W. Leba	
		16:00	Report to JICA Fiji Office	
5 Sep.	Sat.	14:00	Move from Suva to Nadi	In flight
		22:00	Leave Nadi for Apia (FJ253)	

4-1. Dispatch of Experts

Experts from Project Office	Short-term Experts	Local expert *	Total
3.6 MM	23.9 MM	0.9 MM	28.4 MM

Note: Cost of local expert is included in Local Cost Support

4-2. Training in Japan

Course Name	Period	Position / Organization	Name
"J-PRISM Regional Training for Trainers" in Okinawa	25th May to 4th June, 2015	Manager, Department of Health, Lautoka City Council	Mr. Rouhit Singh
		Senior Health Inspector, Lautoka City Council	Mr. Shalend Singh
		Health Inspector, Nadi Town Council	Ms. Nafiza Ali
		Asst. Health inspector - Health Department, Labasa Town Council	Mr. Newal Kishore Naidu

4-3. List of Machinery and Equipment provided by Japan

None

4-4 Local Cost

Country	Air Fare	Travel Allowance	Contract		Fees and honorarium (non-staff)	Refreshments	Miscellaneous	Total			
			Contracts over 500,000 yen	Commission Contract (others)				In local currency	Local Currency	In Japanese Yen*1	In USD *2
Fiji	2,620.35	10,677.75	0.00	2,760.89	1,890.00	3,078.60	201,646.03	222,673.62	Fiji dollar	¥12,367,444	US$106,247.32

Note 1) JICA's official rate – from local currency to Japanese yen,
2) Exchange rate from Japanese Yen (JPY) to US Dollar:
For JFY2010-July 2013: JICA's official rate of August 2013 (USD1=JPY98.10)
For Aug2013-June 2015: JICA's official rate of June 2015 (USD1=JPY123.96)

5-1 List of Counterpart Personnel

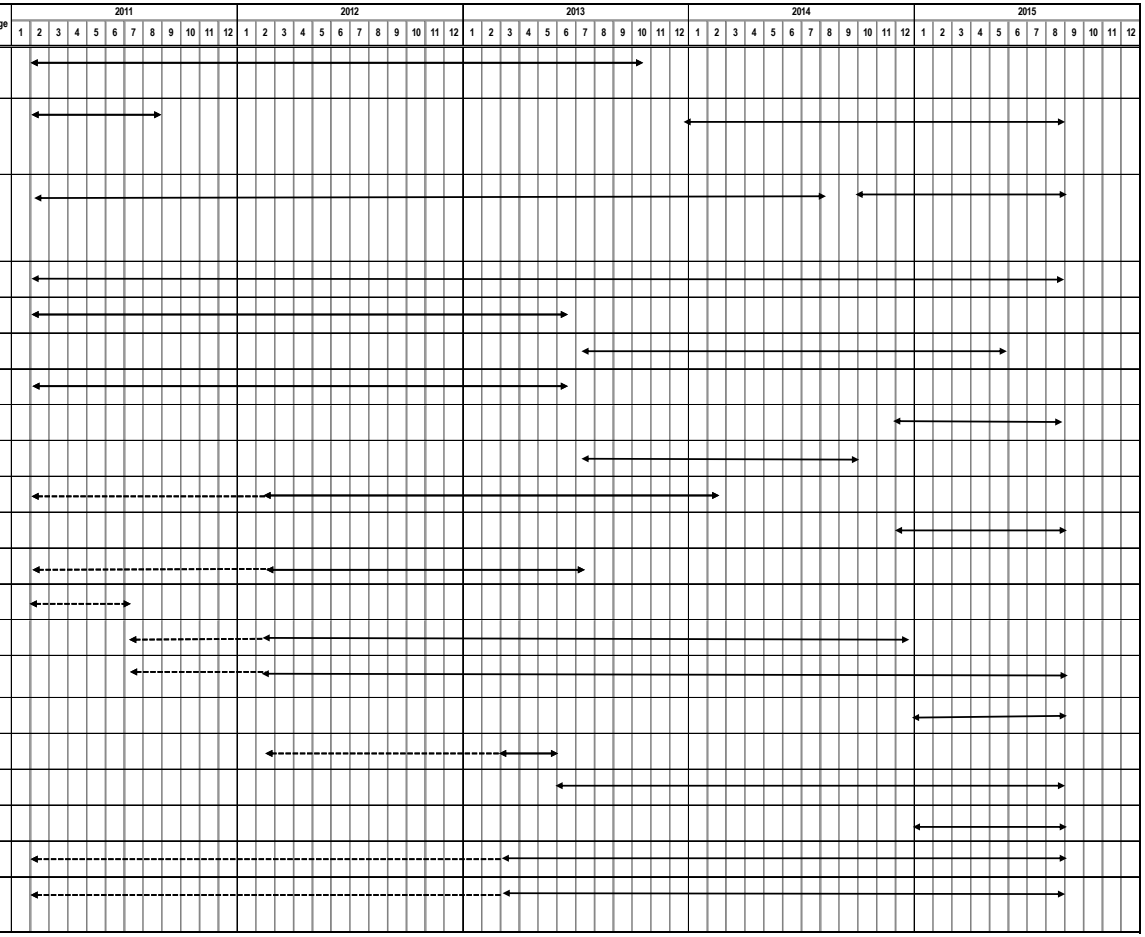
See next Page

5-2 Local Cost

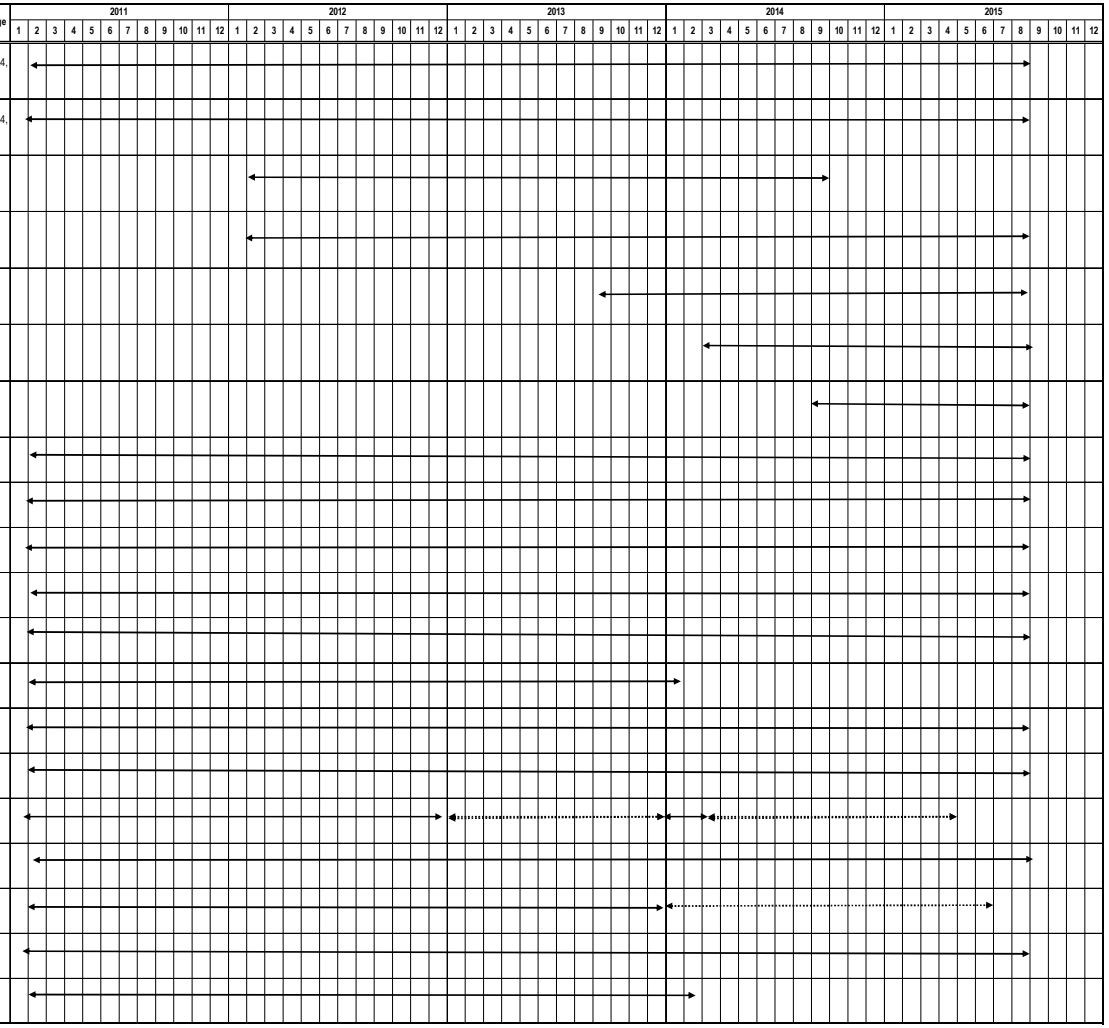
Cost item	Travel expenses (airfare, allowances, transportation etc.)		2. Expenses for documenting		3. Purchasing goods/materials		4. Foods /Drinks		5. Others		Total	
Fiji	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD
	34,302	16,048	14,327	6,703	436,151	204,049	42,069	19,682	133,631	62,518	660,480	308,999

5-1 List of Counterpart Personnel (Fiji)

#	Name	Management CPs	Assigned Period	Position	Organization	Activities in charge
1	Jope Davetanivalu	National Project Director	Feb. 2011-Oct. 2013	Director	Department of Environment, Ministry of Local Government, Urban Development, Housing and Environment	1-4, 2-1
2	Aminiasi Qareqare	National Project Manager	Feb. 2011-Aug. 2011, Jan 2014 -	Principal Environment Officer (Waste Management & Pollution Control) -> Acting Director	Department of Environment, Ministry of Local Government, Urban Development, Housing and Environment	
3	Praveen Bala		Feb. 2011-	Special Administrator (SA) -> Minister for Local Government, Urban Development, Housing and Environment	Lautoka City Council -> Ministry of Local Government, Urban Development, Housing and Environment	
4	Jone Nakauvadra		Feb. 2011 (??)	Chief Administration Officer (CEO)	Lautoka City Council	
5	Aisea Tuidraki		Feb. 2011-Jun.2013	Special Administrator (SA)	Nadi Town Council	
6	Robin Ali		Jul. 2013-	Special Administrator (SA)	Nadi Town Council	
7	Namia Tagi		Feb. 2011-Jun.2013	Chief Administration Officer (CEO)	Nadi Town Council	
8	Robin		Dec. 2014-	Chief Administration Officer (CEO)	Nadi Town Council	
9	Jay Whyte		Jul. 2013-Oct. 2014	Special Administrator (SA)	Sigatoka Town Council	
10	Anand Pillaiy		Feb. 2011-Feb.2013	Chief Administration Officer (CEO)	Sigatoka Town Council	1-1, 1-3
11	Tulsi Ram		Dec. 2014 -	CEO	Sigatoka Town Council	1-3
12	Arun Prasad		Feb. 2011- July 2013	Special Administrator (SA)	Ba Town Council	
13	Tulsi Ram		Feb 2011 - ? 2011	CEO	Ba Town Council	
14	Tulsi Ram		? 2011 - Dec 2014	CEO	Tavua Town Council	1-3
15	Dip Narayan		?, 2011-	Chief Administration Officer (CEO)/Senior Health Inspector	Ba Town Council	1-2, 1-3
16	Temalesi Henfiro		Jan 2015 -	CEO	Tavua Town Council	
17	Seini Reiko		- May 2013	SA	Rakiraki Town Council	
18	Cirikiwasawasa Ralulu		June 2013 -	SA	Rakiraki Town Council	
19	Rakesh Chandra		Jan 2015 -	CEO	Rakiraki Town Council	
20	Chandu Umaria		Feb. 2011-	Special Administrator (SA)	Suva City Council	
21	Bijay Chand		Feb. 2011-	Acting Chief Administration Officer (CEO)/Director of Health Services Department	Suva City Council	1-2, 1-3

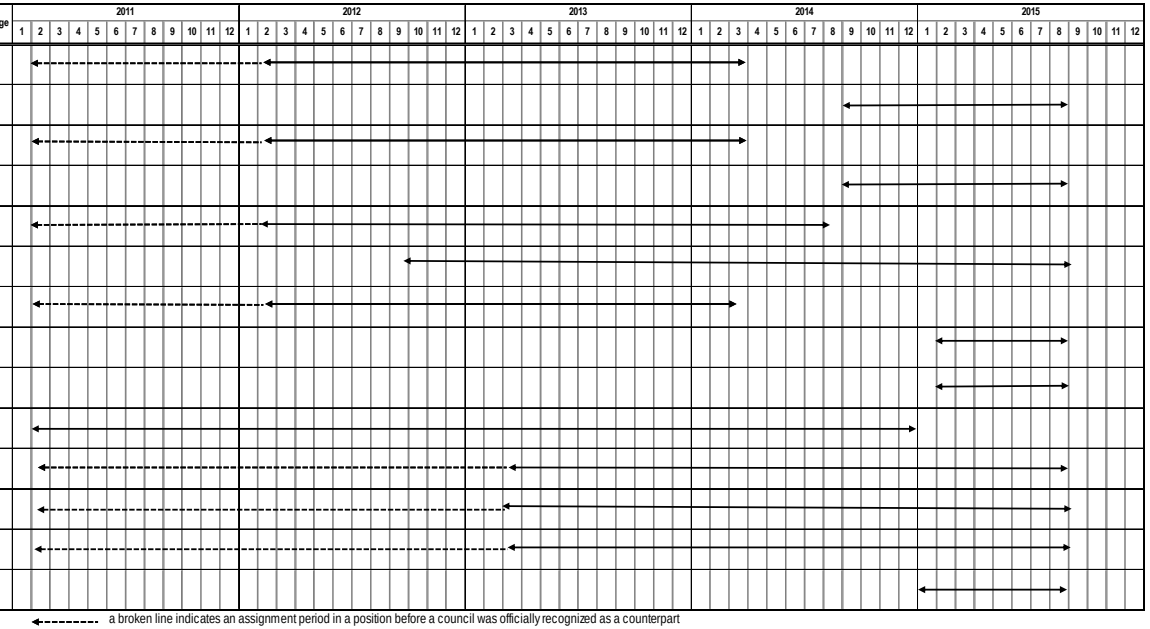


#	Name	Technical CPs	Assigned Period	Position	Organization	Activities in charge
1	Laisani Lewanavanua		Feb. 2011-	Senior Environment Officer (Waste Management & Pollution Control)	Department of Environment, Ministry of Local Government, Urban Development, Housing and Environment	1-1, 1-2, 1-3, 1-4, 2-1, 2-2, 2-3
2	Senivasa Waqairamasi		Feb. 2011-	Senior Environment Officer (Western Division)	Department of Environment, Ministry of Local Government, Urban Development, Housing and Environment	1-1, 1-2, 1-3, 1-4, 2-1, 2-2, 2-3
3	Mere Komailevuka		Feb. 2012-Sep.2014	Technical Officer (Western Division)	Department of Environment, Ministry of Local Government, Urban Development, Housing and Environment	1-4, 2-1, 2-2, 2-3
4	Kelera Tokalau		Feb. 2011-	Environment Officer (Western Division)	Department of Environment, Ministry of Local Government, Urban Development, Housing and Environment	1-4,
5	Mere W. Leba		Sep. 2013 -	Environment Officer	Department of Environment, Ministry of Local Government, Urban Development, Housing and Environment	1-4, 2-1, 2-2, 2-3
6	Sakenasa Namisi		Mar.2014	Environment Officer (Western Division)	Department of Environment, Ministry of Local Government, Urban Development, Housing and Environment	1-4,
7	Laisa Matagi		Sep. 2014-	Senior Environment Officer (Waste Management & Pollution Control)	Department of Environment, Ministry of Local Government, Urban Development, Housing and Environment	1-1, 1-2, 1-3, 1-4
8	Gyneshwar Rao		Feb. 2011-	Director (Department Of Health)	Lautoka City Council	1-2, 1-3, 2-2
9	Rouhit Singh		Feb. 2011-	Manager (Department of Health)	Lautoka City Council	1-2. 1-3, 2-2
10	Shalend P Singh		Feb. 2011-	Senior Health Inspector (Department of Health)	Lautoka City Council	1-2. 1-3, 2-2
11	Wally Pauu		Feb. 2011-	Health Inspector (Department of Health)	Lautoka City Council	1-2, 1-3, 2-2
12	Mithun Prasad		Feb. 2011-	Health Inspector (Department of Health)	Lautoka City Council	1-3
13	Ronika		Feb. 2011-Jan.2014	Health Inspector (Department of Health)	Lautoka City Council	1-3
14	Sheik Mohammed Saidil Ali Shaib		Feb. 2011-	Heavy Machinery Operator	Lautoka City Council	1-2, 1-3, 2-2
15	Anjay Kumar		Feb. 2011-	Landfill Machinery Operator	Lautoka City Council	1-3
16	Sakaraia Serau		Feb. 2011-	Senior Health Inspector	Nadi Town Council	1-2. 1-3, 2-3
17	Rajeshwar Raj		Feb. 2011-	Health Inspector	Nadi Town Council	1-2, 1-3, 2-3
18	Premila Chandra		Feb. 2011-	Health Inspector	Nadi Town Council	1-2. 1-3, 2-4
19	Nafiza Ali		Feb. 2011-	Health Inspector	Nadi Town Council	1-2, 1-3, 2-4
20	Sakenasa Namisi		Feb. 2011-Feb.2014	Environment Officer	Nadi Town Council	1-2. 1-3, 2-4



ANNEX 3(a)-Fiji

#	Name	Technical CPs	Assigned Period	Position	Organization	Activities in charge
21	Maria Ravesivesi		Feb. 2011-Mar 2014	Health Inspector (assistant)	Ba Town Council	1-2, 1-3
22	Ronika Mishra		Sep 2014 -	Health Inspector	Ba Town Council	1-2, 1-3
23	Unayz Asum		Feb. 2011- Mar 2014	Building Inspector	Ba Town Council	1-2, 1-3
24	Hiren Pillay		Sep 2014 -	Head Gardener/Landscaper	Ba Town Council	1-2, 1-3
25	Eseta Leawere		Feb. 2011-Jul.2014	Senior Health Inspector	Sigatoka Town Council	1-2. 1-3, 2-4
26	Ashnil Sharma		Oct. 2012-	3R Project Officer / Assistanct Health Inspector	Sigatoka Town Council	1-2. 1-3, 2-4
27	Robert		Feb. 2012- Mar 2014	Market Master	Tavua Town Council	1-2, 1-3
28	Alvines Prasheel Kumar		Feb 2015 -	Collection vehicle driver	Tavua Town Council	1-2, 1-3
29	Pramod sigh		Feb 2015 -	Labor, Assistant of Collection vehicle driver	Tavua Town Council	1-2
30	amy balemaiwai		Mar. 2013-Dec 2014	Assistant Market Officer	Rakiraki Town Council	1-2, 1-3
31	Naresh Narayan		Mar. 2013-	Senior Health Inspector	Suva City Council	1-2, 1-3
32	Taito Rauluni		Mar. 2013-	Health Educator	Suva City Council	1-2, 1-3
33	Robert Randolf		Mar. 2013-	Assistant Senior Health Inspector	Suva City Council	1-2, 1-3
34	Maria Ravesivesi		to be advised	Asssitant Health Educator	Suva City Council	1-2, 1-3



a broken line indicates an assignment period in a position before a council was officially recognized as a counterpart council at JCC Meeting

Sigataka, Ba and Tavua recognized in Feb.2012 at 1st JCC

Rakiraki and Suva recognized in Mar.2013 at 2nd JCC

ANNEX 3(a)-Fiji

DOE

DOE has exercised its leadership for 3R promotion by strengthening the network amongst councils through bi-monthly meeting, and achieved to launch the subsidy program of home composting and clean school program. These positive achievements by DOE are expected to be further ensured by formalizing National Waste Management Strategy (NWMS) and National 3R policy.

Table 1 :Progress of activities by DOE

Items of Activities	Progress made
National Waste Management Strategy (NWMS)	NSWMS expired in 2014 and the revising of the succeeding strategy will be started soon.
National 3R Policy	DOE drafted National 3R policy which is in the process of finalization as of Aug. 2015
Home Composting Subsidy Program & Clean School Program Financial Assistance	DOE launched the National Framework to Promote 3R, consisting of i) home compost subsidy program and ii) financial support program for Clean School Programs (CSP), in April 2015. Technical training was also conducted after the launching ceremony to provide necessary tips for implementation of two programs. Media awareness through TV and newspaper has been started since Aug. 2015 to promote home composting.
Training Program in Cooperation with DOE and SCC	For the purpose of capacity development of workers /officers of councils in the Central Division, training programs were conducted in cooperation with DOE and SCC every year since 2013. Topics of the training in 2013 was introduction to solid waste management data (lectures and exercises). In 2014, training of compost making for workers was carried out in collaboration with OISCA. In 2015, the training on planning of market compost was carried out.
Bi-monthly joint meeting	With the leadership of DOE, bi-monthly joint meetings have been held to monitor the progress of project activities. All seven (7) councils have taken turns to host the meetings. Meetings have provided effective networking amongst councils for better capacity building and good opportunities for DOE and councils to discuss about various issues, as well as providing advices for J-PRISM non-targeted councils, such as Lami, Nasinu and Nausori Town Council. Since the meetings has opened for J-PRISM non-targeted councils in 2014 and Nausori and Nasinu Town Councils have voluntarily attended the meeting.. All of 13 councils attend the meeting for the monitoring of subsidy program after the introduction of the program in 2015.
Monitoring template	All targeted councils are now using the common monitoring template developed with assistance of JICA expert. This makes it easier for both DOE and each council to monitor the progress of themselves. DOE is considering to utilize this monitoring template for other purposes..

LCC

Much progress have been made in landfill management, market waste and grass composting, and clean school program. Additional efforts are expected to promote separate collection of recyclables with some innovative approach. LCC is always expected to play a leading role in 3R promotion and have responded to such expectation, especially in terms of 3R-centric integrated SWM system.

Table 2: Progress of 3R Promotion for LCC

Indicators	Achievements	Issues to be addressed
Separate collection of Recyclables 1. Target 20% Participation rate is achieved.	Participation rate is low for recyclable collection from households at the average of 1% in June 2015. This indicator is less likely to be fulfilled by the completion of the project.	- More efforts are required to raise public awareness. - Legislation such as CDL should be introduced by DOE to promote recycling activities.
Home Composting 2. At least 350 bins to be promoted by Mar 2016. Note: LCC has been continuing their own subsidy program introduced in the previous 3R project since 2010.	287 compost bins are promoted (Achieved 78%). 332 bins are expected to be sold by the end of J-PRISM and the indicator is less likely to be fulfilled by the completion of the project. This is partly due to the rising the price for compost bins from F$55 to F$115.	- Monitoring activities are not sufficient and need to be strengthened.
Market Waste and Grass	16.6 tons and 22.31 tons of market compost	- As the demand for market compost

Composting 3. More than 15 tons in total of market compost and revenue of at least $4,500 to be produced by Mar 2016.	were generated in total respectively in 2014 and 2015 and revenue of at least $7,215 was produced by July 2015. The indicator has already been fulfilled.	has been increasing, it is expected to augment the amount of market waste to be collected, by i) supervising private contractors to conduct strict separation of waste, ii)awareness raising of vendors and iii) introduction of small-sized shredders.
Clean School Program 4. 3R concept to be promoted for 48 schools in urban and rural areas by March 2016.	3R concept was promoted to all 51 schools (26 in urban area and 25 in rural area) via school teachers at workshop in May 2013. Among 32 schools which prepared an action plan, all schools participated in CSP competition for 2015 (63% of all schools in Lautoka District). The indicator has already been fulfilled.	- As for the collection of recyclables and monitoring activities for some rural schools situated in remote areas, it is necessary to consider measures to more smoothly carry out such activities.
Landfill Management (VDS) 5. 100% coverage on site improvement (periphery bank, improvement of access road and drainage) in dump site by March 2016.	Site improvement has been done and the indicator has already been fulfilled.	- For water quality monitoring, LCC is considering to do it by themselves with test kit, o to outsource monitoring to the universities.

NTC

Much progress have been made in Clean School Program and collection of recyclables from households, some more effort are needed to increase compost bin sale and eco bag sale as well. NTC is also expected to play a leading role in 3R promotion and have responded to such expectation, especially in terms of CSP.

Table 3: Progress of 3R Promotion for NTC

Indicators	Achievements	Issues to be addressed
Separate Collection Recyclables 1. Participation Rate of target premises: 20 % by 2016. (Separate Collection of Recyclables: CBD Town Expansion)	It was decided that this activity for CBD is not implemented by the Council as sufficient manpower is not available at NTC. (It is not feasible for only 2 C/Ps to cover activities, such as to develop calendar, to explain community by going door-to-door, and to monitor the collection services as well.)	- Cooperation with recycling company should be strengthened. NTC is planning to provide CBD with information of recycling companies, so that CBD will independently proceed the separate collection of recyclables.
2. Amount of Recyclables : 15,000kg annually	Amount of recyclables collected by house-to-house visit was achieved to 15,047kg in FY 2014 (excluding PET bottles, glass bottles and hard plastics). And the amount achieved between March and June 2015 is 4,141kg. It is likely that this indicator will be fulfilled by the project completion.	- More efforts are required to raise public awareness.
Home Composting 3. Compost bins to be sold : 330 bins by end of project Note: NTC has been continuing their own subsidy program introduced in the previous 3R project since 2010.	330 bins are expected to be sold by the end of the project, however, 244 bins were sold in FY 2014.This is partly due to the rising the price for compost bins from F$55 to F$115. The indicator is less likely to be fulfilled by the completion of J-PRISM. However, monitoring is properly conducted and recorded.	- NTC could not obtain any bins between November 2014 and May 2015 due to the delayed purchase order and bins were out of stock for the meantime.
Clean School Program 4. 20 Schools to participate by 2016	In Nadi Town, 27 schools have been participating in CSP. Monitoring is done accordingly. In 2015, each schools has been monitored twice for the period of June to August. This indicator has already been fulfilled.	
Eco bag promotion 5. Eco bags to be sold by 2016 – 3000 bags.	As of the end of June, 2,170 eco bags have been sold. Due mainly to the lack of clothes, the indicator is less likely to be	- Raising awareness is needed to sell more bags. - NTC could directly have a contract with

	fulfilled before the completion of J-PRISM.	fabric factory, since the supply of waste cloth is unstable.

BTC

Much progress have been made in collection of vegetable waste for recycling. To promote the home composting and CSP, continuous efforts are expected.
As for CSP, continuous efforts are expected.

Table 4: Progress of 3R Promotion for BTC

Indicators	Achievements	Issues to be addressed
Market Composting 1. Collected vegetable waste for reuse/recycling: 38.5t/year	Average of 3,000 kg of vegetable waste are collected per month. Annualized amount based on this current data will mostly reach to the target. Therefore, this indicator is likely to be fulfilled before the completion of J-PRISM.	
Clean School Program 2. At least 23 schools strengthened. 11 urban schools 12 semi -urban (If it is possible to cooperate with a rural health inspector. If not, the goal of semi urban school is 5.)	11 schools (5 in rural area) have been implementing activities. They have been monitored by using monitoring sheets. Cooperation was not available from a rural health inspector for the 1st monitoring; however, it is expected to have their cooperation for the 2nd monitoring. This indicator is less likely to be fulfilled before the completion of J-PRISM.	- Cooperation among staff has been good and it needs to be further strengthened.
Home Composting 3. 10 bins are properly used.	3 bins have been sold as of August 2015. Promotion of home composting through media started in August 2015 by the initiative of DOE and public awareness is expected to be enhanced by showing bins to the public at the carnival. However, considering the current situation, this indicator is less likely to be fulfilled before the completion of J-PRISM.	- Monitoring plan needs to be developed.

STC

Much progress has been made in home and market composting. To promote CSP, it is necessary to further raise public awareness and ensure the proper use by regular monitoring. As for the disposal site rehabilitation, more efforts are expected for operation and maintenance.

Table 5: Progress of 3R Promotion for STC

Indicators	Achievements	Issues to be addressed
Disposal Site Rehabilitation 1. Number of fire/smoke and complaint from the citizens is decreased	Management of incoming wastes by pushing waste by heavy machinery have been done three times a week. On-the-job training were carried out for caretakers. After the rehabilitation, there were neither fire accidents occurred, nor complaints received. However, from April till June, 2015, two fire accidents occurred and one complaint received.	- A digger owned by STC is being to be repaired. At present, STC uses a digger leased by a private company. The cost is borne by the council.
Hotel Waste Reduction 2. 3R is implemented in more than 3 hotels	Pilot project for Hotel Waste Minimization has been completed at Shangri-La's Fijian Resort & Spa and results have been shared. Currently only one hotel is implementing 3R. Although some hotels have expressed their interest in 3R, no concrete action has been taken. This indicator is less likely to be fulfilled by the project completion.	- Hotel Association attempts to extend 3R to other hotels by using a monthly meeting.

Market Waste Composting 3. 20 % of market waste is reduced through composting and other 3R activities	Market waste is collected twice a week. As of July 2015, 12 % of market waste is used for composting and other 3R activities. This indicator is less likely to be fulfilled by the project completion, while efforts to raise awareness for market vendors and surrounding villagers were made to reduce more waste.	
Clean School Program 4. 3R activities are implemented by 10 schools (4 urban and 6 rural schools)	3 schools have already prepared action plans. Monitoring has not yet been conducted; however it will start September 2015. This indicator is less likely to be fulfilled by the project completion. As an activity to support CSP, JOCV of STC is planning to conduct 3R art contest for schools in Sigatoka District in collaboration with MOE and DOE.	- Implementation system should properly be established. - Involvement of stakeholders should be strengthened.
Home Composting 5. Sale of home compost bin to at least 5 ratepayers and 25% successful composting on first trail	8 bins have already been sold. Among them, four (4) bins are monitored and all of them successfully conducted composting. This indicator has been fulfilled.	- Need to purchase more bins to meet high demands for compost bins.

TTC

Some progress have been made for both Clean School Program and Home Composting. In order to fully achieve the target, monitoring activities is essential.

Table 6: Progress of 3R Promotion for TTC

Indicators	Achievements	Issues to be addressed
Clean School Program 1. The number of participating schools is 4.	4 schools have prepared action plans and started 3R activities. Among them, one (1) school was monitored and a monitoring sheet has been submitted. There are three (3) more schools outside the town boundary, which already started 3R activities by themselves. This indicator has been fulfilled.	- Monitoring should be conducted by using monitoring template developed by the Project.
Home Composting 2. At least 4 bins are properly used.	10 bins have already been sold. So far, monitoring was conducted for one (1) bin and the result was summarized in the monitoring sheet. The rest of bins will be monitored in September 2015. This indicator is likely to be fulfilled if the monitoring is conducted as planned in September.	- Monitoring should be conducted, by using monitoring template developed by the Project.

RTC

Much progress have been made for both Clean School Program and Data Collection Work. Need to strengthen the monitoring to assure that all the compost bins are properly utilized. At the end of July has made CEO took over the Special Administrator's responsibility for the time being. It is expected that this change would affect the monitoring activities.

Table 7: Progress of 3R Promotion for RTC

Indicators	Achievements	Issues to be addressed
Clean School Program 1. The number of participating schools is at least 7.	6 schools have prepared an action plan as of terminal evaluation in August 2015. The schools have been monitored and monitoring sheets are under preparation. The indicator will almost be fulfilled by the completion of J-PRISM.	- Monitoring sheet should be submitted as soon as possible. - In order to assure the quality of judging, support from other councils should be considered.

Data Collection Work 2. Basic strategy to promote organic waste recycling is made	Necessary data concerning waste management (e.g. weight of solid waste) is being collected to prepare the strategy (= an action plan). Action plan is being prepared and the indicator will be fulfilled by the completion of J-PRISM.	
Home Composting 3. At least 4 bins are properly used.	10 bins have already been sold; however, no monitoring has been conducted. It is less likely that this indicator will be fulfilled by the completion of J-PRISM.	- Monitoring to check if all the bins are properly utilized should be strengthened.

SCC

Much progress has been made in i) data collection and analysis, ii) market waste separation and composting, and iii) CSP. Regarding the market waste, collection of waste on Saturday may be considered.

Table 8: Progress of 3R Promotion for SCC

Indicators	Achievements	Issues to be addressed
Data & Information Collection for SWM Master Plan 1. At least 2 officers can utilize the database of municipal waste and market waste collection data and analyze the data	Three (3) officers can utilize the database and analyze the data. Collection and inputting of data from garbage trucks is now being carried out by the Garbage and Reuse Section of the Health Service Dept. As of Jan. 2015, the database of municipal waste is established and input work became routine work. The data is presented at the monthly council meetings.	
Market Waste Separation & Composting Project 2. At least 15% of waste from Suva Market is recycled	About 12% reduction rate is achieved (from Jan. to June, 2015). Pig farmers are provided about 10% of waste and 2% are used to make compost. As for July and August 2015, the rate was risen to about 15% since the frequency of green waste collection has been doubled in July. This indicator has been fulfilled. Improvement of data and information collection of SWM has made it possible for SCC to grasp the waste volume on a monthly basis. This means that reduction rate is now calculated based on the actual measured value not on the estimated value.	- Market is open every Saturday, generating a large volume of waste. However, the council cannot collect garbage as a collection system by the council does not work on Saturdays.
Clean School Program 3. The number of participating schools is at least 10.	As of August 2015, 19 primary schools submitted an action plan. Monitoring will start in September 2015.	
Home Composting 4. In total, 80 compost bins are distributed and properly used in 2015 (both under UNDP and DOE subsidy program)	111 bins (DOE: 30, UNDP: 81) have been sold as of the end of August 2015. Out of these, 62 bins were monitored. They are properly utilized. Considering the current status, this indicator is likely to be fulfilled by the completion of the Project.	

Terminal Evaluation Report for the Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Independent State of Papua New Guinea

Date: August 21, 2015

I. Project Outline and Evaluation Policy

(1) Project Outline	
Background	In Papua New Guinea, a rapid development of natural resources and a growing population, combined with rural-to-urban migration, have contributed towards a deterioration of living standards and the natural environment causing major concern within the country. Infrastructure, particularly for waste disposal and sewerage in urban areas, is under-developed. There is growing recognition that, rehabilitation of a major waste dump site, improvement of waste collection management, and development of sewerage systems, are issues that need to be addressed urgently.
Summary of the Project	(See Attachment 1 and 2 for details)
-Overall Goal	Sustainable management of solid waste in the Pacific Region is enhanced
-Project Purpose	Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)
-Priorities in RS2010	**Outputs**
Waste disposal	1) Solid waste disposal facility and operation is improved
Waste collection	2) Waste collection in Port Moresby is improved
Policy/Planning/ Performance	3) Capacity of planning and monitoring of Solid Waste Management in Port Moresby (National Capital District: NCD) is increased.
Project Duration	Five years from February 3, 2011 to February 2, 2016
Implementing Agency	National Capital District Commission (NCDC)
Collaborating Agency	Conservation and Environment Protection Authority (CEPA), Department of National Planning and Monitoring (DNPM)
Target Group	C/Ps of NCDC
Target Area/ Target Population	National Capital District Approx. 318,000 (Census, 2011)
(2) Evaluation Policy	
Objectives	1) To verify the accomplishments of the Project compared to those planned; 2) To identify promoting and/or inhibiting factors that have affected the project implementation process; 3) To analyze the Project in terms of the five evaluation criteria (i.e. Relevance, Effectiveness, Efficiency, Impact, and Sustainability); 4) To discuss the results of evaluation and solutions for problems that may be observed through the evaluation together with the personnel concerned with the Project and make necessary suggestions
Member of Terminal Evaluation Team	

	Title	Name	Position/Organization
	Cooperation Planning (Overall)	Toru TAGUCHI	Assistant Director, Environmental Management Division I, Global Environment. Department., JICA
*	Cooperation Planning (PNG)	Daisuke HORIKOSHI	Representative JICA PNG Office
*	Evaluation Analysis	Yasuyo HIROUCHI	Permanent Expert, International Development Associates Ltd

*Members participating in the evaluation study in the country

Period of Evaluation Study in the Country	Five days from August 17 to 21, 2015 (See Attachment 3 for details)
Methodology	JICA Terminal Evaluation Team collected the information through document

	analysis, questionnaire survey and interviews with the NCDC officers concerned with the Project, JICA experts, and a local stakeholder. Based on the results of the evaluation, the Team prepared a draft report and finalized it through discussions with the personnel concerned with the Project.
Limitation	Due to limited time available for the study, interviews were mostly limited to the NCDC officers involved in the Project. Sufficient time to discuss the findings with the C/Ps was not secured while preparing the draft.

II. Accomplishment and Implementation Process

(1) Inputs (as of June 2015 unless otherwise mentioned)

<Japanese Side>	**<PNG Side>**
1) Dispatch of JICA experts : 5 persons (19.5 M/M) - 2 Short-term Expert (14.0 M/M) - 2 Long-term Experts from Project Office (2.8 M/M) - 1 Local Expert from Project Office (2.7 M/M) (Cost of Local Expert is included in Local cost support) 1) Training in Japan: 3 persons - Training course titled "J-PRISM Regional Training for Training" in 2015 2) Provision of equipment : Nil Note: Ancillary equipment for Baruni landfill and market composting is planned to be procured in the last quarter of 2015 3) Local cost support: 12,439,767PGK (approx. 106,972 USD)	1) Assignment of National Project Director (PD), Project Manager (PM) and C/Ps: 17 persons. - 3 Management C/P (PD from CEPA, PM and Project Coordinator (PC) from NCDC) - 14 Technical C/P from NCDC 2) Local cost sharing: 8,837,560 PGK, (approx. 3,112,589 USD) - Cost for upgrading Baruni dump, procurement of compactors, a vehicle, etc. 3) Land, facilities, work space - Office space for JICA experts at Waste Management Division (WMD)/ NCDC

(2) Outputs

Output 1: Solid waste disposal facility and operation is improved	Degree of achievement[1]: Mostly achieved

Indicator	Results
1.1 Baruni upgrading plan is prepared and implemented	It is noted that cost for upgrading Baruni dump has been borne by the PNG side. ➢ Baseline: Before the Project, the site was operated as an open dumpsite ➢ Progress: ・ Though the progress was slow in the first half of the Project, the activities for upgrading Baruni dump got on track in the second half. (See "Implementation Process" for the issues faced in the first half of the Project). ・ Construction work finally started in June 2014 based on the upgrading plan, which consists of four parts: Cell 1, a leachate pond, a silt trap, and Cell 2. According to the contract schedule, construction was to be completed by June 2015. The construction is behind schedule, however, due to internal factors of the contracted company, which is beyond the control of the Project. ・ So far, construction of Cell 1 and silt trap has been completed. Cell 1 is expected to become operational in the last quarter of 2015 once the construction of the leachate pond is completed. Construction of Cell 2 has been almost completed and is expected to be completed before the end of the Project, assuming that the contractor fulfills his responsibilities. ・ The construction of the remaining ancillary parts, such as an access road, a drainage system and an administration area, will be continued by the PNG side after the end of the Project. According to NCDC, the construction is likely to be completed by the second quarter of 2016.

[1] *Degree of achievement for each output/Project Purpose is judged based on the achievement level of indicators set for each Output/Project Purpose. Ratings used for this judgment are four levels, such as "Fully achieved", "Mostly achieved", "Partly achieved", "Not achieved."*

	➢ Conclusion: The indicator has been mostly achieved and the degree of achievement is expected to be higher at the end of the Project. It is noted that the Indicator is expected to be fully achieved after the end of the Project by the PNG side alone.
1.2 Operation and maintenance manual is prepared and implemented	➢ Baseline: Before the Project, no standard operating procedures were available for operations at Baruni dump (and any other dumps in Port Moresby). All incoming wastes were dumped anywhere, depending on the drivers. There was a lack of supervision and direction on the site. ➢ Progress: ・ An O&M manual for Cell 1 has been already prepared. The manual will be updated once installment of the leachate pond and construction of Cell 2 is completed. . ・ NCDC staff has already started to voluntarily supervise the contractor/operators at the existing disposal site based on the manual when applicable. ・ NCDC plans to explain the manual to the contractor/operators on site before Cell 1 is open. Once the operation is started, NCDC staff will supervise them based on the manual. ➢ Conclusion: The Indicator has been mostly achieved and is likely to be fully achieved by the end of the Project.
<Overall> **Output 1 has been mostly achieved. It will not be fully achieved by the end of the Project primarily due to delay of the activities in the first half of the Project and internal factors of the contracted company in the second half of the Project. It is noted that the Output is expected to be fully achieved after the end of the Project by the PNG side alone**	

Output 2: Waste collection in Port Moresby is improved	Degree of achievement: Mostly achieved

Indicator	Results
2.1 Collection coverage is increased to 70%	Note: Collection coverage is determined by comparing the amount of the collected waste (estimated through an incoming waste survey) and the total amount of the generated waste (estimated through a waste audit). ➢ Baseline: Before the Project, the collection coverage was not available. Neither incoming waste survey nor waste audit was conducted. A good number of NCDC staff did not know what an incoming waste survey and a waste audit were and how to conduct them. They did not know how to analyze and utilize the results, either. ➢ Progress: ・ In 2014, about 60% of the generated municipal waste was collected according to the analytical results of an incoming waste survey at Baruni landfill and a waste audit conducted by the Project team. ・ The Project team plans to conduct another incoming waste survey in August 2015 to update the collection coverage. The updated coverage shall be reported to the final JCC scheduled in December 2015. ・ Since 2014, the Project team has introduced measures to improve collection in order to have the contractors/their operators collect the waste more efficiently and to monitor their operation more effectively. Through regular meetings with NCDC, the contractors were trained on how to improve their collection efficiency by maximizing the collection routes and improving the behavior of the operators. These measures are expected to increase the collection coverage assuming that the contactors fulfill their responsibilities. ➢ Conclusion: The Indicator has been mostly achieved. The degree of achievement at the end of the Project is likely to be higher.

2.2 Number of complaints are reduced by 30%	The Indicator is found to be impractical in the context of Port Moresby. For example, many of the complaints that were identified during the field surveys, such as time-and-motion survey and waste audit, were never delivered to the NCDC Headquarters directly. Many people do not have means and/or the time to make complaints to the NCDC Headquarters, either. For the effort of the waste collection team about the complaints, please see the additional item under Output 3. ➢ Conclusion: Achievement is not assessed because the Indicator was found to be impractical in the context of Port Moresby.
2.3 One time and motion study conducted by NCDC itself annually	Note: There is an editorial mistake in the Indicator. As per the PO (from the original to the latest ones), a time-and-motion study is scheduled bi-annually. The Indicator should be rephrased as "A time-and-motion study conducted by NCDC itself bi-annually" ➢ Baseline: Before the Project, time and motion studies were not conducted. A good number of NCDC staff did not know what a time-and motion study was and how to conduct it. They did not know how to analyze and utilize it. ➢ Progress: Time and motion studies were conducted and the reports prepared in 2011, 2012, and 2013 by NCDC. Another study is planned for September 2015 and the report is expected to be prepared by November 2015. ➢ Conclusion: The Indicator has been mostly achieved and is likely to be fully achieved by the end of the Project.

<**Overall**>
Output 2 has been mostly achieved. The degree of achievement is expected to be higher at the end of the Project. The exact achievement is expected to be available before the final JCC scheduled in December 2015.

Output 3: Capacity of planning and monitoring of Solid Waste Management in Port Moresby (National Capital District: NCD) is increased.	Degree of achievement: Mostly achieved

Indicator	Results
3.1 Solid Waste Management (SWM) plan is adopted	➢ Baseline: Prior to the beginning of the Project, a SWM plan was not available for NCD. It was not available for any provinces. There is no SWM plan at national level, either. ➢ Progress: ・ According to the latest schedule approved by the JCC in March 2015, the SWM plan is to be available for processing with NCDC for formal adoption by the end of 2015. ・ So far, 2 workshops were held in September2014 and March 2015 to discuss and formulate draft SWM plan with the stakeholders (i.e. NCDC staff from different divisions, CEPA, private collection and recycling companies, universities, etc). The contents of the plan, agreed through the workshops, are summarized in the table below:

Table a: Summary of the expected contents of SWM plan

Period	2016-2020
Scope	Municipal solid waste
Vision	WMD vision with emphasis on sustainable waste management and waste reduction is adopted
Principle	Waste hierarchy, polluter to pay and Best Practicable Environmental Option (BPEO)
Issues to be addressed	Soft components: Enhancement of institutional system, low public awareness and community involvement, improvement of NCDC management of outsourced services, analysis of base of payments covering outsourced services and adjustment, formation of the Waste Committee.

	Hard components: Improvement of collection coverage, regular collection services for settlements and villages, inadequate management of medical and hazardous wastes, low recycling rates and demand, an integrated plan for intermediate treatment and final disposal at Baruni

The final draft is expected to be submitted to the NCDC Board for adoption by the end of the Project as shown in the table below.

Table b: Timeframe for development of the SWM plan

	Major steps	Responsible Organization	Progress/ Provisional schedule
1	1st Workshop	WMD	2014/9 - Completed
2	2nd Workshop	WMD	2015/3 – Completed
3	Draft SWM plan	WMD	2015/9
4	Seminar to disseminate the draft	WMD	2015/11
5	Final draft	WMD	2015/12
6	Submission to the NCDC Board	WMD	2016/1
7	Board approval	NCDC	2016/2

There are no difficulties expected with the adoption of the plan once it is formally submitted since the plan is being prepared in consultations with the stakeholders and is based on the NCD Waste Policy (2014), which was ratified by the NCDC Board. It is likely that the SWM plan would be adopted shortly after the completion of the Project.

- Conclusion: The indicator has been partly achieved and is likely to be mostly achieved by the end of the Project. It is noted that the Indicator is expected to be fully achieved shortly after the end of the Project by the PNG side alone.

3.2 Solid waste management budget is prepared and SWM expenditure is analyzed for FY 2015	In 2014, solid waste management budget was prepared for FY 2015. Data regarding the expenditure for FY 2015 is being collected for analysis. It is expected that the expenditure will be analyzed before the end of the Project. ➢ Conclusion: The Indicator has been mostly achieved and is expected to be fully achieved by the end of the Project.
Additional item: Information on monitoring capacity of NCDC	Note: The Item is added in order to understand the contents of the Output properly. NCDC has developed capacity necessary for monitoring of implementation of the SWM plan. ➢ Landfill management team has developed regular monitoring and inspection schedule for the operation and improvement works at Baruni conducted by the contractor by using the template for the monitoring. After the monitoring, they report it to the senior officer and the Manager of WMD. If they have any issues, they are all treated at manager's level between WMD and the contractor. ➢ Waste collection team is keeping record on all complains for the collection services in their computer. They analyze them and provide instruction to the contracted company at weekly meetings. The number of the complaints for commercial collection services has been drastically decreased since the monitoring system is introduced.

<**Overall**>

Output 3 has been partly achieved and is expected to be mostly achieved by the end of the Project. It is noted that the Output 3 will be achieved after the end of the Project by the PNG side alone.

(3) Project Purpose	
Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific	Degree of achievement: Mostly achieved

Regional Solid Waste Management Strategy (2010-2015) (RS2010)

<table>
<tr><th>Indicator</th><th>Results</th></tr>
<tr><td>1 Four experts (trainers) are listed in the SPREP inventory</td><td>
The relevant data is not available because SPREP has not developed a mechanism for certification of trainers yet.

➢ Conclusion: The Indicator is not used to assess the achievement of the Project Purpose directly[2].

➢ For reference:
・ Before the Project, no C/P had an experience in training others in SWM at regional level. They did not have sufficient capacity and experiences to do that, either.
・ The Project team considers that cumulative total of 5 experts capacitated through the Project could be candidates for certified trainers of SPREP.

Table c: Number of candidates for certified trainers of SPREP
<table>
<tr><th></th><th>Field of expertise</th><th>Number</th></tr>
<tr><td>1.</td><td>Waste Survey Techniques</td><td>2</td></tr>
<tr><td>2.</td><td>Solid Waste Planning (Landfill Design)</td><td>1</td></tr>
<tr><td>3.</td><td>Landfill Management techniques</td><td>1</td></tr>
<tr><td>4.</td><td>Management skill</td><td>1</td></tr>
<tr><td colspan="2">Cumulative total</td><td>5</td></tr>
</table>

・ As of June 2015, cumulative total of 19 C/Ps have participated in the international/regional/country training and workshops organized by J-PRISM as trainers. They are considered as trainers recognize by J-PRISM and are listed in the Pacific Islands Database of Capacity Development Activities (PIDOC), an inventory of SPREP developed through J-PRISM.

Table d: Number of trainers listed in the PIDOC
<table>
<tr><th></th><th>Field of expertise</th><th>Number</th></tr>
<tr><td>1.</td><td>Waste Generation/Characterization Study</td><td>2</td></tr>
<tr><td>2.</td><td>Time and Motion Study</td><td>1</td></tr>
<tr><td>3.</td><td>National/State SWM Strategy</td><td>2</td></tr>
<tr><td>4.</td><td>Waste collection and Transportation</td><td>4</td></tr>
<tr><td>5.</td><td>Landfill Design</td><td>1</td></tr>
<tr><td>6.</td><td>Landfill Improvement/ Rehabilitation/Construction</td><td>2</td></tr>
<tr><td>7.</td><td>School/community program</td><td>6</td></tr>
<tr><td>8.</td><td>Contract management</td><td>1</td></tr>
<tr><td colspan="2">Cumulative total</td><td>19</td></tr>
</table>
</td></tr>
<tr><td>2 Landfill management/collection services are implemented according to the SWM plan</td><td>The Indicator is not used to assess the achievement of the Project Purpose since the period of the SWM plan is 2016-2020 so that it will not be implemented before the conclusion of the Project.</td></tr>
<tr><td>Additional item:

NCDC is ready to implement landfill management/collection service according to the SWM plan.</td><td>
The Item is added in order to reflect the contents of the Project appropriately.

➢ Baseline: Before the Project, a SWM plan was not available for NCD. NCDC did not have capacity to implement it.
➢ Progress:
Since the SWM plan is the first of its kind in the country, its implementation may be challenging; but serious problems are not anticipated for the following reasons:
(i) The SWM plan is being prepared directly by the C/P team of WMD with its Manager leading the team:
</td></tr>
</table>

[2] This indicator was not used as a direct measure of the Project Purpose for the following reasons: (i) while PIDOC, the existing database, is an inventory of SPREP, the persons listed are trainers recognized by J-PRISM but not considered as officially certified trainers by SPREP: and (ii) the target values are not valid as they had been determined before the introduction of PIDOC (thus not consistent with the number of trainers listed in it).

(ii) The SWM plan is being developed, reflecting the lessons learned through the Project in the fields of landfill management, collection services, and 3R so that it is expected to be realistic:

(iii) Through the Project, technical capacity of WMD has been enhanced in the fields of landfill management and collection services so that they will be able to implement the activities according to the SWM plan assuming that private contractors fulfill their responsibilities.

- Landfill management: WMD has become able to plan and monitor the operation using the O& M manual they have developed through the Project. WMD has also become able to plan, design, and monitor the construction work for upgrading and development of the landfill conducted by a private contractor.
- Collection service: WMD has become able to analyze the filed data collected through time-and-motion studies and waste audit; and they can reflect the analytical results in the improvement of the service:

(iv) The SWM plan will include a 5-year action plan for landfill management, waste collection services, and 3R among others with estimated budget. An annual action plan with necessary budget will be prepared by WMD for approval by the senior management of NCDC: and

(v) The SWM plan is expected to have support from the senior management of NCDC since it is based on the NCD Waste Policy and is adopted by the Board before its implementation.

➢ Conclusion: The Item has been mostly achieved and is expected to be fully achieved by the end of the Project.

<**Overall**>

The Project Purpose has been mostly achieved and is likely to be achieved more by the end of the Project.

(4) Implementation Process

(a) Progress of Activities

1) Overall:

The Activities have been delayed almost for two years primarily due to the stagnation of the progress in the first half of the Project caused by various reasons. According to the Mid-term Review Report, "PMU had not been established till February 2013 which caused the delay in activities. Although there was enormous effort paid by JICA experts from Project Office in Samoa and their effort was greatly appreciated, most difficulties might be attributed to the absence of JICA short-term experts from December 2011 to October 2012, exacerbated by background security issues".

Since JICA short-term expert was assigned in November 2012 and the PMU was established in February 2013, the activities started to get on track. Most of the planned activities are likely to be completed before the end of the Project. Though some activities cannot be completed before the end of the Project, they are expected to be completed after the end of the Project by the PNG side alone.

2) Issues/Points specific to each Output

➢ Output 1:

- Activity 1-3(Preparation of upgrading plan for Baruni Dump): According to the Mid-term Review Report, another drawback in the first half of the Project was" an inadequate application for Environment Permit. The natural condition survey implemented by a contractor was very poor, and it took long time to prepare the document pertaining to the environmental permit by C/Ps. However, since the implementation of the Project actually improves the environment, DEC has agreed to lower the Environment Permission level for the Project".
- Activity 1-4 (Upgrading work for Baruni Dump): As stated in the results of the Indicator 1.1 for Output 1, the construction work is expected to be mostly completed before the end of the Project and will be completed by the PNG side alone after the end of the Project.

➢ Output 2:

- Activity 2-4 (Amendments to the contracts for waste collection contractors): Discussion with the contractors on the amendments is ongoing based on the results of time-and-motion studies and

incoming waste records. Lessons form a pilot project for settlement collection improvement (i.e. introduction of communal collection), which will be implemented from September 2015, shall be reflected in the contract amendments. Actual contract amendments are expected to be made in the first quarter of 2016, however, in time of renewal of the contracts in March 2016.

- Output 3:
  - Activity 3.1 (Promotion of 3Rs for inclusion in SWM plan): The Activity 3.1 has been added to the PDM with initiative of the C/Ps, who recognized the importance of 3R promotion especially through Training and Dialogue Program in Japan and a regional training in Fiji in 2012. 3R HEART pilot project, targeting 8 schools, was officially launched in October 2014. In addition, Gerehu market green waste composting project is expected to be launched in the last quarter of 2015. Discussion is ongoing with Pacific Adventist University (PAU), who has shown keen interest in producing and using compost in their PAU farm instead of buying and using chemical fertilizers. Subject to success in the discussions, WMD will enter into an MOU with PAU and start to transport to Gerehu market green waste to PAU for a three-month trial basis. The lessons learnt from both projects will be reflected in the SWM plan.
  - Activity 3.2 (Development of the SWM plan for Port Moresby): As per the PO revised after the Mid-term Review, the plan was to be available for processing with NCDC for formal adoption by 2014 end. The planning process started in early 2014. However, the Project team needed to pay more attention to Output 1. In addition, under 3-1, the Project team decided to undertake waste minimization schemes on pilot basis to make the Plan more realistic, which was agreed in the first workshop in September 2014. Accordingly, the development of SWM plan was rescheduled, which was approved by the fourth JCC in March 2015. As per the latest PO, the plan is to be ready by the end of 2015.

(b) Project Management

- The PNG side has participated in decision making process duly. JCC has been held annually, which has been effective in giving overall guidance and direction of the Project.
- The PMU had not been established until February 2013, which was one of the reasons for slow uptake of the Project.
- Project management, including internal monitoring system, has been improved since the establishment of the PMU. Appointment of Output leaders has also facilitated effective project management
.

(c) Communication within the Project and coordination with the Collaborating Agencies.

- Communication within NCDC, which was pointed out as a significant impediment by the Mid-term Review, has been strengthened in the second half of the Project. C/Ps are working with a team spirit; communication is sufficient to implement the project activities.
- Communication between C/Ps and the JICA Expert Team has been sufficient.
- Communication and coordination with CEPA and DNPM need to be enhanced.

(d) Communication with other Relevant Organizations

- Other relevant organizations, such as Department of Health, University of Papua New Guinea, Pacific Adventist University, etc. have been invited to participate in workshops for SWM plan formulation. The related documents have been shared with them.

(e) Collaboration/coordination with Local Stakeholders

	Stakeholder	Coordination/collaboration
1	Waste pickers	Coordination with the waste pickers has been improved in the second half of the Project. ・ A comprehensive survey was conducted in 2014 to understand the current situation of waste pickers. Information such as the number of waste pickers, personal attribution (such as age, gender, education, health, origin etc), their dependence, their living conditions, materials they collect, safety at the site, their intention to continue waste picking, etc. was collected. ・ Based on the results of the survey, the Project team has encouraged the contractor to employ waste pickers as their site staff. (14 employed) ・ NCDC used to employ some waste pickers as casual labor. Their employment status has been changed to permanent. (7 permanent staff) ・ In September 2014, two children belonging to the waste pickers, who were playing at the foot of the waste slope at the waste disposal area of Baruni dump, died from an accident caused by carelessness of a bulldozer operator hired by the contractor's

		subcontractor. ・ To prevent another tragic accident, Baruni Safety Plan was prepared in October 2014. Baruni Safety Committee has been established, which consists of NCDC, the contractor, and representatives of waste pickers, too. ・ The Project team discussed with the Urban Youth Employment Program to provide job training opportunities for youth from the waste picker's communities in the middle of 2014 and early 2015. ・ The Waste pickers have participated in the inauguration ceremony for Cell 1 of the Baruni landfill.
2	Settlement community	Coordination effort has started recently. The C/Ps are meeting with the community of Ranuguri settlement in order to discuss a waste collection system appropriate for settlement.
3	Private business	Generators of large amount of wastes, receiving the waste collection service of NCDC, monitor the collection contractors and inform WMD of lapses in the collection services.
4	Gerehu market	Through discussions with the C/Ps, Gerehu market agreed to provide its green waste to be used for composting.
5	Recycling companies	The Project team has facilitated the companies to recyclables at Bruni dump and has involved them in 3R HEART pilot projects.
6	Teachers and students	Teachers and students of 8 schools collaborated with the Project in implementing 3R HEART pilot projects at school.

(f) Participation in Region-Wide Activities of J-PRISM

The C/Ps and officers of the related organizations have participated in the various region-wide activities organized by J-PRISM.

	Year	Title	Venue	Number	Remarks
1.	2011	J-PRISM/ILO Occupational Safety &Health (OS&H) Training in waste collection	Port Moresby	34	
2.	2011	J-PRIISM Regional Training on Landfill Management	Vanuatu	3	
3.	2012	J-PRISM Clean Pacific Regional Solid Waste Management Training workshop	Fiji	1	
4.	2012	J-PRISM Study Visit on Landfill Management	Fiji/Samoa	5 (3 from NCDC)	Travel cost met by PNG side
5.	2012	J-PRISM Country Attachment Program for Landfill Management	Fiji/Samoa/ Vanuatu	1	
6.	2013	J-PRISM/ILO Training of trainers' workshop on OS&H in Waste Management for PICs (JPRISM/ILO)	Samoa	1	
7.	2014	J-PRISM Regional Training for Trainers	Fiji	3	
8.	2014	J-PRISM Study Visit for Market Compost in Lautoka, Nadi, Sigatoka and Suva, Fiji	Fiji	1	
9.	2015	J-PRISM Trainers Training to develop Regional Guides for SWM in Pacific Island Countries	Okinawa	3	
10.	2015	J-PRISM Country Attachment in Labasa Fiji from PNG	Fiji	1	
11.	2015	J-PRISM Study Visit on Clean School Program and Home Composting to Nandi Council	Fiji	1	

In addition, the Melanesian SWM workshop was held in Honiara in Solomon Islands during the period of August 5-7, 2015. The C/Ps from PNG and Vanuatu were invited to the workshop to participate together with the C/Ps from Solomon Islands. Five C/Ps from NCDC participated in the workshop. One of them is a supervisor. This was the first time a supervisor was sent for training within the Project.

(g) Coordination with Other Japanese and International Projects

1) Holistic approach with other schemes of Japanese assistance

	Scheme	Coordination
1	Training and Dialogue Program of JICA	So far, 11 C/Ps from NCDC have participated in the Training and Dialogue Programs in Japan and another C/P is going to participate in the training in August 2015. In addition, 3 officers from DEC (then) have participated in the training. Table e: List of Training and Dialogue Program of JICA participated by NCDC and DEC

	Year	Title	Number of participants

1	2011	Solid Waste Management and 3R	NCDC 1, DEC1
2	2011	Solid Waste Management by Local Government (Pacific Region) (2011)	NCDC 2
3	2012	Solid Waste Management and 3R	NCDC1
4	2012	Waste Management Technique	NCDC 1
5	2013	Waste Management Technique	NCDC 1
6	2013	Solid Waste Management by Local Government (Pacific Region)	NCDC 1 DEC 1
7	2013	Design and Maintenance of Semi Aerobic Landfill Site (Fukuoka Method)	NCDC1
8	2014	Design and Maintenance of Semi Aerobic Landfill Site (Fukuoka Method)	DEC 1
9	2014	Enhancement of Solid Waste Management Capacity (Advance, Planning &Policy (2014)	NCDC 1
10	2015	Enhancement of Solid Waste Management Capacity (Advance, Planning &Policy	NCDC 1
11	2015	Management of Sustainable Recycling Business in Island Area	NCDC 1
12	2015	Management of Composting Project (plan)	NCDC 1

2) Collaboration with other donors

	Scheme	Coordination
1	World Bank (Urban Youth Employment Program)	As already stated, the Project team discussed with the World Bank's Urban Youth Employment Program implemented by NCDC to provide training opportunities for youth from the waste picker's communities. Job training were conducted in the middle of 2014 and early 2015.
2	UNWOMEN (Safe Market Program)	The Project team has been discussing with the Market Division of NCDC supported by UNWOMEN on composting of the green waste produced by the markets

(h) Other Promoting and Inhibiting Factors

1) Promoting factors

- Strong organizational and financial commitment from the GoPNG and NCDC
  - The GoPNG and NCDC have committed counterpart funding so that the Project team have been able to improve the Baruni dumpsite without financial impediment.
  - Understanding and leadership of the Governor, who is known as pro-environment, as well as the City manager, whose background is engineering, has facilitated smooth implementation of the Project.
  - NCDC has started acquisition process of land adjacent to the Baruni landfill necessary for future expansion. A portion has been already obtained.
- Highly motivated and committed C/Ps

2) Impeding factors

- Unfamiliarity with the concept of technical cooperation of JICA
  - Some C/Ps were not familiar with the concept of the technical cooperation project of JICA. Therefore, it took some time for them to realize that there was little direct financial support and/or equipment involved in this Project, but rather, technology transfer and capacity development.

III. Results of Analysis from the Viewpoints of Five Evaluation Criteria

(1) Relevance

The Project is still relevant

(a) Necessity

The Project is relevant with the needs of the Papua New Guinea and the Target Area (i.e. NCD). Considering the rapid development and growth of all around the country and the NCD in particular, the pressure to deal with solid waste is high.

(b) Priority

The Overall Goal is consistent with Medium Term Development Plan 2011-2015 of Papua New Guinea in which waste Management is stated under "Cross-cutting sectors, Environment". PNG will host APEC Summit in 2018 and it will provide the cities an extra impetus to tackle the growing waste issue. It is also consistent with Japan's ODA policy (i.e. Japan's Country Assistance Policy for the Independent State of Papua New Guinea in 2012), and Waste Management is stated under Japan's ODA Rolling Plan for Papua

New Guinea, Priority Area "Environment and Climate Change", Program "Formulation of Recycling Oriented Society in Islands".

(c) Appropriateness as means

Japan has accumulated practical techniques, knowledge, know-hows and valuable lessons in the field of solid waste management. Such information has been transferred through training in Japan and OJT/technical advice provided by the JICA Experts. Judging from the assessment of the NCDC personnel on them, technical advantages of Japan are confirmed.

(2) Effectiveness

The Project is expected to be mostly effective

(a) Achievement of Project Purpose

Though the progress was slow in the first half of the Project, the delay has been mostly caught up through efforts of NCDC and advice of JICA Experts. Outputs have been mostly achieved and the Project Purpose is likely to be mostly achieved by the end of the Project.

(b) Contribution of Outputs to Project Purpose

Logical relation between Outputs and Project Purpose is confirmed.

(c) Other promoting/inhibiting factors

Specific factors have not been identified.

(3) Efficiency

The Project has been mostly efficient

(a) Production of Outputs

Outputs have been mostly produced (see Accomplishment of Outputs for details)

(b) Appropriateness of Inputs

- PNG side: Overall, Inputs by the PNG side have been mostly appropriate in producing Outputs.
  - Personnel: The he personnel with adequate technical background and competency have been assigned to the Project.
  - Facilities: WMD does not have good internet connection due to viruses; physical communication through internet has been difficult.
  - Equipment: There were only three vehicles available in WMD, which was insufficient to make regular visits to Baruni for supervision. An additional vehicle (double cabin truck) has been procured in order to facilitate regular supervision and direction.
  - Local cost: In terms of quantity, NCDC has provided necessary budget especially in the second half of the Project, including the construction cost for upgrading Baruni dump, and it has been utilized fully. Meanwhile, utilization/disbursement of the C/P fund, allocated by the GoPNG through DNPM, was not sufficient except for 2012.
- Japanese side: Overall, Inputs by the Japanese side have been fairly appropriate in producing Outputs.
  - Experts: In terms of timing and quantity, dispatch of JICA Short-term Experts was not appropriate in the first half of the Project. As stated already, JICA Short-term Experts were not dispatched for almost one year from December 2011 until the end of October 2012, which caused a delay in progress of the Project. It should be also noted that, due to insufficiency of dispatch of the Expert, the need for equipment, specification etc, could not be clearly identified, which resulted in non-utilization of the budget for equipment. In terms of quality, the Experts with adequate background, relevant experiences and sufficient technical level have been dispatched. They are accessible and ready to answer the technical questions made by the C/Ps.
  - Equipment: No equipment has been provided so far. In the second half, the budget for weighbridge system was secured upon the request. The system, however, was not procured since there were technical problems related to the identified installation site, which were not resolved in time. It is noted that some equipment is expected to be procured in the last quarter of 2015 to make the operation of upgraded Baruni landfill more effective and to facilitate the market green waste composting activities.
  - Training in Japan: Contents of the training were relevant with the needs of the Project and quality of training was appropriate. All of the training participants interviewed by the Evaluation Team showed great appreciation on them. Since the training in Japan was conducted in May to June 2015 and the subject was regional training for trainers, the C/Ps have not been able to utilize what they learned in the Project.
  - Local cost: Necessary amount of the local operational cost has been disbursed in time. Travel cost to participate in the Melanesian SWM workshop held in Solomon Islands in August 2015 provided the C/Ps opportunities to share the experiences of PNG, and to exchange ideas and lessons learned. Collaborative relationship has been established among the participants.

(c) Utilization of region-wide activities and external resources

The C/Ps have gained new insights, ideas, skills, and lessens from all of the region-wide activities of J-PRISM and Training and Dialogue Program of JICA in Japan they participated in. The C/Ps have shared what they learned to their colleagues and apply them in the Project. It is noted that the C/Ps became aware of the importance of 3R through these training and took initiative in adding a new activity for promotion of 3R in the PDM. Good practices of other PI countries, such as semi-aerobic landfill system in Samoa and Vanuatu, market composting operations and Clean School Programme in Fiji, have been adapted in the context of Port Moresby.

(4) Impact

Overall Goal is likely to be achieved in three years after the end of the Project. Other various positive impacts have been already observed and more are foreseen. A negative impact, caused by carelessness of the contractor, was observed but the countermeasures have been already taken.

(a) Impact at Overall Goal level

Overall Goal is likely to be achieved in three years after the end of the Project, judging from the likelihood of achievement of its Indicator.

Indicator	Likelihood
The importance of waste minimization is understood and more than one waste minimization scheme is practiced in NCDC	As a waste minimization measure, 3R HEART initiative has been introduced on a pilot basis since 2014. 3R HERAT will be included in the action plan of SWM plan (2016-2020) and will be practiced as part of the regular program of WMD from 2016. Preparation a pilot project for composting market green waste is ongoing and is expected to start from September 2015 for three-month trail basis. Green waste composting is also expected to be included in the action plan of SWM plan so that it would be practiced from 2016. Lessons learned from the pilot projects will be reflected in finalization of the SWM plan so that its action plan should be realistic and feasible. In view of the above, it is likely that the Indicator would be achieved with continuous effort of NCDC Note: Since the Project addresses not only waste minimization but also landfill management and waste collection, it would be useful to rephrase the Indicator as follows: "Landfill management, collection services, and waste minimization are implemented according to the action plan of the SWM plan (2016-2020) in three years after completion of the Project".

(b) Other impacts

➢ Positive impacts observed

- Incidents of fire at Baruni dump have been drastically decreased since on-site supervision by NCDC staff is enhanced.
- NCDC used to employ some waste pickers as casual labor. Their employment status has been changed to permanent. The contractor was also encouraged to employ waste pickers as their site staff. (14 employed)
- Job training opportunities for youth from the waste picker's communities were provided in the middle of 2014 and early 2015 in coordination with the Urban Youth Employment Program
- A Baruni worker from waste picker's community, interviewed by the Evaluation Team, noticed the positive change in the health risks they used to face before the Project, such as waste littering and disease carried by flies. Since improvement of operation started in full-scale in 2014, wastes are covered by the soil so that the flies are less.
- Field studies introduced through the Project, such as waste audit and time-and-motion studies, have increased opportunities for dialogue between service providers (C/Ps) and end users (general public, private business, etc.) , which have deepen the understanding of what the needs and issues are on the ground. The results have been reflected in improvement of the collection services.
- Through 3R HEART pilot projects, 6 out of 8 schools have already applied "reduce" and "reuse" at schools. Some of the schools take ownership of the 3R HEART and even use their own money to build cages for aluminum cans and pet bottles rather than giving excuses of financial problems. Some students brought unwanted items in the house/community to schools and made them into something useful. For example, bottles of whiskey have been turned into colorful decorative items and sold for PGK10.

- Positive impacts foreseen
  - In 2016, about 20 more schools are likely to join the 3R HERAT because of the positive impacts of less waste in schools through Media learn.
  - The amount of waste in schools will be reduced and the practice will be applied at home because students will bring the practice into their own homes.
- Negative impacts:
  - In 2014, two children from waste picker's community died from an accident at the disposal area of Baruni dump caused by careless ness of the contractor. To prevent another accident, Baruni Safety Plan was prepared in October 2014. Baruni Safety Committee has been established to discuss the safety issues regularly, which consists of NCDC, the contractor, and representatives of waste pickers).

(5) Sustainability

Sustainability is likely to be secured with continuous effort of the C/Ps and support of the senior management of NCDC as well as enhanced coordination with the national agencies and local stakeholders.

(a) Policy and institutional aspects

- Policy and legal support: Legislative/ national policy frameworks for waste management do not exist. The absence of a national waste policy framework has moved NCDC to develop NCD Waste Management Policy in consultation with the stakeholders, including senior officers of the WMD, who are the C/Ps. NCDC has developed a draft of by-law for waste management in NCD. The draft finalized through in-house consultation will be presented in a public consultation meeting. Then, the revised draft will be submitted to the Department of Provincial and Local Level Governments for approval.

(b) Organizational aspects

- Organizational strategy: The SWM plan (2016-2020) is in the process of development based on the NCD Waste Management Policy. The final draft is expected to be submitted to the NCDC Board in January 2016 for its review and approval.
- Assignment of the personnel: While WMD has 30 permanent positions, the C/Ps (and other officers) work on contract basis with NCDC. The contracts are reviewed and renewed every three years based on the performance. In other words, they would be continuously working with WMD unless their performance is found unsatisfactory. So far, the contracts of the C/Ps have not been suspended or terminated for a reason of poorness of the technical performance. It is likely that the C/Ps would remain with WMD so that transferred techniques and accumulated experiences could be continuously used for SWM in Port Moresby.
- Coordination with the relevant organizations: Coordination and linkage with the national government agencies such as DNPM and CEPA has been weak, which needs to be strengthened.

(c) Financial aspects

- NCDC has allocated sufficient budget to implement the Project activities, mostly for upgrading of the Baruni dump into a sanitary landfill. NCDC is committed to allocate the necessary budget to complete the construction work at Baruni after the end of the Project. An annual budget for WMD has been increasing in the last four years, reflecting the commitment and priority of NCDC given to waste management. Moreover, the SWM plan with 5-year action plan with estimated budget is expected to be adopted by the Board.
- The GoPNG has also allocated counterpart fund for the Project through DNPM, which were not disbursed/utilized in 2013-2015. It is uncertain if the GoPNG continues to allocate the fund for waste management after the end of the Project.

(d) Technical aspects

- Technical capacity: Technical capacity of the C/Ps has been gradually enhanced in terms of practical knowledge regarding SWM, landfill management, waste collection, and promotion of 3R. Results of overall capacity assessment conducted in 2013 and 2015 shows improvement for categories of existing collection and operational analysis, collection, final disposal, and 3R. All C/Ps appear committed and confident in their ability to continue with the technical aspects of waste management activities, after completion of the Project. It is likely that they are able to continue the relevant activities after the end of the Project. While much improvement has been made in terms of capacity building, there are still remaining issues such as limited capacity for contract management within WMD, which leads to ineffective waste collection and landfill management. The results of overall capacity assessment also shows that there has not been too much improvement in administration as the C/Ps are still weak in terms of financial analysis and fees setting. (It is noted that setting fees and financial analysis is not included in the activities of the PDM).
- Utilization and dissemination of the transferred techniques and deliverables: Skills and knowledge transferred through the Project as well as the deliverables are considered relevant with the local level and needs. They are expected to be fully utilized by NCDC after the end of the Project. It is uncertain, however, if the

transferred techniques, accumulated experiences and lessons, etc. will be disseminated to other parts of the country since such a mechanism for this does not exist at present.

- The O&M manual for Baruni landfill will be utilized for monitoring and evaluation of the operation outsourced to the contractor; and updated as appropriate. In order to ensure the implementation of the manual on the ground and to facilitate monitoring and evaluation, the manual should be a part of a new contract, which will be awarded in March 2016.
- 3R HEART initiative introduced through the Project is expected to become part of the regular program of WMD/NCDC as it will be incorporated in the action plan for the SWM plan. By 2020, NCDC plans to extend the initiative to most of the schools in Port Moresby.
- During the incoming waste survey, volume of the waste that is entering the landfill is estimated by visual observation. In order to calculate the amount of the waste entering the site accurately, operation with the weighbridge system is indispensable. It is noted that a weighbridge system would be useful to set tipping fees based on the weight, and to estimate longevity of the landfill, too.

(e) Others

- Coordination and collaboration with local stakeholders: Collaboration/coordination with the local stakeholders, such as waste pickers, end-users of waste collection services, schools and recycling companies participating in 3R activities, has been improved especially during the second half of the Project. Collaborative relationship developed through the Project can be maintained and enhanced only with continuous and intensive effort of NCDC.

V Conclusion

Overall, evaluated from the five evaluation criteria, the Project is still relevant, is expected to be mostly effective, and has been mostly efficient. The countermeasures for a negative impact have been already taken and the sustainability is likely to be secured.

The Project Purpose is expected to be mostly achieved by the end of the cooperation period. Therefore, this project shall be finished on 2 February, 2016 as planned.

It is noted that the following issues need to be addressed by the PNG side after the project completion in order to ensure the effects of the Project:

1) Completion of the construction of the remaining ancillary parts, such as an access road, a drainage system and an administration area of Baruni landfill.
2) Enhancement of the incoming waste monitoring at Baruni landfill with the accurately calculated date.
3) Enhancement of administrative capacity, including capacity for financial analysis, setting fees, and procurement/contract management, for effective waste collection and landfill management
4) Involvement and support of national agencies in order to disseminate NCDC's efforts to other parts of the country

IV. Recommendations for the Remaining Period

For the remaining period of project implementation, the terminal evaluation team recommends the followings:

To the Project/NCDC:

1) Completing the construction work for Cell 2 of Baruni landfill and ensuring power supply
2) Completing the update of the O&M manual for Baruni landfill
3) Reviewing contracts for the Baruni landfill construction and operation as well as the waste collection
4) Incorporating the O&M manual for Baruni landfill into a new contract of the landfill operation which will be awarded in March 2016
5) Updating the waste collection coverage and reporting to the final JCC scheduled in December 2015
6) Finalizing the SWM plan and submitting it to the Board of NCDC for its adoption
7) Incorporating 3R pilot activities, including 3R HEART Program and the market green waste composting, into the regular program of NCDC
8) Strengthening coordination and linkage with the relevant organizations, including DNPA and CEPA, by identifying focal persons and having regular meetings with them

9) Continuing to promote the interaction with local stakeholders, including communities of waste pickers and residents of settlements
10) Modifying the Indicator and Means of Verification for Overall Goal for review and approval of the final JCC as shown in the table below.

Item	Original	Modification	Justification
Indicator for Overall Goal	The importance of waste minimization is understood and more than one waste minimization scheme is practiced in NCDC	Landfill management, collection services, and waste minimization are implemented according to the action plan of the SWM plan (2016-2020) in three years after completion of the Project.	The original one does not reflect the contents of the Project sufficiently.
Means of verification	SWM Plan implementation	Monitoring report on implementation of the SWM plan	The original one was not specific enough.

To the Government of PNG:
1) Involving national agencies further in the Project in order to share the know-hows, experiences, and lessons, etc. accumulated in WMD

To JICA:
1) Providing equipment to supplement NCDC's continuous efforts in the solid waste management

Attachment:

1. Latest Project Design Matrix (PDM ver2/March 2015)
2. Latest Plan of Operation (PO ver 3/March 2015)
3. Schedule of Terminal Evaluation
4. Record of Japanese Inputs
   4-1 Dispatch of Esxperts
   4-2 Training in Japan
   4-3 Local Cost
5. Record of PNG Inputs
   5-1 List of counterpart personnel
   5-2 Local Cost

Project Title: Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

PDM: Version 2 (3/2015)

Target Group : C/Ps of DEC and NCDC

Final Beneficiaries: Citizens of Papua New Guinea

Project period: Feb, 2011 - Feb, 2015 (5 years)

Implementing Agency: NCDC

Target Area: National Capital District

Date issued (revised): March 2015

Narrative Summary	Objectively Verifiable Indicators	Means of Verifications	Important Assumptions
Overall Goal			
Sustainable management of solid waste in the Pacific Region is enhanced	1. The importance of waste minimization is understood and more than one waste minimization scheme is practiced in NCDC.	Implementation report on waste minimization schemes	
Project Purpose			
Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	1. Four (4) Experts (Trainers) are listed in the SPREP inventory 2. Landfill management/ collection services are implemented according to the SWM plan.	SPREP (Regional inventory of skilled people) SWM Plan implementation	1. Natural disaster would not drastically affect the collaboration among PICs and SPREP. 2. Political changes of PICs would not drastically affect the collaboration among PICs and SP

#	Priorities under RS2010	Outputs	Objectively Verifiable Indicators	Means of Verifications
1	Sustainable Financing			
2-1	3Rs/4Rs			
2-2	Waste Disposal	**Output 1:**Solid waste disposal facility and operation is improved.	1-1 Baruni upgrading plan is prepared and implemented 1-2 Operation and maintenance manual is prepared and implemented	1-1 Implementation Report 1-2 Monitoring Report
2-3	Waste Collection	**Output 2:** Waste collection in Port Moresby is improved	2-1 Collection coverage is increased to 70% 2-2. Number of complaints are reduced by 30% 2-3 One time-and -motion study conducted by NCDC itself annually	2-1 Operation report (Amount of waste collected, average # of trips per day) 2-2 Complaints Register 2-3 Study Report
3	Legislation			
4	Awareness/Communication/Education			
5	Capacity Building			
6	Environmental Monitoring			
7	Policy,Planning, Performance	**Output 3:** Capacity of planning and monitoring of Solid Waste Management in Port Moresby (National Capital District: NCDC) is increased	3-1. SWM plan is adopted 3-2. Solid waste management budget is preparaed and SWM expendututre is analysed for FY 2015	3-1 Publication of the Plan 3-2 Budget analysis report
8	Solid Waste Industry			
*	Monitoring system of RS2010			

Activities	Inputs: Japanese Side	Inputs: PNG side	Important Assumptions
Please see PO for details.	Dispatch of JICA experts Provision of equipment and materials Provision of Regional, sub-regional and in-country workshops / training Local cost support	Assignment of National PD/PM and CPs Local Costs Sharing Provision of necessary land/facility, work space Funds for EIA (NCDC) Cost sharing for rehabilitation of Baruni landfill	1.Counterpart personnel keep working in the field of SWM. 2. Disasters, such as severe rain storm will not drastically affect the progress of proje 3. Necessary budget to carry out activities is allocated from the government.

Pre-condition

Attachment 1: Latest Project Design Matrix (PDM ver 3)

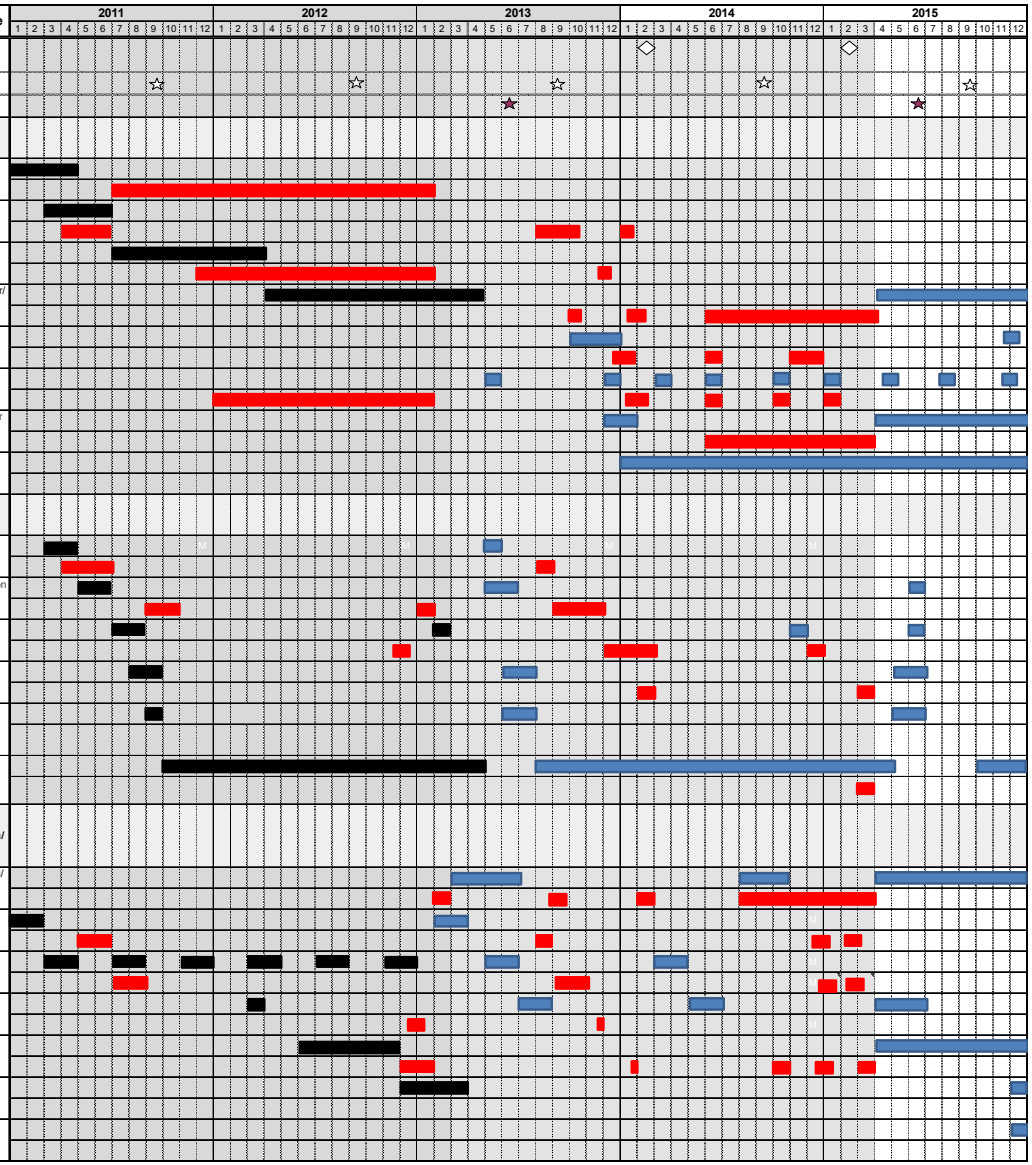
ANNEX 3(b)-PNG

Term: 2011 – 2015 (5years)

March 2015

Indicators of Project Purpose
1. Four (4) Experts (Trainers) are listed in the SPREP inventory
2. Landfill management/ collection services are implemented according to the SWM plan

	Outputs and Associated Activities	Indicators for Outputs	Person in-charge
JCC/SC/ Eva	JCC		Joshua Sam/ Janet Haua/ Dianna Wapyer
	Steering Committee		
	Evaluation Studies		
OUTPUT 1:	**Solid waste disposal facility and operation is improved**	1-1 Baruni upgrading plan is prepared and implemented 1-2 Operation and maintenance manual is prepared and implemented	**Simeon Terina**
1-1	Conduct site investigation into Baruni dumpsite		Completed
1-2	Develop a work plan for the rehabilitation of the Baruni dump		James
1-3	Undertake Environment Permit application process in order to obtain and Environment Permit		Completed
1-4	Undertake upgrading work on the rehabilitation of the Baruni dump		James/ Simeon/ Walter/ Kaupa
1-5	Develop an operation & maintenance manual for Baruni dump		Simeon/ Walter
1-6	Establish water monitoring system and implementation		Walter/ Simeon
1-7	Conduct training for both for landfill management staff and operators		Simeon/ James/ Walter
1-8	Monitor operations of the upgraded landfill and evaluate its efficiency		James/Simeon and Senior Officers
OUTPUT 2:	**Waste collection in Port Moresby is improved**	2-1 Collection coverage is increased to 70% 2-2 Number of complaints are reduced by 30% 2-3 One time-and -motion study conducted by NCDC itself annually	**John Navara (left WMD 1/2015)/ Vivianne Morofa**
2-1	Develop work plan to carry out time-and-motion study		Completed
2-2	Undertake time-and-motion study		Paul/ Vivianne/ Kupil (on study leave)
2-3	Analyse results and generate study report		Paul/ Vivianne
2-4	Make amendments to the contracts for the waste collection contractors		John (left WMD)/ Vivianne/ Joshua
2-5	Conduct training for all contractors		John (left WMD)/ Vivianne/ Paul/ Janet/ Racheal
2-6	Monitor and evaluate at scheduled intervals		John (left WMD)/ Vivianne/ Paul and the supervisors for solid waste
OUTPUT 3:	**Capacity of planning and monitoring of Solid Waste Management in Port Moresby (National Capital District: NCDC) is increased**	3-1 SWM Plan is developed and adopted 3-2 Solid Waste Management budget is prepared and SWM expenditure is analyzed for FY2015	**Ronnie Ranu (supported by Joshua/ Janet)**
3-1	Promotion of 3Rs for inclusion in plan (3R HEART Program and study for Gereh Market Green Waste Compost)		John (left WMD)/ Nanai/ Paul/ Racheal
3-2	Develop work plan for the waste characterization exercise		Ronnie (supported by Joshua/ Janet)
3-3	Undertake waste characterization exercise		Ronnie/ Vivianne/ Kupil (on study leave)/ Nanai
3-4	Analyze results and generate report		Ronnie/ Vivianne/ Kupil (on study leave)/ Nanai
3-5	Develop Solid Waste Management Plan for Port Moresby		Joshua/ Ronnie/ Vivianne
3-6	Adoption of Waste Plan by DEC and NCDC managements		Janet and Joshua
3-7	Implement and monitor the Waste Management Plan		Joshua and Senior waste management officers



Original schedule Actual schedule Revised schedule (as of March, 2015)

Attachment 2: Latest Plan of Operation (PO ver 3)

ANNEX 3(b)-PNG

Attachment 3: Schedule for Terminal Evaluation

Date		Cooperation Planning and Evaluation Analysis	Venue
Aug 17	Mon.	8:30 Meeting with JICA Papua New Guinea Office 10:00 Courtesy call to Project Director (Gunter/Wau/Veari, CEPA) 11:00 Kick-off Meeting with Mr. Honk, C/P &J/E 14:00 Interview with C/P for Output1 ① 14:00-15:00 Simeon 15:00-16:00 Walter	JICA Office CEPA NCDC Board Room
Aug 18	Tue.	9:00 Courtesy call for Mr. Leslie, NCDC (tbc) 9:30 Interview with C/P for Output 1 ② 9:30-10:30 Rickey 10:30 Interview with C/P for Output 2 10:30-11:30 Vivian 11:30-12:30 Racheal 12:30-13:30 Lunch 13:30 Interview with C/P for Output2 & Output 3 13:30-14:30 Paul 14:30-15:30 Diana (*15:30 Peter (Baruni worker) accompanied with Simeon & Walter)	NCDC Board Room
Aug 19	Wed.	9:00 Interview with Project Manager & Coordinator 9:00-10:00 Joshua 10:00-11:00 Janet 11:00-14:00 Lunch and Summarize of results from interviews 14:30-15:00 Meeting with DNPM(Courtesy call)	NCDC Board Room DNPM
Aug 20	Thu	9:00 Preparation of draft, internal meeting 14:00-16:00 Discussion with PM and J/E	JICA Office WMD
Aug 21	Fri.	9:00 Preparation of draft 13:00 Wrap-up meeting with C/P &J/E (discussion on draft) 16:00 Reporting to JICA PNG Office	JICA Office NCDC Board Room JICA Office

4-1. Dispatch of Experts

Long-term Experts from Project Office	Short-term Experts	Local Expert *	Total
2.8 MM	14.0 MM	2.7 MM	19.5 MM

＊Cost of Local eExpert is included in Local Cost Support

4-2. Training in Japan

Course Name	Period	Position / Organization	Name
"J-PRISM Regional Training for Trainers"	25th May to 4th June, 2015	Manager of Waste Management Division, National Capital District Commission (NCDC)	Mr. Joshua Sam
		Engineer of Engineering Division, NCDC	Mr. James Ricky
		Waste Management Officer, NCDC	Ms. Vivianne Morofa

4-3 Local Cost

Country	Air Fare	Fees and honorarium (non-staff)	Miscellaneous	Total			
	Travel Allowance / Air Fare	Fees and honorarium (non-staff)		In local currency	Local Currency	In Japanese Yen*1	In USD *2
Papua New Guinea	111,578.98	25,023.39	136,523.51	273,125.88	Kina	¥12,439,766.57	US$106,972.41

Attachment 5: Record of PNG Inputs

5-1 List of Counterpart Personnel

#	Name	Management CPs	Assigned Period	Position	Organization	
1	Gunther JOKU	National Project Director	Oct. 2012 to present	Managing Director	Department of Environment and Conservation	
2	Janet Haua	Project Coordinator	Aug. 2011 - to present	Manager, Waste Management	National Capital District Commission	1-8,2-6,3-5,3-6,3-7
3	Simeon Terina		Feb. 2011 - to present	Senior Enviromental Health Officer, Waste Management (Hazardous Waste)	National Capital District Commission	1-2,1-3,1-4,1-7,1-8,2-6,3-5,3-7
4	Joshua Sam	Project Manager	Feb. 2011 - Jan. 2012	Senior Enviromental Health Officer, Waste Management (Hazardous Waste)	National Capital District Commission	1-8,

#	Name	Technical CPs	Assigned Period	Position	Organization	Activities in charge
5	James Ricky		Feb. 2012 - to present	Project Engineer (Baruni Dumpsite Engineer)	National Capital District Commission	1-4,
6	John Narava		Feb. 2011 - to present	Senior Enviromental Health Officer (Municipal Solid Waste)	National Capital District Commission	1-8,2-2,2-3,2-4,2-5,2-6,3-1,3-2,3-5,3-7,
7	Ronnie Ranu		Feb. 2011 - to present	Senior Enviromental Health Officer (Dump Management)	National Capital District Commission	1-3,1-8,2-6,3-2,3-5,3-7,
8	Vivianne Morofa		Feb. 2011 - to present	Waste Management Officer- Industrial and Hazardous	National Capital District Commission	3-1,3-2,3-3,3-4,
9	Kupil Alau		Feb. 2011 - to present	Waste Management Officer-Medical Waste	National Capital District Commission	1-1,1-6,3-4,
10	Nanai Raga		Feb. 2011 - to present	Waste Management Officer- Markets and Schools	National Capital District Commission	2-2,2-3,2-4,2-5,3-1,
11	Walter Aukleya		Feb. 2012 - to present	Waste Management Officer-Illegal Disposal & Dump Management	National Capital District Commission	1-1,1-6,
12	Paul Wisi		Feb. 2012 - to present	Waste Management Officer-Domestics and Commercial	National Capital District Commission	2-2,2-3,2-4,2-5,2-6,3-1,
13	Joseph Kaupa		Feb. 2011 - to present	Supervisor- Illegal Disposal and Dump Management	National Capital District Commission	
14	John Kavu		Feb. 2011 - to present	Supervisor- Settlement Wastes	National Capital District Commission	
15	Gabriel Wambre		Feb. 2011 - to present	Supervisor- Domestic	National Capital District Commission	
16	Joseph Wagai		Feb. 2011 - to present	Supervisor- Commercial	National Capital District Commission	
17	David Unumba		Feb. 2011 - to present	Supervisor- Market/School	National Capital District Commission	
18	Phillips James		Feb. 2011 - to present	Supervisor- Medical Waste	National Capital District Commission	
19	Thomas Maume		Feb. 2011 - to present	Supervisor	National Capital District Commission	
20	Frank Griffin (Dr.)		Feb. 2011 - to present	Dean, Faculty of Science	University of Papua New Guinea	1-6,
21	Sneka		Feb. 2012 - to present	Supervisor	National Capital District Commission	1-5,
22	Hubert		Feb. 2013 - Mar. 2013	Senior Enviromental Health Officer (Municipal Solid Waste)	National Capital District Commission	3-5,
23	Racheal Inamuka		Mar. 2014 to present	Enviromental Health Officer (Municipal Solid Waste)	National Capital District Commission	3-1,
24	Diana Wapyer		Jan. 2015 to present	Enviromental Health Officer (Municipal Solid Waste)	National Capital District Commission	3-1,

ANNEX 3(b)-PNG

Attachment 5: Record of PNG Inputs

5-2 Local Cost borne by PNG side

	1. Travel expenses (airfare, allowances,		2. Expenses for documenting		3. Purchasing goods/materials		4. Foods /Drinks		5. Others		Total	
	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD
Papua New Guinea	81,000	28,528	9,000	3,170	117,560	41,405	11,000	3,874	8,619,000	3,035,612	8,837,560	3,112,589

Terminal Evaluation Report for the Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Solomon Islands

Date: August 28, 2015

I. Project Outline and Evaluation Policy

(1) Project Outline	
Background	In the Solomon Islands, the ethnic conflict, which erupted in 2001, damaged the country, however; the GDP growth rate has been over 5% since 2003 and its economy is recovering. While the situation with Law and Order has improved, there are on-going population flows from rural areas to urban and semi-urban areas such as Honiara and Gizo. Waste management has become an urgent issue for urban areas, due to the scarcity of land and an increasing amount and variety of waste.
Summary of the Project	(See Attachment 1 and 2 for details)
-Overall Goal	Sustainable management of solid waste in the Pacific Region is enhanced
-Project Purpose	Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)
-Priorities in RS2010	**Outputs**
3R/4R	1) 3R (Reuse, Reduce and Recycle) activities are practiced in Honiara and Gizo.
Waste Disposal	2) Waste disposal system is improved in Honiara and Gizo
Awareness/Communication/ Education	3) Lessons and experiences learnt are disseminated in Solomon Islands.
Project Duration	Five years from February 3, 2011 to February 2, 2016
Implementing Agency	Ministry of Environment, Climate Change, Disaster Management & Meteorology(MECDM), Ministry of Health and Medical Services (MHMS), Honiara City Council (HCC), Ministry of Culture and Tourism, Western Provincial Government (WPG), Gizo Town Council (GTC)
Collaborating Agency	Ministry of Land, Housing and Survey
Target Group	Officers of MECDM. HCC , WPG, and GTC
Target Area/ Target Population	Honiara City and Gizo Town Approx. 68,000 (census, 2009)
(2) Evaluation Policy	
Objectives	1) To verify the accomplishments of the Project compared to those planned; 2) To identify promoting and/or inhibiting factors that have affected the project implementation process; 3) To analyze the Project in terms of the five evaluation criteria (i.e. Relevance, Effectiveness, Efficiency, Impact, and Sustainability); 4) To discuss the results of evaluation and solutions for problems that may be observed through the evaluation together with the personnel concerned with the Project and make necessary suggestions
Member of Terminal Evaluation Team	

	Title	Name	Position/Organization
	Cooperation Planning (Overall)	Toru TAGUCHI	Assistant Director, Environmental Management Division I, Global Environment. Department., JICA
*	Cooperation Planning (Solomon)	Akiko FUKUDA	Project Formulation Advisor JICA Solomon Island Office
*	Evaluation Analysis	Yasuyo HIROUCHI	Permanent Expert, International Development Associates Ltd

*Members participating in the evaluation study in the country

Period of Evaluation Study in the Country	Five days from August 24 to 28, 2015 (See Attachment 3 for details)
Methodology	JICA Terminal Evaluation Team collected the information through document

	analysis, questionnaire survey and interviews with the officers concerned with the Project, JICA experts, JICA Overseas Volunteers (JOCVs), and Embassy of Japan. Based on the results of the evaluation, the Team prepared a draft report and finalized it through discussions with the personnel concerned with the Project.
Limitation	Due to limited time available for the study, interviews were limited to the C/Ps. Time to discuss the findings with the C/Ps was limited while preparing the draft.

II. Accomplishment and Implementation Process of the Project

(1) Inputs (as of June 2015 unless otherwise mentioned)

<Japanese Side>	**<Solomon Islands Side>**
1) Dispatch of JICA experts : 8 persons (19.3 M/M) - 4 Short-term Expert (15.3 M/M) - 3 Long-term Experts from Project Office (3.0 M/M) - 1 Local Expert from Project Office (1.0M/M) (Cost of Local Expert is included in Local cost support) 1) Training in Japan: Nil 2) Provision of equipment : 32,196 USD - Tractor attachment and fence for Gizo landfill, PC, printers 3) Local cost support: 1,123,500 SBD (142,876 USD) - Cost for airfare, travel allowance, commission of contract, etc. (See Attachment 4 for details)	1) Assignment of National Project Director (PD), Project Manager (PM) and C/Ps: 24 persons. - 3 Management C/P - 21 Technical C/P 2) Local cost sharing: 980,298 SBD - Cost for travel, documenting, etc. 3) Land facility, work space - Office spaces for JICA experts at HCC and MECDM (See Attachment 5 for details)

(2) Outputs

Output 1: 3R (Reuse, Reduce and Recycle) activities are practiced in Honiara and Gizo	Degree of achievement[1]: Mostly achieved

Indicator	Results
1.1 National Solid Waste Management Strategy and Action Plan (NSWMS 2009-2014) is reviewed and NSWMS (2015-2019) is developed	Note: Though Output 1 deals with 3R at municipal level, the Indicator deals with solid waste management at national level, which is beyond the scope of the Output. It is more relevant with Output 3, which deals with dissemination of lessons and experiences of the Project at national level, since the revised Strategy will be developed, reflecting the lessons and experiences learned from the Project. (See Additional Item 3a of Output 3 for results).
1.2 A national waste management communication strategy for 3R is developed	Note: The Indicator should be rephrased as "Waste management communication strategy for 3R is developed in Honiara and Gizo" since a national strategy is beyond the scope of Output 1. ➢ Progress (a) Honiara: A communication strategy for 3R was developed in 2012, which was endorsed by MHMS and HCC. 3R promotion has been conducted based on this strategy. (b) Gizo: WGP/Gizo has also developed its own communication strategy in 2012. The strategy has been utilized to promote 3R. 3R promotion has been conducted based on this strategy ➢ Conclusion: The Indicator has been fully achieved.
1.3 More than 50% of general public in Honiara and	➢ Baseline: Baseline information is not available. ➢ Progress The survey was conducted in June-July and August 2015 in Honiara and Gizo

[1] *Degree of achievement for each output/Project Purpose is judged based on the achievement level of indicators set for each Output/Project Purpose. Ratings used for this judgment are four levels, such as "Fully achieved", "Mostly achieved", "Partly achieved", "Not achieved."*

Gizo, who are interviewed randomly, can answer what 3Rs mean	respectively. The results are expected to be available in September 2015, which will be reported in the final JCC. ➢ Conclusion: Achievement of the Indicator was not assessed because the relevant data was not available yet.
1.4 One draft legislation for 3R is drafted	Note: Though Output 1 deals with 3R at municipal level, the Indicator deals with 3R at national level, which is beyond the scope of Output 1. ➢ Conclusion: The Indicator was not used to assess the achievement of Output 1 because it is beyond the scope of the Output. ➢ For reference ・ Possibility of development of legislation for CDL has been discussed. ・ MECDM C/P together with a customs officer will participate in a study visit for CDL in Palau scheduled in November 2015. Depending on the feedback from the training, MECDM will make a decision on possible introduction of CDL in the country.
1.5.1 Ten schools in Honiara develop 3R action plans	Nine schools in Honiara, which participate in Eco School Program, developed 3R action plans in June 2014. Another school has been incorporated in the Program recently and is likely to develop one by the end of 2015. ➢ Conclusion: The Indicator has been mostly achieved and is likely to be fully achieved by the end of the Project.
1.5.2 Three schools in Gizo develop 3R action plans	Five schools in Gizo, which participate in Clean School Program, developed 3R action plans in May 2014. ➢ Conclusion: The Indicator has been fully achieved. Degree of achievement is more than planned.
1.6.1Three 3R pilot projects are implemented in Honiara	Three 3R pilot projects have been implemented in Honiara. One of them has been completed already and the other two will be completed in August and November 2015 respectively. Table (i): Outline of 3R pilot projects in Honiara [illegible] ➢ Conclusion: The Indicator has been mostly achieved and is expected to be fully achieved by the end of the Project.
1.6.2Two 3R pilot projects are implemented in Gizo	Two 3 R pilot projects have been implemented in Gizo as shown in the table below. Table (ii): Outline of 3R pilot projects in Gizo [illegible]

	Pilot project	Organization in charge	Period	Outline
1.	Eco school program	HCC/ MECDM/ MHMS	Jun. 2014 -Nov. 2015	9 schools elaborated and 8 schools implement their respective action plans
2.	Waste segregation in Panatina Valley Community	HCC/ MECDM/ MHMS	Sep. 2013 - Aug. 2015	-Waste was segregated into organic and inorganic waste at the household level. -Organic waste was composted at home and inorganic waste is collected by HCC
3.	Eco bag campaign	MECDM	Sep. 2014 Last quarter of 2015	-Eco bags were sold at Central Market in Honiara to reduce the use of plastic bags. -Additional 500 bags will be produced and sold in the last quarter of 2015.

	Pilot project	Organization in charge	Period	Outline
1	Clean school	GTC/ WPG	May 2014 -	5 schools elaborated and

	program		Nov. 2015	implemented each action plan.
2	Waste station collection system	GTC/ WPG	April-Aug. 2015	Community covered by GTC was zoned into 8. 5 station collection systems were introduced in 3 Zones.

➢ Conclusion: The Indicator has been mostly achieved and is expected to be fully achieved by the end of the Project.

Additional Item 1a

Analytical reports of waste audit, time-and-motion studies, and incoming waste surveys are available for utilization in waste minimization/3R in Honiara and Gizo

Note: The Item was added by the Evaluation Team in order to understand the contents of the Output1 more appropriately.

➢ Progress:

(a) Honiara

- Waste audits were conducted in 2011 and 2015. The analytical report of the initial audit has been prepared. The report of the second audit is expected to be available by November 2015.
- Incoming waste surveys were conducted in 2012, 2014, and 2015. The reports of the first two have been already prepared. The report of the latest survey is expected to be available by November 2015.
- A time-and-motion study was conducted in 2012 but its report has not been finalized. The second study is planned in the last quarter of 2015. Its report is expected to be available by November 2015.

Table (iii): Progress of waste audit, incoming waste survey, and time-and-motion study

Type	Timing of field survey		Progress
Waste audit (waste characterization survey)	1	2011/8	An analytical report has been prepared and published in 2013.
	2	2015/6	Data is being compiled. An analytical report is expected to be completed by November 2015.
Incoming waste survey	1	2012/5	A draft analytical report has been prepared, which will not be finalized due to inaccuracy of data.
	2	2014/4	An analytical report has been prepared (for post-disaster management).
	3	2015/8	Data is being compiled. An analytical report is expected to be prepared by November 2015.
Time-and-motion study	1	(2015)	A study is planned in the last quarter of 2015. Analytical report will be ready before the final JCC.

(b) Gizo

- Waste audits were conducted in 2011 and 2015. An analytical report of the initial audit has been prepared. The report of the second audit is expected to be available by November 2015.
- Time-and-motion studies were conducted in 2011 and 2015. The report of the first study has not been finalized. The report of the second one is expected to be available by November 2015.

Table (iv): Progress of waste audit, incoming waste survey, and time-and-motion study

Type	Timing of filed survey		Progress
Waste audit (waste characterization survey)	1	2011/5-6	An analytical report has been prepared.
	2	2015/8	Data is being compiled. An analytical report is expected to be completed by November 2015.
Time-and-motion study	1	2011/11	An analytical report has been prepared.
	2	2015/7	Analysis of the data has been completed. Documentation is expected to be completed by November 2015.

It is noted that many of the reports have not been published.

	➢ Conclusion: The Indicator has been partly achieved and is likely to be mostly achieved by the end of the Project.

<Overall>
Output 1 has been mostly achieved. The degree of achievement by the end of the Project cannot be forecasted at the moment since the data for one of the Indicators is expected to be available in September 2015.

Output 2: Waste disposal system is improved in Honiara and Gizo.	Degree of achievement Mostly achieved

Indicator	Results
Additional item 2a: Rehabilitation of disposal sites is completed in Honiara and Gizo according to the respective rehabilitation plans	Note: The item was added by the Evaluation Team to understand the achievement of Output 2 properly since rehabilitation of disposal sites is the major activity under Output 2. (Two-thirds of the PDM activities for Output 2 are associated with the rehabilitation). ➢ Baseline: Before the Project, the sites were operated as open dumpsites. ➢ Progress: (a) Honiara: ・ Though the progress was slow in the first half of the Project, the activities for rehabilitating Honiara landfill got on track in the second half. (See "Implementation Process" for the issues faced in the first half of the Project). ・ Construction works finally started in April 2014, based on the rehabilitation plan, consisting of construction of main disposal areas (i.e. Section 1 and Section 2), a facility area, and a leachate pond. The facility area was completed in May 2015. Construction of the other parts is ongoing and is expected to be completed in October 2015. It is noted that the facility area was constructed through cost-sharing among MECDM, MHMS, HCC, and the Government of Japan through grass-root grant assistance scheme, NZAID, and J-PRISM. (b) Gizo ・ Though the progress was slow in the first half of the Project, the activities for rehabilitating Gizo landfill got on track in the second half. (See "Implementation Process" for the issues faced in the first half of the Project). ・ Improvement work finally started in October 2014, based on the rehabilitation plan, consisting of separation of the disposal sites into two cells and fencing. The separation was completed in May 2015. Construction of fence is almost completed. GTC/WPG is trying to secure the budget for completion of the fence for the FY 2016 (April-March for WPG). ➢ Conclusion: The Item has been mostly achieved. It will not be fully achieved by the end of the Project because the fencing of Gizo landfill will not be completed by then due to the budget constraint.
Additional item 2b Operation manual is utilized in Honiara and Gizo	Note: The item was added by the Evaluation Team to understand the achievement of Output 2 properly since operation based on the manual is the major activity under Output 2. (One-third of the PDM activities for Output 2 are associated with it). . ➢ Baseline: Before the Project, there were no manuals. The sites were operated without proper supervision/instruction. ➢ Progress: (a) Honiara ・ A draft operation manual for Ranadi landfill has been prepared based on the manual prepared by PVMC in Vanuatu through J-PRISM. The draft will be finalized in time for the completion of the rehabilitation in October 2015. ・ Operation has been supervised based on the draft. Training of the landfill staff will be conducted in advance so that they can operate the site in accordance with the manual. It is expected that the manual is utilized by the end of the

Project.

(b) Gizo

- The Gizo team plans to prepare the manual by November 2015 based on the manual prepared in Tonga through J-PRISM.
- The manual will be utilized once the construction of the remaining fence is completed.

➢ Conclusion: The Item has been partly achieved and is likely to be mostly achieved by the end of the Project.

2.1 Different types of waste materials are disposed at appropriate cells

➢ Baseline: Before the Project, there were no demarcated cells for different types of waste materials.

➢ Progress:

- Both in Honiara and Gizo, different types of waste materials are disposed at the designated places as shown in the table below.

Table(v): Disposal of different waste materials at Ranadi landfill in Honiara

	Types of waste materials	Designated cell	Situation
1	Medical waste	Discharged at separated area from municipal waste	-A hole was allocated for disposal of medical waste. -Medical waste is discharged in the hole without any treatment
2	Sludge	Discharged at separated area from municipal waste	-A hole was allocated for disposal of sludge. -Sludge is discharged in the hole without any treatment
3	Municipal waste	Discharged at main disposal area	-Municipal waste is discharged at main disposal area.

Table(vi): Disposal of different waste materials at Gizo landfill

	Types of waste materials	Designated cell	Situation
1	Medical waste	Discharged at separated area from municipal waste	-A hole was allocated for disposal of medical waste in April 2014 -So far no medical waste has been brought to the site.
3	Municipal waste	Discharged at main disposal area	-Municipal waste is discharged at main disposal area.

➢ Conclusion: The Indicator has been fully achieved.

2.2 Annual operation plan is developed

Note: Development of an annual operation plan is not in included in the activities of the PDM/PO. The Project team in Honiara and Gizo, however, recognize its importance and agreed to prepare the plan for their respective landfill, to be rehabilitated through the Project.

➢ Baseline: Before the Project, the landfills were operated without annual operational plans.

➢ Progress:

(a) Honiara: A draft operational plan of Ranadi landfill for FY 2016 has been prepared, which will be finalized by September 2015 for submission to the Council for review.

(b) Gizo: An operational plan for Gizo landfill, including the annual schedule and budget for FY 2016, is expected to be developed in November 2015 for submission to the WPG for review

➢ Conclusion: The Indicator has been partly achieved and is expected to be fully achieved by the end of the Project

2.3 10 officers and operators are trained for landfill operation in

➢ Baseline: Before the Project, officers and operators did not have knowledge /skills related to landfill management.

➢ Progress:

- Eleven officers and landfill staff (i.e. 5 officers and 6 landfill staff) have been

Honiara	trained for landfill operation in Honiara through training in Japan, regional training, and/or OJT. ・ Once rehabilitation of the Ranadi landfill is completed, on-site training is expected to be implemented for operation using the manual. ➢ Conclusion: The Indicator has been mostly achieved and is expected to be fully achieved by the end of the Project.
2.4 5 officers and operators are trained for landfill operation in Gizo	Note: There are only 3 officers and operators engaging in the landfill operation in Gizo. The Indicator should be rephrased as "3 officers and operators are trained for landfill operation in Gizo". ➢ Baseline: Before the Project, officers and operators did not have knowledge /skills related to landfill management. ➢ Progress: ・ Three officers and operators (i.e. one officer and two operators) have been trained for landfill operation in Gizo. ・ Once improvement of the Gizo landfill is completed, on-site training for operators is expected to be implemented for operation of the improved site. ➢ Conclusion: The Indicator has been mostly achieved.
2.5 Management of leachate is established	➢ Target site: Honiara (Gizo does not have a leachate pond yet). ➢ Baseline: Before the Project, there was no facility to control leachate. ➢ Progress: Construction of a leachate pond is ongoing as part of the rehabilitation, which is expected to be completed by October 2015. The leachate is expected to be managed in accordance with the operation manual, which is being prepared through the Project. ➢ Conclusion: The Indicator has been partly achieved and is likely to be fully achieved by the end of the Project.
2.6 Waste pickers are registered and managed properly	Note: Registration and management of waste pickers is not included in the activities of the PDM/PO. ➢ Baseline: Before the Project, there was no coordination/collaboration with waste pickers. ➢ Progress: (a) Honiara: A survey was conducted in July 2015 to understand the current situation of waste pickers and a meeting was held in August 2015. HCC plans to start registration once the rehabilitation is over. Management will be an issue in the post-project period. (Please also see "Collaboration/Coordination with Local Stakeholders" under "Implementation Process". (b) Gizo: GTC/WPG is in an opinion that registration is not effective until fencing is completed. ➢ Conclusion: The Indicator has been partly achieved.
<Overall> **Output 2 has been mostly achieved. The degree of achievement by the end of the Project is expected to be higher.**	

Output 3: Lessons and experiences learnt are disseminated in Solomon Islands.	Degree of achievement Partly achieved

Indicator	Results
3.1 Good practices on 3R and landfill management identified through the project	➢ Baseline: Baseline information is not available. ➢ Progress: ・ To promote SWM, MECDM has been conducting two-day provincial workshops at provincial level. During the workshop, materials on good

activities are available in all provincial centers	practices on 3R and landfill management have been distributed. So far, the workshops were held in 3 provinces (i.e. Western Province, Choiseul Province and Isabel Province) and the good practices are now available at the respective provincial centers. ・ In addition, MECDM plans to share the following materials with the provincial officers at the National Waste Management and Pollution Control Strategy (NWMPCS) Workshop scheduled in November 2015. ➢ Conclusion: The Indicator has been partly achieved and is likely to be fully achieved by the end of the Project.
3.2 Officers from each provincial government learn good practice on 3R and landfill management	➢ Baseline: Before the Project, officers from each provincial government had limited knowledge about good practice on 3R and landfill management. ➢ Progress: ・ As stated in the Indicator 3.1, MECDM has been conducting two-day provincial workshops to promote SWM. Officers from these 3 provincial governments have learned good practice on 3R and landfill management through the SWM workshop conducted in 2014 and 2015. ・ Officers from each provincial government will be invited to NWMPCS workshop planned in November, 2015, in which good practice on 3R and landfill management will be shared. (Please see Additional Item 3a for NWMPCS). ➢ Conclusion: The Indicator has been partly achieved and is likely to be fully achieved by the end of the Project. ➢ For reference: ・ Through a provincial SWM workshop organized by MECDM, integrated solid waste management is introduced; SWOT analysis and training on waste audit and composting are conducted. After the workshop, a waste audit is also conducted by MECDM and the provincial officers. Then, a follow-up provincial workshop will be held to present and discuss the results of the waste audit and to prepare the provincial SWM action plan. MECDM targets 3 provinces per year.
Additional item 3a: National Solid Waste Management Strategy and Action Plan (NSWMS 2009-2014) is reviewed and NSWMS (2015-2019) is developed	Note: The item is an Indicator of the PDM for Output 1, which was moved to Output 3 for the purpose of evaluation. (Please see the results of Indicator 1.1 for Output 1 for details). ➢ Progress ・ MECDM has decided to broaden the scope of NWSMS to National Waste Management and Pollution Control Strategy (NWMPCS). The period of NWMPCS would be 2016-2025. Timeframe for the development of the NWMPCS is shown in the table below. Table(vii):Timeframe for development of NWMPCS (2016-2025) (1st Draft is prepared based on the review of NSWMS (2009-2014); Workshop is held; Circulation of 1st draft; Finalization of the draft; Launching of the plan — MECDM; October, 2015; November, 2015; November, 2015; December, 2015; 2016 (tbc)) ・ It is noted that lessons and experiences learned from the Project will be reflected in development of the Strategy. ➢ Conclusion: The Item has been partly achieved and is likely to be mostly achieved by the end of the Project

	Major steps	Responsible Organization	Provisional schedule
1.	1st Draft is prepared based on the review of NSWMS (2009-2014)	MECDM	October, 2015
2.	Workshop is held	MECDM	November, 2015
3.	Circulation of 1st draft	MECDM	November, 2015
4.	Finalization of the draft	MECDM	December, 2015
5.	Launching of the plan	MECDM	2016 (tbc)

<Overall>
Output 3 has been partly achieved and is likely to be mostly achieved by the end of the Project.

(3) Project Purpose

Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	Degree of achievement: Mostly achieved.

Indicator	Results
1. Five (5) Experts (Trainers) are listed in the SPREP inventory	The relevant data is not available because SPREP has not developed a mechanism for certification of trainers yet. ➢ Conclusion: The Indicator was not used to assess the achievement of the Project Purpose directly[2]. ➢ For reference: ・ Before the Project, no C/Ps had any experience in training others in SWM at regional level. They did not have sufficient capacity and experiences to do that, either. ・ The Project team considers that cumulative total of 5 experts capacitated through the Project could be candidates for certified trainers of SPREP. (nationally recognized trainers). Table (viii): Number of candidates for certified trainers of SPREP (1. Waste Survey Techniques: 2; 2. Solid Waste Planning (Landfill Design): 1; 3. Landfill Management techniques: 1; 4. Management skill: 1; Cumulative total: 5) ・ As of June 2015, cumulative total of 11 C/Ps have participated in the international/regional/country training and workshops organized by J-PRISM as trainers. They are considered as trainers recognized by J-PRISM and are listed in the Pacific Islands Database of Capacity Development Activities (PIDOC), an inventory of SPREP developed through J-PRISM. Table (ix): Number of trainers listed in the PIDOC (1. Waste Generation/Characterization Study: 1; 2. Integrated SWM Planning/Management: 1; 3. Organic Waste Utilization: 2; 4. School/community program: 4; 5. Disaster Waste Management: 3; Cumulative total: 11)
2 5 initiatives on waste minimization introduced	➢ Baseline: Before the Project, waste minimization was practiced in Honiara and Gizo at the minimum level. ➢ Progress: ・ Through the Project, 5 initiatives on waste minimization have been introduced on pilot basis: (i) eco school program/clean school program: (ii) waste segregation: (iii) eco bag campaign: (iv) waste collection station system: and (v) waste audit.

[2] This indicator was not used as a direct measure of the Project Purpose for the following reasons: (i) while PIDOC, the existing database, is an inventory of SPREP, the persons listed are trainers recognized by J-PRISM but not considered as officially certified trainers by SPREP: and (ii) the target values are not valid as they had been determined before the introduction of PIDOC (thus not consistent with the number of trainers listed in it).

Table(x):List of initiatives on waste minimization introduced through the Project

	Initiative	Sites	Responsible organization
1	Eco school program Clean school program	Honiara Gizo	HCC WPG/GTC
2	Waste segregation activities	Honiara Gizo	HCC WPG/GTC
3	Eco bag campaign	Honiara	MECDM
4	Waste collection station system (stations/ drums)	Gizo	WPG/GTC
5	Waste audit (waste characterization survey)	Honiara Gizo Province	HCC WGP/GTC MECDM/MHMS

- It is noted that all of 5 initiatives are expected to be incorporated in the regular programs of the respective responsible organizations after the end of the Project. MECDM, MHMS, and HCC have already included the relevant activities in their respective budget proposals for FY 2016 (January-December). WPG/GTC C/Ps are going to include the SWM in their budget proposals for FY 2016 (April-March).

➢ Conclusion: The Indicator has been fully achieved.

3 Ranadi and Gizo landfill are managed as planned in Annual Operation Plans

➢ Baseline: Before the Project, the landfills were operated as open dumpsites without annual operational plans and manuals. Officers and operators did not have knowledge /skills related to the landfill management.

➢ Progress:
- As stated in the results of Indicator 2.2 for Output 2, Annual Operation Plans for FY 2016 are expected be developed by the end of the Project.
- As stated in the results of 2.3 and 2.4 for Output 2, the relevant officers/operators have been trained in landfill management already and will be trained more by the end of the Project; they are likely to become ready to manage their respective landfills based on the Annual Operational Plans before the end of the Project.
- For Ranadi landfill, management based on the Annual Operational Plan is expected to start before the end of the Project since the fiscal year of HCC begins in January.
- For Gizo landfill, management based on the Annual Operational Plan is expected to start after the end of the Project since the fiscal year of GTC/WPG begins in April.

➢ Conclusion: The Indicator has been partly achieved. It is noted that the Indicator is likely to be achieved after the end of the Project.

4 Provincial officers recognize the importance of 3R and SWM and are willing to promote 3R and SWM in their respective provinces

The Indicator is considered to be irrelevant since (i) provincial officers recognized the importance of 3R and SWM and were willing to promote 3R and SWM even before the project, according to MECDM and MHMS: and (ii) J-PRISM is not the only project which supports 3R and SWM in Solomon Islands.

➢ Conclusion: Achievement of the Indicator was not assessed because the Indicator was found to be irrelevant.

<Overall>

The Project Purpose has been mostly achieved.

(4) Implementation Process

(a) Progress of Activities

1) Overall:

- Progress was slow in the first half of the Project. According to the Mid-term Review Report, the initial stagnation was "due to changes in key positions for the Solomon side C/Ps, and limited interest among

some management C/Ps. However, after joining trainings, the attitude towards waste management has improved and the Solomon Islands was awarded "Best Counterpart Team of the Year 2011" award at the second steering meeting of J-PRISM, side event of SPREP meeting, in New Caledonia".

- When the Project had just started to progress smoothly, the JICA Short-term Expert resigned due to ill health in November 2011, and the position remained vacant until October 2012. During the absence of the JICA Short-term Expert, the Project Office in Samoa supported the Solomon C/Ps; however, the support level was insufficient to cover his absence due to distance and inconvenience. A new Short-term Expert was finally dispatched in November 2012, but his contract ended in March 2013. There was a lapse of three months until the third and current Short-term Expert Team was dispatched in July 2013. It is natural that it took some time for a new expert to understand the situation and to be able to fulfill his role in full-swing.
- The frequent change of the JICA Experts resulted in confusion in approach, which also led to delay in some of the activities. (It is noted that the C/Ps consider the current approach practical).
- The activities started to get on track in the second half of the Project. Most of the planned activities are likely to be completed before the end of the Project.

2) Issues/Points specific to each Output

➢ Output 2:

- Activity 2-2,2-3,2-4,2-5 (Prepare and implement rehabilitation plans): The process of obtaining approval of the EIA report for rehabilitation of Ranadi landfill was suspended for almost a year due to an external condition which could not be controlled by the Project i.e. a land issue. After the land title of the existing landfill and two additional plots was confirmed to be under HCC in September 2013, the process was resumed. Development consent was issued by MECDM in February 2014. The land issue has caused further delays in subsequent activities.

➢ Output 3:

- Activity 3.1 (Establishment of a multi-stakeholder National Committee): The National Committee is expected to be established during the NWMPCS workshop planned in November 2015.

(b) Project Management

- The Solomon side has participated in decision making process duly. JCC has been held annually, which has been effective in giving overall guidance and direction of the Project.
- Regular C/P meetings has been held in Honiara and Gizo respectively, where all members report their activities in the past month and introduce their plan for coming month, so that everyone follows-up not only concerned Outputs but all others.

(c) Communication within the Project and coordination with the Collaborating Agencies.

- In general, communication within the Project has been sufficient, especially in the second half.
- Communication between Honiara and Gizo C/P teams could have been more regular. For example, they have hardly had an opportunity to share their experiences and lessons and to exchange their views face-to-face. A Melanesian workshop held in the beginning of August 2015 was practically the first such an opportunity. The role of MECDM is recommended to play a role to coordinate to promote such a mutual communication.
- Communication between C/Ps and the JICA Expert Team has been generally sufficient though frequent change of Short-term Experts made C/Ps confused for some time.
- C/P meeting was effective in selecting candidates for regional training, which has also ensured transparency

(d) Collaboration/coordination with Local Stakeholders

	Stakeholders	Collaboration/coordination
1.	Waste pickers (Honiara)	Coordination with the waste pickers has just started. • A survey was conducted in July 2015 to understand the current situation of the waste pickers. • Total of 92 waste pickers (57 women and 35 men) are identified through the survey. • Two security guards were hired from the waste picker's community in Julne 2015. • A meeting was held in August 2015 to raise construction safety awareness. They have been cooperating. For example, they have stopped bringing children with them. • During the meeting, women and men were asked to identify the respective leaders. Men's group has identified one. Women's group has yet to identify one. • Once the rehabilitation is completed, HCC plans to allocate a certain section of the facility area for the waste pickers to store the recyclables. In parallel, registration of the waste pickers is planned.

2.	Recyclable collection company (Honiara)	HCC had a consultation with a private recyclable collection company. They buy the aluminum cans and scrap metals.
3.	A recycler (Gizo)	GTC/WPG has supported a local female recycler, who collects aluminum cans, in identifying a buyer in Honiara and making a contract with the buyer. GTC also provides a free transportation of the collected cans to the port.
4.	Community leaders (Honiara, Gizo)	GTC/WPG and HCC have coordinated with community leaders in implementing pilot project for waste segregation). GTC/WPG has also coordinated with community leaders in implementing pilot project for station collection. The C/Ps hold regular meetings with them to promotes awareness continuously.
5.	Women's group (Gizo)	GTC/WPG coordinated with some members of a women's group in making eco bags from household wastes (i.e. plastics).
6.	Teachers and students (Honiara and Gizo)	Teachers and students of the schools participating in Eco School Program (Honiara) and Clean School Program (Gizo) have collaborated with the Project in promoting 3R.
7.	NGO (Honiara,)	HCC has coordinated with an NGO in pilot project for waste segregation.
8.	National Referral Hospital (NRH)	The Project has had a continuous consultation with NRH regarding treatment of medical wastes.
9.	Solomon Waters	Since Ranadi landfill has created a demarcated cell for sludge, Solomon Waters was invited in the C/P meeting in July 2014 to promote proper treatment of the sludge.

(e) Participation in Region-Wide Activities of J-PRISM

So far, cumulative total of 16 C/Ps (MECDM-3, MHMS-3, HCC-10, WPG1, and GTC-1) have participated in the various region-wide activities organized by the J-PRISM. Another C/P from MECDM is going to participate in "Study Visit in Palau to develop Container Deposit Legislation for Solomon Islands" scheduled in October 2015.

	Year	Title	Venue	Number of participants
1.	2011	J-PRISM Regional Training on Landfill Management	Vanuatu	2 (HCC-1, WPG-1)
2.	2011	J-PRISM Country Attachment Program for Landfill Management	Vanuatu	1 (HCC)
3.	2012	J-PRISM 3R Regional Training in collaboration with Shibushi Program	Fiji	2 (MECDM-1, GTC-1)
4.	2012	J-PRISM Teacher's Workshop for the Western Division Clean School Program 2012 and Study Visit	Fiji	2 (MECDM-1, HCC-1)
5.	2013	J-PRISM Training of trainers' workshop on OS&H in Waste Management for PICs (JPRISM/ILO)	Samoa	1 (HCC)
6.	2014	J-PRISM Regional Training for Trainers 2014	Fiji	1 (MECDM)
7.	2014	Post Disaster Waste Management Project in Honiara (J-HOPE)	Solomon Islands	6 (MECDM-1, MHMS-1, HCC -4)
8.	2014	J-PRISM Country attachment in Labasa Fiji from Solomon 2014	Fiji	1 (HCC)
9.	2015	J-PRISM Study Visit for Gizo Counterparts on Waste Management Activities in Vavau, Tonga	Tonga	1 (GTC)*
10	2015	J-PRISM Study Visit on Clean School Program and Home Composting to Nadi Town Council, Fiji"	Fiji	1 (HCC)**

*A JOCV assigned to WPG also participated in the study visit.
**A JOCV assigned to HCC also participated in the study visit

In addition, Melanesian workshop was held from August 5-7, where J-PRISM C/Ps from PNG, Vanuatu and Solomon shared the good practices and experiences. Solomon C/Ps joined the workshop as a host, and their inputs such as presentations contributed a lot to the discussion among them. Noro Town Clerk, who is keen to introduce a proper waste management system, also joined the workshop, after he joined a provincial SWM workshop in 2014; this was helpful to disseminate the lessons learnt to other areas from Honiara and Gizo.

(f) Coordination with Other Japanese and International Projects

1) Holistic approach with other schemes of Japanese assistance

	Scheme	Coordination
1	Training and Dialogue Program of	So far, cumulative total of 17 C/Ps (MECDM-1, MHMS-1, HCC-9, WPG-6) have participated in the Training and Dialogue Programs in Japan.

	JICA	List of Training and Dialogue Program of JICA participated by the C/Ps (see table below)

	Year	Title	Number of participants
1	2011	Solid Waste Management by Local Government (Pacific Region) (C)	2 (MECDM-1,WPG- 1)
2	2012	Environment Education	2 (HCC-1, MHMS-1)
3	2012	Promotion of Shibushi Model from the Republic of the Fiji Islands to Pacific Island Countries	2 (WPG-1, HCC-1)
4	2012	Solid Waste Management by Local Government (c)	2 (WGP-1, HCC1)
5	2013	Solid Waste Management by Local Government (Pacific Region) (F)	2 (WPG-1, HCC-1)
6	2013	Environmental Education	1 (WPG)
7	2013	Waste Management Techniques (A)	2 (HCC-2)
8	2013	Design and Maintenance of Semi Aerobic Landfill Site (Fukuoka Method)(B)	1 (HCC)*
9	2014	Enhancement of Solid Waste Management Capacity (Advance, Planning &Policy)(A)	1 (HCC)
10	2014	Design and Maintenance of Semi Aerobic Landfill Site (Fukuoka Method)(B)	1 (HCC)
11	2015	Enhancement of Solid Waste Management Capacity (Advance, Planning &Policy)(A)	1 (WPG)

* An officer from the Guadalcanal Provincial Government, which use Ranadi landfill for their waste disposal, also participated in the training.

2	Grant Assistance for Grass-root Human Security Project	Construction cost for an administration office cum training center at Ranadi site as well as fence was funded by the Government of Japan through Grant Assistance for Grass-root Human Security Project.
3	JOCV (Environment Education)	• JOCVs assigned to HCC (January 2012 - January 2014, July 2014 - March 2016) have collaborated with the Project in planning, implementing and monitoring a pilot project on 3R (i.e. eco school program). • JOCVs assigned to WPG (January 2012 - April 2014, March 2014 - March 2016) has collaborated with the Project in promoting 3R, especially in the pilot projects on collection system of aluminum can and eco school program.
4	JICA Partnership Program	• The Project has shared information and exchanged views with a JICA partnership program ("Establishing Separate Collection System of Household Waste in Cooperation with Public and Private Sectors Based on a New 3Rs（Reduce, Reuse, Recycle and Return Concept (April 2014-March 2017)"）conducted by a Japanese NGO (LEAF) and HCC. • LEAF has been invited to monthly C/P meetings in Honiara and JCC. LEAF plans to construct a warehouse in the facility area of Ranadi landfill, constructed through J-PRISM, in which installation of a machine for compressing plastic bottles is planned.
5	J-HOPE	• After the flood in April 2014, post disaster management activities were carried out through J-HOPE organized by J-PRISM. A C/P from Vanuatu and a JICA Long-term Expert from the Project Office in Samoa assisted the activities. • Restoration of Ranadi landfill was carried out in one week. Utilization of the flood wood for firewood was promoted. Public awareness on post disaster waste management at household level was encouraged.

2) Coordination with other donors

	Scheme	Coordination
1	NZAID	• NZAID has supported to rent heavy equipment at Ranadi disposal site after the flooding in 2014. • NZAID has contributed to construction of the facility area of Ranadi landfill by financing cost for fence. • Technical Advisor assigned to Work Division of HCC is invited to monthly C/P meetings in Honiara. Information and lessons are shared and views are exchanged. • NZAID has started procurement process of a dozer necessary for operation of Ranadi landfill. A JICA Short-term Expert has provided a technical advice on the matter.

(g) Other Promoting and Inhibiting Factors

- Understanding and support of senior management of the implementing organizations has promoted smooth implementation of the Project.

III. Results of Analysis from the Viewpoints of Five Evaluation Criteria

(1) Relevance

The Project is still relevant

(a) Necessity

The Project meets the development needs (i.e. it relates to health issues, tourism and environment) of Solomon Islands, and Honiara and Gizo in particular.

(b) Priorities

The Project operates within one of the priority areas in Solomon's development strategies (i.e. NDS: National Development Strategy (2011-2020). NDS has identified waste management as a strategy to achieve Objective 7 "Effectively Respond to Climate Change and Manage the Environment and Risks of Natural Disasters", and the MECDM corporate plan identifies waste management as a key priority under Strategic Area 1. Under the Japan's Country Assistance Policy for the Solomon Islands in 2012, "Basic Policy of Assistance" is: "Support for sustainable economic development and improving a living standard through the assistance for the economic and the social sectors", and one of the priority areas is "Environmental conservation". In the latest Rolling Plan for Solomon Islands (2014), J-PRISM is a project under "Program for Establishing a Society with an Environmentally Sound Material-Cycle in islands area" under the Development Issue "Environmental Conservation.

(2) Effectiveness

The Project is expected to be mostly effective

(a) Achievement of Project Purpose

Though the progress was slow in the first half of the Project, the delay has been mostly caught up through efforts of Solomon Islands side and supports of Japanese side. The Project Purpose is likely to be mostly achieved by the end of the Project.

(b) Contribution of Outputs to Project Purpose

Logical relation between Outputs and Project Purpose is confirmed.

(c) Other promoting/inhibiting factors

Specific factors have not been identified.

(3) Efficiency

The Project has been mostly efficient

(a) Production of Outputs

Outputs have been mostly produced.

(b) Appropriateness of Inputs

- Solomon side: Overall, Inputs by the Solomon side have been mostly appropriate in producing Outputs.
  - Personnel: The personnel with adequate technical background and competency have been assigned to the Project. Although the Project is relevant with their mandate to a greater or lesser extent, they have other duties to attend to. Since promotion of 3R and landfill management are new to them, they perceived as additional duties. Sometimes, the C/Ps are too busy with other pressing duties to concentrate on the Project activities.
  - Equipment: For Gizo, a tractor has been provided by WPG. Together with an attachment (a front-end loader) provided by the Japanese side, the tractor has been utilized fully. For Honiara, a heavy machine (a loader) is available but not appropriate for landfill operation. Tentatively, a dozer, an excavator and a compactor are rented for rehabilitation work.
  - Local cost: Necessary budget has been allocated but there are delays in releasing the fund due to other priorities.
- Japanese side: Overall, Inputs by the Japanese side have been fairly appropriate in producing Outputs.
  - Experts: In terms of timing and quantity, dispatch of JICA Short-term Experts was not appropriate in the first half of the Project, which caused the stagnation of the activities coupled with other reasons. (See "Implementation Process" for details). Assignment of Short-term Experts in Gizo has been limited, too. In terms of quality, the Experts with adequate background, relevant experiences and sufficient technical level have been dispatched. They are accessible and ready to answer the technical questions made by the C/Ps.
  - Equipment: A front-end loader, attached to the tractor procured by Solomon side, has been utilized fully in rehabilitation of Gizo landfill.
  - Local cost: Necessary amount of the local operation was disbursed in time.

(c) Utilization of region-wide activities of J-PRISM

- So far, cumulative total of 16 C/Ps participated in the various region-wide activities organized by the J-PRISM. All the C/Ps, interviewed by the Evaluation Team, have gained new insights, ideas, skills, and

lessens from all of the region-wide activities of J-PRISM they participated in. They have shared what they learned to their colleagues and apply them in the Project.

- Good practices of other PI countries, such as landfill improvement using Fukuoka methods in PNG/ Vanuatu has been adapted for use in Honiara. Collection station system (stations/ drums) (Good practice in Vanuatu and Tonga) has been adapted for use in Gizo.
- Through J-HOPE, experiences and lessons learned in Vanuatu were utilized in post-disaster management.

(d) Utilization of external resources

- As stated in the Implementation Process, the Project has been carried out in collaboration with other Japanese schemes and NZAID.
- Training and Dialogue Program of JICA in Japan: Cumulative total of 17 C/Ps have gained new insights, ideas, skills, and lessens from all of the Training and Dialogue Program they participated in. Some C/Ps, however, felt that regional training would have been more efficient and effective since the SWM facilities and the related techniques in Japan are too advanced for them to apply in their country.

(e) Other promoting/inhibiting factors

- As stated in "Implementation Process, a land issue for Ranadi landfill, which came out in the end of 2012, resulted in suspension of the EIA process until September 2013, which caused a delay in its rehabilitation.

(4) Impact

Overall Goal is likely to be achieved to some extent. Various positive impacts have been observed. Negative impacts have not been observed.

(a) Impact at Overall Goal level

Indicator	Likelihood
Proportion of recyclables and green waste disposed of at the landfill is decreased.	Note: Likelihood of achievement cannot be forecasted properly because (i) target value and target venues are not specified in the Indicator: and (ii) baseline data are not available. Waste minimization schemes introduced through the Project are likely to continue and expand after the end of the Project. It is possible that proportion of recyclables disposed of at the landfills at Honiara and Gizo will decrease. For green waste, it is uncertain if the proportion is decreased since the pilot project focuses on composting at household level and is still at preliminary stage. ➢ Conclusion: The Indicator is likely to be achieved to some extent. The exact degree cannot be forecasted due to lack of target value and baseline data.

(b) Other impacts

➢ Positive impacts observed

- A permanent position for a landfill supervisor was created in HCC in March 2014.
- Two security guards for Ranadi landfill have been employed from the waste picker's community since June 2015.
- Three waste audits have been conducted by MECDM in three provinces, utilizing the skills and knowledge transferred through the Project.
- MHMS and MECDM have initiated a monthly stakeholder meeting similar to the C/P meeting for monitoring development activities of Gold Ridge mines.
- In Gizo, a return system of aluminum cans is developed. GTC/WPG supports a woman collecting aluminum cans for recycling in Honiara.
- Utilizing the training center constructed at Ranadi landfill, some schools have organized field trips.

➢ , Positive impacts foreseen

- Ranadi and Gizo landfills will be developed in to controlled landfills.

➢ Negative impacts:

- Negative impacts have not been observed. They are not foreseen, either.

(5) Sustainability

Sustainability is likely to be ensured if the necessary resources are allocated and disbursed.

(a) Policy and institutional aspects

➢ Policy and legal support:

- Solid waste management is included in the policy statement of the current government (the Democratic

Coalition for Change Government).

- National Waste Management and Pollution Control Strategy (2016-2025), which will be developed by MECDM, supported by the Project, is expected to be approved in early 2016.
- National Health Strategic Plan (2016-2020) will be developed by MHMS and National Environmental Health Strategies (2016-2020) will be developed by Environmental Health Division of MHMS, which are also expected to be approved in early 2016.
- As an overall legal framework, Environmental Act exists. There are regulations and ordinances to monitor the implementation of the waste management activities, too.

(b) Organizational aspects

- Organizational strategy:
  - HCC: In its 5-Year Strategic Plan (2014-2018), sustainable environment planning and waste management is identified as one of the 8 priority areas. In addition, creation of a new division for waste management is being considered as part of an organizational reform of HCC planned towards the end of 2016 subject to approval by the Council and acceptance by the Ministry of Home Affairs. According to the draft proposal, the new division would be responsible for waste collection, landfill management, and market and street cleaning. Promotion of 3R seems to be continuously handled by Environment Health Division.
  - WPG/GTC: WPG does not have an organizational strategy for SWM per se.
- Assignment of the personnel:
  - HCC: While the C/Ps of Works Division, responsible for landfill management, are mostly the direct staff of HCC, the C/Ps of Environment Health Division, responsible for promotion of 3R, are the seconded officers from MHMS. Both HCC and MHMS ensured that the C/Ps would be assigned to the relevant posts after the end of the Project.
  - GTC: The C/P of GTC (i.e. Town Clerk) is a permanent employee of WPG, who is expected to be continuously responsible for SWM after the end of the Project. As for landfill operators, one is a permanent staff but the other is employed on casual basis. The Town Clerk hopes that position of the latter will become permanent from FY 2016 subject to the approval of WPG.
  - WPG: As for WPG, most of the C/Ps are the seconded officers from different Ministries (i.e. MHMS and Ministry of Provincial Government). The seconded officers are trying to hand over more responsibilities to the direct staff of the WPG because they may be transferred to other provinces at any time. Recently, the C/Ps have decided among themselves that a direct staff in charge of environment shall be a focal point for SWM in the province.
- Coordination with the relevant organizations: The coordination mechanism built through the Project i.e. regular C/P meetings is expected to be continued as stakeholders meetings in both Honiara and Gizo.

(c) Financial aspects

- HCC: HCC has allocated the budget necessary for the project activities, which has not been fully utilized primarily due to diversion to other priorities driven by the political will. The lump-sum fund for health care and health promotion, allocated by MHMS, is also available for SWM; but most of the funds have been utilized for health care services. Since landfill management and promotion of 3R are included in the latest Corporative Plan, the necessary budget is likely to be allocated after the end of the Project. It is, however, uncertain if the necessary budget is released in time.
- GTC/WPG: GTC does not have a budget specifically allocated for SWM. The WPG C/Ps are trying to set aside the SWM in their respective budget proposals for FY2016, which can be utilized in the activities in Gizo.

(d) Technical aspects

- Technical capacity: Technical capacity of the C/Ps has been gradually enhanced in terms of planning and practical knowledge regarding SWM, landfill management, and promotion of 3R. It is likely that they are able to continue the relevant activities after the end of the Project. While much improvement has been made in terms of capacity building, there are still remaining issues such as limited capacity/experiences for analysis and utilization of the results of the field surveys in waste minimization and operation of landfill and its monitoring based on the manual.
- Utilization and dissemination of the transferred techniques and deliverables: Skills and knowledge transferred through the Project as well as the deliverables are considered relevant with the local level and needs so that they are likely to be utilized after the end of the Project. They are likely to be disseminated in other provinces through SWM provincial workshops conducted under initiative of MECDM in partnership with MHMS.

(e) Others

Coordination and collaboration with local stakeholders: Collaboration/coordination with the local stakeholders, such as community leaders, schools, recycling companies, etc. has been gradually developed

in the last two years. As for waste pickers, development of collaborative relationship has just started in Honiara. For Gizo, GTC is considering starting dialogue once the rehabilitation is completed. Coordination/collaboration with the local stakeholders needs to be further enhanced in order to sustain the effect of the Project.

IV Conclusion

Overall, for the five evaluation criteria, the Project is still relevant, is expected to be mostly effective, and has been mostly efficient. Overall goal is likely to be achieved to some extent. Sustainability is likely to be ensured if the necessary resources are allocated and disbursed.

The Project Purpose is expected to be mostly achieved by the end of the cooperation period. Therefore, this project shall be finished on 2nd of February, 2016.

It is noted that the following issues need to be addressed by Solomon Islands side after the project completion in order to ensure the effects of the Project

1. Continuous interactions among relevant stakeholders for waste management through regular meetings
2. Utilisation of analytical reports on waste characterization surveys, incoming waste surveys, time-and-motion studies for waste management
3. Continuous efforts to secure necessary resources on waste management.
4. Completion of a fence for Gizo landfill
5. Employment for a landfill operator in Gizo, who is a casual worker, as a permanent staff by WPG

V Recommendations for the remaining period

For the remaining period of project implementation, the Terminal Evaluation Team recommends the followings:

To the Project

1. Finalise analytical reports of waste characterization surveys, Incoming waste surveys, time-and-motion studies in Honiara and Gizo.
2. Complete rehabilitations of Ranadi landfill (main disposal areas and leachate pond)
3. Finalise operation manuals for Ranadi and Gizo landfills and train the landfill staff by using the manuals.
4. Finalise operational plans of rehabilitated landfills in Honiara and Gizo for FY 2016.
5. Continue to promote the interaction with the stakeholders such as waste pickers and communities, private companies, and the relevant organisations.
6. Strengthen communication and coordination between Honiara and Gizo C/P teams.
7. Establish a multi-stakeholder national committee during the National Waste and Pollution Management Strategy workshop and utilise it after the workshop.
8. Incorporate 5 initiatives on waste management in regular programmes of the respective responsible organizations including budget and human resource security (Eco-school programme/Clean school programme, community waste segregation, eco bag campaign, waste collection station system and waste audit)

9. Manage medical waste and sludge with treatment to dispose at appropriate cells in coordination with Solomon Islands (formerly SIWA) and NRH in Honiara.

10. Modify the Indicator of the Overall Goal to be more specific for approval by the final JCC.

Item	Original	Modification (example)	Justification
Indicator for Overall Goal	Proportion of recyclables and green waste disposed of at the landfill is decreased	In 2018, proportion of recyclables and green waste disposed at the landfill in (target venue(s)) is decreased by X% and Y% respectively compared to 2015. Note: Target venue(s) and target values (X%) should be specified before the final JCC.	The original one is not specific enough.
Means of Verification	Incoming survey	Analytical results of incoming waste surveys and waste characterization studies in 2015 and 2018	ditto

To HCC

11. Disburse budget allocated for the Project on time

12. Establish a new waste management division/unit in HCC including staff assignments for waste collection and landfill management.

To MHMS, MECDM

13. Coordinate among MHMS, MECDM and other relevant stakeholders to align and harmonise reviewing National Health Strategic Plan and National Environmental Health Strategies (2016-2020) with National Waste and Pollution Management Strategy (2016-2025) in terms of waste management.

Attachment:

1. Latest Project Design Matrix (PDM ver3/February 2015)
2. Latest Plan of Operation (PO ver 3 /February 2015)
3. Schedule of Terminal Evaluation
4. Record of Japanese Inputs
   4-1 Dispatch of Experts
   4-2 List of Machinery and Equipment provided by Japan
   4-3 Local Cost
5. Record of Solomon Islands Inputs
   5-1 List of Counterpart personnel
   5-2 Local Cost

Project Design Matrix (PDM) - Solomon Islands

PDM: Version 3

Project Title: Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Target Group : C/Ps of MECDM, HCC and Gizo Town | Final Beneficiaries: Citizens of Solomon Islands | Project period: Feb, 2011 - Feb, 2016 (5 years)

Implementing Agency: MECDM, HCC and Gizo Town | Target Area: Solomon Islands | Date issued: February 3, 2015

Narrative Summary	Objectively Verifiable Indicators	Means of Verifications	Important Assumptions
Overall Goal			
Sustainable management of solid waste in the Pacific Region is enhanced.	1.Proportion of recyclables and green waste disposed of at the landfill is decreased.	Incoming survey	
Project Purpose	1. 5 experts (Trainers) listed in the SPREP inventory	SPREP (Regional inventory of skilled people)	1. Natural disaster would not drastically affect the collaboration among PICs and SPREP. 2. Political changes of PICs would not drastically affect the collaboration among PICs and SPREP.
Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	2-1. 5 initiatives on waste minimization introduced 2-2. Ranadi and Gizo landfill are managed as planned in the Annual Operation Plans. 2-3. Provincial officers recognize the importance of 3R and SWM and are willing to promote 3R and SWM in their respective provinces.	2-1 Workshop presentation 2-2 Waste characterization reports 2-1. Activities reports 2-2. Annual Operation Plan 2-3. Draft 3R activities/plan in Province	

#	Priorities under RS2010	Outputs	Objectively Verifiable Indicators	Means of Verifications	Important Assumptions
1	Sustainable Financing	**Output 1:** 3R activities are practiced in Honiara and Gizo	1-1. National Solid Waste Management Strategy and Action Plan (NSWMS 2009-2014) is reviewed and NSWMS (2015-2019) is developed. 1-2. A national waste management communication strategy for 3R is developed. 1-3. More than 50% of general public in Honiara and Gizo, who are interviewed randomly, can answer what 3Rs mean. 1-4. One draft legislation for 3Rs is drafted. 1-5-1 10 schools in Honiara develop 3R action plan 1-5-2 3 schools in Gizo develop 3R action plan 1-6-1 Three 3R pilot projects are implemented in Honiara 1-6-2 Two 3R pilot projects are implemented in Gizo	1-1 Strategy paper for National Solid Waste Management Strategy and Action Plan (NSWMS 2015-19) 1-2. Report of 3R communication Strategy 1-3. Survey Reports 1-4. Draft paper for 3Rs related legisration 1-5. Action Plan Reports 1-6. Reports for Pilot Projects	1. Heavy machinery necessary for landfill management is available.
2-1	3Rs/4Rs				
2-2	Waste Disposal	**Output 2:** Waste disposal system is improved in Honiara and Gizo.	2-1 Different types of waste materials are disposed at appropriate cells 2-2 Annual operation plan is developed 2-3-1 10 officers and operators are trained for landfill operation in Honiara 2-3-2 5 officers and operators are trained for landfill operation in Gizo 2-4 Management of Leachate is established 2-5 Waste pickers are registered and managed properly	2-1 Operational manuals 2-2 Operational Reports 2-3. Capacity Assessment Sheet 2-4. Operational manuals 2-5. Monitoring Sheet	
2-3	Waste Collection				
3	Legislation	**Output 3:** Lessons and experiences learnt are disseminated in Solomon Islands	3-1 Good practices on 3R and landfill management identified through the project activities are available in all provincial centers 3-2 Officers from each provincial government learn good practices on 3R and landfill management	3-1. Sharing the ICT materials, Manuals 3-2. Participation of the training/workshop	
4	Awareness/Communication/Education				
5	Capacity Building				
6	Environmental Monitoring				
7	Policy,Planning, Performance				
8	Solid Waste Industry				
*	Monitoring system of RS2010				

Activities	Inputs		
Please see PO for details.	Japanese Side Dispatch of JICA experts Provision of equipment and materials Provision of Regional, sub-regional and in-country workshops / training Local cost support	Solomon Islands side Assignment of National PD/PM and CPs Local Costs Sharing Provision of necessary land/facility, work space	1.Counterpart personnel keep working in the field of SWM. 2. Disasters, such as severe rain storm will not drastically affect the progress of project activities. 3. Necessary budget to carry out activities is allocated from the government. 4. Input of JICA experts for Solomon Islands is provided timely and appropriately.
			Pre-condition
			Cooperation of community people of the target area is obtained.

Attachment 2: Latest Plan of Operation (PO ver 3)

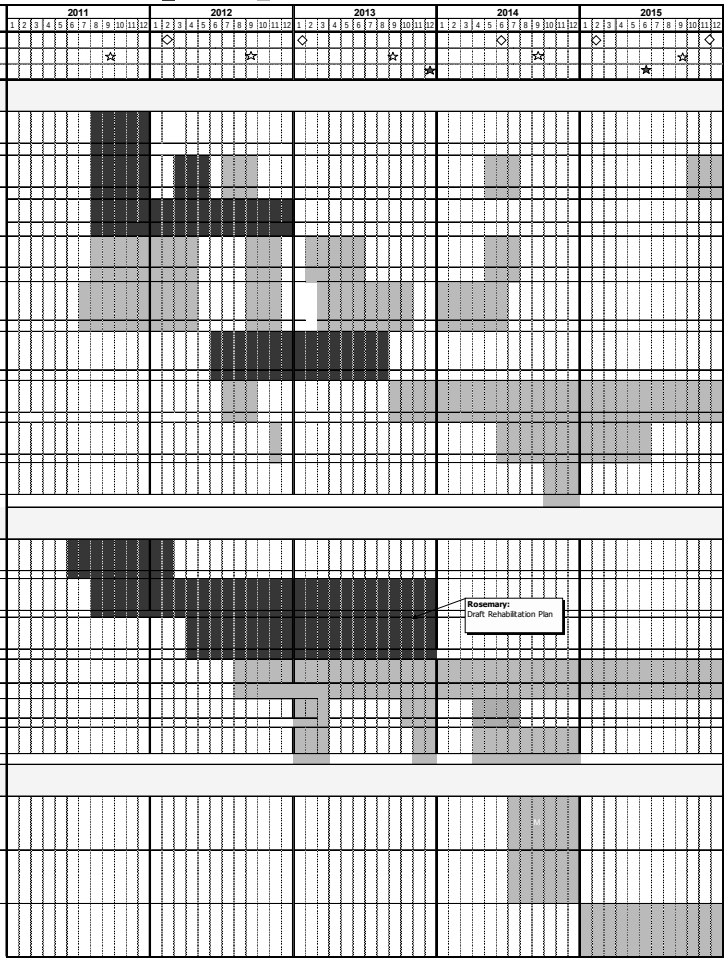
2-1 PO for Honiara

Plan of Operation (PO) - Honiara, Solomon Islands, version 3 (As of February 3, 2015)

Term: 2011 ～ 2015 (5years)

Complete on-going progress

	Outputs and Associated Activities	Person in-charge
JCC/S C/Eva	JCC ◇	
	Steering Committee ☆	
	Evaluation Studies ★	
OUTPUT 1: 3R activities are practiced in Honiara and Gizo.		
1-1	Develop a work plan for the baseline survey	George Titiulu/ Ella Rizwold/ Christina
1-2	Conduct the baseline surveys including environmental condition, public awareness, waste characterization study, etc.	George Titiulu/ Ella Rizwold/ Christina
1-3	Develop a communication strategy	Edward Danitofea
1-4	Identify the feasible options for management of recyclable waste/materials	Joe Kelesi/ John Labu / Robert Bara/
1-5	Review of existing waste collection system	Joe Kelesi/ John Labu / Robert Bara/ Francis Eiku/
1-6	Develop the implementation plan for 3R pilot project	Edward Danitofea/ Ella Rizwold/Jimmy Hilly/ Christina
1-7	Implement the 3R pilot project	Judith Wate Damilea/ Mercy Lilu
1-8	Prepare the draft of policies / strategies / legislation / regulation for 3R activities	George Titiulu/ Jimmy Hilly/
1-9	Monitor the progress of pilot project	Judith Wate Damilea/ Mercy Lilu
OUTPUT 2: Waste disposal system is improved in Honiara and Gizo		
2-1	Conduct site investigation of existing dumpsite	John Labu / Robert Bara/ George Titiulu
2-2	Conduct the EIA study and follow the required procedure	Edward Danitofea/ John Labu/ George
2-3	Prepare the rehabilitation plans for existing dumpsites.	Joe Kelesi/ John Labu/Robert Bara/
2-4	Implement the rehabilitation of dump sites	Joe Kelesi/ John Labu / Robert Bara
2-5	Develop the operation manuals for each site	Joe Kelesi/ John Labu/ Robert
2-6	Train staff of dump sites on landfill operation	Joe Kelesi/ John Labu/ Robert
OUTPUT 3: Lessons and experiences learnt are disseminated in Solomon Islands		
3-1	Establish a multi-stakeholder National Committee to help disseminate experience to other areas within the country	Rosemary Apa/ Wendy Beti/ Jimmy Hilly/ George Titiulu
3-2	Preparation of educational materials for disseminating experience to other areas	Rosemary Apa/ Wendy Beti/ Jimmy Hilly/ George Titiulu
3-3	Conduct the workshop to disseminate the lessons and experiences learnt	Rosemary Apa/ Wendy Beti/ Jimmy Hilly/ George Titiulu



Attachment 2: Latest Plan of Operation (PO ver 3)

2-2 PO for Gizo

Plan of Operation (PO) - Gizo, Solomon Islands, version 3 (As of February 3, 2015)

Term: 2011 ～ 2015 (5years)

■ Complete ■ On-going progress

	Outputs and Associated Activities	2011	2012	2013	2014	2015
JCC/ SC/ Eva	JCC ◇					
	Steering Committee ☆					
	Evaluation Studies ★					
OUTPUT 1: 3R activities are practiced in Honiara and Gizo.						
1-1	Develop a work plan for the baseline survey	Completed				
1-2	Conduct the baseline surveys including environmental condition, public awareness, waste characterization study, etc.					
1-3	Develop a communication strategy					
1-4	Identify the feasible options for management of recyclable waste/materials					
1-5	Review of existing waste collection system					
1-6	Develop the implementation plan for 3R pilot project					
1-7	Implement the 3R pilot project					
1-8	Prepare the draft of policies / strategies / legislation / regulation for 3R activities					
1-9	Monitor the progress of pilot project					
OUTPUT 2: Waste disposal system is improved in Honiara and Gizo		Initial work already started but yet to be completed.				
2-1	Conduct site investigation of existing dumpsite	Completed. Done by the Ministry. A copy of the report is available.				
2-2	Conduct the EIA study and follow the required procedure	Completed. Done by the Ministry. A copy of the report is available.				
2-3	Prepare the rehabilitation plans for existing dumpsites.					
2-4	Implement the rehabilitation of dump sites					
2-5	Develop the operation manuals for each site					
2-6	Train staff of dump sites on landfill operation					
OUTPUT 3: Lessons and experiences learnt are disseminated in Solomon Islands						
3-1	Establish a multi-stakeholder National Committee to help disseminate experience to other areas within the country					
3-2	Preparation of educational materials for disseminating experience to other areas					
3-3	Conduct the workshop to disseminate the lessons and experiences learnt					

Attachment 3: Schedule for Terminal Evaluation

Date		Schedule – Ms Hirouchi	Venue	Stay
Aug 23	Sun	13:20 Arrival (PX084) 15:00 Meeting with J-PRISM Experts, Mr. Usui, Mr. Mizutani, Ms. Fukuda (JICA Solomon Office), and diner with all together.	Hotel (Mendana)	Kitano Mendana Hotel
Aug 24	Mon.	8:00 Courtesy call to Dr. Mataki, Mr. Joe Horokou/MECDM 9:00 Kick-off Meeting (Venue - MHMS) (Introduction, evaluation methods and confirmation of schedule （Hirouchi）, project outline, confirmation of progress of PO and Indicators (CP) 12:00-13:00 Lunch 13:00 Interview with C/P from Gizo/Western Province 13:00-14:00 Derald 14:00-15:00 Rendy, Margaret 15:00-16:00 Ueno JV	MECDM MHMS	
Aug 25	Tue.	9:00 Courtesy call to City Mayor, City Clerk & Deputy City Clerk 10:00 Interview with C/P from Env. Dpt/HCC 10:00-11:00 George (Output 1 & Output 2) 11:00 Interview with C/P from Env. Dpt/HCC 11:00-11:30 Ella, Chiristina (Output1) 11:30-12:00 Mercy, Jerome (Output1) 12:00-13:00 Yasuda JV 14:00 Interview with C/P from Public Work Dp/HCC 14:00-15:00 Joe 15:00 -16:00 John	HCC MHMS MHMS	
Aug 26	Wed.	9:00 Courtesy call to Mr. Tom Nanau, Director of MHMS 10:00 Interview for MHMS 10:00-11:00 Jimmy Hilly 11:30-13:00 Lunch 13:00 Interview with C/P from MECDM 13:00-14:00 Wendy 14:00-15:00 Rosemary 15:30 Interview with City Clerk	MHMS MECDM HCC	
Aug 27	Thu	8:00 Preparation of draft, internal meeting Supplementary information collection, discussion with C/P &J/E(as needed) 15:00: Embassy of Japan in Solomon Islands	JICA EoJ	
Aug 28	Fri.	8:00 Preparation of draft, internal meeting (Printing) 14:00 Wrap-up meeting (discussion on draft) 16:00 Reporting to JICA Solomon Office	JICA MHMS JICA	
Aug 29s	Sat.	14:15 Departure		PV

4-1. Dispatch of Experts

Long-term Experts from Project Office	Short-term Experts	Local expert *	Total
3.0 MM	15.3 MM	1.0 MM	19.3 MM

*Cost of Local Expert is included in Local Cost Support

4-2. Training in Japan

None

4-3. List of Machinery and Equipment provided by Japan

Utilization: A=Fully B=Moderatly, C=Partly, D= Not at all
Management: A=Appropriate B=Fair C=Innapropriate

When delivery	No.	Country	Item	Maker/Model etc.	Qty.	Price in local currency $	Currency	In US$*	Responsible Section/Organization	Utilization	Management
June. 2013	1	Solomon Islands	Lap top computer and its peripheral equipement for National Project Coordinator	Toshiba Satalite Pro C850 Notebook, MS Office Prp 2013 31/x64 bit APAC, eVERKI 16`` COMPACT BRIEFCASE, TrendMicro Titanium 2012 Cloud Edition, V7 Standard Mouse USB 100DPI Wired, Economy 4 Way Surge Protector 1Mtr	1	SBD 15,525.00	Solomon Islands Dollar (SBD)	US$2,126.93	JICA Solomon Office	A	A
June. 2013	2	Solomon Islands	Printer and its peripheral equipment for National Project Coordinator	HP Deskjet 1050 Printer, HP NO61 Tri Color Print Cart	1	SBD 1,464.00		US$200.57	JICA Solomon Office (temporarily being placed at HCC)	A	A
July. 2014	3	Solomon Islands	Tractor attachment (Front End Loader) for Gizo dumpsite operation	Model: MF425 Burder Front End Loader Maker: Burder equipment/ MF425FR Model code: MF425	1	SBD 182,000.00		US$23,150.40	Gizo Town Council/ Western provincial Government	A	A
June. 2015	4	Solomon Islands	Fence for Gizo dumpsite	• Type : Net fencing with Angle support • Height : 2.0 meter • Wire netting size : φ3.2mm, Diamond sharp • Support size : Angle-75mm with Painted • Support distance : 2.5 m • Support foundation: Reinforced concrete (Contractor shall decide the size.) • Quantity: 100 m	1	SBD 52,811.90		US$6,717.67	Gizo Town Council/ Western provincial Government	A	A
					Total	SBD 251,800.90		US$32,195.57			

*(For Feb. 2011-July2013) Exchange rate from local currency to US Dollar refers to OANDA as of 1st August, 2013. 1SBD= US$0.13700

*(For Aug. 2013-June2015) Exchange rate from local currency to US Dollar refers to OANDA as of 1st July, 2015. 1SBD= US$0.12720

4-3 Local Cost

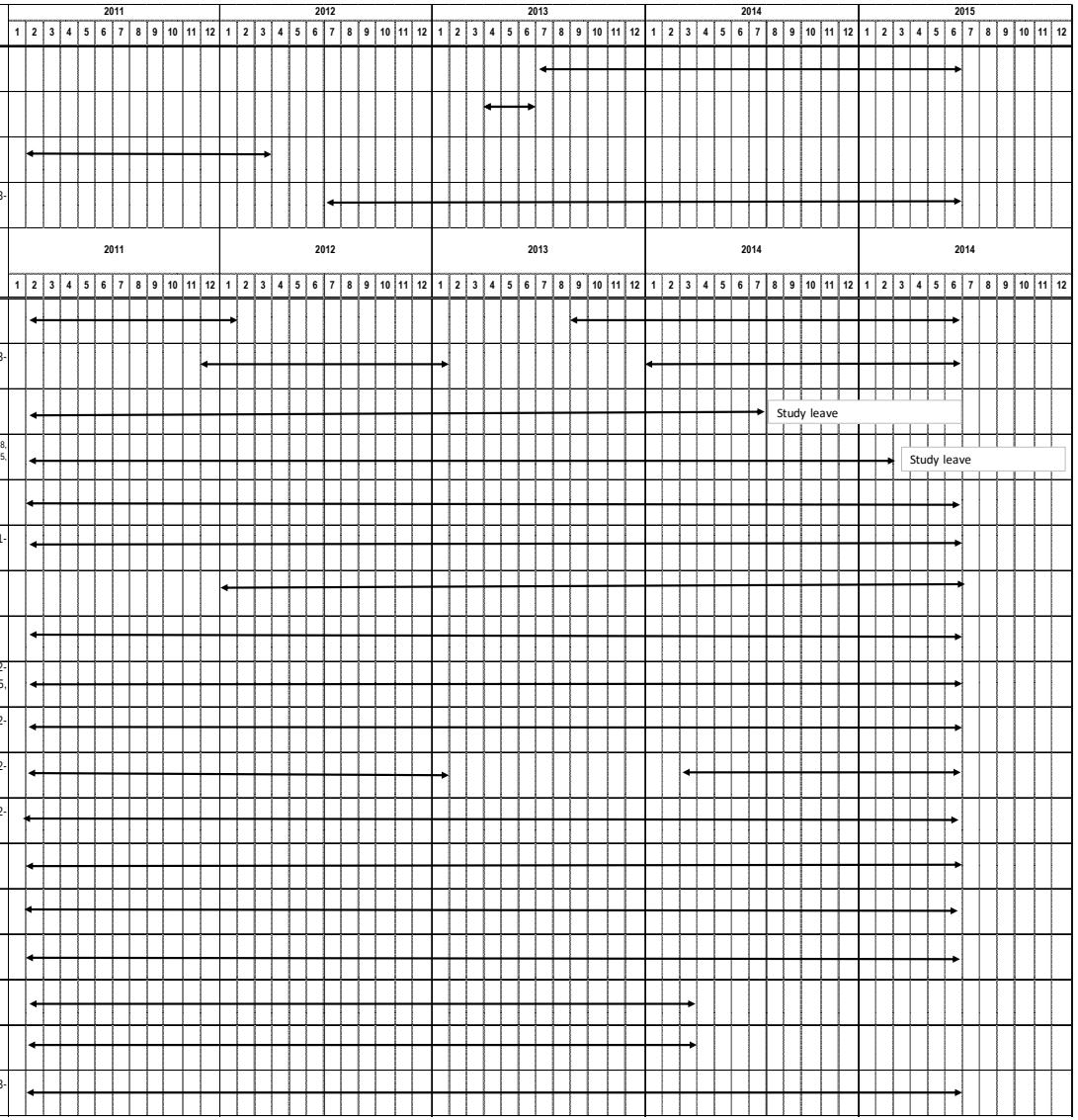
Country	Air Fare	Travel Allowance	Contract	Fees and honorarium (non-staff)	Refreshments	Miscellaneous	Total			
	Travel Allowance / Air Fare	Travel Allowance / Air Fare	Commission Contract (others)	Fees and honorarium (non-staff)	Refreshments		In local currency	Local Currency	In Japanese Yen*1	In USD *2
Solomon Islands	198,759.98	89,073.83	136,055.28	6,623.55	4,446.10	688,541.14	1,123,499.88	Solomon Islands Dollar	¥16,646,182.26	US$142,876.04

Attachment 5: Record of Solomon Islands Inputs

5-1 List of Counterpart Personnel

#	Name	Management CPs	Assigned Period	Position	Organization	Activities in charge
1	Dr.Melchior Mataki	Project Director	Jul 2013-	Permanent Secretary	Ministry of Environment, Climate Change, Disaster Management, & Meteorology	
2	Frank Wickham	Project Director	Apr 2013-Jun 2013	Permanent Secretary (Acting)	Ministry of Agriculture & Livestock Development	
3	Rence Sore	Project Director	Feb. 2011-Mar 2012	Permanent Secretary	Ministry of Environment, Climate Change, Disaster Management, & Meteorology	
4	Rosemary Apa	Project Manager	Jul 2012-	Chief Environment Officer	Environement & Conservation Division, Ministry of Environment, Climate Change, Disaster	1-6, 1-8, 2-2, 3-1, 3-2, 3-3

#	Name	Technical CPs (Outputs in charge)	Assigned Period	Position	Organization	Activities in charge
1	Debra Kereseka	Project Manager	Feb. 2011-Jan 2012 Sep. 2013-	Senior Environment Officer	Environement & Conservation Division, Ministry of Environment, Climate Change, Disaster	
2	Wendy Beti	Project Manager	Dec. 2012 - Jan. 2013, Jan. 2014 -	Environmental Officer	Environement & Conservation Division, Ministry of Environment, Climate Change, Disaster	1-7, 1-9, 3-1, 3-2, 3-3
3	Edward Jonathan Danitofea	Project Counterpart	Feb. 2011- (study leave)	Senior Environment Officer	Environement & Conservation Division, Ministry of Environment, Climate Change, Disaster	1-3, 1-6, 2-2
4	George Titiulu	Project Counterpart	Feb. 2011- (study leave)	Chief Environmental Health inspector	Honiara City Council	1-1, 1-2, 1-4, 1-5, 1-8, 2-1, 2-2, 2-3, 2-4, 2-5, 2-6, 3-1, 3-2, 3-3
5	Ella Rizwold	Project Counterpart	Feb. 2011-	Principal Environmental Health Inspector	Honiara City Council	1-1, 1-2, 1-6
6	Christina Onahikeni	Project Counterpart	Feb. 2011-	Senior Environmental Health Inspector	Honiara City Council	1-1, 1-2, 1-6, 1-7, 1-9
7	Mercy Iilu Nunua	Project Counterpart	Jan. 2012	Environmental Health Inspector	Honiara City Council	1-7, 1-9
8	Judith Wate Damilea	Project Counterpart	Feb. 2011-	Environmental Health Inspector	Honiara City Council	1-7, 1-9
9	John Labu	Project Counterpart	Feb. 2011-	Director of Works Division	Honiara City Council	1-4, 1-5, 2-1, 2-2, 2-3, 2-4, 2-5, 2-6
10	Robert Bara	Project Counterpart	Feb. 2011-	Senior Works Officer	Honiara City Council	1-4, 1-5, 2-1, 2-3, 2-4, 2-5, 2-6
11	Joe Kelesi	Project Counterpart	Mar. 2014-	Landfill Supervisor	Honiara City Council	1-4, 1-5, 2-1, 2-3, 2-4, 2-5, 2-6
12	Francis Fiku	Project Counterpart	Feb. 2011-	Works Officer	Honiara City Council	1-4, 1-5, 2-3, 2-4, 2-5, 2-6
13	Kelly Oge	Project Counterpart	Feb. 2011-	Works Officer	Honiara City Council	2-4
14	Jerome Enato'o	Project Counterpart	Feb. 2011-	Environment Health Officer	Honiara City Council	1-6, 1-7
15	Tom Nanau	Project Counterpart	Feb. 2011-	Director	Ministry of Health and Medical Services	
16	Bobby Patterson	Project Counterpart	Feb 2011-Mar. 2014	Chief Environmental Health & Management Officer	Ministry of Health & Medical Services	
17	Emmanuel Rarumae	Project Counterpart	Feb 2011-Mar. 2014	Chief Quarantine Officer	Ministry of Health & Medical Services	
18	Jimmy Hilly	Project Counterpart	Feb. 2011-	Environmental Health Management Officer	Ministry of Health and Medical Services	1-6, 1-8, 3-1, 3-2, 3-3



Attachment 5: Record of Solomon Islands Inputs

19	Peter Buka	Project Counterpart	Feb. 2011- Mar. 2014	Chief Land Officer	Western Province	
20	Fred Naphtalai	Project Counterpart	Feb. 2011- Jun. 2015 (dismissal)	Chief environment Health Officer	Ministry of Health and Medical Services, Western Provincial Health	1-1, 1-4, 1-5, 1-6, 1-7, 1-9, 2-1, 2-2, 2-3, 2-4, 2-5, 2-6, 3-1, 3-2, 3-3
21	Rendy Solomon	Project Counterpart	Feb. 2013-	Environment Health Inspector	Western Province	1-6, 1-7, 1-9, 3-2, 3-3
22	Derald Michael	Project Counterpart	Feb. 2011-	Town Clerk	Gizo Town Council	1-2, 1-4, 1-5, 1-6, 1-7, 1-8, 1-9, 2-1, 2-3, 2-4, 2-5, 2-6, 3-1, 3-2, 3-3
23	Colin Abba	Project Counterpart	Feb. 2011- Dec. 2012	Environment Heath Officer (deceased)	Western Province	
24	Margaret Moveni	Project Counterpart	Feb. 2011-	Planning Officer	Western Province	1-2, 1-3, 1-6, 1-7, 1-8, 1-9, 3-2, 3-3
25	Dobson Aseri	Project Counterpart	Feb. 2011-	Accountant	Gizo Town Council	1-6, 1-7, 1-9, 3-3
26	Jully Kalamana	Project Counterpart	Dec. 2014-	Environemntal Officer	Western Province	1-7, 1-9, 3-2, 3-3
27	Gregory Auta'a	Project Counterpart	Feb 2011, Oct. 2012	Principal Tourism Officer	Ministry of Culture & Tourism	

ANNEX 3(c)-Solomon Islands

5-2 Local Cost borne by Solomon Islands side

	1. Travel expenses (airfare, allowances,		2. Expenses for documenting		3. Purchasing goods materials		4. Foods Drinks		5. Others		Total	
	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD
Solomon Islands	93,104	11,647	249,038	31,155	92,001	11,509	133,222	16,666	412,933	51,658	980,298	122,635

Terminal Evaluation Report for the Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Republic of Vanuatu

Date: September 4, 2015

I. Project Outline and Evaluation Policy

(1) Project Outline	
Background	Increasing urban populations, combined with insufficient development of infrastructure and systems, has led to a worsening standard of life in these areas with regarding to rubbish collection and sewage disposal. Traditional life styles are changing and waste management faces many challenges, not only in urban and peri-urban areas. In Vanuatu, waste management has become a particularly urgent issue for municipalities due to scarcity of land and the increasing amount and variety of waste.
Summary of the Project	(See Attachment 1 and 2 for details)
-Overall Goal	Sustainable management of solid waste in the Pacific Region is enhanced
-Project Purpose	Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)
-Priorities in RS2010	**Outputs**
3R/4R	1) Waste minimization mechanisms are developed.
Waste disposal	2) Existing waste disposal sites (Bouffa and Luganville) are improved
Policy/Planning/ Performance	3) Capacities for waste management at the national and local government level are enhanced.
Project Duration	Five years from February 3, 2011 to February 2, 2016
Implementing Agency	Main implementing organization: Department of Environmental Protection and Conservation (DEPC), Port Vila Municipality Council (PVMC) Other implementing organization: Luganville Municipality Council (LMC), Vanuatu Chamber of Commerce (VCC), Department of Agriculture and Rural Development (DARD)
Target Group	C/P of DEPC, DARD, PVMC, VCC
Target Area/ Target Population	Port Vila, Luganville, Lenakel , (Tafea Province, Sanma Province) Approx. 57,000 (plus approx. 66,000 in Tafea Province and Sanma Province excluding Luganville) (2009, Census)
(2) Evaluation Policy	
Objectives	1) To verify the accomplishments of the Project compared to those planned; 2) To identify promoting and/or inhibiting factors that have affected the project implementation process; 3) To analyze the Project in terms of the five evaluation criteria (i.e. Relevance, Effectiveness, Efficiency, Impact, and Sustainability); 4) To discuss the results of evaluation and solutions for problems that may be observed through the evaluation together with the personnel concerned with the Project and make necessary suggestions
Member of Terminal Evaluation Team	

	Title	Name	Position/Organization
	Cooperation Planning (Overall)	Toru TAGUCHI	Assistant Director, Environmental Management Division I, Global Environment. Department., JICA
*	Cooperation Planning (Vanuatu)	Yoko ASANO	Project Formulation Advisor JICA Vanuatu Office
*	Evaluation Analysis	Yasuyo HIROUCHI	Permanent Expert, International Development Associates Ltd

*Members participating in the evaluation study in the country

Period of Evaluation Study in the Country	Five days from August 31 to September 4, 2015 (See Attachment 3 for details)

Methodology	JICA Terminal Evaluation Team collected the information through document analysis, questionnaire survey and/or interviews with the officers concerned with the Project, the JICA experts, and local stakeholders. The Team also conducted field observation at Freshwota Ward and Central Market. Based on the results of the evaluation, the Team prepared a draft report and finalized it through discussions with the personnel concerned with the Project.
Limitation	The evaluation study was conducted in the middle of confusion associated with the redundancy of three main C/Ps of PVMC, the main implementing organization, including the officer in charge of the waste management who was also the Project Manager. Their successors had not been identified/appointed. The Team had meetings and interviews only with the C/Ps of DEPC and the redundant/outgoing C/Ps of PVMC. The remaining C/Ps of PVMC did not show up in any meetings/interviews despite the repeated requests. The Team managed to have a brief discussion with the Town Clerk but the appointment with the Mayor was cancelled. The results of the interviews were often contradictory and/or needed further clarification but the Team could not clarify everything due to time constraints and difficulty in making the appointments.

II. Accomplishment and Implementation Process of the Project

(1) Inputs (as of June 2015 unless otherwise mentioned)

<Japanese Side>	**<Vanuatu Side>**
1) Dispatch of JICA experts : 8 persons (14.2 M/M) - 4 Short-term Expert (9.9 M/M) - 3 Long-term Experts from Project Office (3.3 M/M) - 1 Local Expert from Project Office (1.0 M/M) (Cost of Local Expert is included in Local cost support) 1) Training in Japan: 2 persons - J-PRISM Regional Training from Trainers in Okinawa (2 from PVMC) 2) Provision of equipment : 760 USD - Printer, chainsaw 3) Local cost support: 4,265,293VUV (41,211USD) - Cost for airfare, travel allowance, fees and honorarium, etc. (See Attachment 4 for details)	1) Assignment of National Project Director (PD), Project Manager (PM) and C/Ps: 13 persons (As of 4 Septembers 2015) - 2 Management C/P (PD and Project Coordinator from DEPC) - 3 Technical C/P from PVMC, 3 from LMC, 1 each from VCC, DARD, Department of Public Health, Sanma Provincial Office, Tabea Provincial Office 2) Local cost sharing: 114,960VUV (1,055USD) - Cost for travel allowance, etc. 3) Land facility, work space - Office space for JICA experts at PVMC until August 2015 (See Attachment 5 for details)

(2) Outputs

Output 1: Waste minimization mechanisms are developed.	Degree of achievement[1]: Partly achieved.

Indicator	Results
1.1 Amount of organic waste generated from market is reduced by 20% (Port Vila)	➢ Target site: Central Market (The main market in Port Villa, operated by PVMC). ➢ Baseline: Before the Project, some of the organic wastes from Central Market were collected by local pig and poultry farmers on a limited scale. ➢ Progress: ・ Since October 2013, most of the organic/green wastes generated in Central Market have been separated by the market staff, which have been picked up by PVMC and have been transported to a private organic farming company, which produces mulch using the organic/green wastes. The company representative confirmed that PVMC transport the organic/green wastes from Central Market to them on a daily basis. He also showed an interest in getting more green wastes for mulch ・ It is noted that the system has been operated based on a verbal agreement among

[1] *Degree of achievement for each output/Project Purpose is judged based on the achievement level of indicators set for each Output/Project Purpose. Ratings used for this judgment are four levels, such as "Fully achieved", "Mostly achieved", "Partly achieved", "Not achieved."*

PVMC, Central Market, and the company.

- Since the pig and poultry farmers collect the green wastes before PVMC waste collection vehicle arrives at the market, the operation does not negatively affect their livelihood.

➢ Conclusion: The indicator seems to have been fully achieved.

1.2 NWMS is established

➢ Baseline: In Vanuatu, in 2002, an "Environmental management & Conservation Act" was established that specified laws for Environmental Assessment criteria, however, this legislation has not addressed issues of Solid Waste Management,

➢ Progress:

- The Vanuatu National Waste Management Strategy and Action Plan (2011-2016) was prepared with the support from SPREP and JICA, which was endorsed by the Director of DEPC in April 2011.

➢ Conclusion: The indicator has been fully achieved.

➢ For reference:

- According to the NWMS, it should be reviewed in 2014. The review process started with analysis of what had been achieved in the NWMS to date. A workshop was held in 2014 with the stakeholders. Based on the results of the workshop, DEPC is updating the Strategy. The period of the updated Strategy would be 2016-2017. The second workshop is planned in November 2015 to finalize the updated Strategy (2016-2017). It is expected that the updated Strategy will be submitted to the Council of the Ministers in early 2016.

Table (a): Timeframe for updating NWMS

	Major Steps	Organization in charge	Provisional schedule
1	1st Workshop to review the existing strategy (2011-2016)	DEPC	March, 2014
2	Update the strategy based on the results of the 1st Workshop	DEPC	March 2014 -November 2015
3	2nd Workshop to finalize the strategy (2016-2017)	DEPC	November 2015
4	Submission for endorsement by the council of the Ministers.	DEPC	February, 2016

- It is noted that waste minimization would be included in the updated Strategy.

1.3 Collection system for cans is established

➢ Target site: Freshwota Ward (Fresh water 1 and 4), Port Vila

➢ Baseline: Before the Project, collection of cans was operated on a limited scale by a private recycler.

➢ Progress:

- Collection system, developed through a pilot project (November 2014 to January 2015), has not been functioning since March 2015.
- In February 2015, the company stopped purchasing the steel cans due to drop in the market price. Then, in March, the company stopped picking up the cans at the communities due to internal conflicts in the communities over the sales, according to the company's president. The company also found it inconvenient to collect the cans at different points in the communities.
- The cans are continuously collected but they stay in the cages since March 2015 because the communities do not have the means to transport the cans to the company. The conditions of the cages have not been monitored by the communities since March.
- PVMC is supposed to monitor the activities monthly from February 2015. The monitoring was not conducted in March-April due to Cyclone PAM. In May, the redundancy of the C/Ps in charge was announced. Nobody has taken responsibilities for this activity since then.

	➢ Conclusion: The indicator has been partly achieved.

<Overall>
Output 1 has been partly achieved.

Output 2: Existing waste disposal sites (Bouffa and Luganville) are improved	Degree of achievement Partly achieved.

Indicator	Results
2.1 Manual Data management system is established in Bouffa landfill	➢ Baseline: Before the Project, the data for incoming wastes had not been recorded. ➢ Progress: ・ Since June 2014, the data has been collected regularly by the landfill staff. The daily data of the incoming vehicles are manually recorded on the approved formats. The data is input into the computer and a monthly report is prepared for circulation within PVMC. The data collected include truck arrival times, conditions of waste loading, types of waste, collection locations, etc. ➢ Conclusion: The indicator has been fully achieved. ➢ For reference ・ The manual data collection system has been introduced as an alternative to the installment of the weighbridge. The weighbridge installment was not possible due to the lack of electric power supply at the site and the fact that there were no immediate plans to extend the electricity grid to the site.
2.2 Operation and management master plan for Bouffa landfill is utilized	➢ Baseline: Bouffa dumpsite was upgraded to a sanitary landfill in 2008 under the technical cooperation project of JICA ("The Improvement of Bouffa Landfill Project"). The landfill was operated and managed based on the SWM plan (2008-2017) and the operational manual prepared through the Project. ➢ Progress: ・ Preparation of the plan: A development plan (i.e. drawing) for Bouffa landfill was prepared in 2011, which was updated in December 2014 and explained to the senior management in March 2015. The development plan consists of (i) construction of 2 new cells, (ii) procurement of treatment equipment for the existing leachate pond, and (iii) renovation of administration office. The plan was reviewed and updated in July 2015. The updated plan includes operation part, which consists of (i) manual recording of incoming vehicle, (ii) improvement of soil cover application, (iii) gas vents installation in the existing cells, (iv) keeping record of heavy equipment operations, and (v) general site-clean up. ・ Utilization of the plan: Operation part of the plan has been utilized (details are shown in the results of the Project Purpose). Development part of the plan has been partly utilized: one new cell was constructed through post-disaster management activities of J–PRISM. It is uncertain if the remaining would be utilized before the end of the Project due to lack of budget. ➢ Conclusion: The indicator has been partly achieved.
2.3 Closure plan for Luganville disposal site is established	Note: During the 4th JCC meeting, the Luganville team reported that a new VSA volunteer would be dispatched to Luganville soon to support the efforts to set up a new landfill. That volunteer would also be preparing the closure plan for the present site. ➢ Conclusion: Achievement of the Indicator was not assessed since development of a closure plan for Luganville disposal site has become outside the scope of

	the Project.

<Overall>
Output 2 has been partly achieved.

Output 3: Capacities for waste management at the national and local government level are enhanced.	Degree of achievement Fully achieved

Indicator	Results
3.1 More than one provincial officer recognizes the importance of waste minimization and SWM	Note: The Indicator is not specific enough. It should be rephrased as "More than one officer (at least 2 officers) agrees to include waste minimization in their respective annual SWM plans". (All six provinces and three municipalities are required to prepare their respective annual SWM plans, as prescribed by the Waste Management Act of 2014). ➢ Progress: ・ Officers from 5 provinces resolved to include waste minimization schemes in the annual SWM plans they are now preparing. A workshop on annual SWM plans was held in July 2015, in which officers from 5 of the six provinces and the three municipalities participated. During the workshop, the C/Ps from PVMC and LMC explained the waste audit implementation method and results analysis, and introduced the waste minimization schemes they have already implemented. ➢ Conclusion: The indicator has been fully achieved.
3.2 Manual for developing Solid Waste Management master plans at province level is prepared.	Note: As per the Waste Management Act of 2014, an annual SWM plan (not a SWM master plan) is required. The Indicator should be rephrased as "Manual for developing annual SWM plans at province level is prepared". ➢ Progress: ・ A template for an annual SWM plan at provincial and municipal level has been prepared. During the workshop on annual provincial SWM plan in July 2015, the template was distributed and explained to the participants from the provinces and the municipalities. ➢ Conclusion: The indicator has been fully achieved.

<Overall>
Output 3 has been fully achieved.

(3) Project Purpose

Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	Degree of achievement Partly achieved

Indicator	Results
1. Three (3) Experts (Trainers) are listed in the SPREP inventory	The relevant data is not available because SPREP has not developed a mechanism for certification of trainers yet. ➢ Conclusion: The Indicator is not used to assess the achievement of the Project Purpose directly[2]. ➢ For reference:

[2] This indicator was not used as a direct measure of the Project Purpose for the following reasons: (i) while PIDOC, the existing database, is an inventory of SPREP, the persons listed are trainers recognized by J-PRISM but not considered as officially certified trainers by SPREP: and (ii) the target values are not valid as they had been determined before the introduction of PIDOC (thus not consistent with the number of trainers listed in it).

- As of June 2015, cumulative total of 18 C/Ps have participated in the international/regional/country training and workshops organized by J-PRISM as trainers. They are considered as trainers recognize by J-PRISM and are listed in the Pacific Islands Database of Capacity Development Activities (PIDOC), an inventory of SPREP developed through J-PRISM.

Table (b): Number of trainers listed in the PIDOC

	Field of expertise	Number
1.	Waste Generation/Characterization Study	3
2.	Time and Motion Study	3
3.	National/State SWM Strategy	4
4.	Waste collection and Transportation	3
5.	Landfill Design	1
6.	Landfill Improvement/ Rehabilitation/Construction	1
7.	Organic waste utilization	1
8.	Disaster waste management	2
Cumulative total		18

2 Bouffa and Luganville landfill are managed as planned in the Annual Operation Plans

Note: The Indicator should be rephrased as "Bouffa landfill is managed as planned in the Annual Operation Plan" since activities related to management of Luganville landfill are not included in the PDM.

➢ Progress:

- An annual plan for the operation works (2015) was prepared as a component of the Operation and Development Plan for Bouffa Landfill. The plan include the following components: (i) manual recording of incoming vehicle, (ii) improvement of soil cover application, (iii) gas vents installation in the existing cells, (iv) keeping record of heavy equipment operations, and (v) general site-clean up.
- So far, the operation works have been implemented as planned under overall supervision of the outgoing C/P in charge of the landfill management. It is uncertain if the operation will be continuously implemented as planned once the C/P in charge of the landfill management is terminated early September. It is also noted that the existing operation manual, which was prepared in 2008, does not have the components mentioned in the Annual Operation Plan.

➢ Conclusion: The Indicator has been partly achieved.

3 One or more provinces implemented their respective action plan to promote minimizations and composting in respective provinces

Note: In view of the Waste Management Act 2014, which require all the provinces and three municipalities to prepare and implement their respective annual SWM plans, the Indicator should be rephrased as "one or more provinces implemented their respective annual SWM action plans in the respective provinces, which include promotion of waste minimization". (Composting is included in the waste minimization).

➢ Progress:

- As stated in the results of Indicator 3.1 and 3.2, the workshop on preparation of the annual SWM plans was organized in July 2015. At the workshop, the officers from five provinces (and three municipalities) resolved to include waste minimization schemes in the annual SWM plans for FY 2016 they are now preparing. Provisional timeframe for development of the annual SWM plans is shown in the table below.
-

Table (b):Timeframe for development annual SWM plans at provincial and municipal levels

	Major step	Provisional schedule
1	Workshop	July 2015 (completed)
2	Submission of the draft to DEPC	Mid-September 2015
3	Review and finalization of DEPC	November, 2015
4	Endorsement by each provincial council	December, 2015

5	Submission for endorsement by DEPC	December, 2015

- According to the template distributed to the provincial officers at the workshop in July, waste minimization is included as one of the 7 components: (i) preparation of the SWM by-laws: (ii) development of sustainable financing: (iii) capacity building: (iv) waste minimization: (v) integrated SWM: (vi) provincial coordination: and (vii) public awareness.
- So far, Torba Province has submitted its draft SWM plan to DEPC, which includes waste minimization.
- It is expected that all the provinces will start implementing their respective annual SWM plans, including waste minimization schemes, in FY 2016, starting January 2016, considering that it is the requirement of the Act.

➢ Conclusion: The Indicator has been partly achieved. It is expected to be fully achieved before the end of the Project.

<Overall>
The Project Purpose has been partly achieved.

(4) Implementation Process

(a) Progress of Activities

1) Overall:

- Progress was slow in the first half of the Project. According to the Mid-term Review Report, "there had been problems regarding active involvement in the first and the second year of the Project. This might be due to insufficient numbers of C/Ps who involve in the Project, particularly from PVMC, and a lack of awareness among C/Ps regarding the Project during the first year compounded by the absence of JICA country expert(s) in the second year". The first JICA Short-term Expert resigned due to ill health in November 2011, and the position remained vacant until October 2012. During the absence of the JICA Short-term Expert, the Project Office in Samoa supported the Vanuatu C/Ps; however, the support level was insufficient to cover the absence of Short-term Expert due to distance and inconvenience. The second Short-term Expert was finally dispatched in November 2012, but his contract ended in March 2013. There was a lapse of three months until the third and current Short-term Expert Team was dispatched in July 2013. It is natural that it took some time for a new expert to understand the situation and to be able to fulfill his role in full-swing. The frequent change of the JICA Experts resulted in confusion in approach, which also led to delay in some activities.
- The activities started to get on track in the second half of the Project. The progress, however, became slow again in the final year of the Project due to Cyclone Pam in March 2015 and the announcement of the redundancy of the main C/Ps of PVMC, including the Project Manager, in May 2015.
- Cyclone Pam, which hit the nation in March 2015, made the C/Ps occupied with post-disaster waste management until April so that they were not able to focus on the project activities. In May 2015, PVMC announced organizational reform and restructuring of the staff. The Environmental Health Division to which the main C/Ps belonged to was abolished. All of the main C/Ps, including Environmental Health Manager, who was also the Project Manager, received redundancy letters. Two of them were terminated in the end of August and the other would be redundant in early September. The successors of the redundant C/Ps have not been identified/appointed by PVMC yet. Some of the activities keep going with the remaining staff of PVMC. Others have been either suspended or stagnant. It is not certain if they would be completed by the end of the Project.

2) Issues/Points specific to each Output

➢ Output 1

- Activity 1.2 (Use of organic waste for composting):
  - PVMC has not appointed the successor of the redundant C/P. A market officer seems to have taken over some responsibilities.
- Activity 1.3.3 (Updating of the existing 10-year SWM plan of PVMC):
  - PVMC has not appointed the successor of the redundant C/P.
  - A SWM plan for PVMC (2008-2017) was prepared in March 2008 with support of a JICA Technical Cooperation Project "The Improvement of Bouffa Landfill Project". The10-year plan has a number of components, including waste generation, collection, final disposal and minimization. Updating of the existing plan started in 2014 with preparation of the collection plan and development plan of Bouffa landfill, which need to be revisited in view of the structure reform of PVMC in May 2015. Updating of

the other components of the 10-year plan has been suspended since the redundancy of the C/P in charge.
  - PVMC is required to develop its annual SWM plan (with 5-year conceptual plan) as per Waste Management Act of 2014. Though the draft is supposed to be submitted to DEPC by mid-September 2015, the officer in charge has not been determined yet.
- Activity 1.5 (Establishment and implementation of collection system for cans and plastic bottles
  - PVMC has not appointed the successor of the redundant C/P. Collection system is not functioning as stated in the results of the Indicator 1.3. Without the officer in charge in place, it is unlikely the system will be rebuilt before the end of the Project.
- Activities in Luganville:
  - Market waste composting system and collection system for cans has been established and implemented by LMC with technical support of a VSA volunteer. Inputs of the Project have been very limited: JICA Experts have provided some technical advice and part of the cost for the collection cages have been borne by JICA.

➢ Output 2:
- Activity 2-1(Manual data collection at Bouffa landfill):
  - As the results of the restructuring of PVMC, the landfill staff has been decreased from 6 to 3. Fortunately, the staff in charge of manual data collection was not redundant so that the activity is still ongoing.
- Activity 2-3 (Development and updating of a centralized data management system at Bouffa landfill with a weighbridge system):
  - The activity has been cancelled since the weighbridge system would not be introduced under the Project due to lack of power supply.
- Activity 2-5 (Development of closure plan for Luganville disposal site):
  - At the 4th JCC meeting the LMC team reported that another VSA volunteer would be dispatched shortly and he/she would assist LMC in developing the closure plan.

(b) Project Management
- The Vanuatu side has participated in decision making process duly. JCC has been held annually, which has been effective in giving overall guidance and direction of the Project.
- Absence of the Project Manager with relevant decision making power and authority has been a serious problem since May 2015. According to the R/D signed on 8 December 2010, Environmental Health Manager, PVMC, as the National Project Manager, is responsible for the management matters of the Project. As part of the restructuring of PVMC, the post for Environmental Health Manager was abolished in May 2015 and the C/P assigned to the post received a redundancy letter. Though he remained as the Project Manager until his service was terminated by PVMC in the end of August, he was not able to perform the expected role sufficiently without the power and authority he used to have as the Environmental Health Manager. The new Project Manager has not been identified/appointed yet.

(c) Communication within the Project
- In general, communication within Vanuatu side has been sufficient, especially in the second half.
- Monthly C/P meetings are held in Port Vila and Luganville, where all members report their activities in the past month and introduce their plan for coming month, so that everyone follows-up not only concerned Outputs but all others. The relevant organizations, including One Small Bag, an environmental NGO, have been invited. One Small Bag has participated in the public awareness activities for market waste minimization in Central Market.
- Communication between C/Ps and the JICA Expert Team has been generally sufficient.
- Within PVMC, communication between C/Ps and the senior management could have been more regular. Lack of communication may have resulted in insufficient understanding of the senior management about the Project activities.

(d) Collaboration/coordination with Local Stakeholders
- PVMC C/Ps started to coordinate with some local stakeholders especially in the last 2 years.

	Stakeholders	Coordination
1	Central market and an organic farming company	Central market has collaborated with the Project in separation of green/organic wastes from other wastes. The separated wastes are collected by PVMC and transported to an organic farming company for utilization of the wastes for mulch

2	Communities (Freshwota Ward) and a recyclable collection company	As stated in the results of Indicator 1.3 for Output 1, communities in Freshwota Ward and a recyclable collection company collaborated with the Project in collection system for cans. The momentum has been fading away and system has not been functioning since Cyclone PAM and the announcement of the redundancy of the C/Ps in charge.
3	A hardware center	A hardware center in Port Vila has provided the cages for can collection in Freshwota Ward.

(e) Participation in Region-Wide Activities of J-PRISM

1) Participation as trainees

So far, 3 C/Ps (PVMC-2, DEPC-1) have participated in 4 region-wide activities organized by the J-PRISM as trainees as shown in the table below.

	Year	Title	Venue	Name, organization of the C/P
1.	2011/10	J-PRISM Regional Training on Landfill Management	Vanuatu	1. Roger AGATH (PVMC) 2. Carol ROVO (DEPC)
2.	2012/11	3R regional Training in Fiji in 2012	Fiji	1 .Roger AGATH (PVMC)
3.	2013/7	J-PRISM Training of trainers' workshop on OS&H in Waste Management for PICs (JPRISM/ILO)	Samoa	1. Roger AGATH (PVMC) 2. Amos MATHIAS (PVMC)
4.	2014	J-PRISM Regional Training for Trainers 2014	Fiji	1. Amos MATHIAS (PVMC)

*A trainer was a C/P of PVMC (see #1 of the table below for details).

In addition, the Melanesian SWM Workshop was held in Honiara during the period of August 5-7, 2015, in which C/Ps from PNG and Vanuatu were invited to participate together with the Solomon Islands C/Ps. Seven C/Ps from Vanuatu participated in the workshop: five from PVMC, including the Town Clerk, a Councilor, and 3 C/Ps; one from DEPC; and the other from LMC.

(f) Coordination with Other Japanese and International Projects

1) Holistic approach with other schemes of Japanese assistance

	Scheme	Coordination
1	Training and Dialogue Program of JICA	So far, 3 C/Ps (DEPC-1, PVMC-1, LMC-1) have participated in the Training and Dialogue Programs in Japan. List of Training and Dialogue Program of JICA participated by the C/Ps (Year / Title / Number of participants) 1 / 2011 / Waste Management and 3R (Reduce, Reuse, and Recycle) Policies (B) / 1. Carol ROVO (DEPC) 2 / 2012 / Waste Management Techniques (B) / 1. Amos MATHIAS (PVMC) 3 / 2014 / Enhancement of Solid Waste Management Capacity (Advance, Planning &Policy)(A) / 1.Peter SAKITA (LMC)
2	JICA Partnership Program	So far, 5 C/Ps (4 from PVMC and 1 from LMC) have participated in training conducted under a JICA Partnership Program "Promotion of Shibushi Model (Waste Minimization without Incineration"). List of JICA Partnership Program training participated by the C/Ps (Year / Title / Number of participants) 1 / 2013 / Promotion of Shibushi Model (Waste Minimization without incineration) from Fiji to Pacific Island Countries / 1. Tom NALAU (Lenakel) 2. Andrew MARK (PVMC) 2 / 2014 / Promotion of Shibushi Model (Waste Minimization without incineration) from Samoa to Pacific Island Countries / 1. Roger AGATH (PVMC) 2. Berry MAHAU (PVMC) 3. Ray VILVIL (PVMC)
3	JOCV (Environment Education)	• JOCVs assigned to PVMC (2012-2014, 2014-2015) have participated in monthly C/P meetings and have collaborated with the Project in implementing waste characterization surveys and monitoring of aluminum can collection system. • JOCVs assigned to DEPC (2012-2013, 2013-2015) have participated in monthly C/P meetings and have exchanged experiences and views. • A JOCV assigned to LMC (2014-present) has collaborated with the C/Ps of

		Luganville and a VSA volunteer in establishing collection system of aluminum cans.

2) Coordination with other donors

	Scheme	Coordination
1	VSA volunteer (LMC)	As stated earlier, a VSA volunteer, assigned to LMC from 2012 to June 2015, covered most of the activities for LMC originally planned in the Project, including collection system of cans and market waste composting, while inputs from the Project for the activities at LMC were very limited in terms of assignment of Short-term Experts and provision of local costs. In addition, the Project has coordinated with the VSA volunteer in post-disaster waste management of Cyclone Pam. She checked on the damage situation together with the C/Ps of PVMC and DEPC, and JOCV volunteers assigned to LMC and Sanma Province.
2	UNDP	The Project has coordinated with UNDP in post-disaster waste management of Cyclone Pam.
3	Port Vila Urban Development Project (ADB/ Aus-AID)	ADB/Aus-AID is co-financing with the Government of Vanuatu "Port Vila Urban Development Project" that would improve drainage, roads, and sanitation systems in Port Vila. This Project includes construction of sludge treatment facilities at Bouffa landfill. The Project has exchanged information with them when preparing the development plan for Bouffa landfill.

III. Results of Analysis from the Viewpoints of Five Evaluation Criteria

(1) Relevance

The Project is still relevant

(a) Necessity

In Vanuatu, waste management has become a particularly urgent issue for municipalities and provincial centers due to scarcity of land and the increasing amount and variety of waste.

(b) Priorities

In the development plan of Vanuatu, Priority Action Agenda (PAA) (2006-2015), it is stated that "The safe disposal of solid waste is a significant problem for many communities." under Environment and Disaster Management. Moreover, the updated version of PAA (2006 – 2015) was published in September 2013, and, under "Economic Infrastructure and Support Services", J-PRISM was mentioned together with the previous technical cooperation project, Bouffa Landfill Improvement Project and assistance from SPREP and other donors regarding waste management. It shows that solid waste management is seen as an important factor of supporting services in PAA. The Project also corresponds to Japan's ODA policy. Under the Japan's Country Assistance Policy for the Republic of Vanuatu in 2012, Basic Policy of Assistance is: "Accomplishment of Sustainable Economic Growth with Environmental Consideration and Improvement of Living Standards", and one of the priority areas is "Environment/Climate Change". J-PRISM is a project under "Support Programme for Development of Circulatory Communities in the Island Country" under the Development Issue "Environmental Conservation".

(2) Effectiveness

Effectiveness of the Project is expected to be medium

(a) Achievement of Project Purpose

- Progress was slow in the first 2 years primarily due to insufficient assignment of JICA Experts and insufficient involvement of Vanuatu C/Ps. The activities got on track in the third year but became stagnant again in the fifth /final year primarily due to adverse effects of the external factors beyond control of the Project: Cyclone Pam and redundancy of the main C/Ps of PVMC, the main implementing organization, as part of its structural reform. While the Output at national level has been fully achieved, the Outputs at the municipal level (PVMC) have been partly achieved.
- The Project Purpose has been partly achieved considering the achievement level of its Indicators and the Outputs. It is expected that the Project Purpose would be achieved more before the end of the Project.

(b) Contribution of Outputs to Project Purpose

Logical relation between Outputs and Project Purpose is confirmed.

(c) Other promoting/inhibiting factors

Specific factors have not been identified.

(3) Efficiency

Efficiency of the Project has been medium

(a) Production of Outputs

Production level of Outputs is mixed. While the Output at national level has been fully achieved, the Outputs at the municipal level (PVMC) have been partly achieved.

(b) Appropriateness of Inputs

- Vanuatu side: Overall, Inputs by the Vanuatu side have been fairly appropriate in producing Outputs.
  - Personnel: The personnel with adequate technical background and competency have been assigned to the Project. In terms of quantity, the assignment of C/Ps has been insufficient, especially at PVMC, the main implementing organization. Although the Project is relevant with the mandate of the C/Ps to a greater or lesser extent, they have other duties to attend to. Sometimes, the C/Ps are too busy with other pressing duties to concentrate on the Project activities. Moreover, as stated already, 3 main C/Ps of PVMC, including the Project Manager, received redundancy letters in May 2015, which have resulted in stagnation of the project activities. While two of them, including the Project Manager, were terminated in the end of August and the other is going to be terminated in the second week of September, their successors have not been identified/appointed yet. The JICA Short-term Expert, arrived in Vanuatu in the end of August 2015, has not been able to find the C/Ps to work with at PVMC.
  - Facilities : Due to lack of electrical supply to Bouffa landfill site, a weighbridge system originally planned in the Project, could not be introduced. Office space for JICA Experts used to be provided at the office of the Project Manager at PVMC. The JICA Short-term Expert, arrived in Vanuatu in the end of August 2015, has not been able to find an office space at PVMC as the service of the Project Manager was terminated just before his arrival. It is noted that DEPC has managed to provide an office space for him.
  - Local cost: DEPC has managed to secure the budget necessary for the project activities. PVMC also allocated the necessary budget but there are delays in releasing the fund due to other priorities. Since early 2014, as PVMC was passing through some financial problems, the amounts of fuel provided for the landfill heavy equipment decreased radically which affected the operation of the landfill.
- Japanese side: Overall, Inputs by the Japanese side have been fairly appropriate in producing Outputs.
  - Experts: In terms of timing and quantity, dispatch of JICA Short-term Experts was not sufficient especially in the first half of the Project, which caused the stagnation of the activities coupled with other reasons. (See "Implementation Process" for details). Assignment of Short-term Experts in Luganville has been limited, too. In terms of quality, the Experts with adequate background, relevant experiences and sufficient technical level have been dispatched.
  - Local cost: Necessary amount for the local operation was disbursed in time.

(c) Utilization of region-wide activities of J-PRISM

- So far, participated in the various region-wide activities organized by the J-PRISM. All the C/Ps, interviewed by the Evaluation Team, have gained new insights, ideas, skills, and lessens from all of the region-wide activities of J-PRISM they participated in. The experiences gained in training have been utilized in the project activities. During post-disaster waste management activities of Cyclone Pam, the experiences and lessons learned in Solomon Islands were utilized.

(d) Utilization of external resources

- As stated in the Implementation Process, the Project has been carried out in collaboration with other Japanese schemes and VSA.
- Training and Dialogue Program of JICA in Japan: C/Ps have gained new insights, ideas, skills, and lessens from all of the Training and Dialogue Program they participated in.

(e) Other promoting/inhibiting factors

- Insufficient sharing of the transferred techniques within PVMC: At PVMC, technical transfer has been focused on a few C/Ps primarily because of lack of suitable personnel. In addition, the acquired knowledge, information, experiences, and skills have not been sufficiently shared with the remaining C/Ps and other relevant staff. When these C/Ps were redundant, no staff in PVMC were ready to take over their roles.

(4) Impact

It is uncertain if the Overall Goal would be achieved. Some positive impacts have been observed already.

(a) Impact at Overall Goal level

	Indicator	Likelihood
1	60% of registered experts (trainers) on SPREP list will participates as trainers at least one workshop and/or training in region and/or in-country should there be	The Indicator is not valid since SPREP has not developed a list of the register experts to date. It is not certain if such a list will be developed in near future. ➢ Conclusion: Likelihood of the achievement of the Indicator was not assessed because it is not valid.

	an opportunity for them to do so.	
2	Amounts of waste disposal at Port Vila and Luganville landfills are decreased by at least 7% respectively	Two waste minimization activities have been introduced through the Project: one for separation and composting of organic wastes at Central Market and the other for collection system for cans in Freshwota Ward. The activity at the market is likely to continue but there is little scope for expansion as the other markets in Port Vila are outside jurisdiction of PVMC. Collection system for cans is not functioning at the moment. It is uncertain if the system will be rebuilt and will become ready for expansion as the officer in charge has not been identified/appointed yet. In addition, PVMC does not have a strategy for waste minimization, which is supposed to be incorporated in the conceptual plan of the annual SWM plan to be submitted to DEPC as per the Waste Management Act. ➢ Conclusion: It is uncertain if the Indicator would be achieved in three years after the completion of the Project since organizational strategy for waste minimization is yet to be developed.
<Overall> **It is uncertain if the Overall Goal would be achieved in three years after completion of the Project.**		

(b) Other Impacts

➢ Positive impacts observed

- Waste Management Act of 2014 was developed by DEPC, utilizing the knowledge acquired through the Project.
- Recognizing the importance of waste minimization, DEPC has started separation and collection of recyclables (cans and bottles) at their office in collaboration with the JOCV volunteer.
- Based on the analytical results of the waste characterization study conducted in Port Vila, DPEC has identified the needs for home composting. DEPC initiated a pilot project (July to December 2015) in collaboration with PVMC and DARD, targeting 7 households.
- The communities in Southern Ward started separating cans from other wastes as results of public awareness conducted by PVMC.
- Central Market has become cleaner since organic wastes are separated and collected by PVMC for transportation to an organic farming company for mulch.
- After the Cyclone Pam in March 2015, post-disaster waste management activities were carried out by the C/Ps of PVMC and DEPC in coordination with experts from the Project Office in Samoa, Short-term Experts, UNDP, a VSA volunteer assigned to LMC, and JOCVs assigned to LMC and Sanma Province. As part of the post-disaster waste management activities of J-PRISM, an open space for disaster waste was created at Bouffa landfill. The disaster waste was collected and transported to the space. Green wastes were separated as much as possible, which were transported to the organic farming company, involved in waste minimization activities at Central Market, for utilization as mulch. Public awareness activities were carried out on management of disaster wastes. In addition, a new cell was constructed at Bouffa landfill to deal with the increased waste.
- A C/P of PVMC, landfill operation supervisor of PVMC, has participated in 4r region-wide activities organized by the J-PRISM as trainer. The experiences acquired through the Project in Vanuatu have been transferred to cumulative total of 16 C/Ps in Solomon Islands, PNG, Fiji, and Samoa.

List of regional training/study visits, in which C/P participated as trainers/resource person

	Year/month	Title	Venue	Trainer	Number of participants from other countries
1.	2011/10	J-PRISM Regional Training on Landfill Management	Vanuatu	Landfill operation supervisor /PVMC	8 (Fiji-2, PNG-3, Samoa-1, Solomon-2)
2.	2011/12	J-PRISM Country Attachment Program for Landfill Management in Vanuatu from Solomon Islands	Vanuatu	ditto	1 (Solomon Islands)
3.	2012/6	J-PRISM Study Visit in Vanuatu, Samoa, and Fiji from PNG	Vanuatu	ditto	1 (PNG)

4.	2014/4	Post Disaster Waste Management Project in Honiara (J-HOPE)	Solomon Islands	ditto	6 (Solomon Islands)

➢ Negative impacts:
- Negative impacts have not been observed. They are not foreseen, either.

(5) Sustainability

At national level, sustainability is likely to be ensured. At the municipality level (i.e.PVMC), it is uncertain if sustainability is secured. Taken together, sustainability is medium.

(a) Policy and institutional aspects

➢ Policy and legal support:
- National Waste Management Strategy was developed in 2011 with support of the Project and SPREP.
- As a legal framework, Waste Management Act was developed in 2014.

(b) Organizational aspects

➢ Organizational strategy:
- DEPC: National Waste Management Strategy to be updated with the support of the Project is their latest organizational strategy for waste management. Recognizing the importance of waste management, DEPC plans to create two more posts under Environmental Protection Division from the FY 2016: one for pollution control and the other for chemical and ozone.
- PVMC:
  - PVMC does not have a proper organizational strategy for SWM at the moment. The 10-year SWM plan (2008-2017) is outdated and its updating has been suspended since May 2015 with abolishment of Environmental Health Division and the announcement of the redundancy of the C/P in charge as part of the structure reform of PVMC. As per Waste Management Act of 2014, PVMC is required to develop an annual SWM plan with 5-year conceptual plan, which overrides the existing 10-year plan, but officer in charge has not been appointed yet. During the discussion with the Evaluation Team at JICA, the Town Clerk mentioned that he would incorporate the annual SWM plan into the draft Business Plan of PVMC for FY 2016, which is due mid-October. It is uncertain how PVMC will manage to do this since PVMC does not have staff members with capacity to prepare the required SWM plan any more.
  - Organizational structure and human resource for SWM have been downsized since the restructuring in May 2015. The new structure and staffing for SWM has yet to be shared with the relevant organizations. In fact, reorganization of SWM sector seems to be still ongoing. In May 2015, Environmental Health Division was abolished and Environment Unit was temporary created under Town Planning & Development Infrastructure Division, to which the redundant C/Ps were transferred. With their termination of service in the end of August 2015, Environment Unit was moved under Office of the Chief Warden, which is responsible for the regulatory activities, according to the Town Clerk. He also confirmed that Public Work Unit/ Town Planning & Development Infrastructure Division would look after waste management research (survey) and 3R promotion together with landfill operation. (Waste collection service has been outsourced to a public corporation managed by the PVMC ("City Waste Removers")). It is noted that the Head of Public Work Unit has only limited experiences and knowledge in solid waste management. As for waste management surveys and 3R promotion, nobody has been actually assigned to the post. During the discussion with the Evaluation Team, the Town Clerk also mentioned that he would create one more post for waste management for FY 2016, who can oversee SWM in the integrated manner.

➢ Assignment of the C/Ps:
- DEPC: The C/P would be continuously assigned to Environmental Protection Division, DEPC.
- PVMC: As stated already, the main 3 C/Ps have been redundant by PMVC so that they would not be able to utilize the skills and knowledge for SWM in Port Vila if this goes on. Contradictory statements were made by the concerned persons about the reemployment of the redundant C/Ps, either on permanent or contract basis. The Evaluation Team was not able to clarify the matter due to time constraints and difficulties in making appointments. To date, it is not clear who will take over their responsibilities, especially in (i) SWM planning in integrated manner, (ii) waste audits, time-and-motion study, and incoming waste survey as well as utilization of the analytical results in SWM, (iii) monitoring of collection system for cans in the communities, (iv) updating of operational manual and annual operational plan for Bouffa landfill, and (v) updating and implementation of development plan of Bouffa landfill.

➢ Coordination among the implementing organizations: Collaborative relationship has been developed through the Project. With redundancy of the main C/Ps of PVMC, the relationship has to be rebuilt. The other implementing organizations, however, has not been informed of a new focal point at PVMC yet.

(c) Financial aspects

- DEPC**:** It is likely that DEPC will be able to secure necessary budget for their activities after the end of the Project.
- PVMC: PVMC has gone through financial difficulties since early 2014. PVMC has already decreased the fuel cost available for Bouffa landfill, which has led to deterioration of the landfill. With the current financial situation, it would be difficult to secure the necessary budget for proper operation and maintenance of the landfill, not to mention its development. Regarding waste minimization activities in the communities, it is uncertain if the necessary budget is allocated at all since PVMC has not conducted any monitoring activities since redundancy of the responsible officers. During the discussion with the Evaluation Team, the Town Clerk expressed his commitment to the waste management and stated that he would see to the incorporation of the annual SWM plan in the Business Plan for FY 2016 so that necessary budget would be secured. In order for that, PVMC has to assign somebody to prepare the annual SWM plan that is acceptable by DEPC.

(d) Technical aspects

- Technical capacity
  - DEPC: Technical capacity has been enhanced in terms of planning and practical knowledge regarding SWM and promotion of 3R. The C/P is committed to SWM and has already applied the knowledge and skills to her regular work. It is expected that she will be able to continue the relevant activities after the end of the Project.
  - PVMC: Capacity building has been focused primarily on the C/Ps of the Environmental Health Division, who have been redundant. It is noted that all of them are the trainers recognized by the J-PRISM and are listed in the Pacific Islands Database of Capacity Development Activities (PIDOC), an inventory of SPREP developed through J-PRISM. Since the turnover came in towards the end of the Project, their successors, if appointed, would not be able to acquire the experiences, skills, and knowledge to the same level as the redundant C/Ps.
- Utilization and dissemination of the transferred techniques and deliverables:
  - DEPC: DEPC has already utilized/disseminated and is expected to utilize/disseminate the skills and knowledge acquired through the Project as well as the project deliverable (i.e. National Waste Management Strategy).
  - PVMC: It is unlikely that the skills, knowledge, and deliverables transferred through the Project would be utilized by PVMC fully. It is noted that the redundant C/Ps of PVMC are willing to utilize and disseminate the transferred skills and knowledge if the opportunities are provided.

(e) Others

- Coordination and collaboration with local stakeholders: Collaboration/coordination with the local stakeholders, such as market, organic farming company, community leaders, recyclable collection companies, etc. has been gradually developed in the last two years. The momentum has been fading away since Cyclone PAM and the redundancy of the main C/Ps of PVMC, which must be rebuilt.

IV Conclusion

Overall, for the five evaluation criteria, the Project is still relevant: effectiveness and efficiency is expected to be medium: it is uncertain if the Overall Goal would be achieved but some positive impacts have been observed already: and sustainability is medium (sustainability is likely to be ensured at national level but it is uncertain if sustainability is ensured at municipal level (PVMC))

The Project Purpose is expected to be partly achieved by the end of the cooperation period. This project shall be finished on 2nd of February, 2016, as scheduled. It is noted, however, that the following issues need to be addressed by Vanuatu side after the project completion in order to enhance the effects of the Project

1. Insufficient number of staff for solid waste management at PVMC
2. Lack of experienced SWM staff at PVMC due to restructuring
3. Continuous efforts to secure necessary budget for waste management.
4. Utilization of techniques transferred through the Project

V Recommendations for the remaining period

For the remaining period of project implementation, the Terminal Evaluation Team recommends the followings:

1. Identify and appoint the new Project Manager through consultation among the Implementing Organizations and JICA by the end of the second week of September 2015 (Action : PVMC, DEPC, LMC, and JICA)
2. Identify the PVMC C/Ps to take over the responsibilities of the redundant C/Ps and officially share a list of new C/Ps, which specifies name, position, and the responsible activities of PDM/PO, with the Implementing Organizations and JICA by the end of the second week of September 2015 (Action: PVMC)
3. Officially share the new structure for waste management of PVMC with staffing (in writing) with the Implementing Organizations and JICA by the end of the second week of September 2015 (Action: PVMC)
4. Develop a draft annual SWM plan required by the Waste Management Act for submission to DEPC by mid-September 2015 as agreed in the workshop in July, finalize it and incorporate it in the Business Plan for FY 2016 (Action: PVMC/Project)
5. Strengthen/resume monitoring of waste minimization activities at Central Market and Freshwota Ward as soon as the C/Ps in charge are assigned and enhance communication/coordination with the stakeholders, including the organic farming company, the recyclable collection company, and the communities (Action: PVMC/Project)
6. Develop an MOU between PVMC, Central Market and the organic farming company for the waste minimization activities at Central Market, which have been implemented based on the verbal agreements, by the end of October 2015 (Action: PVMC/Project)
7. Develop a separate MOU between PVMC, Freshwota 1 & 4 communities, and the recyclable collection company for the waste minimization activities, which have been implemented based on the verbal agreement, by the end of October 2015 (Action: PVMC/Project)
8. Update the Operational Manual for Bouffa landfill (2008), incorporating operational improvement introduced through the Project to introduce and strengthen safety measures by the end of October 2015 (Action: PVMC/Project)
9. Complete construction of Cell C of Bouffa landfill by installing pipes by the end of the Project (Action: PVMC)
10. Modify the PDM as attached for review and approval by the final JCC (Action: Project)
11. Report the updated achievement of the Indicators at the final JCC (Action: Project)
12. Follow-up the recommendations of the Terminal Evaluation and report it to the final JCC (Action: Project)

Attachment:

1. Latest Project Design Matrix (PDM ver3/ March 2015)
2. Latest Plan of Operation (PO ver 3 /March 2015)
3. Schedule of Terminal Evaluation
4. Record of Japanese Inputs
   4-1 Dispatch of Experts
   4-2 Training in Japan
   4-3 List of Machinery and Equipment provided by Japan
   4-4 Local Cost
5. Record of Vanuatu Inputs
   5-1 List of Counterpart Personnel
   5-2 Local Cost
6. Proposed modification of PDM

Attachment 1: Latest Project Design Matrix (PDM ver 3)

Project Title: Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Target Group : C/Ps of ●● | Final Beneficiaries: Citizens of ●● | Project period: Feb, 2011 -

Implementing Agency: ●● | Target Area: ●● | Date

Narrative Summary	Objectively Verifiable Indicators	Means of Verifications	Important Assumptio
Overall Goal			
Sustainable management of solid waste in the Pacific Region is enhanced.	1-1. 60% of the registered experts (trainers) on the SPREP list will participate as trainers at least one workshop and/or training in region and/or in-country should there be an opportunity for them to do so. 1-2. Amounts of waste disposal at Port Vila & Luganville landfills are decreased by at least 7% respectively.	1-1. Submission of the workshop documents 1-2. Incoming Waste Disposal Records	Registered experts wil be provided with the op in workshops.
Project Purpose			
Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	1. Three experts (Trainers) are listed in the SPREP inventory. 2. Bouffa and Luganville landfill are managed as planned in the Annual Operation Plans 3. One or more provinces implemented their respective action plan to promote minimizations and composting in respective provinces.	1. SPREP (Regional inventory of skilled people) 2. Annual Operational Plans 3. Reports from the province	1. Natural disaster would not drastically affect the c of SPREP. 2. Political changes of PIC countries would not dra collaboration mechanism of SPREP.

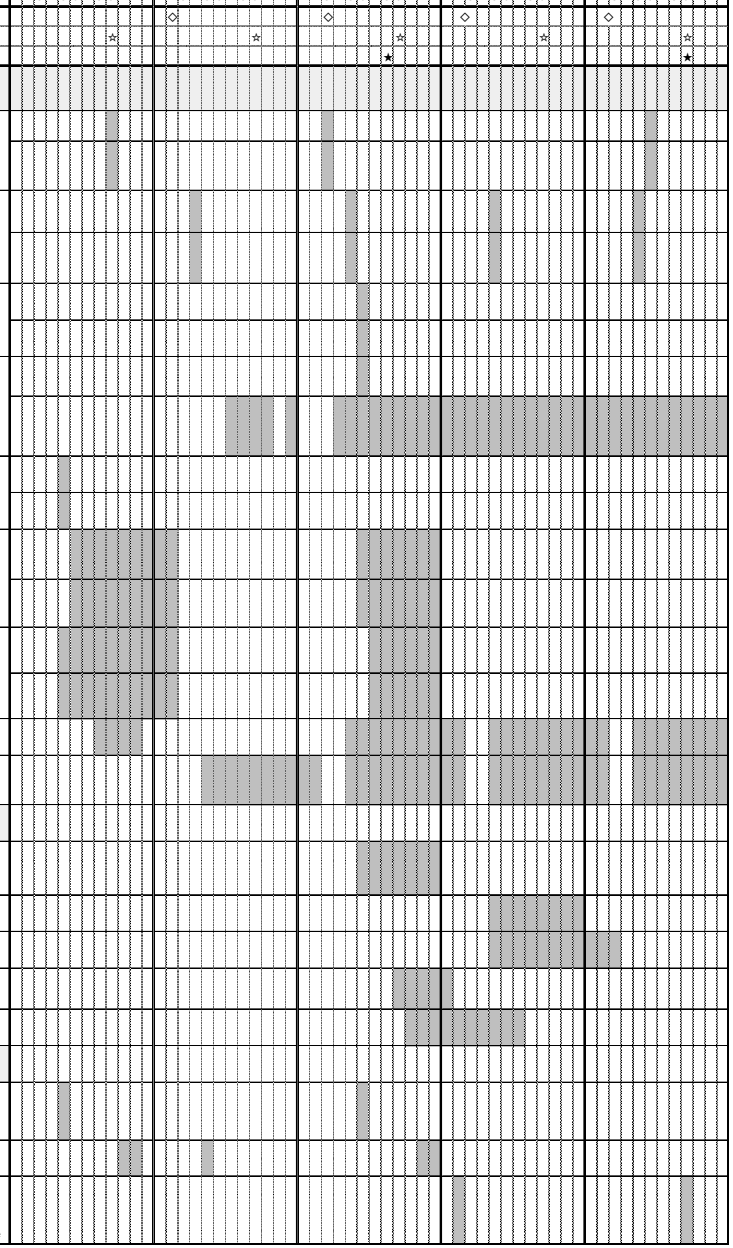
#	Priorities under RS2010	Outputs	Objectively Verifiable Indicators	Means of Verifications
1	Sustainable Financing			
2-1	3Rs/4Rs	**Output 1:** Waste minimization mechanisms are developed.	1.1 Amount of organic waste generated from market is reduced by 20% (Port Vila) 1.2 NWMS is established 1.3 Collection system for cans is established	1.1 Incoming Waste Disposal Records 1.2 Endorsement of NWMS document 1.3 Interview survey of recycling companies
2-2	Waste Disposal	**Output 2:** Existing waste disposal sites (Bouffa and Lugaville) are improved.	2.1 Manual Data management system is established in Bouffa landfill 2.2 Operation and management master plan for Bouffa landfill is utilized 2.3 Closure plan for Luganville disposal site is established	2.1 Establishment of incoming vehicle records in Bouffa 2.2 Periodical data analysis and reporting 2.3 Annual Operational Plans 2.4 Closure Plan document is preparaed
2-3	Waste Collection			
3	Legislation			
4	Awareness/Communication/Education			
5	Capacity Building	**Output 3:** Capacities for waste management at the national and local government level are enhanced.	3.1 More than one provincial officer recognizes the importance of waste minimization and SWM. 3.2 Manual for developing Solid Waste Management master plans at province level is prepared.	3.1 Waste Characterization Reports 3.2 Manual documetns
6	Environmental Monitoring			
7	Policy,Planning, Performance			
8	Solid Waste Industry			
*	Monitoring system of RS2010			

Activities	Inputs: Japanese Side	Inputs: Vanuatu side	Important Assumptions
Please see PO for details.	Dispatch of JICA experts Provision of equipment and materials Provision of Regional, sub-regional and in-country workshops / training Local cost support	Assignment of National PD/PM and CPs Local Costs Sharing Provision of necessary land/facility, work space	1.Counterpart personnel keep working in the fi 2. Disasters, such as severe rain storm will not progress of project activities. 3. Necessary budget to carry out activities is a government. 4. Input of JICA experts for Vanuatu is provide appropriately. 5. Power supply is available at Bouffa Landfill.

Pre-condition
Cooperation of community people of the targe

Date issued: March 2015

	Outputs and Associated Activities	Indicators for Outputs	Person in-charge
JCC/SC/Eva	JCC ◇		
	Steering Committee ☆		
	Evaluation Studies ★		
OUTPUT 1: Waste disposal amounts in the urban and peri-urban areas are reduced through minimization mechanisms.		1.1 Amount of organic waste generated from market is reduced by 20% (Port Vila) 1.2 NWMS is established 1.3 Collection system for cans is established	
1-1-1	Undertake waste characterization studies (Port Vila)		Carol Rovo Roger Tary Amos Mathias Berry George Brian Roberts
1-1-2	Undertake waste characterization studies (Luganville)		(Andrew Ala) (Prosper Buletare) (Keith Jacob) (Anaclet Philip) (Gina Tari) (Ray Vilivil)
1-1-3	Undertake waste characterization studies (Lenakel)		Selwyn Tagapu Tom Nalau Helen Kawiel
1-2	Explore the use of organic waste for composting in partnership with Agriculture Department/Organic Farming groups and Ministry of Health. (Port Vila and Luganville)		Roger Tary Pakoa Rarua Bretain Tambe Mark Vurobaravu Andrew Ala Brian Roberts
1-3-1	Review and finalization of National Waste Management Strategy (NWMS)		Carol Rovo Trinison Tari
1-3-2	Development of National Solid Waste Minimization Strategy (NSWMS)		Carol Rovo Pakoa Rarua Bretain Tambe Mark V Roger Tary Amos Mathias
1-3-3	Review, evaluation and updating of waste management plan of Port Vila Municipality (2008 year)		Roger Tary Amos Mathias
1-4	Establish and implement collection system for cans and plastic bottles (Port Vila)		Roger Tary Flaviana Rory
1-5	Establish and implement collection system for cans and plastic bottles (Luganville)		Andrew Ala Gina Tari
OUTPUT 2: Existing waste disposal sites (Bouffa and Luganville) are improved		2.1 Manual Data management system is established in Bouffa landfill 2.2 Operation and management master plan for Bouffa landfill is utilized 2.3 Closure plan for Luganville disposal site is established	
2-1	Conduct Feasibility Study (FS) on establishment of weighbridge system for Bouffa landfill		Carol Rovo Roger Tary Amos Mathias
2-2	Establish manual data collection system for Bouffa landfill		Amos Mathias
2-3	Develop and Update a centralized data management system at Bouffa landfill		Amos Mathias
2-4	Develop the operational/management master plan for Bouffa Landfill to incoorporate data management		Roger Tary Amos Mathias
2-5	Develop closure plan for Luganville disposal site		Andrew Ala Gina Tari
OUTPUT 3: Capacities for waste management at the national and local government level are enhanced		3.1 More than one provincial officer recognizes the importance of waste minimization and SWM 3.2 Manual for developing Solid Waste Management master plans at province level is prepared	
3-1	Conduct in-country training on waste characterization		Carol Rovo Roger Tary Amos Mathias
3-2	Undertake in-country training on landfill management/operations		Amos Mathias
3-3	Conduct training for waste collection operators/handlers		Roger Tary Amos Mathias Rex Aromalo Christopher Desonville



Activity for "Procurement of recycling equipment such as ●●, for glass and plastic bottles (Port Vila, Luganville)" is eliminated from PO as of Sep. 30. 2010

Attachment 3 Schedule for Terminal Evaluation

Date		Schedule – Ms Hirouchi	Venue
29 Aug	Sat	16:15 Arrival	
30 Aug	Sun	17:00 Meeting with Asano	Melanesian Hotel
31 Aug	Mon.	8:30 Meeting with JICA Vanuatu Office 10:00 Courtesy call to Director, DESSPAC (Mr. Benjamin Shing) (Cancelled) 13:00-16:00 Kick-off Meeting (Introduction, evaluation methods and confirmation of schedule （Hirouchi）, project outline, confirmation of progress of PO and Indicators (CP)) 16:00-17:00 Interview with the present C/P of PVMC Rex, Chirs(Cancelled)	JICA Office DESSPAC DEPC
1 Sep	Tue.	8:30 Courtesy call to City Mayor, PVMC (rescheduled to 3 September) 9:30 Interview with the redundant/outogoing C/P of PVMC 9:30-10:20 Amos Mathias 10:30-11:20 Roger Tari 11:30-12:20 Berry George (cancelled) 13:30 Interview with management C/P from DEPC 13:30-14:20 Carol Rovo, Senior Environment Officer (rescheduled to 3 September) 14:30-15:20 Trinison Tari, Acting Director, DEPC 16:00-17:00 Interview with the present C/P of PVMC Rex, Chiris (Cancelled)	PVMC JICA Vanuatu Office DEPC
2 Sep	Wed.	08:00 Preparation of draft, internal meetings 13:30 Site visit and interview Rececle Corp, Central Market, Freswota 4pilot project site 15:00 Preparation of draft, internal meetings	JICA Vanuatu Office
3 Sep	Thu	8:00 Preparation of draft, internal meeting 11:00 Courtecy call to DG, Ministry of Climate Change (Mr. Jotham Napat) 14:00 Feedback & discussion with Town Clerk, PVMC 15:30 Inteview with the management C/P from DEPC (Carol Rovo) 16:00 Courtesey call to City Mayor, PVMC (cancelled)	 PVMC JICA Vanuatu Office PVMC
4 Sep	Fri.	8:00 Preparation of draft, internal meeting (Printing) 15:00 Wrap-up meeting (discussion on draft) 18:45 Reporting to JICA Vanuatu Office	JICA Vanuatu Office DEPC JICA Office
5 Sep	Sat.	11:30 Departure	-

4-1. Dispatch of JICA Experts

Long-term Experts from Project Office	Short-term Experts	Local Expert *	Total
3.3 MM	9.9 MM	1.0 MM	14.2 MM

* Cost of Local Expert is included in Local Cost Support

4-2. Training in Japan

Course Name	Period	Position / Organization	Name
"J-PRISM Regional Training from Trainers"	25th May to 4th June, 2015	Landfill Supervisor, Port Vila Municipality	Mr. Amos Mathias
		Environmental Health Manager, Port Vila Municipality	Mr. Roger Tary

4-3. List of Machinery and Equipment provided by Japan

Utilization: A=Fully B=Moderatly, C=Partly, D= Not at all
Management: A=Appropriate B=Fair C=Innapropriate

When delivery	No.	Country	Item	Maker/Model etc.	Qty.	Price in local currency $	Currency	In US$*	Responsible Section/Organization	Utilization	Management
January, 2013	1	Vanuatu	Printer	HP DJ2510(XC027A)	1	VUV 10,800.00	Vanuatu Vatu (VUV)	US$111.78	Department of Environmental Conservation	A	A
March, 2015	2	Vanuatu	Chain saw	Maker: Gardenline Power: 2.2kW/ 3.0 HP Blade length: 450mm Cutting speed: 19m/s	3	VUV 69,000.00		US$648.60	Port Vila Municipality	A	A
					Total	VUV 79,800.00		US$760.38			

*(For Feb. 2011-July2013) Exchange rate from local currency to US Dollar refers to OANDA as of 1st August, 2013. 1VUV= US$0.01035

*(For Aug. 2013-June2015) Exchange rate from local currency to US Dollar refers to OANDA as of 1st July, 2015. 1VUV= US$0.00940

ANNEX 3(d)-Vanuatu

4-3 Local Cost

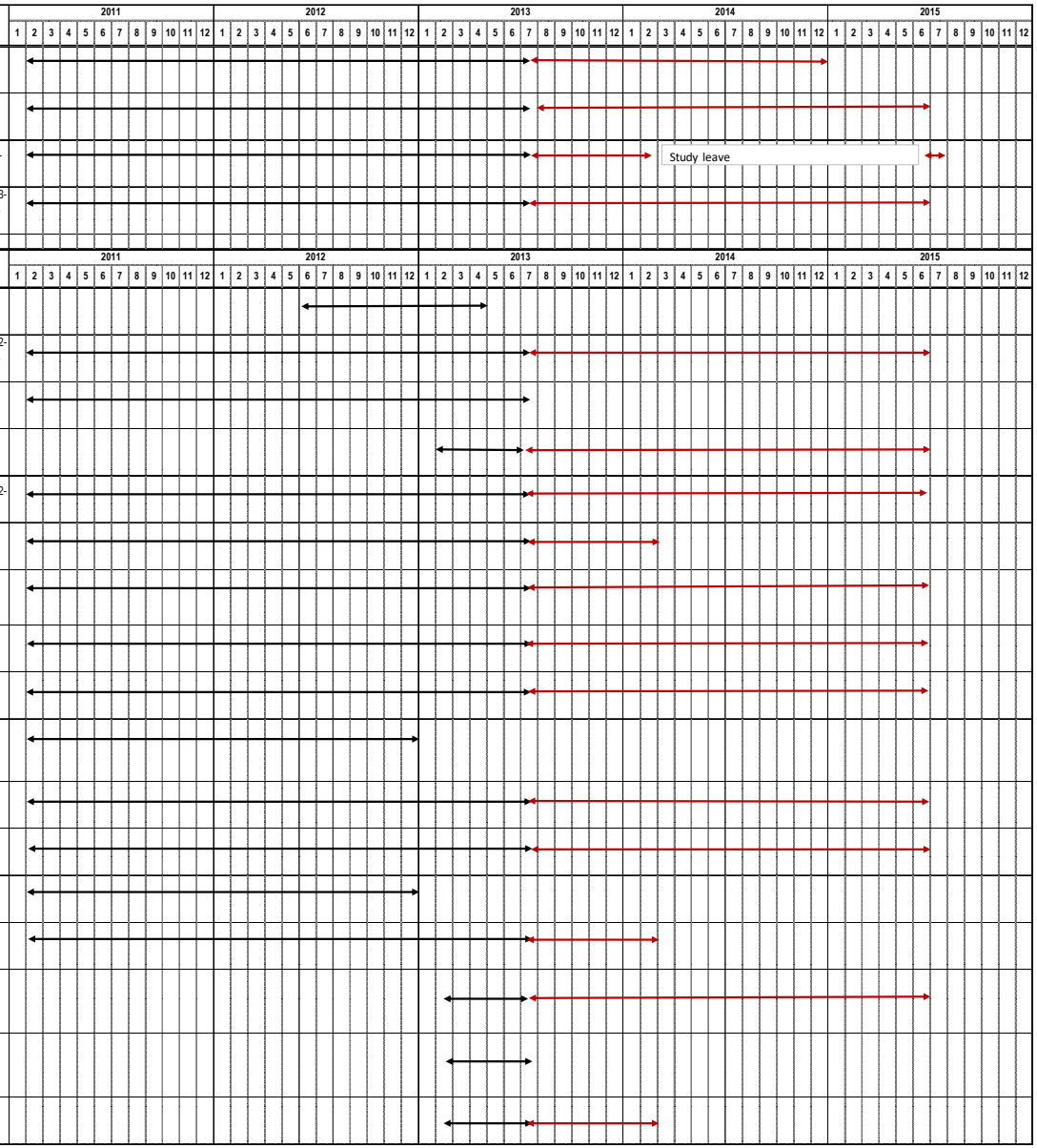
Country	Air Fare	Travel Allowance	Fees and honorarium (non-staff)	Refreshments	Miscellaneous	Total			
	Travel Allowance / Air Fare	Travel Allowance / Air Fare	Fees and honorarium (non-staff)	Refreshments		In local currency	Local Currency	In Japanese Yen*1	In USD *2
Vanuatu	494,568.49	344,620.00	897,798.67	179,187.00	2,349,118.70	4,265,292.86	Vanuatu Vatu	¥4,710,201.98	US$41,210.67

Attachment 5: Record of Vanuatu Inputs

5-1 List of Counterpart Personnel

#	Name	Management CPs	Assigned Period	Position	Organization	Activities in charge
1	Albert Williams	Project Director (Feb. 2011-Dec. 2014)	Feb. 2011- Dec. 2014 (dismissal)	Former Director	Department of Environmental Protection and Conservation, Ministry of Environment	
2	Trinison Tari	Project Director (Jan. 2015-)	Feb. 2011-	Acting Director	Department of Environmental Protection and Conservation, Ministry of Environment	1-3-1, 1-3-2
3	Carol Rovo	Project Coordinator	Feb. 2011- Feb. 2014 Jun. 2015-	Senior Waste and Pollution Control Officer	Department of Environmental Protection and Conservation, Ministry of Environment	1-1-1,1-3-1,1-3-2,2-1,3-1,
4	Roger Tary	Project Manager	Feb. 2011-	Environmental Health Manager	Port-Vila Municipality	1-1-1, 1-2,1-3-3,1-4,2-1,2-4,3-1,3-2, 3-3

#	Name	Technical CPs	Assigned Period	Position	Organization	Activities in charge
	Ayako Nishikawa		Jun. 2012- April, 2013	JOCV	Department of Environmental Protection and Conservation, Ministry Lands and Natural	
1	Amos Mathias		Feb. 2011-	Landfill Operational Supervisor	Port-Vila Municipality	1-1-1, 1-3-3,2-1,2-2,2-3,2-4,3-1,3-2,3-3,
2	Selwyn Tagapu		Feb. 2011-Jul. 2013	Provincial Planner	Tafea Provincial Office, (Lenakel)	
3	Tom Nalau		Feb. 2013-	Provincial Planner	Tafea Provincial Office, (Lenakel)	1-1-3
4	Andrew Ala		Feb. 2011-	Manager	Environmental Health, Luganville Municipality	1-1-2, 1-2,1-5,2-5
5	Kieth Jacob		Feb. 2011- Feb. 2013	Environmental Health Officer	Ministry of Health (Santo)	
6	Anaclet Philip		Feb. 2011-	Environmental Extension Officer	Department of Environmental Protection and Conservation (Santo) Ministry of Lands and Natural Resources	1-1-2, 1-2, 1-5
7	Prosper Buletare		Feb. 2011-	Provincial Planner	Sanma Provincial Office (Santo)	1-1-2, 1-2, 1-5
8	Pakoa Rarua		Feb. 2011-	Environmental Health Officer	Department of Public Health (Port Vila), Ministry of Health	1--4
9	Francois Wobak		Feb. 2011- Dec. 2012	Farm Support Officer	Department of Agriculture and Rural Development, Ministry of Agriculture, Livestock, Quarantine Forest and Fisheries (Port Vila)	
10	Andrew Mark		Feb. 2011-	Construction Supervisor	Port Vila Municipality	1-2
11	~~Trinison Tari~~		~~Feb. 2011-~~	~~Senior Environment Officer~~	~~Department of Environmental Protection and Conservation, Port Vila~~	
12	Bai George		Feb. 2011- Dec. 2012	Quarantine Officer	Department of Quarantine and Inspection Services, Port Vila	
13	Bretain Tambe		Feb. 2011- Feb. 2014	Quarantine Officer	Department of Quarantine and Inspection Services, Port Vila	
14	Mark Vurobaravu		Feb. 2013-	Agriculture officer	Department of Agriculture and Rural Development, Ministry of Agriculture, Livestock, Quarantine Forest and Fisheries (Port Vila)	1-2
15	Peter Iesul		Feb. 2013-	Agriculture officer	Department of Agriculture and Rural Development, Ministry of Agriculture, Livestock, Quarantine Forest and Fisheries (Port Vila)	
16	Alick Berry		Feb. 2013-	Trade Manager	Chamber of Commerce	



17	Flaviana Rory		Feb. 2013-	Policy and Advocacy Officer	Chamber of Commerce	1-1-1, 1-4
18	Berry George		Dec. 2013-	Market Waste Officer	Port Vila Municipality	1-1-1, 1-2, 1-3-3, 1-4, 3-1
19	Rex Aromalo		Nov. 2014-	City Waste Remover Manager	Port Vila Municipality	1-1-1, 1-2, 1-4, 3-3
20	Chris Desonville		Nov. 2014-	City Waste Remover Forman	Port Vila Municipality	1-1-1, 1-2, 1-4, 3-3
21	Gina Tary		Feb. 2014-	Waste Management Officer	Luganville Municipality	1-1-2, 1-2,1-5,2-5
22	Ray Vivil		Feb. 2014-	Environmental Officer	Luganville Municipality	1-1-2, 1-2,1-5,2-5

Attachment 6: Proposed Modification of PDM

5-2 Local Cost borne by Vanuatu side

	1. Travel expenses (airfare, allowances, transportation etc)			2. Expenses for documenting			3. Purchasing goods/materials			4. Foods /Drinks			5. Others			Total		
	Local Currency	USD	JPY	Local Currency	USD	JPY	Local Currency	USD	JPY	Local Currency	USD	JPY	Local Currency	USD	JPY	Local Currency	USD	JPY
Vanuatu	89,000	817	106,978	0	0	0	5,960	55	7,164	20,000	184	24,040	0	0	0	114,960	1,055	138,182
Port Vila Municipal Council	89,000	817	106,978	0	0	0	0	0	0	10,000	92	12,020	0	0	0	99,000	909	118,998
DOE	0	0	0	0	0	0	5,960	55	7,164	10,000	92	12,020	0	0	0	15,960	147	19,184

Attachment 6: Proposed Modification of PDM

	Originals	Modification (example)	Justification
Overall Goal			
Indicator 1	60% of the registered experts (trainers) on the SPREP list will participate as trainers at least one workshop and/or training in region and/or in-country should there be an opportunity for them to do so	(delete)	The Indicator is not valid since SPREP has not developed a list of the register experts to date.
Indicator 2	Amounts of waste disposal at Port Vila & Luganville landfills are decreased by at least 7%	Average amount of daily waste disposal at Port Vila landfill is decreased by at least 7% in 2018 (or 2019) compared with 2015 (or 2016)	Activities related to management of Luganville landfill are not included in the PDM
Project Purpose			
Indicator 2	Bouffa and Luganville landfill are managed as planned in the Annual Operation Plan	Bouffa landfill is managed as planned in the Annual Operation Plan	Activities related to management of Luganville landfill are not included in the PDM
Outputs			
Indicator 1-1	Collection system for cans is established.	Collection system for cans is established in Port Vila	The target site was not clear in the original Indicator.
Indicator 2-3	Closure plan for Luganville disposal site is established	(delete)	At the 4th JCC in March 2015, C/P of Luganville reported that the closure plan would be prepared by VSA

Terminal Evaluation Report for the Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Federated States of Micronesia

Date: September 3, 2015

I. Project Outline and Evaluation Policy

(1) Project Outline		
Background	The Federated States of Micronesia (FSM) is comprising 607 islands and consisting of four states, Kosrae, Pohnpei, Chuuk and Yap. Each of the four states exhibits its own culture and tradition, and has own autonomy within the federation. FSM consistently run a current account deficit and rely heavily on financial assistance provided by the United States under the Compact of Free Association. As an island nation, people of FSM rely on imported goods from overseas for their living and waste materials are accumulated into small islands. However, the political situation and financial constraint makes it difficult to implement effective SWM.	
Summary of the Project	(See Attachment 1 and 2 for details)	
-Overall Goal	Sustainable management of solid waste in the Pacific Region is enhanced	
-Project Purpose	Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	
-Priorities in RS2010	**Outputs**	
Policy, Planning, Performance	OEEM	1-1) The NSWMS is finalized. 1-2) Information sharing of SWM is enhanced among sates.
	Kosrae	2-1a) The SSWMS in Kosrae is finalized. 2-1b) Action plan is developed.
	Pohnpei	3-1) The SSWMS in Pohnpei is finalized.
	Chuuk	4-1) Capacity to prepare the State Solid Waste Management Strategy of Chuuk and Action Plan is developed.
	Yap	5-1) Capacity to prepare the State Solid Waste Management Strategy (SSWMS) of Yap State and Action Plan is developed.
Waste Collection	Kosrae	2-2) Collection of General Waste is improved.
	Pohnpei	3-2) Collection of General Waste is improved.
	Chuuk	4-3) Capacity to improve the collection of general waste is enhanced.
Waste Disposal	Kosrae	2-3) Waste Disposal is improved.
	Pohnpei	3-3) Final Waste Disposal site is improved.
	Chuuk	4-2) Capacity to improve and manage the final disposal site is enhanced.
	Yap	5-2) Capacity to improve and manage the final disposal site is enhanced.
Awareness/ Communication/ Education	Kosrae	2-4) Awareness Raising is improved.
	Yap	5-3) Capacity to conduct awareness activities for SWM is raised
3Rs/4Rs	Pohnpei	3-4) CDL system is improved.
Project Duration	Five years from 2 February 2011 to 1 February 2016	
Implementing Agency	OEEM	Office of Environment & Emergency Management (OEEM) (National Project Manager)
	Kosrae	Kosrae Island Resources Management Authority (KIRMA) (State Project Manager) Department of Transport and Infrastructure, Kosrae (DT&I)
	Pohnpei	Environmental Protection Agency, Pohnpei (EPA) (State Project Manager) Transportation and Infrastructure, Pohnpei (T&I)
	Chuuk	Environmental Protection Agency (EPA), Chuuk (State Project Manager) Department of Transportation and Public Works (DT&PW)

	Yap	Environmental Protection Agency (EPA) (State Project Manager) Department of Public Works and Transportation (DPW&T)
Collaborating Agency	OEEM	Local municipal governments Conservation Society of Pohnpei
	Kosrae	Local municipal governments Micronesia Eco Corporation Kosrae Conservation and Safety Organization Department of Education
	Pohnpei	Pohnpei Waste Management Services (PWMS) Municipal governments of Sokehs and Kitti
	Chuuk	Planning Division, Department of Administrative Services
	Yap	Island Paradise Recycling Company
Target Group	OEEM	Officers of OEEM
	Kosrae	Officers of KIRMA and DT&I
	Pohnpei	Officers of EPA and T&I
	Chuuk	Officers of EPA and DT&PW
	Yap	Officers of EPA and DPW&T
Target Area/ Target Population	FSM	103,903 (World Bank, 2014)
	Kosrae	6,616 (Census by Office of Statistics, Budget and Economic Management, Overseas Development Assistance, and Compact Management, 2010)
	Pohnpei	36,195
	Chuuk	48,654
	Yap	11,377

(2) Evaluation Policy

Objectives	1) To verify the accomplishments of the Project compared to those planned; 2) To identify promoting and/or inhibiting factors that have affected the project implementation process; 3) To analyze the Project in terms of the five evaluation criteria (i.e. Relevance, Effectiveness, Efficiency, Impact, and Sustainability); 4) To discuss the results of evaluation and solutions for problems that may be observed through the evaluation together with the personnel concerned with the Project and make necessary suggestions
Member of Terminal Evaluation Team	

	Title	Name	Position/Organization
	Cooperation Planning (Overall)	Toru TAGUCHI	Assistant Director, Environmental Management Division I, Global Environment. Department., JICA
*	Cooperation Planning (FSM)	Takahisa WATANABE	Project Formulation Advisor JICA-FSM
*	Evaluation Analysis	Takako HARAGUCHI	Permanent Expert, International Development Associates, Ltd.

*Members participating in the evaluation study in the country

Period of Evaluation Study in the Country (See Attachment 3 for details)	FSM	Entire period including days for travel: 18 days 15 August - 19 August and 25 August - 6 September 2015
	OEEM	5 days from 31 August to 4 September 2015 * The study was conducted in Pohnpei.
	Kosrae	
	Pohnpei	
	Chuuk	3 days from 26 to 28 August 2015
	Yap	2 days from 17 to 18 August 2015
Methodology	JICA Terminal Evaluation Team collected the information through document analysis, questionnaire survey and interviews with the officers concerned with the Project and JICA experts, conducted field observation in major project sites. Based on the results of the evaluation, the Team prepared a draft report and finalized it through discussions with the personnel concerned with the Project.	
Limitation	Due to time constraints and flight availability, the evaluation team did not visit Kosrae state. Instead, the team interviewed Directors of KIRMA and DT&I, the key counterpart personnel who were invited by the Project to Pohnpei. Although key information was collected from reports, the above-mentioned interviews and some	

	e-mail communications with other related personnel, information sources were limited compared to those in other states.

II. Accomplishment and Implementation Process of the Project

(1) Inputs (as of June 2015 unless otherwise mentioned) [For entire FSM]

<Japanese Side>	**<FSM Side>**
1) Dispatch of JICA Experts: 8 persons (35.8 M/M) - 3 Short-term Experts (33.3 M/M) - 4 Long-term Experts from Project Office (1.8 M/M) - 1 Local Expert from Project Office (0.7M/M) (Cost of Local Expert is included in Local cost support) 2) Training in Japan: 3 persons - "Great Vava'u and Okinawa Mottainai Movement Project" in 2012 (1 from Yap) - "J-PRISM Regional Training for Trainers" in 2015 (1 from Yap, 1 from Pohnpei) 3) Local cost support: approx. JPY12,830,000 (approx. USD121,000) - Cost for travel, etc.	1) Assignment of National Project Director (PD), Project Manager (PM) and C/Ps: 30 persons. - 5 Management C/P (National PD, State PM) - 25 Technical C/P (2 from OEEM, 8 from Kosrae, 4 from Pohnpei, 6 from Chuuk, 5 from Yap) 2) Local cost sharing: approx. JPY42,057,000 (approx. 339,000 USD) - Cost for travel, fuel, track rental, civil works, training, workshops, etc. 3) Land, facilities, workspace

(2) Outputs

a) Outputs of OEEM

OEEM Output 1-1: The NSWMS is finalized	Degree of achievement[1]: Mostly achieved

Indicator	Results
1-1-1 NSWMS is developed	Fully achieved. The NSWMS 2016-2020 was completed in May 2015. The reason for the slower achievement than planned (the plan was to achieve this indicator in 2011) is that the NSWMS is a compilation of State SSWMSs and endorsement of the SSWMSs were delayed in Chuuk and Yap.
1-1-2 Monitoring of the Action Plan is conducted once a year	Mostly achieved. OEEM has monitored the Action Plan of the draft NSWMS (which consists of state Action Plans) by communicating with each state every quarter since 2009. Although the monitoring results have not been recorded in the format designated in the NSWMS, OEEM uses a checklist that it developed with states instead. The first monitoring of the officially endorsed NSWMS will be conducted at the end of 2015.

[1] *Degree of achievement for each output/Project Purpose is judged based on the achievement level of indicators set for each Output/Project Purpose. Ratings used for this judgment are four levels, such as "Fully achieved", "Mostly achieved", "Partly achieved", "Not achieved."*

OEEM Output 1-2: Information sharing of SWM is enhanced among sates	Degree of achievement: Fully achieved

Indicator	Results
1-2-1 Set up a meeting for SWM at least once a year	Fully achieved. OEEM has utilized JCC of this Project for annual information sharing with state-level stakeholders. Federal-level JCC participated by state-level stakeholders was first held in 2014 to enhance communication between OEEM and states. State-level JCC in each state (around February 2015) was participated by OEEM for information exchange. For information sharing on all SWM topics including those not covered by the J-PRISM, OEEM has utilized the existing meeting mechanisms such as EPA Directors' meeting (held every 2 years) and Environmental Conferences (held every 4 years). However, these conferences are participated only by environmental agencies, not public works agencies that look after delivery of waste services (disposal and collection). Apart form these, Waste Committee mentioned in the NSWMS has functioned as an informal network of the OEEM and environmental and public works agencies. OEEM is planning to formalize and conduct an annual Waste Committee meeting from FY2016.
1-2-2 Document is distributed to 4 states	Fully achieved. "Good Practices for Solid Waste Management in the FSM 2015" was developed under this Project and distributed to all states.
1-2-3 Guidelines are developed and distributed to states. *(Note) According to the JICA expert, this Indicator is missing in PDM by mistake.*	Fully achieved. OEEM and state officers who participated in the Country Focused Training on Water and Sanitation Management (2015) jointly developed "Monitoring Guideline of the Leachate" in May 2015 as a product of the mentioned training. This Guideline was the first water monitoring guideline across states, and distributed to each state, JICA and other related parties.

b) Outputs of States

* See the state-wise evaluation reports for more detailed results.

Kosrae State

Output	Degree of achievement
2-1a: The SSWMS in Kosrae is finalized. 2-1b: Action plan is developed.	Partly Achieved.
2-2: Collection of General Waste is improved.	Fully Achieved in terms of the designated indicator; partly achieved if considering the degree of actual improvement of waste collection.
2-3: Waste Disposal is improved.	Fully Achieved, but not fully attributed to this Project.
2-4: Awareness Raising is improved.	Fully Achieved.

Pohnpei State

Output	Degree of achievement
3-1: The SSWMS in Pohnpei is finalized.	Partly Achieved.
3-2: Collection of General Waste is improved.	Fully Achieved in terms of the designated indicators; partly achieved if considering the degree of actual improvement of waste collection; likely to be fully achieved by the end of the Project.
3-3: Final Waste Disposal site is improved.	Fully achieved in terms of the designated indicator, while capacity development of T&I was not realized as expected.
3-4: CDL system is improved.	Partly Achieved.

Chuuk State

Output	Degree of achievement
4-1: Capacity to prepare the State Solid Waste Management Strategy of Chuuk and Action Plan is developed.	Mostly Achieved.
4-2: Capacity to improve and manage the final disposal site is enhanced.	Fully Achieved.
4-3: Capacity to improve the collection of general waste is enhanced.	Mostly achieved as far as the Indicators are concerned, and significant improvement of capacity was seen from the supplementary information.

Yap State

Output	Degree of achievement
5-1: Capacity to prepare the State Solid Waste Management Strategy of Yap State and Action Plan is developed.	Fully Achieved.
5-2: Capacity to improve and manage the final disposal site is enhanced.	Mostly Achieved.
5-3: Capacity to conduct awareness activities for SWM is raised.	Mostly Achieved.

(3) Project Purpose

* See the state-wise evaluation reports for details of contribution of each state.

Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	Degree of achievement: Mostly Achieved

Indicator	Results
1 Four (4) experts in the field of integrated solid waste management are listed in the SPREP inventory[2]	Five (5) C/Ps are listed as trainers in J-PRISM's Pacific Islands Database of Capacity Development Activities (PIDOC) (4 from Yap and 1 from Pohnpei).
2 Improvement of State landfill in each state	Fully achieved. The state landfills were improved in all four states as follows: ● **Kosrae**: operation and maintenance of the first Fukuoka method (semi-aerobic) landfill in FSM (constructed before J-PRISM) was improved partly owing to training under J-PRISM. ● **Pohnpei**: half of the existing dumpsite was rehabilitated to Fukuoka method landfill. ● **Chuuk**: the existing dumpsite was improved; preparation of the interim site (to be operational within this year) and the new landfill using Fukuoka method (EIA is to be conducted) is partly supported under J-PRISM. ● **Yap**: the existing dumpsite was improved to Fukuoka method landfill; the new landfill using Fukuoka method was constructed with technical support from JICA experts.
3 Good practice developed from one state is shared with all the states of FSM	Fully achieved. OEEM developed a booklet "Good Practices for Solid Waste Management in the FSM 2015" and distributed to all states. Good practices mentioned in the booklet are as follows (the <u>underlined topics</u> are the ones to which this Project contributed): ● **Kosrae**: CDL (out of Project Scope), <u>Awareness</u> and <u>Landfill Management</u> ● **Pohnpei**: Awareness (out of Project Scope) and <u>Landfill Management</u> ● **Chuuk**: <u>Awareness</u> and <u>Collection</u> ● **Yap**: <u>Landfill</u>, <u>Awareness</u> and <u>CDL</u> OEEM plans to update the good practices booklet annually.
(Supplementary Information) Other candidate for experts	Each of OEEM and four states appointed a SWM Coordinator from environmental agency officers (except for Kosrae, where the Coordinator was appointed from the public works agency). Four out of these five Coordinators are C/Ps of this Project, and one of them (Yap) is listed in the PIDOC as a trainer. According to OEEM, the rest of them have potential to be SWM experts (trainers).
(Supplementary Information) Other evidence of capacity development	Each state showed development of capacity in SWM as a result of this Project, though the degree of achievement varies: ● **Kosrae**: C/P of DT&I put into practice some techniques learned from a training in Yap in their final disposal site that was the first semi-aerobic landfill in FSM. The number of schools where EPA and its local partners conduct awareness activities increased from two to six (all public elementary schools). The result of the capacity assessment did not show improvement between 2012 and 2014 (KIRMA showed high capacity even in 2012). ● **Pohnpei**: Motivation of EPA was significantly improved, and EPA and PWMS can now plan, develop and manage semi-aerobic landfill. Also, EPA came to work closely with municipalities in collection. The capacity assessment in 2012 and 2014 showed improvement that is consistent with such findings. T&I developed some capacity in landfill management as well, but it was lost due to loss of C/P.

[2] *This indicator was not used as a direct measure of the Project Purpose for the following reasons: (i) while PIDOC, the existing database, is an inventory of SPREP, the persons listed are trainers certified by J-PRISM but not considered as officially certified trainers by SPREP; (ii) the target values are not valid as they had been determined before introduction of PIDOC (thus not consistent with the number of trainers listed in it). Accordingly, the degree of achievement of the Project Purpose was judged in a comprehensive manner with the other indicators and supplementary information (where necessary), while referring to this indicator as reference information.*

	● **Chuuk**: Operation of the existing landfill and collection services by DT&PW significantly improved with help of EPA. Improvement of collection exposed a need for awareness raising, and EPA's school-based awareness activities have expanded. The capacity assessment in 2012 and 2014 showed improvement that is consistent with such findings. ● **Yap**: DTW&T became able to develop and operate semi-aerobic landfill in cooperation with EPA. Also, DPW&T's responsibility over SWM was clarified and a unit exclusively in charge of SWM was created with recruitment of additional staff. Awareness activities by EPA expanded. The capacity assessment in 2012 and 2014 showed improvement that is consistent with such findings. The final result of the capacity assessment will be available in December 2015.

(4) Implementation Process

・Progress of Activities (for each Output)

	Progress of activities scheduled up to the time of terminal evaluation
OEEM	Completed.
Kosrae	Completed except for Activity 2-1-2 (drafting of SSWMS 2016-2020), which has just begun.
Pohnpei	Completed except for Activity 3-1-2 (monitoring of the SSWMS three times a year by the Monitoring Committee).
Chuuk	Completed. Activity 4-3-6 (awareness raising), which is planned to continue till the end of 2015, is on going.
Yap	Completed.

・Method of Technical Transfer

Technical transfer was carried out by means of various training courses/workshops (including pilot projects), technical advice by JICA experts, OJT, and sharing of information through a guidebook on best practices, etc.

	State-wise notable points
OEEM	OEEM highly appreciates Waste Composition and Waste Generation, which helped their work to determine the volume of waste and propose ways to minimize it.
Kosrae	The approach of the short-term expert (i.e. respect and support C/P's initiatives) brought mixed responses: "not much new" and "motivated to do better job."
Pohnpei	Hands-on training in a form of a pilot project improved both skills and motivation of C/P.
Chuuk	Provision of information on final disposal sites in other states and countries contributed to introduction of Fukuoka method.
Yap	The approach to provide necessary technical assistance while ensuring maximum ownership on C/P is highly appreciated by C/P

・Implementation System/Project Management

There were both positive aspects and rooms for improvement. Regarding the positive aspect, from the 3rd JCC in February 2014, State Project Directors came to attend the national-level JCC, which enhanced sharing of information among states.

Also, OEEM fully monitored each states' activities and submitted quarterly reports to the J-PRISM HQ. For further monitoring within the FSM side, OEEM is going to start bi-annual monitoring by collecting progress reports from each state on the five components of the RS2010 targeted under this Project. The first reporting is scheduled at the end of 2015.

As for a room for improvement, the Project could have addressed a difference in the achievement level of the Output related to planning and monitoring of SSWMS and its Action Plan. In Kosrae and Pohnpei, monitoring of the Action Plan of SSWMS by Monitoring Committee three times a year was planned but did not work well, while in Chuuk and Yap, formulation of Monitoring Committee was not planned and yearly monitoring by EPA (and public works organizations) was conducted as expected. Although this difference is due to how the SSWMS states about monitoring of the Action Plan, making a multi stakeholder committee work is obviously challenging. In case the country-level expert and C/P could not handle the problem, the Project Office could have intervened.

Two issues related to indicator-setting were found:

(i) In Pohnpei, some indicators of the Output 3-4 (CDL), such as more frequent opening of the Recycling Center and amendment of the CDL Law, are susceptible to external factors and targets are quite ambitious to achieve in the latter half of the Project implementation.
(ii) Across FSM, some indicators were not enough to measure the concerned Outputs, and therefore Supplementary Information had to be used.

・Communication within the Project
No major problem. In Kosrae and Yap, good collaborative relationship was seen between environmental agency and public works agency.

・ Collaboration with Local Stakeholders

OEEM

	Stakeholder	Type of coordination
1	Local municipal governments	Meeting and discussion on SWM; reflection of the issues discussed into monitoring of the Action Plan
2	Conservation Society of Pohnpei	Ditto

Kosrae

	Stakeholder	Type of coordination
1	Municipal governments	Planning of improvement of waste collection
2	Micronesia Eco Corporation (recycling company)	Awareness activities
3	KCSO (NGO)	Ditto
4	Department of Education	Ditto

Pohnpei

	Stakeholder	Type of coordination
1	PWMS	Operation of the landfill
2	Municipal governments	Implementation of pilot projects on waste collection

Chuuk

	Stakeholder	Type of coordination
1	Planning Division, Department of Administrative Services	Design of the new landfill
2	College of Micronesia – College of Research and Extension (COM-CRE)	Awareness activity
3	Chuuk Women's Council	Ditto
4	Student Council	Ditto

Yap

	Stakeholder	Type of coordination
1	Youth Group	Preparation of awareness-raising materials; cooperation in conducting awareness survey
2	Schools	Acceptance of awareness activity
3	Island Paradise Recycling Company	Advice on awareness activity, attendance to training courses, running of the recycling program (with contract with EPA)

・Participation in Region-Wide Activities of J-PRISM

	Title	Type of activity	No. of C/P attended
1	Landfill Management Training in Yap, FSM, 2013	Regional training	OEEM (1), Kosrae (2), Pohnpei (2), Chuuk (2), Yap (11)
2	Pilot Project for Rehabilitation of landfill, Pohnpei, 2013	Sub-regional training	Kosrae (1), Pohnpei (3+ 5 from municipal governments), Chuuk (2), Yap (1)
3	Regional Training on Promotion of 3R in Palau, 2013	Regional training	OEEM (1), Kosrae (3), Pohnpei (1), Chuuk (3), Yap (2)
4	Study Trip to Yap State, 2014	In-country training	Chuuk (4)
5	Regional Training for Trainers 2014 (Fiji)	Regional training	Yap (1)
6	Regional Training - Okinawa, Japan, 2015	Regional training	Pohnpei (1), Yap (1)

・Coordination with Other Japanese and International Projects in FSM

1) Holistic approach with other schemes of Japanese assistance

	Scheme	Type of coordination
1	SV/JOCV (JFY2011-)	SV (Solid Waste Management): Kosrae (2), Yap (2) JOCV (Environmental Education): Kosrae (2), Poohnpei (4), Chuuk (2)
2	Grant Assistance for Grassroots Human Security Projects (JFY2005-)	Provision of vehicles for waste collection (Chuuk (2011), Pohnpei (2014),) Provision of vehicles for waste disposal (Pohnpei (2009), Chuuk (2009), Kosrae (2010)) Provision of recycling equipment (Yap (2014)) Renovation of a recycling center (Pohnpei (2011)) Construction of a new landfill (Kosrae (2005), Yap (2012)*) *This new landfill is supported by IMF &US Compact Trust Fund as well.
3	Training and Dialogue Program (JFY2011-)	Comprehensive waste management (Kosrae, Chuuk) 3R waste management (Pohnpei) Design and maintenance of semi aerobic landfill site (Fukuoka method) (Pohpei, Yap) Promotion of Shibushi model (Chuuk, Pohnpei, Yap) Solid waste management by local government (Kosrae, Chuuk, Pohnpei, Yap) Waste management technique (Pohnpei, Yap) Environmental education (Chuuk) Enhancement of solid waste management capacity (Advance, planning & policy) (OEEM) Country Focused Training on Water and Sanitation Management in Okinawa in 2014 (OEEM:1, Pohnpei:2, Yap:2, Chuuk:1, Kosrae:2, Marshall:2, Palau:3)
4	Others	Eco-Islands Symposium (3) 3R Forum in Asia (2)

2) Collaboration with other donors

	Donor	Type of coordination
1	Compact Trust Fund (USA)	Initial budget of 40.8 million dollars is allocated to solid waste management from 2004-2023.
2	IMF	Construction of a new landfill (Yap)
3	New Zealand	Provision of Weigh Bridge (Kosrae)
4	Australia	Provision of a glass crusher (Yap)

・Other Promoting and Inhibiting Factors

III. Results of Analysis from the Viewpoints of Five Evaluation Criteria

(1) Relevance

Evaluation: Relevance is high.

The project is still consistent with the national solid waste management policy (NSWMS), state solid waste management policy (SSWMS), needs for each state as well as Japan's development assistance policy.

(2) Effectiveness

Evaluation: Effectiveness is medium to high.

1) Achievement of Project Purpose

The Project Purpose has been mostly achieved by the time of terminal evaluation, and this status will be the same at the end of the Project period. In all states, valid indicators of the Project Purpose were mostly achieved, and each state showed capacity development in SWM, though its degree varies (see "II (3) Project Purpose" above). In terms of sharing of good practices among states, the booklet "Good Practices for Solid Waste Management in the FSM 2015" developed by OEEM under this Project is a good reference. Also, the landfill management training (regional training) and study visit (in-country training) in Yap were more practical occasions of sharing of information.

	Contribution to Project Purpose
OEEM	OEEM has come to actively facilitate exchange of information and sharing of experiences among states by means such as the followings: (i) Documentation: OEEM produced and disseminated publication of the NSSWM (synthesis of SSWMS), the good practice booklet and the national leachate monitoring guideline.

	(ii) Communication: In addition to the existing facilities such as EPA directors conference (every two years) and environmental conference (every four years), national JCC and state JCC participated by OEEM provided opportunity where key state stakeholders in SWM, not only EPA/KIRMA but public works departments and other concerned organizations meet and discuss their SWM matters. OEEM plans to use Waste Committee (informal setting for communication with state SWM personnel at this moment) as a successor of JCC after project completion.
Kosrae	Capacity development of the target group in part of operation of the landfill and expansion of awareness activities is the outcome of this Project.
Pohnpei	Capacity in landfill management and working with municipalities in waste collection was enhanced. Though part of the acquired landfill management capacity was lost due to leaving of some C/P, it is covered by other C/P organizations.
Chuuk	Capacity in landfill management and waste collection was enhanced.
Yap	Capacity in landfill management was enhanced. The institutional capacity of the public works department was also strengthened by creation of the SWM unit.

2) Contribution of Outputs to Project Purpose
Most Outputs contributed to achievement of the Project Purpose, while delays of activities and loss of C/P have partly affected capacity development.

3) Other promoting/inhibiting factors

(3) Efficiency

Evaluation: Efficiency is medium to high.

1) Production of Outputs
Most Outputs have been fully or mostly achieved, while part some Outputs are on the way toward achievement. These include formulation of a multi stakeholder committee to monitor the Action Plan and legislation for fee mechanism of waste collection and CDL, which all require time and actions FSM-side other than those of this Project.

2) Appropriateness of Inputs
Most Inputs were appropriate for production of Outputs.

- FSM side

	Appropriateness of inputs
OEEM	No problem. OEEM attended the landfill management training in Yap in 2013 by its own funding. It enhanced OEEM's understanding of the progress of state-level landfill development.
Kosrae	No problem. Purchase of trucks by DT&I for municipalities improved waste collection.
Pohnpei	No problem except for assignment of some C/P that did not lead to production of an Output due to leaving of them.
Chuuk	No major problem. EPA's logistic and financial support for DT&PW helped production of Outputs.
Yap	No problem except breakdown of heavy vehicles that affected improvement of the landfill.

- Japanese side

	Appropriateness of inputs
OEEM	No problem.
Kosrae	No problem.
Pohnpei	No major problem.
Chuuk	No problem except for (i) insufficient coordination between the activities of this Project and other JICA training and (ii) cost spent for a pilot project to demonstrate a road rehabilitation technique that was not adopted.
Yap	No problem.

3) Utilization of external resources
In OEEM and each state, external resources were utilized with the inputs of this Project for production of Outputs.

	Utilization of external resources
OEEM	As a product of the country-specific training on water and sanitation management in Okinawa (2014), OEEM and states produced the FSM's first Leachate Monitoring Guideline. Also,

	attendance to this training strengthened connections and communications among them.
Kosrae	Daily help of SV and Grassroots Grant Aid (compactor trucks) were particularly useful.
Pohnpei	Grassroots Grant Aid (rehabilitation of Recycling Center and compactor trucks), JOCV's help and a country-focused training from Japan and cooperation of municipalities were particularly useful.
Chuuk	Grassroots Grant Aid (compactor trucks) was particularly useful.
Yap	Grassroots Grant Aid combined with the US Compact and IMF financing (construction of the new landfill) and SV's technical advice were particularly useful.

4) Other promoting/inhibiting factors
Heavily damaged road infrastructure was a challenge for waste collection and access to the landfill.

(4) Impact

Evaluation: Positive impacts were observed, negative impacts were not observed.

1) Impact at Overall Goal level
There is a likelihood that the Indicator of the Overall Goal "At least more than 2 trainings/workshops in the region which is conducted by facilitators/trainers from FSM" will be achieved in three years after project completion. The candidates of the theme that C/P in each state could instruct to PICs are as shown in the table below. OEEM is willing to facilitate the states' efforts should the need arise in the near future.

	Topic that have potentials to be shared to from state to PICs
Kosrae	CDL and management experience of semi-aerobic landfill for more than ten years
Pohnpei	Collection service and improvement of landfill sites
Chuuk	Collection service
Yap	Landfill management (including environmental monitoring), awareness activities and CDL

2) Other impacts

- Positive impacts:
  Positive impacts other than those mentioned above were observed in some states.

	Positive impacts
OEEM	None in particular other than those already mentioned as Project Purpose and Outputs.
Kosrae	None in particular other than those already mentioned as Project Purpose and Outputs.
Pohnpei	Impact on municipalities (expansion of a new collection system and enhanced motivation); potential impact on communities (future plan of environmental education using the facilities improved as a result of this Project); impact on other states (by inviting SWM personnel to the landfill pilot project)
Chuuk	Impact on development of the interim site and the new semi-aerobic landfill site (use of the experience from this Project and technical advice from JICA experts to development projects that are outside the scope of this Project).
Yap	Impact on recycling program (training and technical advice); impact on other states of FSM and other PICs (landfill management training in Yap and study visit from Chuuk).

- Negative impacts: Not observed.

(5) Sustainability

Evaluation: Sustainability is medium.

1) Policy and institutional aspects
No problem was found. The NSSMW and SSWMSs provide full policy support to the activities introduced under the Project.

2) Organizational aspects
Some organizations have an issue of current or future shortage of manpower.

	Organizational aspects
OEEM	OEEM is currently under the Environment and Sustainable Development Division. The staffs in charge of SWM are Director, Program Manager and an officer and Sustainable Development Planner. The Sustainable Development Planners have been assigned to facilitate the efforts of the states work in Solid Waste Management (SWM).

	Although they are all in charge of SWM and non-SWM tasks, no organizational problem was found in OEEM's coordination with states.
Kosrae	No major problem.
Pohnpei	A concern on successor of SWM personnel of T&I who was lost, and unstable status of PWMS, which operates the landfill with EPA on yearly contract with T&I.
Chuuk	No major problem at present; uncertainty on availability of SWM personnel of EPA after retirement of the current officer in next few years and of manpower for expansion of final disposal activities that is planned in future.
Yap	A concern on insufficient number of officials in charge of SWM; positive finding on organization of DPW&T in terms of SWM that was strengthened.

3) Financial aspects

The common issue to all states is (i) uncertainty on constant allocation of the US Compact Trust Fund (Environmental Sector Grant), the major funding sources for SEM, depending on priority, and (ii) termination of the current Compact in 2023.

	Financial aspects
OEEM	No major problem. There is no serious shortage of cost for coordination such as holding workshops.
Kosrae	Concern on budget availability after 2017, when Environmental Sector Grant is planned to be terminated.
Pohnpei	Concerns on future effects of budget decline of EPA (allocated mainly from the US Compact Trust Fund) and no budget for expansion of the landfill site and the related facilities.
Chuuk	Concerns on DT&PW's ability to allocate fuel cost and on termination of the US Compact Trust Fund in 2023 under the situation that 'Sustainable Financing' component of the Action Plan shows little progress.
Yap	Concern on termination of the US Compact Trust Fund in 2023.

4) Technical aspects

No major problem was found in technical skills of C/P in continuing the activities that they currently carry out. Future concerns may include weaknesses of technical capabilities of some public works organizations that are currently covered by EPA.

5) Others （if any）

IV Conclusion

Five Evaluation Criteria

Criteria	Evaluation	State-wise evaluation	
Relevance	High	High	
Effectiveness	Medium-High	OEEM	High.
		Kosrae	Medium-High. Part of Output did not contribute to Project Purpose.
		Pohnpei	Medium-High. Part of Output did not contribute to Project Purpose.
		Chuuk	High.
		Yap	High.
Efficiency	Medium-High	OEEM	High.
		Kosrae	Medium-High. Outputs partly achieved while Inputs were as planned.
		Pohnpei	Medium-High. Allocation of C/P was partly insufficient.
		Chuuk	Medium-High. Insufficient coordination in inputs from Japan.
		Yap	High.
Impact	Positive	Positive impact was observed; negative impact was not observed.	
Sustainability	Medium	OEEM	High.
		Kosrae	Medium-High. Concern on budget availability after 2017.
		Pohnpei	Medium. Uncertainty on organizational and financial aspects.

		Chuuk	Medium. Some concerns on organizational and financial aspects.
		Yap	Medium-High. Concern on the number of staff at EPA.

Achieved output and remaining issues

For almost all items under "Achieved," capacity development through project activities was observed.
"Remaining" shows the action that needs to be taken to fully achieve the concerned Output.
"Next step" shows the action that can be taken beyond the scope of this Project for further enhancement of SWM activities in the concerned area.

Area	Kosrae	Pohnpei	Chuuk	Yap
Policy, Planning, Performance	Achieved: SSWMS was developed. Remaining: Monitoring of Action Plan by Monitoring Committee (good lead by KIRMA is necessary)	Achieved: SSWMS was developed. Remaining: Monitoring of Action Plan by Monitoring Committee (good lead by EPA is necessary)	Achieved: SSWMS was developed and Action Plan is monitored. Next step: Revision of SSWMS by themselves	Achieved: SSWMS was developed and Action Plan is monitored. Next step: Revision of SSWMS by themselves
Waste Collection	Achieved: A draft of Improvement plan on waste collection system was developed. Remaining: Finalization and implementation of the plan.	Achieved: Collection plan for Sokehs and Kitti municipality were developed. Remaining: Implementation of the collection plan.	Achieved: New collection system was introduced and expanded.	-
Waste Disposal	Achieved: Fukuoka landfill is operated and maintained (partly by this Project).	Achieved: Fukuoka method was introduced. Next step: Development of the 2nd cell.	Achieved: Management of landfill was significantly improved. Remaining: Sharing of operation record among stakeholders.	Achieved: Fukuoka method was introduced. Remaining: Development of more detailed operation and maintenance manual.
Awareness	Achieved: Materials were developed and all elementary schools were covered. Next step: Expansion of teachers' workshops.	-	(As part of waste collection output) Achieved: School-based program started. Next step: Expansion of target schools.	Achieved: School-based program started. Next step: Expansion of target schools.
CDL	-	Achieved: Financial data are regularly collected. Remaining: Law amendment to improve balance of the Recycling Fund.	-	-
OEEM	Achieved: -NSWMS was completed and monitoring has been conducted. -Information sharing was enhanced among states through distribution of documents, such as good practice report, NSWMS, and Leachate Guideline, although these are not reached to the hands of some of the relating agencies. Remaining: -Documentation of monitoring results. -Ensure documents are distributed to all of relating agencies.			

Conclusion on the course of implementation of the Project

Based on the above-mentioned findings and evaluation, the evaluation team considers it appropriate that this Project be completed as planned.

Other Issues on waste management

Kosrae	Pohnpei	Chuuk	Yap
-Proper management for difficult waste, such as used tires, used oil, e-waste and chemical waste -Enhance 4R activities -Enhance environmental education for waste reduction -Review of old legislation and regulations in environmental sector	-Proper management for difficult waste, such as used tires, used oil, e-waste and chemical waste -Enhance environmental education on solid waste management -Enhance environmental education for waste reduction -Proper closure of the existing landfill -Preparation of a new landfill site for disposal before the existing landfill becomes full	-Proper O/M for the Interim Landfill site -Develop new landfill site -Closure existing landfill site -Develop new SSWMS and ensure its implementation -Establish Sustainable financial mechanism on waste management -Enhance 3R + Return Activities	- Increase awareness of overall solid waste management targeting students and youth - Ensure sustainability and improve management of 4R concept - Improve and expand waste collection systems throughout the state - Maintenance and operation of the new landfill site - Develop new SWMS and its implementation

On Implementation System of the Japan side
- Close progress monitoring on inputs and activities by the Japanese side is essential. It should be clarified who should be responsible for such monitoring, JICA HQ, JICA Overseas Offices, Chief Advisor, J-PRISM HQ (Project Office), or Experts for each country. For example, a project coordinator could be based in the Micronesia region or make periodic visit to know the situation of each country/state in the region and consequently to come up with realistic solutions to delays and other problems that short-term experts cannot handle for themselves.

For Project Management
-Indicators should be direct, achievable and measurable.

V Recommendations for the remaining period

For OEEM:
-Continue to ensure output of J-PRISM activities are achieved and remaining issues for each state are addressed
-Disseminate Good Practice Report (2015) to all of relating agencies
-Identify new good practices for the next year's Good Practice Report
-Ensure each state to submit their monitoring report to OEEM; summarize the monitoring reports into a country report and submit it to J-PRISM HQ.

For KIRMA and DT&I in Kosrae:
-Draft a next SSWMS
-Facilitate Monitoring Committee and conduct action plan monitoring with a minimum assistance of JICA Expert. And prepare a progress report.
-Identify certain persons in charge for each activities in PO and Action plan

For EPA in Pohnpei:
-Facilitate Monitoring Committee and conduct the Action Plan monitoring with a minimum assistance of JICA Expert. And prepare a progress report.
-Push the legislation process on the financial mechanism of collection in Sokehs and Kiti so that the new collection system could be put into operation.
-Ensure that SWM remains a priority under the new management.

For T&I in Pohnpei:
-Appoint the permanent officer in charge of SWM, and transfer all necessary documents and procedures to that officer. Also, use the knowledge accumulated in EPA and PWMS when necessary.
-Inspect the proposal from PWMS for US compact fund for improve landfill and proceed to the next step so

that it is approved by JEMCO.
-Maximize the use of the active cell of the landfill.

For PWMS in Pohnpei:
-Transfer of GM's knowledge to the new GM.

For EPA in Chuuk:
-Start looking for a candidate of successor of the the SWM manager.
- At the same time, start providing training opportunity to another staff within the organization.
-Curry out Action Plan Monitoring in December 2015 with DT&PW.

For DT&PW in Chuuk:
-Share existing data on collection and O/M activities with EPA for proper management and supervision of such activities.
-Continue maintenance of existing landfill site.

For EPA in YAP
-Implement Action Plan Monitoring in January 2016 by themselves
- When personnel are changed, Complete takeover and clarify role of each personnel for waste management

For DPW&T in YAP
-For the coming 3 heavy equipment through Japanese Grant, establish maintenance plan including procurement of spare-parts and keep maintain so that never break.

For JICA Experts on Kosrae:
-Support EPA/KIRMA to conduct monitoring of action plan of SSWMS, and PO so that they can continue by themselves after the completion of J-PRISM.

For J-PRISM HQ:
-Disseminate good practices of each countries to all of C/P counties.

Attachment:

1. Latest Project Design Matrix (PDM Version 2, March 2015)
2. Latest Plan of Operation (PO Version 4, March 2015)
3. Schedule of Terminal Evaluation
4. Record of Japanese Inputs
   4-1 Dispatch of Experts
   4-2 Training in Japan
   4-3 List of Machinery and Equipment provided by Japan
   4-3 Local cost
5. Record of FSM Inputs
   5-1 List of Counterpart personnel
   5-2 Local cost
6. Results of the terminal evaluation for J-PRISM in each state of FSM
   6-1 Kosrae
   6-2 Pohnpei
   6-3 Chuuk
   6-4 Yap

Attachment 1: Latest Project Design Matrix (PDM Version 2, March 2013)

ANNEX I:Project Design Matrix (PDM) - FSM (Kosrae, Pohnpei, Chuuk, Yap) PDM: Version 2(4-March-2015)

Project Title: Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Target Group : C/Ps of OEEM, KIRMA & DT&I (Kosrae), EPA & T&I (Pohnpei), EPA &PW (Chuuk), EPA & PW&I(Yap) Final Beneficiaries: Citizens of FSM

Implementing Agency: OEEM, KIRMA & DT&I (Kosrae), EPA & T&I (Pohnpei), EPA &PW (Chuuk), EPA & PW&I (Yap) Target Area: FSM

Narrative Summary			Objectively Verifiable Indicators	Means of Verifications	Important Assumptions
Overall Goal					
Sustainable management of solid waste in the Pacific Region is enhanced.			1.Good practices developed from one state of FSM are implemented in other states and/or other island countries tackling with common issues 1. At least more than **2 trainings**/workshops in the region which is conducted by facilitators/trainers from FSM	1. Report of facilitators on activities 2. Records of training/workshop organized by counterparts	
Project Purpose					
Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)			1. Four (4) experts in the field of integrated solid waste management are listed in the SPREP inventory. 2. Improvement of State landfill in each state. 3. Good practice developed from one state is shared with all the states of FSM.	SPREP (inventory of skilled people) OEEM/ State Government OEEM/ State Government Document from OEEM	1. Natural disaster would not drastically affect the collaboration among PICs and SPREP. 2. Political changes of PICs would not drastically affect the collaboration among PICs and SPREP
#	**State**	**Outputs / Sub-outputs**			
1-1	OEEM	The NSWMS in FSM is finalized.	1-1-1 NSWMS is developed. 1-1-2 Monitoring of the Action Plan is conducte once a year	NSWMS Monitoring sheet	
1-2		Information sharing of SWM is enhanced amoung states.	1-2-1 Set up an meeting for SWM at least once year. 1-2-2 Document is distributed to 4 states.	Record/ Report of meeting Docment from OEEM	
2-1a	Kosrae	The SSWMS in Kosrae is finalized	2-1-1 SSWMS in Kosrae is submitted to the State for approval. 2-1-2The progress is evaluated accroding to the policy of SSWMS 2-1-3 Monitoring is conducted 3 times per year by Monitoring committee.	SSWMS, its Monitoring sheet and progress report	
2-1b		Action plan is developed.		Action plan,their Monitoring sheet and progress report	
2-2		Collection of General Waste-is improved.	2-2 Improvement plan on Waste collection system in each municipality is drafted.	Improvement Plan for waste collection and its monitoring sheet	
2-3		Waste Disposal is improved.	2-3 Operation and maintenance of landfill is regularly conducted.	Monitoring record, operation record, log book using at landfill site	
2-4		Awareness Raising is improved	2-4 Educational material for 4R is developed and education for 4Rs is is conducted in schools. (2013-: For a pilot school, 2015-: Expand for other less than 3 schools)	Booklet, materials, Report of education activities	

Attachment 1 (Continued)

3-1a	Pohnpei	The SSWMS in Pohnpei is finalized	3-1-1 SSWMS in Pohnpei is submitted to the State for approval. 3-1-2 Monitoring is conducted 3 times per year by Monitoring committee. 3-1-3 Progress report is prepared by Monitoring committee annually.	SSWMS, its Monitoring sheet and progress report
3-1b		Action plan is developed.		Action plan,their Monitoring sheet and progress report
3-2		Collection of General Waste is improved.	3-2 Plan for improvement of waste collection including fee system, collection method and cooperation with multi municipality, is developed in Sokehs and Kitti, pilot project municipality .	Plan for waste collection in Sokehs and Kitti municipalities. * Sokes and Kitti are pilot projected municipality on waste collection
3-3		Final Waste Disposal site is improved.	3-3 Operation under Fukuoka method is introduced for existing dumpsite.	Plan for improvement of existing dumpsite drafted by EPA, T&I, PWMS Counterpart's report on dumpsite Log book on operation of dumpsite
3-4		CDL system is improved. *CDL: Container Deposit Legislation	3-4-1 ~~CDL system is operated without unintentional stop.~~ The Recycle Center is operating at least once a month. 3-4-2 The Recycling Law is amended. 3-4-3 Financial system on CDL is improved.	Plan for improvement on CDL system Amended "Recycling Law"
4-1	Chuuk	Capacity to prepare the State Solid Waste Management Strategy of Chuuk and Action plan is developed.	4-1-1 ChuukSSWMS is submitted to the State for approval 4-1-2 Monitoring on the progress of Action Plan is conducted annually	SSWMS, Action plan Monitoring sheet
4-2		Capacity to improve and manage the final disposal site is enhanced	4-2-1 Boundary of the existing dumpsite is identified and separated from other area. 4-2-2 Operation of compacting waste is conducted at least once a week. 4-2-3 Operation is recorded and submitted to PW and EPA.	Installed dyke or fence to show the boundary Operation record
4-3		Capacity to improve the collection of general waste is enhanced.	4-3-1 Monthly collection record is submitted to PW and EPA. 4-3-2 More than 5 villages receive regular collection service. 4-3-3 More than 10 workshops are conducted to improve the waste dischrge of the people.	Collection Record # of village receive collection service
5-1	Yap	Capacity to prepare the State Solid Waste Management Strategy of Yap State and Action Plan is developed.	5-1-1 Yap SSWMS is submitted to the State for approval 5-1-2 Action Plan is distributed to the stakeholders 5-1-3 Monitoring on the progress of Action Plan is conducted annually	SSWMS, Action plan Monitoring sheet
5-2		Capacity to improve and manage the final disposal site is enhanced.	5-2-1 New landfill design is developed. 5-2-2 More than 10 counterparts get certificate in the training of operation and maintenance of landfill 5-2-3 The upgrade of the existing dumpsite to semi-aerobic is completed . 5-2-4 Operation of new landfill is monitored by EPA monthly according to the new landfill management plan	Design of new landfill Completion of construction of a new landfill Rehabilitation of the exsiting landfill Operation record
5-3		Capacity to conduct awareness activities for SWM is raised.	5-3-1 More than 10 workshops are conducted at schools and communities using the awareness materials developed 5-3-2 Awareness of SWM through a questionnaire result is raised by 25%	Evaluation survey

Activities	Inputs		
Please see PO for details.	Japanese Side Dispatch of JICA experts Provision of Regional, sub-regional and in-country workshops / training Local cost support	FSM side Assignment of National PD/PM, State PM and CPs Local Costs Sharing Provision of necessary land/facility, Work space	1.Counterpart personnel keep working in the field of SWM. 2. Necessary budget to carry out activities is allocated from the government. **Pre-condition** Cooperation of community people of the target area is obtained.

ANNEX 3(e)-FSM

ANNEX II : PO - FSM (OEEM)

Ver.4
(Date: March. 4,2015)

Term: 2011 ～ 2015 (5years)

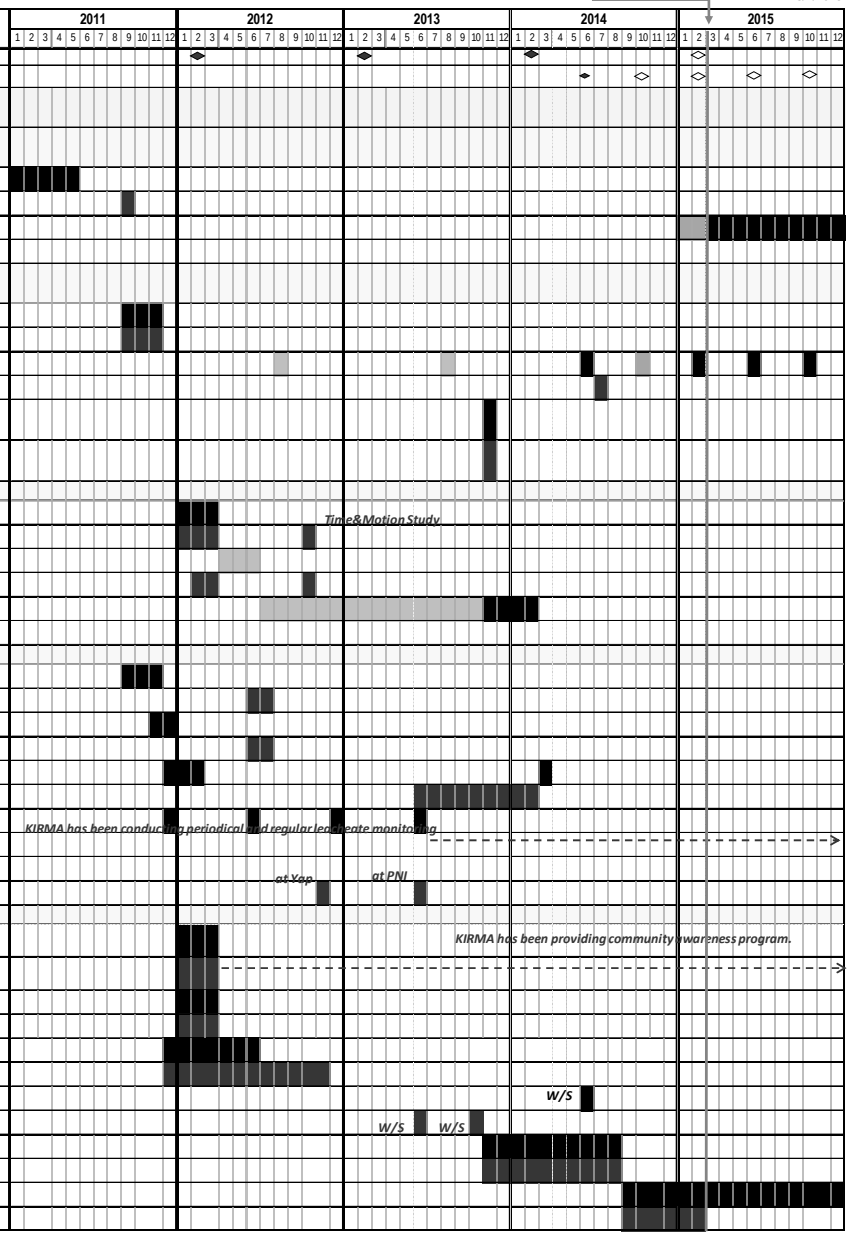
	Outputs and Associated Activities	Indicators for Outputs	Dept. & Agencies in Charge	Technical Assistance	2011	2012	2013	2014	2015
JCC/SC/Eva	JCC ◇							◇	◇
	Steering Committee ☆				☆	☆	☆	☆	☆
	Evaluation Studies ★						★		★
Output 1-1: The NSWMS in FSM is finalized.									
1-1	Finalize the NSWMS for FSM.	*1-1-1 NSWMS is developed.*	OEEM	SPREP					
1-2	Conduct the dissemination workshop for other states to explain the SSWMS of Kosrae state.	*1-1-2 Monitoring of the Action Plan is conducte once a year*	OEEM	SPREP/JICA					
1-3	Facilitate three other states to finalize SSWMS.		OEEM						
1-4	Monitore the progress of Action Plan of 4state								
1-5	Modify the NSWMS based on the result of activities in each state.		OEEM						
~~1-6~~	~~Draft the next NSWMS for the year 2016-2020.~~		~~OEEM~~	~~(SPREP)~~					
Output 1-2: Information sharing of SWM is enhanced amoung states.									
2-1	Set up an opportunity to share progress and issues of SWM such as in an Environmental conference.	*1-2-1 Set up an meeting for SWM at least once year*	OEEM						
2-2	Prepare the document for shaing information of SWM in FSM State	*1-2-2 Document is distributed to 4 states.*	OEEM						
2-3	Develop guidline for leachate monitoring	*1-2-3 Guidline is developed and distributed to States*	OEEM, Dep. Of Health &Social Affairs						

Annex III: Modified PO in Kosrae ver.4 (13-FEB-2015)

:Done ;Scheduled but not yet ;Scheduled

We are here now. 13/2/2015

Outputs and Associated Activities		Indicators for Outputs	Dept. & Agencies in Charge	Technical Assistance	Plan/ Actual
JCC ◇					
Monitoring Committee					
Output 2: State Specific <Kosrae State> Integrated solid waste management is established.					
2-1a The SSWMS in Kosrae is finalized.		*2-1 SSWMS in Kosrae is developed.*			
2-1-1	Finalize the SSWMS in Kosrae state.	*2-2The progress is evaluated accroding to the policy of SSWMS*	KIRMA		Plan / Actual
2-1-2	Draft the next SSWMS for the year 2016-2020.	*2-3 Monitoring committee is conducted 3 times per year*	KIRMA/DT&I	(SPREP)	Plan / Actual
2-1b Action plan is developed.					
2-1-3	Prepare the action plan.		KIRMA/DT&I	SPREP/JICA	Plan / Actual
2-1-4	Monitor and Review result of the action plan		KIRMA		Plan / Actual
2-1-5	After attending training program, Sharing information and experience for other stakeholders in Kosrae		KIRMA		Plan / Actual
2-2 Collection of General Waste is improved.					
2-2-1	Analyze the current collection fee system for all (4) municipalities.	*2-4 Waste collection system in each municipality is improved.*	KIRMA/DT&I	JICA	Plan / Actual
2-2-2	Identify the issues to improve the current system.		KIRMA/DT&I	JICA	Plan / Actual
2-2-3	Draft the improvement plan on waste collection		Municipalities	KIRMA,(DT&I)	Plan / Actual
2-3 Waste Disposal is improved.					
2-3-1	Conduct the baseline study to grasp the current condition of Lelu landfill.		DT&I	JICA	Plan / Actual
2-3-2	Develop a improvement plan of Lela landfill.		DT&I	JICA	Plan / Actual
2-3-3	Conduct the improvement of Lelu landfill.	*2-5 Operation and maintenance of landfill is regularly conducted.*	DT&I		Plan / Actual
2-3-4	Conduct the periodical monitoring of the leachate.		KIRMA		Plan / Actual
2-3-5	Attending Training program on landfill provided by J-PRISM		KIRMA/DT&I	JICA	Plan / Actual
2-4 Awareness Raising is improved		*2- 4 6 Educational material for 4R is developed and education for 4Rs is conducted in schools.(2013-: For a pilot school, 2015-: Expand for other less than 4 schools)*			
2-4-1	Conduct the dissemination workshop to let the community know about the new recycling /redemption plan.		KIRMA	JICA	Plan / Actual
2-4-2	Implement the campaign to introduce the beverage container recycling to schools.		KIRMA	JICA	Plan / Actual
2-4-3	Develop educational materials for 4R promotion.		KIRMA	Miconesia Eco Inc/JICA	Plan / Actual
2-4-4	Starting school visit and education using educational materials.		KIRMA/DOE	Miconesia Eco Inc/JICA	Plan / Actual
2-4-4a	Providing 4R education and teacher training for pilot school .		KIRMA/DOE	Miconesia Eco Inc/JICA	Plan / Actual
2-4-4b	Expanding effort on 4R education and teachertrining for other schools		KIRMA/DOE	Miconesia Eco Inc/JICA	Plan / Actual



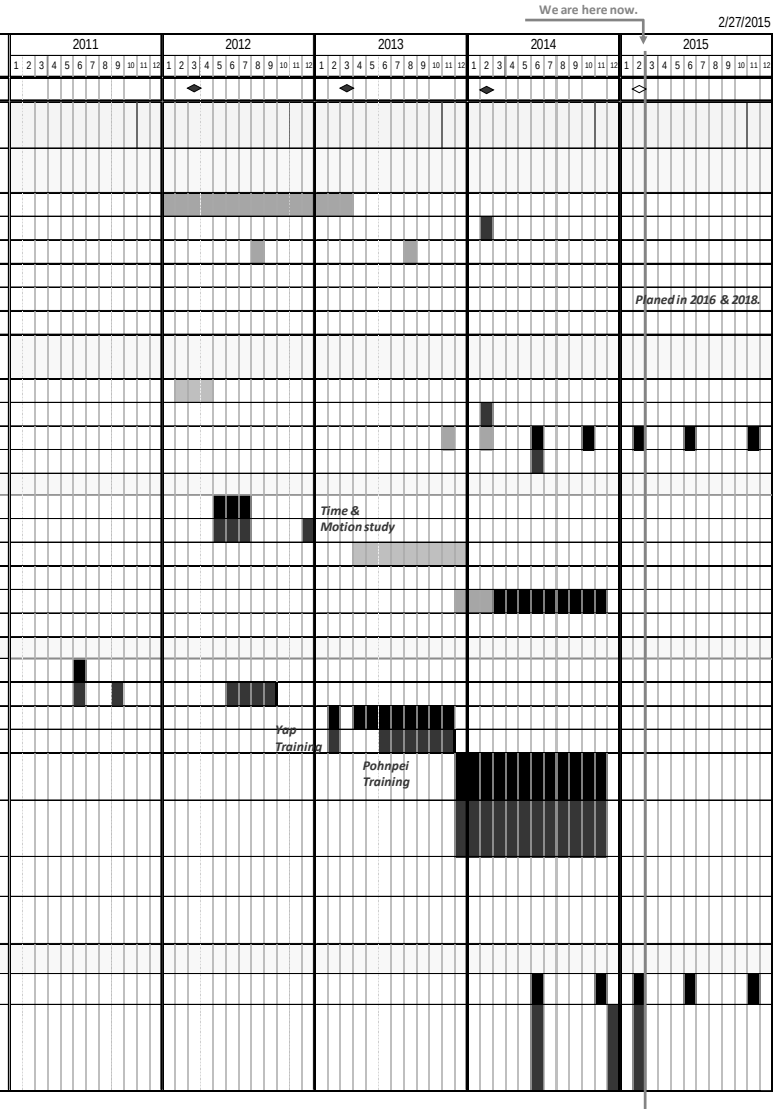
ANNEX 3(e)-FSM

Annex III: Modified PO in Pohpei Ver.4 (27-Feb-2015)

:Done ;Not yet :Scheduled

We are here now. 2/27/2015

	Outputs and Associated Activities	Indicators for Outputs	Dept. & Agencies in Charge	Technical Assistance	Plan/ Actual
	JCC <>				
	Output 3: State Specific <Pohnpei Island> Integrated solid waste management is established.				
	3-1a The NSWMS and SSWMS in FSM are finalized	*3-1-1 SSWMS in Pohnpei is submitted to the State for approval.* *3-1-2 Monitoring is conducted 3 times per year by Monitoring committee.* *3-1-3 Progress report is prepared by Monitoring committee annually.*			
3-1-1	Finalize the SSWMS of Pohnpei.		EPA		Plan / Actual
3-1-2	Modify the NSWMS and SSWMS based on the result of activities in Pohnpei state.		EPA		Plan / Actual
~~3-1-3~~	~~Draft the next SSWMS for the year 2016-2020.~~		~~EPA~~	~~(SPREP)~~	Plan / Actual
	3-1b-Action Plan in Pohnpei is developed.				
3-1-4	Prepare the action plan of SSWMS for Pohnpei.		EPA	SPREP/JICA	Plan / Actual
3-1-5	Monitor, Review and Modify action plan.		EPA		Plan / Actual
	3-2 Collection of General Waste is improved.	3-2 Plan for improvement of waste collection including fee system, collection method and cooperation with multi municipality, is developed in Sokehs and Kitti, pilot project municipality.			
3-2-1	Conduct the baseline study to grasp the current collection system for general waste.		EPA	JICA	Plan / Actual
3-2-2	Develop an improvement plan of collection for general waste.		EPA	JICA	Plan / Actual
3-2-2a	Develop plan for new waste collection system by cooperation among Sokehs and Kitti municipal government.		Sokehs, Kitti, EPA	JICA	Plan / Actual
	3-3 Final Waste Disposal site is improved.	*3-3 Operation under Fukuoka method is introduced for existing dumpsite.*			
3-3-1	Review the existing plan for new landfill.		EPA, T&I/ Task force	JICA	Plan / Actual
3-3-2	Raising capability on management of dumpsite/landfill		EPA, T&I/ Task force	JICA	Plan / Actual
3-3-2a	Improvement on management, operation and leachate treatment at existing landfill site. (Documents to be prepared: Report of improvement work and operation manual)		T&I, EPA, PWMS	JICA	Plan / Actual
~~3-3-2b~~	~~Establish plan for landfill in Madolenihmw (Document to be prepared: Plan of landfill in Madolenihmw)~~		~~Madolenihmw, T&I, EPA~~	~~JICA~~	Plan / Actual
	3-4 CDL system is improved.	*3-4-1 ~~CDL system is operated without unintentional stop.~~ The Recycle Center is operating at least once a month.* *3-4-2 The Recycling Law is amended.* *3-4-3 Financial system on CDL is*			
3-4-1	Monitoring on modification and improvement of the CDL system operation.		EPA	JICA	Plan / Actual



* FSM=Federal States of Micronesia, OEEM= Office of Environment and Emergency Management, EPA=Environmental Protection Agency, T&I= Transportation & Infrastructure, PWMS=Pohnpei Waste Management Seavice

ANNEX 3(e)-FSM

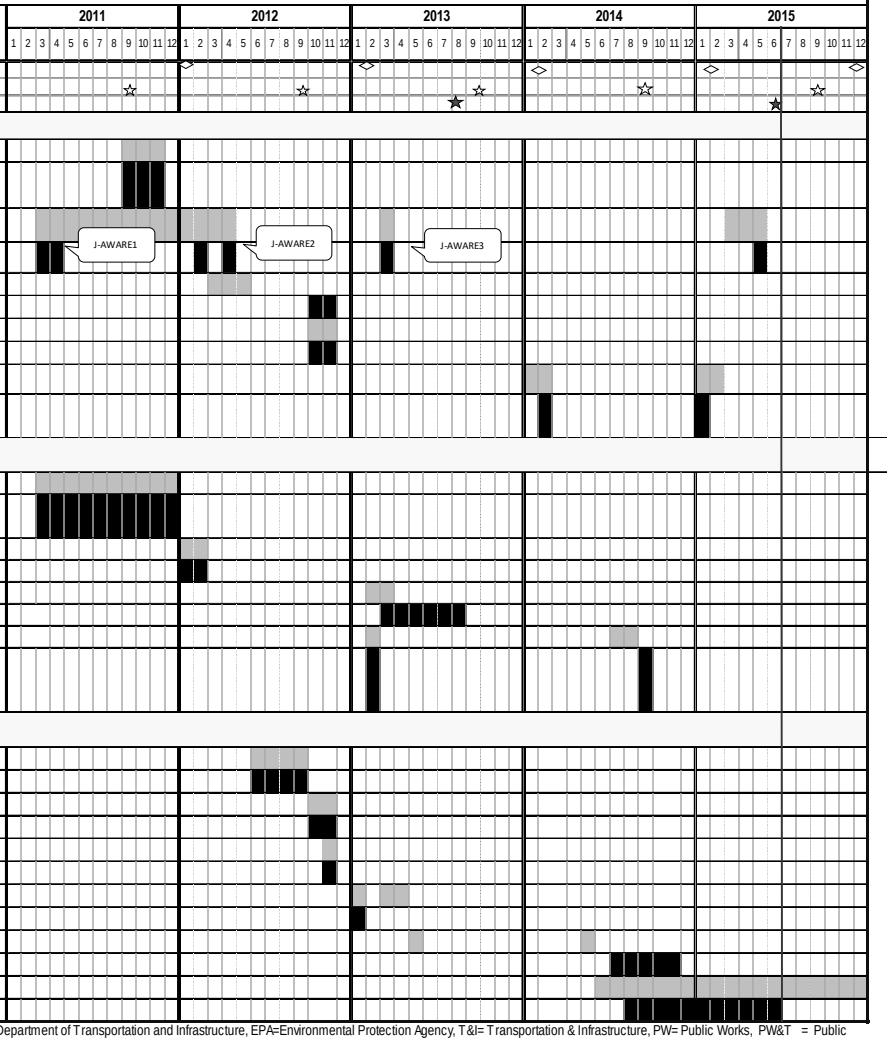
ANNEX III-2 : PO - FSM (Chuuk)

Monitored in June 2015

Term: 2011 ～ 2015 (5years)

Version.4

	Outputs and Associated Activities	Indicators for Outputs	Dept. & Agencies in Charge	Responsible Person	Technical Assistan	Plan / Actual
JCC/	JCC ◇					
SC/	Steering Committee ☆					
Eva	Evaluation Studies ★					
Output 1: The NSWMS and SSWMS in FSM are finalized.						
4-1-1'	Hold in-country trainings for general SWM and workshop for making detail plan of operation in Chuuk State	*4-1-1 ChuukSSWMS is submitted to the State for approval* *4-1-2 Monitoring on the progress of Action Plan is conducted annually*	EPA/ PW	Jack Sham	JICA /SPREP	Plan / Actual
4-1-2'	Conduct the survey to collect the data and information of current SWM situation in Chuuk state.		EPA/ PW	Jack Sham	JICA	Plan / Actual
4-1-3'	Prepare the SSWMS and Action plan.		EPA/ PW	Ismael Mikel/ Joanes Risin	SPREP/ JICA	Plan / Actual
4-1-4'	Finalize the SSWMS of Chuuk State.		EPA/ PW	Ismael Mikel		Plan / Actual
4-1-5'	Monitor the progress of the Action Plan and Modify the SSWMS or Action Plan if necessary		EPA/ PW	Ismael Mikel/ Joanes Risin		Plan / Actual
4-2: Capacity to improve and manage the final disposal site is enhanced						
4-2-1	Review the improvement plan for existing disposal site and recommendation to improve the site is prepared.	*4-2-1 Boundary of the existing dumpsite is identified and separated from other area.*	PW /EPA Chuuk	Jack Sham/ John Newo	JICA	Plan / Actual
4-2-2	Finalize the improvement plan for existing disposal site.	*4-2-2 Operation of compacting waste is conducted at least once a week.*	PW /EPA Chuuk	Jack Sham/ John Newo	JICA	Plan / Actual
4-2-3	Implement the improvement plan.		PW /EPA Chuuk	Jack Sham/ John Newo	JICA	Plan / Actual
4-2-4	Conduct on-the-job training for operation and maintenance of the disposal site.	*4-2-3 Operation is recorded and submitted to PW and EPA*	PW /EPA Chuuk	Jack Sham/ John Newo	JICA	Plan / Actual
4-3: Capacity to improve the collection of general waste is enhanced.						
4-3-1'	Conduct a Pilot Project of waste collection	*4-3-1 Monthly collection record is submitted to PW and EPA.*	PW /EPA Chuuk	Joanes		Plan / Actual
4-3-2'	Conduct Time and Motion Study to find issues of collection system	*4-3-2 More than 5 villages receive regular collection service.*	PW /EPA Chuuk	Joanes	JICA	Plan / Actual
4-3-3'	Develop a collection plan based on the study conducted.	*4-3-3 More than 10 workshops are conducted to improve the waste dischrge of the people.*	PW /EPA Chuuk	Joanes	JICA	Plan / Actual
4-3-4'	Revise /develop a collection route and frequency when collection area is expanded.		PW /EPA Chuuk	Joanes		Plan / Actual
4-3-5'	Plan awareness activity to commercial sectors and public to improve collection service.		EPA/ PW	Jack		Plan / Actual
4-3-6'	Conduct awareness activities		EPA/ PW	Jack		Plan / Actual



* FSM=Federal States of Micronesia, OEEM= Office of Environment and Emergency Management, KIRMA=Kosrae Island Resource Management Authority, DT&I= Department of Transportation and Infrastructure, EPA=Environmental Protection Agency, T&I= Transportation & Infrastructure, PW= Public Works, PW&T = Public Works & Transportation, R&D=Department of Resources & Development

* E-Waste = Electrical and electronic waste, NSWMS=National Solid Waste Management Strategy, SSWMS=State Solid Waste Management Strategy

ANNEX 3(e)-FSM

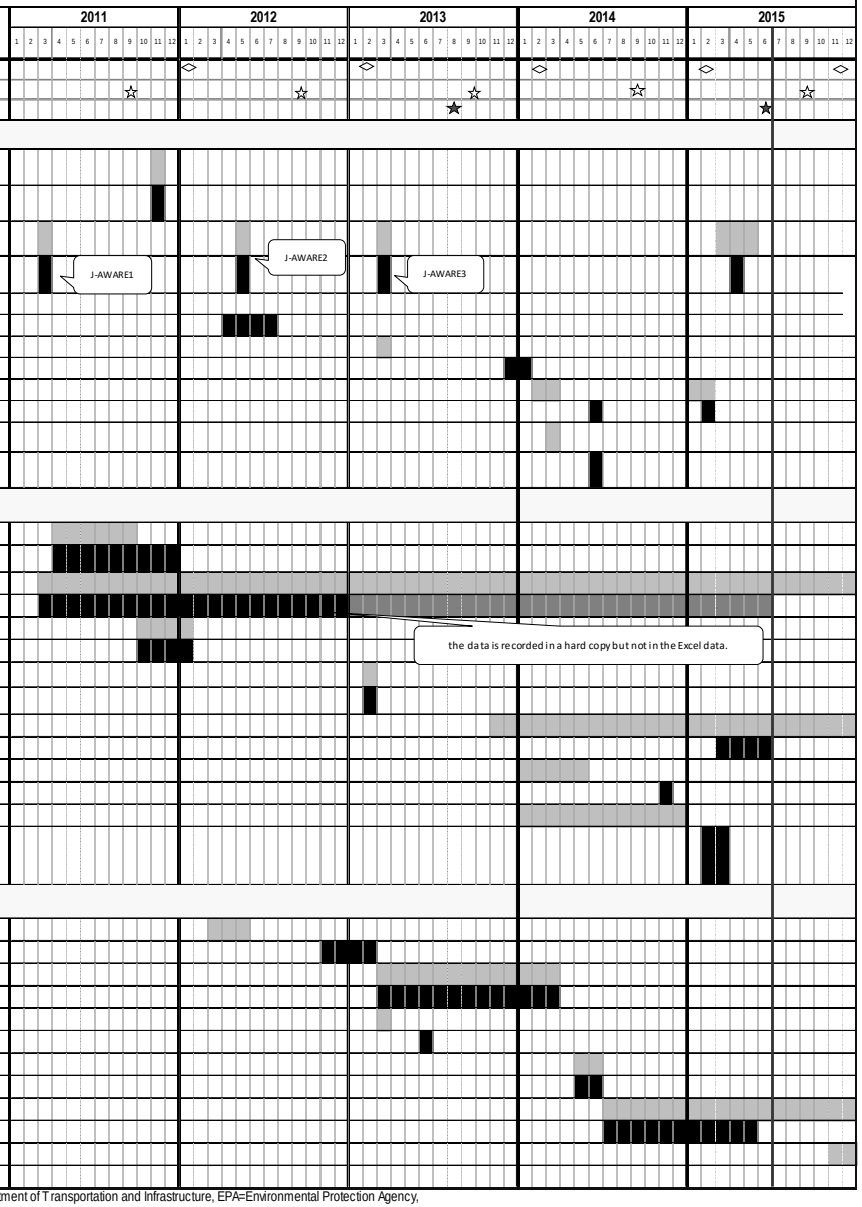
ANNEX II : PO - FSM (Yap)

Term: 2011 ～ 2015 (5years)

Monitored in June 2015

Ver.4

	Outputs and Associated Activities	Indicators for Outputs	Dept. & Agencies in Charge	Person in Charge	Technical Assistance	Plan / Actual
JCC/SC/Eva	JCC					
	Steering Committee					
	Evaluation Studies					
Output 5-1: Capacity to prepare the State Solid Waste Management Strategy of Yap State and Action Plan is developed.						
5-1-1'	Hold in-country trainings for general SWM and workshop for making detail plan of operation in Yap state.	*5-1-1 Yap SSWMS is submitted to the State for approval* *5-1-2 Action Plan is distributed to the stakeholders* *5-1-3 Monitoring on the progress of Action Plan is conducted annually*	EPA/ PW&T	Christina	JICA/ SPREP	Plan / Actual
5-1-2'	Conduct the survey to collect the data and information of current SWM situation in Yap state.		EPA/ PW&T	Christina/ Manuel	JICA	Plan / Actual
5-1-3'	Prepare the SSWMS and Action plan.		EPA Yap/ OEEM	Christina	SPREP/ JICA	Plan / Actual
5-1-4'	Finalize the SSWMS of Yap state.		EPA/ PW&T	Christina		Plan / Actual
5-1-5'	Monitor the progress of the Action Plan		EPA/ PW&T	Christina/ Manuel		Plan / Actual
5-1-6'	Modify the SSWMS and its Action Plan based on the result of activities if necessary.		EPA/ PW&T	Christina		Plan / Actual
5-2: Capacity to improve and manage the final disposal site is enhanced.						
5-2-1	Review the current plan of construction of landfill by applying Fukuoka method.	*5-2-1 New landfill design is developed.* *5-2-2 More than 10 counterparts get certificate in the training of operation and maintenance of landfill* *5-2-3 The upgrade of the existing dumpsite to semi-aerobic is completed .* *5-2-4 Operation of new landfill is monitored by EPA monthly according to the new landfill management plan*	PW&T/ EPA Yap	Vincent/ Christina	JICA	Plan / Actual
5-2-2	Collect data of incoming waste at dumpsite		PW&T/ EPA Yap	Jesse		Plan / Actual
5-2-3	Finalize the revised plan of construction of landfill		PW&T/ EPA Yap	Vincent/ Christina		Plan / Actual
5-2-4	Train C/Ps on operation and maintenance of landfill by applying Fukuoka method.		PW&T/ EPA Yap	Vincent	JICA	Plan / Actual
5-2-5	Operate and maintain the new landfill.		PW&T	Jesse		Plan / Actual
5-2-6	Plan to rehabilitate the exsiting dumsite		PW&T	Jesse	JICA	Plan / Actual
5-2-7	Rehabilitate an existing dumpsite		PW&T	Jesse		Plan / Actual
5-3: Capacity to conduct awareness activities for SWM is raised.						
5-3-1	Prepare awareness program/materials (1)	*5-3-1 More than 10 workshops are conducted at schools and communities using the awareness materials developed* *5-3-2 Awareness of SWM through a questionnaire result is raised by 25%*	EPA Yap	Christina	JICA	Plan / Actual
5-3-2	Conduct schools/ community visits		EPA Yap	Christina		Plan / Actual
5-3-3	Evaluate the program (1)		EPA Yap	Christina	JICA	Plan / Actual
5-3-4	Prepare awareness program/materials (2)		EPA Yap	Christina	JICA	Plan / Actual
5-3-5	Conduct awareness program (2)		EPA Yap	Christina		Plan / Actual
5-3-6	Evaluate the program (2)		EPA Yap	Christina	JICA	Plan / Actual



* FSM=Federal States of Micronesia, OEEM= Office of Environment and Emergency Management, KIRMA=Kosrae Island Resource Management Authority, DT&I= Department of Transportation and Infrastructure, EPA=Environmental Protection Agency,

* E-Waste = Electrical and electronic waste, NSWMS=National Solid Waste Management Strategy, SSWMS=State Solid Waste Management Strategy

Attachment 3: Schedule of Terminal Evaluation

Date	Day	Schedule
15-Aug	Sat	22:05 Arrival at Yap (UA185)
16-Aug	Sun	Internal meeting and data analysis
17-Aug	Mon	9:00◆Courtesy call on State Governor's Office : 10:00◆Visit Environmental Protection Agency (EPA Yap) and interview with CPs 11:30 Visit Recycling company island Paradise Recycling Company w/EPA 13:30◆Visit Department of Public Works and Transportation (DPW&T) and interview with CPs and SV ◆Site visit 15:00 ◆(Landfill site) w/DPW&T
18-Aug	Tue	AM: ◆Data analysis & Preparation of Evaluation Report ◆Report to EPA and DPW&T@ DPW&T Conference Room
19-Aug	Wed	01:35 Departure at Yap (UA186)

Date	Day	Schedule
25-Aug	Tue	15:43Watanabe and Guinto Arrival at Chuuk (UA154)
26-Aug	Wed	11:08 Haraguchi Arrival at Chuuk (UA155)
		10:00◆Courtesy call to State Governor's Office 14:00◆Courtesy call to Department of Transportation and Public Works, Chuuk (DT&PW) and interview with CPs
27-Aug	Thu	9:00◆Visit Environmental Protection Agency, Chuuk (EPA) and interview with CPs 10:00◆Interview with JOCV PM◆Landfill site◆New landfil site and interim site
28-Aug	Fri	AM ◆Data analysis&Preparation of Evaluation Report 14:00◆Report to DT&PW and EPA
29-Aug	Sat	◆Data analysis & Preparation of Evaluation Report
30-Aug	Sun	22:25Departure at Chuuk (UA176)
31-Aug	Mon	0:43Arrival at Pohnpei (UA176) 8:30◆Meeting with JICA Office 10:00◆Visit Office of Environment & Emergency Management (OEEM) and interview with CPs 14:00◆ Courtesy call on State Governor's Office 15:00◆Meeting with Environmental Protection Agency (EPA) CPs and JOCV ◆Data analysis & Preparation of Evaluation Report
1-Sep	Tue	9:00◆Visit Pohnpei State Transportation & Infrastructure (T&I) and interview with CPs 11:00◆Visit Landfill site and interview with CPs 14:00◆Interview with Mr. Simpson Abraham, SPREP 16:30◆Interview with CPs from Kosrae; Mr. Robert Jackson, KIRMA, and Mr. Weston Luckymis, Kosrae DT&I @JICA-FSM
2-Sep	Wed	10:00◆Presentation by Mr. Ryan , PWMS about outcome of the training in Japan "Advancement of Solid Waste Management Technology; 6/6-8/8", invite Pohnpei EPA, Pohnpei DT&I, Kosrae DT&I, KIRMA, and OEEM PM◆Data analysis & Preparation of Evaluation Report
3-Sep	Thu	AM◆Data analysis & Preparation of Evaluation Report 13:30◆Report to DFA with CPs from Kosrae; Mr. Robert Jackson, KIRMA, and Mr. Weston Luckymis, DT&I 14:30◆Report to OEEM with CPs from Kosrae; Mr. Robert Jackson, KIRMA, and Mr. Weston Luckymis, DT&I
4-Sep	Fri	10:00◆Report to EPA and T&I 15:00◆Report to the Embassy of Japan 16:00◆Report to JICA office
5-Sep	Sat	◆Data analysis & Preparation of Evaluation Report
6-Sep	Sun	Departure at Pohnpei (ON032)

Attachment 4. Record of Japanese Inputs

4-1. Dispatch of Experts

Long-term Experts from Project Office	Short-term Experts	Local expert *	Total
1.8 MM	33.3 MM	0.7 MM	35.8 MM

Note: Cost of local expert is included in Local Cost Support

4-2. Training in Japan

Course Name	Period	Position / Organization	Name
"Great Vava'u and Okinawa Mottainai Movement Project"	4th to 18th August, 2012	Manager, Island Paradise Co. Yap	Mr. Jesse Faimaw
"J-PRISM Regional Training for Trainers"	25th May to 4th June, 2015	Executive Director, Yap Environmental Protection Agency, Yap	Ms. Christina Fillmed
		Specialist, Pohnpei Environmental protection Authority, Pohnpei	Mr. Charles Lohn

4-3. List of Machinery and Equipment provided by Japan

None

4-4 Local Cost (For all four states)

Period: from Feb2011 to June 2015

Country	Sub Category	Air Fare	Travel Allowance	Refreshments	Miscellaneous							Total	
		Travel Allowance / Air Fare	Travel Allowance / Air Fare	Refreshments	construction less than 500,000 yen	Supplies/Equipment	Communication	printing and bookbinding	Rent(Office Equipment, etc.)	Utilities	Miscellaneous	In Japanese Yen*1	In USD *2
FSM		23,544.40	47,241.05	3,471.73	374.04	24,879.33	1,701.35	7,928.27	18,387.33	834.75	1,611.25	¥12,830,414.44	US$121,650.16

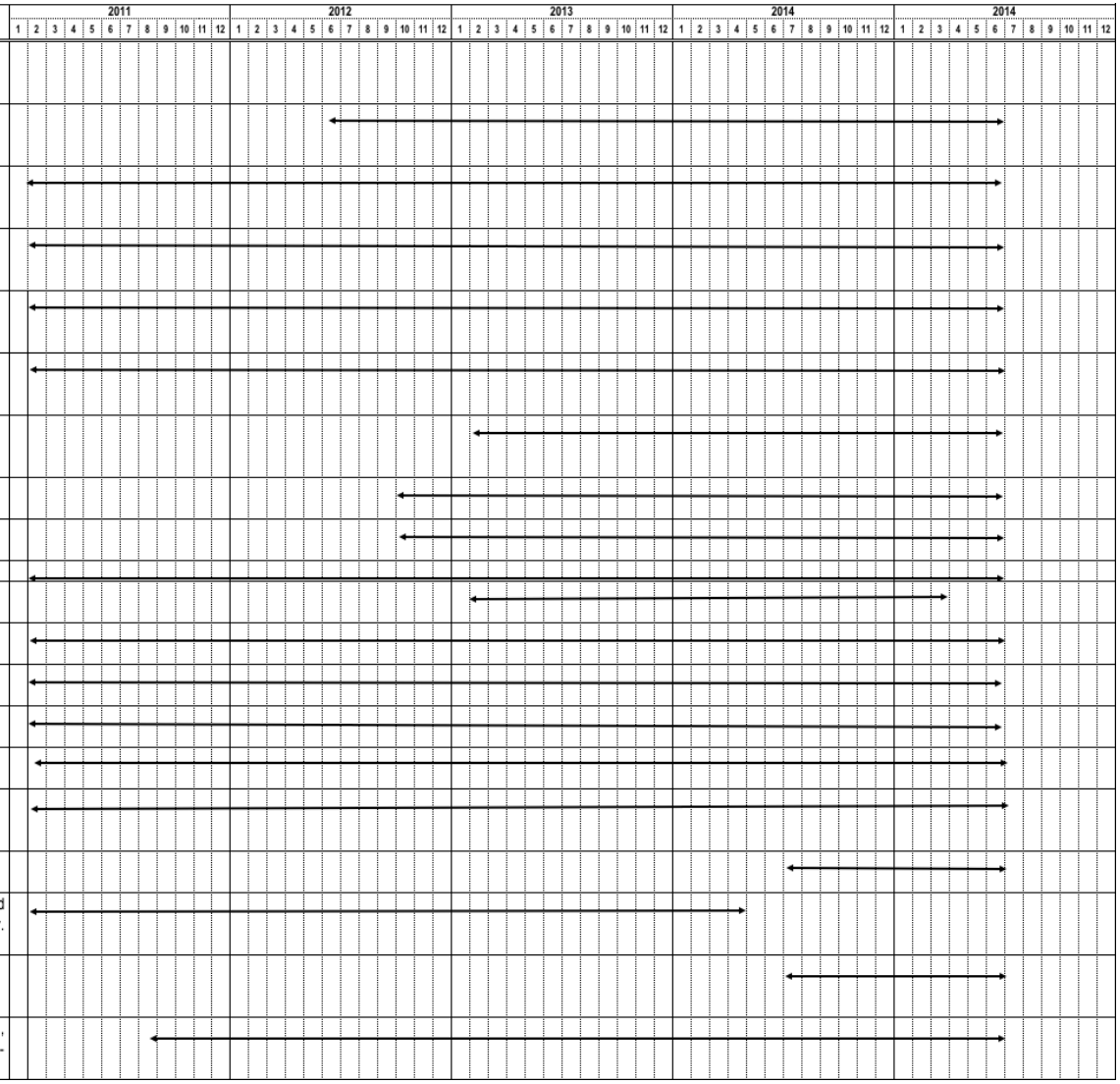
Attachment 5. Record of FSM Inputs

5-1 List of Counterpart Personnel

#	Name	Management CPs	Assigned Period	Position	Organization	
1	Marion Henry		Feb. 2013-	Secretary	Department of Resources and Development	1
2	Andrew R. Yatilman	National Project Director	Feb. 2011-	Director	Office of Environment & Emergency Management	1
3	Robert H. Jackson	State Project Manager	Feb. 2011-	Director	Kosrae Island Resources Management Authority	2
4	Albert Loby	State Project Manager	Feb. 2011-	Director	Pohnpei Environmental protection Authority	3
5	Ismael H. Mikel	State Project Manager	Feb. 2011-	Executive Director	Chuuk, Environmental Protection Agency	All activities in Chuuk
6	Christina Fillmed	State Project Manager	Feb. 2011-	Executive Director	Yap, Environmental Protection Agency	All activities in Yap

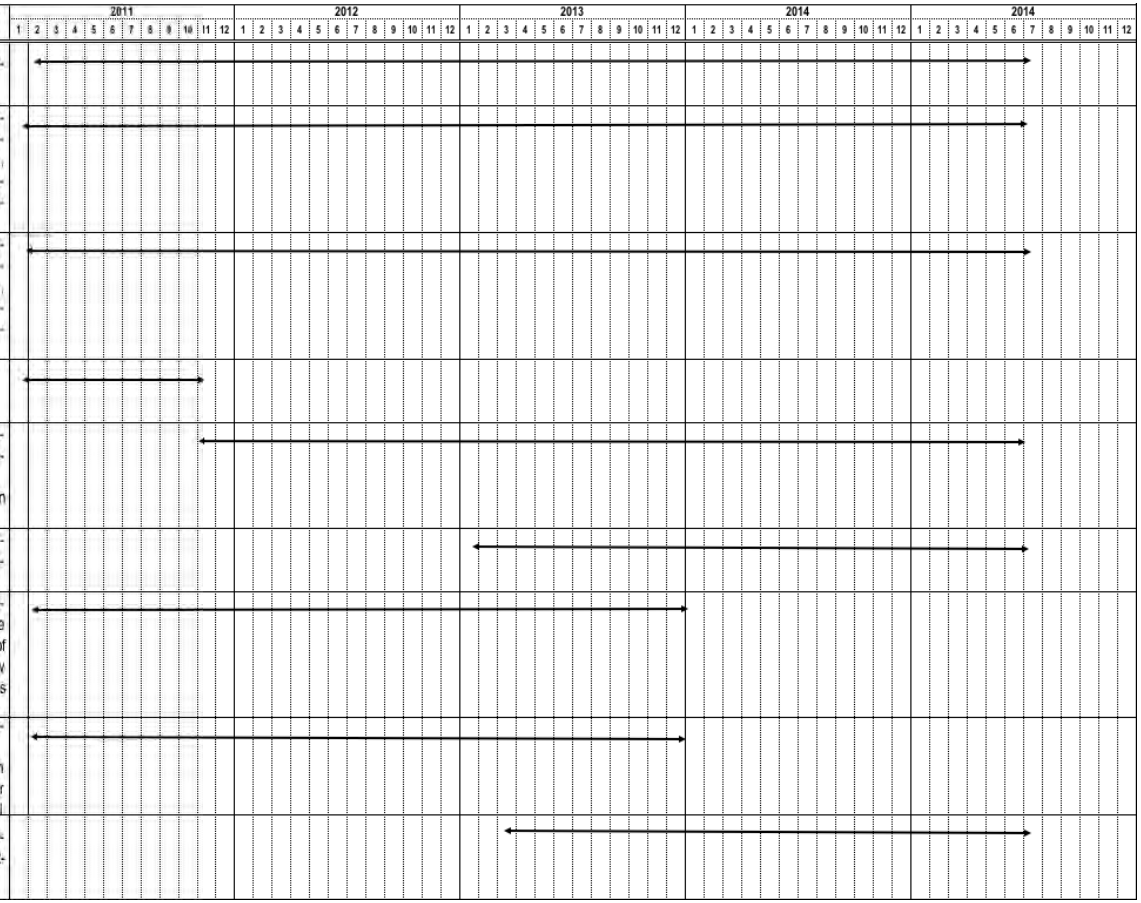
Attachment 5 (Continued)

#	Name	Technical CPs	Assigned Period	Position	Organization	Activities in charge
1	Cyndy Ehemes		Feb. 2011-	Program Manager	Office of Environment & Emergency Management	1
2	Patti Pedrus		June. 2012-		Office of Environment & Emergency Management	1
3	Weston Luckymis		Feb. 2011-	Director	Kosrae, Department of Transportation and Infrastructure	2
4	Kiobu K.Luey		Feb. 2011-		Kosrae Island Resources Management Authority	2-3,2-4
5	Likiak A. Melander		Feb. 2011-		Kosrae Island Resources Management Authority	2-4
6	Hairom Livaie		Feb. 2013-		Kosrae, Department of Transportation and Infrastructure	2-2,2-3
7	Zakias Obet		Feb. 2012-		Kosrae, Department of Transportation and Infrastructure	2-3
8	Lyndon Coanerius		Oct. 2012-	Director	Kosrae department of education	2-4
9	Lipton Tilfas		Oct. 2012-		Kosrae department of education	2-4
10	Maria Stephens		Feb. 2011-		Micronesia Eco Inc.	2-4
11	Fredrico O. Primo		Feb. 2013-March,2015	Administrator	Pohnpei Transport and Infrastructure	3-2,3-3
12	Charles Lohn		Feb. 2011-		Pohnpei Environmental protection Authority	3-1,3-2,3-3
13	Nerson Henry. Jr		Feb. 2011-		Pohnpei Transport and Infrastructure	3-2,3-3
14	Pius Yaropiyal		Feb. 2011-		Pohnpei Waste Management Services	3-3
15	Jason Saeson Poll		Feb. 2011-	Deputy Direcctor	Chuuk, Environmental Protection Agency	All
16	Jack H. Sham		Feb. 2011-	Manger of Solid Waste Management	Chuuk, Environmental Protection Agency	All
17	Dayson Marar		Aug. 2014	Environmental Educator	Chuuk, Environmental Protection Agency	4-3-5, 4-3-6
18	Jonny Killion		Feb. 2011- April, 2014	Director	Chuuk, Dept of Transportation and Public Works	All (passed away in Apr. 2014)
19	Tos Nakayama		July, 2014	Director	Chuuk, Dept of Transportation and Public Works	All
20	Joanes Risin		Sep. 2011-	Assistant Chief	Chuuk, Dept of Transportation and Public Works	4-1, 4-2, 4-3-1, 4-3-2, 4-3-3, 4-3-4



Attachment 5 (Continued)

#	Name	Technical CPs	Assigned Period	Position	Organization	Activities in charge
21	John Michael Newo.		Feb. 2011-	Operator	Chuuk, Dept of Transportation and Public Works	4-2-1, 4-2-2, 4-2-3, 4-2-4
22	Joe Fanafai		Feb. 2011-	Pollution Control Program Specialist	Yap, Environmental Protection Agency	5-1-1, 5-1-2, 5-1-5, 5-1-6, 5-1-7, 5-2-2, 5-3-1, 5-3-2, 5-3-3, 5-3-4, 5-3-5, 5-3-6
23	Peter Fattamag		Feb. 2011-	Pollution Control Program Specialist	Yap, Environmental Protection Agency	5-1-1, 5-1-2, 5-1-5, 5-1-6, 5-1-7, 5-2-2, 5-3-1, 5-3-2, 5-3-3, 5-3-4, 5-3-5, 5-3-6
24	(Alphonsus Ruwema)*		Feb. 2011- Oct. 2011	Director	Yap, Dept of Public Works and Transportation	Retired
25	Vincent Figir		Oct. 2011-	Director	Yap, Dept of Public Works and Transportation	5-1-5, 5-1-6, 5-1-7, 5-2-5, 5-2-6, 5-2-7 (resigned in Nov. 2014)
26	Mano Maleichog		Feb. 2013-	Deputy Director	Yap, Dept of Public Works and Transportation	5-1-5, 5-1-6, 5-1-7, 5-2-5, 5-2-6, 5-2-7
27	James Sarmog		Feb. 2011-	Chief - Contracts & Engineering	Yap, Dept of Public Works and Transportation	5-2-1, 5-2-3, 5-2-6, (fter the completion of the new landfill, there is no main
28	Manny Mendoza		Feb. 2011-2013	Engineer - Contracts & Engineering	Yap, Dept of Public Works and Transportation	5-2-1, 5-2-3, 5-2-6, (deleted from C/P list after the new landfill
29	Jesse Waayan	Recruited in Feb. 2013 (not officially confirmed yet)	Feb. 2013-	Refuse Collection Manager	Yap, Dept of Public Works and Transportation	5-1-5, 5-1-6, 5-1-7,5-2-5, 5-2-6, 5-2-7



Attachment 5 (Continued)

5-2 Local Cost

	1. Travel expenses (airfare, allowances,		2. Expenses for documenting		3. Purchasing goods/materials		4. Foods /Drinks		5. Others		Total	
	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD
FSM	3,700	3,700	0	0	130,080	130,080	901	901	204,605	204,605	339,286	339,286
OEEM	3,500	3,500	0	0	5,000	5,000	0	0	0	0	8,500	8,500
Pohnpei T&I	0	0	0	0	4,900	4,900	0	0	0	0	4,900	4,900
Chuuk EPA	0	0	0	0	48,750	48,750	0	0	0	0	48,750	48,750
Kosrae, KIRMA/Sector	0	0	0	0	40	40	50	50	40	40	130	130
Kosrae, EPA	0	0	0	0	14,590	14,590	410	410	430	430	15,430	15,430
Yap PW&T (Compact)	0	0	0	0	41,800	41,800	0	0	17,500	17,500	59,300	59,300
Yap, Compact	0	0	0	0	0	0	0	0	77,460	77,460	77,460	77,460
Yap, EPA	200	200	0	0	15,000	15,000	441	441	0	0	15,641	15,641
Yap, GGP	0	0	0	0	0	0	0	0	99,807	99,807	99,807	99,807
Yap, IMF	0	0	0	0	0	0	0	0	9,368	9,368	9,368	9,368

Attachment 6-1 Kosrae

Terminal Evaluation Report for the Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Federated States of Micronesia [Kosrae State]

Date: September 3, 2015

I. Project Outline and Evaluation Policy

(1) Project Outline	
Background	The Federated States of Micronesia (FSM) is comprising 607 islands and consisting of four states, Kosrae, Pohnpei, Chuuk and Yap. Each of the four states exhibits its own culture and tradition, and has own autonomy within the federation. FSM consistently run a current account deficit and rely heavily on financial assistance provided by the United States under the Compact of Free Association. As an island nation, people of FSM rely on imported goods from overseas for their living and waste materials are accumulated into small islands. However, the political situation and financial constraint makes it difficult to implement effective SWM.
Summary of the Project	(See Attachment 1 and 2 for details)
-Overall Goal	Sustainable management of solid waste in the Pacific Region is enhanced
-Project Purpose	Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)
-Priorities in RS2010	**Outputs**
Policy, Planning, Performance	2-1a) The SSWMS in Kosrae is finalized. 2-1b) Action plan is developed.
Waste Collection	2-2) Collection of General Waste is improved.
Waste Disposal	2-3) Waste Disposal is improved.
Awareness/ Communication/ Education	2-4) Awareness Raising is improved.
Project Duration	Five years from 2 February 2011 to 1 February 2016
Implementing Agency	Kosrae Island Resources Management Authority (KIRMA) (State Project Manager) Department of Transport and Infrastructure, Kosrae (DT&I)
Collaborating Agency	Micronesia Eco Corporation Depart of Education Municipal Governments Kosrae Conservation and Safety Organization (KCSO)
Target Group	Officers of KIRMA and DT&I
Target Area/ Target Population	Kosrae State 6,616 (Census by Office of Statistics, Budget and Economic Management, Overseas Development Assistance, and Compact Management, 2010)
(2) Evaluation Policy	
Objectives	1) To verify the accomplishments of the Project compared to those planned; 2) To identify promoting and/or inhibiting factors that have affected the project implementation process; 3) To analyze the Project in terms of the five evaluation criteria (i.e. Relevance, Effectiveness, Efficiency, Impact, and Sustainability); 4) To discuss the results of evaluation and solutions for problems that may be observed through the evaluation together with the personnel concerned with the Project and make necessary suggestions
Member of Terminal Evaluation Team	

	Title	Name	Position/Organization
	Cooperation Planning (Overall)	Toru TAGUCHI	Assistant Director, Environmental Management Division I, Global Environment. Department., JICA
*	Cooperation	Takahisa	Project Formulation Advisor

Attachment 6-1 Kosrae

	Planning (FSM)	WATANABE	JICA-FSM
*	Evaluation Analysis	Takako HARAGUCHI	Permanent Expert, International Development Associates, Ltd.

*Members participating in the evaluation study in the country

Period of Evaluation Study in the Country	Kosrae: 3 days from 1 to 3 August 2015 in Pohnpei （See Attachment 3 for details）
Methodology	JICA Terminal Evaluation Team collected the information through document analysis, questionnaire survey and interviews with the officers concerned with the Project and JICA experts, conducted field observation in major project sites. Based on the results of the evaluation, the Team prepared a draft report and finalized it through discussions with the personnel concerned with the Project.
Limitation	Due to time constraints and flight availability, the evaluation team did not visit Kosrae state. Instead, the team interviewed Directors of KIRMA and DT&I, the key counterpart personnel who were invited by the Project to Pohnpei. Although key information was collected from reports, the above-mentioned interviews and some e-mail communications with other related personnel, information sources were limited compared to those in other states.

II. Accomplishment and Implementation Process of the Project

(1) Inputs (as of June 2015 unless otherwise mentioned) [For entire FSM]

<Japanese Side>	**<FSM Side>**
1) Dispatch of JICA experts: 8 persons (35.8 M/M) - 3 Short-term Experts (33.3 M/M) - 4 Long-term Experts from Project Office (1.8 M/M) - 1 Local Expert from Project Office (0.7M/M) (Cost of local expert is included in Local cost support) 2) Training in Japan: 3 persons - "Great Vava'u and Okinawa Mottainai Movement Project" in 2012 (1 from Yap) - “J-PRISM Regional Training for Trainers” in 2015 (1 from Yap, 1 from Pohnpei) 3) Local cost support: approx. JPY12,830,000 (approx. USD121,000) - Cost for travel, etc.	1) Assignment of National Project Director (PD), Project Manager (PM) and C/Ps: 30 persons. - 5 Management C/P (National PD, State PM) - 25 Technical C/P (2 from OEEM, 8 from Kosrae, 4 from Pohnpei, 6 from Chuuk, 5 from Yap) 2) Local cost sharing: approx. JPY42,057,000 (approx. 339,000 USD) - Cost for travel, fuel, track rental, civil works, training, workshops, etc. 3) Land, facilities, workspace

(2) Outputs [Kosrae]

Output 2-1a: The SSWMS in Kosrae is finalized Output 2-1b: Action plan is developed	Degree of achievement[1]: Partly Achieved

Indicator	Results
2-1-1 SSWMS in Kosrae is submitted to the State for approval	Fully achieved. The SSWMS 2011-2015 was signed in 2011. As the document became officially effective in 2012, it is considered that it will be effective till 2016. Preparation of the next SSWMS (2017-2021) (revision of the current SSWMS) will start within 2015.
2-1-2 The progress is evaluated according to the policy of SSWMS	Mostly achieved. Evaluation of progress was conducted once in 2014. If the above-mentioned revision of the SSWMS is conducted in 2015, it will be counted as the second time evaluation.
2-1-3 Monitoring is conducted 3	Partly achieved. The evaluation in 2014 (mentioned in 2-1-2 above) is the only

[1] *Degree of achievement for each output/Project Purpose is judged based on the achievement level of indicators set for each Output/Project Purpose. Ratings used for this judgment are four levels, such as “Fully achieved”, “Mostly achieved”, “Partly achieved”, “Not achieved.”*

times per year by Monitoring committee	monitoring activity by the Monitoring Committee. The Monitoring Committee consists of Director of KIRMA, Director of DT&I and Mayors of the four municipalities. It has not been active as the contact officer to coordinate the holding of meetings has not been assigned within KIRMA.
2-1-4 Progress report is prepared by Monitoring Committee	Partly achieved. Monitoring Committee has not prepared the progress report due to the reason mentioned in 2-1-3 above. On the other hand, KIRMA and DT&I submit the SWM progress report every quarter to the Governor's Office, and the contents of the report is partly related to the progress of the Action Plan of the SSWMS.

Output 2-2: Collection of General Waste is improved	Degree of achievement: Fully Achieved in terms of the designated indicator; partly achieved if considering the degree of actual improvement of waste collection.

Indicator	Results
2-2-1 Improvement plan on Waste collection system in each municipality is drafted	Fully achieved. Based on the survey by KIRMA and the JICA short-term expert, "The Improvement Plan on Waste Collection in Kosrae (Draft)" was prepared in May 2015.
(Supplementary Information) Degree of actual improvement of waste collection	Waste collection has been improved, but it is attributed to provision of two compactor trucks provided under a Grassroots Grant Aid project for Tafunsak and Lelu, and two flatbed trucks for Malem and Utwe that were purchased by the state. Currently, collection service is provided on an in call basis, and collection fee (for example, $3 per pick-up in Lelu) is collected in three out of the four municipalities. The above-mentioned Improvement Plan on Waste Collection in Kosrae has just been prepared, and further refinement including the fee collection system as well as securement of budget for fuel and consent by each municipality is needed for implementation.

Output 2-3: Waste Disposal is improved	Degree of achievement: Fully Achieved, but not fully attributed to this Project.

Indicator	Results
2-3-1 Operation and maintenance of landfill is regularly conducted	Fully achieved. Regular maintenance have been regularly conducted since commencement of operation in 2009: staff is on duty all the time, amount of collection is recorded (currently, measured by size of the truck), and soil covering is conducted every month. In Kosrae, a landfill using the Fukuoka method had been constructed with funding from Grassroots Grant Aid and the Kosrae State Government in 2005. According to a key C/P and the JICA short-term expert, the good operation of the landfill is because Senior Volunteers (SVs) have been continuously assigned to DT&I, the responsible organization for management of the disposal site, and have provided guidance on application for grants and management. This Project provided opportunity for C/P to attend the landfill management training in Yap in 2013 and technical advice from the JICA short-term expert,

	from which they learned techniques such as leachate circulation system and reinforcement of gas ventilation pipes.

Output 2-4: Awareness Raising is improved	Degree of achievement: Fully Achieved.

Indicator	Results
2-4-1 Educational material for 4R is developed and education for 4Rs is conducted in schools (2013-: For a pilot school, 2015-: Expand for other less than 3 schools)	Fully achieved. Materials were developed mainly by KIRMA in 2012, and the number of targeted schools increased by four in 2015 as a result of J-PRISM. The materials developed are fully utilized by all the 6 schools in Kosrae now. KIRMA had conducted awareness activities in cooperation with a recycling company since before this Project. Before the Project, education activities had been conducted at two of the six public elementary schools. Under this Project, the remaining four schools were covered. Teachers' training on education on 4R was also conducted in two schools. According to key personnel in this activity, this Project played an intermediary role with Department of Education, which promoted expansion of activities.

(3) Project Purpose

Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	Degree of achievement: Mostly Achieved (Kosrae) Contribution of this Project is partial.

Indicator	Results
1 Four (4) experts in the field of integrated solid waste management are listed in the SPREP inventory[2]	(FSM) Five (5) C/P are listed as trainers in J-PRISM's Pacific Islands Database of Capacity Development Activities (PIDOC). (4 from Yap and 1 from Pohnpei)
2 Improvement of State landfill in each state	(Kosrae) Fully achieved. The state landfill is well maintained. The improvement during the Project period is as a result of the Grassroots Grant Aid, help of the SV and the training under this Project (see Output 2-3-1 above).
3 Good practice developed from one state is shared with all the states of FSM	(Kosrae) Mostly achieved. A booklet titled "Good Practices for Solid Waste Management in the FSM 2015" designates CDL, Awareness and Landfill Management as good practices found in Kosrae state. This booklet was distributed to all states. It is part of 'Awareness' (in terms of financial assistance in preparation of materials and joint planning with the Japanese short-term experts) and part of 'Landfill Management' (in terms of training in Yap and technical advice from the JICA expert) that can be regarded as the outcomes of this Project.

(4) Implementation Process

・Progress of Activities (for each Output)

(Kosrae) All activities scheduled up to now have been completed except for Activity 2-1-2 (drafting of SSWMS 2016-2020), which has just begun.

・Method of Technical Transfer

(FSM) No major problem. Technical transfer was carried out by means of various training courses/workshops (including pilot projects), technical advice by JICA experts, OJT, and sharing of

[2] *This indicator was not used as a direct measure of the Project Purpose for the following reasons: (i) while PIDOC, the existing database, is an inventory of SPREP, the persons listed are trainers certified by J-PRISM but not considered as officially certified trainers by SPREP; (ii) the target values are not valid as they had been determined before introduction of PIDOC (thus not consistent with the number of trainers listed in it). Accordingly, the degree of achievement of the Project Purpose was judged in a comprehensive manner with the other indicators and supplementary information (where necessary), while referring to this indicator as reference information.*

information through a guidebook on best practices, etc.
(Kosrae) There are mixed opinions on the impact of the way the short-term expert conducted the activities in Kosrae. As Kosrae had been advanced on SWM (e.g. the Fukuoka method landfill had been operated; awareness activities had been extended) even before this Project, the short-term expert respected it and supported Kosrae's initiatives in managing solid wastes. While a key personnel of the Kosrae side claimed there was not much new learned from this Project, another person commented that the Project required them to conduct periodic monitoring of the SWM activities and motivated them to do their job better.

・Implementation System
No particular problem.

・Project Management
No particular problem. Some delays (e.g. drafting of the waste collection improvement plan) were overcome by taking countermeasures (e.g. holding a planning workshop).

・Communication within the Project
The communication between DT &I and KIRMA is very good which ensures smooth implementation of the Project.

It seems, from the way the Japanese side and Kosrae side communicated with each other for the conduct of terminal evaluation, that there has been sufficient communication during the Project implementation period. However, detailed information was not available.

・ Collaboration with Local Stakeholders in Kosrae

	Stakeholder	Type of coordination
1	Municipal governments	Planning of improvement of waste collection
2	Micronesia Eco Corporation (recycling company)	Awareness activities
3	NGO (KCSO: Kosrae Conservation and Safety Organization)	Ditto
4	Department of Education	Ditto

・Participation in Region-Wide Activities of J-PRISM

	Title	Type of activity	No. of C/P in Kosrae attended
1	Landfill Management Training in Yap, FSM, 2013	Regional training	2
2	Pilot Project for Rehabilitation of landfill, Pohnpei, 2013	Sub-regional training	1
3	Regional Training on Promotion of 3R in Palau	Regional training	3

・Coordination with Other Japanese and International Projects in FSM

1) Holistic approach with other schemes of Japanese assistance

	Scheme	Type of coordination
1	SV/JOCV (JFY2011-)	SV (Solid Waste Management): Kosrae (2), Yap (2) JOCV (Environmental Education): Kosrae (2), Poohnpei (4), Chuuk (2)
2	Grant Assistance for Grassroots Human Security Projects (JFY2005-)	Provision of vehicles for waste collection (Chuuk (2011), Pohnpei (2014),) Provision of vehicles for waste disposal (Pohnpei (2009), Chuuk (2009), Kosrae (2010)) Provision of recycling equipment (Yap (2014)) Renovation of a recycling center (Pohnpei (2011)) Construction of a new landfill (Kosrae (2005), Yap (2012)*) *This new landfill is supported by IMF &US Compact Trust Fund as well.
3	Training and Dialogue Program (JFY2011-)	Comprehensive waste management (Kosrae, Chuuk) 3R waste management (Pohnpei) Design and maintenance of semi aerobic landfill site (Fukuoka method) (Pohpei, Yap) Promotion of Shibushi model (Chuuk, Pohnpei, Yap) Solid waste management by local government (Kosrae, Chuuk, Pohnpei, Yap) Waste management technique (Pohnpei, Yap) Environmental education (Chuuk) Enhancement of solid waste management capacity (Advance, planning & policy)

		(OEEM)
4	Others	Eco-Islands Symposium (3) 3R Forum in Asia (2)

2) Collaboration with other donors

	Donor	Type of coordination
1	Compact Trust Fund (USA)	Initial budget of 40.8 million dollars is allocated to solid waste management from 2004-2023.
2	IMF	Construction of a new landfill (Yap)
3	New Zealand	Provision of Weigh Bridge (Kosrae)
4	Australia	Provision of a glass crusher (Yap)

・Other Promoting and Inhibiting Factors

III. Results of Analysis from the Viewpoints of Five Evaluation Criteria

(1) Relevance

Evaluation: Relevance is high.

The project is still consistent with the state solid waste management policy (SSWMS) and the state Strategic Development Plan 2011-2015 that clearly plans actions in SWM, needs for SWM in Kosrae, as well as Japan's development assistance policy.

(2) Effectiveness

Evaluation: Effectiveness is high to medium.

1) Achievement of Project Purpose
In Kosrae, the valid indicators of the Project Purpose were mostly achieved, though the observed contribution of this Project in terms of capacity development of the target group was limited to part of operation of the landfill and expansion of awareness activities.

2) Contribution of Outputs to Project Purpose
While Output 2-3 (landfill) and Output 2-4 (awareness) contributed to the Project Purpose, Output 2-1 (SSWMS) and Output 2-2 (waste collection) have not fully contributed due to delays in the activities, through which capacity development of C/P was aimed.

3) Other promoting/inhibiting factors

(3) Efficiency

Evaluation: Efficiency is high to medium.

1) Production of Outputs
Monitoring of the Action Plan of SSWMS (part of Output 2-1), planning and implementation of improved collection services (part of Output 2-2) are on the way toward achievement.

2) Appropriateness of Inputs

- FSM side (Kosrae) No particular problem. Purchase of trucks by DT&I for municipalities that did not receive the compactor trucks from Japan under the Grassroots Grant Aid, improved waste collection of those municipalities even in the current situation where the collection improvement plan (Output 2-2) has not been implemented.
- Japanese side (Kosrae) No particular problem, except that it did not serve needs of some C/P who needed longer or more frequent stays by the short-term expert for more hands-on support. Even so, whether the longer stay of the expert could have better achieved the Outputs cannot be verified.

3) Utilization of external resources
Daily help of SV significantly contributed to good operation of the landfill.
Grassroots Grant Aid improved waste collection by municipalities through provision of compactor trucks (see "2) Appropriateness of Inputs" above).

4) Other promoting/inhibiting factors

(4) Impact

Evaluation: Positive impact was observed; negative impact was not observed.

1) Impact at Overall Goal level

There is a possibility that the good practices in Kosrae will contribute to the achievement of Indicator of the Overall Goal "At least more than 2 trainings/workshops in the region which is conducted by facilitators/trainers from FSM" in three years after project completion.

Although the capacity developed under the activities of this Project in Kosrae may only partially contribute to the conduct of such trainings/workshops, the network/connection with OEEM and other states that was reinforced under this Project (through activities with OEEM and opportunity of meeting such as JCC and other occasions) will enhance possibility of having facilitators/trainers from Kosrae.

2) Other impacts

- Positive impacts: Not observed.
- Negative impacts: Not observed.

(5) Sustainability

Evaluation: Sustainability is high to medium.

1) Policy and institutional aspects

No major problem was found. The SSWMS provides full policy support to the activities introduced under the Project.

2) Organizational aspects

No major problem was found. Staff members in SWM of both KIRMA (2 Environmental Public Education Officers and 2 Field officers) and DT&I (3 Landfill Attendants, 1 Administration Officer and 1 Operator) can handle the activities that they currently carry out.

3) Financial aspects

There is a major concern on the future prospects of the SWM budget.

Currently, SWM budget relies on the Environmental Sector Grant of the US Compact Trust Fund (allocated to DT&I through KIRMA). There is a plan to terminate the SWM budget from Environmental Sector Grant after 2017. Introduction of fee collection for disposal is listed in the Action Plan of the SSWMS, but the concrete plan has not been developed yet. This issue is to be discussed with leaders again in 2015.

4) Technical aspects

No major problem was found in technical skills of both KIRMA and DT&I in continuing the activities that they currently carry out without presence of JICA experts.

5) Others （if any）

IV Conclusion

Five Evaluation Criteria

-Relevance is already high enough because this project matches both of the policies of FSM and Japan.

-Effectiveness is high to medium. While project purposes were almost achieved, some of outputs did not contribute enough because of delay of the activities.

-Efficiency is high to medium. Collaborating with other schemes; such as training, grant aid, volunteers; J-PRISM created good outputs especially for improvement of landfill site, while some of other outputs are still under the progress.

-Impact is not very clear at the moment, however, there is a possibility to produce positive impact in three years.

-Sustainability is high to medium. To ensure sustainability, long-term budget planning is essential. Preparing for the expiration of US compact, it is important to develop self-financial mechanism, for waste management, such as fee collection system.

Achieved output and remaining issues

Output 2-1a: The SSWMS in Kosrae is finalized

Output 2-1b: Action plan is developed

SSWMS was successfully developed and endorsed. On the other hand, capacity of counterparts has not improved enough to keep facilitating Monitoring Committee to continue monitoring of action plan and produce a progress report.

Output 2-2: Collection of General Waste is improved

A draft of Improvement plan on waste collection system was developed by KIRMA and DT&I with consultation with each municipality except Walung. As the next step, it is expected for them to finalize it and implement. After completion of the road, it is required for KIRMA, DT&I, and Walung municipality to develop a waste collection plan for Walung to the final disposal site.

Output 2-3: Waste Disposal is improved

The indicator "Operation and maintenance of landfill is regularly conducted" is achieved and now under good Operation and maintenance.

It is difficult to identify whether this can be attributed to this Project.

Output 2-4: Awareness Raising is improved

It is a good achievement that an educational material was developed through J-PRISM, which is utilized for environmental education for all of 6 schools in the island by KIRMA, Dept. of Education, and a recycling company. In addition, through J-PRISM, workshops for teachers were conducted for two schools. As the next step, it is expected KIRMA to expand the workshops for other 4 schools in the island.

Conclusion on the course of implementation of the Project

Based on the above-mentioned findings and evaluation, the evaluation team considers it appropriate that this Project be completed as planned.

Other Issues on waste management

-Proper management for difficult waste, such as used tires, used oil, e-waste and chemical waste
-Enhance 4R activities
-Enhance environmental education for waste reduction
-Review of old legislation and regulations in environmental sector

V Recommendations for the remaining period

For KIRMA:

-Start drafting a next SSWMS
-Facilitate Monitoring Committee and conduct action plan monitoring with a minimum assistance of JICA Expert. And prepare a progress report.

For KIRMA and DT&I:

-Identify certain persons in charge for each activities in PO and Action plan

For JICA Experts for Kosrae:

-Assist KIRMA for draft a next SSWMS
-Assist KIRMA for Facilitate Monitoring Committee so that it can conduct action plan monitoring and prepare a progress report.

Attachment 6-2: Pohnpei

Terminal Evaluation Report for the Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Federated States of Micronesia [Pohnpei State]

Date: September 4, 2015

I. Project Outline and Evaluation Policy

(1) Project Outline	
Background	The Federated States of Micronesia (FSM) is comprising 607 islands and consisting of four states, Kosrae, Pohnpei, Chuuk and Yap. Each of the four states exhibits its own culture and tradition, and has own autonomy within the federation. FSM consistently run a current account deficit and rely heavily on financial assistance provided by the United States under the Compact of Free Association. As an island nation, people of FSM rely on imported goods from overseas for their living and waste materials are accumulated into small islands. However, the political situation and financial constraint makes it difficult to implement effective SWM.
Summary of the Project	(See Attachment 1 and 2 for details)
-Overall Goal	Sustainable management of solid waste in the Pacific Region is enhanced
-Project Purpose	Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)
-Priorities in RS2010	**Outputs**
Policy, Planning, Performance	3-1) The SSWMS in Pohnpei is finalized.
Waste Collection	3-2) Collection of General Waste is improved.
Waste Disposal	3-3) Final Waste Disposal site is improved.
Sustainable Financing	3-4) CDL system is improved.
Project Duration	Five years from 2 February 2011 to 1 February 2016
Implementing Agency	Environmental Protection Agency, Pohnpei (EPA) (State Project Manager) Transportation and Infrastructure, Pohnpei (T&I)
Collaborating Agency	-
Target Group	Officers of EPA and T&I
Target Area/ Target Population	Pohnpei State 36,195 (Census by Office of Statistics, Budget and Economic Management, Overseas Development Assistance, and Compact Management, 2010)
(2) Evaluation Policy	
Objectives	1) To verify the accomplishments of the Project compared to those planned; 2) To identify promoting and/or inhibiting factors that have affected the project implementation process; 3) To analyze the Project in terms of the five evaluation criteria (i.e. Relevance, Effectiveness, Efficiency, Impact, and Sustainability); 4) To discuss the results of evaluation and solutions for problems that may be observed through the evaluation together with the personnel concerned with the Project and make necessary suggestions
Member of Terminal Evaluation Team	

	Title	Name	Position/Organization
	Cooperation Planning (Overall)	Toru TAGUCHI	Assistant Director, Environmental Management Division I, Global Environment. Department., JICA
*	Cooperation Planning (FSM)	Takahisa WATANABE	Project Formulation Advisor JICA-FSM
*	Evaluation Analysis	Takako HARAGUCHI	Permanent Expert, International Development Associates, Ltd.

Attachment 6-2: Pohnpei

	*Members participating in the evaluation study in the country
Period of Evaluation Study in the Country	Pohnpei: 5 days from 31 August to 4 September 2015 * During this period, surveys on Office of Environment & Emergency Management (OEEM) of the federal government and Kosrae State were also conducted. (See Attachment 3 for details)
Methodology	JICA Terminal Evaluation Team collected the information through document analysis, questionnaire survey and interviews with the officers concerned with the Project and JICA experts, conducted field observation in major project sites. Based on the results of the evaluation, the Team prepared a draft report and finalized it through discussions with the personnel concerned with the Project.
Limitation	

II. Accomplishment and Implementation Process of the Project

(1) Inputs (as of June 2015 unless otherwise mentioned) [For entire FSM]

<Japanese Side>	**<FSM Side>**
1) Dispatch of JICA Experts: 8 persons (35.8 M/M) - 3 Short-term Experts (33.3 M/M) - 4 Long-term Experts from Project Office (1.8 M/M) - 1 Local Expert from Project Office (0.7M/M) (Cost of Local Expert is included in Local cost support) 2) Training in Japan: 3 persons - "Great Vava'u and Okinawa Mottainai Movement Project" in 2012 (1 from Yap) - "J-PRISM Regional Training for Trainers" in 2015 (1 from Yap, 1 from Pohnpei) 3) Local cost support: approx. JPY12,830,000 (approx. USD121,000) - Cost for travel, etc.	1) Assignment of National Project Director (PD), Project Manager (PM) and C/Ps: 30 persons. - 5 Management C/P (National PD, State PM) - 25 Technical C/P (2 from OEEM, 8 from Kosrae, 4 from Pohnpei, 6 from Chuuk, 5 from Yap) 2) Local cost sharing: approx. JPY42,057,000 (approx. 339,000 USD) - Cost for travel, fuel, track rental, civil works, training, workshops, etc. 3) Land, facilities, workspace

(2) Outputs [Pohnpei]

Output 3-1: The SSWMS in Pohnpei is finalized	Degree of achievement[1]: Partly Achieved

Indicator	Results
3-1-1 SSWMS in Pohnpei is submitted to the State for approval	Fully achieved. The SSWMS titled "Clean Pohnpei 2014-2018" was signed by the state governor in February 2014. The review of the SSWMS is planned in 2016 in preparation for the next SSWMS.
3-1-2 Monitoring is conducted 3 times per year by Monitoring committee	Partly achieved. Monitoring was conducted only once by EPA with assistance of the JICA short-term expert in July 2014. Even if updating of the Action Plan by EPA in May 2015 (for preparation for JCC) is counted, "3 times per year by Monitoring committee" has not been achieved. Setting up of the Monitoring committee, consisting of EPA (Chair), T&I and Municipal Mayors, and its activities such as periodical check 3 times a year and preparation of annual report (both starting in 2014) were agreed in the 3rd JCC

[1] *Degree of achievement for each output/Project Purpose is judged based on the achievement level of indicators set for each Output/Project Purpose. Ratings used for this judgment are four levels, such as "Fully achieved", "Mostly achieved", "Partly achieved", "Not achieved."*

	meeting in February 2014. However, Monitoring committee meetings have not been held due to difficulties in coordinating organizations. Considering the remaining time period, it is unlikely that the target of this indicator will be fully achieved by the end of the Project period.
3-1-3 Progress report is prepared by Monitoring committee annually	Not achieved yet. Progress report has not been issued yet. The first issuance is planned in 2015. Considering the remaining time period, it is unlikely that the target of this indicator will be fully achieved by the end of the Project period.

Output 3-2: Collection of General Waste is improved	Degree of achievement: Fully Achieved in terms of the designated indicators; partly achieved if considering the degree of actual improvement of waste collection.

Indicator	Results
3-2-1 Plan for improvement of waste collection including fee system, collection method and cooperation with multi municipality, is developed in Sokehs and Kitti, pilot project municipality	Fully achieved. Before this Project, there was no established collection and transportation service in Sokhes and Kitti. Each municipality developed the first plan for improvement of waste collection in 2013 and attached it to the application for the Grassroots Grant Aid for compactor trucks. EPA, with help of the JICA short-term expert, advised the municipalities to improve the plan, and the updated plans were endorsed in 2014. The revised plans aims to introduce the prepaid bag system (as an optional service besides in-call collection) that Kolonia municipality is practicing. The proposed price of the pre-paid bag is $0.25/bag. The compactor trucks and a dump truck arrived in May 2015. They will be in full operation once the new financial mechanism, currently being developed by EPA, is legislated and enforced in December 2015 at the earliest. At the 4th JCC meeting in February 2015, Kolonia, Sokhes and Kitti signed a MOU on sharing of information on preceding cases of Kolonia and cooperation in the maintenance of collection vehicles. The above-mentioned financial mechanism is awaited for realization of the MOU.
(Supplementary Information) Capacity of EPA to provide guidance to municipalities	Pohnpei state is divided in 6 municipalities. Although there are no clearly-stated rules, each municipality is deemed responsible for waste collection and transportation. Degree of involvement of the state government in collection and transportation had not been high before, but a new way/idea such as EPA providing guidance to each municipality has grown in the course of implementation of this Project.

Output 3-3: Final Waste Disposal site is improved	Degree of achievement: Fully achieved in terms of the designated indicator, while capacity development of T&I was not realized as expected.

Indicator	Results
3-3-1 Operation under Fukuoka method is introduced for existing damp site	Fully achieved. Following the region-wide training in Yap on landfill management (February 2013), a pilot project to improve half of the existing landfill site to the one with Fukuoka method was started in June 2013.

	At the time of terminal evaluation, it was observed that the improved area of the landfill was well managed except for lack of soil covering and operation cost (see "III (5) Sustainability" below). EPA and PWMS have continuously improved the facilities of the landfill site. For example, they installed a leachate filtering system based on what a C/P of EPA learned from the country-focused training and using financial inputs from the Project. Further, EPA and PWMS prepared a master plan to develop the landfill such as introduction of Fukuoka method to the remaining half of the existing landfill (the 2nd cell), development of side berms, segregation yard, waste processing and storing facilities, etc. The development of the 2nd cell is underway by EPA with financial and technical inputs from J-PRISM. While the construction cost has been applied to the US Compact Trust Fund, the site was excavated with local cost support from J-PRISM. A new excavator provided under the Non-project Grant Aid in 2015 will be deployed at the landfill in early September 2015.
(Supplementary Information) Capacity development of C/P	This pilot project was effective not only in a sense that it introduced the low-cost and sustainable Fukuoka method but also in a sense that it improved motivation of C/P of EPA and PWMS, the actors now actively involved in landfill management and rehabilitation. On the other hand, T&I, the agency responsible for management of the landfill, had acquired some capacity under this Project, but the main C/P passed away and there is no successor at the time of terminal evaluation. Under such circumstances, EPA oversees the operation of the landfill and is working with PWMS on improvement of the remaining part of the existing landfill while T&I supervises contract with PWMS.

Output 3-4: CDL system is improved	Degree of achievement: Partly achieved

Indicator	Results
3-4-1 The Recycle Center is operating at least once a month	Not achieved yet. There are two Recycling Centers in Pohnpei operated by two municipalities (processing is done in the Center in Kolonia, while the Center in Madolenihmw only receives cans), and they opened 12 times during a total of 34 months period from the commencement of the CDL program in June 2012 to August 2015 (1 time in 2012, 1 time in 2013, 7 times in 2014, and 3 times in 2015). The total number of aluminum cans collected so far is 12,009,500, making the annual average a little over 1 million cans. In the last time the Recycling Center operated in July 2015, a total 1,141,500 cans were collected. The Centers cannot operate more frequently due to insufficient balance of the Recycling Fund from which $0.5 out of $0.6 deposit per can should be refunded (see 3-4-3 below). In 2014, EPA and the JICA short-term expert prepared a recommendation paper that listed prioritized activities to improve the CDL program, and one recommendation is to limit the number of cans received to 300,000-350,000 per month. However, EPA found it hard to implement this since there are high demands from consumers every time they open the Recycling Centers. While EPA is responsible for the CDL system, Department of Treasury and Administration (DT&A) manages funds, and the municipal governments of Kolonia and Madolenihmw operate the facilities (the Recycling Center of Kolonia was rehabilitated under Grassroots Grant Aid in 2011).

Attachment 6-2: Pohnpei

3-4-2 The Recycling Law is amended	Not achieved yet. The draft amendment has been revised several times between EPA and AG Office, but wording has not been finalized yet. The latest draft amendment was submitted to AG Office around May 2015. It includes (i) collection of tax ($0.6 deposit per can) from importers upon landing on the port (under the current law it is collected at the first sale in Pohnpei), and (ii) inclusion of electronic and car batteries in the items collected (under the current law, only aluminum cans are eligible). The recommendation paper mentioned above aims to include PET bottles that should be recycled. However, the draft amendment only includes items that are more eligible for payment in order to have it passed promptly. EPA has hired a legal counselor on a few month contract to speed up the legislation process.
3-4-3 Financial system on CDL is improved (Note) Based on the information from the Project, the evaluation team interpreted this Indicator as "*Data are shared by DT&A and EPA and issues are identified.*"	Mostly achieved. Since March 2015, EPA has collected and compiled financial data (e.g. amount of import and sales of redeemed cans) from DT&A, and the data such as breakdown of the revenue from the CDL are readily available. However, it does not use the comprehensive data entry format that it developed with the JICA short-term expert pending the passage of the new amendment of the law. Therefore, identification of issues based on analysis of the flow of money using the new format has not been realized yet.

(3) Project Purpose	
Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	Degree of achievement: (Pohnpei) Mostly Achieved in terms of the degree of achievement of the designated indicators. However, organizational capacity in SWM has not reached the expected level in some aspects.

Attachment 6-2: Pohnpei

Indicator	Results
1 Four (4) experts in the field of integrated solid waste management are listed in the SPREP inventory[2]	(FSM) Five (5) C/P are listed as trainers in J-PRISM's Pacific Islands Database of Capacity Development Activities (PIDOC). (4 from Yap and 1 from Pohnpei)
2 Improvement of State landfill in each state	(Pohnpei) Fully achieved. See Output 3-3.
3 Good practice developed from one state is shared with all the states of FSM	(Pohnpei) Fully achieved. "Good Practices for Solid Waste Management in the FSM 2015" developed under this Project designates Awareness and Landfill as good practices found in Pohnpei state. The good practice of landfill is an outcome of this Project. This report was distributed to all states. Also, SWM personnel from other states of FSM (1 each from Kosrae, Chuuk and Yap) and Marshall Islands participated in the pilot project for the landfill as a sub-regional training of J-PRISM. This was a hands-on opportunity of sharing the experience of Pohnpei with all other states of FSM.
(Supplementary Information) Other evidence of capacity development	(Pohnpei) The following changes were observed: - EPA is planning to review and revise SSWMS without external support and halfway through validity; - EPA and PWMS is operating/managing the existing landfill site using Fukuoka method and preparing a new cell with the same technology without external technical support; - EPA now works closely with municipalities on collection and possibilities of having municipal-level landfills using Fukuoka method; and - EPA has good control of the CDL program. The JICA short-term expert conducted capacity assessment of EPA and T&I in 2012 and 2014. The results show improvement in the areas of landfill management and collection. The final capacity assessment is planned at the end of 2015.

(4) Implementation Process

・Progress of Activities (for each Output)
(Pohnpei) All activities scheduled up to now have been completed except for Activity 3-1-2 (monitoring of the SSWMS 3 times a year by the Monitoring Committee).

・Method of Technical Transfer
(FSM) No major problem. Technical transfer was carried out by means of various training courses/workshops (including pilot projects), technical advice by JICA experts, OJT, and sharing of information through a guidebook on best practices, etc.

・Implementation System
(Pohnpei) The level of commitment of T&I in the Project was lower compared to other relevant organizations. The other organizations such as EPA and PWMS covered the weakness of T&I which contributed to, the overall implementation of the Project to progress.

・Project Management
(Pohnpei) Some indicators of the Output 3-4 (CDL), such as more frequent opening of the Recycling Center

[2] *This indicator was not used as a direct measure of the Project Purpose for the following reasons: (i) while PIDOC, the existing database, is an inventory of SPREP, the persons listed are trainers certified by J-PRISM but not considered as officially certified trainers by SPREP; (ii) the target values are not valid as they had been determined before introduction of PIDOC (thus not consistent with the number of trainers listed in it). Accordingly, the degree of achievement of the Project Purpose was judged in a comprehensive manner with the other indicators and supplementary information (where necessary), while referring to this indicator as reference information.*

and amendment of the CDL Law, are susceptible to external factors and targets are quite ambitious to achieve in the latter half of the Project implementation.

・Communication within the Project

(Pohnpei) Communication with T&I was not always smooth since its appropriate representatives were sometimes absent from meetings.

・ Collaboration with Local Stakeholders in Pohnpei

	Stakeholder	Type of coordination
1	PWMS	Operation of the landfill
2	Municipal governments	Implementation of pilot projects on waste collection

・Participation in Region-Wide Activities of J-PRISM

	Title	Type of activity	No. of C/P in Pohnpei attended
1	Landfill Management Training in Yap, FSM, 2013	Regional training	2
2	Pilot Project for Rehabilitation of landfill, Pohnpei, 2013	Sub-regional training	3 (+ 5 from municipal government)
3	Regional Training on Promotion of 3R in Palau	Regional training	1
4	Regional Training - Okinawa, Japan, 2015	Regional training	1

・Coordination with Other Japanese and International Projects in FSM

1) Holistic approach with other schemes of Japanese assistance

	Scheme	Type of coordination
1	SV/JOCV (JFY2011-)	SV (Solid Waste Management): Kosrae (2), Yap (2) JOCV (Environmental Education): Kosrae (2), Poohnpei (4), Chuuk (2)
2	Grant Assistance for Grassroots Human Security Projects (JFY2005-)	Provision of vehicles for waste collection (Chuuk (2011), Pohnpei (2014),) Provision of vehicles for waste disposal (Pohnpei (2009), Chuuk (2009), Kosrae (2010)) Provision of recycling equipment (Yap (2014)) Renovation of a recycling center (Pohnpei (2011)) Construction of a new landfill (Kosrae (2005), Yap (2012)*) *This new landfill is supported by IMF &US Compact Trust Fund as well.
3	Training and Dialogue Program (JFY2011-)	Comprehensive waste management (Kosrae, Chuuk) 3R waste management (Pohnpei) Design and maintenance of semi aerobic landfill site (Fukuoka method) (Pohpei, Yap) Promotion of Shibushi model (Chuuk, Pohnpei, Yap) Solid waste management by local government (Kosrae, Chuuk, Pohnpei, Yap) Waste management technique (Pohnpei, Yap) Environmental education (Chuuk) Enhancement of solid waste management capacity (Advance, planning & policy) (OEEM) Country Focused Training on Water and Sanitation Management in Okinawa
4	Others	Eco-Islands Symposium (3) 3R Forum in Asia (2)

2) Collaboration with other donors

	Donor	Type of coordination
1	Compact Trust Fund (USA)	Initial budget of 40.8 million dollars is allocated to solid waste management from 2004-2023.
2	IMF	Construction of a new landfill (Yap)
3	New Zealand	Provision of Weigh Bridge (Kosrae)
4	Australia	Provision of a glass crusher (Yap)

・Other Promoting and Inhibiting Factors

High commitment of key C/P promoted achievement of the Outputs.
Organizational restructuring and unclear mandate on the responsibility for SWM prohibited prompt implementation of some activities.

III. Results of Analysis from the Viewpoints of Five Evaluation Criteria

(1) Relevance

Evaluation: Relevance is high.

The project is still consistent with the state solid waste management policy (SSWMS), needs for SWM in Pohnpei as well as Japan's development assistance policy.

(2) Effectiveness

Evaluation: Effectiveness is high to medium.

1) Achievement of Project Purpose
In Pohnpei, the valid indicators of the Project Purpose were mostly achieved, and it was observed that EPA and PWMS (a private company commissioned to operate the landfill) developed their capacity in landfill management. However, the capacity developed at T&I, a responsible organization in final disposal, was lost due to passing away of the C/P who received technical transfer.

Regarding the other target areas than landfill management, EPA's capacity in working with municipalities in waste collection as well as management of CDL have improved.

2) Contribution of Outputs to Project Purpose
(Pohnpei) All Outputs contributed to achievement of the Project Purpose except the capacity development of T&I (part of Output 3-3) for the reason mentioned in 1) above.

3) Other promoting/inhibiting factors

(3) Efficiency

Evaluation: Efficiency is high to medium.

1) Production of Outputs
Planning of improved collection services (Output3-2) and improvement of the existing landfill (Output 3-3) were fully achieved, while monitoring of the Action Plan of SSWMS (Output 3-1) and improvement of CDL (Output 3-4) are on the way toward achievement. The main reasons for the non-achievement are difficulties in coordinating the stakeholders for monitoring (for Output 3-1) and high targets for the short time period allocated for activities (for Output 3-4).

Although C/P are working hard on production of Output 3-1 and 3-4, which showed progress at the time of terminal evaluation, it is unlikely that the target of this indicator will be fully achieved by the end of the Project considering the remaining time period.

2) Appropriateness of Inputs
- FSM side (Pohnpei State) No problem except for assignment of C/P from T&I that did not lead to production of the Output on landfill (3-3).
- Japanese side (Pohnpei State) No major problem.

3) Utilization of external resources
- Grassroots Grant Aid made possible the development of the Recycling Program (through rehabilitation of the facilities of the Center) and introduction of a new collection system (through provision of compactor trucks).
- Under Non-project Grant Aid, an excavator has just been provided to EPA, which will start operation in early September and help saving of cost for renting excavators.
- A JOCV helped EPA develop the CDL program.
- Group training on solid waste management and the country focused training in water and sanitation management helped EPA and PWMS improve the landfill.

- Cooperation of municipalities was essential for establishment of the new collection system.

4) Other promoting/inhibiting factors

(4) Impact

Evaluation: Positive impact was observed; negative impact was not observed.

1) Impact at Overall Goal level

There is a likelihood that the Indicator of the Overall Goal "At least more than 2 trainings/workshops in the region which is conducted by facilitators/trainers from FSM" will be achieved in three years after project completion. The collection service and improvement of landfill sites can be candidates of the theme that C/P in Pohnpei could instruct to PICs.

2) Other impacts

- Positive impacts:

(i) Impact on municipalities (collection): After the pilot project of waste collection in Sokehs and Kiti (Output 3-2), Nett and U are also going to start a new collection system once compactor vehicles arrive in FY2015 (the Non-project Grant Aid).

(ii) Impact on municipalities (disposal site): Participation in the pilot project on waste disposal (Output 3-3) not only from state government but from municipal governments improved municipalities' motivation as well. For example, various ideas to handle SWM issues such as developing small disposal sites at municipal level came up (though careful consideration is needed for realization of this idea).

(iii) Potential impact on communities: Educator and JOCV of EPA conduct school-based awareness activities such as visit to the landfill and the Recycling Center. Once realized, the Outputs of this Project could be good opportunity for students to learn SWM issues.

- Negative impacts:

Not observed.

(5) Sustainability

Evaluation: Sustainability is fair (medium).

1) Policy and institutional aspects

No major problem was found. The SSWMP provides full policy support to the activities introduced under the Project.

2) Organizational aspects

There is a concern on organizational settings for landfill management.

EPA is an agency responsible for planning and legislation of SWM and oversight of waste disposal, and T&I is responsible for operation of the final disposal site. T&I outsources operation and management of the existing landfill to PWMS on the basis of yearly contract.

Regarding T&I, after leaving of two out of three C/P and resignation of another SWM-related officer, no staff is assigned SWM tasks. At the time of terminal evaluation, it is not clear who will perform the task of supervising the PWMS's operation of the landfill, which is an essential step for payment to PWMS that it hires.

No problem was observed in the organizational aspect of PWMS except that it is hired by T&I on the basis of annual contract, which is causing uncertainty on continuous assignment of the company that has a will to continue and capabilities of operation aßnd maintenance.

At EPA, current staff members in charge of SWM (Director, 3 Specialists (of which 2 are for CDL) and 1 Educator) can handle the activities that it currently carries out. Director will retire at the end of this fiscal year (September 2015).

3) Financial aspects

There are concerns on the financial situation of both EPA and T&I. The budget of EPA (allocated mainly from the US Compact Trust Fund) started declining in 2014, and it resulted in decrease of the number of

staff. While EPA has managed to continue its SWM activities with limited funding, the situation in the future is uncertain.

Information on the financial situation of T&I was not available. Although payment to PWMS for its operation of landfill operation has been constantly made, the future prospects are uncertain due to the reason mentioned under "2) Organizational aspects" above. Also, no budget has been secured for expansion of the landfill site and the related facilities. Budget proposals for the expansion that PWMS submitted to T&I has not been processed yet.

4) Technical aspects
No major problem was found in technical skills of both EPA and PWMS in continuing the activities that they currently carry out. Future concerns may include lack of technical capabilities on T&I fulfilling its responsibility to manage the landfill, which is currently covered by EPA.

Manager of PWMS has just changed, but necessary information is being transferred to the successor.

5) Others （if any）

IV Conclusion

Five Evaluation Criteria
Relevance is already high enough.
Effectiveness is medium to high. From indicators, the project purpose is mostly achieved, however, capacity of T&I was not enough improved.
Efficiency is medium to high. Collaborating with other schemes; such as training, grant aid, volunteers; J-PRISM created good outputs especially for improvement of landfill site, while some of other outputs are still under the progress.
Impact is likely to be high.
Sustainability is medium. To ensure sustainability, long-term budget planning is essential. Preparing for the expiration of US compact, it is important to develop self-financial mechanism for waste management. In addition, when replace officials, a proper takeover of knowledge and skill is essential.

Achieved output and remaining issues
The degree of achievement is variable among each output

Output 3-1: The SSWMS in Pohnpei is finalized
While SSWMS was developed, Monitoring Committee does not work well enough to continue monitoring of action plan and produce a progress report. As the next step, it is expected for EPA to facilitate Monitoring Committee regularly to implement the Action Plan with a good control.

Output 3-2: Collection of General Waste is improved
Collection plan for Sokehs and Kitti municipality were developed with a financial mechanism of pre-paid bag.
As a next step, it is expected for these municipalities to implement the collection plan by utilizing collection vehicles funded by Japan. Also the collection plan should be developed for other municipalities. It is expected that EPA encourage these municipalities to plan and implement the collection plan.
At the same time, mandate over waste collection needs to be clarified so that most efficient collection system could be introduced.

Output 3-3: Final Waste Disposal site is improved
Since the pilot project to install a part of Fukuoka method in June 2013, the final disposal site has been improved under J-PRSIM. Although the 2nd cell is now under construction, it is unlikely to be completed during the J-PRISM period. In addition, it is expected for T&I and PWMS to continue improving facilities at the land fill site such as side berms and segregation yard.
After J-PRISM, it is required for PWMS to seek for necessary budget to keep improving the landfill site.
T&I can assist PWMS to obtain budget from US Compact Trust Fund.

Output 3-4: CDL System is improved
Through J-PRISM project, the flow of money is now clarified among relating agencies.
On the other hand, the current law of CDL is not effective because deposit is not charged on arrival to the port. Although EPA proposed amendment of the law of CDL, it is under consideration among EPA, AG Office and the state cabinet.
It is necessary for EPA to persuade cabinet members to pass the law.

Conclusion on the course of implementation of the Project
Based on the above-mentioned findings and evaluation, the evaluation team considers it appropriate that this Project be completed as planned.

Other Issues on waste management
-Proper management for difficult waste, such as used tires, used oil, e-waste and chemical waste
-Enhance environmental education on solid waste management
-Enhance environmental education for waste reduction
-Proper closure of the existing landfill
-Preparation of a new landfill site for disposal before the existing landfill becomes full

V Recommendations for the remaining period

For EPA:
- Facilitate Monitoring Committee and conduct the Action Plan monitoring with a minimum assistance of JICA Expert. And prepare a progress report.
- Push the legislation process on the financial mechanism of collection in Sokehs and Kiti so that the new collection system could be put into operation.
- Ensure that SWM remains a priority under the new management.

For T&I:
- Appoint the permanent officer in charge of SWM, and transfer all necessary documents and procedures to that officer. Also, use the knowledge accumulated in EPA and PWMS when necessary.
- Inspect the proposal from PWMS for US compact fund for improve landfill and proceed to the next step so that it is approved by JEMCO.
- Maximize the use of the active cell of the landfill.

For PWMS:
- Transfer of GM's knowledge to the new GM.

For JICA Experts for Pohnpei:
Support EPA to organize the Monitoring Committee

Attachment 6-3: Chuuk

Terminal Evaluation Report for the Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Federated States of Micronesia [Chuuk State]

Date: August 28, 2015

I. Project Outline and Evaluation Policy

(1) Project Outline	
Background	The Federated States of Micronesia (FSM) is comprising 607 islands and consisting of four states, Kosrae, Pohnpei, Chuuk and Yap. Each of the four states exhibits its own culture and tradition, and has own autonomy within the federation. FSM consistently run a current account deficit and rely heavily on financial assistance provided by the United States under the Compact of Free Association. As an island nation, people of FSM rely on imported goods from overseas for their living and waste materials are accumulated into small islands. However, the political situation and financial constraint makes it difficult to implement effective SWM.
Summary of the Project	(See Attachment 1 and 2 for details)
-Overall Goal	Sustainable management of solid waste in the Pacific Region is enhanced
-Project Purpose	Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)
-Priorities in RS2010	**Outputs**
Policy, Planning, Performance	4-1) Capacity to prepare the State Solid Waste Management Strategy of Chuuk and Action Plan is developed.
Waste Disposal	4-2) Capacity to improve and manage the final disposal site is enhanced.
Waste Collection	4-3) Capacity to improve the collection of general waste is enhanced.
Project Duration	Five years from 2 February 2011 to 1 February 2016
Implementing Agency	Environmental Protection Agency (EPA), Chuuk (State Project Manager) Department of Transportation and Public Works (DT&PW)
Collaborating Agency	Planning Division, Department of Administrative Services
Target Group	Officers of EPA and DT&PW
Target Area/ Target Population	Chuuk State 48,654 (Census by Office of Statistics, Budget and Economic Management, Overseas Development Assistance, and Compact Management, 2010)
(2) Evaluation Policy	
Objectives	1) To verify the accomplishments of the Project compared to those planned; 2) To identify promoting and/or inhibiting factors that have affected the project implementation process; 3) To analyze the Project in terms of the five evaluation criteria (i.e. Relevance, Effectiveness, Efficiency, Impact, and Sustainability); 4) To discuss the results of evaluation and solutions for problems that may be observed through the evaluation together with the personnel concerned with the Project and make necessary suggestions
Member of Terminal Evaluation Team	

	Title	Name	Position/Organization
	Cooperation Planning (Overall)	Toru TAGUCHI	Assistant Director, Environmental Management Division I, Global Environment. Department., JICA
*	Cooperation Planning (FSM)	Takahisa WATANABE	Project Formulation Advisor JICA-FSM

Attachment 6-3: Chuuk

	*	Evaluation Analysis	Takako HARAGUCHI	Permanent Expert, International Development Associates, Ltd.
	*Members participating in the evaluation study in the country			
Period of Evaluation Study in the Country	Chuuk: 3 days from 26 to 28 August 2015 （See Attachment 3 for details）			
Methodology	JICA Terminal Evaluation Team collected the information through document analysis, questionnaire survey and interviews with the officers concerned with the Project and JICA experts, conducted field observation in major project sites. Based on the results of the evaluation, the Team prepared a draft report and finalized it through discussions with the personnel concerned with the Project.			
Limitation				

II. Accomplishment and Implementation Process of the Project

(1) Inputs (as of June 2015 unless otherwise mentioned) [For entire FSM]

<Japanese Side>	**<FSM Side>**
1) Dispatch of JICA Experts: 8 persons (35.8 M/M) - 3 Short-term Experts (33.3 M/M) - 4 Long-term Experts from Project Office (1.8 M/M) - 1 Local Expert from Project Office (0.7M/M) (Cost of Local Expert is included in Local cost support) 2) Training in Japan: 3 persons - "Great Vava'u and Okinawa Mottainai Movement Project" in 2012 (1 from Yap) - "J-PRISM Regional Training for Trainers" in 2015 (1 from Yap, 1 from Pohnpei) 3) Local cost support: approx. JPY12,830,000 (approx. USD121,000) - Cost for travel, etc.	1) Assignment of National Project Director (PD), Project Manager (PM) and C/Ps: 30 persons. - 5 Management C/P (National PD, State PM) - 25 Technical C/P (2 from OEEM, 8 from Kosrae, 4 from Pohnpei, 6 from Chuuk, 5 from Yap) 2) Local cost sharing: approx. JPY42,057,000 (approx. 339,000 USD) - Cost for travel, fuel, track rental, civil works, training, workshops, etc. 3) Land, facilities, workspace

(2) Outputs [Chuuk]

Output 4-1: Capacity to prepare the State Solid Waste Management Strategy of Chuuk and Action Plan is developed	Degree of achievement[1]: Mostly Achieved
Indicator	**Results**
4-1-1 Chuuk SSWMS is submitted to the State for approval	Fully achieved. The draft Chuuk Solid Waste Management Plan (SSWMP) 2012-2016 and Action Plan were approved by the government in 2012.
4-1-2 Monitoring on the progress of Action Plan is conducted annually	Mostly achieved. Monitoring of the Action Plan was conducted twice (in 2014 and 2015). EPA is planning to conduct the next monitoring in December 2015 without help of the short-term expert. The average achievement rate of the Action Plan increased from 40% in 2014 to 48% in 2015. The achievement rate is low in a field of Sustainable Financing such as introduction of environmental levy, which is difficult due to lack of manpower in legal affairs. By implementing monitoring, C/P recognized what has to be done, which promoted implementation of some Action Plan items.

[1] *Degree of achievement for each output/Project Purpose is judged based on the achievement level of indicators set for each Output/Project Purpose. Ratings used for this judgment are four levels, such as "Fully achieved", "Mostly achieved", "Partly achieved", "Not achieved."*

Output 4-2: Capacity to improve and manage the final disposal site is enhanced	Degree of achievement: Fully Achieved

Indicator	Results
4-2-1 Boundary of the existing dumpsite is identified and separated from other area	Fully achieved. In 2012, the boundary was identified through discussions with related parties. In 2013 and 2014, the improvement of the disposal site was conducted as part of a pilot project, which was one kind of training. The improvement works included construction of a dyke and fences, rehabilitation of approach road and part of access road, installation of signboards, and installation of gas venting pipe and leachate pipes. In doing so, low cost materials were used such as general waste (for the dyke), old tires (for the approach road), coral sands stuffed in bags (DONO) (for the access road) and abandoned old fences. At the time of terminal evaluation, it was observed that the boundary was maintained, while signboards were lost. The road rehabilitation technology using DONO was not adopted for other portion of the road due to still high cost for materials.
4-2-2 Operation of compacting waste is conducted at least once a week	Fully achieved. Frequency of compacting increased from once a month in 2011 to twice a week in 2015. At the time of terminal evaluation, the bulldozer has not been operational for pushing and compaction for last three weeks due to breakdown. While waiting for the necessary parts, the mechanic officer made temporary repair to the broken parts, and the bulldozer was about to be back to operation.
4-2-3 Operation is recorded and submitted to PW and EPA	Partly achieved. Recording started in 2015 using a form prepared by DT&PW. At the time of terminal evaluation, the record is submitted to DT&PW but not to EPA. According to EPA, EPA does not have to check the operation record, but it can intervene if needed.
(Supplementary Information) Preparation of the interim site and the new landfill site	The typhoon in March 2015 reduced the capacity of the existing final disposal site, and it would be full at the end of 2015. EPA and DT&PW are preparing an interim site. Although J-PRISM is not fully involved in the interim site and the new landfill, the short-term experts provided some assistance such as advices on constructing an interim site on the sea, collecting and sharing drawings of landfill in other states, and providing opportunity to actually observe one of such landfill site (through the in-country training Yap in 2014). C/P highly appreciated advice and technical assistance by the short-term experts, as it was crucial in obtaining the consent of the State Governor for the use of the interim site. Also, the waste survey conducted in May 2015 under J-PRISM was used for the

	identification of remaining capacity of the existing landfill. [Statuses of the interim site and the site for new landfill] Interim site: The site is ready, and operation will start in early September, when a new excavator for landfill starts operation (note: under a non-project type grant assistance), three excavators arrived in late August 2015, and one of them is going to be used in the interim site. At the time of terminal evaluation, the operator was receiving training from the supplier). However, dumping of waste started in an open space (for temporary storage of construction waste) next to the interim site because, according to DT&PW, the pushing and compaction cannot be performed in the existing site due to the breakdown of the bulldozer. New landfill: Preparation of a new landfill site is underway. The site was identified, and survey was finished. Learning from Yap, use of the Fukuoka method is being planned. At the time of terminal evaluation, EIA was being planned. The cost for construction of the new landfill is to be funded from the US Compact Fund.

Output 4-3: Capacity to improve the collection of general waste is enhanced	Degree of achievement: Mostly achieved as far as the Indicators are concerned, and significant improvement of capacity was seen from the supplementary information.

Indicator	Results
4-3-1 Monthly collection record is submitted to PW and EPA	Partly achieved. Although collection crews (DT&PW) kept collection record on their notebooks, they did not use the record form that they could request to the office, and did not submit the record. The record is not submitted to EPA, either.
4-3-2 More than 5 villages receive regular collection service	Fully achieved. Service area of regular collection was expanded to 8 out of 10 villages (the remaining two villages are inaccessible due to very bad road conditions). According to EPA, one factor that promoted such expansion was people's awareness of the benefits of the collection of garbage and trash from their communities.
4-3-3 More than 10 workshops are conducted to improve the waste discharge of the people	Fully achieved. In 2015, EPA conducted 10 small workshops. It plans to hold more workshops at schools by the end of the Project period. Besides workshops, EPA implemented a cleanup campaign (June), and putting up of a signboard (broken due to the typhoon) and provision of a radio program to announce about waste collection schedule and for awareness raising. The State Government designated September as the State Major Cleanup Month starting from 2015. Accordingly, EPA is going to conduct major cleanups in September 2015.
(Supplementary Information) Establishment of regular collection system	Before the Project, there had been no regular collection service. The regular collection service has been carried out since the commencement of the pilot project on horn collection in May 2012, using two collection vehicles (2t and 4t) provided through Grassroots Grant Aid. By the time of terminal evaluation, this service has become a regular duty of DT&PW. The collection frequency is 4

	times a week with areas collected on alternate days. The JICA short-term expert provided technical advice on decision of collection method, facilitated the time and motion study to identify issues over collection, and is monitoring the collection activity. A JOCV helped the implementation of the collection program. In 2013, the correction crews received a special award from J-PRISM and SPREP for their constant commitment to regular collection of waste from all over the island, where road conditions are very bad.

(3) Project Purpose

Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	Degree of achievement: Mostly Achieved

Indicator	Results
1 Four (4) experts in the field of integrated solid waste management are listed in the SPREP inventory[2]	(FSM) Two (4) C/P are listed as trainers in J-PRISM's Pacific Islands Database of Capacity Development Activities (PIDOC). (3 from Yap and 1 from Pohnpei)
2 Improvement of State landfill in each state	(Chuuk State) Fully achieved. The existing landfill was significantly improved. Also, preparation of the new landfill and the interim site (to be used until the new landfill is opened) was promoted (see Output 2-2 above).
3 Good practice developed from one state is shared with all the states of FSM	(Chuuk State) Fully achieved. "Good Practices for Solid Waste Management in the FSM 2015" developed under this Project designates Awareness and Collection as good practices found in Chuuk state. This report was distributed to all states. In particular, the collection activity in Chuuk was discussed several times in other states, and the Office of Environment and Emergency Management (OEEM) of the federal government visited Chuuk to observe it.
(Supplementary Information) Capacity assessment	The JICA short-term expert conducted capacity assessment of EPA and DT&PW in 2012 and 2014. The results show improvement in all aspects targeted under the Project, namely, monitoring of waste collection/ management of the disposal site and awareness activities by EPA and provision of waste collection services and operation of the disposal site by DT&PW. This finding is consistent with the degree of achievement of Outputs described above. The final capacity assessment is planned at the end of 2015.

[2] *This indicator was not used as a direct measure of the Project Purpose for the following reasons: (i) while PIDOC, the existing database, is an inventory of SPREP, the persons listed are trainers certified by J-PRISM but not considered as officially certified trainers by SPREP; (ii) the target values are not valid as they had been determined before introduction of PIDOC (thus not consistent with the number of trainers listed in it). Accordingly, the degree of achievement of the Project Purpose was judged in a comprehensive manner with the other indicators and supplementary information (where necessary), while referring to this indicator as reference information.*

(4) Implementation Process

・Progress of Activities (for each Output)
All activities scheduled up to now have been completed. Activity 4-3-6 (awareness raising), which is planned to continue till the end of 2015, is on going.

・Method of Technical Transfer
No problem. Technical transfer was carried out by means of various training courses/workshops (including pilot projects), technical advice by JICA experts, OJT, etc. Provision of information on final disposal sites in other states and countries, especially in-country training in Yap, resulted in introduction of the Fukuoka method for the new landfill.

・Implementation System
No significant problem, while there was an issue of division of responsibilities mentioned in "III (5) Sustainability" below.

・Project Management
No problem. In 2014, an activity on awareness-raising was added to PO as part of the waste collection component. This was a reflection of learning that better collection requires better awareness of people.

・Communication within the Project
No significant problem.

・ Collaboration with Local Stakeholders in Chuuk

	Stakeholder	Type of coordination
1	Planning Division, Department of Administrative Services	Design of the new landfill
2	College of Micronesia – College of Research and Extension (COM-CRE)	Awareness activity
3	Chuuk Women's Council	Ditto
4	Student Council	Ditto

・Participation in Region-Wide Activities of J-PRISM

	Title	Type of activity	No. of C/P in Chuuk attended
1	Landfill Management Training in Yap, FSM, 2013	Regional training	2
2	Pilot Project for Rehabilitation of landfill, Pohnpei, 2013	Sub-regional training	2
3	Regional Training on Promotion of 3R in Palau	Regional training	3
4	Study Trip to Yap State	In-country training	4

・Coordination with Other Japanese and International Projects in FSM

1) Holistic approach with other schemes of Japanese assistance

	Scheme	Type of coordination
1	SV/JOCV (JFY2011-)	SV (Solid Waste Management): Kosrae (2), Yap (2) JOCV (Environmental Education): Kosrae (2), Pohnpei (4), Chuuk (2)
2	Grant Assistance for Grassroots Human Security Projects (JFY2005-)	Provision of vehicles for waste collection (Chuuk (2011), Pohnpei (2014),) Provision of vehicles for waste disposal (Pohnpei (2009), Chuuk (2009), Kosrae (2010)) Provision of recycling equipment (Yap (2014)) Renovation of a recycling center (Pohnpei (2011)) Construction of a new landfill (Kosrae (2005), Yap (2012)*) *This new landfill is supported by IMF &US Compact Trust Fund as well.
3	Training and Dialogue Program (JFY2011-)	Comprehensive waste management (Kosrae, Chuuk) 3R waste management (Pohnpei) Design and maintenance of semi aerobic landfill site (Fukuoka method) (Pohpei,

		Yap) Promotion of Shibushi model (Chuuk, Pohnpei, Yap) Solid waste management by local government (Kosrae, Chuuk, Pohnpei, Yap) Waste management technique (Pohnpei, Yap) Environmental education (Chuuk) Enhancement of solid waste management capacity (Advance, planning & policy) (OEEM)
4	Others	Eco-Islands Symposium (3) 3R Forum in Asia (2)

2) Collaboration with other donors

	Donor	Type of coordination
1	Compact Trust Fund (USA)	Initial budget of 40.8 million dollars is allocated to solid waste management from 2004-2023.
2	IMF	Construction of a new landfill (Yap)
3	New Zealand	Provision of Weigh Bridge (Kosrae)
4	Australia	Provision of a glass crusher (Yap)
5	SPREP	Technical assistance in hazardous waste management (Chuuk)

・Other Promoting and Inhibiting Factors None.

III. Results of Analysis from the Viewpoints of Five Evaluation Criteria

(1) Relevance

Evaluation: Relevance is high.

The project is still consistent with the state solid waste management policy (SSWMS), needs for SWM in Chuuk as well as Japan's development assistance policy.

(2) Effectiveness

Evaluation: Effectiveness is high.

1) Achievement of Project Purpose
In Chuuk, the valid indicators of the Project Purpose were fully achieved, in terms of both improvement of landfill sites and accumulation of good practices in SWM such as waste collection.

2) Contribution of Outputs to Project Purpose
The Outputs, namely, SWM planning, improvement of landfill sites and collection/ awareness-raising, all showed improvement of capacity of C/P (the target group). Therefore, contribution is high.

3) Other promoting/inhibiting factors

(3) Efficiency

Evaluation: Efficiency is medium to high.

1) Production of Outputs
Most Outputs have been produced as planned.

2) Appropriateness of Inputs

- FSM side (Chuuk State) Overall, there was no serious problem. Although participation of C/P from DT&PW was limited at the initial stage of project implementation, its commitment significantly increased in the last half of the project period. EPA's logistic and financial support for DT&PW (fuel for heavy vehicles and collection trucks, etc.) helped the production of outputs related to landfill and collection.
- Japanese side (Chuuk State) No problem except the followings:
(i) dispatch of the JICA short-term expert and training of a C/P in Japan were scheduled in the same timing, which affected technical transfer to that C/P;
(ii) pilot project to rehabilitate access road several meters by DONO has been implemented with assistance

of external consultant hired by J-PRISM. But it was not so efficient compared to the cost.

3) Utilization of external resources
Grassroots Grant Aid made possible the introduction of a new collection system.
One of the three excavators funded by Japanese Government through Non-project grant will be soon utilized at Interim landfill site.

4) Other promoting/inhibiting factors
Heavily damaged road infrastructure was a challenge for waste collection and access to the landfill.

(4) Impact

Evaluation: Positive impact was observed; negative impact was not observed.

1) Impact at Overall Goal level
There is a likelihood that the Indicator of the Overall Goal "At least more than 2 trainings/workshops in the region which is conducted by facilitators/trainers from FSM" will be achieved in three years after project completion. The collection service can be a candidate of the theme that C/P in Chuuk could instruct to PICs, if the service provision is well monitored and supervised by the management level.

2) Other impacts

- Positive impacts:
  Impact on development of the interim site and the new landfill site. Although preparation of the interim site and the new landfill site were outside the scope of this Project, the Japanese experts provided information and technical advice on site selection, design, etc., and organized the in-country training to Yap. Such assistance helped the Chuuk side's landfill development process, and resulted in the adoption of the Fukuoka method for the new landfill.
- Negative impacts:
  Not observed.

(5) Sustainability

Evaluation: Sustainability is fair (medium).

1) Policy and institutional aspects
No problem was found. The SSWMP provides full policy support to the activities introduced under the Project.

2) Organizational aspects
There are several concerns.

Division of responsibilities between EPA and DT&PW over SWM is as follows: EPA is a regulatory agency responsible for monitoring and penalizing waste collection and disposal; DT&PW is an implementing agency responsible for operating and maintaining collection services and landfills.

EPA current staff members in SWM (1 Deputy Director, 1 Solid Waste and Hazardous Waste Manager and 1 Educator) can handle the activities that it currently carries out, but there are no prospects on staff allocation after retirement of the Solid Waste and Hazardous Waste Manager.

DT&PW's current staff members in SWM (1 Director, 1 Assistant Chief, 1 Landfill Bulldozer Operator, 1 Mechanic, 2 Collection Crews) can handle the activities that it currently carries out, but concerns for the future includes no distinct SWM unit in the organization and possible shortage of manpower when it needs to operate the interim site while closing the existing landfill site.

3) Financial aspects
There are some concerns on budget availability of DT&PW and EPA.

Budget of DT&PW comes from the state budget. While personnel cost is allocated, operation cost,

	especially cost for fuel is a major challenge. The bulldozer for the existing landfill and the collection vehicles have been operated as EPA has covered shortages of DT&PW's operation cost for SWM. According to EPA, DT&PW has recently come to better manage to secure fuel cost from their own budget. Budget of EPA comes from the US Compact Trust Fund. Although there is no serious shortage of budget for continuing the activities that were supported by this Project for the time being, the budget is declining. Also, there is a concern on long-term financial sustainability considering the termination of the current Compact Trust Fund in 2023. The "Sustainable Financing" component of the Action Plan of the SSWMP has shown little progress.
4)	Technical aspects No major problem was found in technical skills of both EPA and DT&PW in continuing the activities that they currently carry out. Future concerns may include technical skills related to development and operation of the new landfill site, which may require external assistance.
5)	Others （if any）

IV Conclusion

Five Evaluation Criteria
Relevance and Effectiveness are high.
Regarding Efficiency, the timing of short term experts' activities could have been coordinated with the timing of JICA training in Japan. The fact that the DONO pilot project did not expand should be a lesson learned for future project that seeks for low cost road rehabilitation.
Although Impact cannot be fully assessed at the moment, it is notable that EPA and DT&PW started planning to develop a new semi-aerobic land fill site they learned through J-PRISM.
To secure Sustainability, i) appropriate transfer of knowledge/skill for solid waste management to new staff who may be assigned in the future is required at EPA, and ii) stable financial mechanism are required.

Achieved output and remaining issues
Most of all output will be achieved by the end of the project, while some parts remain which need assistance by Japanese Government.

Output 4-1: Capacity to prepare the State Solid Waste Management Strategy of Chuuk and Action Plan is developed
SSWMS with Action plan is completed and under implementation. Now C/Ps can monitor the action plan by them. They also supposed to be able to establish new SSMWS after 2017 basically by themselves, while limited advice of JICA expert or Senior Volunteer may be required.

Output 4-2: Capacity to improve and manage the final disposal site is enhanced
Current landfill site and its management are significantly improved. Also the result of Capacity Assessment shows the capacity of each personnel and organization on managing landfill is improved. The record of operation and maintenance (O/M) is not fully shared with EPA by DT&PW.

Output 4-3: Capacity to improve the collection of general waste is enhanced
It is remarkable that proper Collection service is developed and expanded its area and keeps continuing after J-PRISM started. The workshops for public awareness on waste collection have been conducted as planned.

Conclusion on the course of implementation of the Project
Based on the above-mentioned findings and evaluation, the evaluation team considers it appropriate that this Project be completed as planned.

Remaining Issues on waste management after J-PRISM
-Proper O/M for the Interim Landfill site
-Develop new landfill site
-Closure existing landfill site
-Develop new SSWMS and ensure its implementation
-Establish Sustainable financial mechanism on waste management
-Enhance 3R + Return Activities

V Recommendations for the remaining period

For EPA:
-Start looking for a candidate of successor of the the SWM manager.
- At the same time, start providing training opportunity to another staff within the organization.

For DT&PW:
-Share existing data on collection and O/M activities with EPA for proper management and supervision of such activities.
-Continue maintenance of existing landfill site.

For EPA and DT&PW:
-Curry out Action Plan Monitoring in December 2015.

Attachment 6-4: Yap

Terminal Evaluation Report for the Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Federated States of Micronesia [Yap State]

Date: August 20, 2015

I. Project Outline and Evaluation Policy

(1) Project Outline	
Background	The Federated States of Micronesia (FSM) is comprising 607 islands and consisting of four states, Kosrae, Pohnpei, Chuuk and Yap. Each of the four states exhibits its own culture and tradition, and has own autonomy within the federation. FSM consistently run a current account deficit and rely heavily on financial assistance provided by the United States under the Compact of Free Association. As an island nation, people of FSM rely on imported goods from overseas for their living and waste materials are accumulated into small islands. However, the political situation and financial constraint makes it difficult to implement effective SWM.
Summary of the Project	(See Attachment 1 and 2 for details)
-Overall Goal	Sustainable management of solid waste in the Pacific Region is enhanced
-Project Purpose	Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)
-Priorities in RS2010	**Outputs**
Policy, Planning, Performance	5-1) Capacity to prepare the State Solid Waste Management Strategy (SSWMS) of Yap State and Action Plan is developed.
Waste Disposal	5-2) Capacity to improve and manage the final disposal site is enhanced.
Awareness/ Communication/ Education	5-3) Capacity to conduct awareness activities for SWM is raised
Project Duration	Five years from 2 February 2011 to 1 February 2016
Implementing Agency	Environmental Protection Agency (EPA) (State Project Manager) Department of Public Works and Transportation (DPW&T)
Collaborating Agency	-
Target Group	Officers of EPA and DPW&T
Target Area/ Target Population	Yap State 11,377 (Census by Office of Statistics, Budget and Economic Management, Overseas Development Assistance, and Compact Management, 2010)
(2) Evaluation Policy	
Objectives	1) To verify the accomplishments of the Project compared to those planned; 2) To identify promoting and/or inhibiting factors that have affected the project implementation process; 3) To analyze the Project in terms of the five evaluation criteria (i.e. Relevance, Effectiveness, Efficiency, Impact, and Sustainability); 4) To discuss the results of evaluation and solutions for problems that may be observed through the evaluation together with the personnel concerned with the Project and make necessary suggestions
Member of Terminal Evaluation Team	

	Title	Name	Position/Organization
	Cooperation Planning (Overall)	Toru TAGUCHI	Assistant Director, Environmental Management Division I, Global Environment. Department., JICA
*	Cooperation Planning (FSM)	Takahisa WATANABE	Project Formulation Advisor JICA-FSM
*	Evaluation Analysis	Takako HARAGUCHI	Permanent Expert, International Development Associates, Ltd.

Attachment 6-4: Yap

	*Members participating in the evaluation study in the country
Period of Evaluation Study in the Country	Yap: 2 days from 17 to 18 August 2015 （See Attachment 3 for details)
Methodology	JICA Terminal Evaluation Team collected the information through document analysis, questionnaire survey and interviews with the officers concerned with the Project and JICA experts, conducted field observation in major project sites. Based on the results of the evaluation, the Team prepared a draft report and finalized it through discussions with the personnel concerned with the Project.
Limitation	

II. Accomplishment and Implementation Process of the Project

(1) Inputs (as of June 2015 unless otherwise mentioned) [For entire FSM]

<Japanese Side>	**<FSM Side>**
1) Dispatch of JICA Experts: 8 persons (35.8 M/M) - 3 Short-term Experts (33.3 M/M) - 4 Long-term Experts from Project Office (1.8 M/M) - 1 Local Expert from Project Office (0.7M/M) (Cost of Local Expert is included in Local cost support) 2) Training in Japan: 3 persons - "Great Vava'u and Okinawa Mottainai Movement Project" in 2012 (1 from Yap) - "J-PRISM Regional Training for Trainers" in 2015 (1 from Yap, 1 from Pohnpei) 3) Local cost support: approx. JPY12,830,000 (approx. USD121,000) - Cost for travel, etc.	1) Assignment of National Project Director (PD), Project Manager (PM) and C/Ps: 30 persons. - 5 Management C/P (National PD, State PM) - 25 Technical C/P (2 from OEEM, 8 from Kosrae, 4 from Pohnpei, 6 from Chuuk, 5 from Yap) 2) Local cost sharing: approx. JPY42,057,000 (approx. 339,000 USD) - Cost for travel, fuel, track rental, civil works, training, workshops, etc. 3) Land, facilities, workspace

(2) Outputs [Yap]

Output 5-1: Capacity to prepare the State Solid Waste Management Strategy of Yap State and Action Plan is developed.	Degree of achievement[1]: Fully Achieved

Indicator	Results
5-1-1 Yap SSWMS is submitted to the State for approval	Fully Achieved. The draft SSWMS 2012-2017 was submitted to the state governor in March 2014.
5-1-2 Action Plan is distributed to the stakeholders	Fully Achieved. The Action Plan was consulted on to the stakeholders when it was developed, and its progress was reported to stakeholders at JCC in 2015.
5-1-3 Monitoring on the progress of Action Plan is conducted annually	Fully Achieved. Monitoring of the Action Plan was conducted twice (in 2014 and 2015).
(Supplementary Information) Endorsement of SSWMS by the state governor	The draft SSWMS has not been endorsed yet. Although the SSWMS and Action Plan have been implemented, EPA needs official endorsement as SSWMS is the only policy document of Yap's SWM. EPA keeps urging the governor to endorse it.
(Supplementary Information) Capacity of planning/monitoring	Through preparation, revision and monitoring of the Action Plan, EPA became able to identify the weak points and to propose countermeasures. They are confident that they can manage to prepare the next SSWMS without technical assistance.

Output 5-2: Capacity to improve and manage the final disposal site is enhanced	Degree of achievement: Mostly Achieved.

[1] *Degree of achievement for each output/Project Purpose is judged based on the achievement level of indicators set for each Output/Project Purpose. Ratings used for this judgment are four levels, such as "Fully achieved", "Mostly achieved", "Partly achieved", "Not achieved."*

Attachment 6-4: Yap

Indicator	Results
5-2-1 New landfill design is developed	Fully Achieved. DPW&T prepared drawings of the new landfill, with technical input from EPA, JICA experts and JICA Senior Volunteers. (The new landfill site was constructed with funding from Grassroots Grant Aid by the Embassy of Japan, US Compact and IMF.)
5-2-2 More than 10 counterparts get certificate in the training of operation and maintenance of landfill	Fully Achieved. 20 C/P attended the Landfill Management Training (Regional training in 2013) and received the certificate. Among them, 17 persons were from FSM, including 11 persons from Yap.
5-2-3 The upgrade of the existing dumpsite to semi-aerobic is completed	Mostly Achieved. The existing dumpsite was partly rehabilitated due to budget constraint. Improvement work such as compaction and installation of gas venting pipes as a measure to help with decomposition of waste was carried out with funding from the Project. Due to breakdown of excavators of DPW&T, soil covering has not been conducted yet. It will be started when a new excavator arrives in late August 2015 (under Non-project Grant Aid scheme).
5-2-4 Operation of new landfill is monitored by EPA monthly according to the new landfill management plan	Fully Achieved. EPA started monitoring in April 2015 according to the landfill operation and maintenance guidelines developed under this Project.
(Supplementary Information) Capacity of managing the final disposal site	C/P utilizes what they learned from training and other technical transfer. EPA staff utilize information learned regarding and maintenance activities and monitoring of leachate pond that should be regularly conducted at the landfill site. DPW&T improved planning of daily management, construction of air vents, spreading and compaction of waste, and sorting and separating waste.
(Supplementary Information) Institutional building	Before the Project, role of DPW&T in SWM was not officially designated. Project facilitated official appointment of DPW&T as a responsible organization in SWM by the state governor and creation of a unit/ allocation of human resources solely in charge of SWM within DPW&T.

Output 5-3: Capacity to conduct awareness activities for SWM is raised	Degree of achievement: Mostly Achieved

Indicator	Results
5-3-1 More than 10 workshops are conducted at schools and communities using the awareness materials developed	Fully Achieved. 18 workshops were held. Materials such as posters, stickers and recycle bins were produced by EPA and DPW&T.
5-3-2 Awareness of SWM through a questionnaire result is raised by 25%	Not Achieved. The first questionnaire survey was conducted in 2013, and the second survey is scheduled in December 2015. It is expected that the second survey result will show 25% improvement in the 10 survey items.
(Supplementary Information) Capacity of conducting awareness activities	EPA and DPW&T continue awareness activities with materials that can be developed by themselves at low cost. Even though the second awareness survey has not been conducted, effects of the awareness activities are felt by DPW&T and the recycling center in a way that people's waste disposal behavior clearly changes after awareness activities.

(3) Project Purpose

Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	Degree of achievement: Mostly Achieved

Attachment 6-4: Yap

Indicator	Results
1 Four (4) experts in the field of integrated solid waste management are listed in the SPREP inventory[2]	(FSM) Five (5) C/P are listed as trainers in J-PRISM's Pacific Islands Database of Capacity Development Activities (PIDOC). (Yap State) Four (4) is listed from Yap (EPA).
2 Improvement of State landfill in each state	(Yap State) Mostly Achieved A new landfill (with Fukuoka method) was constructed with technical inputs from the Project. The existing landfill was partly rehabilitated. There is an issue of maintenance due to lack of heavy vehicles, but it is expected to be solved by the end of the cooperation period with upcoming arrival of new heavy vehicle under Japanese Grant assistance.
3 Good practice developed from one state is shared with all the states of FSM	(Yap State) Mostly Achieved "Good Practices for Solid Waste Management in the FSM 2015" developed under this Project designates Landfill, Awareness and CDL as good practices found in Yap state. This report was distributed to all states. In addition, a practice on landfill was obviously shared with Chuuk SWM personnel through Study Visit to Yap.
(Supplementary Information) Other candidate for experts	(Yap State) One DPW&T officer and one private recycling company owner (contracting with EPA) are nominated by EPA/DPW&T as being capable of instructing SWM personnel in other PICs.
(Supplementary Information)	(Yap State) The JICA short-term expert conducted capacity assessment of EPA and DPW&T in 2012 and 2014. The results show improvement in all areas targeted under this Project. The final capacity assessment is planned at the end of 2015.

(4) Implementation Process

<Items of analysis may include the followings>

・Progress of Activities (for each Output)
All activities scheduled to be implemented up to now have been completed.

・Method of Technical Transfer
No problem. Technical transfer was carried out by means of various training courses/workshops (including pilot projects), technical advice by JICA experts, OJT, etc. The approach to provide necessary technical assistance while ensuring maximum ownership on C/P is highly appreciated by C/P.

・Implementation System
No problem.

・Project Management
No major problem. However, part of C/P was not fully aware of project management based on PDM/PO.

・Communication within the Project
No problem. It is notable that in Yap, communication between EPA and DPW&T and between C/P and the JICA expert was smooth.

・ Collaboration with Local Stakeholders

	Stakeholder	Type of coordination
1	Youth Group	Preparation of awareness-raising materials; cooperation in conducting awareness survey
2	Schools	Acceptance of awareness activity

[2] *This indicator was not used as a direct measure of the Project Purpose for the following reasons: (i) while PIDOC, the existing database, is an inventory of SPREP, the persons listed are trainers certified by J-PRISM but not considered as officially certified trainers by SPREP; (ii) the target values are not valid as they had been determined before introduction of PIDOC (thus not consistent with the number of trainers listed in it). Accordingly, the degree of achievement of the Project Purpose was judged in a comprehensive manner with the other indicators and supplementary information (where necessary), while referring to this indicator as reference information.*

2	Recycling company	Advice on awareness activity, attendance to training courses, running of the recycling program (with contract with EPA)

・Participation in Region-Wide Activities of J-PRISM

	Title	Type of activity	No. of C/P in Yap attended
1	Landfill Management Training in Yap, FSM, 2013	Regional training	11
2	Pilot Project for Rehabilitation of landfill, Pohnpei, 2013	Sub-regional training	1
3	Regional Training on Promotion of 3R in Palau	Regional training	2
4	Regional Training for Trainers 2014 (Fiji)	Regional training	1
5	Regional Training - Okinawa, Japan (May. 2015)	Regional training	1

・Coordination with Other Japanese and International Projects

1) Holistic approach with other schemes of Japanese assistance

	Scheme	Type of coordination
1	SV/JOCV (JFY2011-)	SV (Solid Waste Management): Kosrae (2), Yap (2) JOCV (Environmental Education): Kosrae (2), Poohnpei (4), Chuuk (2)
2	Grant Assistance for Grassroots Human Security Projects (JFY2005-)	Provision of vehicles for waste collection (Chuuk (2011), Pohnpei (2014),) Provision of vehicles for waste disposal (Pohnpei (2009), Chuuk (2009), Kosrae (2010)) Provision of recycling equipment (Yap (2014)) Renovation of a recycling center (Pohnpei (2011)) Construction of a new landfill (Kosrae (2005), Yap (2012)*) *This new landfill is supported by IMF &US Compact Trust Fund as well.
3	Training and Dialogue Program (JFY2011-)	Comprehensive waste management (Kosrae, Chuuk) 3R waste management (Pohnpei) Design and maintenance of semi aerobic landfill site (Fukuoka method) (Pohpei, Yap) Promotion of Shibushi model (Chuuk, Pohnpei, Yap) Solid waste management by local government (Kosrae, Chuuk, Pohnpei, Yap) Waste management technique (Pohnpei, Yap) Environmental education (Chuuk) Enhancement of solid waste management capacity (Advance, planning & policy) (OEEM)
4	Others	Eco-Islands Symposium (3) 3R Forum in Asia (2)

2) Collaboration with other donors

	Donor	Type of coordination
1	Compact Trust Fund (USA)	Initial budget of 40.8 million dollars is allocated to solid waste management from 2004-2023.
2	IMF	Construction of a new landfill (Yap)
3	New Zealand	Provision of Weigh Bridge (Kosrae)
4	Australia	Provision of a glass crusher (Yap)

・Other Promoting and Inhibiting Factors

III. Results of Analysis from the Viewpoints of Five Evaluation Criteria

(1) Relevance

Evaluation: Relevance is high.

The project is still consistent with the state solid waste management policy (SSWMS), needs for SWM in Yap as well as Japan's development assistance policy. Regarding the needs for SWM, needs in other areas than addressed by this Project were also observed such as improvement of waste collection and promotion of 4R (those are mentioned in SSWMS). The technology being transferred is suitable.

(2) Effectiveness

Evaluation: Effectiveness is high.

1) Achievement of Project Purpose

The Project Purpose was mostly achieved. In Yap, the indicators of the Project Purpose were mostly

achieved, in terms of both improvement of landfill sites and accumulation of good practices in SWM. Also, it was observed that the C/P improved their capacity in SWM significantly. Some of them acquired sufficient experience/skills to act as trainers for other states and PICs. Further, it is noteworthy that institutional base in SWM was strengthened as DPW&T's responsibility over SWM was clarified and a unit exclusively in charge of SWM was created with recruitment of additional staff, with help of the Project.

2) Contribution of Outputs to Project Purpose
The Outputs, namely, SWM planning, construction/rehabilitation of landfill sites and awareness-raising, all showed improvement of capacity of C/P (the target group). Therefore, contribution is high.

3) Other promoting/inhibiting factors

(3) Efficiency

Evaluation: Efficiency is high.

1) Production of Outputs
Except for part of the rehabilitation of the existing landfill (part of Output 5-2) that have not been completed due to lack of heavy vehicles of DPW&T (Input on FSM side), most Outputs have been produced as planned.

2) Appropriateness of Inputs
- FSM side Mostly appropriate except the above-mentioned heavy vehicles.
- Japanese side No problem was found. Although the period of dispatch of short-term expert was limited, it did not affect the degree of production of Outputs. Inputs for rehabilitation of the dumpsite were also well utilized.

3) Utilization of external resources
Grassroots Grant Aid combined with the US Compact and IMF financing made possible the construction of the new landfill. In addition, technical advice by SV helped the production of Output 5-2 (capacity to improve and manage final disposal site).

4) Other promoting/inhibiting factors
Capacity assessment conducted by the short-term expert identified the specific area for improvement for each C/P, and thus enhanced efficiency of technical transfer.

(4) Impact

Evaluation: Positive impact was observed, and no negative impact was observed.

1) Impact at Overall Goal level
There is a likelihood that the Indicator of the Overall Goal "At least more than 2 trainings/workshops in the region which is conducted by facilitators/trainers from FSM" will be achieved in three years after project completion. The landfill using the Fukuoka method and awareness-raising activity are candidates of the themes that C/P in Yap could instruct to PICs.

2) Other impacts
- Positive impacts:
(i) Impact on recycling program. Although not planned in PDM/PO, recycling activity in Yap was improved partly by the Project. A recycling specialist (owner of recycling company) attended several training of JICA and J-PRISM. Public-private cooperation (between EPA and the recycling company) in running the recycling program is good.
(ii) Impact on other states of FSM and other PICs. C/P of this Project in other states of FSM and Palau visited Yap for attending the Landfill Management Training and C/P in Chuuk for Study Visit on landfill. The case of Yap could be referred to in landfill construction and management in other states and countries.
- Negative impacts: not observed.

(5) Sustainability

Evaluation: Sustainability of effects of this Project is between high and medium.

1) Policy and institutional aspects
While the current SSMWS is waiting to be endorsed, the government supports it. EPA plans to start preparation of the next SSWMS (2018-) in late 2015 or early 2016.

2) Organizational aspects
At EPA, the number of officials in charge of SWM is not sufficient (it is expecting to recruit one person in next fiscal year). The organization of DPW&T in terms of SWM was strengthened as mentioned above.

3) Financial aspects
No serious problems are observed: both EPA and DPW&T secure budget necessary for continuing the activities that they currently carry out. However, there is a concern in long-term financial sustainability considering the termination of the current Compact Trust Fund in 2023 and the uncertainty of other donor

	funding.
4)	Technical aspects No serious problems are observed in technical skills of both EPA and DPW&T in continuing the activities that they currently carry out. However, DPW&T is not fully confident in data collection and analysis yet.
5)	Others （if any）

IV Conclusion

Five Evaluation Criteria
In Yap State, Relevance, Efficiency, and Effectiveness for J-PRISM are all high.
To enhance Impact, dissemination of the FSM's Good Practice Report is helpful.
To ensure sustainability, long-term budget planning is essential. Preparing for the expiration of the US Compact, it is important to develop self-financial mechanism for waste management. Effective CDL system or Prepaid bag, compost business can be the solution. In addition, when EPA or DPW&T replace its personnel, good takeover is necessary for sustainability.

Achieved output and remaining issues
Most of all Output will be achieved by the end of the Project, while some parts remain which need assistance by the Japanese Government.

Output 5-1Capacity to prepare the State Solid Waste Management Strategy of Yap State and Action Plan is developed
SSWMS with Action plan is completed and under implementation. Now C/Ps can monitor the Action Plan by themselves. They are also supposed to be able to establish new SSMWS after 2017 basically by them, while limited advice of JICA expert or Senior Volunteer may be helpful.

Output 5-2: Capacity to improve and manage the final disposal site is enhanced
New final landfill is now under operation and maintenance (O/M) in line with the basic O/M guidelines, which was developed though J-PRISM.
As the next step, EPA and DPW&T are planning to develop some more detailed O/M manuals. Assistance of JICA expert or Senior Volunteer is required to develop and implement the detailed O/M manuals.

Output 5-3: Capacity to conduct awareness activities for SWM is raised
Awareness program has been started for schools through J-PRISM.
As next step, to expand the target and increase contents of the program, assistance of JICA expert or JOCV is required.

Conclusion on the course of implementation of the Project
Based on the above-mentioned findings and evaluation, the evaluation team considers it appropriate that this Project be completed as planned.

Other Issues on waste management for which Japanese assistance is required

1. Improve Waste Collection
Public service for waste collection is limited to Colonia.
Although expansion of the collection service is described as an action plan in the SSWMS, there is no significant progress this moment.
EPA and DPW&T are planning to install collection stations and vehicle and hold workshop to expand the collection area. Then, technical support by JICA expert might be helpful.

2. 3R+Return
-EPA and DPW&T are planning to install equipment to establish compost. JICA's assistance may be helpful.
-Although 4R enhancement is described in the action plan of SSWMS, activities are limited to recycling. With technical assistance of JICA expert, activities for all "R"s should be identified and implemented. Also, generation of revenues from recycling should be sought.
-For management of waste oil and other toxic waste, EPA and DPW&T require assistance. Some of assistances have been undertaken through SPREP project. JICA needs to discuss with SPREP to confirm if JICA needs to assist any parts.

Attachment 6-4: Yap

Scope of Post J-PRISM project
Capacity Building for;
- Increase awareness of overall solid waste management targeting students and youth
- Ensure sustainability and improve management of 4R concept
- Improve and expand waste collection systems throughout the state
- Maintenance and operation of the new landfill site
- Develop new SWMS and its implementation

V Recommendations for the remaining period

For EPA and DPW&T:
-Implement Action Plan Monitoring in January 2016 by themselves.
- When personnel are changed, Complete takeover and clarify role of each personnel for waste management
- Keep urging the state government to endorse the SSWMS.

For DPW&T:
- For the coming 3 heavy equipment through Japanese Grant, establish maintenance plan including procurement of spare-parts and keep maintain so that never break.

For Experts in J-PRISM HQ:
-Disseminate FSM's good practice report to other countries. Also please share other countries' good practice with FSM.

For JICA Experts for Yap:
-In accordance with PO/PDM, make common understandings of remaining activities with C/Ps for closure project

Terminal Evaluation Report for the Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Republic of Kiribati

Date: 31, Aug. 2015

I. Project Outline and Evaluation Policy

(1) Project Outline	
Background	As a small island nation in the south pacific region, Kiribati has very limited landmass and approximately 40% of total population lives in South Tarawa and Betio Town. According to the Environment and Conservation Division (ECD), Ministry of Environment, Lands and Agriculture Development (MELAD), one of the priorities in these area is to reduce the green waste which accounts for about 70% of wastes disposed at the landfill. The green waste has pushed up the total volume of waste collection, thus it has largely taken up the landfill capacity. For the waste collection, the situation has gradually been improving with the assistance of external partners. In terms of reduction of green waste disposal, it is urgently needed to introduce its proper disposal, such as making chips, firewood and compost.
Summary of the Project	(See Attachment 1 and 2 for details)
-Overall Goal	Sustainable management of solid waste in the Pacific Region is enhanced
-Project Purpose	Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)
-Priorities in RS2010	**Outputs**
3R/4R	1) Household waste, especially organic waste is minimized through establishment and promotion of compost.
Awareness/ Communication/ Education	2) Community awareness on solid waste is improved.
Project Duration	Five years from 2 February 2011 to1 February 2016
Implementing Agency	Environment and Conservation Division(ECD)* under the Ministry of Environment, Lands and Agriculture Development (MELAD), Agriculture and Livestock Division (ALD, MELAD), Betio Town Council (BTC), Teinainao Urban Council (TUC) Note: ECD is responsible for coordinating and implementation of national project activities.
Collaborating Agency	Taiwan Technical Commission, NZAID
Target Group	Officers of ECD/MELAD, BTC and TUC
Target Area/ Target Population	Betio Town 15,755, Teinainao Urban Town4,171 Citizens of Kiribati : 103,942 (census by Ministry of Finance & Economic Development, 2010)
(2) Evaluation Policy	
General Objectives	1) To verify the accomplishments of the Project compared to those planned; 2) To identify promoting and/or inhibiting factors that have affected the project implementation process; 3) To analyze the Project in terms of the five evaluation criteria (i.e. Relevance, Effectiveness, Efficiency, Impact, and Sustainability); 4) To discuss the results of evaluation and solutions for any problems that may arise through the evaluation together with the personnel concerned with the Project and make necessary suggestions; and 5) To draw lessons that can be applied to similar projects.
Member of Terminal Evaluation Team	

	Title	Name	Position/Organization
	Cooperation Planning (Overall)	Mr. Toru Taguchi	Assistant Director, Environmental Management Division 1, Global

				Environment Department., JICA
	*	Cooperation Planning (Kiribati)	Mr. Hideki Sawada	Assistant Resident Representative, JICA Fiji Office
	*	Evaluation Analysis	Mr. Atau Kishinami	Permanent Expert, International Development Associates, Ltd.

Note: Members participating in the evaluation study in the country

Period of Evaluation Study in the Country	5 days from 27 to 31 August 2015 (See Attachment 3 for details)
Methodology	JICA Terminal Evaluation Team collected the information through document analysis, questionnaire survey and interviews with the officers concerned with the Project, JICA experts and collaborating agencies. Based on the results of the evaluation, the Team prepared a draft report and finalized it through discussions with the personnel concerned with the Project.
Limitation	Some of main counterparts were not available at the time of the Terminal Evaluation. Due to the time constraint, no site visits were conducted.

II. Accomplishment and Implementation Process of the Project

(1) Inputs (as of June 2015)

<Japanese Side>	**<Kiribati Side>**
(See attachment 4) 1) Dispatch of JICA Experts : 4 experts (11.5 M/M) - 1 Short-term Expert (10.9 M/M) - 3 Long-term Experts from Project Office (0.6 MM) 2) Training in Japan: None 3) Provision of equipment: AUD1,500 plus FJD93,542 (US$50,684) - 1 Mobile Shredder, 2 Chainsaw - 1 set of desk top computer(BTC) 4) Local cost support: US$42,689 - Cost for equipment and supplies, etc.	(See attachment 5) 1) Assignment of National Project Director (PD), Project Manager (PM) and C/Ps: 7 persons. (at the time of terminal evaluation) - 1 Management C/P : 1 from ECD/ MELAD (PM) - 6 Technical C/P: 2 from MELAD, 2 from TUC, 2 from BTC 2) Local cost sharing: AUD4,608 (US$3,362) - Cost for others, etc. 3) Land, facilities - Necessary workspace for JICA experts at ECD

(2) Outputs:

Output 1: Household waste, especially green waste is recycled through waste separation and chipping.	Degree of Achievement[1]: Partly achieved.
Indicator	**Results**
1.1 5% of households (of South Tarawa) using compost.	Prior to the technical cooperation by J-PRISM, the compost making had been introduced to households by the Taiwan Technical Mission (TTM) for the first time. But it was not successful. With these learnings in mind, the project carried out the compost making for households on a trial bases for three selected sites in order to explore the effective approach. The project identified that it would take much time for making compost out of fallen leaves and branches available in Kiribati. Moreover, it was less likely that the compost making would be widely accepted by the community where many of them had engaged in fishing. Therefore, the project explored the alternative ways for green waste recycling, such as wooden chips and firewood by shredder operation and by using chainsaw. [Note on appropriateness of this Indicator] As explained above, the project shifted from compost making to other alternative measure.

[1] *Degree of achievement for each output/Project Purpose is judged based on the achievement level of indicators set for each Output/Project Purpose. Ratings used for this judgment are four levels, such as "Fully achieved", "Mostly achieved", "Partly achieved", "Not achieved".*

There are some compost made at BTC, but most of them have been self-consumed at nursery of BTC. Therefore, the Output 1 is examined by the indicator 1-2 not using the set indicator *"5% of households (of South Tarawa) using compost"*

1.2 The amount of green waste for recycling (compost, firewood, etc.) is increased at Betio landfill site. (5% of recycling rate)

The Project explored the effective measure to recycle green waste and BTC started making chips to be used for balk of the field through shredder operation. BTC also started making firewood out of fallen trees by using the chainsaw provided by the Project. The amount of green waste for recycling has been increased as shown in the table 1 below.

Table 1: Amount of green waste recycled at Betio landfill site (as of July 2015)

Year	Period	# of months	CHIP (kg)	Sale in AUD	Firewood (kg)	Sale in AUD	Total (kg)	Total Sale in AUD
2012	Sep-Jan.2013	5	1,830	0	0	0	1,830	0
2013	Feb-Dec.	11	4,610	0	0	0	4,610	0
2014	Jan. - Dec.	12	3,508	226	7,016	64	10,524	290
2015	Jan.-Jul.	7	3,700	124	4,855	264	8,555	388
Total	Sep.2012 to Jul.2015		13,648	350	11,871	328	25,519	678

Source: Project Report
Note: Green waste recycle started from Sep. 2012 when Shredder was first used at Betio landfill site

The percentage of recycled amount out of total green waste, the recycle rate[2] of green waste at Betio landfill site are shown below.

Recycle rate of green waste for 2014 10.5 ton /1,491ton = 0.7%
for 2015 8.555ton/1,491ton= 0.57% (as of July 2015, annual rate: 1.0%)

Measures for recycling green waste are explained in the table 2 below.

Table 2: Measures taken to recycle green waste

	Recycled products	How to make	For use
1	Wooden chips	Shredder the green waste to small pieces	To sell compost makers, or to donate TTM, churches, schools and farmers for making compost or for mulching
2	Firewood	Cut the fallen trees by chainsaw	To sell community people as fuel for the use of barbecue held for the special occasions, such as weddings.
3	Compost	Shredder the green waste to the small piece and put together with chicken manure	To self-consume as compost for the nursery at BTC (it is plan to increase the production of compost to cope with the demand of nursery)

Source :Project report and hearings from J-PRISM expert

As a result, the amount of green waste recycles has been steadily increased in 2014 and 2015. However, the target recycle rate of 5.0% has not been met by now. And it is less likely to be achieved by the end of the Project.
This indicator is partly achieved.

Supplemental Information (Establishing the financial system of green waste

In Feb. 2015, the independent accounting system has been established for the green waste recycling at BTC with the initiative of CEO. What is earned through selling wood chips and firewood and rental fee of equipment have

[2]Calculation of recycle rate: Parameter (Total amount of waste) is from baseline study conducted by NZAID in 2009 with no adjustment of population growth. According to the study, the total amount of waste at BTC is 2,016 ton in which 74% of these waste is estimated as green waste. Proportion of waste out of total is also from baseline study by NZAID. The amount of recycled out of green waste is 10.5 ton for 2014 (12 months period) and 8.6 ton for 2015 (only 7 months from Jan. to Jul.)

recycling)	used for the fuel cost of operation of shredder and chainsaw as well as chicken manure to make compost. As of the end of July, the balance of independent account exceeds AUD$ 500. BTC may consider to purchases another chainsaw.

In light of the above, Output 1 has been partly achieved.
Having explored the effective measures for green waste recycling, the project has now identified making wooden chips, firewood as more appropriate for the needs of Kiribati. With the independent accounting system in place at BTC, it is expected that green waste recycling activities will be further promoted and the independent accounting system will be introduced to TUC as well.

Output 2: Community awareness on solid waste is improved through Clean School Program.	Degree of Achievement: Mostly Achieved.

Indicator	Results
2.1 Seven schools of South Tarawa are implementing the Clean School Program.	The Clean School Program (CSP) was introduced to Kiribati in Sep. 2012 when the Teacher's Workshop was held with the support from the Fiji C/P as a trainer. Since then, the project have carried out the program attended by primary schools as shown below.

Table 3: Records of Clean School Program

Year	2013	2014	2015	Total
Submitted AP	5	4	6	15
Implemented CSP	4	4	5*	13
Completed CSP	4	2	On going	6
Name of Primary Schools completed CSP	-Temwanoku -Aratokotoko -War Memorial Bareaumai -St John Bosco	-Temwanoku -Tebanimaneka	-Temwanoku -Tebanimaneka -St John Bosco -Abaunamoub -War Memorial Bareaumai	

Source: Project report and hearings from J-PRISM expert
Note: According to C/P of TUC, another school will implement CSP in August 2015.

After the completion of the program, ECD conducted the final judging for the achievement of schools. Some good practices and comments were shared among participants of judging. In Jan, 2014 and 2015, the project held the meeting to share the good practices, with teachers of other schools. Good practice of waste separation and gardening reusing pandanus and recyclables was shared in 2014 at Aratokottotko primary school who won the program of the previous year. In 2015, good practice of compost making was shared at Tebanimaneka primary school.

[Note on interpretation of this Indicator]
In order to improve community awareness on solid waste through CSP, it is expected that schools participating in CSP need to complete the program. Therefore, this indicator can be interpreted as *"Seven schools of South Tarawa have completed the Clean School Program."*

At the time of terminal evaluation, six (6) schools completed the program, and it is expected that the number will increase by the end of the project.
The indicator with this interpretation has been mostly achieved.

(Supplemental information) School monitoring to support the CSP implementation	In CSP, two kinds of activities, "Waste Separation &Storage of organic waste (fallen leaves)", "Compost making including regular turnover", are carried out. It was planned that schools' activities were supported by C/P of ECD through school monitoring.

Table 4 :School Monitoring

	Target Primary schools	Monitoring Plan	Monitoring Actual	Remarks
BTC	Temwanoku St. John Bosco	2 /month	2 /month	Started Jun.2015
TUC	Tebanimaneka Abaunamoub	2/month	1/month On average	Started Mar.2015
ECD	War Memorial Bareaumai	1/month	1/month monitoring sheet mot submitted	Started July 2015

Source: Project report and hearing from J-PRISM experts and C/Ps

However, up to 2014, the school monitoring has rarely been conducted partly due to the insufficient manpower of ECD. In 2015, the project has decided to conduct school monitoring by combined effort of BTC, TUC and ECD. It is expected that each school will be visited by C/P twice a month and will receive advices if needed.

CSP has been carried out mostly as planned and awareness on solid waste has been steadily progressed in schools. Monitoring are conducted mainly in 3 components, i) environment awareness, ii) compost from organic waste, and iii) waste separation and recycling. With the periodical monitoring and proper advices by C/Ps, their awareness on solid waste through CSP will be further improved. In light of the above, Output 2 has been mostly achieved.

(3) Project Purpose

Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	Degree of Achievement: Partly achieved.

Indicator	Results
1. 2 of experts (trainers) in the two (2) field listed in the SPREP inventory[3]	The capacity of C/P on solid waste has not been progressed as planned. Although knowledge and skills of individual C/P has been increased through attending regional trainings and Group and Region-focused Training in Japan. However, not all of those C/Ps have utilized acquired Knowledge and skills at work due to the internal transfer, sick leave and long-leave for oversea education. No C/P has worked as trainers, thus not listed in the PIDOC at the time of terminal evaluation.
(Supplemental Information) Training experience through NZAID project	One C/P at TUC has acquired the skills as a trainer in the field of landfill management through training program assisted by NZAID. He has presented current situation of TUC at the Solid Waste Management Committee and conducted training courses on landfill for trainees from Marshal Islands.
2. Volume of disposal waste at landfill sites is reduced by 5%.	Green waste recycling at BTC and TUC(just started in 2015) has somewhat contributed to the reduction of disposal waste volume at landfill sites. However, the target recycle rate of 5.0% has not been met by now as shown in below. And it is less likely to be achieved by the end of the Project. This indicator is partly achieved. The percentage of reduction for disposal waste at landfill sites(South Tarawa) is 0.15% for 2014 and 0.21%for 2015 (up to July) Table 5: Reduction of disposal waste | | Total volume of disposal (both BTC/TUC) | Green waste recycling at BTC/TUC* | Percentage of reduction | | 2014 | 6,869 ton | 10.5 ton | 0.15% | | 2015 | 4,000 ton* | 8.6 ton | 0.21% (as of July) | Source: Document prepared by and hearings from J-PRISM expert Note: Total volume of disposal waste for 2015 is based on 2014 data adjusted for 7 months. Green waste recycling has been recently started at TUC and not has generated the substantial results.

The capacity of C/P on solid waste has been progressed to some extent but not as planned. Although green waste recycling at BTC and TUC has somewhat contributed to the reduction of disposal waste volume at landfill sites, target recycle rate of 5.0% has not been met by now and it is less likely to be achieved by the end of the Project.
In light of the above, the Project Purpose has been partly achieved.

[3] *This indicator was not used as a direct measure of the Project Purpose for the following reasons;(i) While PIDOC, the existing database, is an inventory of SPREP, the persons listed are trainers certified by J-PRISM but not considered as officially certified trainers by SPREP, (ii) the target values are not valid as they had been determined before the introduction of PIDOC (thus not consistent with the number of trainers listed in it.)Accordingly, the degree of achievement of the Project Purpose was judged in a comprehensive manner with the other indicators and supplementary information (where necessary), while referring to this indicator as reference information.*

(4) Implementation Process

・Progress of Activities :
Frequent change and absence of C/Ps have affected the progress of project activities.

・Method of Technical Transfer :
Although it is inevitable with the limited number of human resources who have multiple responsibilities, the temporary absences or turnover of C/Ps have made the technical transfer somewhat difficult.

・Implementation System :
Relevant activities have been carried out by two councils. However, monitoring of activities based on PDM /PO has not been effectively carried out due mainly to time constraint of staff of BTC, TUC as well as ECD and also to unclear monitoring process and jurisdictions. Staff of ECD expressed that monitoring activities should be incorporated in their routine work and it is expected that regular monitoring will be conducted.

・Project Management :
Joint Coordination Committee (JCC) was held four (4) times and 5th JCC will be held in November 2015. Besides the implementing agencies, collaborating donors such as TTM and NZAID regularly attend the JCC to share the progress of their project activities and possible collaboration. As a leading agency in the field of environment, ECD proposed BTC and TUC to organize Solid Waste Management Committee. According to the proposal, both councils established the committee, which is an important venue to exchange views. However, it has been difficult for ECD to fully manage this committee partly due to the insufficient budget and number of staff.

・Communication within the Project :
Communication between the J-PRISM expert and BTC/TUC has been smooth.

・Collaboration with Local Stakeholders :
None

・Participation in Region-Wide Activities of J-PRISM

#	Title	Type of activity	No. of C/P attended
1	Clean Pacific 2012 Campaign	Regional Training	1
2	Clean School Program /Trainer Dispatch (Fiji-Kiribati 2012) participated by 26 teachers in Kiribati	Trainer Dispatch	
3	3R Regional Training Fiji, 2012	Regional Training	1
4	High-Level Fourth Regional 3R Forum in Asia (Ha Noi, Vietnam) 2013	International Conference, Forums and Academic Societies	1
5	High-Level Fourth Regional 3R Forum in Asia (Surabaya, Indonesia) 2014	International Conference, Forums and Academic Societies	2
6	Study Visit in Fiji from Kiribati, 2014	Study Visit	1

・Coordination with other Japanese and International Projects :

1) Holistic approach with other schemes of Japanese assistance

#	Scheme	Type of coordination
1	Group and Region-focused Training in Japan	2 C/Ps participated in Solid Waste Management by Local Government (Pacific Region) 2011, 1 C/P in same program in 2012 2 CPs participated in Enhancement of Solid Waste Management Capacity (Advance, Planning and Policy) in 2014 and 1 C/P in the same program in 2015

2) Collaboration with other donor

#	Donor	Type of coordination
1	NZAID/Urban Development Programme (UDP)	Information sharing in baseline survey as well as opinion survey Information sharing of the progress of each project at the meetings of both sides, to implement both projects effectively. Conduct school monitoring in collaboration by sharing the vehicles

2	Taiwan Technical Mission/Garden Project	Information sharing for the effective way of green waste recycling. Experiment of the sample compost prepared by the Project to be utilized as soil conditioner.

III. Results of Analysis from the Viewpoints of Five Evaluation Criteria

(1) Relevance

Evaluation: Relevance of the project is high.

This project has been highly relevant with Kiribati's development policy. The Ministry of Environment, Lands and Agriculture Development (MELAD) has identified waste management and pollution control as one of the core environmental issues in the Kiribati Development Plan (2012-15) and in the Kiribati Integrated Environment Policy. The project is consistent with the development needs to reduce the green waste by introducing the effective recycle by making chips and compost for the vegetable cultivation and firewood for fuel. The project is also consistent with the Japanese ODA Policy to improve the people's living standards and to deal with vulnerability to climate change impact, by improving the solid waste management and environmental protection especially in the area of Tarawa.

(2) Effectiveness

Evaluation: Effectiveness of the Project is relatively low.

1) Achievement of Project Purpose

Green/organic waste recycling has started to bear fruit in BTC and also in TUC which recently started the recycling. The target figure set up in the PDM seems to be too ambitious, it is likely that green/organic waste recycling would be improved based on the experience of BTC and TUC. Regarding the capacity development of C/Ps, frequent change and absence of C/Ps have affected the degree of achievement of the Project Purpose. It is necessary for C/Ps to stay with the same department/section of implementing agencies to implement the activities of J-PRISM.

2) Contribution of Outputs to Project Purpose

Two (2)Outputs, i) recycling of green waste through waste separation and chipping, and ii) improvement of community awareness on solid waste are necessary and sufficient components to achieve the Project Purpose.

3) Other promoting/inhibiting factors

・<u>Inhibiting factors</u>

Frequent change of C/Ps was a constraint to conduct technical transfer. In addition, absence of C/Ps because of illness, participation in conferences abroad somewhat delayed the activities. JICA's corporation framework was not well understood by ECD and this makes it difficult to smoothly start the project.

(3) Efficiency

Evaluation: Efficiency of the Project is relatively low.

1) Production of Outputs

Output 1 is partly achieved, as BTC started making chips through shredder operation and also started making firewood out of fallen trees by using a chainsaw provided by J-PRISM. As a result, the amount of green waste for recycling has been increased by 0.7% in 2014 and 0.57 % in 2015 (by July, annual rate: 1.0%). Output 2 is mostly achieved since six (6) schools have already implemented CSP. Monitoring activities are currently conducted by ECD, BTC and TUC. The activities only started in 2015 and should be continued to raise awareness at schools.

2) Appropriateness of Inputs

・<u>Kiribati side</u>

C/Ps were assigned as planned though frequent change and absence of C/Ps hindered efficient technical transfer.

・Japanese side
Inputs of Japanese side were appropriate in terms of quantity, quality and timing. Besides practical training by experts, equipment including shredder and chainsaw contributed to technical and financial improvement of BTC.

3) Utilization of external resources

The Project collaborated with NZAID by sharing information regarding baseline survey, opinion survey and progress of both projects. In addition, both agencies have implemented CSP together. NZAID provided compost bins and gardening tools while J-PRISM provided technical advice teachers through C/P. Furthermore, J-PRISM shared information for the effective way of green waste recycling with TTM.

4) Other promoting/inhibiting factors

・Promoting factors
It is well noted that given the limited resources available in Kiribati, the demarcation and collaboration with NZAID and TTM have contributed to increase the efficiency.

・Inhibiting factors
Frequent change and absence of C/Ps has negatively affected the efficiency of the project.

(4) Impact

Evaluation: Positive impacts were observed and no negative impact was observed.

1) Impact at Overall Goal level

Overall Goal is "Sustainable management of solid waste in the Pacific Region is enhanced" and in order to measure the degree of achievement, one (1) indicator is set in the PDM, which is "80% of household engaged in the green waste recycling" Considering the current achievement at the Output and the Project Purpose levels, it is unlikely that Overall Goal will be achieved within a few years.

2) Other impacts

・Positive impacts
Awareness regarding solid waste management for school teachers and students is not confined only at schools. An officer of ECD pointed out that parents are getting aware of the issue through their children.

・Negative impacts
Negative impacts are not observed.

(5) Sustainability

Evaluation: Sustainability of the effects of this Project is likely to be secured by continuous efforts of councils under the leadership of ECD.

1) Policy and institutional aspects

Pollution and waste is also recognized as an environmental issue under the key policy area in Kiribati Development Plan (2012 – 2015). It is expected that the government of Kiribati continuously puts the priority on the solid waste management, and on the implementation of national waste management strategy.

2) Organizational aspects

The project has mainly implemented by ECD, BTC and TUC.

In terms of green waste recycling, activities have mainly been implemented by two councils. In order to sustain and further promote the activities, the involvement of Urban Management Unit* of the Ministry of Internal Affairs (MIA) is needed. According to the urban management officer, MIA would work to enhance capacities of councils. An urban management officer attends Solid Waste Management Committee of both BTC and TUC,

thus he/she is expected to promote the information sharing on effective green waste recycling between BTC and TUC. It is also pointed out that MIA would be a responsible agency of Green Bag Collection Service assisted by NZAID and the urban management officer would be assigned to take an initiative in promoting the service.

[Note: Urban Management Unit]
The Urban Management Unit was newly established under MIA in 2015 to improve overall situations of the urban council, including solid waste management. Its mandates include the expansion of good practices such as green waste recycling as well as introduction of independent accounting system of BTC to other councils.

In terms of Clean School Program, all of ECD, BTC and TUC have carried out activities together.
In order to sustain the activities, the collaboration with NZAID is needed. NZAID has been involved in school activities mainly by providing compost bins and gardening tools for schools and it is considering to conduct school activities together with a waste minimization officer employed for its own project for ECD.

3) Financial aspects

BTC has introduced the independent accounting system in terms of solid management and well understand the advantage of the system. What is earned through selling wood chips and firewood and rental fee of equipment have used for the fuel cost of operation of shredder and chainsaw as well as chicken manure to make compost.

Besides the independent accounting system, BTC has gained financial benefit by leasing its equipment such as a shredder and chainsaws to other councils. An urban management officer of MIA has been discussing the introduction of the independent accounting system with TUC. ECD and MOE well understand the importance of CSP and it is expected that both ECD and MOE secure the necessary budget for CSP activities.

4) Technical aspects

As mentioned above, frequent change and absence of C/Ps have affected the project. Among the implementing agencies, BTC has made an effort to systematically maintain knowledge and skills through J-PRISM activities within the institution.

The outcome of J-PRISM activities will be reflected into the official curriculum of environmental science and healthy living as well as extra curricula activity in order to localize the topics. It is expected that materials on garbage separation for the 3rd and 4th grades and practical composting for the 5th and 6th grades are to be incorporated into the curriculum. Modification of Teachers Guide of “environmental science” and People’s Book are under discussion between MOE and the J-PRISM expert.

Regarding the equipment provided by the Japanese side, a shredder and chainsaw are frequently used and some parts are almost worn out. After the mid-term review, C/Ps started to pay attention to the maintenance of equipment by greasing them more often. According to BTC, equipment can be repaired locally with imported parts from abroad.

5) Others
Awareness regarding solid waste management has been steadily raised.

IV. Conclusion

Five Evaluation Criteria

Relevance is still high, as there is an increasing demand for waste management and pollution control as one of the core environmental issues. Effectiveness is evaluated relatively low since the Project Purpose is partly achieved with low reduction of disposal waste volume at landfill sites. Efficiency is also considered to be relatively low due to the frequent change and absence of C/Ps. To enhance impact, as well as to ensure sustainability, it is essential to continue and expand the green waste recycling and community awareness activities by joint collaboration among all stakeholders, including MELAD (ECD), MIA, MOE, BTC, TUC, donors, communities, etc.

V. Recommendations for the remaining period

For ECD/MELAD

Securing of Budget

It is desirable that ECD/MELAD secure the budget to monitor and supervise the related activities.

For BTC, TUC and JICA experts

Continuation of Activities

BTC and TUC should continue activities implemented through J-PRISM, such as chipping, sale of fire wood and CSP, under collaboration with respective governmental organizations and other donor partners.

Continuation of Waste Minimization

Frequent change and absence of C/Ps have affected the degree of achievement of the Project Purpose. It is necessary to specify the waste minimization in the TOR.

For BTC

Strengthening of Financial Status

Besides the independent accounting system, BTC has gained financial benefit by leasing its equipment such as a shredder and chainsaw. It is recommended that BTC further strengthen its financial status, for instance, by purchasing replacement of equipment, e.g. chainsaw and shredder.

For TUC

Strengthening of Financial Status

It is recommended that TUC examine the independent accounting system that is successfully implemented in BTC and carefully consider introducing the system.

For MIA

Continuation of Activities Establishment of Expansion Plan

As mentioned above, one of the responsibilities of Urban Management Unit is to assure the continuation of BTC and TUC practices such as waste minimization introduction of independent accounting system and also to expand good practices among councils. It is recommended that MIA establish the expansion plan and , such as green waste recycling, etc and secure budget to implement for t such plan. It is necessary to request budget in a timely manner.

Attachment:

1. Project Design Matrix (PDM Version 3)
2. Plan of Operation (PO Version 4)
3. Schedule of Terminal Evaluation
4. Record of Japanese Inputs
   - 4-1 Dispatch of Experts
   - 4-2 Training in Japan
   - 4-3 List of Machinery and Equipment provided by Japan
   - 4-4 Local cost
5. Record of Kiribati Inputs
   - 5-1 List of Counterpart personnel
   - 5-2 Local cost

PDM: Version 3

Project Title: Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)					**Recommended at MTR as of Sep. 4, 2013**
Target Group : C/Ps of Ministry of Environment, Lands and Agriculture Development (MELAD), Betio Town Council, Teinainano Urban Council			Final Beneficiaries: Citizens of Kiribati		Project period: Feb, 2011 - Feb, 2015 (5 years)
Implementing Agency: C/Ps of Ministry of Environment, Lands and Agriculture Development (MELAD), Betio Town Council, Teinainano Urban Council			Target Area: The Republic of Kiribati (South Tarawa)		Date issued: 10th February., 2015
Narrative Summary			**Objectively Verifiable Indicators**	**Means of Verifications**	**Important Assumptions**
Overall Goal					
Sustainable management of solid waste in the Pacific Region is enhanced.			1.80% of household engaged in the green waste recycling	Household survey	
Project Purpose					1. Natural disaster would not drastically affect the collaboration among PICs and SPREP. 2. Political changes of PICs would not drastically affect the collaboration among PICs and SPREP.
Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)			1. 2 of experts (Trainers) in the field of 2 listed in the SPREP inventory	SPREP (Regional inventory of skilled people)	
			2. Volume of disposal waste at Landfill sites is reduced by 5%	Waste Audit (baseline survey)	
#	**Priorities under RS2010**	**Outputs**			
1	Sustainable Financing				
2-1	3Rs/4Rs	**Output1:** Household waste, especially green waste is recycled through waste separation and chipping.	1-1 5% of households (of South Tarawa) using compost 1-2 The amount of green waste for recycling (compost, firewood, etc.) is increased at Betio landfill site. (5% of recycling rate)	1-1 Household Survey 1-2 Monitoring Report at the Betio Landfill	
2-2	Waste Disposal				
2-3	Waste Collection				
3	Legislation				
4	Awareness/Communication /Education	**Output 2:** Community awareness on solid waste is improved through Clean School Program.	2-1 Seven schools of South Tarawa are implementing the Clean School Program	2-1 Household Survey 2-2 Bi-annual Monitoring Report/Meeting	
5	Capacity Building				
6	Environmental Monitoring				
7	Policy,Planning, Performance				
8	Solid Waste Industry				
*	Monitoring system of RS2010				
Activities			**Inputs**		
		Please see PO for details.	Japanese Side	Kiribati side	1.Counterpart personnel keep working in the field of SWM. 2. Disasters, such storms will not drastically affect the progress of project activities. 3. Necessary budget to carry out activities is allocated from the government.
			Dispatch of JICA experts	Assignment of National PD/PM and CPs Local Costs Sharing Provision of necessary land/facility, work space	
			Provision of equipment and materials Provision of Regional, sub-regional and in-country workshops / training Shuredder for organic wastes		
			Local cost support		**Pre-condition**
					Cooperation of community people of the target area is obtained.

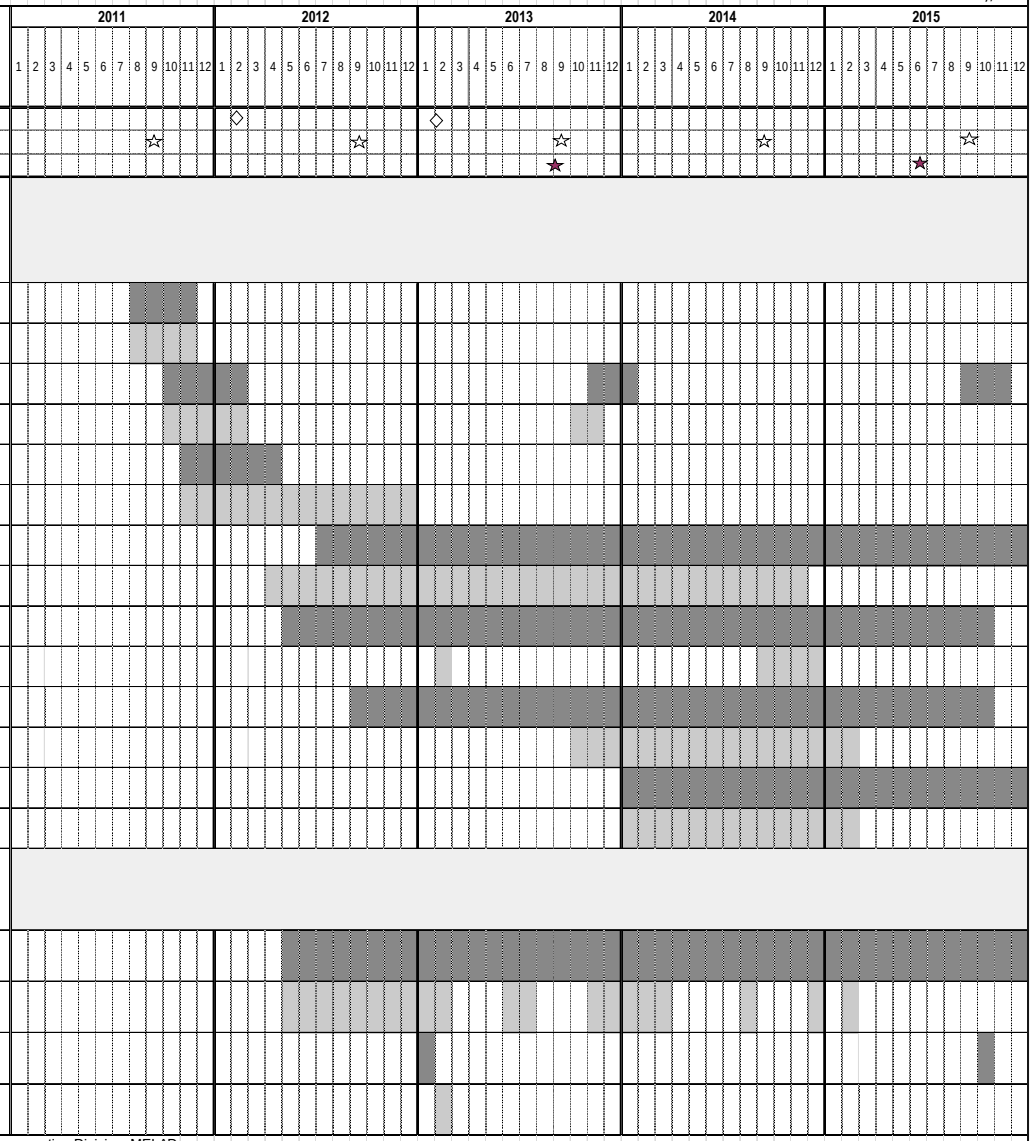
Term: 2011 ～ 2015 (5years)

Indicators of Project Purpose: Volume of disposal waste (especially organic waste) is reduced by 5%

Version 4

Date issued: 10th of February, 2015

	Outputs and Associated Activities	Indicators for Outputs	Organization in-charge	
JCC/SC/Eva	JCC ◇			
	Steering Committee ☆			
	Evaluation Studies ★			
OUTPUT 1:	**Household waste, especially green waste is recycled through waste separation and chipping (recycling of organic waste)**	1-1 5% of households (of South Tarawa) using compost 1-2 The amount of green waste for recycling (compost, firewood, etc.) is increased at Betio landfill site. (5% of recycling rate)		
1-1	Development of a work plan for the baseline survey		ECD	Plan
				Actual
1-2	Conducting of baseline surveys		ECD	Plan
				Actual
1-3	Conducting trial of home composting using compost bins		BTC	Plan
				Actual
1-4	Making compost at BTC from green waste		BTC	Plan
				Actual
1-5	Conduction public education and environment awareness program on the importance of waste minimization and waste separation		BTC, TUC, ECD (MPA), ALD	Plan
				Actual
1-6	Promoting the use of wood chips and fire woods		BTC, TUC, ALD	Plan
				Actual
1-7	Establishing financial system for shredder operation at BTC		BTC	Plan
				Actual
OUTPUT2:	**Community awareness on solid waste is improved through Clean School Program.**	2-1 seven schools of South Tarawa is implementing the Clean School Program.		
2-1	promoting 3R related activities at schools through Clean School Program		ECD (MPA), TUC, BTC	Plan
				Actual
2-2	Conducting of workshop to disseminate the lessons and experiences learnt		ECD (MPA)	Plan
				Actual



* ECD: Environment and Conservation Division, MELAD
BTC: Betio Town Council
TUC: Teinainao Urban Council

JICA Terminal Evaluation for
The Japanese Technical Cooperation Project
for Promotion of Regional Initiative
on Solid Waste Management in Pacific Island Countries (J-PRISM)

Field Survey Schedule (KIRIBATI)

Date		Schedule	Stay
27 Aug	Thurs.	11:00 Arrival at Tarawa (FJ231) 14:00 Curtesy Call to ECD/MELAD Ms. Taouea Reiher, Acting Director of ECD Ms. Robite Teaete, Media &Public Awareness Officer 14:30 Courtesy Call to MELAD Mr.Tiimi Kaiekieki., Secretary of MELAD Ms.Robite Teaete, Media &Public Awareness Officer 15:15 Meeting with TUC (Interview with CP) Ms. Tekotaake Teariki, Acting CEO of TUC 16:00 Meeting with NZAID Mr. Ross Craven, Urban Development Coordinator	South Tarawa
28 Aug	Fri.	9:00 Meeting with BTC (Interview with CP) Mr. Romano Reo, Mayor Mr. Teikarawa Amatia, Acting CEO Mr. Kaiea Toromon, Waste Supervisor 10:00 Meeting with MIA Ms. Eliza Tokataake, Urban Management Officer, Local government division 11:30 Interview with CP of ECD Ms. Robite Teaete, Media &Public Awareness Officer 14:30 Meeting with Ministry of Education(MOE) Ms. Lucy Kum-On, Policy Planning and Development Unit	South Tarawa
29 Aug.	Sat.	9:00 Meeting with TUC (Interview with CP) Mr. Harry Langley, Waste Supervisor 11:00 Courtesy Call to JOCV Office 14:00 Meeting with MOE Ms. Bibiana Bureimoa (Curriculum Development Resource Center)	South Tarawa
30 Aug.	Sun.	Finalize the Evaluation Report	South Tarawa
31 Aug.	Mon.	9:00 Report to MELAD Mr. Tiimi Kaiekieki., Secretary of MELAD Ms. Robite Teaete, Media &Public Awareness Officer 12:00 Leave for Nadi (FJ230)	

4-1. Dispatch of Experts

Long-term Expert from Project Office	Short-term Expert	Total
0.6 MM	10.9 MM	11.5 MM

4-2. Training in Japan

None

4-3. List of Machinery and Equipment provided by Japan

Utilization: A=Fully B=Moderatly, C=Partly, D= Not at all

Management: A=Appropriate B=Fair C=Innapropriate

When delivery	No.	Country	Item	Maker/Model etc.	Qty.	Price in local currency $	Currency	In US$*	Responsible Section/Organization	Utilization	Management
May, 2012	1	Kiribati	Mobile Shredder	GreenMech Arborist 15-23 (diesel)	1	FJD 92,692.14	Fiji Dollar (FJD)	49,124.98	Betio Town Council	A	B
May, 2012	2	Kiribati	Chainsaw	New STIHL Model MS390 Chainsaw	1				Betio Town Council	A	A
May, 2012	3	Kiribati	Tarpulin Sheet	New HD Tarpaulin Sheet (180 GSM) 7.2 m x 7.2 m	3				Betio Town Council	A	A
May, 2012	4	Kiribati	Tow Hook	-	1				Betio Town Council	D	A
Sep, 2014	5	Kiribati	Chainsaw	STIHL MS170, 14" bar	1	FJD 850.00		406.59	Teinainano Urban Council	A	A
Sep, 2014	6	Kiribati	Desk-top Computer	DELL Inspiron AIO 2020 (Windows 8)	1	AUD 1,500.00	Austrarian Dollar (AUD)	1,152.98	Betio Town Council	A	A
					Total	FJD 93,542.14		$50,684.54			
						AUD 1,500.00					
*(For Feb. 2011-July2013) Exchange rate from local currency to US Dollar refers to OANDA as of 1st August, 2013.						1FJD=	US$0.52998				
*(For Aug. 2013-June2015) Exchange rate from local currency to US Dollar refers to OANDA as of 1st July, 2015.						1FJD=	US$0.47834				
						1AUD=	US$0.76865				

4-4. Local Cost

Country	Travel Allowance	Contract		Fees and honorarium (non-staff)	Refreshments	Miscellaneous	Total			
		Contracts over 500,000 yen	Commission Contract (others)				In local currency	Local Currency	In Japanese Yen*1	In USD *2
Kiribati	120.00	11,568.90	0.00	6,551.40	1,220.20	25,179.48	44,639.98	Aus Dollar	¥4,187,872.64	US$42,689.83

Note 1) JICA's official rate – from local CCY to Japanese yen,
Note 2) Exchange rate from Japanese Yen (JPY) to US Dollar:
For JFY2010-July 2013: JICA's official rate of August 2013 (USD1=JPY98.10)
For Aug2013-June 2015: JICA's official rate of June 2015 (USD1=JPY123.96)

ANNEX 3(f) -Kiribati

5-1. List of Counterpart Personnel

#	Name	Management CPs	Assigned Period	Position	Organization	Activities in charge
1	Winki Tooma	National Project Director	Feb. 2011- ? 2012	Secretary	MELAD	
2	Manikaoti Timeon	National Project Director	? 2012 -	Secretary	MELAD	
3	Faren REDFERN	National Project Manager	Jan 2011 - Dec. 2011	Acting Director of ECD	ECD/MELAD	
4	Nenenteti Teariki	National Project Manager	Jan 2013 - Aug 2014	Director of ECD	ECD/MELAD	
5	Taoua Reiner	National Project Manager	Sep 2014 -	Acting Director of ECD	ECD/MELAD	

#	Name	Technical CPs (Outputs in charge)	Assigned Period	Position	Organization	Activities in charge
1	Bwereata		Jan 2011 - Dec.2011	Waste Management officer	MELAD	1-1, 1-2
2	Taulelia Puefou	Sick leave from July 2013 to Jan 2014	Jan 2012 -	Waste Management officer	MELAD	1-1, 1-2
3	Teema Biko mobile: 97070		Aug. 2013 -	Waste Management officer	MELAD	
4	Taati Era Sakamoto		Feb. 2011 - Mar. 2012	Media & Public Awareness Officer	MELAD	1-1,1-2,1-5,2-1,2-2,2-3
5	Robte Teaete		April 2012 -	Media & Public Awareness Officer	MELAD	1-1,1-2,1-5,2-1,2-2,2-3
6	Noketi Karoua		Feb. 2011-	Assistant PC officer	MELAD	1-1,1-2,1-5,
7	Eliza Tokataake		Feb. 2011- Dec 2012, Feb 2015 -	CE O(BTC) -> Urban Management Officer	Betio Town Council -> Ministry of Internal Affairs (MIA)	1-3,1-4,1-5,1-6,1-7
8	Bouataake Tengkam		Jan 2013 - May 2013	CEO	BTC	1-3,1-4,1-5,1-6,1-7
9	Rine Ueare		May. 2013- Dec. 2014	CEO	BTC	1-3,1-4,1-5,1-6,1-7
10	Teikarawa Amata		Aug. 2015 -	CEO	BTC	1-3,1-4,1-5,1-6,1-7
11	Felioa		Feb 2011 - Dec 2011	Acting CEO	Teinainano Urban Council	1-4,1-5,1-6,1-7,
12	Tekotaake Kearki		Jan 2013 -	Acting CEO	TUC	1-4,1-5,1-6,1-7,
13	Takena Redfern Vela		Jan 2013 -	ALD	MELAD	1-4,1-5,1-6,1-7
14	Sonica Tamw		Sep 2012 - Sep 2013	Development Officer	BTC	1-3,1-4,1-5,1-6,1-7
15	Bwaree Taorobwa		Oct 2013 - Mar 2015	Waste Supervisor	BTC	1-3,1-4,1-5,1-6,1-7
16	Kaea Toromon		Mar 2015 -	Waste Supervisor	BTC	1-3,1-4,1-5,1-6,1-7
17	Harry Langley		Jan 2013 -	Waste Supervisor	TUC	1-4,1-5,1-6,1-7

5-2. Local Cost

	1. Travel expenses (airfare, allowances,		2. Expenses for documenting		3. Purchasing goods/materials		4. Foods /Drinks		5. Others		Total	
	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD
Kiribati	200	146	150	109	208	152	0	0	4,050	2,955	4,608	3,362

ANNEX 3(g)-RMI

Terminal Evaluation Report for the Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Republic of the Marshall Islands

Date: September 11, 2015

I. Project Outline and Evaluation Policy

(1) Project Outline	
Background	People of Marshall Islands (RMI) rely on imported goods from overseas for their living and waste materials are accumulated into small islands. Due to its limited land areas, solid waste is dumped along the shoreline and into the sea, which has an adverse effect on public health of the people and environment of the surrounding area. It is an urgent matter to establish appropriate solid waste management system for atoll-islands, while it is necessary to reduce waste generation, promote environmental education and develop capacity of people who are responsible for those things above.
Summary of the Project	(See Attachment 1 and 2 for details)
-Overall Goal	Sustainable management of solid waste in the Pacific Region is enhanced
-Project Purpose	Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)
-Priorities in RS2010	**Outputs**
Policy, Planning, Performance	1) NSWMS is implemented.
3R/4Rs	2) Recycling system is improved in Majuro. 3) Composting system is improved in Majuro.
Awareness/ Communication/ Education	4) School-based recycle system is introduced in Majuro.
Waste Collection	5) Solid waste management system is improved in Ebeye.
Waste Disposal	
Capacity Building	
Project Duration	Five years from 2 February 2011 to 1 February 2016
Implementing Agency	Office of Environmental Planning and Policy Coordination (OEPPC) Ministry of Public Works (MPW) (Project Director) Majuro Atoll Waste Company (MAWC) (Project Manager) Environmental Protection Agency (EPA) Majuro Atoll Local Government (MALGov) Kwajalein Atoll Local Government (KALGov) Public School Service (PPS) (Former Ministry of Education (MOE) till 2015; Implementing Agency since February 2014-)
Collaborating Agency	Office of Chief Secretary (OCS) Marshall Islands Conservation Society (MICS) (Implementing Agency till February 2014) Ministry of Health (MOH) Office of Deputy Chief Secretary (DCS) of Kwajalein Atoll
Target Group	C/Ps of OEPPC, MPW, EPA, MAWC, MALGov, KALGov and MOE
Target Area/ Target Population	Marshall Island (Majuro and Ebeye) 39,205 (Census by Economic Policy, Planning and Statistics Office, 2011)
(2) Evaluation Policy	
Objectives	1) To verify the accomplishments of the Project compared to those planned; 2) To identify promoting and/or inhibiting factors that have affected the project implementation process; 3) To analyze the Project in terms of the five evaluation criteria (i.e. Relevance, Effectiveness, Efficiency, Impact, and Sustainability);

	4) To discuss the results of evaluation and solutions for problems that may be observed through the evaluation together with the personnel concerned with the Project and make necessary suggestions
Member of Terminal Evaluation Team	

	Title	Name	Position/Organization
	Cooperation Planning (Overall)	Toru TAGUCHI	Assistant Director, Environnemental Management Division I, Global Environnent. Department, JICA
*	Cooperation Planning (RMI)	Yoko ONUMA	Special Advisor, Environmental Management Team 1, Global Environment Department, JICA
*	Evaluation Analysis	Takako HARAGUCHI	Permanent Expert, International Development Associates, Ltd.

*Members participating in the evaluation study in the country

Period of Evaluation Study in the Country	5 days from 7 to 11 September 2015 （See Attachment 3 for details）
Methodology	JICA Terminal Evaluation Team collected the information through document analysis, questionnaire survey and interviews with the officers concerned with the Project and JICA experts, conducted field observation in major project sites. Based on the results of the evaluation, the Team prepared a draft report and finalized it through discussions with the personnel concerned with the Project.
Limitation	

II. Accomplishment and Implementation Process of the Project[1]

(1) Inputs (as of June 2015 unless otherwise mentioned)

<Japanese Side>	**<RMI Side>**
1) Dispatch of JICA Experts: 7 persons (11.3 M/M) - 3 Short-term Experts (9.5 M/M) - 4 Long-term Experts from Project Office (1.3 M/M) - 1 Local Expert from Project Office (0.5 M/M) (Cost of Local Expert is included in Local cost support) 2) Local cost support: approx. JPY3,794,000 (approx. USD34,000) - Cost for travel, workshops, etc.	1) Assignment of Project Director (PD), Project Manager (PM) and C/Ps: 10 persons. - 5 Management C/P (PD from MPW, PM from MAWC) - 12 Technical C/P (2 from OEPPC, 5 from EPA, 1 from MAWC, 2 from MOE, 2 from KALGov) 2) Land, facilities, workspace

(2) Outputs

Output 1: NSWMS is implemented. (OEPPC/MAWC)	Degree of achievement[2]: Partly achieved

Indicator	Results
1-1 NSWMS and Action plan of Majuro is finalized	Mostly achieved. In September 2014, OEPPC submitted the draft NSWMS (2014-2018) to Minister in Assistance to the President, but it has not been submitted to the cabinet for approval yet, in spite of repeated approaches by C/P and the JICA short-term expert, due to unknown reasons.
1-2 Implementation of Action plan is monitored and reviewed by the Monitoring Committee 3 times a year	Partly achieved. As NSWMS and the attached Action Plan have not been approved yet, there has not been an official Monitoring Committee yet, either. Nevertheless, the implementing agencies started implementing the draft Action Plan. In October 2014 and May 2015, the implementing agencies meetings (Counterpart Committee meetings) on monitoring were held. In the Plan of Operations (PO), Monitoring Committee consists of OEPPC (Chair), MPW, MAWC, EPA and MOE. As these agencies attended the above-mentioned

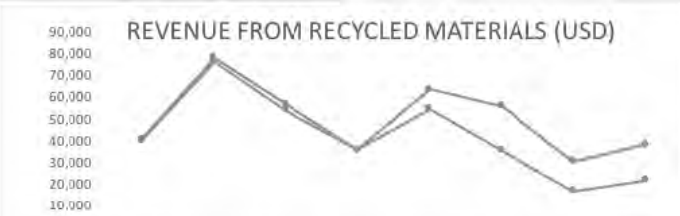
[1] *In the sections below, this Project is sometimes called J-PRISM depending on the context.*

[2] *Degree of achievement for each output/Project Purpose is judged based on the achievement level of indicators set for each Output/Project Purpose. Ratings used for this judgment are four levels, such as "Fully achieved", "Mostly achieved", "Partly achieved", "Not achieved."*

	Counterpart Committee meetings for monitoring, they can be regarded as Monitoring Committee meetings. However, C/P in Ebeye (KALGOv, EPA-Ebeye and MOE-Ebeye) are not included in the Committee.
1-3 Progress report is issued annually	Partly achieved. The presentation made by the C/P in for the monitoring in May 2015 can be regarded as a type of progress report, though it has not documented in a form of report.

Output 2: Recycling system is improved in Majuro. (MAWC/EPA/OEPPC)	Degree of achievement: Mostly Achieved; this Project indirectly contributed to achievement.

Indicator	Results
2-1 Recycle products is Increased year by year	Mostly achieved. MAWC started recycling with help of a SV in 2008, and the number of purchase (collection) of aluminum cans significantly increased after 2011, when a C/P attended the 3R training in Fiji under this Project and incorporated the topic of recycling in school visits in collaboration with EPA based on what he learned in the training. MAWC analyzes that this increase is due to, besides daily support by the SV, the enhanced visibility of the recycling program to the public, and the above-mentioned 3R training may have at least partly contributed to it: before the training, MAWC had not collaborated with EPA, and the topic in the school visits only included separation of waste. The number of cans dropped in FY2014 due to breakdown of the pressing machine in December 2013. The operation resumed in October 2014, but the machine does not function at its full capacity.  Source: Prepared by terminal evaluation team based on data from MAWC. While there was not much input from this Project in the second half of the project period except monitoring of the activities, MAWC has expanded its recycling activities. In 2015, it started sales of recycled products it makes from waste damped to its landfill such as paper briquettes, cooking ovens and fish flyers.
2-2 # of collected and exported materials are increasing year by year	Not achieved, but this indicator does not necessarily show improvement of recycling activity. Sales from exports from recycled materials (proxy indicator to the number of collected and exported materials, which were not readily available) fluctuates due to external factors (e.g. large volume of purchase by a foreign buyer at one time). The contribution of this Project cannot be clearly seen in available data except the one shown in 2-1 above.



	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15 Oct14-Aug15
Exported	39,632	76,124	53,455	35,238	54,020	34,705	16,258	20,993
Total	40,212	77,727	56,458	35,238	63,139	55,443	29,879	37,743

Source: Prepared by terminal evaluation team based on data from MAWC.

Output 3: Composting system is improved in Majuro. (MAWC/OEPPC)	Degree of achievement: Mostly Achieved; this Project indirectly contributed to achievement.

Indicator	Results
3-1 Volume of compost production are increased in Majuro	Mostly achieved. MAWC started composting with help of a SV in 2008, and the sales of compost (proxy indicator to the volume of production, which were not readily available) is in an increasing trend. Similar to recycling (Output 2), MAWC considers that the help of SV and the enhanced visibility of the composting program contributed to the increase. MAWC observes a significant change in public awareness: before 2011, the composting activity was mainly small-scale demonstration to reduce waste in the landfill. At present, it is one of MAWC's main activities involving communities. The sales dropped in FY2014 due to breakdown of the shredder in 2012-2013 (the sales did not suddenly drop as there were stockpiles).  Source: Prepared by terminal evaluation team based on data from MAWC. There was not much input from this Project in the second half of the project period except monitoring of the activities.

Output 4: School-based recycle system is introduced in Majuro. (EPA/MOE)	Degree of achievement: Mostly Achieved; this Project partly contributed to achievement especially in the initial stage of the Project implementation.

Indicator	Results
4-1 Manual/material of awareness raising is developed	Mostly achieved. Materials (video and booklet) were developed in 2012 by C/P of EPA, with help of MAWC and advice from the JICA short-term expert. However, the C/P who made these materials left EPA, and his successor no longer uses them, because hardcopy of the booklet was all distributed and there was no additional printing. The successor uses more physical materials such as reprocessed waste

	products, and plans to cooperate with MOE in developing another booklet. On the other hand, MAWC still uses the video. The last time MAWC used it was February 2015, when the C/P showed it at a high school and an elementary school he visited for awareness activity.
4-2 Campaign activities are conducted on a regular schedule	Mostly achieved, while the achievement is not directly related to J-PRISM (see "Supplementary Information" below). EPA has conducted campaigns such as segregation programs, cleanups, summer schools, My Folk Campaign, radio programs, etc., with help of SV assigned to MAWC and JOCV (MAWC also has its own radio program, too).
4-3 I-Recycle programs are implemented in over 80% of elementary schools in Majuro	Partly achieved. 'I-Recycle' has not been fully implemented in a sense that school-based collection of beverage cans has taken place in a few schools. Instead, the following activities have been conducted for schools: (i) MAWC have conducted awareness activities on 3R in schools as mentioned in 2-1 above; (ii) MAWC distributed recycling bins to some schools; (iii) EPA started school visits with MAWC in 2013. Initially, MAWC and EPA carry out the activity separately these days. MAWC explained that it is because their schedule does not match. (iv) EPA and PSS also started school based recycling programs in 2014 (introduction of recycling in the curriculum of elementary school; composting, etc.) An issue is that there is no systematic plan of implementation and coordination of awareness activities in both EPA and MAWC. [Note on the indicator] 'I-Recycle' is the name of a specific initiative of school-based recycling of aluminum beverage cans that started in Guam and was aimed to expand to Majuro. According to MAWC, this initiative was not fully implemented. Based on comments from EPA and MAWC, it is considered that this Project called school-based collection and sales of beverage cans 'I-Recycle'.
(Supplementary Information) Contribution of this Project	Before this Project, school-based awareness activities had been conducted by MAWC. Major product of this Project is limited to a baseline study (by short-term expert), technical advice on preparation of materials in 2012 (Output 4-1 by EPA and MAWC) and the teachers' workshop in 2013 by EPA, and a regional training in Fiji (a region-wide activity of J-PRISM), though only one of the trainee C/P remains at the time of terminal evaluation. Implementation of awareness activities has been assisted mostly by SVs and JOCVs, which led to increased involvement of EPA and cooperation with MAWC. Under such circumstances, it was agreed among the Project, JICA RMI, SV and JOCV in May 2013 that the activities for Outputs 2, 3 and 4 would be routine operations of each concerned agency, and the Project would only monitor the progress of such operations. Even so, some contributions of this Project was observed: involvement of the current C/P from EPA in educational activities in Ebeye (activities for Output 5) enhanced her understanding of and commitment in educational activities in Majuro.

Output 5: Solid waste management system is improved in Ebeye. (KALGov, EPA-Ebeye, MOE (PSS) -Ebeye)	Degree of achievement: Mostly achieved.

Indicator	Results
5-1 Plan for improvement of waste collection is drafted	Fully achieved. In November 2014, an improvement plan on collection including the fee collection mechanism was drafted by C/P with technical assistance from a JICA short-term expert. The plan has not been implemented yet because negotiations on acceptance of compactor trucks donated by the United States were prolonged between KALGov and the vendor due to specification mismatch. Meantime, a loader (provided under the Grassroots Grant Aid for the dumpsite) and a pick-up truck with an improvised trailer have collected waste. After negotiations, an agreement on acceptance of the vehicles was concluded in 3 September 2015, and the operation training and the first trial collection is scheduled in 17 September 2015. The detailed plan including time schedule is to be prepared after having findings from the trial operation. The full implementation of the new collection is to be commenced in 1 October (i.e. from FY2016). [New fee collection system] Since 2006, KALGov (Public Works division) has collected $40/dumpster/month from commercial waste producers, and $5/bin/month from households. Under the new system, bins (donated from the US together with the collection vehicles) will be provided to all households, and $10/bin/month will be collected from households by the utility company together with utility fees.
5-2 The burning in the open dumping decreased to 0 in Ebeye	Fully achieved. On-site instruction on improvement of the final disposal site was conducted in 2014, and the activities for Indicator 5-2, 5-3 and 5-4 started. The final disposal site in Ebeye is an open dumping. Before the intervention by this Project in 2014, the level of management of the site was not high as there was burning practiced almost everyday. Burning of waste other than hospital waste stopped after this Project installed “NO BURNING” signboards. Other actions such as deployment of heavy vehicles and introduction of manned operation also enhanced awareness of people who would burn waste. According to C/P, participation in the demonstration of landfill improvement in Majuro and the landfill training in Pohnpei-FSM also enhanced their knowledge (e.g. Fukuoka method), while the condition in Ebeye has not reached a point to where they could put what they learned into practice.
5-3 The waste is located separately and adequately in dump site	Fully achieved. Since the above-mentioned instruction on the final disposal site (Indicator 5-2), separation of metals and general waste has been practiced .
5-4 Bulky waste collection is separated from the common household waste	Fully achieved. Since the above-mentioned instruction on the final disposal site (see Indicator 5-2), separation of vehicles has been practiced. Demolition waste is still dumped together with general waste to, according to KALGov, keep people who want to pick up the waste.
5-5 Education on 4R promotion is conducted for all school classroom	Fully achieved. Since before this Project, EPA-Ebeye had already conducted awareness activities on solid waste and water quality for all classes of schools (6 elementary schools, 1 middle school and 5 high schools). Under this Project, frequency of school visits increased from 1-2 times/quarter to every month, and cooperation with stakeholders (KALGov, MOE-Ebeye and MOH-Ebeye) started. According to EPA-Ebeye, it can continue the activity at this frequency even after completion of this Project.
5-6 Teacher training on 4R promotion is conducted for all teachers in Ebeye (Interpretation of this Indicator)* Teacher training on 4R promotion is	Fully achieved. Two teachers training courses on 4R/3R were held (in 2013 for 54 teachers and in 2015 for 15 teachers). The instructors were C/P of this Project (EPA-Majuro and MAWC in 2013 and EPA-Majuro and Fiji in 2015). The 15 teachers trained in 2015 are schoolmasters or head teachers of all schools. The Project expects them to train teachers of their schools.

conducted for teachers in all schools. * Confirmed with the Project	
5-7 Plan for paper fuel is drafted	Not achieved yet, but likely to be achieved by the end of the Project. The technical transfer on production of paper briquettes started in Majuro (by MAWC with help of a SV), and the plan to introduce it to Ebeye through training has been postponed. As collection of cardboards has been started, KALGov is planning to draft the plan by the end of this Project, and invite a resource person from Majuro to learn how to produce paper briquettes.

(3) Project Purpose

Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	Degree of achievement: Mostly Achieved.

Indicator	Results
1 Six (6) experts (Trainers) listed in the SPREP inventory[3]	According to J-PRISM's Pacific Islands Database of Capacity Development Activities (PIDOC), the two persons (1 from EPA and 1 from MAWC) got "trainers point," meaning they have acted as trainers in training courses under J-PRISM. The one from EPA resigned. The one from MAWC is active in awareness activities.
2 Good practices and experience are shared among Majuro and other Atoll Local Governments	Mostly achieved. There are at least three cases where good practices were shared with atoll local governments. In both cases, however, the 'good practices' were not the outputs of J-PRISM in RMI, meaning they cannot fully verify the achievement of this Indicator. (i) In 2013, EPA C/P in Majuro was invited to Ebeye for the school-based environmental education pilot project, which was highly appreciated in Ebeye and provided good feedback to C/P of EPA Majuro as well. This Project partly contributed to Majuro's 'good practices' that were shared to C/P in Ebeye. (ii) In 2015, A C/P in Fiji and a C/P in EPA-Majuro were invited to the teachers' workshop in Ebeye. (iii) In 2014, A C/P in MAWC was invited to Ebeye for demonstration of production of paper briquettes.
(Supplementary Information) Other evidence of capacity development	(Ebeye) SWM in Ebeye drastically changed in terms of collection, landfill and school-based awareness activity through OJT, trainings and a pilot project. Such experiences enhanced collaborative relationship among KALGov (Public Works Division), EPA-Ebeye and PPS-Ebeye, which led to at least two local initiatives on SWM: (i) SWM Steering Committee consisting of KALGov (Chair), PPS-Ebeye, EPA-Ebeye, MOH-Ebeye, Chamber of Commerce and Youth Group. (ii) "Pack and Tie" campaign as "Ebeye Initiative" (being planned following a recommendation from a local expert of this Project).

(4) Implementation Process

・Progress of Activities (for each Output)

[3] *This indicator was not used as a direct measure of the Project Purpose for the following reasons: (i) while PIDOC, the existing database, is an inventory of SPREP, the persons listed are trainers certified by J-PRISM but not considered as officially certified trainers by SPREP; (ii) the target values are not valid as they had been determined before introduction of PIDOC (thus not consistent with the number of trainers listed in it). Accordingly, the degree of achievement of the Project Purpose was judged in a comprehensive manner with the other indicators and supplementary information (where necessary), while referring to this indicator as reference information.*

Most activities scheduled up to now have been completed except the followings:

- Activity 2-2-3 (development of a conceptional plan on recycling) in Majuro – likelihood of implementation by the end of the Project period is unknown.
- Activity 5-3-6 (start producing paper fuel) in Ebeye – C/P is willing to start preparation for this activity, namely, development of a paper briquette production plan, and there is a possibility of launching the production by the end of the Project period.

・Method of Technical Transfer

The findings are mixed. In Majuro, the work of the short-term expert in the second half of the implementation period was mainly monitoring and reporting of the progress of activities carried out solely on the RMI side C/P with help of SV/JOCV, based on the agreement among the Project, JICA RMI, SV and JOCV in May 2013 that the activities for Outputs 2, 3 and 4 would be routine operations of each concerned agency, and the Project would only monitor the progress of such operations.

In Ebeye, planning and implementation of project activities by C/P and short-term experts as well as long-term experts (coordinator and local expert in J-PRISM HQ) provided hands-on opportunity of skill development. A C/P mentioned that the process of the Project implementation was mutual learning by the Ebeye side and the Japanese side. In addition, training and pilot projects involving C/P from other islands (Majuro and Fiji) was an appropriate means of capacity development of both C/P who were trained and who were dispatched as trainers.

・Implementation System

The complexity of the implementation system was a major challenge of this Project. One of the characteristic of this Project in RMI is that it involved a number of organizations. In the course of implementation, division of responsibilities and degree of participation in project activities have been clarified. Also, the Project held the Counterpart Committee meeting every time (2-3 times a year) the JICA short-term expert visited Majuro. Through these, the core implementing agencies were narrowed down to MPW, MAWC, OEPPC, OCS, EPA, MOE (PSS), KALGov.

While such efforts led to constant holding of the Counterpart Committee meetings, the evaluation team found that there are still more than one focal organizations (MPW as Project Director, MAWC as Project Manager, OCS as JCC Chair and OEEPC as Counterpart Committee Chair), which complicates responsibilities over monitoring. Also, the implementing agencies in Ebeye (KALGov, EPA-Ebeye and MOE (PSS) -Ebeye) attended JCC but were not included in Counterpart Committee members, despite that the Counterpart Committee was expected to function not only as a coordinating body for project activities in Majuro but as the Monitoring Committee for the NSWMS Action Plan that includes actions to be taken in Ebeye as well.

	Expected Role stated in "Role sharing of Counterparts authorities & Organizations in RMI" (2011)	Current Situation on Role of Organization in J-PRISM	Degree of attendance to the Counterpart Committee meeting
MPW	National Project Director Output 1 Draft NSWMS (Output 1)	National Project Director Oversee the entire progress of the Project	Fully attended
MAWC	National Project Manager Draft NSWMS (Output 1) Operate Recycling System (Output 2) Operate Composting System (Output 3) Facilitate SWM system in Ebeye (Output 5)	National Project Manager Operate Recycling System (Output 2) Operate Composting System (Output 3) Conduct Awareness Activity (Output 4) Facilitate SWM system in Ebeye (Output 5)	Fully attended
OCS	Chair of C/P Committee Endorse NSWMS (Output 1)	Chair of JCC Coordinate with government	Attended when necessary
OEPPC	Facilitate Output 1, 2, 3	Chair of Counterpart Committee Output 1 (NSWMS)	Fully attended
EPA-Majuro	Draft NSWMS (Output 1)	Lead Output 2 (recycling) and	Almost fully attended.

	Facilitate / Collaborate in Output 2 (Recycling) Facilitate Output 3 (Composting) Initiate Output 4 (school-based recycling)	Output 4 (school-based recycling) through awareness raising.	
Ministry of Resource and Development	Facilitate/ Collaborate in Output 3 (Composting)	No involvement	None
MOE-Majuro (PSS)	Collaborate / Initiate Output 3 Collaborate in Output 4 (school-based recycling)	Output 4 (school-based recycling)	Sometimes
MOH	Facilitate SWM system (Output 5)	Limited involvement	When necessary
MALGov	-	Listed as an implementing agency but involvement	None
Territorial Program, Marshall Islands Conservation Society (MICS)	Collaborate in composting (Output 3) and school-based recycling system (Output 4) Collaborate in SWM system in Ebeye (Output 5)	No involvement	None
KALGov	Operate SWM system (Output 5)	Coordination of activities in Ebeye (Output 5); implementation of activities related to collection and landfill	None (JCC only)
EPA-Ebeye	(No specific role other than those of EPA-Majuro was mentioned)	Implementation of awareness activities for Output5.	None (JCC only)
MOE-Ebeye (PSS)	(No specific role other than those of MOE-Majuro was mentioned)	Implementation of awareness activities for Output5.	None (JCC only)

・Project Management/ Communication within the Project

(i) Revision of PDM/PO several times made the project plan more realistic by narrowing down the core organizations to be involved and clarifying activities of J-PRISM in relation to other initiatives, though the PDM/PO could not fully reflect the actual situation due to the highly complicated structure of the implementation system not only on the RMI side but on the JICA side (i.e. need coordination of activities with SV/JOCV).

(ii) A C/P pointed out that PO should have mentioned clear demarcation of funding responsibilities for each activity. The evaluation team considers it important especially in Majuro where a number of organizations are involved in project activities.

(iii) JCC and Counterpart Committee meetings functioned as a place of communication among stakeholders. However, C/P in Ebeye were not shared sufficient information.

・Participation in Region-Wide Activities of J-PRISM

	Title	Type of activity	No. of C/P in RMI attended
1	3R Regional Training, Fiji in 2012	Regional Training	1
2	Pilot Project for Rehabilitation of landfill, Pohnpei, 2013	Sub-regional Training	2
3	Teacher Training on 4R promotion in Ebeye, 2013	In-country Training	2 as trainers 2 as resource persons (for 54 schoolteachers)
4	Teacher Training on 3R promotion in Ebeye, 2015	In-country Training	2 as trainers (for 15 schoolteachers) 1 C/P from Fiji as trainer

・Coordination with Other Japanese and International Projects

1) Holistic approach with other schemes of Japanese assistance

	Scheme	Type of coordination
1	SV/JOCV (JFY2011-)	SV: Environmental Administration (2 for OEPPC), Waste disposal (3 for MAWC) JOCV: Environmental Education (3 for EPA)
2	Grant Assistance for Grassroots Human Security Projects (JFY2005-)	Wheel bins (Majuro, 2010) Fences of the landfill site (Ebeye, 2011) An excavator and a loaders (Ebeye, 2012)
3	Training and Dialogue Program (JFY2011-)	3R (2011): 1 from EPA Waste Management Technique (B) (2011): 1 from MAWC Waste Management Technique (A) (2013): 1 from MAWC Environmental Education (2011): 1 from EPA Environmental Education (2013): 1 from EPA Enhancement of Solid Waste Management Capacity (Advance, Planning & Policy)(A): 1 from EPA Environmental Education, 2014: 1 from EPA
4	Others	

2) Collaboration with other donors

	Donor	Type of coordination
1	US	Compact Trust Fund
2	SPREP	Assistance in drafting of NSWMS; Majuro Atoll Integrated Waste Management Project (2014-2017) as part of Pac Waste

<About Majuro Atoll Integrated Waste Management Project>
The Majuro Atoll Integrated Waste Management Project, currently implemented through the PacWaste Project by SPREP, will benefit from J-PRISM's technical cooperation outputs. The project will assist in the implementation of an integrated atoll waste management geared at reducing wastes generated in the atolls.

・Other Promoting and Inhibiting Factors
- (Inhibiting factor in Ebeye) Remoteness of Ebeye caused insufficient sharing of information on SWM such as NSWMS from Majuro.
- (Promoting factor in Ebeye) Outbreak of dengue fever and chikungunya in 2014 raised people's awareness of clean surroundings. EPA-Ebeye and MOH-Ebeye responded to the incidence by spraying and visiting the communities to raise their awareness of clean water. Consequently, schools and other governmental agencies began bringing their waste to the dump site, which eased workload of collection.

III. Results of Analysis from the Viewpoints of Five Evaluation Criteria

(1) Relevance

Evaluation: High with a concern

The project is still highly consistent with needs for SWM in Ebeye and Japan's development assistance policy. On the other hand, consistency with RMI's development policy is not clear as the NSWMS, the only policy document that clearly articulates the country's SWM policy, has not been approved by the government.

(2) Effectiveness

Evaluation: Medium to High

1) Achievement of Project Purpose

The Project Purpose has been mostly achieved by the time of terminal evaluation, and there is a possibility that the achievement level will be higher at the end of the Project period.

The valid indicators of the Project Purpose were fully achieved, in terms of sharing of good practices in SWM mainly in terms of school-based awareness program on 3R/4R between Majuro and Ebeye. Also, capacity of C/P in Ebeye was enhanced through improvement of the waste collection system (including fee collection) and the landfill.

Challenges may include the leaving of some human resources developed under this Project, and a weakness in monitoring of the NSWMS Action Plan jointly by stakeholders.

2) Contribution of Outputs to Project Purpose
Output 1 (NSWMS) has not fully contributed to human resource development in terms monitoring (see above). Contribution of Outputs 2 (recycling), Output 3 (composting) and Output 4 (awareness/education) is partial in a sense that capacity development through production of these Outputs is owing to SV/JOCV besides this Project and that the fruits of capacity development were lost in Majuro with leaving of C/P who were trained under this Project.

3) Other promoting/inhibiting factors

(3) Efficiency

Evaluation: Medium to High

1) Production of Outputs
Outputs 2 to 5 have been mostly produced, while Output 1 has been partly achieved.

2) Appropriateness of Inputs
- RMI side
  Mostly appropriate.
- Japanese side
  While some expert input produced Outputs to a significant extent for short period of dispatch, some other expert input did not produce expected Outputs.
  Besides the inputs specifically for RMI, region-wide training enhanced production of Outputs.

3) Utilization of external resources
- For Output 5 (SWM in Ebeye), a loader provided under the Grassroots Grant Aid contributed not only to the landfill but also for collection. Also, compactor trucks and bins for households, donated by the US made the introduction of the new collection system possible.
- Activities of SV/JOCV promoted the production of Outputs in Majuro. On the other hand, it took a considerable amount of time for coordination of activities among SV/JOCV and this Project.

4) Other promoting/inhibiting factors
Remoteness of Ebeye caused insufficient sharing of information on SWM such as NSSWM from Majuro.

(4) Impact

Evaluation: Positive impacts are expected; negative impact was not observed.

1) Impact at Overall Goal level
There is a possibility that Indicator 1 "Good practices conducted in RMI are implemented in other island countries tackling with common issues" and Indicator 2 "At least one training/workshop in the region which is conducted by facilitators/trainers from Marshall Islands" will be achieved in three years after project completion. The awareness/educational activity in Majuro and integrated (well-coordinated) SWM in an atoll in Ebeye can be a candidate of the theme that C/P could instruct to PICs.

2) Other impacts
- Positive impacts:
  In Ebeye, although data could not be collected, positive environmental impact may have been produced, such as improvement of quality of surroundings due to better collection and reduction of toxic substance due to elimination of burning on the landfill. Also, future positive impact may include reduction of waste dumped in the landfill if production of paper fuel gets off the ground.
  In Majuro, an additional revenue source was created by selling recycled products.
- Negative impacts: Not observed.

(5) Sustainability

Evaluation: High with a concern

1) Policy and institutional aspects
There is a matter of concern. Although there is a general support of SWM in the government, NSWMS has not been endorsed yet, and clear policy documents that support human resource development in SWM were not found.

2) Organizational aspects

Majuro: No major problems were found in Majuro in continuing the activities that this Project supported, except that there is no concrete plan on how to continue monitoring of the activities that have been done by the Counterpart Committee (de facto Monitoring Committee).

Ebeye: No major problems were found in Ebeye despite the limited staff and budget.

	Role in SWM	Number of staff in SWM
MPW	Provision of solid waste services through MAWC	1 person (Secretary, who is Chairman of MAWC)
MAWC	A governmental entity under MPW in charge of provision of solid waste services	43 persons including a SV and administration, collection, landfill operation and recycling/composting staff.
OEPPC	Planning, implementation and monitoring of national SWM policy Coordination with international cooperation partners; focal point of PacWaste (SPREP)	1 person (Deputy Director)
EPA-Majuro (EPA-RMI)	Environmental regulation and education	Education and Awareness Department: 3 persons including a JOCV Solid Waste Department: 5 persons (but not related to the activities of this Project)
KALGov	Planning, implementation and monitoring of solid waste services	Public works officer: 1 person Landfill staff: 2 persons (recently decreased from 4 persons due to budget cut) Collection staff: 5 staff (recently increased from 3 persons by transfer from another division)
EPA-Ebeye	Environmental regulation and education in Ebeye (under EPA-RMI)	3 persons (not solely in SWM)
MOE-Ebeye (PSS)	Cooperation with EPA-Ebeye in environmental education	

3) Financial aspects

No major problems were found in both Majuro and Ebeye in continuing the activities that this Project supported despite constraints. In Majuro, major budget sources for it are the general fund (national budget), revenue (MAWC: service fees and sales of recycled products; EPA: fines, license fees) and the US Compact Trust Fund.

In Ebeye, major budget sources are local revenue (for operation and maintenance of the landfill and collection), revenue from collection services for commercial waste producers (mostly for fuel) and the US Compact Trust Fund (for infrastructures). As the local revenue is declining, increase in revenue from collection services (by introducing the new fee collection system developed under this Project) is expected.

4) Technical aspects

No major problems were found in both Majuro and Ebeye in continuing the activities that this Project supported.

5) Others （if any）

IV Conclusion

Five Evaluation Criteria

Criteria	Evaluation
Relevance:	High with a concern
Effectiveness:	Medium to High

Efficiency:	Medium to High
Impact:	High
Sustainability:	High with a concern

Achieved output and remaining issues

Most of all Output will be achieved by the end of the Project, while some parts remains which need actions under J-PRISM, or need to be addressed by the Marshall Islands side.

1) Output 1: NSWMS is implemented.
The project contributed to finalize NSWMS and Action plan in Marshall Islands. Monitoring of the action plan is regularly conducted (but not as frequently as expected) between C/Ps in Majuro along with JICA experts based on PO at the time of dispatch of JICA expert. The progress of the project was shared among stakeholders through various meetings as JCC and Counterpart Committee meetings (de fact Monitoring Committee for the NSWMS Action Plan).
However, policy-making process involved in the output 1, and this organizational situation makes difficult to achieve concrete results.
As the next step, OEPPC and JICA expert are expected to continue to address the NSWMS approval by the Cabinet in Assistance to the President in order to raise shared awareness of national strategy and action plan for solid waste management system. The Cabinet approval is expected by the final JCC in November 2015.

2) Output 2: Recycling system is improved in Majuro.
The volume of recycling materials sales in Majuro has been gradually increasing.
Although J-PRISM activity on Output 2 is confined to reporting of progress at JCC meetings, J-PRISM has also indirectly contributed to the increase in the volume of recyclable products sales through expansion of public awareness as a result of regional training.
Currently, New landfill site construction project in Majuro is ongoing with the Compact Trust Fund from the United States (The budget for capital expenditure is approximately $ 600,000 (Reference: MAWC annual budget sheets). J-PRISM would be better off collecting the necessary information to examine the effects on the Project).

3) Output 3: Composting system is improved in Majuro.
The volume of composting sales in Majuro has been gradually increasing.
Although J-PRISM activity on Output 3 is confined to reporting of progress at JCC meetings, J-PRISM has also indirectly contributed to the increase in the volume of composting sales through expansion of public awareness as a result of regional training.

4) Output 4: School-based recycle system is introduced in Majuro.
School-based recycling program by the EPA and MAWC has been carried out continually. The contribution of J-PRISM on Output 4 was seen particularly in the initial stage of the Project implementation. However, the trainings provided under J-PRISM (3R workshop in Fiji in 2012, Teachers' training on 4R promotion in Ebeye in 2013, Teachers' workshop in Ebeye in 2015) have been effective to strengthen the capacity building of C/Ps. The trainees have played focal role in environmental education and public awareness, though some C/P quit the jobs.

5) Output 5: Solid waste management system is improved in Ebeye.
Solid waste management system has been steadily developing in Ebeye.
The activities of J-PRISM on Output 5 have brought good practices to the improvement of waste collection system and proper management of dump site, promotion of environmental education.
Especially, the introduction of collection route plan setting and waste collection fee system, prohibition of open burning, implementation of " Pack and Tie" (Environmental campaign for improvement of garbage bag disposal) are evaluated as an initiative that can prevent environmental problems such as Emission control and removal of hazardous substances, preserve the living environment, increase public awareness.
However, some issues remains which need to be addressed as to enhancement of information sharing among Majuro and Ebeye C/Ps, to promote implementation of waste collection plan and paper fuel production plan.

Conclusion on the course of implementation of the Project
The Project Purpose is expected to be mostly achieved by the end of the cooperation period. Therefore, this project shall be finished as planned.

Other Issues on waste management for which Japanese assistance is required
1) Further promotion of 3R activities and environmental sound management of hazardous wastes
2) Consideration of introduce Semi-aerobic landfill (Fukuoka Method) in Majuro and Ebeye
3) Development of Technical guidelines of sanitary landfill system

4) Technical transfer for proper closure of existing landfill sites

V Recommendations for the remaining period

For the remaining period of project implementation, the terminal evaluation team recommends the followings:

For Office of Chief Secretary (OCS):

1) Pushing the NSWMS approval onto the agenda of Cabinet meeting.
2) Facilitating the process of the official approval of the NSWMS by the time of final JCC in November 2015.

For Monitoring Committee (OEPPC(Chair), MPW, MAWC, EPA, MOE):

1) Discussing an implementation system to strengthen coordination linkage among Monitoring Committee members before J-PRISM ends.
2) Bringing in KALGov, EPA Ebeye and MOE (PSS) Ebeye as a new member to Monitoring Committee.

For Office of Environmental Planning and Policy Coordination(OEPPC):

1) Addressing the NSWMS approval by the Cabinet in Assistance to the President in order to raise shared awareness of National Strategy and Action Plan for solid waste management system in Marshall Islands.
2) Verifying a progress of the NSWMS approval by the Cabinet in Assistance to the President.
3) Informing JICA experts a status of NSWMS approval as soon as possible
4) Reporting regularly on the NSWMS approval status to Monitoring Committee.
5) Sharing the necessary information of NSWMS and Action Plan among Ebeye C/Ps.

For Ministry of Public Works (MPW):

1) Observing the agreement between KALGov and waste collection vehicle's vendor, and the improved implementation of waste collection system in Ebeye.
2) Enhancing information sharing between MPW and KALGov.

For Environmental Protection Agency (EPA):

1) Continuing promotion of environmental education and playing a central role in School-based environmental activities.

For Public School System (PSS):

1) Continuing promotion of School-based environmental education and sharing the information.

For Majuro Atoll Waste Company (MAWC):

1) Continuing promotion of public awareness and playing a central role of communities.
2) Enhancing information sharing between MAWC and KALGov.

For Kwajalein Atoll Local Government (KALG), EPA-Ebeye, MOE-Ebeye:

1) Engaging on Monitoring Committee as a new member.
2) Promoting implementation of waste collection improvement plan and paper fuel production plan.(KALGov)
3) Continuing promotion of School-based environmental education and sharing the information about the detailed activities in Ebeye to JCC and Monitoring Committee.(EPA-Ebeye, MOE-Ebeye)

For the JICA Experts:

1) Continuing to support and provide effective advice to OEPPC for having the NSWMS approval of the Cabinet in Assistance to the President.
2) Supporting to make the Progress report on the NSWMS/Action Plan and report the accomplishments at Monitoring Committee.
3) Sharing the information between J-PRISM HQ and SPREP so that the Japanese experts will grasp overall necessary information of SPREP's project and assistance in Marshall Island. While the Majuro Atoll Integrated Waste Management Project is being kicked off when J-PRISM is about to end, it is recommended that collaboration be made during the remaining period of J-PRISM so that outputs for both projects can be optimized. This will also ensure that there will be no duplication in future JICA assistance to Majuro.
4) Developing the Project implementation process and schedule through discussions with all C/Ps, especially MPW and C/Ps in Ebeye.
5) Working in close coordination by each JICA Expert.

Recommendations on modification of PDM

The following modifications are proposed for review and approval by the final JCC in November 2015.

No.	Proposed modification	Original (Ver.1)	Reason of the revision proposal
1	【Indicator of Overall goal】 2 At least one training/workshop in the region which is conducted by facilitators/trainers from Marshall Islands in three years after completion of the project.	【Indicator of Overall goal】 2 At least one training/workshop in the region which is conducted by facilitators/trainers from Marshall Islands.	【Indicator of Overall goal】 Clarifying the target year setting of the indicator.
2	【Indicator of Output 4】 4-3 Beverage Container Recycling Program is implemented in over 80% of elementary schools in Majuro.	【Indicator of Output 4】 4-3 I-Recycle programs are implemented in over 80% of elementary schools in Majuro.	【Indicator of Output 4】 Revised reflecting the complete accuracy of the activities. 'I-Recycle' is a proper noun which is not called in elementary school based beverage container collection in Majuro.

Attachment:

1. Latest Project Design Matrix (PDM Version 1, February 2014)
2. Latest Plan of Operation (PO Version 4, January 2015)
3. Schedule of Terminal Evaluation
4. Record of Japanese Inputs
   4-1 Dispatch of Experts
   4-2 Training in Japan
   4-3 List of Machinery and Equipment provided by Japan
   4-3 Local cost
5. Record of RMI Inputs
   5-1 List of Counterpart personnel
   5-2 Local cost

ANNEX I: Project Design Matrix (PDM) - Marshall Islands

PDM: Version 1 (7-Feb,2014)

Project Title: Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Target Group : C/Ps of OEPPC, MPW, EPA, MAWC, MLG, KALGov. MOE

Final Beneficiaries: Citizens of Marshall Islands

Project period: 5 years

Implementing Agency: OEPPC, MPW, EPA, MAWC, MLG, KALGov., MOE

Target Area: Marshall Island (Majuro and Ebeye)

Narrative Summary	Objectively Verifiable Indicators	Means of Verifications	Important Assumptions
Overall Goal			
Sustainable management of solid waste in the Pacific Region is enhanced	1.Good practices developed in Marshall Islands is implemented in other island countries tackling with common issues 2.At least one training/workshop in the region which is conducted by facilitators/trainers from Marshall Islands	1. Report of activities on experience sharing 2. Records of training/workshop organized by counterparts in Marshall Islands	
Project Purpose			
Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	1. 6 experts (Trainers) listed in the SPREP inventory 2. Good practices and experience are shared among Majuro and other Atoll Local Governments.	1.SPREP (Regional inventory of skilled people) 2.Records on cooperation activities/actions.	1. Natural disaster would not drastically affect the collaboration among PICs and SPREP. 2. Political changes of PICs would not drastically affect the collaboration among PICs and SPREP.
# Outputs			
1 NSWMS is implemented.	1-1 NSWMS and Action plan of Majuro is finalized. 1-2 Implementation of Action plan is monitored and reviewed by the Monitoring Committee 3 times a year. 1-3 Progress report is issued annualy.	1-1 Finalized NSWMS and Action plan 1-2 Reports/check results of Monitoring presented for the Monitoring committee**. **Monitoring Committee: OEPPC(Chair), MPW, MAWC, EPA, MOE 1-3 Annual progress report	
2 Recycling system is improved in Majuro.	2-1 Recycle products is increased year by year. 2-2 # of collected and exported materials are increasing year by year.	2-1& 2-2 Reports/check results of Monitoring presented for the Monitoring committee.	
3 Composting system is improved in Majuro.	3-1 Volume of compost production are increased in Majuro	3-1 Reports/check results of Monitoring presented for the Monitoring committee.	
4 School-based recycle system is introduced in Majuro.	4-1 Manual/material of awareness raising is developed. 4-2 Campaign activities are conducted on a regular schedule. 4-3 I-Recycle programs are implemented in over 80% of elementary schools in Majuro.	4-1Manual and Materials 4-2 &4-3 Reports/ check results of Monitoring presented for the Monitoring Committee.	

Attachment 1 (Continued)

5	Solid waste management system is improved in Ebyeye.	5-1 Plan for improvement of waste collection is drafted. 5-2 The burning in the open dumping decreased to 0 in Ebye. 5-3 The waste is located separately and adequately in dump site. 5-4 Bulky waste collection is separated from the common household waste. 5-5 Education on 4R promotion is conducted for all school classroom. 5-6 Teacher training on 4R promotion is conducted for all teachers in Ebeye. *4R: Refuse, Reduce, Reuse, Recycle 5-7 Plan for paper fuel is drafted	5-1Plan for improvement of waste collection 5-2,5-3&5-4 Evaluation results of Management level on dump site 5-5&5-6Records on education activities/actions on 4R promotion. 5-7 Drafted plan for paper fuel.	
Activities		**Inputs**		
Please see PO for details.		Japanese Side Dispatch of JICA experts Provision of Regional, sub-regional and in-country workshops / training Loca cost support	Marshall Islands side Assignment of National PD/PM and CPs Local Costs Sharing Provision of necessary land/facility, work space	1.Counterpart personnel keep working in the field of SWM. 2. Necessary budget to carry out activities is allocated from the government. **Pre-condition** Cooperation of community people of the target area is obtained.

* OEPPC= Office of Environmental Planning and Policy Coordination, MPW=Ministry of Public Works, EPA=Environmental Protection Authority, MAWC=Marshall Atoll Waste Company, MLG=Majuro Atoll Local Government, KALGov.=Kwajalein Atoll Local Government, MICS=Marshall Islands Conservation Society, NSWMS=National Solid Waste Management Strategy

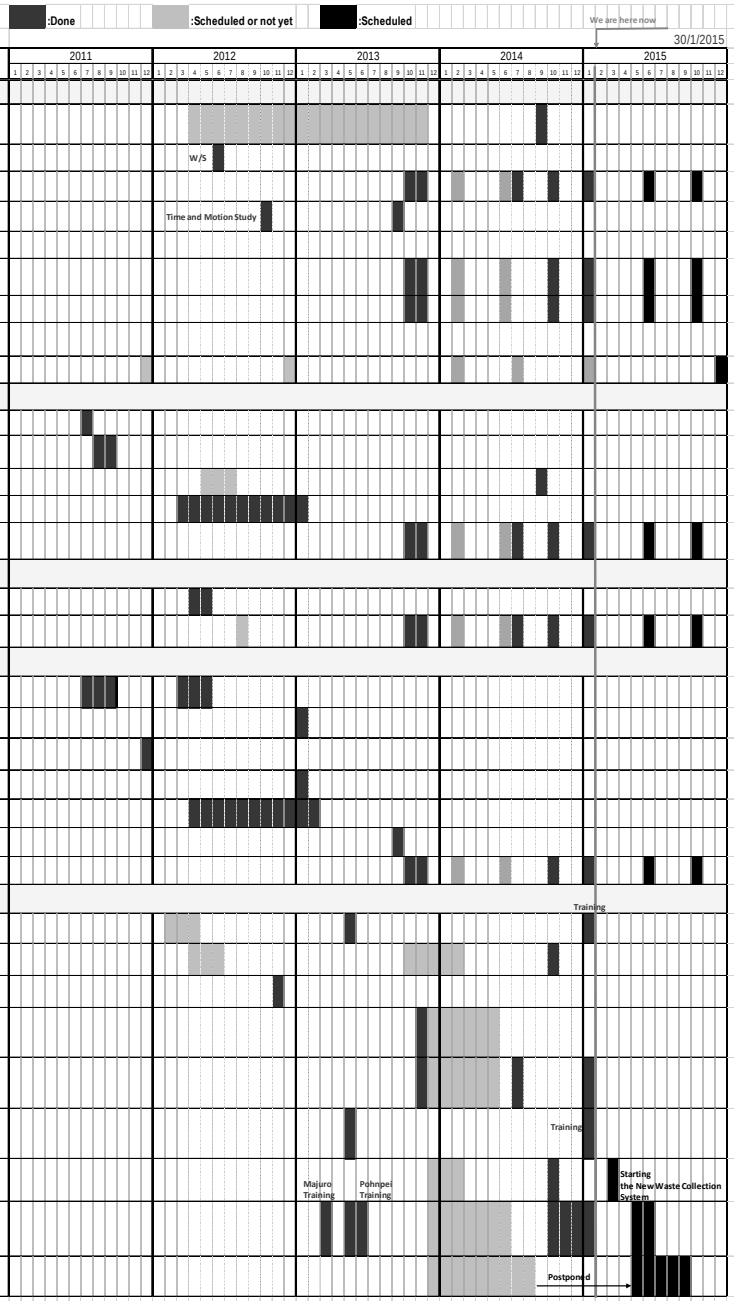
ANNEX 3(g)-RMI

Annex III: Modified PO in Marshall Islands Ver.3 (30-Jan, 2015)

:Done :Scheduled or not yet :Scheduled

We are here now 30/1/2015

	Outputs and Associated Activities <Modification>	Indicators for Outputs	Dept. & Agencies in Charge (Role-sharing is detailed in Annex IV)	Technical Assistance
Output 1: NSWMS is implemented.		*1-1 NSWMS and Action plan of Majuro is finalized.* *1-2 Implementation of Action plan is monitored and reviewed by the Monitoring Committee 3 times a year.* *1.3. Progress report is issued annually.*		
1-1	Develop the action plan of NSWMS.		OEPPC	JICA/SPREP
1-2	Conduct the dissemination workshop on NSWMS/Action plan for key stakeholders.		OEPPC	JICA
1-4	Monitoring, Check and Review on NSWMS/Action plan		OEPPC	JICA
1-4-1	Rising capability on waste collection system.		MAWC	
1-5	Modify the NSWMS based on the result of activities. > Detail is shown as follow.		OEPPC	
1-5-1	Review and monitor progress of NSWMS/AP by the Monitoring Committee* *Monitoring Committee: OEPPC(Chair), MPW, MAWC,EPA,MOE		OEPPC	
1-5-2	Review and Modify the NSWMS in accordance with activities of the Monitoring Committee		OEPPC	JICA
~~1-6~~	~~Draft the next NSWMS for the year 2016-2020.(This activity should be erase in case cuttent NSWMS covers year of 2015)~~		~~OEPPC~~	~~(SPREP)~~
1-7	PROGRESS REPORT		OEPPC	JICA
Output 2 : Recycling system is improved in Majuro.		*2-1 Recycle products is increased year by year.* *2-2 # of collected and exported materials are increasing year by year.*		
2-1	Review the existing survey for waste volume, waste composition.		MAWC	JICA
2-2	Identify the marketable recyclables		MAWC/EPA	
2-3	Develop the conceptual plan of recycling system		OEPPC、(MAWC)	JICA
2-5	Conduct the awareness raising activities for Majuro.		EPA (MAWC, MICS)	
2-8	Review and monitor progress on output2 by the monitoring committee		OEPPC、(MAWC)	JICA
OUTPUT 3 : Composting system is improved in Majuro.		*3-1 Volume of compost production are increased in Majuro*		
3-1	Conduct the survey for quality improvement of compost from green waste.		MAWC	JICA
3-5	Review and monitor progress on output3 by the monitoring committee		OEPPC	JICA
OUTPUT 4 : School-based recycle system is introduced in Majuro.		*4-1 Manual/material of awareness raising is developed.* *4-2 Campaign activities are conducted on regular schedule.* *4-3 I-Recycle programs are implemented in over 80% of elementary schools in Majuro.*		
4-1	Develop the implementation plan for awareness raising and environmental education		MOE,(EPA, MAWC, OEPPC)	
4-2	Conduct training of school-based recycle system including awareness/ environmental education to the organizations concerned.		MOE,(EPA, MAWC, OEPPC)	
4-3	Select the target schools (public elementary schools).		MOE,(EPA, MAWC, OEPPC)	
4-4	Conduct training on awareness and environmental education for school teachers.		MOE,(EPA, MAWC, OEPPC)	JICA
4-5	Implement the school-based recycle system		MOE,(EPA, MAWC, OEPPC)	
4-6	Conduct thecampaign activities.		MOE,(EPA, MAWC, OEPPC)	
4-13	Review and monitor progress on output4 by the monitoring committee		OEPPC	JICA
Output 5 : Solid waste management system is improved in Ebeye.		*5-1 Plan for improvement of waste collection is drafted.* *5-2 The burning in the open dumping decreased to 0 in Ebye.* *5-3 The waste is located separately and adequately in dump site.* *5-4 Bulky waste collection is separated from the common household waste.* *5-5 Education on 4R promotion is conducted for all school classroom.* *5-6 teacher training on 4R promotion is conducted for all teachers in Ebeye.* *5-7 Plan for paper fuel is drafted*	Chief person: KAL Gov.(Aeto)	
5-1	Conduct the survey for waste volume and waste composition.		KALGov	JICA
5-2	Develop the action plan of SWMS/Action Plan for Ebeye.		KALGov	
5-3	Select the priority activities.		KALGov	JICA
5-3-1	Develop teaching materials such as booklet, powerpoint and other materials		KALGov	JICA
5-3-2	Develop plan and implementation on school education and teacher training for 4R promotion		KALGov/EPA/MOE	JICA
5-3-3	Implementation of Waste composition survey		KALGov	JICA
5-3-4	Draft improvement plan on collection-fee system and other waste collection program		KALGov	JICA
5-3-5	Improvement of dump site.		KALGov	JICA
5-3-6	Launching producing "Paper Fuel"		KALGov	



4R: Refuse, Reduce, Reuse, Recycle

Attachment 3: Schedule of Terminal Evaluation

Terminal Evaluation Mission on the Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)
in the Republic of the Marshall Islands

Date/Day		Ms. Onuma (HP. 692-455-3382)	Consultant: Ms. Haraguchi
4-Sep	Fri	19:17 Arrive at Majuro (UA155)	
5-Sep	Sat	Landfill site visit(Majuro Atoll Waste Company, MAWC) (arranged by Mr.Haseyama)	
6-Sep	Sun	14:00-16:00 Internal Meeting at MIR Hotel Lobby	10:15 Arrive at Majuro (ON032) 14:00-16:00 Internal Meeting at MIR Hotel Lobby
7-Sep	Mon	9:00 Kick-off Meeting with JICA Marshall Islands Office 10:30 Meeting with Ministry of Public Works (MPW) Director(Mr.Wilbur) and C/P 14:00 Meeting with Environment Protection Authority (EPA) Director,C/P and JOCV 16:00 Interview with JOCV(Mr.Negoro)	9:00 Kick-off Meeting with JICA Marshall Islands Office 10:30 Meeting with Ministry of Public Works (MPW) Director(Mr.Wilbur) and C/P 14:00 Meeting with Environment Protection Authority (EPA) Director,C/P and JOCV 16:00 Interview with JOCV(Mr.Negoro)
8-Sep	Tue	10:00 Meeting with Office of Environment Planning and Policy coordination (OEPPC) Director. C/P(Mr.Warwick) and SV(Mr.Sato) 12:00 Interview with SV(Mr.Sato) 14:00 Meeting with Majuro Atoll Waste Company, (AWC) and interview with CPs(Mr.Tibon) and SV 16:00 Interview with SV(Mr.Hyodo) PM Landfill Site Visit (Majuro Atoll Waste Company, MAWC)	10:00 Meeting with Office of Environment Planning and Policy coordination (OEPPC) Director. C/P(Mr.Warwick) and SV(Mr.Sato) 12:00 Interview with SV(Mr.Sato) 14:00 Meeting with Majuro Atoll Waste Company, (AWC) and interview with CPs(Mr.Tibon) and SV 16:00 Interview with SV(Mr.Hyodo) PM Landfill Site Visit (Majuro Atoll Waste Company, MAWC)
9-Sep	Wed	10:00- 12:00 Wrap-up meeting with all CP agencies(MPW:Mr.Wilbur,AWC:Mr.Tibon,EPA.OEPPC) at MPW 14:00-15:00 Meeting with Acting Chief Secretary 16:00-17:00 Meeting with EOJ in Majuro	10:00- 12:00 Wrap-up meeting with all CP agencies(MPW:Mr.Wilbur,AWC:Mr.Tibon,EPA.OEPPC) at MPW 14:00-15:00 Meeting with Acting Chief Secretary 16:00-17:00 Meeting with EOJ in Majuro
10-Sep	Thu	Depart for the airport by Hotel's shuttle bus 11:20 Depart at Majuro(UA154) 12:20 Arrive at Kwajalein Ebeye at boat PM Meeting with KALGov PW, Mr. Jesse (Assistant CAO) and Mr. Wesley PM Meeting with EPA Ebeye, Deputy General Manager, Mr. Odrikawa and Mr. Whitney PM Landfill site Visit (arranged by Mr. Wesley)	
11-Sep	Fri	AM Meeting with Kwajalein Atoll Local Government (KALGov), EPA Ebeye and MOE PM Report Making	AM Meeting with Kwajalein Atoll Local Government (KALGov), EPA Ebeye and MOE 18:19 Depart at Kwajalein island (UA155)
12-Sep	Sat	12:20 Depart at Kwajalein(UA154) 17:55 Arrive at Guam	

Attachment 4. Record of Japanese Inputs

4-1. Dispatch of Experts

Long-term Experts from Project Office	Short-term Experts	Local expert *	Total
1.3 MM	9.5 MM	0.5 MM	11.3 MM

Note: Cost of local expert is included in Local Cost Support

4-2. Training in Japan

None

4-3. List of Machinery and Equipment provided by Japan

None

Attachment 4 (Continued)

4-4 Local Cost

Period: from Feb2011 to June 2015

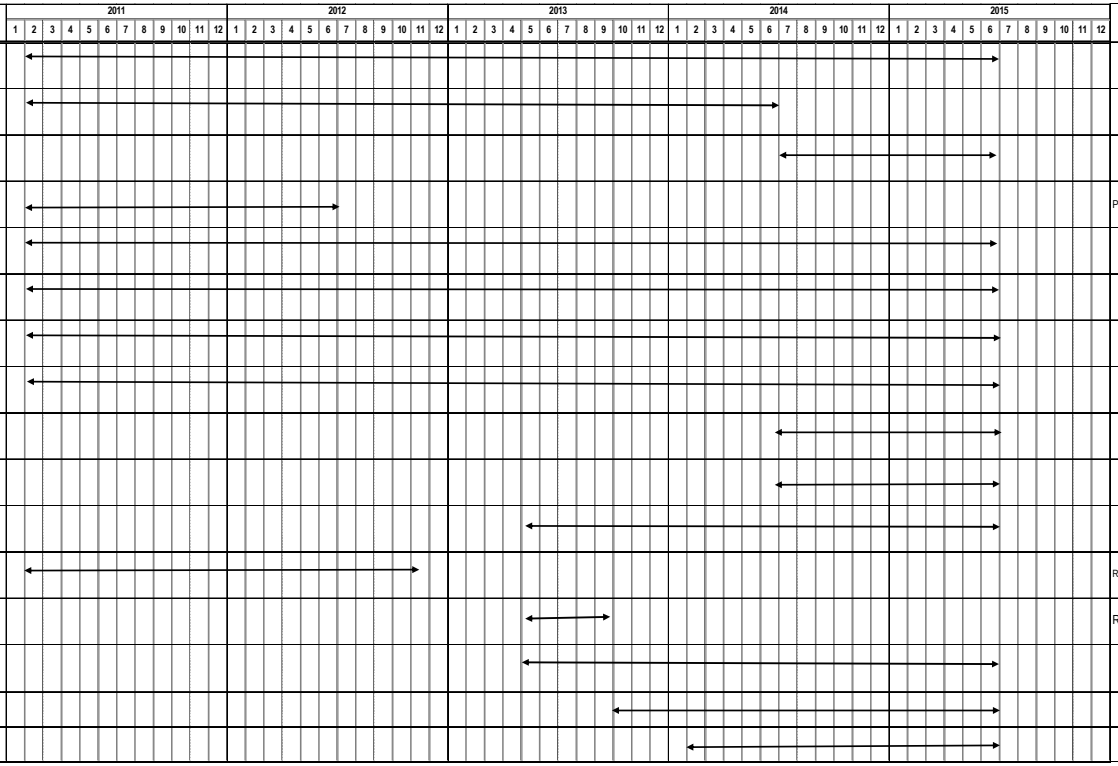
Country	Sub Category	Air Fare	Travel Allowance	Refreshments	Miscellaneous									Total			
		Travel Allowance / Air Fare	Travel Allowance / Air Fare	Refreshments	construction less than 500,000 yen	office repair	Supplies/Equipment	Maintenance of equipment	Communication	printing and bookbinding	Rent(Office Equipment, etc.)	Utilities	Miscellaneous	In local currency	Local Currency	In Japanese Yen*1	In USD *2
Marshall Islands	From JICA Office budget	4,016.00	6,235.87	0.00	0.00	0.00	3.78	0.00	385.25	4,727.94	5,307.43	0.00	3,012.07	23,688.34	US Dollar	¥2,619,767.05	US$22,252.49
	From FSM budget	352.00	11,773.40	317.29	0.00	0.00	564.55	0.00	615.00	160.63	0.00	0.00	0.00	13,782.87	US Dollar	¥1,175,177.75	US$11,961.55
	Sub-Total	4,368.00	18,009.27	317.29	0.00	0.00	568.33	0.00	1,000.25	4,888.57	5,307.43	0.00	3,012.07	37,471.21	US Dollar	¥3,794,944.81	US$34,214.06

List of Counterpart Personnel (Marshall Islands)

#	Name	Management CPs	Assigned Period	Position	Organization		Remarks (Reasons for change)
1	Casten N. Nerma		Feb. 2011-Sep.2015	Chief Secretary	Chief secretary		
2	Justina R. Langidrik		Sep, 2015-	Acting Chief Secretary	Chief secretary		
3	Smith Ysawa	National Project Director	Feb. 2011-Feb, 2013	Secretary	Ministry of Public Works		Retired
4	Jorelik Tibon	National Project Manager	Oct.2011-	General Manager	Majuro Atoll Waste Company		
5	Roger	National Project Manager	Mar.2007-Mar.2011	General Manager	Majuro Atoll Waste Company		
6	Steave Why	National Project Manager	Apr2011-Sep.2011	General Manager	Majuro Atoll Waste Company		
7	Gary Ueno		Feb. 2011-	Secretary	Ministry of Education		
8	Wilbur Allen	National Project Director	May. 2013-	Secretary	Ministry of Public Works		
9	Bruce Kijiner		May. 2013-Mar,2015	Director	Office of Environmental Planningn and Policy Coordination		
10	Lowell Alik		May,2015-	Director	Office of Environmental Planningn and Policy Coordination		

Attachment 5 (Continued)

#	Name	Technical CPs	Assigned Period	Position	Organization	Activities in charge	Remarks (Reasons for change)
1	Warwick Harris		Feb. 2011-	Acting director	Office of Environmental Planningn and Policy Coordination	1	
2	Julian Alik		Feb. 2011-	Chief Educatoin and Awareness Officer	Environmental Protection Authority in Marashall	4	
3	Jessica Zebedee		June.2014-	Chief Educatoin and Awareness Officer	Environmental Protection Authority in Marashall	4	
4	Roney Arelong		Feb, 2011- July, 2012	Chief Officer, Solid & Hazardous WM	Environmental Protection Authority in Marashall		Passed in July, 2012
5	Kanchi Hosia		Feb. 2011-	Assistant Secretary	Ministry of Education	4	
6	Teliphen Neamon		Feb. 2011-		Majuro Atoll Waste Company	2,3,4	
7	Aeto Bantol		Feb. 2011-	Chief Administrative Officer	Kwajalein Atoll Local Government	5	
8	Wesley D. Lemari		Feb. 2011-	Assistant Director	Kwajelein Atoll Local Government Public Works	5	
9	Odrikawa A. Jatios		June.2014-	Deputy General Manager	Environmental Protection Authority in Marashall		
10	Whitney deBrum		June.2014-		Environmental Protection Authority in Marashall		
11	Bruce Kijiner		May. 2013-	Director	Office of Environmental Planningn and Policy Coordination	1	
12	Doan Hadley Trevor II		Feb. 2011-Nov.2012		Majuro Atoll Waste Company	2,3,4	Retired
13	Hiram Malolo		May 2013-	Asst. Secretary	Ministry of Education (Ebeye)	5	Retired
14	Morina Mook		May 2013-	Waste Management Officer	Environmental Protection Authority in Marashall	4	
15	Jelton Anjain		Sep, 2013 -	Asst. Secretary	Ministry of Education (Ebeye)	5	
16	Itu Steve		Feb, 2014 -		Environmental Protection Authority in Marashall	4	



Terminal Evaluation Report for the Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

The Republic of Palau

Date: August 25, 2015

I. Project Outline and Evaluation Policy

(1) Project Outline	
Background	The amount of solid waste generation in Palau has been increasing in recent years due to economic and social development and the types of waste have become more diverse. Solid waste management (SWM) is urgent issue especially in Koror State, where the capital and population is most concentrated in Palau. In response to such situations in Palau, JICA conducted "The Project for Improvement of Solid Waste Management in the Republic of Palau" for capacity development of the national government and Koror Sate from 2005-2008. However, there is still a room for further improvement in SWM such as in continuous and effective operation of landfill and in planned maintenance of necessary equipment due to financial constraints. For sustainable financing for SWM, beverage container deposit fee program, a program of container deposit legislation (CDL), has been introduced since 2011. However, there still remained challenges in its financial management.
Summary of the Project	(See Attachment 1 and 2 for details)
-Overall Goal	Sustainable management of solid waste in the Pacific Region is enhanced
-Project Purpose	Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)
-Priorities in RS2010	**Outputs**
Sustainable Financing	1) Capacity to manage the beverage container deposit fee program (sustainable financing system) is enhanced.
Policy, Planning, Performance	2) National Solid Waste Management Plan (NSWMP) is finalized and Action Plan is revised.
Awareness/ Communication/ Education	3) Capacity to conduct Awareness-raising on 3R is enhanced.
Waste Disposal	4) Capacity to manage the final landfill site is enhanced.
Capacity Building	5) Training program on 3R/SWM is developed.
Project Duration	Five years from 2 February 2011 to 1 February 2016
Implementing Agency	Division of Solid Waste Management of Bureau of Public Works (SWM-BPW), Ministry of Public Infrastructure, Industries and Commerce (MPIIC) (Project Director) Solid Waste Management, Koror State Government (SWM-KSG)
Collaborating Agency	Environmental Quality Protection Board (EQPB) Ministry of Finance (MOF) Division of Environmental Health, Ministry of Health Ministry of Education
Target Group	C/Ps of SWM-BPW and SWM-KSG
Target Area/ Target Population	Palau 21,097 (World Bank, 2014)
(2) Evaluation Policy	
Objectives	1) To verify the accomplishments of the Project compared to those planned; 2) To identify promoting and/or inhibiting factors that have affected the project implementation process; 3) To analyze the Project in terms of the five evaluation criteria (i.e. Relevance, Effectiveness, Efficiency, Impact, and Sustainability); 4) To discuss the results of evaluation and solutions for problems that may be observed through the evaluation together with the personnel concerned with the

	Project and make necessary suggestions
Member of Terminal Evaluation Team	

	Title	Name	Position/Organization
	Cooperation Planning (Overall)	Toru TAGUCHI	Assistant Director, Environmental Management Division I, Global Environment. Department., JICA
*	Cooperation Planning (Palau)	Nobuaki MATSUI	Resident Representative, JICA Palau Office
*	Evaluation Analysis	Takako HARAGUCHI	Permanent Expert, International Development Associates, Ltd.

*Members participating in the evaluation study in the country

Period of Evaluation Study in the Country	6 days from 20 to 25 August 2015 （See Attachment 3 for details)
Methodology	JICA Terminal Evaluation Team collected the information through document analysis, questionnaire survey and interviews with the officers concerned with the Project and JICA experts, conducted field observation in major project sites. Based on the results of the evaluation, the Team prepared a draft report and finalized it through discussions with the personnel concerned with the Project.
Limitation	

II. Accomplishment and Implementation Process of the Project[1]

(1) Inputs (as of June 2015 unless otherwise mentioned)

<Japanese Side>

1) Dispatch of JICA Experts: 7 persons (8.9 M/M)
   - 2 Short-term Experts (7.9 M/M)
   - 4 Long-term Experts from Project Office (0.9 M/M)
   - 1 Local expert from Project Office (0.1M/M) (Cost of Local Expert is included in Local cost support)
2) Training in Japan: 3 persons
   - "Promotion of Shibushi Model from the Republic of the Fiji Islands to Pacific Island Countries" in 2013 (2 from Palau) (Participation in JICA Partnership Program using J-PRISM's financial inputs)
   - "J-PRISM Regional Training for Trainers" in 2015 (2 from Palau)
3) Local cost support: approx. JPY1,696,000 (approx. USD14,000)
   - Cost for travel, etc.

<Palauan Side>

1) Assignment of Project Director (PD), Project Manager (PM) and C/Ps: 10 persons.
   - 2 Management C/P (PD from BPW, PM from SWM-BPW)
   - 8 Technical C/P (4 from SWM-BPW, 4 from SWM-KSG)
2) Local cost sharing: approx. USD485,000
   - Cost for travel, fuel, civil works, training, workshops, etc.
3) Land, facilities, workspace

(2) Outputs

Output 1: Capacity to manage the beverage container deposit fee program (sustainable financing system) is enhanced.	Degree of achievement[2]: Mostly Achieved

Indicator	Results
1-1 % of amount of containers redeemed out of imported beverage containers by the end of the project	Fully achieved. Redemption rate of all imported beverage containers in 2011-2014 was 93%. [Note on interpretation of this Indicator] The beverage container deposit fee program had been prepared and implemented by the Palauan side since 2011. J-PRISM rather assisted the national level SWM-BPW in monitoring and management of the deposit fee program as a whole, in coordination with SWM-KSG. Therefore, this Indicator should be interpreted to be "*SWM-BPW can regularly monitor redemption rate.*"

[1] *In the sections below, this Project is sometimes called J-PRISM depending on the context.*

[2] *Degree of achievement for each output/Project Purpose is judged based on the achievement level of indicators set for each Output/Project Purpose. Ratings used for this judgment are four levels, such as "Fully achieved", "Mostly achieved", "Partly achieved", "Not achieved."*

	The Indicator with this interpretation was fully achieved, too. SWM-BPW had monitored redemption rate since the start of the beverage container deposit fee program. After 2014 when a monitoring officer was assigned, SWM-BPW compiles and publicizes the data with assistance of J-PRISM and a JOCV.
1-2 Amount of shipped off containers	Mostly achieved. The exact amount of shipped-off containers is not available, as the recycling company weighs redeemed beverage containers and other recyclable metals it ships off together. As proximate data, the total amount of beverage containers that are redeemed at the Redemption Center of Koror State in 2011-2014 was approx. 640 tons, and the annual amount is in an increasing trend. As this Redemption Center is the only center from which the recycling company collects redeemed beverage containers, those proximate data more or less reflect the actual shipped-off amount. [Note on interpretation of this Indicator] For the same reason as 1-1 above, this Indicator can be interpreted as "*SWM-BPW can regularly monitor the amount of shipped-off beverage containers.*" The Indicator with this interpretation was mostly achieved. SWM-BPW now regularly collects data from the recycling company, and the above-mentioned proximate data from the Redemption Center. Further, after J-PRISM facilitated discussions between MPIIC and Ministry of Finance to share the issues over the deposit fee program, flow of data from Ministry of Finance to SWM-BPW was established. Starting in September 2014, SWM-BPW collects data such as balance of the Recycling Fund and export earnings of redeemed beverage containers from Ministry of Finance, while breakdown of deposit from imported containers and revenue from redeemed beverage containers is available but not clearly sorted at this moment.

Output 2: National Solid Waste Management Plan (NSWMP) is finalized and Action Plan is revised.	Degree of achievement: Fully Achieved

Indicator	Results
2-1 NSWMP is finalized	Fully achieved. NSWMP was endorsed by Minister of MPIIC at the 1st JCC meeting in 2012. NSWMP has a character of the guidelines and thus does not have particular effective period. However, following recent improvement in SWM in Palau such as and the new landfill construction plan, a revision of NSWMP is planned in 2015 with help of SPREP.
2-2 Action Plan is revised	Fully achieved. The Action Plan of NSWMP 2008-2012 was revised with SPREP in 2012.

Output 3: Capacity to conduct Awareness raising on 3R is enhanced.	Degree of achievement: Mostly Achieved

Indicator	Results
3-1 Materials are delivered to 50% of schools in the Earth day activity	Fully achieved. 3R brochures, presentation materials and goods such as flowerpots made from waste tires, 200 face towels, 50 T-shirts and 70 water bottles were prepared and distributed to participants in the Earth day event in 2014 and 2015. The target of 50% was obviously achieved as almost all schools participate in the Earth day event every year. According to C/P and the short-term expert, designing and preparation of materials that can attract participants is a way to enhance awareness-raising capacity.
3-2 # of school presentations/ visits & conducted workshops	Partly achieved. The target number set by the Project was to conduct at least one workshop at every school in Palau excluding two outer island schools (22 schools in total, consisting of 16 elementary schools, 5 high schools and 1 college, including

	private schools) every year. During the period from mid-2014 to present, 17 workshops were conducted (10 at elementary schools, 1 at high school, 2 at college, 2 for schoolteachers (at teachers conference every summer), 1 at community and 1 at SWM-BPW). Besides, BPW conducted radio show (3), earth day activities (game, presentation, etc) The actual number was smaller than the target number because until 2013, the awareness activities were stagnant due to difficulties in decision-making through Public Education and Enhancement Committee (PEEC) (see "Other Promoting and Inhibiting Factors" of "(4) Implementation Process"). The awareness activities increased rapidly after resolution of PEEC in 2014.

Output 4: Capacity to manage the final landfill site is enhanced.	Degree of achievement: Partly Achieved (Likely to be fully achieved by project completion)

Indicator	Results
4-1 A period of operation for M-Dock is extended for 3 years	Fully achieved. Before the J-PRISM, M-Dock landfill (the final disposal site in Koror) would have become full in 2013. In 2012-2013, construction of dykes and other improvement works extended the period of operation for 3 years with technical advice from the JICA experts (construction cost was expensed from the Recycling Fund).
4-2 The existing closure plan for M-dock landfill is revised	Not achieved yet. Activity is on going at the time of terminal evaluation. The existing closure plan is outlined in the M-dock landfill operation manual (prepared under the previous JICA technical cooperation project), but it had to be updated and detailed for safe closing. It is planned that the SWM-BPW (with technical assistance from the JICA experts) will prepare a closure guideline by the end of the project period.
4-3 Conceptional Plan of the waste disposal is developed.	Fully achieved. With assistance from the JICA experts, a basic conceptional plan (site layout plan) of the new landfill site was developed. Outstanding issue: The site for the new landfill was secured in Aimeliik State. The new landfill will cover Koror and Babeldaob (currently, states other than Koror have their own dumping site). That may require new design of SWM administration involving state governments, particularly collection system and closure of all dumpsite in states.
(Supplementary Information) Capacity of operation and maintenance of the M-dock landfill	The activities of J-PRISM for the existing landfill site (M-Dock) consisted of technical advice on construction of additional dykes and revision of the closure plan, while management and improvement of the landfill site were not included. However, as issues were found in management and daily operation of the landfill site, J-PRISM conducted a survey on the management status of the site, and had discussions on how it can be improved. It was also related to the closure plan and for the safe closing of M-Dock landfill. As a result, improvement of operation and maintenance such as installation of signboards, compaction, limit of disposal area and segregation, monitoring of leachate, monitoring of gas temperature, etc). It was observed at the time of terminal evaluation that the landfill was well maintained. The remaining issues observed were difficulty in getting soil for covering (it has not been conducted for two years due to unavailability of soil) and overuse of excavators due to frequent breakdown of the old bulldozer.

Output 5: Training program on 3R/SWM is developed.	Degree of achievement: Mostly Achieved

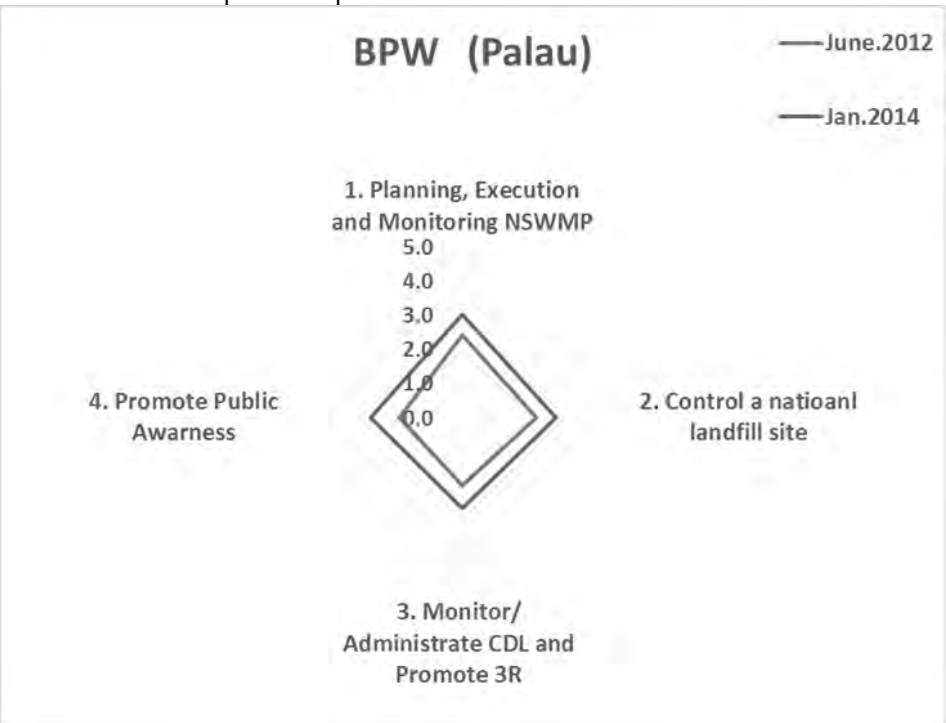
Indicator	Results
5-1 Training manual/ materials is developed	Fully achieved. Three manuals for the 3R training were developed for the "Regional Training on Promotion of 3R in Palau" in 2013 (a region-wide activity of J-PRISM). The training manuals are highly appreciated as important reference in 3R by C/P of SWM-BPW and SWM-KSG who jointly developed them. J-PRISM is planning to publish these manuals in the "Pacific Guidebook of SWM Planning."
5-2 # of training conducted and # of participants	Mostly achieved. The target number set by the Project is 2 training courses. No target number was set on the number of participants, but the Project planned to cover the Micronesia region for the first training and all states of Palau for the second training. 1) The above-mentioned "Regional Training on Promotion of 3R in Palau" was conducted in November 2013, and a total of 22 persons attended (14 from FSM, 6 from Palau, 2 from Samoa). The trainers/resource persons were C/P of J-PRISM (1 from SWM-BPW and 2 from SWM-KSG). The Project considers the number of trainees almost reached the expected level as it covered the Micronesia region except the Republic of Marshall Islands. 2) An in-country training "In-country training for Waste Amount Composition Survey (WACS)" was conducted in August 2015, and 25 persons attended from 14 out of 16 states of Palau. The trainers/resource persons were from SWM-BPW (3 persons) and SWM-KSG (5 persons). The Project considers the number of trainees reached the expected level as it covered most states. As a result of the 2nd training, it is expected that the trainees will conduct a waste survey at each state and the result will be basic information for designing a new landfill (related to Output 4) and also revising the NSWMP (related to Output2).

(3) Project Purpose

Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	Degree of achievement: Mostly Achieved

Indicator	Results
1 Five (5) experts (Trainers) in the field of 3R/ beverage container deposit fee program/ landfill operation are listed in the SPREP inventory[3]	Three (4) C/P (2 from SWM-BPW and 2 from SWM-KSG) are listed as trainers in J-PRISM's Pacific Islands Database of Capacity Development Activities (PIDOC). Although those three persons had had high capacity since before the Project, they and the short-term expert commented that they gained confidence and motivation in performing their tasks in SWM after they participated in activities/training under J-PRISM as well as other JICA training courses.
2 % of amount of containers redeemed out of imported beverage containers maintained 90% or above	Fully achieved. See Output Indicator 1-1 [Note on interpretation of this Indicator] For the same reason as stated in Output Indicator 1-1, this Indicator can be interpreted as "*the beverage containers deposit fee program is properly managed by SWM-BPW in collaboration with SWM-KSG*".

[3] *This indicator was not used as a direct measure of the Project Purpose for the following reasons: (i) while PIDOC, the existing database, is an inventory of SPREP, the persons listed are trainers certified by J-PRISM but not considered as officially certified trainers by SPREP; (ii) the target values are not valid as they had been determined before introduction of PIDOC (thus not consistent with the number of trainers listed in it). Accordingly, the degree of achievement of the Project Purpose was judged in a comprehensive manner with the other indicators and supplementary information (where necessary), while referring to this indicator as reference information.*

	The indicator with this interpretation was mostly achieved. Under the beverage container deposit fee program, out of $0.10 deposit per container paid by container importers, $0.05 is refunded to consumers, $0.025 per redeemed container is compensated to Koror State for redemption, and $0.025 is deposited to the Recycling Fund at Ministry of Finance. Also, sales from shipped-off containers are deposited to the Recycling Fund. When the beverage container deposit fee program started in 2011, the data on this whole system as well as balance and use of the Recycling Fund for SWM activities were not clear. Through organizational strengthening of SWM-BPW and technical assistance from the short-term expert with help of the JOCV, SWM-BPW became able to grasp the entire flow of the containers and deposit money by regularly collecting data from Koror State, Ministry of Finance and the recycling company. In 2015 the first volume of the Annual Report of the program compiling all data of FY2011-2014 was issued. Through such improvement, flow of money became transparent, and SWM-BPW became able to better use the Recycling Fund for their activities such as hiring of additional staff, awareness activities and improvement of the landfill including purchase of heavy vehicles, and construction of additional recycling facility (tire shredding facility). Among the issues on management of the deposit fee program identified under the Project, the followings have not fully been addressed: (i) Further analysis of data and annual planning based on the analysis (ii) Facilitating amendment of the act on the beverage container deposit fee program to expand eligible containers to all types of beverage containers.
(Supplementary Information) Capacity assessment	The short-term expert conducted capacity assessment of SWM-BPW and SWM-KSG two times in June 2012 and January 2014. Regarding SWM-BPW, the main target of technical transfer, the results show improvement in all aspects targeted under the Project, namely, (i) planning, implementation and monitoring of NSWMP, (ii) landfill management, (iii) management and monitoring of CDL/ promotion of 3R, and (iv) awareness raising. This finding is consistent with the degree of achievement of Outputs described above. The final capacity assessment is planned by the end of the Project. Further improvement of the scores in all aspects is expected.  *(Note) In the capacity assessment, one more item "support state SWM" was assessed. Its result is omitted from this report as this Project carried out little activities for that end (the training in*

	August 2015 mentioned in "Output Indicator 5-2" above is the first one).

(4) Implementation Process

・Progress of Activities (for each Output)

All activities scheduled up to now have been completed except Activity 4-6 (EIA for the new national landfill). Activity 4-6 has not been conducted, as the site for the new landfill was not acquired until mid 2014. EIA is planned within 2015.

・Method of Technical Transfer

No problem. Technical transfer was carried out by means of various training courses/workshops (including pilot projects), technical advice and positive criticism by JICA experts, OJT, etc. C/P appreciated that the short-term expert gave them "homework (To-do list)" that they had to do by the time the expert visited Palau next time. According to C/P, the To-do list clearly showed focus of their tasks while leaving independence on them.

・Implementation System

No problem. Outputs 1 to 4 were mainly targeted to SWM-BPW, while Output 5 was targeted to both SWM-BPW and SWM-KSG (i.e. as a joint undertaking by SWM-BPW and SWM-KSG). Also, EQPB was initially listed as an implementing agency, but it has not been a direct C/P agency since 2013 when its outreach officer in charge of SWM resigned. The Project focused the target of its on-site technical assistance on SWM-BPW among several C/P organizations. It accelerated activities and thus production of Outputs. JICA training opportunity (both under this Project and other JICA training courses) was provided to both SWM-BPW and SWM-KSG.

・Project Management

No major problem. JCC meetings were held once a year with participation of all key stakeholders, and functioned as a place for annual monitoring and decision-making. At JCC meetings, PDM and PO were reviewed and revised reflecting the situation. However, as noted in "(2) Outputs" and "(3) Project Purpose," some quantitative indicators do not have target values, and some other indicators are not the ones that exactly show the changes resulted in this particular Project.

・Communication within the Project

No major problem. A room for improvement was found in information sharing among SPREP, the Palauan side implementing agencies and JICA Palau Office.

・ Collaboration with Local Stakeholders

	Stakeholder	Type of coordination
1	Ministry of Health	Cooperation in awareness raising on 3R
2	Ministry of Education	Ditto
3	Ministry of Finance	Implementation of the beverage container deposit fee program
4	EQPB	Permit review for the new landfill site; the M-dock landfill closure plan

・Participation in Region-Wide Activities of J-PRISM

	Title	Type of activity	No. of C/P in Palau attended
1	Clean Pacific 2012 Campaign, Fiji, 2012	Regional training	1
2	Landfill Management Training in Yap, FSM, 2013	Regional training	3
3	Regional Training on Promotion of 3R in Palau, 2013	Regional training	3 trainers and 6 trainees
4	Regional Training for Trainers 2014 (Fiji)	Regional training	1
5	Study visit in Fiji from Palau, 2014	Study visit	1
6	Regional Training - Okinawa, Japan (May. 2015)	Regional training	2

・Coordination with Other Japanese and International Projects

1) Holistic approach with other schemes of Japanese assistance

	Scheme	Type of coordination
1	SV/JOCV (JFY2011-)	SV: Solid Waste Management (1) JOCV: Environmental Education (1)
2	Grant Assistance for	The Project for Koror State Government Compost Facility and Recycling Center

	Grassroots Human Security Projects (JFY2005-)	(2007) The Project for Koror Stated Government-Waste Segregation Station Phase 2 (2009) The Project for Acquisition of Waste Management Vehicles for Koror State (2010)
3	Others	Integrated Programme for Environmental-friendly Compost System in the Republic of Palau (JICA Partnership Program) (2011-2013) Eco-Islands Symposium (3) 3R Forum in Asia (1)

2) Collaboration with other donors

	Donor	Type of coordination
1	SPREP	Revision of NSWMP; workshops; wood chipper to Koror State (2003)
2	UNDP	Solar panels for the Recycle Center in Koror State (2007)

・Other Promoting and Inhibiting Factors

Abandonment of activities related to Public Education and Enhancement Committee (PEEC) as a promoting factor: PEEC, a committee established under the previous JICA technical cooperation project (Improvement on Solid Waste Management in the Republic of Palau, 2005-2008) was once revitalized under J-PRISM, but finally dissolved in 2013, as it was difficult to hold regular meetings attended by members from SWM-BPW, EQPB and SWM-KSG. This resolution solved the problem of delays of activities for Output 3 (awareness on 3R) as SWM-BPW alone became able to carry out necessary activities.

III. Results of Analysis from the Viewpoints of Five Evaluation Criteria

(1) Relevance

Evaluation: Relevance is high.

The Project is still consistent with the national solid waste management policy (NSWMP), needs for SWM in Palau as well as Japan's development assistance policy. Regarding the needs for SWM, a new system of collection and closure of state dumpsites will be necessary when the new national landfill being planned starts operation in the future. The technology being transferred is suitable.

(2) Effectiveness

Evaluation: Effectiveness is high.

1) Achievement of Project Purpose

The Project Purpose was mostly achieved. The valid indicator of the Project Purpose (Indicator 2 on management of the beverage container deposit fee program, which was selected as the issue that best represents the SWM issues in Palau) was mostly achieved. This shows improved monitoring and reporting capacity by SWM-BPW, thus enhanced transparency of flow of beverage containers and money under the deposit fee program in coordination with Koror State (SWM-KSG) as well as Ministry of Finance. The Indicator will be fully achieved if closer monitoring of the program, especially that of sales from export of redeemed beverage containers, and annual planning are conducted.

Besides the deposit fee program, SWM-BPW's management of the existing national landfill (M-dock), preparation of closing of it and development of the new landfill (land was acquired) is on track with technical assistance under this Project. Also, awareness activities on 3R and human resource development (training) in 3R/SWM were promoted by SWM-BPW and SWM-KSG. This is attributed to, besides technical assistance from J-PRISM, organizational strengthening of SWM-BPW and enhanced collaborative relationship between SWM-BPW and SWM-KSG.

Such outcomes are shown in the results of the capacity assessment. Scores of SWM-BPW, the main target of technical assistance improved between 2012 and 2014 in all aspects of technical transfer, namely, NSWMP planning and implementation, landfill management, CDL/3R and awareness raising. The final results of the capacity assessment throughout the Project period will be obtained when the final round of capacity assessment (end line survey) is conducted by the end of the Project.

2) Contribution of Outputs to Project Purpose

All Outputs contributed to achievement of the Project Purpose.

3) Other promoting/inhibiting factors
None in particular.

(3) Efficiency

Evaluation: Efficiency is high.

1) Production of Outputs
The Outputs was fully or mostly produced except for the revision of the closure plan of the M-dock landfill (part of Output 4), for which activities are ongoing at the time of terminal evaluation and expected to be completed by the end of the Project period.

2) Appropriateness of Inputs
- Palauan side No problem was found. It was noteworthy that the Palauan side provided sufficient inputs such as additional C/P (as a result of upgrading of SWM-BPW from a unit to division) as well as cost for recruiting additional officers of SWM-BPW, improvement of the M-dock landfill, purchase of heavy vehicles, etc., from the Recycling Fund, which significantly contributed to production of Outputs.
- Japanese side No problem was found. Although the period of dispatch of short-term experts was limited, it did not affect the degree of production of Outputs.

3) Utilization of external resources
Facilities and equipment developed at the Recycling Center of Koror State through Grassroots Grant Aid helped smooth operation of the beverage container deposit fee program, and contributed to production of Output 1.

The JOCV assigned to SWM-BPW helped C/P in its daily operation and awareness activities.

Training opportunities other than under J-PRISM also accelerated capacity building of C/P.

4) Other promoting/inhibiting factors
An ex-Senior Volunteer, who is currently directly hired by Koror State for consulting on SWM, significantly contributed to the development of the Recycling Center and smooth operation of the beverage container deposit fee program.

The Outputs of this Project was built upon the previous JICA technical cooperation project. The outcomes of that project (such as the operation manual of the M-Dock landfill, draft closure plan of the M-dock land fill, draft NSWMP and awareness activities) were further enhanced under this Project.

(4) Impact

Evaluation: Positive impacts were observed; negative impacts were not observed.

1) Impact at Overall Goal level
There is likelihood that the Indicator of the Overall Goal, "Good practices conducted in Palau are implemented in other island countries tackling with common issues" will be achieved in three years after project completion. The good management of the M-Dock landfill site and the beverage container deposit fee program are candidates of the themes that Palau can share in other island countries.

Regarding the latter case, although the Palau's beverage container deposit fee program is different from other Micronesian countries in that the amount of deposit per beverage container is higher, it is worth showing an example of a working CDL that generates funds for SWM activities.

2) Other impacts
- Positive impacts:
  (i) Financial impact of accurate grasp of status of the Recycling Fund: Through improvement of management of the Recycling Fund, flow of money became transparent, and SWM-BPW became able to better use the Recycling Fund for their activities such as hiring of additional staff, awareness activities and improvement of the landfill including purchase of heavy vehicles, and construction of additional recycling facility (tire shredding facility).
  (ii) Impact of working with SWM-KSG: Participation in the Project indirectly enhanced staff motivation in management that contributed to successful operation of the Redemption Center. The number of staff of the Redemption Center doubled from around 30 persons in 2011 to nearly 70 persons in 2015.
  (iii) Impact of interaction of the national (SWM-BPW) and Koror State (SWM-KSG): Emergence of joint activities such as glass craft projects.

- Negative impacts: Not observed.

(5) Sustainability

Evaluation: Sustainability is between high to medium.

1) Policy and institutional aspects

No problem was found. The NSWMP provides full policy support to the activities introduced under the Project. Amendment of the law of beverage container deposit fee program (2005) that is currently under consideration could further accelerate implementation of the program.

2) Organizational aspects

No problem was found in the current situation, while there is a concern on manpower of SWM-BPW in near future.

In May 2014, SWM-BPW was upgraded from a unit to a Division under the BPW's organizational chart with one Chief, one SWM Educator, one SWM Coordinator, one Administration Officer and one M-dock landfill Supervisor and staffs. This significantly enhanced SWM-BPW's capacity in SWM.

On the other hand, there are still two vacancies (assistant SWM Educator and assistant SWM Coordinator). According to SWM-BPW, the vacancies will be filled once funds for it is secured (at the moment, there is no concrete plan of recruiting new staffs). Opening and operation of the new national landfill in future may require additional personnel.

3) Financial aspects

No problem was found in the current situation, while there is a concern on budget availability of SWM-BPW in near future.

The budget of SWM-BPW consists of the recurrent fund (from Congress) and the Recycling fund that is used to cover shortages of the recurrent fund. In FY 2015, the share of the amount is roughly 25% from the recurrent fund and 75% from the Recycling Fund.

There is a plan that the allocation of recurrent fund to SWM-BPW will be zero in FY2016, which adds a concern on continuation of its activities including construction and operation of the new landfill and the following commencement of collection services in Babeldaob and closure of state landfill sites there.

4) Technical aspects

No major problem was found in technical skills of both SWM-BPW and SWM-KSG in continuing the activities that they currently carry out. It is notable that SWM-BPW conducted a session to share what some staff members learned with others. Regular holding of such sharing sessions is planned. Further, SWM-BPW is planning to hold workshops with states SWM for information and knowledge sharing. SWM-KSG shares and exchange information including technical knowledge in its regular internal meetings.

Future concerns may include technical skills for SWM-BPW's new operations in near future such as construction and operation of the new landfill and the following commencement of collection services in Babeldaob and closure of state landfill sites there.

5) Others （if any）

Human resource development of SWM-KSG might be important for sustainability of effects of this Project in terms of smooth operation of the beverage container deposit fee program and maintenance of collaboration. Although training is conducted within the organization, development and maintenance of skills of all management and technical staff members including a number of newly recruited staffs (following the rapid expansion of operation) is critical.

In Palau, there is a tendency that a lot of new technology is brought from abroad (e.g. plastic oil, biogas) that needs to be well controlled in terms of appropriateness of technology and feasibility.

IV Conclusion

Five Evaluation Criteria

・Relevance, Effectiveness and Efficiency are high. Negative impact was not observed.

・To further improve Effectiveness, improvement of close monitoring on cash flow of the beverage container deposit fee program is necessary.

・Improvement of monitoring of CDL, 3R awareness program are observed which was resulted mainly strengthening manpower of MPIIC utilizing the Recycling Fund.

・Some indicators for output are recommended to be revised since they may not indicate achievement accurately.

・Good communication and collaboration between SWM-BPW and SWM-KSG caused a new activity such as glass craft activity utilizing waste glass bottle. Further collaboration among stakeholders is inevitable for success.

Achieved output and remaining issues

Output Indicator 1-2: Amount of shipped off containers. To ensure transparency of Beverage Container Deposit Fee Program, analysis break down of revenue for the Recycling Fund is needed.

Output 2: Fully achieved, but recent development of SWM in Palau requires revision of NSWMP.

Due to failure of concrete target figure set in the indicator, achievement evaluations become lower in some indicators (3-2, 5-2)

Output 4: Indicators 4-1 and 4-3 are achieved, and 4-2 (closure plan) is expected to be completed by the end of the Project period.

Conclusion on the course of implementation of the Project

Based on the above-mentioned findings and evaluation, the evaluation team considers it appropriate that this Project be completed as planned.

Other Issues on waste management for which Japanese assistance is required

1. Proper collection system utilizing new national landfill including all states in Koror and Babeldaob Island.
2. Construction of new landfill
3. Strengthening of support for states SWM
4. Further promotion of 3R and management of hazardous wastes
5. Technical advice for new technology for waste management
6. Coordinate Japan related assistance on waste management in Palau

V Recommendations for the remaining period

For SWM-BPW:
1. Amend the law of the container deposit fee program for further improvement of the program
2. Revise NSWMP in a way that it reflects current improvement in SWM
3. Continue good management of M-Dock landfill including continuous search for covering soil
4. Finalize the closure plan of the M-Dock landfill
5. Cooperate with other states than Koror for SWM in conducting waste generation and composition survey in order to collect information for closure plans of dumpsites and new landfill construction.
6. Continue the awareness activities

For Koror State Solid Waste Management Office:
1. Keep good collaboration with SWM-BPW for awareness and support to other state for SWM

For SPREP:
1. Provide technical support to SWM-BPW to revise NSWMP.

For JICA experts:
1. Advise on management of the existing landfill site including revision of the closure plan
2. Advise on a report of EA and concept design which will be outsourced by SWM-BPW
3. Monitor the progress of the activities of the awareness-raising

For Experts in J-PRISM HQ:
1. Improve sharing of information between J-PRISM HQ and SPREP so that the Japanese side in Palau can grasp overall picture of SPREP's assistance in Palau.

Recommendations on modification of PDM
The following modifications are proposed for review and approval by the final JCC.

Item	Current (Ver.4)	Proposed modification	Reason
Project Purpose Indicator	2) % of amount of containers redeemed out of imported beverage containers maintained 90% or above	2) The beverage containers deposit fee program is properly managed by SWM-BPW in collaboration with SWM-KSG.	Redemption rate does not show specific outcomes of this Project, which is improvement of data compilation and reporting of the program.
Project Purpose Indicator	-	3) The results of capacity assessment show improvement of scores in all aspects at the end of the Project period.	Alternative indicator to Indicator 1.

Attachment:

1. Latest Project Design Matrix (PDM Version 4, May 2015)
2. Latest Plan of Operation (PO Version 4, June 2015)
3. Schedule of Terminal Evaluation
4. Record of Japanese Inputs
   - 4-1 Dispatch of Experts
   - 4-2 Training in Japan
   - 4-3 List of Machinery and Equipment provided by Japan
   - 4-3 Local cost
5. Record of Palauan Inputs
   - 5-1 List of Counterpart personnel
   - 5-2 Local cost

ANNEX III: Project Design Matrix (PDM) - Palau

PDM: Version4 Mar.2015

Project Title: Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Target Group : C/Ps of Bureau of Public Works (BPW), Ministry of Public Infrastructure, Industry and Commerce(MPIIC) and Solid Waste Management, Korore State

Final Beneficiaries: Citizens of Palau

Project period: 5 years

Implementing Agency: BPW, MPIIC and Korore State

Target Area: Palau

Narrative Summary	Objectively Verifiable Indicators	Means of Verifications	Important Assumptions
Overall Goal			
Sustainable management of solid waste inPalau is enhanced	1.Good practices conducted in Palau are implemented in other island countries tackling with cmmon issues.	To be advised	
Project Purpose			
Human and institutional capacity base for sustainable Solid Waste Management in Palau is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	1. 5 experts (Trainers) in the field of 3R/beverage container deposit fee program/ landfill operation are listed in the SPREP inventory 2. % of amount of containers redeemed out of imported beverage containers maintaned 90% or above.	SPREP (Regional inventory of skilled people) Records of Recycling Center	1. Natural disaster would not drastically affect the collaboration among PICs and SPREP. 2. Political changes of PICs would not drastically affect the collaboration among PICs and SPREP.

#	Priorities under RS2010	Outputs	Objectively Verifiable Indicators	Means of Verifications
1	Sustainable Financing	**Output 1**: Capacity to manage the beverage container deposit fee program (sustainable financing system) is enhanced.	1-1: % of amount of containers redeemed out of imported beverage containers by the end of the Project. 1-2: Amount of shipped off containers.	Records of Recycling Center
2-1	3Rs/4Rs			
2-2	Waste Disposal	**Output 4**: Capacity to manage the final landfill site is enhanced.	4-1: A period of operation for M-Dock is extended for 3 years. 4-2: The exsiting closure plan for M-dock landfill is revised. 4-3: Conceptional Plan of the waste disposal is developed.	Record of BPW
2-3	Waste Collection			
3	Legislation			
4	Awareness/Communication/ Education	**Output 3**: Capacity to conduct Awareness raising on 3R is enhanced.	3-1: Materials are deliverd to 50% of schools in the Earth day activity. 3-2: # of school presentations/ visits & conducted workshops	Records of BPW
5	Capacity Building	**Output 5**: Training program on 3R /SWM is developed.	5-1 Training manual / materials is developed. 5-2: # of training conducted and # of participants	Record of BPW
6	Environmental Monitoring			
7	Policy,Planning, Performance	**Output 2:** National Solid Waste Management Plan(NSWMP) is finalized and Action Plan is revised.	2-1: NSWMP is finalized. 2-2: Action Plan is revised.	Record of BPW
8	Solid Waste Industry			
*	Monitoring system of RS2010			

Activities	Inputs: Japanese Side	Inputs: Palauan side	Important Assumptions
Please see PO for details.	Dispatch of JICA experts Provision of materials of 3R Provision of Regional, sub-regional and in-country workshops / training	Assignment of National PD/PM and CPs Local cost sharing Provision of necessary land/facility, work space Fund for new dike of M-Dock / preparatory study for new landfill site (EIA)	1. Counterpart personnels keep working in the field of SWM. 2. Budget for setting up of segregation points are to be allocated from Koror state government.

Pre-condition

Cooperation of community people of the target area is obtained.

ANNEX 3(h)-Palau

ANNEX II : PO - Palau

Term: 2011 ~ 2015 (5years)

Monitored in June 2015

Ver.4

	Outputs and Associated Activities	Indicators for Outputs	Person in-charge	Plan / Actual
JCC's C/Elvs	JCC ◇			
	Steering Committee ☆			
	Evaluation Studies ★			
OUTPUT 1: Capacity to manage the beverage container deposit fee program (sustainable financing system) is enhanced.				
1-1	Implement the beverage container deposit fee program	1-1: % of amount of containers redeemed out of imported beverage containers by the end of the Project. 1-2: Amount of shipped off containers.	Calvin	Plan / Actual
1-2	Conduct regular meeting and revise the program if necessary		Calvin	Plan / Actual
OUTPUT 2: National Solid Waste Management Plan is finalized and Action Plan is revised.				
2-1	Facilitate the approval of the NSWMP (and obtain the approval)	2-1: NSWMP is approved by the Government of Palau and Action Plan is revised.	Calvin	Plan / Actual
2-2	Revise the Action Plan of NSWMP if necessary		Calvin	Plan / Actual
OUTPUT 3: Capacity to conduct Awareness raising on 3R (targeting MPIC and Eathday) is enhanced.				
3-1	Prepare the action plan of awareness raising / environmental education on 3R and finalize it	3-1: Materials are delivered to 50% of schools in the Earth day activity. 3-2: # of school presentations/ visits & conducted workshops	Mangkur	Plan / Actual
3-2	Implement the Action Plan		Mangkur	Plan / Actual
3-3	Develop and revise the tools/materials on 3R reflecting the lessons learned		Mangkur	Plan / Actual
OUTPUT 4: Capacity to manage the final landfill site is enhanced.				
4-1	Develop the plan of new dike for M-dock landfill	4-1: The closure plan for M-dock landfill is officially submitted to EQPB for approval. 4-2: EIA for the new landfill site is conducted. 4-3: Selection of site for new landfill is approved by landowner.	Calvin	Plan / Actual
4-2	Construct the new dike for M-dock landfill		Calvin	Plan / Actual
4-3	Conduct a survey to estimate the remaining capacity of M-Dock landfill		Calvin	Plan / Actual
4-4	Prepare a plan for safe closure of M-dock landfill		Calvin	Plan / Actual
4-5	Select the site of a new national landfill		Calvin	Plan / Actual
4-6	Prepare EIA for the new national landfill.		Calvin	Plan / Actual
4-7	Develop a conceptional plan of the waste disposal.		Calvin	Plan / Actual
OUTPUT 5: Training program on 3R / SWM is developed.				
5-1	Develop the training program on 3R / recycling program to be used at the regional training/workshop	5-1 Training manual / materials is developed. 5-2: # of training conducted and # of participants.	John	Plan / Actual
5-2	Conduct the training for Micronesian area training /workshop (This includes in-country training conducted in other countries)		John	Plan / Actual
5-3	Evaluate the training / revise the training program with feedbacks		John	Plan / Actual

Attachment 3: Schedule of Terminal Evaluation

Date	Time	Where/What	With who
20th of August (THU)	7:30-	JICA office	Mr. Matsui
	9:00-10:00	Visit M-Dock landfill (first meet at BPW)	Mr. Mengkur SWM-BPW(tell: 488-2480)
	10:00-11:30	Visit a new landfill site	Mr. Mengkur
21st of August (FRI)	9:00-10:00	Visit Koror State Recycling Center	Mr. Selby SWM-KSG (488-8076)
	10:00-10:30	Interview to C/P @SWM office of Koror State	Mr. Selby
24th of August (MON)	11:00-12:00	Meeting @BPW	Risa Muranaka
	13:30-16:00	Courtesy call to BPW and Interview @conference room of BPW	Mr. Brian, Mr. Calvin, Mr. Menkgur.
25th of August (TUE)	14:00-16:00	Report to BPW @ conference room of BPW	Mr. Brian, Mr. Calvin, Mr. Menkgur, Mr. Fuji, Mr. Selby
	16:30-	Embassy of Japan	

Attachment 4: Record of Japanese Inputs

Attachment 4. Record of Japanese Inputs

4-1. Dispatch of Experts

Long-term Experts from Project Office	Short-term Experts	Local expert *	Total
0.9 MM	7.9 MM	0.1 MM	8.9 MM

Note: Cost of local expert is included in Local Cost Support

4-2. Training in Japan

Course Name	Period	Position / Organization	Name
"Promotion of Shibushi Model from the Republic of the Fiji Islands to Pacific Island Countries"	15th to 30th July, 2013	Environmental Community Educator, Koror State Government	Mr. Ngirbechat Arsenio
		Waste Generation Rate Surveyor, Koror State Government	Mr. Lee Roth Wilhelm
"J-PRISM Regional Training for Trainers"	25th May to 4th June, 2015	Manager, Solid Waste Office, Bureau of Public Works, Ministry of Public Infrastructure, Industry and Commerce	Mr. Calvin Ikesiil
		Manager, Solid Waste Management Office of Koror State Government	Mr. Selby Etibek

4-3. List of Machinery and Equipment provided by Japan

None

ANNEX 3(h)-Palau

4-4 Local Cost

Period: from Feb2011 to June 2015

Country	Sub Category	Air Fare	Travel Allowance	Refreshments	Miscellaneous					Total			
		Travel Allowance / Air Fare	Travel Allowance / Air Fare	Refreshments	Supplies/Equipment	Communication	printing and bookbinding	Rent(Office Equipment, etc.)	Miscellaneous	In local currency	Local Currency	In Japanese Yen*1	In USD *2
Palau	From JICA Office budget	4,455.08	653.52	84.50	3.79	240.25	855.00	4,195.84	592.85	11,080.83	US Dollar	¥1,331,450.32	US$10,740.96
	From FSM budget	0.00	3,198.57	190.85	301.66	414.60	0.00	150.00	0.00	4,255.68	0.00	365,308.57	US$3,693.40
	Sub-Total	4,455.08	3,852.09	275.35	305.45	654.85	855.00	4,345.84	592.85	15,336.51	0.00	¥1,696,758.89	US$14,434.37

Attachment 5. Record of Palau Inputs

5-1 List of Counterpart Personnel

#	Name	Management CPs	Assigned Period	Position	Organization	Activities in charge
1	Techur Rengulbai	Project Director	Feb. 2011-Nov. 2012	Director	Bureau of Public Works, Ministry of Public Infrastructure, Industry and Commerce	Resigned
2	Brian Melairei	Project Director	Nov. 2012-	Director	Bureau of Public Works, Ministry of Public Infrastructure, Industry and Commerce	All
3	Calvin Ikesil	Project Manager	Feb. 2011-	Manager	Solid Waste Office, Bureau of Public Works, Ministry of Public Infrastructure, Industry and Commerce	All

#	Name	Technical CPs	Assigned Period	Position	Organization	Activities in charge
1	Mengkur Rechelulk		Feb. 2011-	Educator	Solid Waste Management Division, Bureau of Public Works, Ministry of Public Infrastructure, Industry and Commerce (SWM-BPW)	3-1, 3-2, 3-3
2	Vernon Basiliu		Feb. 2011-	Operator	SWM-BPW	no activities in charge on PDM/PO as of Jul.2013. But some activities might be considered in due course
3	Sylvester Bemert		Feb. 2011-	Operator	SWM-BPW	no activities in charge on PDM/PO as of Jul.2013. But some activities might be considered in due course
4	Jessica Shizuko Emesiochel		Mar. 2014-	Coordinator	SWM-BPW	
5	Isumechraard K. Ngirairikl		Feb. 2011- Aug. 2013	Outreach Officer	Environmental Quality and Protection Board	Resigned
6	John O. Ngiraked, Jr.*		Feb. 2011-	Project Coordinator	Solid Waste Management Office of Koror State Governemnt (SWM-KSG)	1-1, 5-1, 5-2, 5-3
7	Bachat Arsenio*		Feb. 2011-	Community Educator	SWM-KSG	1-1, 5-1, 5-2, 5-3
8	Selby P. Eilbek*		Jan. 2013-	Manager	SWM-KSG	1-1, 5-1, 5-2, 5-3
9	Bally Sokyang*		Feb. 2011-	Community Educator	SWM-KSG	1-1, 5-1, 5-2, 5-3

*Partially involvement

Attachment 5 (Continued)

5-2 Local Cost

	1. Travel expenses (airfare, allowances,		2. Expenses for documenting		3. Purchasing goods/materials		4. Foods /Drinks		5. Others		Total	
	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD
Palau	850	850	0	0	18,489	18,489	0	0	466,045	466,045	485,384	485,384

Terminal Evaluation Report for the Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Independent State of Samoa

Date: September11, 2015

I. Project Outline and Evaluation Policy

(1) Project Outline	
Background	Samoa has been fortunate with the JICA cooperation since 2000 because of its status as the host country of JICA's regional technical cooperation as well as the presence of the SPREP Office. Tafaigata landfill is the first landfill in the Pacific region rehabilitated using the semi-aerobic system as a model. A number of officers with MNRE have already participated, some with multiple times, in the various training held in Japan. Therefore, it was anticipated that Samoa could play a key role to transfer its technical experiences and good practices to other countries, especially in terms of proper landfill management.
Summary of the Project	(See Attachment 1 and 2 for details)
-Overall Goal	Sustainable management of solid waste in the Pacific Region is enhanced
-Project Purpose	Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)
-Priorities in RS2010	**Outputs**
3R/4R	1) Waste Minimization measures and practices are introduced and implemented at the urban areas.
Waste Disposal	2) Tafaigata is operated as a regional waste disposal facility with improvements at Vaiaata in place
Capacity Building	3) Experiences and lessons learnt are shared in both national and international levels
Project Duration	Five years from February 3, 2011 to February 2, 2016
Implementing Agency	Ministry of Natural Resources and Environment (MNRE)
Target Group	C/Ps from Division of Environment and Conservation (DEC), MNRE
Target Area/ Target Population	Samoa with population of approximately 189,000 (as of 2012, World Bank data)
(2) Evaluation Policy	
Objectives	1) To verify the accomplishments of the Project compared to those planned; 2) To identify promoting and/or inhibiting factors that have affected the project implementation process; 3) To analyze the Project in terms of the five evaluation criteria (i.e. Relevance, Effectiveness, Efficiency, Impact, and Sustainability); 4) To discuss the results of evaluation and solutions for problems that may be observed through the evaluation together with the personnel concerned with the Project and make necessary suggestions
Member of Terminal Evaluation Team	

	Title	Name	Position/Organization
	Cooperation Planning (Overall)	Toru TAGUCHI	Assistant Director, Environmental Management Division I, Global Environment. Department., JICA
*	Cooperation Planning (Samoa)	Tetsuji NAKASONE	Project Formulation Advisor JICA Samoa Office
*	Evaluation Analysis	Yasuyo HIROUCHI	Permanent Expert, International Development Associates Ltd

*Members participating in the evaluation study in the country

Period of Evaluation Study in the Country	Five days from September 7 to 11, 2015 (See Attachment 3 for details)
Methodology	JICA Terminal Evaluation Team collected the information through document analysis, questionnaire survey and interviews with the officers concerned with the Project, JICA experts, and the local stakeholders involved in the pilot project for waste

	segregation/minimization (PPP partners and a community leader) and a JOCV volunteer. Based on the results of the evaluation, the Team prepared a draft report and finalized it through discussions with the personnel concerned with the Project.
Limitation	Due to limited time available for the study, interviews were mostly limited to the MNRE officers involved in the Project. Sufficient time to discuss the findings with the C/Ps was not secured while preparing the draft.

II. Accomplishment and Implementation Process of the Project

(1) Inputs (as of June 2015 unless otherwise mentioned)

<Japanese Side>

1) Dispatch of JICA Experts : 7 persons (15.8M/M)
   - 1 Short-term Expert (0.8 M/M)
   - 5 Long-term Experts from Project Office (10.8 M/M)
   - 1 Local Expert from Project Office (4.2 M/M)

   (Cost of Local expert is included in Local cost support)
1) Training in Japan: 1 persons
   - Training course for "Great Vava'u and Okinawa Mottainai Movement Project" (1 from PPP partner)
2) Provision of equipment : 145,858 USD
   - Weighbridge with accessories, computerize data management system, control house, chainsaw, etc.
3) Local cost support: 405,017 WST (168,227USD)
   - Construction cost for weighbridge system

(See Attachment 4 for details)

<Samoan Side>

1) Assignment of National Project Director (PD), Project Manager (PM) and C/Ps: 7 persons.
   - 3 Management C/P
   - 4 Technical C/P from MNRE
2) Local cost sharing: 200,246 WST (84,842USD)
   - Cost for base of weighbridge system
3) Land facility, work space
   - Office space for JICA experts at MNRE and Tafaigata

(See Attachment 5 for details)

(2) Outputs

Output 1: Waste Minimization measures and practices are introduced and implemented at the urban areas.	Degree of achievement[1]: Partly achieved

Indicator	Results
1.1Four (4) waste survey reports are produced	➢ Baseline: Before the Project, the C/Ps did not have practical knowledge /skills related to waste surveys. ➢ Progress: ・ So far, 6 waste surveys have been conducted. 5 reports have been already prepared and the other one is expected to be completed by December 2015. ・ In addition, two more surveys are planned in October and November 2015. The reports are expected to be ready by December 2015.

Table (a): List of waste surveys conducted/to be conducted through the Project

	Type of waste survey	Timing of survey	Preparation of Report
1.	Time-and-motion (1) in Zone A	2013/4-5	Completed
2.	Waste audit (1) in Vai late	2014/6	Completed
3.	Waste audit (2) Hotels in Apia	2014/5-6	Completed
4.	Waste audit (3) in Apia village, Viala village	2014/6	Completed
5.	Incoming green waste survey at Tafaigata landfill	2015/1-3	Completed
6.	Time-and-motion (2) in Zone B1, B2	2015/7	-Data is being compiled -Report is expected to be ready by Dec 2015
7.	Waste audit (4) in Savai	(2015/10)	-Report is expected to be ready by Dec 2015

[1] *Degree of achievement for each output/Project Purpose is judged based on the achievement level of indicators set for each Output/Project Purpose. Ratings used for this judgment are four levels, such as "Fully achieved", "Mostly achieved", "Partly achieved", "Not achieved."*

8.	Time-and-motion (3) in rural area	(2015/11)	-Report is expected to be ready by Dec 2015

➢ Conclusion: The Indicator has been fully achieved.

1.2 Four (4) communities and nine (9) businesses participated in waste segregation/minimization

➢ Baseline: Before the Project, there were activities to promote segregation at source, but they did not continue. Some activities driven by Pacific Recycle Co.Ltd focused on some schools and few businesses. However, it was discontinued because of the problems with the high mixed general waste included in the recycling cages provided by the company

➢ Progress:

- At present, 7 communities and 6 businesses participate in segregation of cans and plastic bottles and/or composting from green wastes under the pilot project for waste segregation/minimization (October 2013-December 2015).
- In addition, 4 schools and one government agency participate in in segregation of cans and plastic bottles and/or composting from green waste.

Table (b): Communities/businesses participating in waste segregation/minimization

	Organization	#	Waste segregation/minimization measures implemented
1	Community	7	• Segregation of recyclable waste from households (7): Segregated recyclable wastes are collected from the households along the main collection roads in 7 communities in Zone A (Leufisa, Motootua, Malifa, Tanugamanono, Apia, Matautu and Vaiala villages) since October 2013. • Segregation of cans and plastic bottles (1): A segregation cage installed at the community house in Vaiala village since May 2015 • Composting of green waste (2): A model home garden, using the composted waste, has been established at the Village Mayor's house l in collaboration with a JOCV volunteer and Shibushi Project since July 2014. A communal garden, using the composted waste, is being developed in Apia village.
2	Business	6	• Segregation for cans and plastic bottles. 7 segregation cages installed at 4 hotels and 2 supermarkets. Note: The activity started with 9 businesses, but cages were removed from some businesses because of the high mix rate of general waste. The Project plans to expand the activity to other hotels and accommodations through STA in September 2015

Table (c): Public organizations participating in waste segregation/minimization

	Organization	#	Waste segregation/minimization measures implemented
1	Schools	4	• Segregation for cans and plastic bottles. Segregation cages installed at 4 schools. • Composting from green waste: School garden, using the composted waste, has been introduced at one of the 4 schools in collaboration with a JOCV volunteer and Shibushi Project
2	Government agency (Samoa Tourism Authority)	1	• Segregation for cans and plastic bottles. 10 segregation cages installed at 2 points along the Beach Road and 4 bus terminals schools. The cages removed from the businesses were used.

➢ Conclusion: The Indicator has been mostly achieved and is likely to be fully achieved by the end of the Project.

1.3 Amounts of recyclable waste collected increase 10%.

The relevant data is not available.

➢ Conclusion: Achievement of the Indicator was not assessed because the relevant data is not available.

1.4Four (4) public consultation/hearing

➢ Progress:

- Four public consultation/public awareness meetings have been held (July 2013, March, September, and December 2014) to solicit public opinions about waste

meeting/workshop for waste minimization regulations/strategy	management, which have been reflected in developing draft National Solid Waste Management Strategy. ➢ Conclusion: The Indicators have been fully achieved.
Additional item1a National Solid Waste Management Strategy is developed, including waste minimization strategy	Note: The Item 1a is added in order to understand the contents of the Output properly. ➢ Progress: The draft National Solid Waste Management Strategy (2016-2025) has been developed, which will be updated based on the interim results of the pilot projects in October 2015. It will be further modified after the "Pacific Regional Waste and Pollution Management Strategy" is adopted in October 2015 so that the National Strategy will be in line with the Regional one. MNRE plans to finalize the draft and submit it to the Cabinet for endorsement by the end of November 2015.

Table (d):Timeframe for development of National Solid Waste Strategy

	Major steps	Provisional schedule	Progress
1	Consultation meetings/public awareness	2013-2014	Completed
2	Development of draft strategy	August-September 2015	Ongoing
3	Modification based on the interim results of the pilot project on waste segregation/minimization	September-October 2015	
3	(Adoption of Regional Strategy (RS))	(October 2015)	
4	Align the strategy with RS	October 2015	
5	Submission to the Cabinet for endorsement	By the end of November 2015	

➢ Conclusion: The Indicator has been partly achieved and is likely to be fully achieved by the end of the Project.

Additional item 1b Policy framework for Container Deposit Levies (CDL)	Note: The Item 1b is added in order to understand the contents of the Output properly. ➢ Progress: Draft policy framework for CDL ("CDL Program Framework") has been circulated among the relevant key stakeholders (i.e. Ministry of Finance, Ministry of Health, Ministry of Public Enterprise, and Ministry of Revenue) for further comments prior to conducting a wider public consultation planned in October 2015. MNRE plans to finalize the draft and submit it to the Cabinet for endorsement by the end of November 2015.

Table (e): Timeframe for development of policy framework for CDL

	Major steps	Provisional schedule	Progress
1	Draft framework	September 2015	Ongoing
2	Public consultation meeting	October 2015	
3	Finalization of draft	October 2015	
4	Submission to the Cabinet for endorsement	By the end of November 2015	

➢ Conclusion: The Indicator has been partly achieved and is likely to be fully achieved by the end of the Project.

<Overall>
Output 1 has been partly achieved and is likely to be fully achieved by the end of the Project

Output 2: Tafaigata is operated as a regional waste disposal facility with improvements at Vaiaata in place	Degree of achievement: Partly achieved

Indicator	Results
2-1Tafaigata Landuse and	➢ Baseline: Before the Project, there was no land use development plan in place before to guide the use of the Tafaigata Land Area of 100 acres in the future especially for disposal

Development Plan produced	purposes. ➢ Progress: ・ Tafaigata Land Use and Development Plan was prepared in 2012, which was approved by CEO in 2013. The Plan demarcates different areas for various developments: (i) Administration Area, (ii) Recycling Area, (iii) Healthcare Waste Area, (iv) Hazardous Waste Area, (v) Sewage and Sludge Area, and (vi) Waste Landfill Area. ・ It is noted that there is no space specifically allocated for disaster wastes at the Tafaigata landfill. ➢ Conclusion: The Indicator has been fully achieved.
2-2 Incoming waste data are recorded and periodically reported (monthly) using the weighbridge system at Tafaigata	➢ Baseline: Before the Project, there was no recording and reporting system in place at Tafaigata. ➢ Progress: ・ Recording of the incoming waste data and monthly monitoring, using the weighbridge system, started in April 2013 on trial basis and in June officially. The incoming waste data has been recorded and reported monthly. ➢ Conclusion: The Indicator has been fully achieved.
2-3Improved quality of leachate at Vaiaata landfill	➢ Definition: The improvement of quality of leachate refers to (i) construction of the leachate treatment facility: and (ii) improvement of at least basic parameters (Color, Smell, Transparency, pH, Dissolved Oxygen (DO)) in line with the standards set by the operational manual (2009). ➢ Baseline: Before the Project, no treatment system was installed for Vaiaata, and thus its generated leachate was only collected in a retention pond but without any treatment ➢ Progress: ・ Leachate treatment system (combination of coconut husks, volcanic stones, corals and sand) was installed in March 2015. ・ MNRE started monthly monitoring in August 2015 but has not been able to collect the enough samples due to weather conditions. According to the visual check, physical parameters of the leachate (color, smell and transparency) were greatly improved after treatment with the installation of the treatment facility. ➢ Conclusion: The Indicator has been partly achieved.
2-4 Management and control of waste pickers are checked daily	➢ Definition: The Indicator means "The waste pickers who work in Tafaigata landfill should be registered by MNRE and their comings and goings should be checked daily. Also they are expected to follow MNRE's occupational safety guidance". ➢ Baseline: The registration started in 2010. ➢ Progress: ・ Currently, 20 waste pickers are registered by MNRE. The waste pickers sign the attendance book kept by their leader when they work at the landfill. The landfill officers/casual workers monitor the waste pickers on site to see if they are the registered ones and if they follow the safety guidance. ・ Sometimes, waste pickers do not observe the safety guidance especially when the landfill officers are not around. They tend not to listen to the instruction of the casual workers of MNRE. ・ The landfill office used to call twice-a-month meeting with the waste pickers, which has become ad-hoc lately due to other engagements. ➢ Conclusion: The Indicator has been partly achieved.
<Overall> **Output 2 has been partly achieved. The achievement level by the end of the Project may become higher depending on the results of leachate monitoring and enhanced effort for coordination with the waste pickers.**	
Output 3: Experiences and lessons learnt are shared in both national and international levels	Degree of achievement: Mostly achieved

Indicator	Results
3.1 Newsletters are produced twice a year and at least one relevant document is produced.	Note: Semi-annual publication of newsletter was decided in September 2013 so that the Indicator should be rephrased as "Newsletters are produced twice a year from September 2013 and at least one relevant document is produced by the end of the Project". ➢ Progress: ・So far, electronic newsletters have been produced on semi-annual basis (September 2013, March and December 2014, and July 2015). Another one is planned in December 2015. The newsletters have been distributed to J-PRISM C/Ps in other PISs, SPREP, and JICA. ・A brochure on 3R, incorporating the experiences and lessons from the pilot project, is expected to be produced in October 2015. ➢ Conclusion: The Indicator has been mostly achieved and is likely to be fully achieved by the end of the Project.
3-2 Four (4) overseas missions of PIC counterparts and national stakeholders are hosted.	➢ Progress: So far, 7 overseas missions of PIC counterparts and national stakeholders are hosed by MNRE as shown in the table below. Table (g):List of overseas missions of PIC counterparts and national stakeholders hosed by MNRE ➢ Conclusion: The Indicator has been fully achieved.

	Year	Type/objective of missions	Participants
1.	2012	"Study visit on landfill management (2012)"/ To learn experience and apply in PNG	4 Officer from PNG
2.	2012	"Study Visit on landfill management (2012)/ To learn about Fukuoka Method	1 Officer from PNG
3.	2013	Training of trainers' workshop on Occupational Safety and Health in Waste Management for PICs (ILO/JPRISM)	28 from Samoa, Fiji, Nauru, PNG, Solomon and Vanuatu
4.	2014	Visit/To learn how to make compost using green waste	Mayor & Assistant Mayor Vaiala
5.	2014	Visit/To learn waste management in Samoa	Fiamalamalama school
6.	2015	Visit/To learn waste management in Samoa	National University of Samoa
7.	2015	Visit/To learn waste management in Samoa	ditto

3-3 At least five (5) regional and international workshops participated to present Samoa's experiences	➢ Progress: So far, Samoa's experiences have been presented at 5 regional and international workshops in the form of oral presentation and/or country report as shown in the table below. Table (h):List of regional and international workshops participated to present Samoa's experiences ➢ Conclusion: The Indicator has been fully achieved.

	Year	Regional/International Workshop participated by C/Ps	Remarks
1.	2014	Asia Pacific 3R Forum in Indonesia	Country report
2.	2014	SIDS Conference in Samoa	Oral presentation
3.	2015	Asia Pacific 3R Forum in Maldives	Country report and oral presentation
4.	2015	Regional Strategy Workshop (SPREP)	Oral presentation
5.	2015	Mercury and Hazardous Waste Workshop (SPREP)	Oral presentation

<Overall>

Output 3 has been mostly achieved and is likely to be fully achieved by the end of the Project.

(3) Project Purpose

Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	Degree of achievement Partly achieved

Indicator	Results
1. Two (2) experts (Trainers) are listed in the SPREP inventory	The relevant data is not available because SPREP has not developed a mechanism for certification of trainers yet. ➢ Conclusion: The Indicator is not used to assess the achievement of the Project Purpose directly[2]. ➢ For reference: ・As of June 2015, cumulative total of 2 C/Ps have participated in the international/regional/country training and workshops organized by J-PRISM as trainers. They are considered as trainers recognized by J-PRISM and are listed in the Pacific Islands Database of Capacity Development Activities (PIDOC), an inventory of SPREP developed through J-PRISM. Table (i): Number of trainers listed in the PIDOC (1. Waste Generation/Characterization Study: 1; 2. Time-and-motion study: 1; Cumulative total: 2)
2. Amount of waste disposal is decreased by at least 5%	➢ Definition: The Indicator means "In 2015, monthly average of amount of waste disposal at Tafaigata is decreased by at least 5% compared with 2013". ➢ Progress: ・As of June 2015, monthly average of amount of waste disposal at Tafaigata in 2015 is decreased by 12.8% compared with 2013. ・In 2015, no complaints have been made to MNRE about illegal dumping. Table (j): Change in monthly average of amount of waste disposal at Tafaigata landfill (Base Year: 2013 (Jun-Dec), 661,159, -Data recording using weighbridge system officially started in June 2013; Interim Year: 2014 (Jan-Aug), 721,006, -Gate open hour was not enforced so that the actual amount could be higher; 2014 (Sep-Dec), 758,863, -Gate open hour (9h-16h) was enforced from September 2014; Target year: 2015 (Jan-Jun), 576,375, -New tipping fee, based on the weight of incoming waste, was introduced in January 2015) ➢ Conclusion: It seems that progress has been made towards achievement of the Indicator. The achievement of the Indicator could not be assessed since the available data for 2015 is only for 6 months at the time of the evaluation.

<Overall>

The Project Purpose has been partly achieved considering the achievement level of the Indicator for the Project Purpose as well as overall achievement level of three Outputs. The Project Purpose is likely to be mostly achieved by the end of the Project.

(4) Implementation Process

(a) Progress of Activities

[2] This indicator was not used as a direct measure of the Project Purpose for the following reasons: (i) while PIDOC, the existing database, is an inventory of SPREP, the persons listed are trainers recognized by J-PRISM but not considered as officially certified trainers by SPREP: and (ii) the target values are not valid as they had been determined before the introduction of PIDOC (thus not consistent with the number of trainers listed in it).

1) Overall
Progress was slow in the first half of the Project. The activities got on track in the second half with the assignment of the JICA Experts specifically attached to the Project.

2) Issues/Points specific to each Output

➢ Output 1

・ Activity 1-4 (Development of Public-Private Partnership(PPP))

- Prior to the implementation of the pilot project for waste segregation/minimization in October 2013, the MOU was made among MNRE, a waste collection company, responsible for Zone A, a recycling company, and the Project, which was renewed in January 2015. Outline of the renewed MOU is shown in the table below.

Outline of the MOU for PPP for waste segregation/minimization

Organizations	Roles/responsibilities as per the MOU
Waste collection company for Zone A	✓ Provision of a special separate collection of the approved recyclable waste materials (i.e. cans, plastic bottles, glass bottles, small size metals) from households in Zone A once a week in addition to its official designated duties under its contract with MNRE for the provision of waste collection service. ✓ Transportation of the collected recyclable wastes and uploaded at the facility of the recycling company at Tafaigata landfill for sorting and assessment by the recycling company.
Recycling company	✓ Sorting and assessment of the collected recyclable waste materials into various categories with assistance from MNRE. ✓ Export the collected materials to its overseas markets. ✓ Provision of monthly information on the incoming recyclable wastes and quarterly reports on the exported materials to MNRE and the JICA Project Office at Samoa. ✓ Provision of segregation cages for the recyclable wastes at the locations designated by MNRE.
MNRE	✓ Promote public awareness on the proposed collection of identified recyclable waste items from Zone A. ✓ Consultation with other relevant government agencies, supermarkets, hotels, schools, and communities on the pilot project through meetings, workshops, and economical communication tools available. ✓ Monitoring and supervision of the progress.

・ Activity 1-5 (Promotion of public awareness)

- The following materials have been developed to promote public awareness.

List of awareness materials produced by the Project

	Title of document	Number of copies	Distribution of copies	Timing
1	Collection calendar	200	Households in Tanugamanono, Mototua, Apia, part of Vaiala (Zone A)	Sep.2014
2	Segregation explanation material	150	Household in Vaiala, Pulenuu	Sep.2014
3	Awareness sticker for cages	75 (1st edition) 50 (2nd edition)	Put on the segregation cages	Ongoing from March 2015
4	Environment Calendar	550	Households and schools in Apia, Vaiala, Tanugamanono villages	March 2015

・ Activity 1.6 (Implementation of pilot project)

- Originally, the period of the pilot project was one year from October 2013 to October 2014. It was extended for one year (from December 2014 to December 2015) in order to test two different waste collection methods (i.e. household and station) and assess the feasibility of recyclable materials collection.

(b) Project Management

・ The Samoan side has participated in decision making process duly. JCC has been held annually, which has been effective in giving overall guidance and direction of the Project.

- In the first half of the Project, regular project meetings were not held. Regular project meetings have been conducted since April 2014.

(c) Communication within the Project

- Communication within the Project has been improved in the second half of the Project after the JICA Experts specifically attached to the Project were assigned. The regular project meetings together with the stakeholder meetings have facilitated communication within the Project.

(d) Collaboration/coordination with Local Stakeholders

- Waste minimization/segregation: Collaboration/coordination with the local stakeholders has been enhanced especially in the second half through planning and implementation of the pilot project for waste segregation/minimization (October 2013-November 2014, December 2014-December 2015). A regular stakeholder committee meeting has been held at MNRE since April 2014, participated by the C/Ps, representatives of the waste collection and recycling companies, and JICA Experts. MNRE plans to invite other key stakeholders, such as community leaders and STA, in the last quarter of 2015.

	Stakeholders	Coordination
1.	Waste collection company for Zone A and recycling company	The waste collection and recycling companies have collaborated with the Project in implementing the pilot project for waste segregation/minimization (October 2013-December 2015).
2.	Community leaders of Vaiala and Apia Villages	• The community leader of Vaiala Village (Village Mayor) has collaborated in promoting waste segregation at source and at community house as well as composting from green wastes in his village. • The community leader of Apia Village has collaborated in promoting public awareness on waste segregation and composting in his village.
3.	STA	STA has collaborated with the Project in identifying the hotels which would participate in the pilot project for waste segregation/minimization.

- Landfill management: MNRE plans to re-establish the existing technical committee for management of Tafaigata landfill. A TOR of the committee will be re-defined in consultation with the JICA Experts, and SPREP. The first meeting is expected to be organized in October 2015.

(e) Participation in Region-Wide Activities of J-PRISM

1) Participation as trainees

So far, cumulative total of 8 C/Ps from WMS/DEC/MNRE have participated in 6 region-wide activities organized by the J-PRISM as shown in the table below.

	Year	Title	Venue	Number	Remarks
1.	2011/10	J-PRISM Regional Training on Landfill Management	Vanuatu	1 (WMS/DEC)	
2.	2011/12	J-PRISM Study Visit for Weighbridge Management of 3R in Fiji from Samoa*1	Fiji	2 (WMS/DEC)	An officer from Accountant Section also participated
3.	2012/11	3R regional Training in Fiji in 2012	Fiji	1 (WMS/DEC)	
4.	2013/7	J-PRISM Training of trainers' workshop on OS&H in Waste Management for PICs (J-PRISM/ILO)	Samoa	3 (WMS/DEC)	
5.	2013/11	J-PRISM Regional Training for Promotion of 3R in Palau	Palau	1 (WMS/DEC)	An officer from Legal Division also participated
6.	2014/6	J-PRISM Study Visit Program in Lautoka	Fiji	1(WMS/DEC)	

(f) Coordination with Other Japanese and International Projects

1) Holistic approach with other schemes of Japanese assistance

	Scheme	Coordination
1	Training and Dialogue Program of JICA	So far, cumulative total of 5 C/Ps of MNRE (4 from WMS/DEC and 1 from Hazardous Waste Management Section/DEC) have participated in the Training and Dialogue Programs in Japan. List of Training and Dialogue Program of JICA participated by the C/Ps

	Year	Title	Number of participants
1	2012	Solid Waste Management by Local Government (c)	1 (WMS/DEC)
2	2012	Waste Management Techniques (A)	1 (WMS/DEC)
3	2013	Waste Management Techniques (A)	1 (WMS/DEC)
4	2014	Enhancement of Solid Waste Management Capacity (Advance, Planning &Policy)(A)	1 (WMS/DEC)
5	2015	Enhancement of Solid Waste Management Capacity (Advance, Planning &Policy)(A)	1 (Hazardous Waste Management Section/DEC)

2	JICA Partnership Program	The Project has coordinated with a JICA Partnership Program "Promotion of Shibushi Model (Waste Minimization without Incineration)", known as Shibushi Project in promotion of waste segregation and composting using green wastes at Vaiala village. In addition, a C/P from WMS/DEC participated in a training conducted under Shibushi project in 2014.
3	JOCV (Vegetable Cultivation)	A JOCV volunteer assigned to Nurse Association has collaborated with the Project in promotion of composting using green wastes at Vaiala and Apia villages and Falefitu Primary School.

List of JICA Partnership Program training participated by the C/P and local stakeholders

	Year	Title	Number of participants
1	2014	Promotion of Shibushi Model (Waste Minimization without incineration) from Fiji to Pacific Island Countries	1 (WMS/DEC)

(g) Other Promoting and Impeding factors

- Unfamiliarity with the technical cooperation of JICA
  The C/Ps were not familiar with the concept of the technical cooperation project of JICA. Therefore, it took some time for them to realize that there was little direct financial support and/or equipment involved in this Project, but rather, technology transfer and capacity development was the core of the Project. Some C/Ps implemented the activities because they were told to do so by the JICA Experts, without understanding the meaning of the activities and the inter-relation with the activities.

III. Results of Analysis from the Viewpoints of Five Evaluation Criteria

(1) Relevance

The Project is still relevant

(a) Necessity

The Project is relevant with the needs of Samoa, especially the urban areas, considering the rapid growth in volume and types of solid wastes, which causes negative impacts to the environment and human health. The Project is relevant with organizational needs of the Implementing organization because MNRE is the National agency which oversees solid waste management in Samoa through the DEC. It regulates waste management through legislations and operates it waste management facilities.

(b) Priorities

The Project is relevant with Strategy for the Development of Samoa (2012-2016) in which the environmental sector is one of the priority areas as well as the needs of society in which there is an increasing demand of solid waste management along with the economic development and population increase, especially in the urban area. Furthermore, the Project is also consistent with the Japanese ODA Policy which puts the high priorities to support the improvement of solid waste management and ecosystem conservation as well as the disaster prevention and climate change impact in order to mitigate the risk of natural disasters. Under the Japan's Country Assistance Policy for Samoa in 2012, Basic Policy of Assistance is: "Accomplishment of Sustainable Economic Growth with Environmental Consideration and Improvement of Living Standards", and one of the priority areas is "Environment/Climate Change". J-PRISM is a project under "Support Programme for Development of Circulatory Communities in the Island Country" under the Development Issue "Environmental Conservation".

(2) Effectiveness

The Project is expected to be mostly effective.

(a) Achievement of Project Purpose

Though the progress was slow in the first half of the Project, the delay has been fairly caught up through efforts of MNRE and advice of JICA Experts. Project Purpose is expected to be mostly achieved by the end of the Project.

(b) Contribution of Outputs to Project Purpose

Logical relation between Outputs and Project Purpose is confirmed.

(c) Other promoting/inhibiting factors

Specific factors have not been identified.

(3) Efficiency

Efficiency of the Project has been medium

(a) Production of Outputs

Outputs have been partly produced and are likely to be mostly produced by the end of the Project.

(b) Appropriateness of Inputs

- Samoa side: Overall, Inputs by the Samoan side have been fairly appropriate in producing Outputs.
  - Personnel: WMS of DEC is short of staff. All of the officers of WMS have been assigned to the Project as technical C/Ps but the quantity was not enough. Often, the C/Ps were too busy with other duties/engagements to concentrate on the Project activities. One of the C/P left the office in January 2015 but the successor has not been assigned yet. In addition, waste minimization/segregation is a new concept for WMS so that the roles and responsibilities of the officers are not yet clearly defined. Thus, all the C/Ps, irrespective of their official duties, participated in the waste minimization/segregation activities when they are available. In terms of quality, some C/Ps did not have previous experiences in waste management. It is noted that they have managed to catch up with the activities with support of their colleagues and JICA Experts.
  - Facilities : Land and facilities necessary for the Project activities have been provided in time. Office spaces for JICA Experts have been provided at DEC/MNRE and at an administration office of Tafaigata landfill when needed.
  - Local cost: MNRE has managed to secure necessary budget for Project Activities. Most of the activities have been carried out through cost-sharing.
- Japanese side: Overall, Inputs by Japanese side have been fairly appropriate in producing Outputs.
  - Experts: In the first half of the Project, various JICA Experts of the Project Office in Samoa supported the Project in relay but they have other responsibilities: nobody was specifically attached to the Project. A Short-term Expert specifically attached to the Project was dispatched in September 2013 and January-February 2014 for around 2 weeks respectively but his contract ended in March 2014. The second Expert attached to the Project has been assigned since April 2014, who belongs to the Project Office. The experts with adequate knowledge and background have been dispatched.
  - Equipment: Provision of equipment was appropriate in terms of quantity, quality and timing. The equipment has been fully utilized for the Project activities. For all the provided equipment, English specification documents and/or manual are available. Initial training was provided by the manufacturer. Since the handover, the equipment has been managed by Samoan side without a serious problem. It is noted that there is no company in Samoa which can provide regular and emergency maintenance for the weighbridge system. As the warranty of the weighbridge system has been expired, MNRE has to identify a company which can provide the service. The spare parts are not locally available. A company with relevant experience on scale calibration does not exist in Samoa, either.
  - Local cost: Necessary amount of has been disbursed in time.

(c) Utilization of region-wide activities of J-PRISM

- So far, participated in the various region-wide activities organized by the J-PRISM. All the C/Ps, interviewed by the Evaluation Team, have gained new insights, ideas, skills, and lessens from all of the region-wide activities of J-PRISM they participated in. Good practices of other PIC, such as weighbridge management in Fiji, and CDL in Palau, have been adapted in the context of Samoa.

(d) Utilization of external resources

- As stated in the Implementation Process, the Project has been carried out in collaboration with other Japanese schemes
- Training and Dialogue Program of JICA in Japan: C/Ps have gained new insights, ideas, skills, and lessens from all of the Training and Dialogue Program they participated in.

(4) Impact

Overall Goal is likely to be achieved to some extent. Positive impacts have been observed already.

(a) Impact at Overall Goal level

	Indicator	Likelihood

1	70% of household of town area continue the 3R practice and segregation of recyclable materials at source	Note: The Indicator means "In February 2019, 70% of households of town area of Upolu conduct the 3R practices and segregation of recyclable materials at source". ➢ Current situation and likelihood: ・ Through the pilot project, segregation of the recyclable materials at source (at household level) has been promoted in Zone A, consisting of 7 villages/communities (Leufisa, Motootua, Malifa, Tanugamanono, Apia, Matautu and Vaiala villages) with 475 households. The actual number of household, which practice the segregation, is yet to be available because the pilot project is still ongoing. ・ MNRE is exploring a different approach regarding collection methods of recyclable materials (i.e. station collection). Depending on the outcome of the pilot project, most practical option would be decided by the end of the Project. ➢ Conclusion: Likelihood of achievement could not be assessed because (i) the relevant data is yet to be available and (ii) the collection method is yet to be determined.
2	At least 3 PPP activities are implemented	The Indicator means "In 2019, at least 3 PPP activities are implemented in urban area of Upolu. ➢ Current situation and likelihood: ・ Segregation of recyclable materials is ongoing on pilot basis, which is likely to be expanded after the end of the Project. ・ Another ongoing effort of MNRE is collaboration with the Media companies. MNRE has contacted with senior management of Media companies for promotion of public awareness. Two companies (a newspaper company and a TV company) are going to send their staff to a training organized under the Shibushi Project (a JICA Partnership Program "Promotion of Shibushi Model (Waste Minimization without Incineration)" in October 2015. It is expected that official arrangements would be developed after their staff come back from the training. ・ STA has agreed to promote green waste composting at hotels and beach houses (fales). It is expected that an official arrangement would be developed between MNRE and STA next year. ➢ Conclusion: The Indicator is likely to be achieved in 2019.
<Overall> **Overall Goal is likely to be achieved to some extent. The exact degree could not be forecasted because the relevant data is yet to be available for one of the Indicators.**		

(b) Other Impacts

➢ Positive impacts observed

- Green wastes from food processing companies and parks have been composted at Tafaigata landfill, which has contributed to decrease of the amounts of the waste disposal.
- Before the Project, tipping fee was set according to the vehicle type. Through introduction of the weighbridge system, the weight of incoming wastes became available. New tipping fee based on the weight has been introduced since January 2015 on the basis of the report of the incoming wastes. The new tipping fees and operating hours were publicly announced on radios and televisions in December 2014 and enforced in January 2015 until now. After introduction of the new tipping fee, the incoming waste has been decreased drastically as shown in the result of Indicator 2 for the Project Purpose.
- After introduction of new tipping fee system, the major producers of green wastes (i.e. STA and Fugalei Market (the biggest market in town)) stopped taking the green wastes to the Tafaigata landfill. STA has started composting the green wastes for utilization as fertilizers for street planting.
- A newspaper ("Samoa Observer") published articles on the pilot project activities on waste segregation/minimization in May 27, July 30, and August 13, 2015, which has contributed to promotion of public awareness.

➢ Positive impacts foreseen

- The weighbridge system would be useful to estimate longevity of the landfill.

- Negative impacts:
  - Negative impacts have not been observed. They are not foreseen, either.

(5) Sustainability

Sustainability is likely to be ensured if the necessary human and financial resources are allocated.

(a) Policy and institutional aspects

- Policy and legal support:
  Policy and legal support for waste management is likely to continue. Waste Management Policy (2001) is an overall policy framework for waste management. In addition, National Waste Management Strategy (2016-2025) is expected to be developed by the end of the Project. An overall legal framework has been established with Waste Management Act (2010). Plastic Bag Prohibition on Importation Regulation was developed in 2006 and a regulation for CDL is expected to be developed in early next year. Moreover, MNRE is developing a TOR for drafting regulations for operation and maintenance of solid waste management, including economic instruments and standards. According to MNRE, draft regulations are expected to be ready for endorsement by the Cabinet early next year.

(b) Organizational aspects

- Organizational strategy:
  - National Solid Waste Management Strategy would be the organizational strategy of MNRE.
  - Not only landfill management but also waste surveys and waste segregation activities are included in the latest Annual Work Plan of Waste Management Section for FY2015/16 (July-Jun) as a regular program.
  - Currently, the Waste Management Section has only 4 staff (Principal Waste Management Officer, Senior Landfill Officer, Senior Waste Planning & Policy Officer, and Landfill Officer). In addition, Contract Officer has been vacant since January 2015. The number is far from sufficient to address the wide range of issues associated with waste management. It is noted that MNRE is planning to enhance the institutional set-up of waste management, including increase of the number of qualified staff and creation of separate division for waste management. Recognizing the importance of enforcement, MNRE has already created 10 posts for environmental rangers (7 for Upolu and 3 for Savaii) for FY 2015/16, whose main duties would be monitoring of illegal dumping.
- Assignment of the C/Ps:
  - All of the technical C/Ps are permanent staff of MNRE. They are likely to be assigned to the relevant posts after the end of the Project so that they could utilize the skills and knowledge transferred through the Project. In addition to the technical C/Ps, some casual workers of MNRE have assisted the Project in conducting waste surveys and composting the green waste at Tafaigata. Their continuous employment is not certain at the moment though MNRE is considering giving permanent status to those workers who have worked with MNRE for 5 years or more.

(c) Financial aspects

It is likely that MNRE will continuously allocate necessary budget for landfill operation and maintenance and waste collection services, which are outsourced. As for maintenance of weighbridge system, specific budget has not been secured yet. It is noted that the revenue from tipping fee is directly pooled in the treasury account and is not at disposal for the solid waste management. According to MNRE, Ministry of Finance considers the revenue from the tipping fee when they review the budget.

(d) Technical aspects

- Technical capacity: Technical capacity has been gradually enhanced in terms of planning and practical knowledge regarding solid waste management in general, landfill management, and promotion of 3R. It likely that the C/Ps will be able to continue the relevant activities for themselves after the end of the Project. While improvement has been made in terms of capacity building, there are still remaining issues such as limited capacity for analysis of the waste surveys and utilization of the analytical results for improvement of waste management, monitoring of waste segregation/minimization activities, supervision of landfill operation based on the manual, and analysis of the results of leachate monitoring.
- Utilization and dissemination of the transferred techniques and deliverables: As for landfill management, skills and knowledge transferred through the Project as well as the deliverables are considered relevant with the local level and needs. They are expected to be utilized by MNRE after the end of the Project. To make sure the sustainable utilization, operation improvement and lessons learned during the Project period should be incorporated in the O&M manual (2009). In order to ensure the implementation of the updated manual on the ground and to facilitate supervision by MNRE, O&M standards specified in the updated manual should be reflected in the scope of work of a new contract, which will be awarded in June 2016. Regarding waste segregation/minimization, the pilot project is still ongoing. It is expected that the Project would be able to identify the effective and efficient option in the context of urban area of Samoa before the end of the Project through enhanced coordination/consultations with the local stakeholders.
- Utilization, operation and maintenance of the provided equipment:

- Utilization: Machinery and equipment provided by the Project has been utilized for waste management. It is expected to be continuously utilized after the end of the Project.
- Maintenance: It is noted that there is no company in Samoa which can provide regular and emergency maintenance for the weighbridge system. The spare parts are not locally available. As the warranty of the weighbridge system has been expired, MNRE has to identify a company which can provide the service. A company with relevant experience on scale calibration does not exist in Samoa, either.

(e) Others

- Coordination and collaboration with local stakeholders: Collaboration/coordination with the local stakeholders in waste minimization/segregation activities has started in the second half of the Project. It is noted that coordination, in particular with the community leaders, is mainly taken up by the JICA Experts, which is a concern for the sustainability. Collaborative relationship developed through the Project can be maintained and enhanced only with continuous and intensive effort of MNRE.

IV Conclusion

Overall, for the five evaluation criteria, the Project is still relevant, is expected to be mostly effective. The efficiency has been medium. Overall goal is likely to be achieved to some extent. Sustainability is likely to be ensured if the necessary human and financial resources are allocated.

The Project Purpose is expected to be mostly achieved by the end of the cooperation period. Therefore, this project shall be finished on 2nd of February, 2016.

It is noted that the following issues need to be addressed by Samoan side (MNRE) after the project completion in order to ensure the effects of the Project.

1. Enhancement of institutional set-up for waste management at DEC, including number of qualified staff
2. Finalization and endorsement of regulations for operation and maintenance of solid waste management, including economic instruments and standards
3. Utilization of the analytical results of the waste surveys in developing a draft contract for waste collection, which will be awarded in June 2016
4. Incorporation of the contents of the updated manual in developing a draft contract for landfill operation, which will be awarded in June 2016
5. Continuous utilization of the transferred knowledge, skill, etc. in improvement of waste management
6. Continuous coordination with local stakeholders
7. Management and analysis of data collected through surveys, monitoring, and weighbridge system as well as their utilization in waste management
8. Publication/dissemination of reliable data to public

V Recommendations for the remaining period

For the remaining period of project implementation, the Terminal Evaluation Team recommends the followings:

To the Project

1. Finalize National Solid Waste Management Strategy and Framework for CDL for submission to the Cabinet for endorsement.
2. Enhance coordination with local stakeholders for waste segregation/minimization by inviting community leaders of the relevant villages, STA, media, etc. to monthly stakeholder meeting.
3. Update Tafaigata Land Use and Development Plan (2013) so that specific space for disaster wastes is allocated.
4. Update the operational manual (2009), incorporating the knowledge and skills acquired through the project, including operation and routine check of weighbridge system. Post-disaster waste management, fire emergency operation, and safety measures should be also added.
5. Train the contractor for operation and maintenance of landfill using the updated manual.
6. Identify a local company which can provide a regular maintenance service (at least twice a year) and emergency service for weighbridge system and secure the necessary budget.
7. Continue leachate monitoring at Tafaigata and Vaiaata landfills to make sure the leachate quality is in

line with the standards set by the manual.

8. Enhance coordination with the waste pickers to make sure their attendance is checked and safety guidance is observed.
9. Modify the Indicators for Overall Goal, Project Purpose, and Outputs for approval by the final JCC as shown in the table below and their Means of Verification accordingly.
10. Report the updated achievement of the Indicators to the final JCC.

Item	Original	Modification (example)	Justification
<Overall Goal>			
Indicator 1	70% of household of town area continue the 3R practice and segregation of recyclable materials at source	(To be modified based on the outcome of the pilot project)	The pilot project is still ongoing.
Indicator 2	At least 3 PPP activities are implemented	In 2019, at least 3 PPP activities are implemented in Urban Area of Upolu (i.e.*****) as regular program of MNRE. Note: Definition of Urban Area (***) should be specified before the final JCC	The original one is not specific enough
<Project Purpose>			
Indicator 2	Amount of waste disposal is decreased by at least 5%	In 2015, monthly average of amount of waste disposal at Tafaigata is decreased by at least 5% compared with 2013	The original one is not specific enough.
<Outputs>			
Indicator 1.3	Amounts of recyclable waste collected increase 10%	(delete)	The relevant data is not available
Indicator 1.5	(Addition)	National Solid Waste Management Strategy, including waste minimization strategy, is developed by the end of the Project.	Existing indicators are insufficient to reflect contents of Output 1 properly
Indicator 1.6	(Addition)	Policy framework for CDL is developed by the end of the Project.	ditto
Indicator 2.3	Improved quality of leachate at Vaiaata landfill	After treatment facilities are installed at Vaiaata landfill, at least basic parameters (Color, Smell, Transparency, pH, DO) are in line with the standards of the operational manual according to the results of monthly monitoring	The original one is not specific enough.
Indicator 2.4	Management and control of waste pickers are checked daily	The waste pickers, who work in Tafaigata landfill, are registered by MNRE and their comings and goings are checked daily by MNRE. Also they follow MNRE's occupational safety guidance.	ditto
Indicator 3.1	Newsletters are produced twice a year and at least one relevant document is produced.	Newsletters are produced twice a year from September 2013 and at least one relevant document is produced by the end of the Project	ditto

Attachment:

1. Latest Project Design Matrix (PDM ver4/ April 2015)
2. Latest Plan of Operation (PO ver4 /April 2015)
3. Schedule of Terminal Evaluation
4. Record of Japanese Inputs
   4-1 Dispatch of Experts
   4-2 Training in Japan
   4-3 List of Machinery and Equipment provided by Japan
   4-4 Local Cost
5. Record of Solomon Islands Inputs
   5-1 List of Counterpart Personnel
   5-2 Local Cost

Project Title: Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM) **PDM: Version 4**

Target Group : C/Ps of Ministry of Natural Resources and Environment | Final Beneficiaries: Citizens of Independent State of Samoa | Project period: Feb. 2011 for 5 years

Implementing Agency: Ministry of Natural Resources and Environment | Target Area: Independent State of Samoa | Date issued: 29th April 2015

Narrative Summary	Objectively Verifiable Indicators	Means of Verifications	Important Assumptions
Overall Goal			
Sustainable management of solid waste is enhanced.	~~1.To be discussed~~ 1. 70% of household of town area continue the 3R practices and segregation of recyclable materials at source. 2. At least 3 PPP activities are implemented.	~~To be advised~~ 1. Questionnaire and visit Survey. 2-1.Monitoring reports. 2-2 MOU of PPP	
Project Purpose			
Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	1. Two (2) experts (Trainers) are listed in the SPREP inventory 2. Amount of waste disposal is decreased by at least 5%	SPREP (Regional inventory of skilled people) MNRE's records	1. Natural disaster would not drastically affect the collaboration among PICs and SPREP. 2. Political changes of PICs would not drastically affect the collaboration among PICs and SPREP.

#	Priorities under RS2010	Outputs	Objectively Verifiable Indicators	Means of Verifications	Important Assumptions
1	Sustainable Financing				
2-1	3Rs/4Rs	**Output 1:** Waste Minimization measures and practices are introduced and implemented at the urban areas.	1-1 Four (4) Waste Survey Reports are produced 1-2 Four (4) communities and nine (9) businesses participated in waste segregation/minimization 1-3 Amounts of recyclable waste collected increase 10%. 1-4 Four (4) public consultation/hearing meeting/workshop for waste minimization regulations/strategy	1-1 Produced Waste Survey Reports 1-2 Waste segregation/minimization project report 1-3 Waste segregation/minimization project report 1-4 Meeting/workshop records	1. Cooperation and commitment of private sectors is obtained.
2-2	Waste Disposal	**Output 2:** Tafaigata is operated as a regional waste disposal facility with improvements at Vaiaata in place	2-1 Tafaigata Land use and Development Plan produced 2-2 Incoming waste data are recorded and periodically reported (monthly) using the weighbridge system at Tafaigata 2-3 Improved quality of leachate at Vaiaata landfill 2-4 Management and control of waste pickers are checked daily	2-1 Produced Tafaigata land use plan 2-2 Monthly Incoming waste date records 2-3 Monitoring result reports of leachate 2-4 Waste pickers registry and attendance book	
2-3	Waste Collection				
3	Legislation				
4	Awareness/Communication/ Education				
5	Capacity Building	**Output 3:** Experiences and lessons learnt are shared-in both national and international levels	3-1 Newsletters are produced twice a year and at least one relevant document is produced. 3-2 Four (4) overseas missions of PIC counterparts and national stakeholders are hosted. 3-3 At least five (5)-regional and international workshops participated to present Samoa's experiences	3-1 Distributed Newsletters 3-2 Tafigata visitor's report 3-3 Trip report of the each workshops	
6	Environmental Monitoring				
7	Policy, Planning, Performance				
8	Solid Waste Industry				
*	Monitoring system of RS2010				

Activities	Inputs		Important Assumptions
	Japanese Side	Samoa side	
Please see PO for details.	* Dispatch of JICA experts * Provision of equipment and materials (Weightbridge-Tafaigata, leachate facility—Savaii Island) * Provision of Regional, sub-regional and in-country workshops / training * Local cost support	* Assignment of National PD/PM and CPs * Provision of necessary land/facility and equipment * Local cost sharing	1.Counterpart personnel keep working in the field of SWM. 2. Cooperation of community people of the target area is obtained. 3. Disasters, such as severe rain storm will not drastically affect the progress of project activities. 4. Necessary budget to carry out activities is allocated from the government.
			Pre-condition

* MNRE=Ministry of Natural Resources and the Environment

Attachment 1: Latest Project Design Matrix (PDM ver 4)

ANNEX 3(i)-Samoa

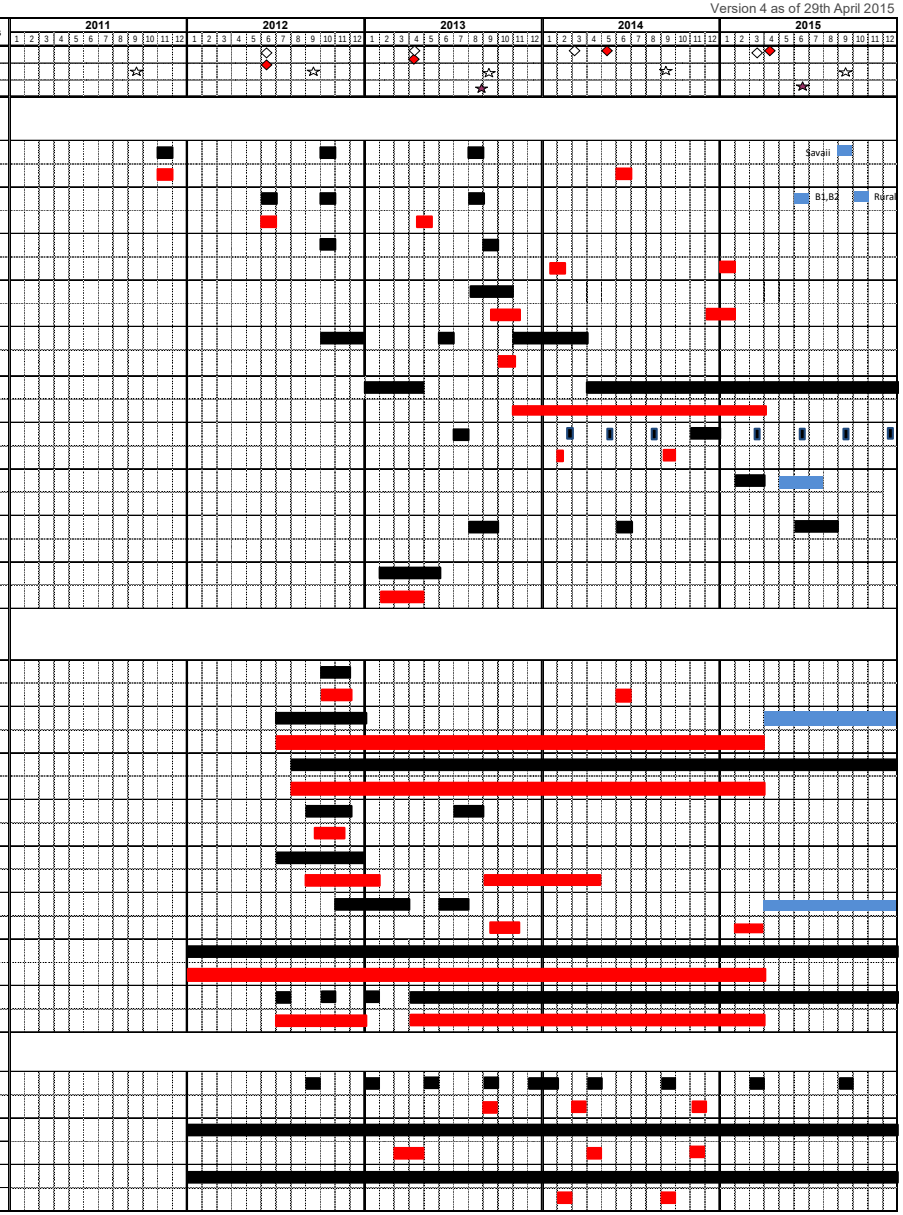
ANNEX 3(i)-Samoa

Project Term: 2011 ～ 2015 (5years)

Indicators for Project Purpose:
1. Two (2) Experts (Trainers) are listed in the SPREP inventory
2. Amount of waste disposal is decreased by at least 5%

Version 4 as of 29th April 2015

	Outputs and Associated Activities	Indicators for Outputs	Person in-charge	Progress
JCC/SC/Eva	JCC ◇			
	Steering Committee ☆			
	Evaluation Studies ★			
OUTPUT 1:	WASTE MINIMIZATION MEASURES AND PRACTICES ARE INTRODUCED AND IMPLEMENTED AT THE URBAN AREAS	1-1 Four (4) waste survey reports are produced.		
1-1	Conduct Solid Waste Characterization Study	1-2 Four (4) communities and nine (9) businesses participated in waste segregation/ minimization	Ms Faatamalii Meredith ~~/ Ms Pesio Tutagalevao~~	Planned / Actual
1-2	Conduct Time and Motion Study	1-3 Amounts of recyclable wastes collected increase 10%.	Ms Faatamalii Meredith ~~/ Ms Pesio Tutagalevao~~	Planned / Actual
1-3	Prepare and finalize project plan for waste minimization	1-4 Four (4) public consultation/ hearing meeting/ workshops for waste minimization regulations/ strategy	Ms Faatamalii Meredith	Planned / Actual
1-4	Develop and setup Public-Private Partnership with Pacific Recycler Company - collection and return of certain waste		Mr Setoa Apa / Mr Seumanu Mikaele	Planned / Actual
1-5	Conduct consultation and public awareness to promote segregation at source and collection of approved waste under PPP		Mr Setoa Apo	Planned / Actual
1-6	Implement Pilot Project - segregation and collection of recyclable waste items under PPP		Mr Seumanu Mikaele / Ms Faatamalii Meredith	Planned / Actual
1-7	Review the Pilot Project		Ms Faatamalii Meredith / ~~Ms Pesio Tutagalevao~~	Planned / Actual
1-8	Develop a Waste Minimization Strategy		Mr Setoa Apo	Planned / Actual
1-9	Develop ~~Draft~~ Framework of Regulation for Container Deposit Levies to support the recover and return of identified waste under the Pilot project		Mr Setoa Apo / Ms Faatamalii Meredith	Planned / Actual
1-10	Review Regulation on Biodegradable shopping bags		Mr Setoa Apo	Planned / Actual
OUTPUT 2:	TAFAIGATA IS OPERATED AS A REGIONAL WASTE DISPOSAL FACILITY WITH IMPROVEMENTS AT VAIAATA IN PLACE	2-1 Tafaigata land use and development plan produced		
2-1	Produce a Tafaigata Draft Master Landuse and Development Plan	2-2 Incoming waste data are recorded and periodically reported (monthly) using the weighbridge system at Tafaigata	Mr Seumanu Mikaele	Planned / Actual
2-2	Introduce measures to control waste picking	2-3 Improved quality of leachate at Vaiaata landfill	Mr Seumanu Mikaele	Planned / Actual
2-3	Enforce waste segreation for the incoming commercial waste	2-4 Management and control of waste pickers are checked daily.	Mr Seumanu Mikaele	Planned / Actual
2-4	Install signs at different zones and waste disposal facilities at Tafaigata		Mr Falaniko Tino	Planned / Actual
2-5	Install an electronic waste recording system at Tafaigata and provide training for staff on maintenance and operation.		Mr Seumanu Mikaele	Planned / Actual
2-6	Plan and make improvements to the leachate quality and treatment facilities at Vaiaata landfill		Mr Seumanu Mikaele/Mr.Lucie Isaia	Planned / Actual
2-7	Monitor and enforce conditions for existing waste facilities at Tafaigata		Mr Lameko Tasimale / Mr Seumanu Mikaele/Technical Committee	Planned / Actual
2-8	Conduct Leachate Monitoring at Tafaigata ~~and Vaiaata~~		~~Senior Chemical Officer~~Mr. Lucie Isaia/ Ms Faatamalii Meredith/ ~~Ms Pesio Tutagalevao~~	Planned / Actual
OUTPUT 3:	Output 3: Experiences and lessons learnt are shared in both national and international levels	3-1 Newsletters are produced twice a year and at least one relevant document is produced.		
3-1	Produce Newsletters twice a year to share collected results and achievements	3-2 Four (4) overseas missions of PIC counterparts and national stakeholders are hosted.	Ms Faatamalii Meredith / ~~Ms Pesio Tutagalevao~~	Planned / Actual
3-2.	Accept overseas missions and attachments of PIC counterparts	3-3 At least five (5)-regional and international workshops participated to present Samoa's experiences	Mr Setoa Apo /Mr Seumanu Mikaele / Ms Faatamalii Meredith / ~~Ms Pesio Tutagalevao~~	Planned / Actual
3-3	Participate and share project progresses and lessons learnt at regional and international workshops		Mr Setoa Apo/Mr Seumanu Mikaele / Ms Faatamalii Meredith / ~~Ms Pesio Tutagalevao~~	Planned / Actual



Activity planned before Feb. 2014 | Activity rescheduled after Feb. 2014 | Actual implementation | Activities planned in 2015

Attachment 3: Schedule for Terminal Evaluation

Date		Schedule – Hirouchi	Mr.	Venue
6 Sep	Sun	01:50 Arrival 16:00 Meeting with Expert		
7 Sep	Mon.	9:00 Meeting with JICA Samoa Office/JICA Expert		JICA
		11:00 Courtesy call to Mr. Amataga (Project Director, MNRE CEO)		MNRE
		13:00 Kick-off Meeting with MNRE CP		MNRE
		16:00 Meeting with JICA Expert		JICA
8 Sep	Tue.	09:00 Mr. Falaniko Tino (DEC CP)		Tafaigata
		10:00 Mr. Mikaele Samuele(DEC CP)		Tafaigata
		13:00 Ms. Faatamaliiamio Meredith (DEC CP)		MNRE
		14:00 Mr. John Sio, Pacific Recycle (Pilot Project Collaborator)		MNRE
		15:00 Mr. Affa, Jaffa Sanitary System (Pilot Project Collaborator)		MNRE
		18:00 Mr. Hara (JOCV)		Scalini
9Sep	Wed.	8:30 Mr. Iosua Esekia (Vaiala Village Mayor)		Mayor's House
		10:00 Mr. Faafetai Sagapolutele		SPREP
		11:00 Ms.Shindo		SPREP
		14:00 Mr.Setoa Apo (Project Coordinator)		MNRE
		15:00 Ms.Fuatino Leota (Project Manager)		MNRE
10 Sep	Thu	9:00 Preparation of draft, internal discussion （Japanese side）		JICA
		13:00 Supplementary information collection, discussion with C/P &J/E(as needed)		MNRE
11 Sep	Fri.	9:00 Preparation of draft, internal discussion（Japanese side）		JICA
		14:00 Wrap-up meeting (discussion on draft with MNRE CP&JE)		MNRE
		15:00 Reporting to JICA Samoa Office		JICA

4-1. Dispatch of Experts

Long-term Experts from Project Office	Short-term Experts	Local Expert *	Total
10.8 MM	0.8 MM	4.2 MM	15.8 MM

Note: Cost of Local Expert is included in Local Cost Support

4-2. Training in Japan

Course Name	Period	Position / Organization	Name
"Great Vava'u and Okinawa Mottainai Movement Project"	4th to 18th August, 2012	Managing Director, Pacific Recycling Co. Ltd.	Mr. Ioane Sio

4-3. List of Machinery and Equipment provided by Japan

Utilization: A=Fully B=Moderatly, C=Partly, D= Not at all
Management: A=Appropriate B=Fair C=Innapropriate

When delivery	No.	Country	Item	Maker/Model etc.	Qty.	Price in local currency $	Currency	In US$*	Responsible Section/Organization	Utilization	Management
Jan. 2013	1	Samoa	Weighbridge unit with accessories	CAS WBK Stainless Steel Load Cell etc.	1 set	WST 341,404.41	Samoan Tala (WST)	US$144,649.63	MNRE	A	A
Jan. 2013	2	Samoa	Computerized data management system	Systemtechnik and Industrieautomation GmbH etc.	1 set				MNRE	A	A
Jan. 2013	3	Samoa	Foundation, Approaches, Ramps and Side Road	-	1 set				MNRE	A	A
Jan. 2013	4	Samoa	Control House	-	1				MNRE	A	A
May.2015	5	Samoa	Chainsaw	Echo CS550x18s	1	WST 2,852.00		US$1,208.36	MNRE	B	A
					Total	WST 344,256.41		US$145,858.00			

*(For Feb. 2011-July2013) Exchange rate from local currency to US Dollar refers to OANDA as of 1st August, 2013. 1WST= US$0.42369

*(For Aug. 2013-June2015) Exchange rate from local currency to US Dollar refers to OANDA as of 1st July, 2015. 1WST= US$0.42369

ANNEX 3(i)-Samoa

4-3 Local Cost borne by Japanese side

Country	Travel Allowance	Contract	Fees and honorarium (non-staff)	Refreshments	Miscellaneous	Total			
	Travel Allowance / Air Fare	Contracts over 500,000 yen	Fees and honorarium (non-staff)	Refreshments		In local currency	Local Currency	In Japanese Yen*1	In USD *2
Samoa	1,911.00	341,404.41	200.00	1,370.00	60,132.05	405,017.46	Samoan Tala	¥17,057,067.91	US$168,227.47

Attachment 5: Record of Samoan Inputs

5-1 List of Counterpart Personnel

#	Name	Management CPs	Assigned Period	Position	Organization	Activities in charge
1	Taule'aleausumai Tuifuisa'a Laavasa Maula	National Project Director	Feb. 2011-Nov.2013	Chief Exceutive Officer	Ministry of Natural Resources and Environment	
2	Suluimalo Amataga Penaia	National Project Director	Mar.2014-	Chief Exceutive Officer	Ministry of Natural Resources and Environment	
3	Faleafaga Toni Tipamaa	National Project Manager	Feb. 2011-Aug.2014	Assistant Chief Executive Officer	Ministry of Natural Resources and Environment	
4	Setoa Apo	National Project Coordinator	Feb. 2011-	Prinncipal Waste Management Officer	Division of Environment and Conservation, Ministry of Natural Resources and Environment	1-3, 1-4, 1-5,1-7, 1-8,1-9,1-10,2-5, 2-6, 3-2,3-3,
5	Fuatino Leota	National Project Manager	Oct. 2014-	Assistant Chief Executive Officer	Ministry of Natural Resources and Environment	

#	Name	Technical CPs (Outputs in charge)	Assigned Period	Position	Organization	Activities in charge
1	Fuatino Leota		Feb. 2011-Oct.2014	Principal Chemical and Hazardous Waste Officer	Division of Environment and Conservation, Ministry of Natural Resources and Environment	2-8,
2	Seumanu Mikaele		Feb. 2011-	Senior Landfill Officer	Division of Environment and Conservation, Ministry of Natural Resources and Environment	1-5,1-6,2-1,2-2,2-3,2-5,2-6,2-7,3-2,3-3,
3	Faatamaliiamio Meredith		Feb. 2011-	Senior Waste Policy and Planning Officer	Division of Environment and Conservation, Ministry of Natural Resources and Environment	1-1,1-2,1-6,1-7, 2-5, 2-8,3-1,3-2,3-3,
4	Falaniko Tino		Feb. 2011-	Landfill Officer	Division of Environment and Conservation, Ministry of Natural Resources and Environment	2-4,3-2,3-3
5	Pesio Tutagalevao		Apr. 2012-Dec.2014	Contract Officer	Division of Environment and Conservation, Ministry of Natural Resources and Environment	1-7,2-8,3-1,3-2,3-3,
6	Lameko Tasimale		Feb. 2011-	Principal Health Care Waste Officer	Ministry of Health	1-6,2-3
7	Lucie Isaia		Apr. 2015	Chemical and Hazardous Waste Officer	Division of Environment and Conservation, Ministry of Natural Resources and Environment	2-8,

Attachment 5: Record of Samoan Inputs

5.2 Local cost borne by Samoan side

	1. Travel expenses (airfare, allowances,		2. Expenses for documenting		3. Purchasing goods/materials		4. Foods /Drinks		5. Others		Total	
	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD	Local Currency	USD
Samoa	2,166	918	480	203	4,000	1,695	800	339	192,800	81,687	200,246	84,842

Terminal Evaluation for the Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Kingdom of Tonga

Date: August 25, 2015

I. Project Outline and Evaluation Policy

(1) Project Outline	
Background	In the Kingdom of Tonga, with the increase of locals and tourists, there is an increasing demand to improve the solid waste management for the outer islands, such as Vava'u island. MEIDECC, MOH and an NGO have put a lot of efforts in this area. However, existing landfill was not properly managed with no garbage collection system in place, under no comprehensive Solid Waste Management Plan, it was greatly needed to improve the situation of solid waste management of Vava'u.
Summary of the Project	(See Attachment 1 and 2 for details)
-Overall Goal	Sustainable management of solid waste in the Pacific Region is enhanced
-Project Purpose	Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)
-Priorities in RS2010	**Outputs**
2-2 Waste Disposal 2-3 Waste Collection 7.Policy/Planning/Performance	1) The existing solid waste disposal facility and operation in Vava'u is improved. 2) Solid waste collection service in Vava'u is improved. 3) Framework and system for long-term Solid Waste Management in Vava'u is established.
Project Duration	Five years from February 2011 to February 2016
Implementing Agency	Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications (MEIDECC) , Ministry of Health (MOH)
Target Group	C/Ps of MEIDECC, MOH
Target Area/ Target Population	Vava'u Citizens of Vava'u (14,922 as of 2011 census)
(2) Evaluation Policy	
General Objectives	1) To verify the accomplishments of the Project compared to those planned; 2) To identify promoting and/or inhibiting factors that have affected the project implementation process; 3) To analyze the Project in terms of the five evaluation criteria (i.e. Relevance, Effectiveness, Efficiency, Impact, and Sustainability); 4) To discuss the results of evaluation and solutions for problems that may be observed through the evaluation together with the personnel concerned with the Project and make necessary suggestions
Member of Terminal Evaluation Team	

	Title	Name	Position/Organization
	Cooperation Planning (Overall)	Mr. Toru Taguchi	Assistant Director, Environmental Management Division I, Global Env. Dep., JICA HQ
*	Cooperation Planning (Tonga)	Mr. Shoichi Iwata	Project Formulation Advisor, JICA Tonga Representative Office
*	Evaluation Analysis	Mr. Atau Kishinami	Permanent Expert, International Development Associates, Ltd.,

*Members participating in the evaluation study in the country.

Period of Evaluation Study in the Country	6 days from Aug. 20 to Aug. 25, 2015 (See Attachment 3 for details)
Methodology	JICA Terminal Evaluation Team collected the information through document analysis, questionnaire survey, and interviews with officers concerned with the Project and JICA experts as well as community people and made site visits such as Kalaka landfill, community activities of garbage collection. Based on the results of the evaluation, the

	Team prepared a draft report and finalized it through discussions with the officers concerned with the Project.

II. Accomplishment and Implementation Process of the Project

(1) Inputs (as of June 2015)

<Japanese Side>	**<Tonga Side>**
(see attachment 4) 1) Dispatch of JICA experts : 5 experts (16.9 M/M) - 1 Short-term Expert (14.3 M/M) - 3 Long-term Experts from Project Office (1.0 M/M) - 1 Local Expert (1.6 M/M) (Cost of this Local Expert is included in Local Cost Support) 2) Training in Japan: 2 C/Ps - Training course for "J-PRISM Regional Training for Trainers" in Okinawa from May 24 to Jun 2015 3) Provision of equipment:TOP8, 953 (US$4,877) - Printer, Computer, Projector, Digital Camera and Grass cutter, etc. 4) Local cost support: TOP226, 877 (US$118,719) (as of July 2015) - Cost for Travel, Fees, Construction, etc.	(see attachment 5) 1) Assignment of National Project Director (PD), Project Manager (PM) and Counterparts: 10 persons (at the time of Terminal Evaluation) - 5 Management C/P(2 from MEIDECC, 3 from MOH - 5 Technical C/P (2 from MEIDECC, 2 from MEIDECC Vava'u, 1 from MOH Vava'u) 2) Local cost sharing: TOP7, 670 (US$3,450) - Cost for travel expense, others. 3) Land, facilities - Office space and utilities for JICA experts at MOH and MEIDECC Vava'u Offices

(2) Outputs

Output 1: 1) The existing solid waste disposal facility and operation in Vava'u is improved.	Degree of achievement[1]: Mostly achieved.

Indicator	Results
1.1 The existing dumpsite is rehabilitated.	Kalaka landfill was fully rehabilitated according to the plan with the technical support of the Project in Feb. 2013.
1.2 Rehabilitated landfill is operated in accordance with operation manuals	The operation manual of landfill was developed in Feb.2013 by the Project and finalized with the approval of MOH in Jan. 2015. One C/P can operate the rehabilitated landfill according to this manual and he conducted training to the J-PRISM C/P team from Gizo Town of Solomon Island in Jan. 2015. Water quality monitoring has been carried out on a quarterly basis with collaboration of IWCM Project. It is expected that the MOH will collaborate with other donors to carry out water quality monitoring after the termination of IWCM project. Management of facilities by cutting grass, picking scattered wastes, as well as management of incoming wastes by pushing waste by hired wheel loader have been done by C/P of MOH every two to three months according to the developed operation manual. Management of incoming wastes using heavy machinery has been voluntarily supported by the Ministry of Infrastructure, Vava'u Office since July 2014. With the initiatives of MOH, further improvement of the landfill condition by setting the fence along the landfill boundary to control scattering waste is expected to be finalized by the end of November, 2015. Currently, this C/P and one caretaker have worked to operate the landfill, but the manual has not necessarily been referred at work. It was pointed out that the issues and concerns of landfill operation, such as to control the waste burning and to deal with scattered waste, have not been handled in a timely manner. This is partly due to the lack of manpower allocated to the landfill. In order to properly maintain the landfill operation, by recording the incoming

[1] *Degree of achievement of each output/Project Purpose is judged based on the achievement level of indicators set for each Output/Project Purpose. Ratings used for this judgment are four levels, such as "Fully achieved", "Mostly achieved", "Partly achieved", "Not achieved."*

	waste, monitoring the recycling station, as well as controlling the waste burning, it is expected to monitor more frequently and allocate one more staff for landfill operation. This indicator has been partly achieved.
(Supplemental information) Financial status of landfill operation	Although expenses for these landfill operation was partly funded by the Project until the beginning of 2014, they has now been fully funded by MOH whose annual budget has gradually increased from TOP$1,000 at the beginning of the project to TOP$4,000 in FY2014 and further increased to TOP$8,000 in FY2015. Furthermore, its financial status has also been improved by the assistance of Vava'u Development Funds, and free lease of heavy machinery by MOI.

The existing dumpsite was fully rehabilitated, however, it has not been fully operated in accordance with operation manuals and some concerns regarding landfill management were pointed out. In light of the above, Output 1 has been mostly achieved. It should be well noted that the financial situation has been improved with the commitment of MOH. As the landfill operation requires regular funding, it is expected that the MOH continues to secure necessary budget for managing the incoming waste.

Output 2: Solid waste collection service in Vava'u is improved.	Degree of achievement: Mostly achieved.
Indicator	**Results**
2.1 Collection service is provided according to the schedule (plan).	Community-based garbage collection services have gradually been introduced and expanded with the voluntary efforts by VEVE[2] committee members in each community. As of August, 2015, it is confirmed that the project has started to implement activities for the 2nd expansion communities according to the revised expansion plan. Following table shows the implementation status of collection system.

Table 1: Implementation status of garbage collection system as of Aug. 2015

Name of District	Name of Community	No. of Population	No. of Household
Neiafu	Kameli	1,125	213
	Talau	1,250	250
	Fungamis	420	84
Pangaimotu	Pangaimotu	661	125
Hahake	Tu'anekivale	487	86
Leimatu'a	Leimatua	1,105	218
	Mataika	490	102
	Feletoa (2)	388	65
Hihifo	Longomapu	613	121
	Tefisi	588	113
Pilot Project (Sep.2013 ～)		3,330	638
1st Expansion (Oct./Nov. 2014 ～)		2,989	590
2nd Expansion (Aug. 2015 ～)		808	149
Total		7,127	1,377

Source: Project

It should be noted that in six (6) communities (Toula, Okoa, Ha'alaufuli, Makave, Utui, Vaimalo) not targeted by the Project, community people have started the garbage collection by their own efforts. This indicator was fully achieved.

[2] VEVE means "waste" in Tonga language.

<table>
<tr><td>(Supplemental information)
Implementation Process of community-based garbage collection system</td><td>The following procedures are taken to introduce garbage collection system into the community. This step-by-step process has worked well to get all stakeholders involved in the activities and also has served to foster the initiative of VEVE committee member. And most of activities have been carried out by the initiatives of VEVE committee.

Table 2 Procedure to introduce Hiko VEVE
<table><tr><th>Step</th><th>Activities</th><th>done by</th></tr><tr><td>1</td><td>Meeting with Town Officer</td><td>MEIDECC/Community</td></tr><tr><td>2</td><td>Establishment of VEVE committee</td><td>Community</td></tr><tr><td>3</td><td>Development of Hiko VEVE plan</td><td>VEVE Committee</td></tr><tr><td>4</td><td>Awareness activities to the community</td><td>VEVE Committee</td></tr><tr><td>5</td><td>Implement garbage collection</td><td>VEVE Committee</td></tr><tr><td>6</td><td>Conduct monitoring by following collection truck.</td><td>MEIDECC/MOH</td></tr><tr><td>7</td><td>Workshop/Training to share good practices and lessons</td><td>MEIDECC/MOH</td></tr></table>Source: project</td></tr>
<tr><td>2.2 More than 80% of total households in Vava’u have access to garbage collection system.</td><td>With the smooth implementation of pilot project, participated by many communities, the project revised the target coverage upward to 80%, (approved by JCC in Feb. 2014) anticipating to achieve full coverage by the end of the project. However, with the heavy workload of assisting many communities at the same time, the Project decided to make the plan more feasible and revised the expansion plan which is currently ongoing without modifying the indicator. This resulted that the current coverage target has remained high.

According to the Tonga National Population and Housing Census 2011, there are 2,828 households in Vava’u. As of Aug. 2015, the number of households with access to garbage collection system is 1,377, attaining the coverage of 49%. With the inclusion of six (6) communities who have started garbage collection by their own initiative, the coverage is 62%. And it is expected that the coverage will reach to 78% by the end of the Project, Feb. 2016. This indicator has been partly achieved.

Table 3 Coverage of garbage collection system
<table><tr><td></td><td>10 communities implemented by project</td><td>incl. communities implemented by themselves</td><td>Projection at the end of Project (Feb. 2016)</td><td>Vava'u Tonga</td></tr><tr><td>No. of household</td><td>1,377</td><td>1,746</td><td>2,214</td><td>2,828</td></tr><tr><td>Coverage (%)</td><td>49%</td><td>62%</td><td>78%</td><td>100%</td></tr></table>Source Project</td></tr>
<tr><td>(Supplemental information)
Clean School Program</td><td>Clean School Program (CSP) started by a JOCV assigned to MEIDECC in collaboration with VEPA (Vava’u Environment Protection Association) in 2012. CSP was once suspended, but resumed by a newly assigned staff at MEIDECC, Vava’u. At the initiative of MEIDECC, in collaboration with Ministry of Education and Schools, CSP has been incorporated into VEVE program, in order to overcome lack of waste collection system in school as well as to generate synergy effect by combining both. Currently, 3 preschools, 12 primary schools and 6 secondary schools are participating the program.
In relation to this, GIO recycling company has collaborated with school with the support of MEIDECC by providing learning opportunities for school students on environmental issues. Kalaka landfill serves as a study site for them as well.</td></tr>
<tr><td>(Supplemental information)
Voice of VEVE community members</td><td>According to the interviews with VEVE committee members, it is confirmed that the garbage collection is voluntarily carried out by the effort of community people, who are committed to beautification of environment. Social capacity assessment study done by the Project reveals the positive</td></tr>
</table>

	change in the perception of people's awareness on community-based garbage collection system as well as impression of Kalaka final disposal site. People have known how to segregate waste into its classification and what kind of wastes should be taken to Kalaka. People has recognized their home and community environment has become cleaner than before.
(Supplemental Information) Financial support from MEIDECC	Having highly evaluated the successful implementation of community-based garbage collection system and effective involvement of schools in CSP, MEIDECC have allocated the TOP$15,000 to carry out community-based garbage collection and CSP for the first time.

With voluntary initiatives, community-based garbage collection system has been implemented as planned and approximately 50% of all households in Vava'u have access to the system. In light of the above, Output 2 has been mostly achieved.

In order to further expand and continue this system, as VEVE committee is taking a very important role for delivery of necessary information on their garbage collection, it is necessary therefore, to firmly establish the trust relationship between VEVE committee and residents with the strong leadership and commitment of District and Town Officers. With the technical advice from C/Ps of MEIDECC/MOH at the monitoring, it is expected that the system will be firmly stabilized.

Output 3: Framework and system for long-term Solid Waste Management in Vava'u is established.	Degree of achievement: Mostly Achieved
Indicator	**Results**
3.1 Solid waste management(SWM)] plan	Solid Waste Management Plan was drafted for Vava'u in Jan. 2012. It is in the process of finalization as of July, 2015. Main reasons in taking much time are :i) the draft has been repeatedly revised in order to incorporate activities specified in PO as well as budget estimated by J-PRISM, ii) comments are currently being reflected on the draft. According to the interview with Governor of Vava'u, the Plan is expected to be approved at the JCC in November, 2015. This indicator has been mostly achieved.
3.2 Meeting or workshop for Vava'u SWM Committee is held annually at least.	In order to share the progress of project activities and issues to be considered, workshops for Vava'u SWM Committee were held almost every year as follows;

Table 4 Record of Vava'u Solid Waste Management Workshop

	Date	No.	Topics
1	Oct.2011	56	Explanation of outline of the project, Vava'u SWM Plan
2	Jan.2012	34	Vava'u SWM Plan
3	Aug.2012	50	Vava'u SWM Plan
4	Feb.2014	48	Vava'u SWM Plan
5	Feb.2015	31	Vava'u SWM Plan
	Feb. 2013		Opening Ceremony of Kalaka Landfill inviting Committee members

Source: Project

For the year of 2013, the workshop was substituted by the opening ceremony of Kalaka Landfill. Project is planning to have the 6th workshop in November, 2015 to obtain approvals for the finalized the Vava'u Solid Waste Management Plan. This indicator has been mostly achieved.

In light of the above, Output 3 has been mostly achieved.

(3) Project Purpose

Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	Degree of achievement: Mostly achieved.

Indicator	Results
1. Six (6) trainers listed in the SPREP inventory[3]	Capacity development of C/Ps have been progressed through the project activities. As a results, some C/Ps have worked as trainers for other PIC members. In the SPREP inventory, which is a database developed by J-PRISM, (Pacific Islands Database of Capacity Development Activities: PIDOC), five (5) trainers are listed in following fields of SWM; 1 C/P for Waste Generation/characterization Study, 1 for Waste Collection & Transportation, 1 for Landfill Improvement/Rehabilitation/Construction and 2 for School/Community Program. Capacity Assessment conducted in August 2015 has proved the great improvement of capacity of those C/Ps. Furthermore, supervisors of those C/Ps positively appraised their capacity during the interviews.
(Supplementary Information) Other candidate for trainers	One officer from MEIDECC and Community Leader of collaborating agency are nominated by JICA expert as being capable of garbage collection services.
2. More than 50 % of target communities operate and maintain the garbage collection system with a minimum support from the government.	Currently, ten (10) communities have access to garbage collection system run by the VEVE committee members. Out of those, eight (8) communities can independently operate and maintain the garbage collection system without direct support from MEIDECC/MOH through monitoring. This indicator has been fully achieved.

In light of the above, the Project Purpose is mostly achieved.

High degree of achievement of three (3) outputs contributed to strengthen both human, institutional and social capacity for SWM.

(4) Implementation Process

・Method of Technical Transfer：
Approach to encourage C/Ps ownership by JICA experts have greatly contributed to C/Ps to enhance their capacity in solid waste management. Further efforts have been made in documentation and presentation. Various training courses/workshop have also served to expand their capacity.

・Project Management:
Much efforts were made and various innovative ideas were used to mobilize local resources in the situation of Vava'u where resources are limited and communication network may not be fully available. Collaboration with the governor, local NGO, private companies and communities have contributed to overcome these constraints in Vava'u. Vava'u Solid Waste Management Workshop has served well to get local people involved. These efforts has facilitated the progress of activities and produced the expected outputs.

・Communication within the Project:

[3] *This indicator was not used as a direct measure of the Project Purpose for the following reasons;(I) While PIDOC, the existing database, is an inventory of SPREP, the persons listed are trainers certified by J-PRISM but not considered as officially certified trainers by SPREP, (ii) the target values are not valid as they had been determined before the introduction of PIDOC (thus not consistent with the number of trainers listed in it.) Accordingly, the degree of achievement of the Project Purpose was judged in a comprehensive manner with the other indicators and supplementary information (where necessary), while referring to this indicator as reference information.*

Communication with implementation agency, JICA office, local stakeholders have been well. Especially, effective communication with Governor has resulted in the successful implementation of project activities overall. Much efforts have been made to share the information and opinion between main offices in Tongatapu and offices in Vava'u for both MEIDECC and MOH, in order to facilitate the decision making process in main offices.

・Collaboration with Local Stakeholders

No.	Stakeholder	Type of coordination
1	GIO Recycling Company	Waste Recycling Activities for Community-based garbage collection Environmental education and awareness programs with schools under CSP
2	MOE and schools	CSP program in collaboration with community-based garbage collection system

・Participation in Region-Wide Activities of J-PRISM

No.	Title	Type of activity	No. of C/P attended
1	Clean Pacific Campaign Training in Fiji 2012	Sub-regional training	1
2	Clean School Program Teacher's workshop in Fiji,2012	Sub-regional training	1
3	Regional Training for Trainers 2014 in Fiji	Regional Training	2
4	Regional Training for Trainers in Okinawa, May 2015	Regional Training	2

・Coordination with Other Japanese and International Projects

1) Holistic approach with other schemes of Japanese assistance

No.	Scheme	Type of coordination
1	JICA partnership program with Okinawa Citizens Recycling Movement "Great Vava'u and Okinawa Mottainai Movement Project"	3 C/Ps participated in Training on recycling in Okinawa in 2013 and 2014.
2	JOCV assigned to MEIDECC (Oct. 2011 – Sep. 2013)	Environmental education and awareness raising in Clean School Program
3	Training and Dialogue Program on Solid Waste Management Technique in Japan.	1 C/P participated in Waste Management and 3R Policies at JICA Tokyo, JFY2011 1 C/P participated in Waste Management Technique at JICA Kyushu, JFY2012
4	Non Project Grant Aid for Provision of Industrial Product 2011	Provision of excavator to MOI (the project is supported by lease of excavator to pushing the waste at Kalaka landfill)

2) Collaboration with other donors

No.	Donor / Project Name	Type of coordination
1	GEF: Integrated Water Resources Management Project (IWRM)	Water Quality Monitoring at Kalaka Landfill on a quarterly basis
2	AusAID: Integrated Water and Coastal Management Project (IWCM)	Water Quality Monitoring at Kalaka Landfill on a quarterly basis
3	AusAID: Vava'u Environmental Protection Association (VEPA)	Awareness raising/ promotion of garbage collection at school and community

III. Results of Analysis from the Viewpoints of Five Evaluation Criteria

(1) Relevance

Evaluation: Relevance of the Project is high.

In the Kingdom of Tonga, there is an increasing demand to improve the solid waste management for the outer islands, such as Vava'u island. This project has been highly relevant with Tonga's development needs to cope with the increasing waste in Vava'u in accordance with the increasing trend of tourists. The project is also consistent with the Japanese ODA Policy i) to improve solid waste management system, ii) to improve people's health, iii) to enhance human resource capacity, iv) to improve people's living standards and economic development and so forth. In addition, Solid Waste Management Plan for Vava'u incorporating J-PRISM activities was drafted in 2012 and is in the process of finalization, although until now, there has been no comprehensive Solid Waste Management Plan.

(2) Effectiveness

Evaluation: Effectiveness is relatively high.

1) Achievement of Project Purpose

As mentioned above, it is likely that the Project Purpose is mostly achieved. Through activities of the rehabilitation and operation of landfill, implementation of garbage collection system, capacity of C/Ps have greatly improved. Experts and managerial personnel of relevant organizations/agencies altogether acknowledge the improvement of C/Ps' capacity, so as the results of Capacity Assessment indicate.

2) Contribution of Outputs to Project Purpose

Three (3) Outputs, consisting of i) improvement of existing solid waste disposal facility and its operation, ii) improvement of solid waste collection service and iii) establishment of framework and system for long-term solid waste management, are necessary and sufficient components to achieve the Project Purpose.

3) Other promoting/inhibiting factors

It is pointed out that the high level of achievement of the project in terms of community activities in Vava'u is largely attributed to the strong commitment of relevant personnel, such as Governor, District Officers, Town Officers and members of VEVE Committees. This aspect is quite important when establishing new groups and starting collective activities.

Step-by-step procedures to build consensus among community people has proven to be very effective. The project first introduced the idea of garbage collection system to the District/Town Officers, influential leaders of the community. Workshop and meetings have served to get all relevant stakeholders be aware about the real needs and their part of responsibilities to carry out the activities. And the establishment of VEVE committee has fostered their initiatives.

(3) Efficiency

Evaluation: Efficiency is relatively high.

1) Production of Outputs

Three Outputs have been mostly produced as planned. Some improvement are needed for the operation of landfill for Output 1. Although facilities of Kalaka Landfill have been improved, the operations are not necessarily conducted according to the operation manual. Shortage of staff at the landfill site might have contributed to insufficient monitoring of the site.

2) Appropriateness of Inputs

Inputs of both Tonga side and Japanese side were appropriate in terms of quantity, quality and timing. Especially, the opportunities for C/Ps to attend the training of trainers have greatly enhanced their capacities as trainers.

3) Utilization of external resources

Project collaborated with GIO Recycling Company in waste recycling activities for community-based garbage collection. C/Ps of MOH have worked together to water quality monitoring of surrounding area of Kalaka landfill in collaboration with IWRM/IWCM projects by AUSAID/GEF and a local NGO, VEPA. In the first half of the period, JOCV assigned to MEIDECC has collaborated to carry out Clean School Program.

4) Other promoting/inhibiting factors

<u>Promoting Factors</u>

As for garbage collection, mobilization of local people and resources (e.g. vehicles) has facilitated the operations as well as cooperation from residents. Government supports, such as technical advice, training, etc. are one of important factors for promotion.

Inhibiting Factors
No inhibiting factors are reported.

(4) Impact

Evaluation: Positive impacts were observed and no negative impact was observed.

1) Impact at Overall Goal level

It is likely that indicator 2 "All households in Vava'u have access to garbage collection system" will be achieved in three years considering the steadily progress of current implementation status. However, the likelihood of achieving the indicator 1 "Kalaka landfill has been properly operated" will depend on whether the landfill operation will improve in accordance with the operation manual.

2) Other impacts

・Positive impacts
At present, GIO Recycling Company provides students mainly from the primary schools with learning opportunities of recycling at its recycling center and Kalaka landfill. This event was first introduced to GIO by C/P (MEIDECC) and it is expected to increase the number of schools participating CSP.

In some communities, various "good practices" have been observed, i.e. picking up rubbish in the area during collection work by VEVE committee, sufficient operation cost secured by communities. Community empowerment has been strengthened through 'outreach' activities done by the Project.

The Town Officer commented at the interview that the infection rate of tetanus has been reduced in Mataika Community. This could be the one of ripple effects of the garbage collection which may contribute to make the environment hygienic.

・Negative impacts
No negative impacts have been reported.

(5) Sustainability

Evaluation: Sustainability of effects of this Project is expected to be enhanced.

1) Policy and institutional aspects

Solid Waste Management Plan for Vava'u, which incorporates J-PRISM activities was drafted in 2012 and is in the process of finalization. The Plan is expected to be endorsed at the JCC, which is scheduled in November 2015 and to be put into action as scheduled.

2) Organizational aspects

The number of workers for operating landfill management still needs further improvement. MOH needs to establish a proper landfill operation system in accordance with the developed operation manual.

3) Financial aspects

Landfill is fully funded by the MOH with increased budget for landfill since 2014. As the landfill operation requires the constant funding, it is desirable that MOH continuously secure necessary budget for landfill.

Having highly evaluated the successful implementation of community-based garbage collection system and effective involvement of schools in CSP, MEIDECC is expected to allocate necessary budget for promotion of community-based garbage collection, CSP and trainings. The funding mechanism, such as imposing the environmental tax, etc. is crucial to implement solid waste management plan.

4) Technical aspects

It is confirmed that most of knowledge and technologies transferred through the project activities are appropriate in the context of Tonga and it is very likely to be maintained, especially, knowledge and skills for landfill operation, garbage collection system, and Clean School Program.

5) Others

Promotion of garbage collection requires the behavior change of the people. It is necessary to firmly establish the trust relationship between VEVE committee and residents under the strong leadership and commitment of District and Town Officers. Continuous following up of activities by C/Ps is essential.

VI. Conclusion

Relevance is still high, as there is an increasing demand to improve the solid waste management with the increase of tourists in outer islands like Vava'u. Effectiveness is evaluated relatively high since the Project Purpose is mostly achieved as capacity of C/Ps has been enhanced and also garbage collection system has been introduced and established in target communities. Efficiency is also relatively high as inputs have been appropriately made in terms of quantity, quality and timing and Outputs have been mostly produced as planned. However, the operations at Kalaka Landfill are not necessarily conducted in accordance with operation manual due to lack of regular monitoring and human resources. To enhance impact, as well as to ensure sustainability, it is essential to monitor daily operations and to constantly secure enough budget for Kalaka landfill.

For the future maintenances and sustainability of the project, it is recommended that MOH and MEIDECC, with other stakeholders, continues their joint collaboration on improving human resources for SWM issues and exploring other funding opportunity as well.

V. Recommendations for the remaining period

For MEIDECC

- It is suggested that the member of steering committee collaborate together and make extra effort to finalize the Solid Waste Management Plan in time prior to the JCC in November 2015. Also, it is expected that the Plan will be endorsed by the committee at the JCC meeting and will be put into action as scheduled by the concerned agencies.
- It is also recommended that MEIDECC continues to secure a funding for garbage collection system as well CSP.
- The funding mechanism, such as imposing the environmental tax, etc. is crucial to implement solid waste management plan.

For MOH

- It is recommended that the C/P person in charge of Kalaka Landfill should follow up regularly to inspect the current situation and to maintain the site as well report to the main office.
- It is recommended that the MOH should allocate additional staff to ensure the proper operation and maintenance of Kalaka landfill.
- The landfill operation requires a constant funding and thus it is advised that the MOH continues to secure necessary budget.

For MEIDECC and MOH

- It is identified that the community-based system is well set up through Town officers, Youth leaders, as well village committees. With these outstanding models, the result can be utilized in other outer islands as model to be followed.

For JICA expert for Tonga:

- It is recommended the JICA Expert to be follow-up and finalized the Solid Waste Management Plan, as well follow up the project C/P and make sure that they are fully understand the Operation Manual.

For JICA Tonga Office:

- It is essential that JICA Tonga Office continues its tireless effort of follow-up and monitoring counterparts for their timely input and collaboration towards achieving the project goals.

Attachment:

1. Project Design Matrix (PDM Version 3)
2. Plan of Operation (PO Version 4)
3. Schedule of Terminal Evaluation
4. Record of Japanese Inputs
   4-1 Dispatch of Experts
   4-2 Training in Japan
   4-3 List of Machinery and Equipment provided by Japan
   4-4 Local cost
5. Record of Tonga Inputs
   5-1 List of Counterpart personnel
   5-2 Local cost

Project Design Matrix (PDM) - Tonga **Version 3**

Project Title: Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Target Group : C/Ps of Ministry of Environment and Climate Change, Ministry of Health | Final Beneficiaries: Citizens of Vava'u | Project period: 02, 2011 - 01, 2016 (5 years)

Implementing Agency: Ministry of Environment and Climate Change, Ministry of Health | Target Area: Vava'u | Date issued: February 13, 2014

Narrative Summary	Objectively Verifiable Indicators	Means of Verifications	Important Assumptions
Overall Goal			
Sustainable management of solid waste in the Pacific Region is enhanced.	1. Kalaka landfill has been properly operated. 2. All households in Vava'u have access to garbage collection system	Monitoring records MoH's working records (Kalaka)	
Project Purpose			
Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	1. 6 experts (Trainers)-listed in the SPREP inventory 2. More than 50 % of target communities operate and maintain the garbage collection system with a minimum support from the government.	SPREP (Regional inventory of skilled people) Monitoring records	1. Natural disaster would not drastically affect the collaboration mechanism of SPREP. 2. Political changes of PIC countries would not drastically affect the collaboration mechanism of SPREP.

#	Priorities under RS2010	Outputs	Objectively Verifiable Indicators	Means of Verifications
1	Sustainable Financing			
2-1	3Rs/4Rs			
2-2	Waste Disposal	**Output 1:** The existing solid waste disposal facility and operationin Vava'u is improved	1-1 The existing dumpsite is rehabilitated 1-2 Rehabilitated landfill is operated in accordance with operation manuals	MoH's working record (Kakala) Progress report
2-3	Waste Collection	**Output 2:** Solid waste collection service in Vava'u is improved	2-1 Collection service is provided according to the shedule (plan) 2-2 More than 80% of total households in Vava'u have access to garbage collection system	Progress report
3	Legislation			
4	Awareness/Communication/ Education			
5	Capacity Building			
6	Environmental Monitoring			
7	Policy,Planning, Performance	**Output 3**: Framework and system for long-term Solid Waste Management in Vava'u is established	3-1 Solid waste management plan 3-2 Meeting or Workshop for Vava'u Solid Waste Management Committee is held annually at least.	Minutes of Meeting Progress
8	Solid Waste Industry			
*	Monitoring system of RS2010			

Important Assumptions

Important Assumptions
1.Counterpart personnel keep working in the field of SWM. 2. Disasters, such as severe rain storm will not drastically affect the progress of project activities. 3. Necessary budget to carry out activities is allocated from the government.

Activities	Inputs: Japanese Side	Inputs: Tonga side
Please see PO for details.	Dispatch of JICA experts Provision of equipment and materials Provision of Regional, sub-regional and in-country workshops / training Local cost support	Assignment of Natinonal PD/PM and CPs Local Costs Sharing Provision of necessary land/facility, work space

Pre-condition
Cooperation of community people of the target area is obtained.

Plan of Operation

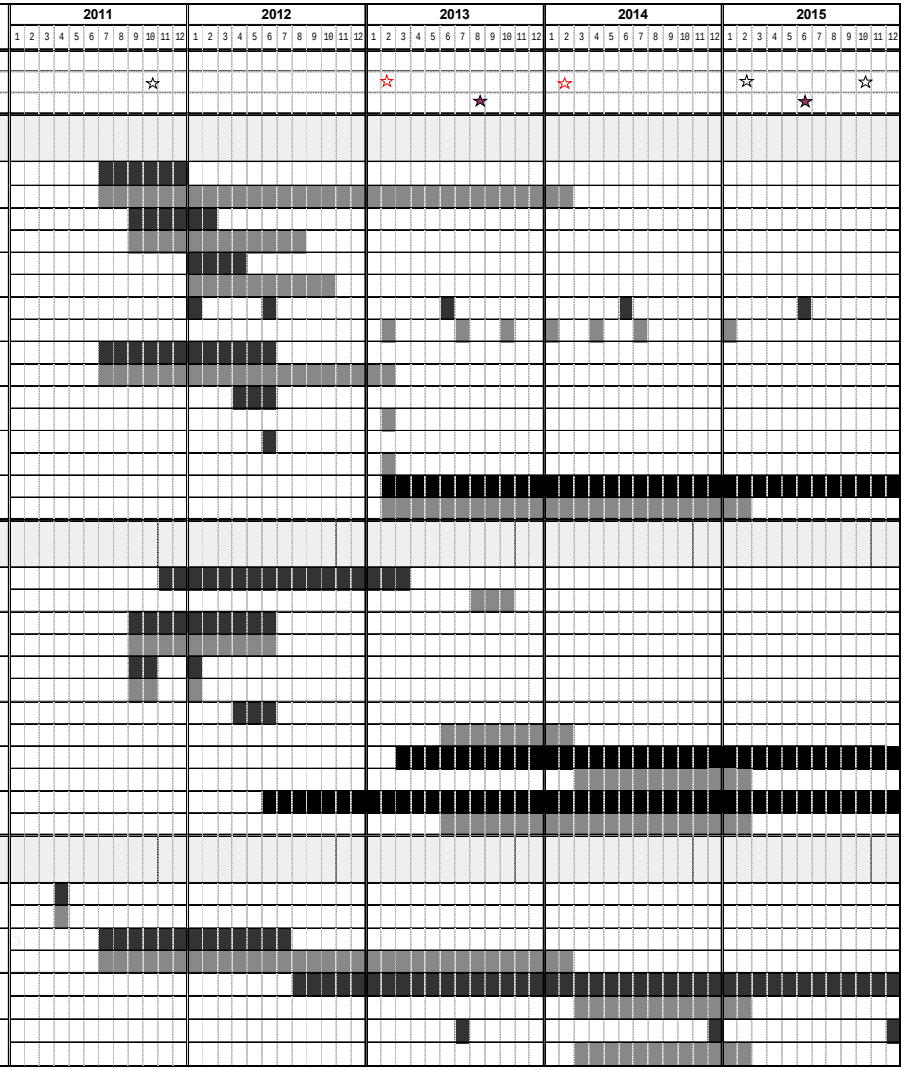
Term: 2011～ 2015 (5years)

Version 4

Indicators of Project Purpose **1. 6 experts (Trainers) in the SPREP inventory**
2. More than 50% of target communities operate and maintain the garbage collection system with a minimum support from the government.

REVISED PLAN OF OPERATIO NS - TONGA

	Outputs and Associated Activities	Indicators for Outputs	Person in-charge
JCC/SC/Eva	JCC ◇		
	Steering Committee ☆		
	Evaluation Studies ★		
OUTPUT 1: The existing solid waste disposal facility and operationin Vava'u is improved		1-1 The existing dumpsite is rehabilitated 1-2 Rehabilitated landfill is operated in accordance with operation manuals	
1-1	Conduct site investigation at the existing dump site		Manase, Pino, Feauini
1-2	Develop a plan, design and construction for the improvement of the site		Manase, Pino, Feauini
1-3	Undertake Environmental Impact Assessment		Lupe Matoto, Manase, Pino, Feauini
1-4	Waterquality monitoring of Vava'u dumpsite and nearby environment		Manase, Pino, Feauini
1-5	Undertake rehabilitation of existing dumpsite		Manase, Pino
1-6	Development of the operation manual for Vava'u rehabilitated disposal site		Manase, Pino
1-7	Conduct training for site operation & maintenance		Manase, Pino, Feauini
1-8	Operate the rehabilitated disposal site		Manase, Pino
OUTPUT 2: Solid waste collection service in Vava'u is improved		2-1 Collection service is provided according to the shedule (plan) 2-2 More than 80% of total households in Vava'u have access to garbage collection system	
2-1	Improvement of facility and equipment for waste collection such as provision of bins, dumpsters and collection vehicles		Feauni, Pino, Manase
2-2	Develop a plan to improve domestic waste collection system		Feauni, Pino, Manase
2-3 *	Conducting of waste characterization study for collection service planning		Mafileo, Feauni, Pino, Manase
2-4	Conduct pilot project of solid waste management		Feauni, Pino, Manase
2-5	Promote a community-based garbage collection system according to the garbage collection plan		Feauni, Pino, Manase
2-6	Monitor an implementation of community-based garbage collection		Feauni, Pino, Manase
OUTPUT 3: Framework and sytem for long-term Solid Waste Management in Vava'u is establised.		3-1 Solid waste management plan 3-2 Meeting or Workshop for Vava'u Solid Waste Management Committee is held annually at least.	
3-1	Establish a committee involving key stakeholders to oversee the management of solid waste in Vava'u		Feauni, Pino, Manase
3-2	Development of solid waste management plan for Vava'u		Mafileo, Feauni, Pino, Manase
3-3	Monitoring of solid waste management plan implementation in Vava'u		Mafileo, Feauni, Pino, Manase
3-4	Evaluation and improvement of solid waste management plan		Mafileo, Feauni, Pino, Manase



JICA Terminal Evaluation for
The Japanese Technical Cooperation Project
for Promotion of Regional Initiative
on Solid Waste Management in Pacific Island Countries (J-PRISM)

Field Survey Schedule

Date		Schedule
20 Aug.	Thurs.	10:15 Arrival at Nuku'alofa from Nadi (FJ211) 12:00 Meeting at JICA Rep Office with Mr. Kikawa, Mr. Iwata 14:00 Courtesy Call to MEIDEC, interview with CPs at MEIDEC Mrs. Lupe Matoto (Act CEO), Mr. Mone Lapaoo 15:30 Courtesy Call to MOH, interview with CPs at MOH Dr. Leiukamea Saafi (Act CEO), Dr. Raynold 'Ofanoa 17:30 Visit GIO Recycling Co. Ltd, Nuku'alofa Office Interview with Ms. Ofa
21 Aug.	Fri.	08:00 Leave Nuku'alofa to Vava'u (RT803) 09:00 Arrival at Vava'u 09:10 Site Visit and interview with VEVE Committee of Feletoa, and Mataika Community. 11:00 Interview with CPs (MEIDECC, MOH) Ms. Winnie, Mr. Manase, Ms. Mele 13:00 Visit GIO Recycling Co. Ltd, Vava'u Office Site Visit to Kalaka Landfill 15:00 Meeting with Governor of Vava'u Hon. Load Fulivai (Governor)
22 Aug.	Sat.	08:00 Site visit community activities (Pangaimotu, Tefisi, Tu'anekivale Community) Data analysis
23 Aug.	Sun.	Preparation of Evaluation Report
24 Aug.	Mon.	08:10 Leave Vava'u for Nuku'alofa (RT802) 09:10 Arrival at Nuku'alofa Preparation of Evaluation Report (ER) 14:00 Meeting with MEIDEC on ER Mrs. Lupe Matoto (Act CEO), Ms. Mafile'o Masi, Mr. Mone Lapaoo 15:30 Meeting with MOH on ER Dr. Leiukamea Saafi (Act CEO), Dr. Raynold 'Ofanoa Mrs. Sela Faniela Fau
25 Aug.	Tue.	09:00 Meeting with MEIDEC, MOH to discuss on ER at JICA Office Mrs. Lupe Matoto, MEIDEC (Act CEO), Dr. Leiukamea Saafi, MOH (Act CEO) 15:00 Report to JICA Tonga Office 19:00 Leave Nuku'alofa for Nadi (FJ210)

4-1. Dispatch of Experts

Long-term Experts from Project Office	Short-term Experts	Local Expert *	Total
1.0 MM	14.3 MM	1.6 MM	16.9 MM

Note: Cost of Local Expert is included in Local Cost Support

4-2. Training in Japan

Course Name	Period	Position / Organization	Name
"J-PRISM Regional Training for Trainers"	25th May to 4th June, 2015	Health Inspector, Vava'u Ministry of Health	Mr. Manase Pongi
		Officer in Charge Vava'u, Ministry of Environment, Energy, Climate Change, Disaster Management, Meteorological Information & Communications	Ms. FeauiniVeikoso

4-3. List of Machinery and Equipment provided by Japan

Utilization: A=Fully B=Moderatly, C=Partly, D= Not at all
Management: A=Appropriate B=Fair C=Innapropriate

When delivery	No.	Country	Item	Maker/Model etc.	Qty.	Price in local currency $	Currency	In US$*	Responsible Section/Organization	Utilization	Management
Sep. 2011	1	Tonga	Printer	DELL1135n Laser Printer	1	TOP 768.00	Tonga Pa'anga (TOP)	US$418.37	MOH Ngu Hospital, Environmental Health Section	damaged	damaged
Oct. 2011	2	Tonga	Laptop Computer	HP Probook 4250s, 15.6" screen I5-480M 2.66GHz, HDD 500GB RAM 4GB, Win7 Pro 32bit	1	TOP 2,335.00		US$1,271.99	MOH Ngu Hospital, Environmental Health Section	A	B
Feb. 2012	3	Tonga	Digital Camera	OLYMPUS Stylus Tough-6020	1	TOP 614.00		US$334.48	MOH Ngu Hospital, Environmental Health Section	A	A
Feb. 2012	4	Tonga	Software	Microsoft Office Professional	1	TOP 1,450.00		US$789.89	MOH Ngu Hospital, Environmental Health Section	A	A
Jan. 2012	5	Tonga	Hard drive	Verbatim/Model#53004/320GB USB 2.0 - 2.5 inch	1	TOP 243.85		US$132.84	MLECCNR Vava'u	Stallen in Nov 2014	Stallen in Nov 2014
Mar. 2012	6	Tonga	Projector	Dell 1410	1	TOP 2,100.00		US$1,143.98	MLECCNR Vava'u	A	A
Mar. 2012	7	Tonga	Printer	Brother HL 3040CN	1	TOP 768.00		US$418.37	MLECCNR Vava'u	A	A
Jun. 2013	8	Tonga	Grass cutter	Bushcutter 26cc Straight Shaft (SANLI)	1	TOP 675.00		US$367.71	MoH Ngu Hospital, Environmental Health	A	A
					Total	TOP 8,953.85		US$4,877.61			

* Exchange rate from local currency to US Dollar refers to OANDA as of 1st August, 2013.

1TOP= US$0.54475

4-4. Local Cost

Country	Travel Allowance	Contract		Fees and honorarium (non-staff)	Refreshments	Miscellaneous	Total			
		Contracts over 500,000 yen	Commission Contract (others)				In local currency	Local Currency	In Japanese Yen*1	In USD *2
Tonga	13,685.11	45,296.90	600.00	2,367.00	5,720.30	152,139.20	226,877.01	Tonga Pa'anga	¥12,235,379.24	US$118,719.96

Note 1) JICA's official rate – from local CCY to Japanese yen,
Note 2) Exchange rate from Japanese Yen (JPY) to US Dollar:
For JFY2010-July 2013: JICA's official rate of August 2013 (USD1=JPY98.10)
For Aug2013-June 2015: JICA's official rate of June 2015 (USD1=JPY123.96)

5-1. List of Counterpart Personnel

See next page

5-2. Local Cost

	1. Travel expenses (airfare, allowances,		2. Expenses for documenting		3. Purchasing goods/materials		4. Foods /Drinks		5. Others		Total	
Country	**Local Currency**	**USD**	**Local Currency**	**USD**	**Local Currency**	**USD**	**Local Currency**	**USD**	**Local Currency**	**USD**	**Local Currency**	**USD**
Tonga	1,240	558	0	0	0	0	0	0	6,430	2,892	7,670	3,450

5-1 List of Counterpart Personnel

#	Name	Management CPs	Assigned Period	Position	Organization	Activities in charge
1	Asipeli Palaki	National Project Director	Feb. 2011-Jul.2014	CEO/Director	Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications (MEIDECC)*	
2	Paula Ma'u	National Project Director	Aug. 2014 -	CEO/Director	MEIDECC	
3	Dr Siale 'Akau'ola		Feb. 2011-	CEO/Director	Ministry of Health (MOH)	
4	Dr. Edgar 'Akauola	Co-National Project Manager (Dr.)	Feb. 2011 - May 2011	Chief Medical Officer, Vava'u	MOH, Vava'u	
5	Dr. Saia Piukala	Co-National Project Manager (Dr.)	Jun. 2011 -Dec.2011,	Chief Medical Officer, Vava'u -> Minister	MOH	1.2, 3.2
6	Dr. Tevita Tu`ungafasi	Co-National Project Manager (Dr.)	Jan.2012 -Oct. 2012	Chief Medical Officer, Vava'u	MOH, Vava'u	1.2, 3.2
7	Dr Reynold 'Ofanoa	Co-National Project Manager (Dr.)	Nov. 2012-	Chief Medical Officer, Vava'u -> Head of Public Health Divisiton	MOH	2.1, 2.2, 3.2
8	Mrs. Lupe Matoto	(MEIDECC)	Feb. 2011-	Director of Environment	MEIDECC	1.3, 1.4, 2.1, 2.2, 2.6, 2.7, 3.2, 3.3, 3.4
9	Mrs. Sela Fa'u	(MOH)	Jan. 2015 -	Supervising Public Health Inspector	MOH	1.4, 1.8, 2.2, 3.2, 3.3, 3.4

#	Name	Technical CPs	Assigned Period	Position	Organization	Activities in charge
1	Mafile'o Masi		Feb. 2011-	Senior Environmentalist	MEIDECC	1.2, 1.3, 1.4, 2.2, 2.3, 3.2
2	Filimone Lapaoo		Apr. 2014 -	Environment Officer	MEIDECC	
3	Mele Finau		Sep. 2014 -	Environment Officer, Vava'u	MEIDECC, Vava'u	
4	Feauini Veikoso Laumanu	Co-National Project Manager	Feb. 2011-	Officer-In-Charge, Vava'u	MEIDECC, Vava'u	1.1, 1.2, 1.3, 1.4, 2.2, 2.3, 2.4, 3.1, 3.2
5	Dr. Malakai 'Ake		Feb. 2011-Apr. 2014	Public Health	MOH	1.2, 2.2, 3.2
6	Niutupuivaha Fakakovikaetau		Feb. 2011-Aug. 2013	Senior Health Inspector	MOH	1.2, 1.3, 3.2
7	Manase Malua		Feb. 2011-	Health Inspector, Vava'u	MOH, Vava'u	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 2.2, 2.3, 2.4, 3.2
8	Leopino Fa'asolo		Feb. 2011-Jul.2015	Health Inspector, Vava'u	MOH, Vava'u	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 2.2, 2.3, 2.4, 3.2

Note: Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications (MEIDECC) was formerly named as Ministry of Lands, Environment and Climate Change and Natural Resources (MLECCNR).

Terminal Evaluation for the Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)

Tuvalu

Date: Sep. 11, 2015

I. Project Outline and Evaluation Policy

(1) Project Outline	
Background	Tuvalu is the last country that signed the Record of Discussions (R/D) in May 2011. Under J-PRISM, assistance to be provided to Tuvalu is very limited in order to avoid overlapping and to complement of assistance being provided by EU's "Tuvalu / Water, Waste and Sanitation Project (TWWSP)" under 10th European Development Fund (EDF 10).The Minutes attached to the R/D documents states that activities of Output 2 will be further elaborated in the future once the details of EU project are finalized. Upon receiving information on the EU project which covers the public awareness activities, it was agreed that Output 2 is removed from the project.
Summary of the Project	(See Attachment 1 and 2 for details)
-Overall Goal	Sustainable management of solid waste in the Pacific Region is enhanced
-Project Purpose	Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)
-Priorities in RS2010	**Outputs**
2-1 :3R/4R	Output 1: Capacity of operators and field workers is increased through training. Note: Output 2 "Public awareness for waste minimization is enhanced" was removed from the project component in 2015 since EU has assisted on public awareness for waste minimization from August 2011.
Project Duration	Five years from 2 February 2011 to1 February 2016
Implementing Agency	Solid Waste Agency of Tuvalu (SWAT), Ministry of Home Affairs (MHA) Funafuti Kaupule (local government)
Collaborating Agency	None
Target Group	C/Ps of SWAT, MHA, Funafuti Kaupule
Target Area/ Target Population	Funafuti/ Approximately 10,782 (2012 World Bank)
(2) Evaluation Policy	
General Objectives	1) To verify the accomplishments of the Project compared to those planned; 2) To identify promoting and/or inhibiting factors that have affected the project implementation process; 3) To analyze the Project in terms of the five evaluation criteria (i.e. Relevance, Effectiveness, Efficiency, Impact, and Sustainability); 4) To discuss the results of evaluation and solutions for any problems that may arise through the evaluation together with the personnel concerned with the Project and make necessary suggestions; and 5) To draw lessons that can be applied to similar projects.
Member of Terminal Evaluation Team	Title: Cooperation Planning; Name: Mr. Toru Taguchi; Position/Organization: Assistant Director, Environmental Management Division 1, Global Environment Department., JICA Title: Evaluation Analysis; Name: Ms. Shinobu Mamiya; Position/Organization: Permanent Expert, International Development Associates, Ltd.
Period of Evaluation Study in the Country	NA

Methodology	JICA Terminal Evaluation Team collected the information through document analysis, hearing with officers by project experts. Based on the results of the evaluation, the Team prepared a draft report.
Limitation	No field study was conducted. Assessment was conducted based on the data and information of the existing reports and interviews done by J-PRISM experts.

II. Accomplishment and Implementation Process of the Project

(1) Inputs (as of June 2015)

<Japanese Side>	**<Tuvalu Side>**
(See attachment 3) 1) Dispatch of JICA experts : 2 experts (0.2 M/M) - 2 Long-term Experts from Project Office (0.2 M/M) 2) Training in Japan: None 3) Provision of equipment :None 4) Local cost support: US$4,372 - Airfare and Travel Allowances for Country Attachment Program in Fiji	(See attachment 4) 1) Assignment of National Project Director (PD), Project Manager (PM) and C/Ps:6 persons - 3 Management C/Ps (1 from SWAT, 1 from MHA and 1 from Funafuti Kaupule - 3 Technical C/Ps (2 from SWAT and 1 from Funafuti Kauple) 2) Local cost sharing: None 3) Land, facilities: None

(2) Outputs:

Output 1: Capacity of operators and field workers is increased through training.	Degree of Achievement[1]: Partly achieved.

Indicator	Results
1.1 Duration time for waste collection in Funafuti Kaupule has reduced after training in Fiji.	There is no data available for the reduction of duration time for waste collection. Therefore, achievement of the Indicator was not assessed.
1.2 At least one training conducted in-country by trained personnel in Fiji.	Two C/Ps were trained under Country Attachment Program to learn about mainly garbage collection system of Lautoka City Council (LCC), Fiji. They also learned about the Waste Disposal and several 3R components practiced in LCC. After coming back to Tuvalu, they shared the knowledge and skills acquired with other workers. However, since one of them left the organization soon after and no training was not conducted. This indicator was not achieved.
(Supplemental Information) Improvement on occupational safety	According to the hearing done by the J-PRISM expert, some improvement was identified. C/Ps who received training in Fiji proposed the improvement of occupational safety in which workers should wear gloves and shoes at work. The proposal was well accepted by the city council which had made it practiced.

Two C/Ps received trainings on garbage collection system in Fiji and learned about waste disposal and 3R as well. No training was done by these C/Ps, but they shared the knowledge and skills with other workers and there was some improvements identified in terms of occupational safety.

In light of the above, Output 1 "Capacity of operators and field workers is increased through training" was partly achieved.

[1] *Degree of achievement for each output/Project Purpose is judged based on the achievement level of indicators set for each Output/Project Purpose. Ratings used for this judgment are four levels, such as "Fully achieved", "Mostly achieved", "Partly achieved", "Not achieved".*

(3) Project Purpose

Human and institutional capacity base for sustainable solid waste management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	Degree of Achievement: Not assessed:

Indicator	Results
1. Number of experts (trainers) in the field of XX listed in the SPREP inventory[2]	The capacity of C/P on solid waste has not been progressed as planned. Although two C/Ps acquired the knowledge and skills on 3R through Study Visit to Lautoka, Fiji, they did not have a chance to utilize acquired knowledge and skills at work. No C/P has worked as trainers, thus not listed in the PIDOC at the time of Terminal Evaluation.
2. Improved operation of waste collection	There is no data available for the Improved operation of waste collection. Therefore, achievement of the Indicator was not assessed.

There was some improvement identified in terms of occupational safety. However, knowledge and skills acquired through training have not been well utilized at work partly due to that one of those trained C/Ps left the organization. Given the minimum level of activities done so far and non-availability of data, it is difficult to judge the degree of achievement of Project Purpose.

(4) Implementation Process

・Progress of Activities:
Without the support of J-PRISM experts, no planned activities were carried out except trainings of two C/Ps under the Country Attachment Program in Fiji.

・Method of Technical Transfer:
JICA experts have not been dispatched. Only training outside Tuvalu was provided.

・Project Management：
Joint Coordination Committee (JCC) was not held from 2011 to 2014. The mid-term review was carried out without field study and no face-to-face discussion was made between C/P agency and J-PRISM experts. However, it was recommended on the report that JCC should be held to discuss on how they should proceed the activities together. Finally, on July 29, 2015, the JCC was held for the first time and the modification of PDM and PO was agreed reflecting the removal of Output 2 which has been complemented by significant inputs from the project of European Union (EU) under European Development Fund (EDF) 10.

・Communication within the Project：
It was identified that communication between C/P agency and J-PRISM experts were not periodically made. This is partly due to the frequent staff turnover at the side of Tuvalu which made it difficult for J-PRISM expert to identify the C/P to work with. Also, J-PRISM experts failed to make a periodical contact with Tuvalu partly due to the distance limitation and poor network connection.

・Collaboration with Local Stakeholders：None

・Participation in Region-Wide Activities of J-PRISM

No.	Title	Type of activity	No. of C/P attended
1	Country Attachment Program in Fiji, 2012	Regional Training	2

・Coordination with other Japanese and International Projects

1) Holistic approach with other schemes of Japanese assistance

[2] *This indicator was not used as a direct measure of the Project Purpose for the following reasons;(i) While PIDOC, the existing database, is an inventory of SPREP, the persons listed are trainers certified by J-PRISM but not considered as officially certified trainers by SPREP, (ii) the target values are not valid as they had been determined before the introduction of PIDOC (thus not consistent with the number of trainers listed in it.)Accordingly, the degree of achievement of the Project Purpose was judged in a comprehensive manner with the other indicators and supplementary information (where necessary), while referring to this indicator as reference information.*

No.	Scheme	Type of coordination
1	Group and Region-focused Training in Japan	1 C/P participated in Waste Management Technique (A) held at Kyushu Center in 2013
2	Training Course by Ministry of the Environment	2 C/Ps participated in training related to recycling held at Japan Environmental Sanitation Center in 2014

2) Collaboration with other donor

No.	Donor	Type of coordination
1	EU (EDF10)	Technical assistance to the Tuvalu National Authorizing Officer, Solid Waste and Sanitation Components

III. Results of Analysis from the Viewpoints of Five Evaluation Criteria

(1) Relevance

Evaluation: Relevance of the project was high at the time of ex-ante evaluation. At the time of terminal evaluation, relevance of the project is assessed as low as the necessity of J-PRISM cooperation has been reduced due to the significant inputs from other donors.

The Project was relevant with National Strategy for Sustainable Development 2005-2015. In Chapter 11 of the strategy, it is said that waste management is one of the most pressing problems and has direct implications for human and ecosystem health, especially in Funafuti. Proper waste collection and waste disposal are expected to lead to less potential pollution of lagoon waters and less accumulation of waste that is a latent source of disease and other public health issues. The Project was also consistent with the Japanese ODA Policy which put the high priorities to support the improvement of solid waste management and ecosystem conservation as well as the disaster prevention and climate change impact in order to mitigate the risk of natural disasters.

However, at the time of terminal evaluation, it was identified that with significant inputs and technical assistance from EU (EDF 10), the need to assist by J-PRISM has drastically reduced. In order not to duplicate the work, but to properly demarcate the assistance, both of Tuvalu and Japanese sides agreed to remove the component of output 2 from the PDM before the Terminal Evaluation.

(2) Effectiveness

Evaluation: Effectiveness of the Project is not assessed due to the non-availability of the data.

1) Achievement of Project Purpose

As explained in the Accomplishment of the Project, given the minimum level of activities done so far and non-availability of data, it is difficult to judge the degree of achievement of Project Purpose.

2) Contribution of Outputs to Project Purpose

Output 1 was intended to contribute to achieving Project Purpose, however, the production level of Output 1 was not sufficient. As explained above, in order to complement the significant inputs from EU project, Output 2 was removed from project component.

3) Other promoting/inhibiting factors

None in particular.

(3) Efficiency

Evaluation: Efficiency of the Project is low.

1) Production of Outputs

Output 1 was partly achieved. Two C/Ps acquired knowledge and skills through Country Attachment Program in Fiji. No training was done by these C/Ps, but they shared the knowledge and skills with other workers and there was some improvements identified in terms of occupational safety.

2) Appropriateness of Inputs

・Tuvalu side：No inputs were made.

・Japanese side：Training of two C/Ps were carried out under Country Attachment Program.
No other inputs were made.

3) Utilization of external resources

Some of C/Ps attended the training program under the Group and Region-focused Training and Training Course by the Ministry of the Environment held in Japan.

4) Other promoting/inhibiting factors

Communication between C/P agency and J-PRISM experts was not sufficient partly due to the staff turnover at the side of Tuvalu and distance limitation and poor network connection at the side of J-PRISM experts. Project management was not effectively carried out. The progress of activities and any issues and concerns were not discussed between both sides since JCC was not held until July 2015. The PDM and PO should have been revised soon after the assistance of EU was determined.

(4) Impact

Evaluation: No positive and negative impact were identified by the interview of J-PRISM expert.

1) Impact at Overall Goal level

Considering the current achievement level of Output and Project Purpose, the likelihood of achieving the Overall Goal is low.

2) Other impacts

No positive and negative impacts were reported.

(5) Sustainability

Evaluation: With only little effects of the Project, it is not appropriate to assess the sustainability.
For reference, the followings are information obtained by the J-PRISM expert in July 2015.

1) Policy and institutional aspects

At the time of ex-ante evaluation, National Solid Waste Management Plan was in the process of development. It has not been finalized at the time of terminal evaluation, and it is expected to be finalized under the EDF11.

2) Organizational aspects

Solid Waste Agency of Tuvalu (SWAT) is in charge of solid waste management with four officers, seven workers and one security staff. One officer is on leave for study as of July, 2015. The number of officers and staff remained unchanged. And funding from EU under EDF 11 is expected to support implementation of waste management activities.

3) Financial aspects

Funding from EDF 11 is expected to implement waste management activities.

4) Technical aspects

Knowledge and skills acquired through trainings under J-PRISM Country Attachment Program have not been well sustained.

IV. Conclusion

Five Evaluation Criteria

Relevance was high at the time of ex-ante evaluation. At the time of terminal evaluation, relevance of the project is assessed as low as the necessity of J-PRISM cooperation drastically reduced due to the significant inputs from other donor. Effectiveness is not assessed due to the no-availability of data. Efficiency of the Project is low. No positive/negative impacts are reported. With only little effects of the project, it is not appropriate to assess the sustainability.

It is anticipated that implementing agencies will continue their efforts to achieve the sustainable solid waste management in collaboration with external donors.

Attachment:

1. Latest Project Design Matrix (PDM Version 1)
2. Latest Plan of Operation (PO Version 1)
3. Record of Japanese Inputs
   - 3-1 Dispatch of Experts
   - 3-2 Training in Japan
   - 3-3 List of Machinery and Equipment provided by Japan
   - 3-4 Local cost
4. Record of Tuvalu Inputs
   - 4-1 List of Counterpart personnel
   - 4-2 Local cost

Project Design Matrix (PDM) - Tuvalu

Project Title: Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM) **Version No. 1**

Target Group : C/Ps of Solid Waste Agency of Tuvalu, Ministry of Home Affairs, Kaupule of Fun Final Beneficiaries: Citizens of Tuvalu Project period: February 2011 - January 2015 (5 years)

Implementing Agency: Solid Waste Agency of Tuvalu, Ministry of Home Affairs Target Area: Funafuti Atoll Date issued: July 29, 2015

Narrative Summary	Objectively Verifiable Indicators	Means of Verifications	Important Assumptions
Overall Goal Sustainable management of solid waste in the Pacific Region is enhanced.	Waste Management service is appropriately provided in Funafuti	1. Waste audit 2. Public opinion survey	
Project Purpose Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) (RS2010)	1. Improved operation of waste collection	1. Number of complaints from residents reported 2. Collection schedule and report	1. Natural disaster would not drastically affect the collaboration mechanism of SPREP. 2. Political changes of PIC countries would not drastically affect the collaboration mechanism of SPREP. 3. EU continues to provide its assistance as planned for 2015 onward.
Outputs **Output 1:** Capacity of operators and field workers is increased through training.	1. Duration time for waste collection in Funafuti Kaupule has reduced after training in Fiji. 2. At least one training conducted in-country by the trained personnel in Fiji	1-1. Report from Funafuti Kaupule 2-1. List of Participants 2-2. Report on the in-country training	Public awareness for waste minimization is enhanced by EU project.
Activities Please see PO for details.	**Inputs** Japanese Side Dispatch of JICA experts Provision of equipment and materials Provision of Regional, sub-regional and in-country workshops / training Local cost support	Tuvalu side Assignment of National PD/PM and CPs Local Costs Sharing Provision of necessary land/facility, work space	1.Counterpart personnel keep working in the field of SWM. 2. Disasters, such as severe rain storm will not drastically affect the progress of project activities. 3. Necessary budget to carry out activities is allocated from the government. **Pre-condition** Cooperation of community people of the target area is obtained.

#	Priorities under RS2010
1	Sustainable Financing
2-1	3Rs/4Rs
2-2	Waste Disposal
2-3	Waste Collection
3	Legislation
4	Awareness/Communication/ Education
5	Capacity Building
6	Environmental Monitoring
7	Policy, Planning, Performance
8	Solid Waste Industry
*	Monitoring system of RS2010

Plan of Operation (PO) - Tuvalu

Term:2011-2015 (5 years)

Version 1 as of 29th July 2015

Outputs and Associated Activities		Indicators for Outputs	Person in-charge	Progress	2011	2012	2013	2014	2015
OUTPUT 1: Capacity of operators and field workers is increased through training.									
1-1	Participate in the county attachment program for on-the-job training in Fiji and/or other countries	1. At least 2 personnel are trained through the country attachment program to Fiji 2. At least one training conducted in-country by the trained personnel	Director, SWAT	Planned					
				Actual					
1-2	Conduct in-country training for operators and field workers by trained personnel by outside training		Planner, Kaupule	Planned					
				Actual					
1-3	Monitor and evaluate operation of solid waste management in Funafuti		Director, SWAT	Planned					
				Actual					

3-1. Dispatch of Experts

Long-term Experts from Project Office	Total
0.2 MM	0.2 MM

3-2. Training in Japan

None

3-3. List of Machinery and Equipment provided by Japan

None

3-4 Local Cost

Country	Air Fare	Travel Allowance	Miscellaneous	Total			
				In local currency	Local Currency	In Japanese Yen *1	In USD*2
Tuvalu	3,581.69	4,019.92	710.66	8,312.27	Fiji dollar	￥428,913.-	US$4,372.20

Note 1) JICA's official rate – from local CCY to Japanese yen
2) Exchange rate from Japanese Yen (JPY) to US Dollar:
For JFY2010-July 2013: JICA's official rate of August 2013 (USD1=JPY98.10)
For Aug2013-June 2015: JICA's official rate of June 2015 (USD1=JPY123.96)

4-1 List of Counterpart Personnel

List of Counterpart Personnel (Tuvalu)

Project Officially commenced in May 2011

#	Name	Management CPs	Assigned Period	Position	Organization	Activities in charge
1	Pisineli Laafai	National Project Director	Feb. 2011- Nov.2011	Permanent Secretary	Ministry of Home Affairs	
2	Kelesoma Saloa	National Project Director	Nov. 2011 - Jun. 2013	Permanent Secretary	Ministry of Home Affairs	
3	Pepetua Latasi	National Project Manager	to be advised	Acting Director	Department of Environment	1-1, 1-2
4	Susan		Feb. 2011 - Apr. 2012		SWAT	
5	Uluao Lauti		Feb. 2011 -	Secretary	Funafuti kauple	1-1, 1-2
6	Iete Avanitele	National Project Director	Oct. 2014 -	Permanent Secretary	Ministry of Home Affairs	
7	Susana Telakau	National Project Manager	Dec. 2013 -	Director	SWAT	1-1, 1-2,1-3

#	Name	Technical CPs	Assigned Period	Position	Organization	Activities in charge
1	Tepola Taulaga		Feb. 2011 - Nov. 2012	Waste Operation Officer	SWAT	1-2
2	Miriam Uluiviti		Nov. 2012 - Dec. 2014	Waste Regulatory Officer	SWAT	1-1, 1-3
3	Penimina Ene Etuati		Feb. 2011 -	Collector	Funafuti kauple	1-1
4	Paeniu Luke		Feb. 2011 - Jul. 2013	Collector	Funafuti kauple	1-1
5	Litiana Talake		Mar. 2014 -	Waste Regulatory Officer	SWAT	1-1, 1-3
6	Malia Fataoto		Feb. 2011 -	Executive Officer	SWAT	1-1, 1-3

a broken line indicates an assignment period in a position before project officially started

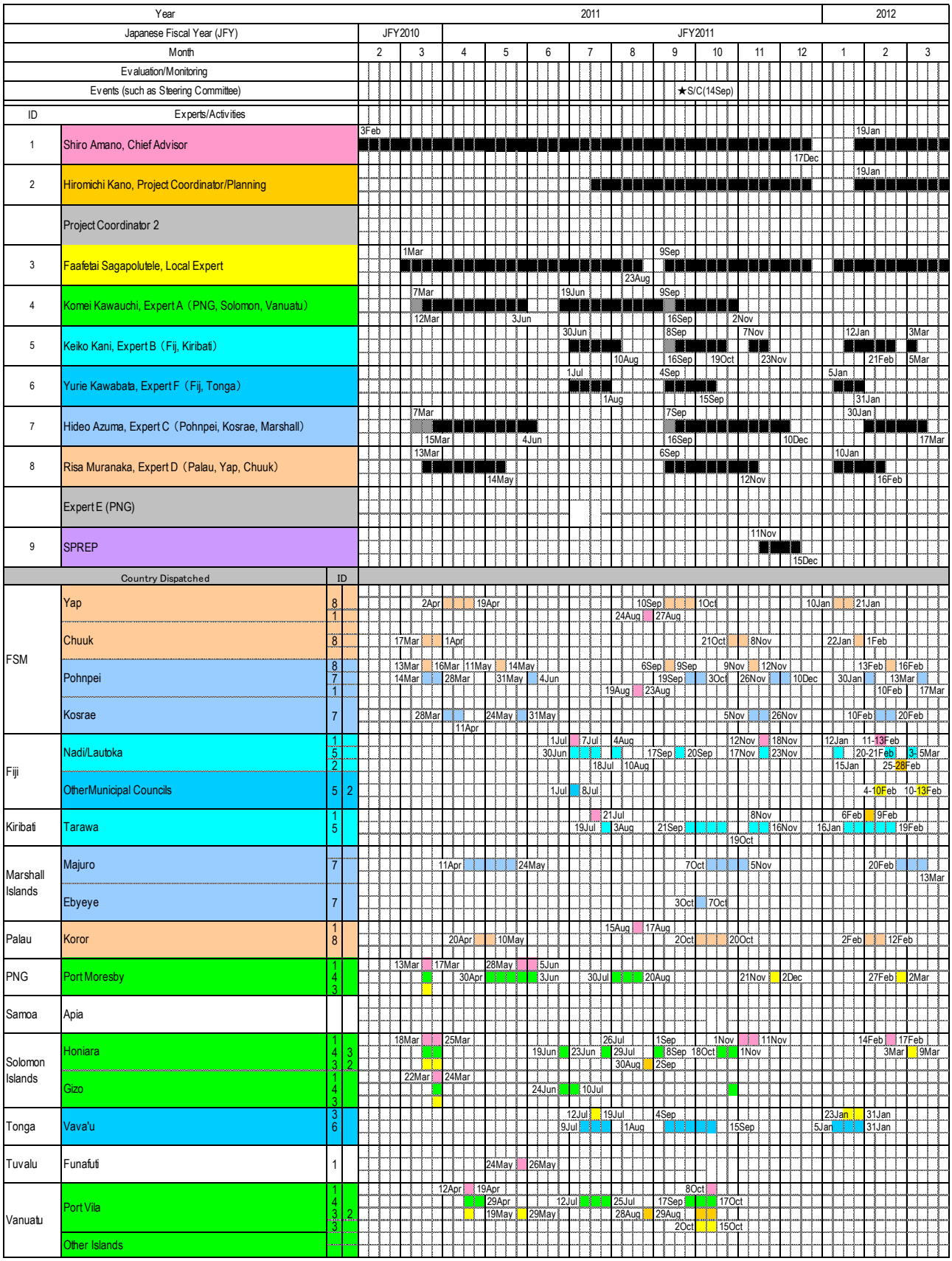
4-2 Local Cost

None

ANNEX 4

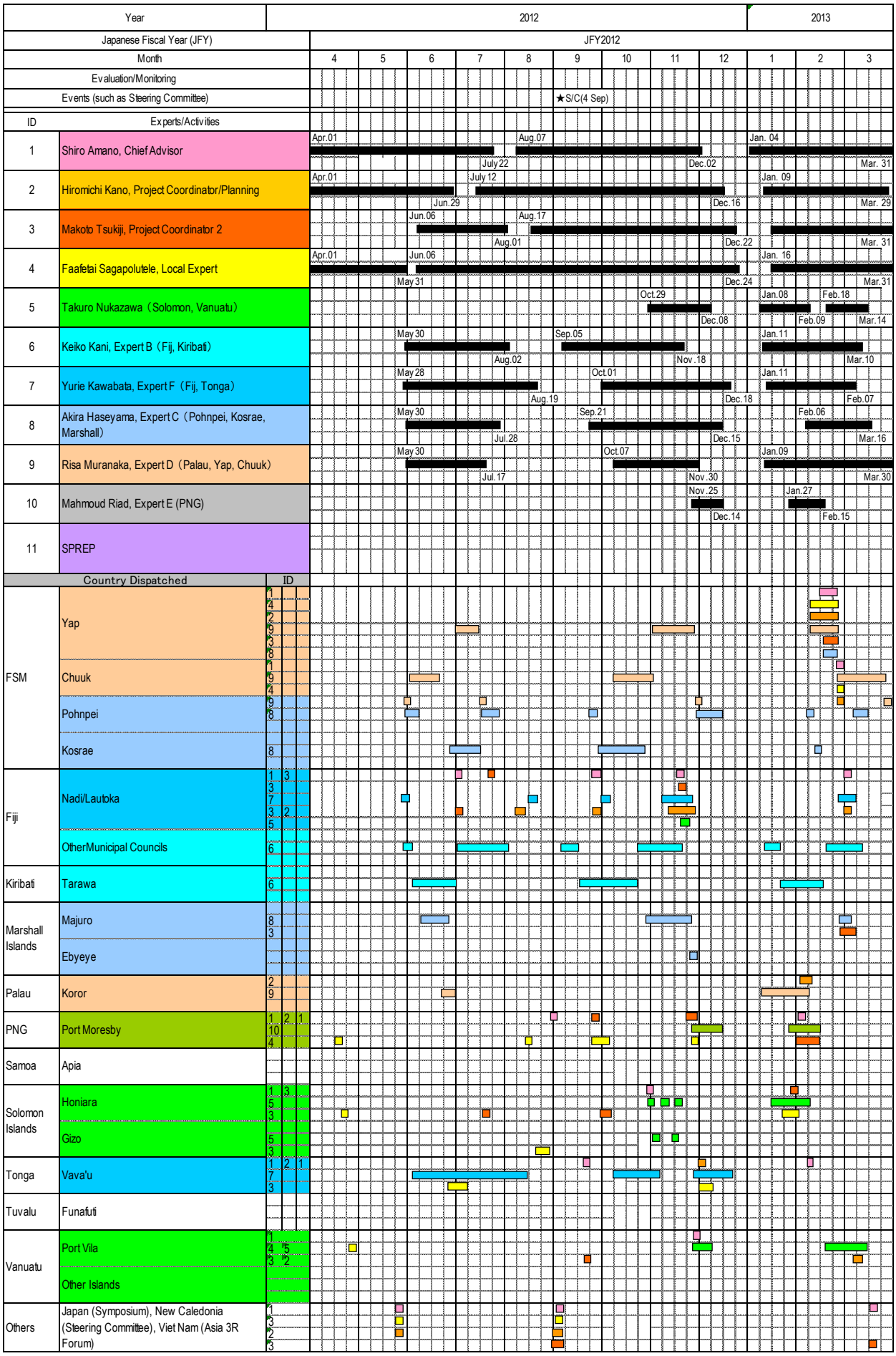
List of JICA Experts

Dispatch Record (For Feb. 3, 2011 - Mar. 31, 2012)



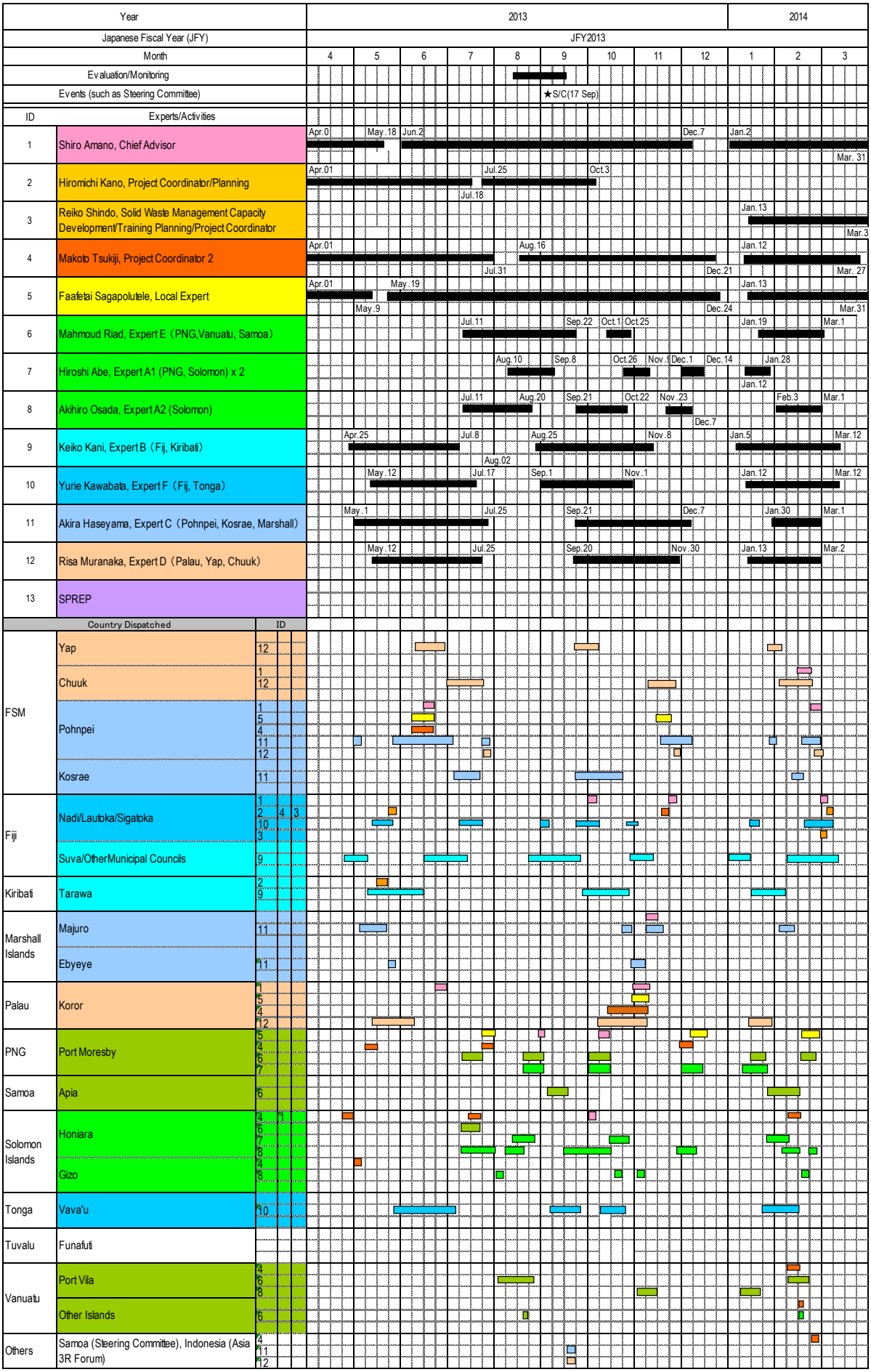
ANNEX 4

Dispatch Record (For April 1, 2012 - March 31, 2013)



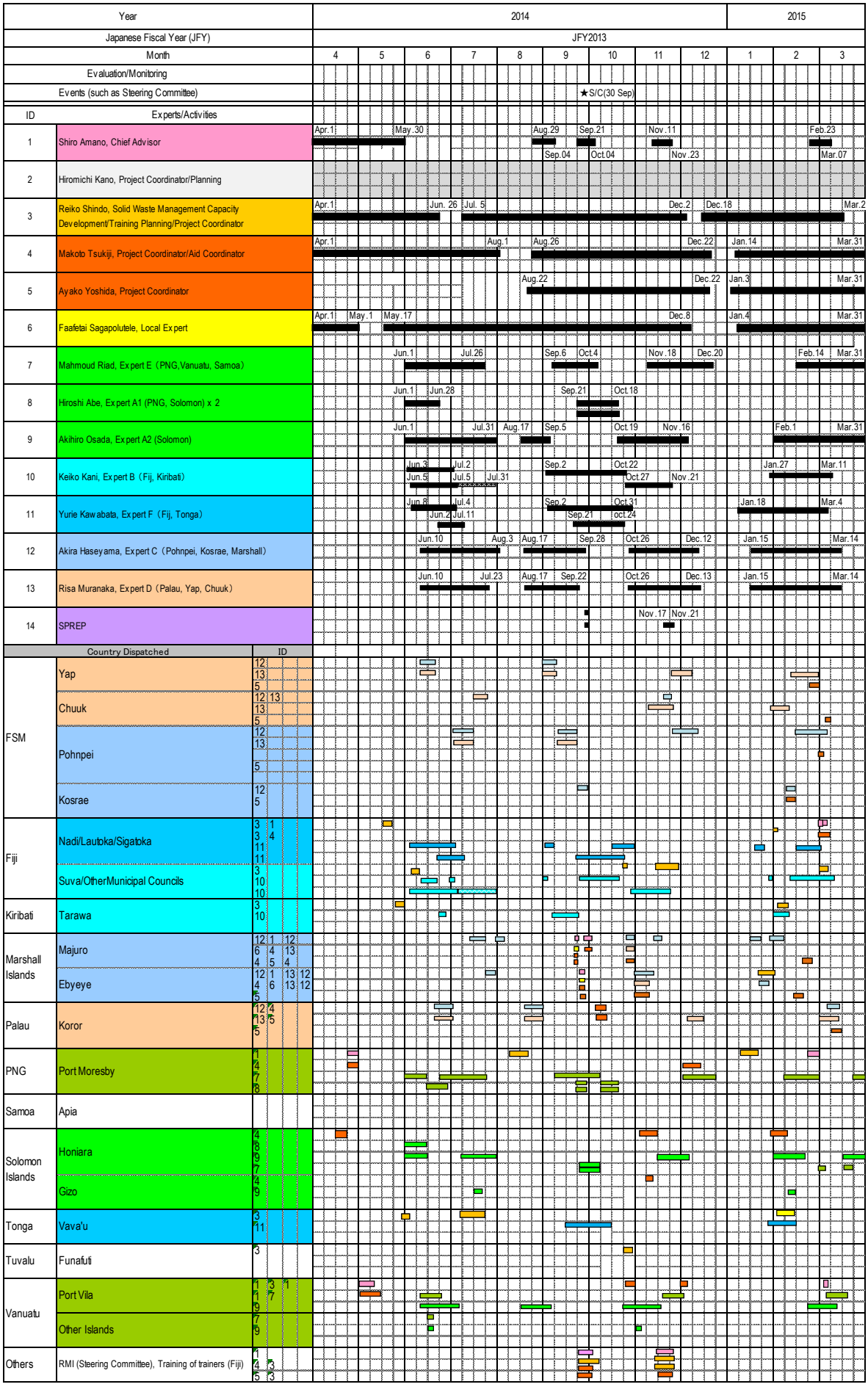
ANNEX 4

Dispatch Record (For April 1, 2013 - March 31, 2014)



ANNEX 4

Dispatch Record (For April 1, 2014 - March 31, 2015)



ANNEX 4

Dispatch Record (For April 1, 2015 - June 30, 2015)

List of Local Stakeholders

Country	#	Stakeholders	Coordination
Fiji	1.	MOE and schools	Implementation of CSP. J-PRISM established the partnership with MOE to realize the DOE's financial assistant to CSP
	2.	Nadi Women's Group	Support NTC in preparing the Eco-bag
	3.	Ministry of Women and Culture	Garment Manufacturing Industry on Eco- Bag project for NTC
	4.	Fijian Resort in Coral Coast Areas	Hotel waste minimization pilot project in Sigatoka from March 2014 to six months. Lessons learned from pilot project is expected to be disseminated to all hotels in Coral Coast Areas
	5.	Manufacturer of compost	A manufacturer of compost bin has assisted DOE and council (LCC/NTC) by providing the compost bin with discount price.(approximately 30% discount)
PNG	1.	Waste pickers	Coordination with the waste pickers has been improved in the second half of the Project. A comprehensive survey was conducted in 2014 to understand the current situation of waste pickers. Information such as the number of waste pickers, personal attribution (such as age, gender, education, health, origin etc), their dependence, their living conditions, materials they collect, safety at the site, their intention to continue waste picking, etc. was collected. Based on the results of the survey, the Project team has encouraged the contractor to employ waste pickers as their site staff (7 employed). NCDC used to employ some waste pickers as casual labor. Their employment status has been changed to permanent. (14 permanent staff). In September 2014, two children belonging to the waste pickers, who were playing at the foot of the waste slope at the waste disposal area of Baruni dump, died from an accident caused by carelessness of a bulldozer operator hired by the contractor's subcontractor. To prevent another tragic accident, Baruni Safety Plan was prepared in October 2014. Baruni Safety Committee has been established, which consists of NCDC, the contractor, and representatives of waste pickers, too. The Project team discussed with the Urban Youth Employment Program to provide job training opportunities for youth from the waste picker's communities in the middle of 2014 and early 2015.The Waste pickers have participated in the inauguration ceremony for Cell 1 of the Baruni landfill.
	2.	Settlement community	Coordination effort has started recently. The C/Ps are meeting with the community of Ranuguri settlement in order to discuss a waste collection system appropriate for settlement.
	3.	Private business	Generators of large amount of wastes, receiving the waste collection service of NCDC, monitor the collection contractors and inform WMD of lapses in the collection services.
	4.	Gerehu Market	Through discussions with the C/Ps, Gerehu market agreed to provide its green waste to be used for composting.
	5.	Recycling companies	The Project team has facilitated the companies to recyclables at Bruni dump and has involved them in 3R HEART pilot projects.
	6.	Teachers and students	Teachers and students of 8 schools collaborated with the Project in implementing 3R HEART pilot projects at school.
Solomon Islands	1.	Waste pickers (Honiara)	Coordination with the waste pickers has just started. A survey was conducted in July 2015 to understand the current situation of the waste pickers. Total of 92 waste pickers (57 women and 35 men) are identified through the survey. Two security guards were hired from the waste picker's community in June 2015. A meeting was held in August 2015 to raise construction safety awareness. They have been cooperating. For example, they have stopped bringing children with them.During the meeting, women and men were asked to identify the respective leaders. Men's group has identified one. Women's group has yet to identify one. Once the rehabilitation is completed, HCC plans to allocate a certain section of the facility area for the waste pickers to store the recyclables. In parallel, registration of the waste pickers is planned.
	2.	Recyclable collection	HCC had a consultation with a private recyclable collection company. They buy the aluminum cans and scrap metals.

Country	#	Stakeholders	Coordination
		company (Honiara)	
	3.	A recycler (Gizo)	GTC/WPG has supported a local female recycler, who collects aluminum cans, in identifying a buyer in Honiara and making a contract with the buyer. GTC also provides a free transportation of the collected cans to the port.
	4.	Community leaders (Honiara, Gizo)	GTC/WPG and HCC have coordinated with community leaders in implementing pilot project for waste segregation). GTC/WPG has also coordinated with community leaders in implementing pilot project for station collection. The C/Ps hold regular meetings with them to promotes awareness continuously.
	5.	Women's group (Gizo)	GTC/WPG coordinated with some members of a women's group in making eco bags from household wastes (i.e. plastics).
	6.	Teachers and students (Honiara and Gizo)	Teachers and students of the schools participating in Eco School Program (Honiara) and Clean School Program (Gizo) have collaborated with the Project in promoting 3R.
	7.	NGO (Honiara,)	HCC has coordinated with an NGO in pilot project for waste segregation.
	8.	National Referral Hospital	The Project has had a continuous consultation with National Referral Hospital (NRH) regarding treatment of medical wastes.
	9.	Solomon Waters	Since Ranadi landfill has created a demarcated cell for sludge, Solomon Waters was invited in the C/P meeting in July 2014 to promote proper treatment of the sludge.
Vanuatu	1.	Central market and an organic farming company	Central market has collaborated with the Project in separation of green/organic wastes from other wastes. The separated wastes are collected by PVMC and transported to an organic farming company for utilization of the wastes for mulch
	2.	Communities (Freshwota Ward) and a recyclable collection company	Communities in Freshwota Ward and a recyclable collection company collaborated with the Project in collection system for cans. The momentum has been fading away and system has not been functioning since Cyclone PAM and the announcement of the redundancy of the C/Ps in charge.
	3.	A hardware center	A hardware center in Port Vila has provided the cages for can collection in Freshwota Ward.
FSM	1.	Municipal governments & Conservation Society of Pohnpei (OEEM)	Meeting and discussion on SWM; reflection of the issues discussed into monitoring of the Action Plan
	2.	Municipal governments (Kosrae)	Planning of improvement of waste collection
	3.	A recycling company, an NGO & Department of Education (Kosrae)	Awareness activities
	4.	A contractor for landfill operation (Pohnpei)	Operation of the landfill
	5.	Municipal governments (Pohnpei)	Implementation of pilot projects on waste collection
	6.	Department of Administrative Services(Chuuk)	Awareness activity
	7.	COM-CRE (Chuuk)	Ditto
	8.	Chuuk Women's Council (Chuuk)	Ditto

Country	#	Stakeholders	Coordination
	9.	Student Council (Chuuk)	Awareness activity
	10.	Youth Group (Yap)	Preparation of awareness-raising materials; cooperation in conducting awareness survey
	11.	Schools (Yap)	Acceptance of awareness activity
	12.	A recycling company (Yap)	Advice on awareness activity, attendance to training courses, running of the recycling program (with contract with EPA)
Marshall Islands	1.		
Palau	1.	MOH	Cooperation in awareness raising on 3R
	2.	MOE	Ditto
	3.	MOF	Implementation of the beverage container deposit fee program
	4.	EQPB	Permit review for the new landfill site; the M-dock landfill closure plan
Samoa	1.	Waste collection company for Zone A and a recycling company	The waste collection and recycling companies have collaborated with the Project in implementing the pilot project for waste segregation/minimization (October 2013-December 2015).
	2.	Community leaders of Vaiala and Apia Villages	• The community leader of Vaiala Village (Village Mayor) has collaborated in promoting waste segregation at source and at community house as well as composting from green wastes in his village. • The community leader of Apia Village has collaborated in promoting public awareness on waste segregation and composting in his village.
	3.	STA	STA has collaborated with the Project in identifying the hotels which would participate in the pilot project for waste segregation/minimization.
Tonga	1.	A recycling company	Waste Recycling Activities for Community-based garbage collection Environmental education and awareness programs with schools under CSP
	2.	MOE and schools	CSP program in collaboration with community-based garbage collection system

List of Media Coverage of the Project

JFY=April-March

JFY 2011					
No	**Country**	**Date**	**Media**	**Contents**	**Remarks**
1	Tonga	24-Mar	JICA Press release	Official signing of the R/D	
2	Vanuatu	4-Jun	Vanuatu Daily Post	Solid Waste Categorization Study training	
3	Fiji	1-Aug	JICA Kyushu HP	Introduction of the Shibushi Project in Fiji	Partnership Program http://www.jica.go.jp/kyushu/eco/201108.html
4	Solomon Islands	11-Aug	Solomon Star	Waste characterization study in Honiara	
5	FIji	18-Aug	Fiji Sun Newspaper	Introduction of the home composting on Fiji 3R project	http://www.fijisun.com.fj/main_page/view.asp?id=60665
6	Solomon Islands	6-Sep	Solomon Star	Environment Week in Gizo	
7	Samoa	15-Sep	Savali News (online)	1st Steering Committee Meeting	http://www.savalinews.com/2011/09/15/jprism-meeting-held-in-samoa/
8	Samoa	16-Sep	Samoa Observer	1st Steering Committee Meeting	
9	Vanuatu	14-Oct	Vanuatu Daily Post	Regional Training on Waste Landfill Management in Port Vila, Vanuatu	
10	Vanuatu	18-Oct	Vanuatu Daily Post	Regional Training on Waste Landfill Management in Port Vila, Vanuatu	
11	Vanuatu	21-27-Oct	Vanuatu Times	Landfill Management in Bouffa Landfill site	
12	Vanuatu	22-Oct	Vanuatu Daily Post	Landfill Management in Bouffa Landfill site	
13	Samoa	18-Oct	Samoa Observer	SPREP restructure	
14	Fiji	30-Oct	Minami Nihon shinbun in Japan	Departure Ceremony of Shibushi Mission Team to Fiji	Partnership Program
15	Fiji	1-Nov	Fiji Times	Shibushi Mission visit on Vunato Landfill site	Partnership Program
16	Samoa	9-Dec	Fiji Times online	Samoan CP Study tour on Weighbridge at Lautoka	http://www.fijitimes.com/story.aspx?id=187978
17	Solomon Islands	16-Dec	Solomon Star	Solomon CP country attachment program in Port Vila, Vanuatu	
18	Solomon Islands	20-Dec	Solomon Star	Solomon CP country attachment program in Port Vila, Vanuatu	
19	Fiji	29-Feb	Fiji Times	1st JCC Meeting (& 10th JCC Meeting of 3R Project)	
20	Fiji	16-Mar	Fiji Times	Flood Waste pilot project in Ba	
21	Fiji	22-Mar	Fiji Times	Flood Waste pilot project in Ba	
22	Fiji	29-Mar	FIJI SUN	Flood Waste pilot project in Ba	
JFY 2012					
No	**Country**	**Date**	**Media**	**Contents**	**Remarks**
1	Solomon Islands	11-May	Solomon Star	School Program in Honiara	
2	Japan	24-May	Okinawa Times (Newspaper), Ryukyu Shimpo(Newspaper)	Eco-Island Symposium 2012 in Okinawa, Japan	
3	Solomon Islands	24-May	Solomon Star	Submission of final report on rehabilitation in Gizo	

JFY 2012					
No	Country	Date	Media	Contents	Remarks
4	Samoa	31-May	SPREP Homepage	Eco-Island Symposium 2012 in Okinawa, Japan	
5	Vanuatu	30, 31-May	Vanuatu Daily Post	Consulting meeting for Pollution Control Bill and Waste Management Bill	
6	Samoa	13-Jun	Samoaobserver (11/06/2012)	SPREP celebrates 20 years in Samoa	
7	Japan	13-Jun	JICA Homepage (29/05/2012)	Eco-Island Symposium 2012 in Okinawa, Japan	
8	Japan	13-Jun	JICA (Okinawa) Homepage (30/05/2012)	Eco-Island Symposium 2012 in Okinawa, Japan	
9	Marshall	22-Jun	The Marshall Islands Journal	Revisiting waste management	
10	Fiji (LCC)	5-Jul	National NEWS	WARM Training Discussion among J-PRISM/ILO/LCC	
11	Vanuatu	27-Jul	Vanuatu Daily Post	Clean Pacific 2012 Campaign in Vanuatu	
12	Vanuatu	8-Aug	ODA Mail Magazine of Ministry of Foregin Affairs of Japan	Article relating to J-PRISM by JICA Vanuatu PFA Mr. Motegi	
13	Tonga, Samoa, Yap	9-Aug	Ryukyu Asahi Broadcasting (TV Program)	Mottainai Project Training in Okinawa	
14	Tonga, Samoa, Yap	12-Aug	Okinawa Times (Newspaper)	Trainees of Okinawa Mottainai Project's visit to Mayor of Naha City	
15	Tonga, Samoa, Yap	14-Aug	Super News (TV program of Okinawa TV Broadcasting)	Trainees of Okinawa Mottainai Project's visit to a recycle company in Okinawa to learn recycling business	
16	Solomon Islands	14-Sep	The Island Sun 2012.9.14	waste management program in Gizo hailes as a success	
17	Solomon Islands	14-Sep	Solomon Star	Gizo learns to waste management	
18	Fiji	27-Sep	Fiji Television	Workshop on Imoprovement of Bulky Waste Recycling in the PICs through Reverse Logistics	
19	Fiji	28-Sep	The Jet	Nadi Town Council Eco-Bag Launching Ceremony	
20	FSM	October1-16,2012	The Kaselihlie Press	Solid waste composition surveys completed in FSM	
21	Fiji	October	OCDI Website	Workshop on Imoprovement of Bulky Waste Recycling in the PICs through Reverse Logistics	
22	Solomon Islands	6-Dec	Solomon Star	Officials learn about environmental education in Japan	
23	Fiji	Jan 2o13	JICA Website	J-PRISM/Shibusi 3R Regional training	http://www.jica.go.jp/kyushu/eco/201301_02.html
24	Fiji	25-Jan	Fiji Government Online Portal	Nadi Town New Landfill Plan	http://www.fiji.gov.fj/index.php?option=com_content&view=article&id=7521:major-plans-afoot-for-nadi-town&catid=71:press-releases&Itemid=155
25	Solomon Islands	25-Jan, 2013	Solomon Star	Work to improve dumpsite	
26	Solomon Islands	29-Jan, 2013	Solomon Star	Public warned of health risks from Ranadi dumpsite. Poor waste treatment, a national concern	
27	Samoa	30-Jan	Samoa Observer	Weighbridge Opening Ceremony	
28	Solomon Islands	2-Feb, 2013	Solomon Star	Manage your Waste, SPREP boss urges	
29	Solomon Islands	2-Feb, 2013	Solomon Star	Are we dumping ground for overseas wastes?	
30	Fiji	20-Feb	Lautoka City Council News	Pilot Project on Disaster Waste Management in Lautoka	
31	FSM	5-Mar, 2013	Palau Pacific News	Regional Landfill management training held in Yap	http://www.mvariety.com/regional-news/palaupacific-news/54052-regional-landfill-management-training-held-in-yap
32	Marshall Islands	8-Mar, 2013	The Marshall Islands Journal	Cas buildingup an issue at dump	

JFY 2013					
No	Country	Date	Media	Contents	Remarks
1	Fiji	6-Apr	Fiji Sun	Sigatoka Market Compost	
2	Tonga	9-Apr	Talaki	Asia 3R Forum	
3	FSM	28-Jun	EOJ Website	Pilot Project on Rehabilitation for Semi-aerobic landfill, Pohnpei	
4	FSM	15-Jul	Kaselehlie Press	Pilot Project on Rehabilitation for Semi-aerobic landfill, Pohnpei	
5	Samoa	18-Jul	Samoa Observer	the Training of Trainer's Workshop on Occupational safety and Health in Waste Management for Pacific Island Countries (colloboration with ILO)	http://www.samoaobserver.ws/local-news/business/6065-tackling-daily-dangers-of-rubbish
6	Vanuatu	2-Aug	Daily Post	Shibushi Training in Japan	
7	Vanuatu	5-Aug	Daily Post	Shibushi Training in Japan (Lenakel)	
8	Solomon Islands	9-Aug	Islands Sun	Waste audit report 2011 launching ceremony	
9	PNG	6-Sep	Post-Courrier	JICA Audits NCD Waste Level (Waste characterizatin Study in POM)	
10	Vanuatu	12-Sep	Daily Post	JPRISM PV presentation Sept. 2013	
11	Vanuatu	12-Sep	Daily Post	Luganville Property tax Sept 2013	
12	Vanuatu	20-Sep	Daily Post	Market Waste Separation Awarness in Port Vila	
13	Samoa	20-Sep	Samoaobserver	Site Visit for Mr. Fuwa, DG, JICA HQ Office	
14	Vanuatu	1-Oct	Daily Post	Market Waste compost pilot project launching	
15	Solomon Islands	30-Sep	Solomon Star/Island sun	Eco-school program workshop for teachers	
16	Fiji	2-Oct	Fiji Times	Hoteliers Contribute 75pc of garbage	
17	Vanuatu	3-Oct	Traiding Post	Women's Mission to Santo	
18	PNG	16-Oct	The National	NCD at Risk	
19	PNG	16-Oct	Post-Courrier	Dump rehabilitation Work to cost K14m etc	
20	RMI	22-Nov	The Marshall Islands Journal	Reduce, Reuse, Recycle and Refuse	
21	RMI	10-Jan	The Marshall Islands Journal	Steve Ittu puches "3Rs" for the Marshall Islands	
22	Solomon Islands	18-Feb	Solomon Star/Island sun	Advertisement for Landfill Supervisor (HCC)	
23	Solomon Islands	26-Feb	Solomon Star/Island sun	Waste minimization initiatives for Panatina Valley	
24	PNG	6-Mar	The National (supplement)	Solid Waste Management Project (NCD)	
25	Samoa	7-Mar	Samoa Observer	"Reduce, reuse, Recycle" -3R Forum	
26	Fiji	7-Mar	Fiji Times	JICA Waste Minimization &Management in Fiji	
27	Fiji	8-Mar	Fiji Sun	JICA Waste Minimization &Management in Fiji	
28	Fiji	21-Feb	Fiji Times	Programs benefit Fiji	
29	Fiji	23-Feb	Fiji Sun	Vunato focuses on waste project	

JFY 2014					
No	Country	Date	Media	Contents	Remarks
1	FSM	7-Apr	Kaselehlie Press	J-PRISM the 3rd JCC meeting	
2	Solomon Islands	19-Apr	Solomon Star	New Project Address waste issue in Honiara	
3	Fiji	20-May	City Star	LCC conducts training for Samoan staff	http://www.epapergallery.com/citystar/
4	Vanuatu	1-Jun	Daily Post	Mamas Study tour on waste management	
5	Solomon Islands	26-Jun	Solomon Star	Eco-School Launching Article on	
6	Yap, FSM	10-Sep	Yap, EPA	JICA sponsored Yap Landfill Improvement Training and Exchange with Chuuk State Representatives	
7	Solomon Islands	2-Oct	Island Sun	HCC welcome Eco-bag program	
8	Solomon Islands	2-Oct	Island Sun	Eco-bag pilot program officially kicks off	
9	Solomon Islands	2-Oct	Solomon Star	Environmental Department introduces program in schools	
10	Solomon Islands	2-Oct	Solomon Star	Dr. Matakai: Change of behaviour and atttude vital for wste management	
11	Solomon Islands	2-Oct	Solomon Star	Waste Management is everyone's business	
12	Solomon Islands	7-Oct	Solomon Star	Eco-bag initiative key to waste management practice	
13	Solomon Islands	7-Oct	Solomon Star	Eco-bag a move to address waste control	
14	Vanuatu	17-Oct	Daily Post	Collection of alminium cans project oiloted at Frshwota Ward	
15	Solomon Islands	28-Oct	Island Sun	Noro-Munda benefits from Integrated Solid Waste Management Workshop	
16	Fiji	30-Oct	Fiji Sun	Sigatoka landfill site improvement	http://fijisun.com.fj/2014/10/30/70k-for-disposal-site/
17	Solomon Islands	30-Oct	Solomon Star	Japan Experience will help (LEAF)	
18	Fiji	31-Oct	Fiji times	Sigatoka landfill site improvement	http://www.fijitimes.com/story.aspx?id=284699
19	Vanuatu	8-Nov	Daily Post	Waste Characterization Survey	
20	Fiji	13-Nov	Fiji Sun	Parveen Kumar visits Labasa dump site	
21	PNG	14-Nov	Post Courier	Baruni landfill development off to good start	
22	PNG	14-Nov	Post Courier	Rubbish to power city	
23	Samoa	25-Nov	Samoaobserver	Fiamalamalama leads environment effort	
24	Solomon Islands	12-Dec	Island Sun	REP hands over new truck to HCC	
25	Vanuatu	15-Dec	Daily Post	Freswota can separation project progressing well	
26	Solomon Islands	4-Feb	Solomon Star	Mataki applauds JICA for its support toward waste control	
27	Solomon Islands	4-Feb	Island Sun	J-PRISM implementers pass new platform	
28	Vanuatu	4-Feb	Daily Post	Clean School	
29	Solomon Islands	5-Feb	Island Sun	Waste Disposal System in Gizo	
30	Solomon Islands	26-Feb	Island Sun	Gizo cleaning campaign	
31	FSM	16-Mar	Kaselehlie Press Pohnpei	For a bright future of Solid Waste Management in Pohnpei State	

JFY 2014					
No	**Country**	**Date**	**Media**	**Contents**	**Remarks**
32	Fiji	20-Mar	City Star	Launching of the recycling center in Lautoka	
33	Vanuatu	28-Mar	Daily Post	Disaster Waste Management very important	
34	Palau	23-Mar	JICA Topic	国民一人ひとりの手で守るパラオの環境	http://www.jica.go.jp/topics/news/2014/20150323_01.html
35	Japan	31-Mar	JICA News	Utilize Japan's Experience to Establish a Sound Material-Cycle Society on Pacific Islands	http://www.jica.go.jp/english/news/field/2014/150331_02.html
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No	**Country**	**Date**	**Media**	**Contents**	**Remarks**
1	Samoa	4-Feb	SPREP	JICA-SPREP renew commitment to combat waste in the Pacific	http://www.sprep.org/waste-management-pollution-control/jica-sprep-renew-commitment-to-combat-waste-in-the-pacific
2	Fiji	11-Apr	Fiji Times	Managing waste and pollution critical, says Kumar	http://www.fijitimes.com/story.aspx?ref=archive&id=301558 http://www.fijitimes.com/story.aspx?ref=archive&id=301616
3	Fiji	11-Apr	Fiji Times	Share what you learn with others	http://www.fijitimes.com/story.aspx?ref=archive&id=301616
4	Fiji	11-Apr	Fiji Sun		http://fijisun.com.fj/2015/04/11/push-for-green-awareness/
5	Fiji	10-Apr	Fiji Village	Bala launches Home Composting Program and Clean School Program in Nadi	http://fijivillage.com/news/Bala-launches-Home-Composting-Program-and-Clean-School-Program-in-Nadi-r29ks5/
6	Fiji	10-Apr	You tube (Fijian Government)	Fijian Minister for Environment officially launched 3R's NationalFramework.	https://www.youtube.com/watch?v=RgqEI-niJs4
7	FSM	12-Apr	Kaselehlie Press	Yap improves recycling program operations through Japan's Grant Aid Program	
8	Solomon	13-Apr	Islandsun	Solid Waste Integration Program	
9	Samoa	3-Apr	Scoop.co.nz	JICA-SPREP renew commitment to combat waste in the Pacific	http://www.scoop.co.nz/stories/WO1504/S00049/jica-sprep-renew-commitment-to-combat-waste-in-the-pacific.htm
10	Samoa	5-Apr	Samoa Observer	Commitment to combat waste renewd	
11	Solomon	13-Apr	Island Sun	Solid Waste Integration Programme	
12	Vanuatu	29-Apr	Vanuatu Daily Post	Bouffa Landfill faces lack ofdumping space	
13	Solomon	13-May	Island Sun	Waste Management indicates how a society lives; Dr Mataki	
14	Solomon	13-May	Island Sun	HCC takes ownership of Ranadi Landfill Administration and Training Center	
15	Solomon	13-May	Island Sun	JICA happy with Ranadi Landfill Administration Managament and training Center project	
16	Solomon	13-May	Solomon Star	New administration and training center for HCC	
17	Solomon	14-May	Island Sun	Gizo Rubbish Collection Pilot Project kicks off	
18	FSM	25-May	Kaselehlie Press	Collaboratin Works of Reliable Development Partners facilitated Solid Waste Management in the FSM	
19	Samoa	27-May	Samoa Observer	Be healthy and keep our school clean	
20	Samoa	17-Jun	SPREP	Pacific solid waste practitioners share their success stories with the region	http://www.sprep.org/waste-management-pollution-control/pacific-solid-waste-practitioners-share-their-success-stories-with-the-region
21	PNG	30-Jun	The National	Upgraded city landfill put to work	

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