スリランカ民主社会主義共和国
全国廃棄物管理支援センター
能力向上プロジェクト
終了時評価報告書

平成 25 年 4 月
(2013 年)

独立行政法人国際協力機構
スリランカ事務所

スリ事
JR
13-003

序　　文

当機構は、スリランカ民主社会主義共和国（以下「ス」国）の要請に基づき、2007 年 3 月から 4 ヵ年の計画で「全国廃棄物管理支援センター能力向上プロジェクト」を開始しました。

そして本プロジェクトの協力開始から約3年半が経過し、プロジェクト終了まで約6か月となった機会に、これまでのプロジェクトの達成度の確認及び評価を行うとともに、今後の活動にかかる提言や類似案件に適用可能な教訓を導き出すことを目的として、2010 年 7 月 28 日から 8 月 17 日まで、当機構国際協力専門員、吉田充夫を団長とする終了時評価調査団を現地に派遣しました。

本調査団は、スリランカ側評価委員と合同評価チームを形成し協議を尽くした上、評価結果を合同評価報告書・協議議事録に取り纏め、本調査団団長及びス国カウンターパート機関の間で署名を取り交わしました。

本報告書は、調査団による調査結果を取りまとめたものであり、今後のプロジェクトの実施にあたり広く活用されることを願うものです。

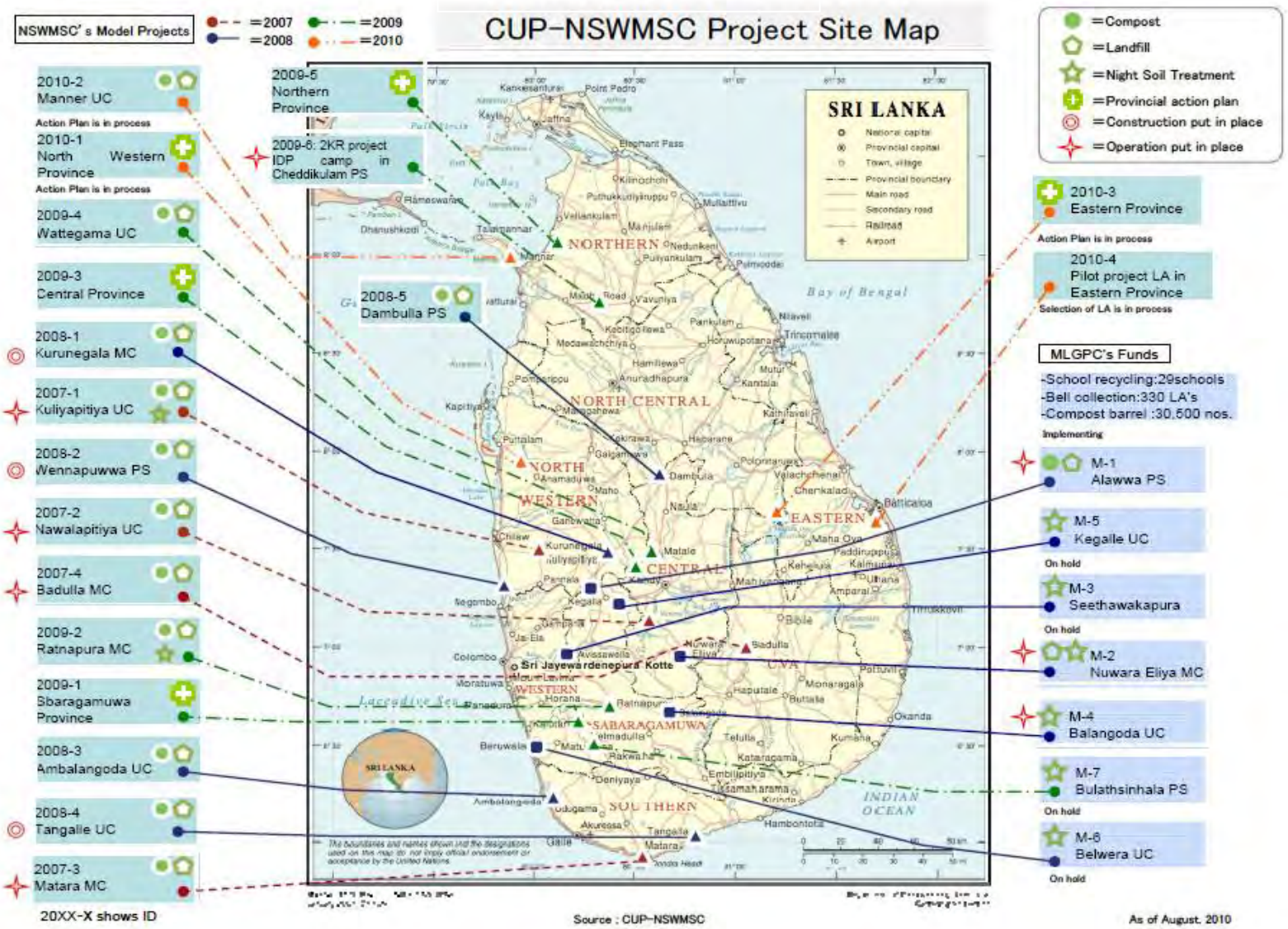
終わりに、本調査にご協力とご支援を頂いた内外の関係各位に対し、心からの感謝の意を表します。

2013 年 4 月

独立行政法人国際協力機構
スリランカ事務所長　青　晴海

目　　次

プロジェクト対象地域部



写　　真

地方自治・州議会省（MLGPC）の本部建物（現在4つの局がある）

全国廃棄物管理支援センター（NSWMSC）の建物と所長のMs.Mangalika

同省の次官補Mr.Hetttiarachchi（NSWMSC担当、その他数名の次官補がいる）

第1回キックオフ会議（7月29日、終了時評価の進め方を協議）

環境省（MoE）下の中央環境局（CEA）の内部の事務所

第2回キックオフ会議（8月5日、終了時評価の意義、内容、今後の活動を協議）

担当の次官補Mr. Hettiarachchi、関係者での協議（8月10日）

同省次官Dr. Jayathilaka以下幹部と日本側評価団との協議（8月10日）

次官との会議（続き）

北西州の視察時の協議(Kuliyaptiya UCにおいて)

ゴミ収集・運搬用のトラクター（Kuliyapitiya　UCにおいて）

Kuliyapitiya　UCのコンポストプラントの仕分け作業（元ウェイストピッカーを雇用）

IDP camp（ Cheddikulam PS）にて 2KRプロジェクトによって調達された車両、重機、資材（同キャンプの衛生問題の改善を目的として2009年11月に支援）

既存処分場（Kurunegala MCにて）の一部を利用してコンポストプラント（Windrow式、2010年3月）を建設。

Kuliyapitiya UCのコンポストプラントにて、市長Mr. Adikariが説明

同プラントの視察（吉田団長からの質問）

同プラント内の様子（約60日処理、仕分け後、水分補給、切返し）

同じ敷地内のし尿処理プラント（手前に投入、処理、汚泥分離後、放流）

し尿処理施設の汚泥乾燥床

コンポストに不適な資材を分離・回収し、リサイクル（収納小屋）

Steering Committee での Mr. Hettiarachchi（終了時評価の経緯説明）

同Committeeでの吉田団長（合同終了時評価の結果内容を説明）

同Committeeに参加した他省の担当者

同Committeeに参加した関連州政府の代表

略　　語

略語	原語、原文	和訳（仮）、説明
ACLG	Assistant Commissioner of Local Government	地方政府長官補
ADB	Asian Development Bank	アジア開発銀行
CBO	Community-Based Organization	コミュニティ団体
CD	Capacity Development	キャパシティ・ディベロップメント
CDO	Community Development Officer	地域開発オフィサー
CDT	Capacity Development Target	キャパシティ・ディベロップメント目標
CEA	Central Environmental Authority	中央環境庁
CLG	Commissioner of Local Government	地方政府長官
C/P	Sri Lankan Counterpart to Japanese Expert	カウンターパート
CPHI	Chief Public Health Inspector	公衆衛生監視員長
DEO	Divisional Environmental Officer	地域環境オフィサー
EIA	Environnemental Impact Asses ment	環境影響評価
EPL	Environnemental Protection License	環境保護許可
EPR	Extensive Producers Responsibilities	拡大生産者責任
F/S	Feasibility Study	フィージビリティ・スタディ
IEE	Initial Environmental Examination	初期環境評価
JGGA	Japanese Grassroots Grant Assistance (GGA)	日本草の根無償支援（GGA）
JICA	Japan International Cooperation Agency	国際協力機構
LA	Local Authority	地方自治体
LLDF	Local Loans and Development Fund	自治体向けの有利なローン
MC	Municipal Council	市に相当
MoE	Ministry of Environment	環境省
MHN	Ministry of Health and Nutrition	保健・栄養省
MLGPC	Ministry of Local Government and Provincial Councils	地方政府・州議会省
M/M	Minutes of Meeting	会議議事録
MOH	Medical Officer of Health	メディカルオフィサー
MSW	Municipal Solid Waste	都市廃棄物
MSWM	Municipal Solid Waste Management	都市廃棄物管理
NGO	Non-Governmental Organization	非政府組織
NIPHS	National Institute of Public Health and Science	国立公衆衛生・科学機構
NSSWM	National Strategy for Solid Waste Management	国家廃棄物管理戦略
NSWMSC	National Solid Waste Management Support Centre	全国廃棄物管理支援センター
O&M	Operation and Maintenance	維持管理
OVI	Objectively Verifiable Indicator	客観指数
PC	Provincial Council	州議会
PDM	Project Design Matrix	プロジェクト・デザイン・マ

		トリックス
PHI	Public Health Inspector	公衆衛生監視員
PO	Plan of Operation	実行計画
P/R	Progress Report	プログレス・レポート
PS	Pradeshiya Sabha	村に相当
R/D	Record of Discussion	協議議事録
S/C	Steering Committee	ステアリング・コミッティ
SLILG	Sri Lankan Institute of Local Governance	スリランカ地方政府機構
SWM	Solid Waste Management	廃棄物管理
UC	Urban Council	町に相当
UDA	Urban Development Authority	都市開発庁
3R	Reduce, Reuse and Recycle	リデュース(廃棄物の発生抑制)、リユース（再使用）、リサイクル（再資源化）

評価結果要約表

１．案件の概要		
国名：スリランカ民主社会主義共和国		案件名：全国廃棄物管理支援センター能力向上プロジェクト
分野：廃棄物		援助形態：技術協力プロジェクト
所轄部署：スリランカ事務所		協力金額：約3.5億円
協力期間	2007年3月～2011年2月	先方関係機関：地方政府・州議会省
		日本側協力機関：国際航業株式会社
他の関連協力：なし		

1-1 協力の背景と概要

スリランカ国では、商業活動の活発化、生活の多様化等によりごみの排出量が増加し、適切に処分されない廃棄物による環境悪化（水質汚濁、悪臭等）、観光国としてのイメージ低下を招いているが問題の多くは放置されており、廃棄物に起因する保健衛生及び環境問題は今後一層深刻化することが懸念されていた。また、廃棄物管理事業費は地方自治体財政の20%から50%を占めており、廃棄物管理事業の改善と持続可能な事業運営体制の構築は、地方自治体のサービス維持と改善にとって最大の課題となっていた。

この課題を解決するため、JICAはスリランカの要請に基づき開発調査「地方都市環境衛生改善計画調査」を2002年3月から2003年12月にかけて実施した。この調査では、地方都市における廃棄物管理計画を策定するためのパイロットプロジェクトを７都市で実施し、収集改善、既存処分場の衛生改善、環境教育やリサイクル運動の促進、廃棄物モデル条例案の作成、現地技術を用いた安価な衛生埋立処分場の建設等を通じて、廃棄物管理に関する提案事業の現地適用性の実証が行われ、実質的な改善も見られた。上記開発調査では、小規模な地方自治体や廃棄物管理技術者が存在しない州政府議会が独自に廃棄物管理計画を策定することは技術的に困難で非効率であることから、中央政府による支援の枠組みを構築する必要を提言し、スリランカ側実施機関で地方自治体の管轄官庁である地方政府・州議会省に地方自治体の廃棄物管理改善を支援する「全国廃棄物管理支援センター（以下、「NSWMSC」）」の設置と、併せて廃棄物管理事業に対する地方自治体向きの融資制度の強化を提言した。

しかしながら、地方政府・州議会省には廃棄物管理に関する知見の蓄積と能力が不足しており、独自で提言内容を実施することが困難であったため、スリランカは2004年8月に我が国に対してNSWMSCの能力強化を目的とした技術協力プロジェクトを要請し、2006年7月にNSWMSCを同省内に設置した。これを受け、JICAは2006年11月に事前評価調査を実施し、R/D署名の後、NSWMSCをカウンターパート（C/P）機関として、2007年3月より4年間の予定でプロジェクトを実施した。

1-2 協力内容

コロンボにおいて、NSWMSCを対象に、地方自治体の廃棄物管理事業を支援するための技術移転を行う。

(1) 上位目標

地方自治体の廃棄物管理が改善される。

(2) プロジェクト目標

NSWMSCが、関連省庁や州議会政府等の関係者と協力して、廃棄物管理国家戦略に沿った地方自治体の廃棄物管理事業を支援できるキャパシティを獲得する。

(3) 成果

1. NSWMSCの中期計画が策定され、基本的な組織体制が確立される。
2. NSWMSCが関係機関と協働して地方自治体廃棄物管理事業を支援するための効率的なメカニズムが構築される。

3. NSWMSC が地方自治体の廃棄物管理アクションプラン実施を促進するための能力を獲得する。
4. 地方政府・州議会省が廃棄物管理国家戦略に貢献するために、NSWMSCより必要な情報が提供される。

(4) 投入（評価時点）
＜スリランカ側＞
カウンターパートの配置：
- Director 1 名
- Assistant Director 1 名
- Staff 5 名

その他：執務室（プロジェクトオフィス）の配置、事務所の光熱費や出張費等

＜日本側＞
総投入額：約3.5億円
専門家：（6名）
- チーフアドバイザー／CD
- 廃棄物管理計画／3R
- 最終処分計画／環境配慮
- PPP 推進・社会配慮
- 財務管理／資金管理
- 業務調整

機材供与：車両、事務用品（PC、コピー機、プリンター、GPS等）等
研修：本邦研修 6名

2. 評価調査団の概要

合同評価調査団	＜スリランカ側＞ Mr. D.P. Hettiarachchi (地方政府・州議会省　次官補) Mr. M.L. Sunil Fernando (地方政府・州議会省　アドバイザー) Ms. L. Mangalika (国家廃棄物管理支援センター　所長) Ms. M. Geethani (国家廃棄物管理支援センター　課長) ＜日本側＞ 総括：吉田　充夫（JICA国際協力専門員） 協力担当：Dr. P. Serasinghe（JICAスリランカ事務所） 評価分析：野田　典宏（三井共同建設コンサルタント株式会社）
調査期間：　2010年7月28日～2010年8月17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) プロジェクト目標：NSWMSCが、関連省庁や州議会政府等の関係者と協力して、廃棄物管理国家戦略に沿った地方自治体の廃棄物管理事業を支援できるキャパシティを獲得する。

プロジェクトの目標はほぼ達成されていると判断できる。

本プロジェクト活動を通して、NSWMSCのキャパシティは管理面・技術面共に格段に向上した（2010年キャパシティ評価[管理・技術]は、NSWMSCによる自己評価[70%、45%]、日本人専門家による評価[71%、57%]）。また、中間レビュー以降、州の廃棄物委員会やリソースパーソン等各種関係者との連携により、効率的に地方自治体を支援するための体制が強化された。地方政府・州議会省予算は年々増加し、環境省によるピリサルプロジェクト（注１）予算と合わせると年200百万ルピーを超える事業の実施を支援していることも、NSWMSCによる支援体制が整いつつあることを示している。ただし、現在のNSWMSCの人員体制は当初の計画

スタッフ数を下回っており、特に技術者はセンター長1名体制となっている。現在スタッフが日々の業務に忙殺され日本人専門家による技術移転が制約されていることは否めず、さらに今後は地方自治体による廃棄物処理施設の維持管理や廃棄物管理システムの構築等にかかる支援を強化する必要性が高まる中、スタッフ（特に技術職）の増員は喫緊に解決すべき課題である。NSWMSCスタッフは週末出勤を行うなどして業務に熱心に取り組んでおり、厳しい人員配置状況であるにもかかわらず、多数の指標において成果が確認されている。2011年2月末までにNSWMSCがPDM3の提案通りスタッフを配置することは容易ではないものの、少なくとも2名のエンジニアを配置し、NSWMSCが今後とも同様の努力を続ければ（特に廃棄物管理システムの構築についてはキャパシティ向上が期待される）、プロジェクト目標はプロジェクト終了までにほぼ達成されるであろうと判断する。

（注１）2008年、環境省により自治体が実施する廃棄物管理事業へ総額約57億ルピー（約46億円）の無償資金を供与するプロジェクトが開始した。

当初案に対する現スタッフ数

	所長	次長	課長	事務スタッフ	合計（人）
2007年1月署名RDでの合意人数	1	3	5	12	21
2009年9月改定PDM3での合意人数	1	2	3	8	14
終了時評価時点でのスタッフの実数	1	0	1	5	7

※なお、その他、運転手2名及びオフィスボーイ1名が配置されている。

(2) 成果1： NSWMSCの中期計画が策定され、基本的な組織体制が確立される。

成果1はほぼ達成されていると判断できる。
本プロジェクトのPDM及びプロジェクトドキュメントに基づき2011年2月にNSWMSCの中期計画が改訂された。プロジェクトドキュメントはNSWMSCスタッフ全員に配布され、センター長の明確かつ迅速な指示のもと、定められた業務プロセスと意思決定プロセスに基づき効率的に業務が実施されている。また、NSWMSCスタッフは、地方自治体への研修に用いている資料等を通して自己学習を行い、廃棄物管理の基本的知識を獲得している。留意すべきはNSWMSCスタッフの配置不足であり、そのギャップはプロジェクト終了までに少なくとも2名のエンジニアを配置することで最小化する必要がある。

(2) 成果 2：NSWMSCが関係機関と協働して地方自治体の廃棄物管理事業を支援するための効率的なメカニズムが構築される。

成果2はほぼ達成されていると判断できる
5州で廃棄物管理委員会が設立され、NSWMSCは州と協働して地方自治体の廃棄物管理事業を支援することができるようになった。うち3州（Sabaragamuwa, Central, Northern）では州の廃棄物管理アクションプランが作成され、残る2州（Eastern, North Western）は2010年末までに廃棄物管理アクションプランを完成させる予定である。また、NSWMSCは、廃棄物管理関係者のためのガイドライン・マニュアルを作成し、州・地方自治体に対し廃棄物管理研修を実施した。実施した研修は2009年時点で8州で3回、研修生の総数は560名に達している。また、広報誌”NSWMSC News”及びウェブサイトによる廃棄物管理の情報展開を行った。広報誌はシンハラ・タミル・英語で発行され、これまで7回分が330の地方自治体、全JICA帰国

研修員同窓会（廃棄物管理）、及びその他の関係機関に配布された。また、ウェブサイトからは様々な廃棄物管理関連資料（廃棄物管理関係者が使用するガイドラインやマニュアル等含む）が無料でダウンロードできるよう有益な情報が掲載されている。

(3) 成果3 : NSWMSC が地方自治体の廃棄物管理アクションプラン実施を促進するための能力を獲得する。

成果3はほぼ達成されていると判断できる

NSWMSCは本プロジェクトで選定した14の地方自治体（14番目の地方自治体は選定中）において廃棄物管理アクションプランの策定・実施を支援しており、現時点で8つが策定したアクションプランに基づく廃棄物処理施設の建設若しくは稼働に至っている（その他2つはアクションプランの策定中、残る4つはアクションプラン実施に向け準備中）。また、NSWMSCはその他3つの地方自治体のアクションプラン策定も支援している。NSWMSCは地方自治体の廃棄物管理アクションプランの策定・実施支援を通し、用地取得、法的許認可取得、社会問題解決、資金獲得、調達、維持管理、モニタリング等を含め、実施促進のための能力を一定程度蓄積してきていると評価できる。

(4) 成果4：地方政府・州議会省が廃棄物管理国家戦略に貢献するために、NSWMSCより必要な情報が提供される。

成果4は部分的に達成されていると判断できる

NSWMSCは157の地方自治体に対して行った廃棄物管理調査結果、及び日々の地方自治体支援を通して、全国の廃棄物管理の現状を十分に把握している。また、NSWMSCは、国連機関や海外ドナー、NGO、スリランカ国内の大学、JICAの帰国研修員等、国内外の組織とのネットワークを保持しており、国内外の廃棄物関連の人的ネットワークのハブ機能を持ちつつある。ただし、現在NSWMSCの年報には、NSWMSCの活動報告を中心とした内容にとどまっており、今後、国の廃棄物管理の現状、政策に関わる重要な事項や提言等が充実化されることが期待される。NSWMSCは引き続きスリランカの廃棄物管理にかかる情報及び政策決定に有益な情報発信を積極的におこなう必要がある。

3-2 評価結果の要約

(1) 妥当性

本プロジェクトの妥当性は高い。

・スリランカ政府は、国家環境条例、廃棄物管理国家戦略、医療廃棄物管理国家政策等により廃棄物管理の推進に重点を置く他､2008年より地方自治体の廃棄物管理事業に国家予算を配賦する「ピリサル・プロジェクト」を開始するなど、政策上の優先順位が高いことが認められる｡小規模な地方自治体や廃棄物管理技術者が存在しない州政府議会が独自に廃棄物管理計画を策定することは技術的に困難で非効率であることから、NSWMSCのサービスは国・州・地方自治体の各レベルで広く求められている。特に地方自治体関係者のNSWMSC支援に関する満足度は非常に高く、地方自治体関係者のほぼ全員が、NSWMSC支援と州政府支援なしにモデルプロジェクトはできなかったであろうと述べており、NSWMSC支援の意義と必要性を示している。

・我が国はODA戦略「対スリランカ国別援助計画」において、都市部でのインフラ整備、生活環境・社会環境の保全（上下水道・大気汚染・一般廃棄物処理等）が不可欠であり、日本は「美しいスリランカ」を実現・維持する援助プログラム・プロジェクトを形成する必要があるとしている。さらにJICAは援助重点分野のひとつとして「都市環境改善」プログラムをあげており、本件は右プログラムのコアプロジェクトのひとつに位置付けられている。

(2) 有効性

本プロジェクトの有効性は中程度である。

プロジェクトは、地方自治体によるコンポストプラント、埋立地、し尿処理施設など多数の目に見える成果を生み出した。その過程において、NSWMSCはその管理能力・技術力が格段に向上させ、自治体支援体制を構築し、結果的に地方自治体関係者のほぼ全員がNSWMSC支援と州政府支援なしにそれらモデルプロジェクトはできなかったであろうと述べており、組織として地方自治体の廃棄物管理を支援するための体制は整いつつある。ただし、コンポストプラント、埋立地、し尿処理施設などはあくまで効率的な廃棄物管理を実施するための道具にすぎず、各地方自治体は効率的な廃棄物管理を行うための仕組みづくりを行う必要がある。NSWMSCには廃棄物管理システムの構築に係るより一層のキャパシティ向上と地方自治体への支援実施が求められており、プロジェクト終了までの5ヶ月に行うべき重要な課題である。NSWMSCがスタッフ数（特に技術職）を増員し、この点に留意した日本人専門家による技術移転を重点的に行えばプロジェクト目標の達成が可能である。

(3) 効率性

本プロジェクトの効率性は中程度である。

人員配置不足を除き、スリランカ側・日本側の投入は当初計画通り実施され、十分に成果につながっている。人員配置不足については依然課題が残るものの、中間評価以降以下の点で大きな改善がなされている。

・2009年2月に実施した中間レビューでは、NSWMSCのスタッフ不足により全員が業務に追われ、日本人専門家も彼らの業務の「請負要員」となりがちであったことから、技術移転の機会を失っており、効率性に課題ありと判断せざるを得ない状況にあった。しかし、中間レビュー以降はローカルリソース（州エンジニア、大学教授、その他知見を有するリソースパーソン等）との協力関係を強化し、ガイドラインの配布やリソースパーソンを招いての技術研修等を行うといったような体制ができるようになり、効率性は格段に向上した。

(4) インパクト

本プロジェクトのインパクトは高い。

・本プロジェクトにて選定した地方自治体において適正技術を用いたモデルプロジェクトを実施することにより、その他の地方自治体の廃棄物管理を励行する効果をもたらしている。例えばスリランカのコンポストプラントの数は、2006年時点では17ヶ所であったが、2010年には56ヵ所に拡大し、地方自治体330の17%を占めるようになっており、これだけの普及に至った背景には、本プロジェクトのインパクトがあったものと評価できる。
・他方、コンポストプラント等廃棄物管理施設を建設すれば廃棄物問題は解決されるといった施設第一主義の傾向がみられる。そういった施設はあくまで廃棄物管理のための道具であり、施設建設後も廃棄物管理のために様々な活動が必要であるとの理解を普及させる必要がある。なお、モデル地方自治体のひとつであるKuliyapitiya UCでは、廃棄物施設建設後、さらに廃棄物管理システムが効果的に実施されるよう、コミュニティの協力を得ながら分別収集を採用し始めている。
・また、プロジェクトにより、いくつかの州政府内に廃棄物管理委員会を組織されたことから、組織フレームについても大きなインパクトをもたらしている。

(5) 持続性

本プロジェクトの持続性は概ね高い。

・本プロジェクトでは技術支援が主であり、施設建設の資金は、スリランカ側で省予算やピリサルプロジェクトによってほぼ確保されている。国際ドナーなど外部資金に依存していないことから、財政上の自立発展性は確保されていると評価できる。しかし数年たつと、ピリサルプロジェクトは終了し、地方自治体は廃棄物管理施設のためその他の資金を探す必要が生じる。そのため、地方自治体向きの小規模融資制度を検討する必要がある。
・プロジェクトの最終ステージでは、地方自治体における技術や組織面のさらなるキャパシテ

ィ向上に力を注ぐ必要がある。プロジェクト期間中にモデルプロジェクトにてグッドプラクティスを示し、その後NSWMSCが優れたスタッフとともに活動を継続すれば地方自治体の技術や組織面の自立発展性は確保される。特に、NSWMSCは廃棄物管理施設の維持管理及び廃棄物管理システムの構築にかかる地方自治体支援のキャパシティを向上させる必要がある。

・モデルプロジェクトの実施を通して、NSWMSCは州政府等の重要な関係者との協力しながら地方自治体の廃棄物管理を支援する体制を構築した。今後はモデルプロジェクト対象州以外の地域においても同様の体制づくりが展開できれば持続性は強化される。

3-3 効果発現に貢献した要因

(1) 計画内容に関すること

・プログラムアプローチの採用：地方政府・州議会省が2006年にNSWMSCを設置して以降、本プロジェクトは地方自治体のアクションプラン策定や、コンポストプラント等のモデル事業の実施を通して能力向上を行ってきた。現在は州政府を巻き込み、地方自治体の廃棄物管理を支援するメカニズムを構築中であり、こうしたアプローチは次第に浸透し発展してきている。これまでの成果は一つのプロジェクトで得られたものではなく、1990年代後半から開発調査や技術協力プロジェクト、さらには青年海外協力隊や研修事業等様々なアプローチによりなし得たものである。そのような戦略的な協力アプローチがキャパシティ・ディベロップメントには重要である。

・組織レベルのキャパシティ向上に適切な実施体制の構築：NSWMSCは地方政府・州議会省のもとに設置されたため、NSWMSCは地方自治体に対し廃棄物管理にかかる働きかけを直接行うことができる。さらに州政府レベルのより強力なコミットメントと、地方自治体間のネットワークの構築により、より効果的なメカニズムの構築が進んでいる。今後、州レベルでの廃棄物管理推進を進めるためには、省常設の廃棄物管理委員会を設置することが重要である。

(2)実施プロセスに関すること

・NSWMSCの個人、組織キャパシティ・アセスメント方法：JICA専門家、NSWMSCスタッフはユニークなキャパシティ・アセスメント方法を採用している。それは毎年プロジェクトに関する質問表を使って行うものであり、個人と組織のキャパシティを数値として可視化でき、また、それらによりプロジェクトの進捗及び課題をも把握することができる。

・本プロジェクトでは、地方政府・州議会省次官を委員長とし、同省、NSWMSC、財務省、環境省、保健省、中央環境局、州政府等によるステアリングコミッティを設立し、半年毎にプロジェクトの進捗及び重要な意思決定を行ってきた。当該ステアリングコミッティは、本プロジェクトの実施監理のみならず、関係者間の廃棄物管理にかかる情報交換、スリランカの廃棄物管理にかかる議論、多数の廃棄物管理プロジェク間の調整などを行う場としても重要な役割を果たした。

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

特になし

(2)実施プロセスに関すること

業務量が増加する一方NSWMSCの人員配置が十分になされなかったため、NSWMSCの負荷は増加し、多忙を極め、日本人専門家からC/Pへの技術移転の時間を十分に確保できない等技術移転の非効率を招いた。ただし、配置されたスタッフの献身的な業務により、結果的には、多数の廃棄物管理プロジェクト（2009年は約200百万ルピー）を支援できるほどまで組織能力が向上し、プロジェクト目標が達成できなくなるほどの支障とはならなかった。ただし、今後NSWMSCが地方自治体への廃棄物管理にかかる効果的な技術支援を継続的に行うためには、人員（特に技術者）の追加配置が必要である。

3-5 結論

評価5 項目に関し、妥当性は高い。プロジェクトは、地方自治体によるコンポストプラント、埋立地、し尿処理施設など多数の目に見える成果を生み出した。その過程において、NSWMSCはその管理能力・技術力を格段に向上させ、自治体支援体制を構築し、組織として地方自治体の廃棄物管理を支援するための体制は整いつつある。NSWMSCは人員増員、各地方自治体の廃棄物管理の仕組みづくりにかかる支援強化、長期的な地方自治体の融資制度の検討などの面でより一層の努力が必要であるものの、プロジェクト期間中にプロジェクト目標、上位目標は概ね達成可能である。持続性の面についても、長期的な資金の確保や今後の持続性概ね高いと結論づけることができる。

3-6 提言

(1) NSWMSC の人員配置

プロジェクト終了後含め、今後NSWMSCが地方自治体への廃棄物管理にかかる効果的な技術支援を継続的に行うためには、最低2名の技術者が必要である。現在空席であるコアスタッフ（次長1名、課長1名）を早急に配置することが期待される。

(2) 州政府レベルとの連携及び地方自治体間の連携

州毎に状況は異なるものの、地方自治体支援のためには州政府との連携が重要である。５州ではすでに廃棄物管理に関しNSWMSCとの協力関係ができているが、他の州においては協力関係が必ずしも構築されてはいない。また、廃棄物管理を先行、グッドプラクティスを蓄積している地方自治体が彼らの経験及びノウハウをその他の地方自治体と共有する等、地方自治体間のネットワーク強化も重要である。

(3) 研修による人的資源の開発

地方自治体レベルでのキャパシティは依然、質・量ともに不足している。自立発展する廃棄物管理を実現するため、州政府や地方自治体の技術スタッフや環境、保健、コミュニティ開発に関わるスタッフへの研修が必要である。NSWMSC は、州政府や地方自治体のスタッフのキャパシティ強化のため、今後も様々な研修やワークショップを開催する必要がある。JICA の国別研修スキームが活用できれば有益と考えられる。

(4) アクションプラン策定マニュアルの作成

NSWMSC スタッフは、本プロジェクトを通し、地方自治体の廃棄物管理のアクションプラン策定を支援するためのキャパシティを獲得した。今後は、地方自治体自身がより質の高いアクションプランを短時間で策定できるよう、NSWMSC による策定方法の見直しや技術的アドバイス等が求められる。

(5) 廃棄物管理システムの構築・管理

プロジェクトで支援したモデルプロジェクトでは、コンポストプラントなどの廃棄物管理施設が建設され、地方自治体の廃棄物問題は徐々に緩和されつつある。しかし持続的な廃棄物管理事業の実施、施設の運転・維持管理、合理的な廃棄物管理フローには依然懸念が残る。個々の施設はあくまで廃棄物管理の道具に過ぎず、地方自治体は、其々の状況に応じた効果的な廃棄物管理システム（施設の運転・維持管理や分別、収集運搬、リサイクル等を含む一連の流れ）を構築する必要がある。NSWMSC 及び地方政府・州議会省は、財務面での持続性確保、既存施設の運転や維持管理にかかるアドバイスや指導の上、持続性的な廃棄物管理システム構築・管理のための支援を行う必要がある。

(6) 住民意識向上とマスメディアへのアプローチ

地方自治体が(5)で述べた廃棄物管理システムを実施する上で、特に実際の分別、収集等でのキーとなる関係者である住民の巻き込みがこれまで十分になされているとは必ずしも言えない。プロジェクトはアクションプランの説明等プロジェクトの先進的な活動を紹介するによって廃棄物管理にかかる住民の理解促進（意識向上）や行動変容の重要性をアピールする必要がある。

(7) ステアリング・コミッティーの継続

プロジェクトのステアリングコミッティは、本プロジェクトの実施監理のみならず、関係者間の廃棄物管理にかかる情報交換、スリランカ国の廃棄物管理にかかる議論、多数の廃棄物管理プロジェク間の調整などを行う場として重要な役割を果たしてきた。このため、本プロジェクト終了後もステアリングコミッティを継続することが重要である。

3-7 教訓

(1) ステアリング・コミッティーの役割

本案件では、廃棄物管理の政策・実施・資金に係る主要組織により構成されるステアリングコミッティを形成し、プロジェクトの実施監理だけではなく、廃棄物管理に係る全般的な議論も行うことで、NSWMSCの機能強化、関係者の連携促進、及び国家レベルでの廃棄物管理政策にかかる協議促進にも貢献することできた。特に本案件におけるNSWMSCのように新規に形成された組織の能力強化を通じた当該国の課題解決を目的とする場合には、ステアリング・コミッティの有効な活用が重要と考えられる。

(2) 個人、組織キャパシティ・アセスメント方法

本案件のように組織のキャパシティ向上をプロジェクト目標とする場合、質問形式でのアセスメント（本案件においては管理・技術・業務環境の3つの項目によるアセスメントを毎年実施）結果を記録することにより結果を可視化でき、プロジェクトの進捗及び課題をも把握することができると考えられる。

Summary

<table>
<tr><td colspan="3">1. Outline of the Project</td></tr>
<tr><td colspan="2">Country: Democratic Socialist Republic of Sri Lanka</td><td>Project Title: The Capacity Upgrading Project of NSWMSC (CUP-NSWMSC)</td></tr>
<tr><td colspan="2">Issue/Sector: Solid Waste Management</td><td>Cooperation scheme: Technical Cooperation Project</td></tr>
<tr><td colspan="2">Division in charge: JICA Sri Lanka Office</td><td>Total Cost: Approximately 350 Million Yen</td></tr>
<tr><td rowspan="2">Period of Cooperation</td><td rowspan="2">March 2007 to February 2011</td><td>Partner Country's Implementing Organization: Ministry of Local Government & Local Provinces</td></tr>
<tr><td>Supporting Organization in Japan: Kokusai Kokusai Kogyo Co., Ltd.</td></tr>
<tr><td colspan="3">Related Cooperation: none</td></tr>
<tr><td colspan="3">1-1 Background of the Project
In Sri Lanka, the seriousness of the problems caused by waste has been on the rise due to a surge in the amount of waste generated, attributed mainly to economic growth and a lack of effective countermeasures being taken. Although the National Strategy for Solid Waste Management was formulated in 2000, no significant improvement in solid waste problems have been observed due to a lack of capacity of both LAs, who are responsible for the execution of SWM, and provincial councils, who are responsible for their supervision.

In order to tackle these problems, JICA executed "The Study on Improvement of Solid Waste Management in Secondary Cities in Sri Lanka (JICA SWM Study)" from 2002 to 2003. In this Study, action plans for seven selected local towns were formulated and the implementation of various pilot projects resulted in visible improvements. In addition, the Study found that LAs experienced difficulty in executing proper SWM if no technical assistance was provided, and provincial councils without in-house SWM engineering staff found it hard to supervise LAs in improving SWM. Therefore, the Study recommended establishing a system which would provide assistance to LAs by the central government. In concrete terms, it recommended the establishment of a NSWMSC and strengthening the system for financial assistance to enable LAs to carry out SWM projects.

However, the MLGPC had come to a deadlock in implementing the Study's recommendations due to the insufficient stock of SWM knowledge and human resources. Therefore, in August 2004, the Sri Lankan government requested the Japanese government to provide technical assistance in order to materialize the aforementioned recommendations and to initiate long-term improvement measures. In addition, the NSWMSC was established internally in July 2006, and officially approved by the cabinet in January 2007, with plans to strengthen the organization in the years to come.

In response to the request, JICA dispatched a preliminary study team in November 2006 and confirmed the validity of the project implementation. The M/M, which stipulated the project outline, the executing system and distribution of tasks, was compiled and the Record of Discussion (R/D) was signed in January 2007. In order to allow NSWMSC to fully exercise its capabilities, 4 year project has been implemented since March 2007.</td></tr>
<tr><td colspan="3">1-2 Project Overview
In Colombo, technical transfer is conducted to NSWMSC to promote solid waste management activities in local authorities in Sri Lanka.

(1) Overall Purpose:

Local Authorities improve solid waste management</td></tr>
</table>

(2) Project Purpose:

The NSWMSC acquires capacity for supporting SWM activities of LAs with close collaboration of relevant stakeholders so that LAs can implement SWM activities in accordance with the National Strategy for Solid Waste Management

(3) Outputs:

Output 1

NSWMSC establishes the basic organizational structure with the mid-term implementation strategy

Output 2

The NWWMSC establishes an efficient mechanism for supporting LA's SWM by stake holders

Output 3

Facilitation capacity of the NSWMSC for implementation of SWM action plans of LSs is acquired

Output 4

NSWMSC provides necessary information so that the Ministry can contribute to the National SWM policy and strategy

(4) Inputs (as of the Terminal evaluation)

Sri Lankan Side:

<Counterparts>

Director none 1

Assistant Director 1

Staff 5

<Office space>

The NSWMSC office was prepared prior to May 2007 which provides enough space for around 15 people. Necessary utilities, such as electricity and water, have been provided too.

Japanese Side:

Total amount: Approximately 350 Million Yen

<Dispatch of Japanese experts> Total:6 experts

Chief Advisor/Capacity Development

Solid Waste Management Planning/3Rs

Final Disposal Planning/Environmental consideration

Promotion of PPP and Social Consideration

Financial Management/Fund Planning

Project Coordination

<Equipment>

Vehicle, PC, Photocopy, Printer, GPS etc.

<Counterpart Training in Japan>

6 person

2. Evaluation Team

Member of Evaluation Team	Sri Lankan Side Mr. D.P. Hettiarachchi Additional Secretary of the MPCLG Mr. M. J. J. Fernando Assistant Director of CEA Ms L.Mangalika Director of NWSMSC Ms. M. Geethani Assistant Director of NSWMSC Sri Lankan Side Dr. Mitsuo Yoshida (Leader) Senior Advisor, JICA Dr. P. Serasinghe (Cooperation Planning) Representative, JICA SL Dr. Norihiro Noda (Evaluation Analysis) Consultant
Period of Evaluation: 28th July 2010 to 17th August 2010	Type of Evaluation: Terminal Evaluation

3. Results of Evaluation

3-1 Achievements

(1) Project Purpose: The NSWMSC acquires capacity for supporting SWM activities of LAs with close collaboration of relevant stakeholders so that LAs can implement SWM activities in accordance with the National Strategy for Solid Waste Management

Project purpose is generally achieved as planned. Through the Project, NSWMSC develop its capacity from management and technical aspect (Capacity evaluation [Management/Technical] in 2010 is [70%/40%] by NSWMSC and [71%/57%] by Japanese expert). Efficient mechanism was established with the collaboration of solid waste management authority in provinces to assist SWM in local authorities. Budget allocated for the SWM including Pilisaru Project has been increased annually, and NSWMSC has assisted the projects of more than Rs. 200 million in2009, which shows the improvement of NSWMSC capacity. However, number of NSWMSC staff is not enough (only one engineer at director position), which hinder the technical transfer from Japanese experts to C/Ps in the heavy workload to handle with the daily work. Considering the sustainable assistance on operation and maintenance and SWM system in local authorities, it is urgent needs to solve staffing issues. It is observed that it is difficult to allocate the staff as agreed in R/D or PDM3, however, at least 2 engineers should be additionally allocated and transferred the technical capacity (especially on SWM system management), which contribute the achievement of the project purpose.

Number of Personnel

	Director	Deputy Director	Assistant Director	Administrative staff	Total
Personnel agreed on R/D in Jan, 2007	1	3	5	12	21
Personnel agreed on PDM 3 in Sep,2009	1	2	3	8	14
Personnel as of terminal evaluation	1	0	1	5	7

※2 drivers and 1 office boy is assigned apart from above.

(2) Output

Output 1: NSWMSC establishes the basic organizational structure with the mid-term implementation strategy

Output 1 is generally achieved as planned. Mid-term strategy of NSWMSC was revised based on PDM and the project document. Project document is distributed to all the NSWMSC staff and staff are working efficiently with the clear idea of work process and decision making process. NSWMSC staff has accumulated its knowledge through the training material. It is noted that lack of the staffing of NSWMSC should be solved by allocating at least 2 additional engineers by the end of the Project.

Output 2: The NWWMSC establishes an efficient mechanism for supporting LA's SWM by stake holders

Output 2 is generally achieved as planned. Solid waste management authorities have been established in 5 provinces, with which NSWMSC start working to assist SWM in local authorities. Action plans for SWM in provinces have been formulated in 3 provinces (Sabaragamuwa, Central, Northern), and to be formulated by end of 2010 in 2 provinces (Eastern, North Eastern) NSWMSC have provided trainings for local authorities with SWM guidelines and manuals for more than 560 stakeholders in 8 provinces. Information was distributed through "NSWMSC News" (leaflet) and website. "NSWMSC News" was translated in 3 languages (Sinhala, Tamil, English) and 7 sets were distributed to 330 local authorities, all JICA ex-participant association members of SWM training, and other relevant stakeholders. Information (including SWM guidelines and manuals) could be downloaded from website.

Output 3: Facilitation capacity of the NSWMSC for implementation of SWM action plans of LSs is acquired

Output 3 is generally achieved as planned. 14 local authorities have been assisted by NSWMSC to formulate/implement action plan and 8 local authorities are constructing or operating the SWM facilities based on the action plan (Remaining 2 local authorities are under preparation of action plans and 4 local authorities are under preparation to implement action plan.) NSWMSC assisted other 3 local authorities on SWM as well. Through formulation and implementation of action plans of local authorities, NSWMSC has developed its capacity on land acquisition, legal permission and approval, social issues, fund acquisition, procurement, operation and maintenance, monitoring etc.

Output 4: NSWMSC provides necessary information so that the Ministry can contribute to the National SWM policy and strategy

Output 4 is partially achieved as planned. NSWMSC understand the SWM situation in Sri Lanka through the survey conducted in 157 local authorities and daily cooperation with local authorities. NSWMSC also keeping its network with UN, bilateral donors, NGOs, university, JICA ex-participant association of SWM, and other human resources in and out of the countries. NSWMSC is expected to share its knowledge and its recommendation to SWM policies through annual report.

3-2 Summary of Evaluation Result

(1) Relevance: High

The Team concluded that the Project is fairly relevant to the policy of the Government of Sri Lanka. This is because SWM is prioritized at National level, Provincial level, as well as LA level, and the services of the NSWMSC are widely welcomed by Provincial Councils and LAs.

The level of satisfaction with NSWMSC's assistance is very high among stakeholders on target LAs. All of them stated the model projects could not be realized without the support from the NSWMSC and Provincial government. This is proof of the significance and necessity of the NSWMSC support.

The Team also concluded that the Project is fairly relevant to the Official Development Assistance (ODA) strategy of the Government of Japan. In the ODA strategy of Japan towards Sri Lanka, Japanese policy clearly states that Japan cooperates for keeping the island as a beautiful country through improvement of infrastructure, and conservation of living & social environment in the urban areas, as well as improvement of the urban environment, which is one of the key areas of JICA cooperation.

(2) Effectiveness: Middle

The Project produced a number of visible outputs like several compost plants, landfill, and night soil treatment facilities. Through implementation of the action plans, NSWMSC has gained its capacity and established the mechanism to assist LAs SWM. However, such facility is merely a component for securing effective SWM but not SWM system itself. The Project has still a room for upgrading the Capacity for supporting LAs on SWM system understanding and operation, without which the Project Purpose would not be completely achieved.

The Capacity Upgrading for NSWMSC to support LAs with Provincial Councils on SWM system management and operation & maintenance of constructed facilities is, thus, the main issue for the coming 5 months period by the end of the Project.

Project purpose could be achieved if at least 2 engineers are additionally allocated and technical transferred is conducted including SWM system.

(3) Efficiency: Middle

Apart from the staff shortage issue, input from Japanese side and Sri Lankan side is appropriate and contribute to the output. The Team also identified the following points which were significantly improved since the Mid-term Evaluation.

As pointed by the Evaluation, there was a big opportunity being lost because of the shortage of core staff of NSWMSC, in the first half period of the Project. Actually, the Japanese Expert Team dispatched for NSWMSC was working as "filler personnel", because of the shortage of counterpart staff in NSWMSC. The Effectiveness was not favorable in the first half period.

In the second half period of the Project, NSWMSC could successfully establish collaborative relations with the Provincial Councils and other local resources, namely provincial engineers, academic professionals, experienced implementers in local level, etc. for supporting LAs, so much more efficient contribution became possible to Project Purpose level.

(4) Impact: High

The Team recognized from the findings of the joint evaluation survey that the following various impacts are emerging from the Project:

Now the number of functioning compost plant is 56 LAs of total 330 LAs (17%), where more or less improvement of SWM has been started by the LAs. The model project with appropriate technologies in a LA have had a propagating effect, which demonstrated and encouraged to other LAs that there is a feasible direction in their SWM. It can be recognized as positive impacts.

Most of the LAs were becoming so called "product-oriented" which is attracting many stakeholders because they think SWM problems can be sorted out by having a compost plant,

for example. However, the "product" is a tool and they will have to realize that even after they acquire the plant, there might be many other things to be done in SWM. Some target LAs such as Kuliyapitiya came to in-depth understanding on optimization of SWM system and now is introducing a source-separation and collection method under the cooperation of community.

There has been important sign of a big impact in institutional framework such as organizing SWM Committee or organization in Provincial level because of the Project.

(5) Sustainability: Generally High

The sustainability after the completion of the Project will be secured if NSWMSC develops the Capacity to support LAs in operation and maintenance of facility and SWM system management. These issues are previously pointed by Mid-term Evaluation and by the JICA Expert Team, but so far such activity is very limited. The Team concluded that some concentrated efforts are necessary for several target LAs in the issue. After getting god practice in the targeted LAs, if NSWMSC continue its work with qualified staff the sustainability will be secured.

There is growing involvement of key stakeholders, such as provincial government in the process of the model projects. If the involvement is realized in much more provinces, the sustainability will be strengthened.

Funds for the construction of SWM facilities have been secured by Sri Lank, however, after a few years, many local authorities will have to seek another source of funds for SWM. It is necessary to prepare small-scale fund mechanism that is appropriate for LA level SWM project, without which the sustainability is not fully secured.

3-3 Factors that impeded realization of effects

(1) Factors concerning the planning

- Importance of broader and progressive approach to solve problems:

The MLGPC first established National Solid Waste Management Support Centre (NSWMSC), and the Project succeeded human resources development of the NSWMSC through preparing action plans with LAs, producing visible outputs/products such as composting plants through conducting model projects with LAs, and is now going to develop a support mechanism with Provincial councils to LAs, which is gradually broader and progressively better approach to provide solutions to waste problems.

- Capacity upgrading at institutional level through appropriate implementation structure

The NSWMSC was established under the MLGPC, and there are many advantages because of this institutional/organizational setting. The Ministry can exert its power and authority to Provincial councils to LAs in order to provide necessary assistances on improvement of SWM through the supports by the NSWMSC.

The Team found significant development in establishing effective mechanism, for instance, having stronger involvements of Provincial level and enhancing networks among LAs in accordance with the present provision of structure.

(2) Factors concerning the implementation process

- Capacity Assessment of individual and organizational levels of NSWMSC

JICA Expert Team and NSWMSC counterparts applied unique capacity assessment using annual questionnaire survey in the Project, which visualized, anyhow successfully, the acquisition state of capacities at individual and organizational levels. The capacity assessment at

individual and organizational levels also demonstrated to show the progress and challenge of the Project in practical manner.

- Role of Steering Committee

Steering Committee was held every 6 month chaired by Secretary of MLGPC and consists of MLGPC, NSWMSC, Ministry of Finance and Planning, Ministry of Environment, Ministry of Health, Central Environmental Authority, Provincial Councils etc. Steering committee play the role not only to share the progress of the Project and made important decision of the Project, but also to provide the occasion to exchange the information, discuss on the SWM in Sri Lanka, coordinate variety of the projects among stakeholders.

3-4 Factors that impeded realization of effects

(1) Factors concerning the planning

Nothing special

(2) Factors concerning the implementation process

While the required service of the NSWMSC increasing, enough staff of NSWMSC was not allocated, which cause the heavy workload of NSWMSC and hinder the technical transfer from Japanese expert in the busy schedule. Due to the hard work of the each staff of NSWMSC, NSWMSC could manage to assist the SWM project amount up to 200 million and nearly achieving the Project purpose. However it is highly necessary for NSWMSC to allocate additional staff (especially engineers) to secure effective and sustainable assistance of SWM in local authorities.

3-5 Conclusion

Relevancy is evaluated as high. The Project produced a number of visible outputs like several compost plants, landfill, and night soil treatment facilities. Through implementation of the action plans, NSWMSC has gained its capacity and established the mechanism to assist LAs SWM. While NSWMSC has some aspect to be improved (such as to secure additional staff, to strengthen SWM system management, to secure financial scheme for local authority to implement SWM), it is observed that project purpose and overall goal is expected to be generally achievable.

3-6 Recommendation

(1) Immediate action on personnel placement

Core staff vacancies (2 Deputy Director and 2 Assistant Directors) should be filled as soon as possible. At least two engineers are urgently necessary for implementing the Project successfully in its final stage and even after the Project. Technology transfer program shall be done for these engineers by JICA Expert Team after the assignment.

(2) Effective assistance mechanism for Local Authorities

Strong involvement of Provincial level is essential for supporting LAs, although it depends on each province's situation. Five Provinces have been cooperated with NSWMSC on SWM issue in LAs, but so far, such cooperation mechanism has not yet fully established with the other Provinces.

Networks among stakeholders, for example a leading LA which experienced good practice on improvement of SWM to other LAs, should also be strengthened in order to share the experience and technical know-how.

(3) Human resource development

To strengthen above mechanism, there are needs in training for engineering staff of Provincial

councils and LAs, as well as technical, environment, health and community development staffs in LAs for sustainable SWM implementation. In other words, it is important to produce a human resource base for the SWM at local level. Various types of training course or workshops shall continuously organized by NSWMSC.

(4) Manual for formulating Action Plan

NSWMSC has gained the capacity to formulate a SWM action plan for a LA through the Project experiences, although the NSWMSC staff has to spend relatively long time for the planning, and the quality of action plan prepared should be also improved. In order to upgrade the capacity of NSWMSC staff, above-mentioned experiential approach applied in the Project was effective, but it is necessary to shorten the time spent for formulation and to improve the quality of the plan. It is recommended to review the formulation method so than more clear action plan can be quickly formulated, which is probably very useful for Provincial engineers and LAs officers.

(5) System management practice in SWM

In the most model projects supported by the project, SWM facility such as compost plant has constructed and the waste problems in Las are gradually mitigating. However, there are some concerns about sustainable implementation of SWM activities, operation & maintenance of facility, and rational setting of the waste management flow under the existence of the facility in Las. Individual facility is just a component of SWM, and establishing an effective and efficient system for SWM is required under the actual conditions of Las. “System management” is essential for implementing and optimizing sound SWM with a newly constructed SWM infrastructure. The issue on source separation, rational collection & transportation, recycling, etc. should be examined based on given conditions. In the system management, at the same time, it should be considered how to ensure the sustainability of SWM operation & maintenance and economic viability. The NSWMSC and the MLGPC should give necessary advice and direction on system management including its operation & maintenance and economic viability issues.

(6) Public awareness and Mass media

One of key stakeholders to operate SWM system has been left behind. The Project should take the opportunity and show leading practices and project activities, like Action Plan Presentation, to raise awareness of civil society on SWM and appeal the importance of change in public general’s behaviour.

(7) Continuance of Steering Committee

Steering Committee of the project works not only for the monitoring of the project but also playing the important role to provide the occasion to exchange the information, discuss on the SWM in Sri Lanka, and coordinate variety of the projects among stakeholders. Thus it is recommended to continue holding the steering committee even after the Project.

3-7 Lessons learned

(1) Role of Steering Committee

Steering Committee of the project consists of all the relevant organization on policy, implementation, finance, etc. works effectively not only for the monitoring of the project but also playing the important role to provide the occasion to exchange the information, discuss on the SWM in Sri Lanka, coordinate variety of the projects among stakeholders.

(2) Assessment in individual and organizational capacity

In case the project purpose is capacity building of the organization, capacity assessment (this project introduced 3 category of the assessment in management, technical aspect and working environment with questionnaires) recorded every year could be effective to visualize the result of the assessment whereby demonstrating the progress and challenge of the Project.

第１章　終了時評価の概要

1-1　調査の背景と目的

スリランカ国（以下、「ス」国）では、商業活動の活発化、生活の多様化等によりごみの排出量が増加し、適切に処分されない廃棄物による環境悪化（水質汚濁、悪臭等）、観光国としてのイメージ低下を招いているが問題の多くは放置されており、廃棄物に起因する保健衛生及び環境問題は今後一層深刻化することが懸念されていた。また、廃棄物管理事業費は地方自治体財政の20%から50%を占めており、廃棄物管理事業の改善と持続可能な事業運営体制の構築は、地方自治体のサービス維持と改善にとって最大の課題となっていた。

この課題を解決するため、JICAは「ス」国の要請を受けて開発調査「地方都市環境衛生改善計画調査」を2002年3月から2003年12月にかけて実施した。この調査では、地方都市における廃棄物管理計画を策定するためのパイロットプロジェクトを７都市で実施し、収集改善、既存処分場の衛生改善、環境教育やリサイクル運動の促進、廃棄物モデル条例案の作成、現地技術を用いた安価な衛生埋立処分場の建設等を通じて、廃棄物管理に関する提案事業の現地適用性の実証が行われ、実質的な改善も見られた。上記開発調査では、小規模な地方自治体や廃棄物管理技術者が存在しない州政府議会が独自に廃棄物管理計画を策定することは技術的に困難で非効率であることから、中央政府による支援の枠組みを構築する必要を提言し、「ス」国側実施機関で地方自治体の管轄官庁である地方政府・州議会省に地方自治体の廃棄物管理改善を支援する「全国廃棄物管理支援センター（以下、「NSWMSC」）」の設置と、併せて廃棄物管理事業に対する地方自治体向きの融資制度の強化を提言した。

しかしながら、地方政府・州議会省には廃棄物管理に関する知見の蓄積と能力が不足しており、独自で提言内容を実施することが困難であったため、「ス」国は2004年8月に我が国に対してNSWMSCの能力強化を目的とした技術協力プロジェクトを要請し、2006年7月にNSWMSCを同省内に設置した。これを受け、JICAは2006年11月に事前評価調査を実施した。

本プロジェクト終了まで約半年となることを踏まえ、今般以下を目的として終了時評価を実施することとした。

(1)　プロジェクトの実施プロセスとその達成度の確認、評価。
(2)　プロジェクトの残余期間及び終了後の活動にかかる提言、類似案件に適用可能な教訓の抽出。

1-2　合同評価団のメンバー

本終了時評価は、スリランカ側４名、日本側３名からなる合同評価調査団で実施した。

＜スリランカ側＞
Mr. D.P. Hettiarachchi（地方政府・州議会省　次官補）
Mr. M.L. Sunil Fernando（地方政府・州議会省　アドバイザー）
Ms. L. Mangalika（国家廃棄物管理支援センター　所長）
Ms. M. Geethani（国家廃棄物管理支援センター　課長）

＜日本側＞
総括：吉田　充夫　（JICA、国際協力専門員）
協力計画：Dr. Priyantha Serasinghe（JICAスリランカ事務所、ナショナルスタッフ）
評価分析：野田　典宏　（三井共同建設コンサルタント株式会社）

1-3　評価手法

本終了時評価調査は、プロジェクトサイクル・マネジメント手法で用いられるプロジェクト・デザイン・マトリックス（Project Design Matrix: PDM）を活用し、以下の手順で実施した。

(1) PDMに基づいて評価の枠組みをデザインする。
(2) 質問表、インタビュー、プロジェクトサイトの視察、ドキュメント調査などにより評価に必要なデータを収集する。
(3) 達成度、実施プロセス、5つの評価基準（妥当性、有効性、効率性、インパクト、自立発展性）から収集データを分析する。
(4) 分析結果からプロジェクトの残りの実施期間の活動に対する提言を抽出する。また他の類似案件に有益な教訓を導きだす。

＜プロジェクトの達成度と実施プロセスの評価方法＞
プロジェクト目標及び成果の達成度は、PDM3（2009年9月版）およびPOに基づき実際の進捗状況と比較しながら評価した。プロジェクトの実施プロセスは、意思決定や実施管理体制、プロジェクト関係者間のコミュニケーション、人材育成など種々の観点から評価を行った。

＜客観的に検証可能な指標（OVI)によるレーティング（評点）方法＞
OVIによる評価結果は、評価団の定義により、次の5つのカテゴリーに分類の上、評価レーティング（評点）で表現した。
A: プロジェクト終了までに十分満足して達成される。
B: プロジェクト終了までにほぼ達成されるが、完全という訳ではない。
C: プロジェクト終了までに達成されるのは、困難である。
A/B ： A と B の中間である。
B/C ： B と C の中間である。

＜評価基準＞
収集した情報は以下の5項目で評価を行った。

表１　５つの評価クライテリア

評価5項目	概要
妥当性	「プロジェクト目標」「上位目標」は受益者のニーズと合致しているか。援助国側の政策と日本の援助政策との整合性はあるか。
有効性	「プロジェクト目標」は達成される見込みか。「成果」はその達成に十分貢献しているか。
効率性	「成果」を得るための「投入」の質、量、手段、方法、時期は適切であったか。
インパクト	「上位目標」はプロジェクト終了後5年以内に達成される見込みか。プロジェクトの実施により生じた正及び負の影響は何か。
持続性	プロジェクト終了後もプロジェクトの実施による効果は持続されるか。

出典：DAC Criteria for evaluating Development Assistanceより要訳

1-4 調査日程

表 2 調査日程

日程		活動
7月28日	水	野田団員（評価分析）の到着
29日	木	AM ：TV会議（JICA本部、JICAスリランカ事務所） PM ：第1回キックオフ会議（地方政府・州議会省、NSWMSC）
30日	金	NSWMSCとの打合せ（終了時評価の目的、方法、訪問先、視察場所など）
31日	土	資料収集・整理、レポート作成準備
8月1日	日	資料収集・整理、レポート作成準備
2日	月	AM ：質問表回答の回収、インタビュー PM ：質問表回答の回収、インタビュー
3日	火	AM ：質問表回答の回収、インタビュー PM ：CEAの訪問、インタビュー
4日	水	AM ：質問表回答の回収、インタビュー PM ：質問表回答の回収、インタビュー，吉田団長の到着
5日	木	AM：第2回キックオフ会議（地方政府・州議会省、NSWMSC） PM ：資料収集と整理、インタビュー
6日	金	AM ：日本側団内会議（スリランカ事務所） PM ：C/Pとの会議、情報収集・整理、インタビュー
7日	土	現地視察（Kuliyapitya UC、North Western PC）
8日	日	現地視察（Ratnapura MC）
9日	月	AP：合同評価報告書（案）の作成、資料収集・分析 PM：日本側団内会議（案の検討、修正）
10日	火	合同評価協議
11日	水	合同評価協議
12日	木	AM：合同評価報告書の検討、完成 PM：ステアリングコミッティ会議の開催（地方政府・州議会省、NSWMSC、関連省、地方政府代表との協議）
13日	金	ステアリングコミッティ会議、M/Mへの署名（地方政府・州議会省次官、日本側団長）
14日	土	報告書チェック、訂正
15日	日	報告書チェック、訂正
16日	月	報告書作成、スリランカ事務所への報告
17日	火	調査団員の帰国

1-5　主要面談者

(1)　カウンターパート
Dr. Y.D. Nihal Jayathilaka（地方政府・州議会省　次官）
Mr. D. P. Hettiarachchi（地方政府・州議会省　次官補）
Mr. M. L. Sunil Fernando（地方政府・州議会省　アドバイザー）
Ms. L. Mangalika, Director of NSWMSC（NSWMSC所長）
他NSWMSC職員全員

(2)　日本人専門家
土井　章　（チーフアドバイザー／キャパシティ・ディベロップメント）
佐藤　尚文（廃棄物管理計画／3R）
佐藤　秀男（業務調整）

(3)　地方自治体、州政府関係者
Mr. A.L.M. Adikari（Kuliyapitya UC , 町長）
Mr. Suranga Dewappriya（コンポストプラントのスーパーバイザー）

(4)　その他の関係者
Mr Chathura Malwana（ﾋﾟﾘｻﾙﾌﾟﾛｼﾞｪｸﾄ　ﾌﾟﾛｼﾞｪｸﾄﾃﾞｨﾚｸﾀｰ補　中央環境局）

第2章　プロジェクトの実績と実施プロセス

2-1　投入実績

2-1-1　スリランカ側からの投入

(1)　カウンターパート

2007年1月に署名された本案件のR/D によると、スリランカ側カウンターパートとしてNSWMSC所長1名、次長3名、課長5名、スタッフ12名の計21名（ドライバー、オフィスボーイを除く）の配置義務があった。しかし、現時点での人員配置状況は以下のとおり（所長1名、課長1名、スタッフ5名の計7名。）2009年3月の配置の遅れは2009年3月の中間レビュー時にも指摘されており、その後NSWMSCの中期計画にて職員数を段階的に増加させるべく2009年8月までに所長1名、次長2名、課長3名、スタッフ8名の計14名による組織体制を整える計画を立案し、2009年3月以降に4名が雇用されたがそのうちの3名が退職。状況は中間レビュー以降から改善されていない。現在技術者は所長1名のみ。NSWMSCは多忙を極め、日本人専門家からC/Pへの技術移転の時間が制約されるなど、人材不足（特に技術者）はプロジェクト目標達成の阻害要因となっている。

表 3　当初案に対する現有スタッフ数

	所長	次長	課長	スタッフ	合計（人）
2007 年 1 月署名 RD での合意人数	1	3	5	12	21
2009 年 9 月改定 PDM3 での合意人数	1	2	3	8	14
終了時評価時点でのスタッフの実数	1	0	1	5	7

※なお、その他、運転手2名及びオフィスボーイ1名が配置されている。

スリランカ側の中間レビュー以降の人員は、以下のとおり。

Position	Name	2009									2010		
		April	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Director	L. Mangalika												
Acting Director	Dilan Fernandopulle												
Deputy Director	L. Mangalika			Promoted									
Deputy Director	R. M. M. B. Ratnayake						Transferred						
Assistant Director	M. Geethani												
Assistant Director	R. P. Darmasena						Retired						
Assistant Director	E.K.D.R.Edirisinghe										Retired		
Development Officer	K.C.P. Kasturiarachchi												
Development Assistant	Chanaka Wijesekara							Resigned					
Development Assistant	Rumali Tillekeratne												
Management Assistant	J.R.M.N. Jayalath												
Management Assistant	M.P.D.C.W. Kumari												
Management Assistant	L.A. Chandrakanthi					Maternity leave							
Office boy	Sanjeewa												
Driver	Dhammika Nanda Kumara												
Driver	H.A.R. Pushpa Kumara												

Note: a dot line means that the person took a long leave.

Source: CUP-NSWMSC

図 2　NSWMSC スタッフの変遷

- 前次長のMs.Mangalikaは、2009年6月所長に昇進した。
- Mr.RatnayakeとMr.Darmasena は次長、課長として2009年6月に雇用したが、前者は他部へ移籍し、後者は早期退職をした。
- Mr.Edirisingheは、10月中旬から1月中旬まで雇用したが、早期退職を選択した。
- Mr.Chanaka Wijesekaraは、CUP-NSWMSC 当初から働いていたが、退職した。
- Mrs.LA Chandrakanthi は2009年5月より産休をとったが、2010年1月職場復帰した。

(2)　事務室・ユーティリティ等

NSWMSCの事務所は、日本人専門家が業務を開始した2007年5月以前に準備された。全床面積は92平方メートルで、15名ほどが使用可能な広さである。電気、水道などの設備サービスも提供されている。

(3) 予算

下表は、地方自治体の廃棄物管理支援のための地方政府・州議会省の年間予算を示すものである。省の予算は、2006年以降増加し続け、2010年には40百万ルピーが承認されている。

表 4　省の廃棄物管理予算

会計年度	2006	2007	2008	2009
予算（百万ルピー）	10	15	35	30
決算(百万ルピー)	8.5	11.4	13.5	32
裨益地方自治体数	64	51	48	110

Source: CUP-NSWMSC

2-1-2 日本側からの投入

(1) 日本人専門家の派遣

以下の専門家が派遣されている。

- チーフアドバイザー／CD（土井章）
- 廃棄物管理計画／3R（佐藤尚文）
- 最終処分計画／環境配慮（井戸、田村）
- PPP 推進・社会配慮（中村、田村）
- 財務管理／資金管理（小川武彦）
- 業務調整(岩本、松本)

(2) 日本での研修

6名のNSWMSCスタッフが、日本での廃棄物管理のグループ研修に参加した。

表 5 日本でのグループ研修者

No	氏名	資格/所属	期間	研修名
1	Ms. K.C.P. Kasturiarachchi	Development Officer	2007年8月21日～10 月 24 日	都市廃棄物処理研修（JICA大阪研修センター）
2	Mr. Chanaka Wijesekara	Development Assistant	2007年10月29日～12 月 15 日	南西アジア地域廃棄物管理（JICA 北九州研修センター）
3	Ms. Lanka Wedagedara	Development Assistant	2007年10月29日～12 月 15 日	南西アジア地域廃棄物管理（JICA 北九州研修センター）
4	Ms. J.R.M.N. Jayalath	Management Assistant	2007年10月15日～11 月 22 日	スリランカ地方都市環境行政研修（JICA中部センター）
5	Ms. Rumali Tillekeratne	Development Assistant	2008年10月12日～12月5日	南西アジア地域廃棄物管理（JICA 北九州研修センター）
6	Ms. L. Mangalika	Director of NSWMSC	2008年3月26日～4月12日	廃棄物管理システムコース

Source: CUP-NSWMSC

(3) 機材の供与

車輌及び事務用品（コンピューター、プリンター、コピー機、ソフトウェア等）等の各種資機材の供与を行った。（詳細は英文合同評価報告書のAnnex6参照。）

2-2　プロジェクトの達成度

2-2-1　プロジェクト目標

プロジェクト目標
NSWMSCが、関連省庁や州議会政府等の関係者と協力して、廃棄物管理国家戦略に沿った地方自治体の廃棄物管理事業を支援できるキャパシティを獲得する。

プロジェクト目標の総合評価は A/B と判断する。プロジェクト目標にかかる評価は PDM3 の 7 個の OVI（客観指標）のうち、A が 4 つ、B が 3 つ。現状でいくつかの指標が低いのは、NSWMSC の技術スタッフが不足しているためである。しかし、スタッフ不足にもかかわらず各指標において大きな成果が確認されることから、NSWMSC が今後とも同様の努力を続ければ、プロジェクト目標はプロジェクト終了までにほぼ達成されるであろうと判断する。

(1)　OVI P1: 提案スタッフの 100%（所長 1 名、次長 2 名、課長 3 名、スタッフ 8 名）が 2010 年末までに配置される。＜評価:B＞

2-1-1 で記載したとおり、現在、計画していたスタッフ数と比較し、実際のスタッフ配置が遅延している。業務量が増加する中 NSWMSC の負荷は増加傾向であり、多忙を極める中、日本人専門家から C/P への技術移転の時間を十分に確保できない等技術移転の非効率を招いている。

NSWMSC スタッフは週末出勤を行うなどして業務に熱心に取り組んでおり、厳しい人員配置状況であるにもかかわらず、多数の廃棄物管理プロジェクト（2009 年に 20 百万ルピー）を支援している。そのため PDM3 での合意人数の 100%配置がなされなくともプロジェクト目標を達成することができると見込まれるが、スタッフ（特に技術系）の増員は緊急に必要である。2011 年 2 月末までに NSWMSC が PDM3 の提案通りスタッフを配置することは容易ではないものの、地方政府・州議会省地方政府・州議会省次官補が 2010 年 8 月末までに 2 名のエンジニアを配属すると言及したことを踏まえ、本指標の評価は B とする。

(2)　OVI P2: NSWMSC の管理キャパシティが目標の 70%に到達する。＜評価：A＞

プロジェクトでは、質問表によるキャパシティ・アセスメントを実施している。管理キャパシティ、技術キャパシティ、業務環境の 3 つのカテゴリーの項目について、NSWMSC スタッフ自身及びチーフアドバイザーが採点を行い、その結果を毎年記録している。NSWMSC の管理キャパシティは表 6・7 共に 70%を超えており、管理キャパシティは当初の目標に到達していることから、本指標の評価は A とする。

表 6　NSWMSC スタッフによる NSWMSC の CD 指標

年	2007	2008	2009	2010
管理キャパシティ	0%	56%	62%	70%
技術キャパシティ	0%	37%	47%	45%
業務環境	23%	68%	67%	61%
NSWMSCのCDI	8%	53%	59%	58%

Source: Project Progress Report No.3

表 7　チーフアドバイザーによる NSWMSC の CD 指標

年	2007	2008	2009	2010
管理キャパシティ	0%	50%	64%	71%
技術キャパシティ	0%	12%	29%	57%
業務環境	23%	79%	76%	72%
NSWMSCのCDI	8%	47%	57%	67%

Source: Project Progress Report No.3

(3) OVI P3: NSWMSC の知識、技術が目標の 70%に到達する。＜評価：B＞

表 6・7 のとおり、技術キャパシティは、2007 年 0%であったが、2010 年にはスタッフ自身では 45%、チーフアドバイザーでは 57%に到達している。技術スタッフ数が不足して限り、目標であるプロジェクト終了時点での 70%は容易ではない。このキャパシティの向上を促進するためにも NSWMSC へのエンジニア配置と彼らの技術キャパシティの向上が必要である。したがって本指標の評価は B とする。

(4) OVI P4: NSWMSC の業務環境が、目標の 70%に到達する。＜評価：B＞

業務環境の評価結果は、2008 年に上昇したものの、2008 年 79-68%、2009 年 76-67%、2010 年 72-61%と年々下がっている。これは、業務量が大きく増大し、地方自治体への支援強化に伴う遠隔地への出張も増加している一方、NSWMSC スタッフが増員されていないためである。本指標を達成するためには NSWMSC の空きポジションへの人員配置が喫緊に必要である。したがって本指標の評価は B とする。

(5) OVI P5: 省の廃棄物管理関連予算が、年額 50 百万ルピーを超過する。＜評価：A＞

地方自治・州議会省の予算及び決算は下表の通り。地方自治・州議会省の廃棄物管理の予算は年々増加しており、2010 年度予算は、2010 年 7 月の国会にて 40 百万ルピーが承認された。

表 8　地方自治・州議会省の廃棄物管理の年間予算（LKR）：

年	2007	2008	2009	2010
予算	15百万	35百万	30百万	40百万
決算	11.4百万	13.5百万	32百万	-

Source: MLGPC

その他、環境省よりピリサルプロジェクト実施のため 45 百万ルピーが承認されている。地方自治・州議会省の予算のみでは 50 百万ルピー以下であるが、その他を加味すると、廃棄物管理予算全体として 50 百万ルピーを超過している。したがって本指標の評価は A とする。

表 9　NSWMSC の廃棄物管理支出実績（LKR）：

年	2007 （決算）	2008 （決算）	2009 （決算）	2010 （予算）
地方自治・州議会省	11,446,400.00	13,491,093.43	31,875,622.33	40百万
ﾋﾟﾘｻﾙﾌﾟﾛｼﾞｪｸﾄ	-	22,013,211.00	72,413,111.48	45百万
2KR	-	-	100,038,480.18	-
合計	11,446,400.00	35,504,304.43	204,327,213.99	85百万

Source: MLGPC

(6) OVI P6: NSWMSC の現地調査の予算が、年間 1 百万ルピーに達する。＜評価：A＞

NSWMSC は「現地調査費」という形では予算配賦を受けていないものの、配賦予算全体の中から、年間 1 百万ルピーに相当する金額をサイト調査にあてることができる環境にある。したがって本指標の評価は A とする。

(7) OVI P7: NSWMSC と多様な関係者との良好なネットワークが維持される。＜評価：A＞

NSWMSC は、以下のとおり多様な関係者との良好なネットワークを構築している。中間レビューでは、NSWMSC は、直接地方自治体を支援するのではなく、より州政府やその他関係者を巻き込みながら地方自治体への働きかけを実施すべきであるとの指摘がなされており、以降、NSWMSC は州政府や廃棄物管理に関わる関係者との緊密な連携を図り、大きく改善された。評価団は、NSWMSC が廃棄物管理ネットワークのハブ機能を有しつつあり、将来スリ

ランカの各種廃棄物管理活動に連携・調に寄与するであろうと判断する。したがって本指標の評価はAとする。

1) NSWMSCは、JICA廃棄物管理研修の元研修生の同窓会事務局となり、日々の同窓会活動を側面支援するほか、新たな新規研修生の選考・文書作成や、環境教育のJOCVの要望・受入等を行っている。更に、2009年日本大使館の2KR見返り資金を活用し、約30万人の国内難民のいるVanuniya IDPキャンプの衛生改善プロジェクトを実施している。
2) NSWMSCは、環境省のピリサルプロジェクト（2008年20百万ルピー、2009年72百万ルピー、2010年45百万ルピー）を支援しており、関連会議に参加し、関連者と日常的にコンタクトをとっている。
3) NSWMSCは、西部州の廃棄物管理委員会との協力関係を構築している。
4) NSWMSCは、Ampara郡のUNOPS廃棄物管理プロジェクト施設の維持管理を行っている。（将来的には施設は地方自治体に移管される。）
5) NSWMSCは、世銀スリランカ事務所の環境エンジニアであるDr. Sumith Pilapitiya、ペラデニア大学のProf. BFA Basnayake 、モラトゥワ大学のDr. Mahesh、バランゴダUCのPHIであるMr Nimal Prematilaka等の貢献を得て、コンポストの研修を行っている。
6) NSWMSCは、USAID、 Lirnerasia、 AustAID、SEVANATA、Arthachariya等のNGOやドナーともつながりを持っている。

2-2-2 成果

プロジェクトの成果は､4つの成果で計画された｡評価団は､以下のとおりPDM3による指標(OVI)をもとに、これらの成果達成度を評価した。

成果1
NSWMSCの中期計画が策定され、基本的な組織体制が確立される。

成果1の総合評価はA と判断する。以下の5個の指標はすべてAであることを踏まえ、成果1はプロジェクト終了までに達成されることが見込まれる。留意すべきはNSWMSCスタッフの配置不足であり、そのギャップはプロジェクト終了までに少なくとも2名のエンジニアを配置することで最小化する必要がある。

(1) OVI 1.1: NSWMSCが包括的な中期計画を策定し更新する。＜評価：A＞

NSWMSCの中期計画は2009年3月に策定され、その後PDM及びProject Documentの改定を踏まえ、同年9月に更新された。NSWMSCの2010年の業務プログラムも、この中期計画に基づき策定された。したがって本指標の評価はAとする。

(2) OVI 1.2: NSWMSCの各スタッフが、業務を理解し効率的に作業できる。＜評価：A＞

NSWMSCの活動スケジュールを示すProject DocumentはNSWMSC全スタッフに渡し説明されており、全スタッフがプロジェクト及び自分の担当課題を理解し、業務に集中している様子が伺える。限られたスタッフで多大な業務を実施している現在の構造は、スタッフのハードワークをベースにしている。したがって本指標の評価はAとする。

(3) OVI 1.3: NSWMSCが明確な業務プロセスと意思決定プロセスを持ち、活動を実施できる。＜評価：A＞

NSWMSCは、業務フロー図や業務プランを作成し、後者については月例会議にて進捗確認を行っている。地方自治体への指導に活用する様々なマニュアルも作成されている。NSWMSC所長の指示はいつも明確で迅速であり、全スタッフは業務プロセスと意思決定プロセスを理解して業務を行っている。したがって本指標の評価はAとする。

(4) OVI 1.4: スタッフの研修資料が、自己学習用に蓄積される。＜評価：A＞

地方自治体への廃棄物管理の講義や研修は、NSWMSC スタッフが行っている。日本人専門家はただ側面支援しているのみ。研修は、40 回を超え、Kuliyapitiya モデルプロジェクトへのスタディツアー等も実施している。さらに、研修で用いた資料は、NSWMSC スタッフが自己研修用として編集・活用しており、NSWMSC スタッフはプロジェクトを通して、基礎的キャパシティを獲得している。したがって本指標の評価は A とする。

(5) OVI 1.5: NSWMSC の全スタッフが廃棄物管理の基本的知識を持ち、活動できる。＜評価：A＞

調達業務は 100%NSWMSC スタッフが実施し、F/S 等必ずしも十分なレベルに達していない分野については日本人専門家との共同で実施するなど分野による自立度にばらつきはあるものの、スタッフは全員が廃棄物管理の基本的知識を保有しており業務遂行のキャパシティがある。したがって本指標の評価は A とする。

成果2
NSWMSCが関係機関と協働して地方自治体の廃棄物管理事業を支援するための効率的なメカニズムが構築される。

成果 2 の総合評価は A と判断する。以下の 6 個の指標のうち、A が 4 個、A/B が 2 個であり、成果 2 はプロジェクト終了までにほぼ達成されることが見込まれる。

(1) OVI 2.1: 廃棄物管理委員会が 5 州以上で成立し、機能し始める。＜評価：A＞

2009 年に 3 州（Sabaragamuwa、 Central、Northern)で、2010 年に 2 州（Eastern、North Western）で廃棄物管理委員会が設立され活動を開始している。常勤スタッフが配置されていないため、活動は限定的であり、NSWMSC は各州の現状を踏まえ廃棄物管理事業を継続的に支援する必要があるものの、本指標の評価は A とする。

(2) OVI 2.2: 州の廃棄物管理アクションプランが 5 州以上で策定され、実施される。＜評価：A/B＞

3 州(Sabaragamuwa、Central、Northern)で 州の廃棄物管理アクションプランが作成・実施されている。州政府は、各地方自治体の廃棄物管理の現況を十分に把握し、アクションプランの実施・見直しを行っている。2 州（Eastern 、North Western ）では、廃棄物管理アクションプランの策定をそれぞれ 2010 年 6 月と 7 月に開始し、2010 年末までの完成を目指している。したがって本指標の評価は A/B とする。

(3) OVI 2.3: NSWMSC が様々な方法で廃棄物管理の情報を関係者に展開できる。＜評価：A＞

NSWMSC は、OVI 2.4 に示すとおり、広報誌“NSWMSC News”及びウェブサイトにより廃棄物管理の情報を関係者に展開している。広報誌“NSWMSC News”はシンハラ・タミル・英語で発行され、これまで 7 回分が 330 の全地方自治体、全 JICA 帰国研修員同窓会員（廃棄物管理）、及びその他の関係機関に配布されている。ウェブサイトからは様々な廃棄物管理関連資料を無料でダウンロードできる。したがって本指標の評価は A とする。

(4) OVI 2.4: NSWMSC のウェブサイトが年間 4 回更新され、NSWMSC ニュースが四半期毎に発行される。＜評価：A/B＞

NSWMSC は広報誌“NSWMSC NEWS”を、2007 年 11 月、2008 年 6 月 2009 年 1 月、7 月、10 月、2010 年 3 月、6 月に発行した。これらは 330 の全地方自治体、全 JICA 帰国研修員同窓会員（廃棄物管理）、及びその他の関係機関に配布された。2009 年 7 月版 NSWMSC NEWS 以降は、NSWMSC スタッフ自身が編集、執筆し、日本人専門家は関与していない。記事はまず

シンハラ語で執筆し、それから英語、タミル語に翻訳されている。広報誌の発行頻度は向上し、2010 年には年間 4 回となる予定である。NSWMSC のウェブサイトの更新は、省のウェブシステムの制限等のため年間 4 回の更新を必ずしも達成しておらず、NSWMSC は可能な限りコンテンツのアップデートに取り組んでいる。したがって本指標の評価は A/B とする。

(5) OVI 2.5: NSWMSC が、廃棄物管理関係者が使用するガイドライン、マニュアルを普及できる。＜評価：A＞

NSWMSC の非技術系スタッフは、2007 年 NSWMSC 発足当時は廃棄物管理の基礎知識はほとんど持っていなかったが、プロジェクトを通して廃棄物管理の基礎知識を得、様々なガイドライン、マニュアルを普及できるようになった。したがって本指標の評価は A とする。ただし、作成した資料の知識や技術を普及するためには多様な分野の専門性が求められる。NSWMSC の技術系スタッフの増員がなされれば、今後技術マニュアルのさらなる活用が見込まれる。

(6) OVI 2.6: NSWMSC 研修が 5 州以上で実施され、受講者の 20%以上がこの知識を活用する。＜評価：A＞

本指標の評価は A と判断する。NSWMSC は 2009 年 8 州で 3 回の研修を行っており、研修生の総数は 560 名に達している。したがって、本指標の評価は A とする。ただし、地方自治体での真のニーズを把握するためには、研修実施後のフォローアップ調査等が必要と思科する。

表 10　廃棄物管理研修の受講生数

対象州	North western North central Southern	Uva Central Sabaragamuwa	North Eastern	合計
月	6 月	8 月	12 月	-
場所	Colombo	Colombo	Trincomalee	-
受講者数（3 日間技術スタッフ用）	70	70	非技術コースと合同	140
受講者数（3 日間非技術スタッフ用）	70	70	70	210
受講者数（1 日間幹部用）	70	70	70	210
合計	210	210	140	210

Source: CUP-NSWMSC, 2010

成果3

NSWMSC が地方自治体の廃棄物管理アクションプラン実施を促進するための能力を獲得する。

成果 3 の総合評価は **A** と判断する。10 個の指標のうち、A が 9 つ、B が 1 つであり、成果 3 は、プロジェクト期間内にほぼ達成できると判断する。

(1) OVI 3.1: NSWMSC が地方自治体のアクションプラン策定の支援をできる。＜評価：A＞

地方自治体の廃棄物管理アクションプランは、NSWMSC 支援のもと、2007 年に 3 件、2008 年に 5 件、2009 年に 3 件、合計 11 件が策定された。うち、Tangalle PS と Kurunegala PS のアクションプランは 2008 年に日本人専門家は関わらず NSWMSC のみの支援で策定された。

NSWMSC スタッフは地方自治体への支援で得た経験によって、廃棄物管理アクションプランを策定する能力を得たと評価できる。したがって本指標の評価は A とする。ただしその策定には時間がかかり向上の余地がある。プロジェクトの残余期間において、NSWMSC スタッフの目標はアクションプラン策定の時間短縮、及び質の向上を図ることが期待される。

(2) OVI 3.2: NSWMSC が、用地取得について地方自治体を支援できる。＜評価：A＞

NSWMSC は Kuliyapitiya UC と Nawalapitiya UC におけるモデルプロジェクトの用地取得を省の高官とともに支援した。スリランカにおける用地所有権の移転の行政手続きは非常に複雑であるが、NSWMSC は一定程度のファシリテーション能力を得たと評価できる。したがって本指標の評価は A とする。

(3) OVI 3.3: NSWMSC が、法的許認可取得について地方自治体を支援できる。＜評価：A＞

NSWMSC は 6 つの地方自治体（Kuliyapitiya UC, Nawalapitiya UC, Badulla MC, Matara MC, Tangalle UC, Wennappuwa PS）におけるモデルプロジェクトの環境許可申請を支援し、許可を得ている。特に Nawalapitiya UC においては、CEA の要求に従い初期環境評価（IEE）の実施を支援し、承認を受けている。NSWMSC が、本経験を通じ小規模廃棄物管理施設の法的許可獲得のプロセスを支援する能力を得たと判断できる。したがって本指標の評価は A とする。

(4) OVI 3.4: NSWMSC が、社会問題解決について地方自治体を支援できる。＜評価：B＞

NSWMSC は 4 つの地方自治体（Kuliyapitiya UC, Nawalapitiya UC, Badulla MC, Matara MC）において廃棄物管理施設の建設前の地元説明会を支援し、プロジェクト実施にかかる住民の同意を得た。また、Kegalle UC 及び Seethawakapura UC での低コスト小規模し尿処理施設の建設においては、住民の強力な反対を受け差し止めを決定した。こうした貴重な経験を通して、NSWMSC はプロジェクトの計画、実施段階での社会的配慮、住民参加の重要性を学んでいる。NSWMSC は今後より多くの社会問題を通し、管理能力を向上させる必要がある。したがって本指標の評価は B とする。

(5) OVI 3.5: NSWMSC が、プロジェクト資金獲得について地方自治体を支援できる。＜評価：A＞

NSWMSC は地方自治体を支援して、プロジェクト資金の総額 200 百万ルピー（省廃棄物管理予算 32 百万ルピー、ピリサルプロジェクト資金 72 百万ルピー及び２KR 見返り資金 100 百万ルピー）を 2009 年に獲得した。したがって本指標の評価は A とする。

(6) OVI 3.6: NSWMSC が、調達（D/D、入札、契約、施行管理、プロジェクト会計）について地方自治体を支援できる。＜評価：A＞

NSWMSC は地方自治体のモデルプロジェクト実施にあたり調達の支援を行った。当初自治体はコンポストプラントの D/D 及び施工管理はローカルコンサルタントに委託し、NSWMSC はそのための調達を支援する方針であったが、ローカルコンサルタントの調達に時間を要したこと、受注したローカルコンサルタントが期待した業務を実施できなかったこと等から、これら業務は地方自治体の技術スタッフ自らが行うこととした。これを踏まえ NSWMSC は、「小規模コンポストプラントの設計マニュアル」を作成した。この設計マニュアルにより地方自治体の技術スタッフは、適切なコンポストプラントを設計、見積もり、入札書類準備を行うことが可能となった。ピリサルプロジェクトの施設は本マニュアルを活用して地方自治体の技術スタッフが設計している。したがって本指標の評価は A とする。

(7) OVI 3.7: NSWMSC が、施設の維持管理について地方自治体を支援できる。＜評価：A＞

NSWMSC スタッフは施設の維持管理にかかる現場経験がなく、また遠隔のサイトを頻繁に訪問することも困難であることから、以下のとおりスリランカの様々な関係者の協力を得ながら施設の維持管理支援を行っている。したがって本指標の評価は A とする。

・コンポスト施設の維持管理マニュアル

2006 年以降 Weligama のコンポストプラントの運転を指導している Dr. Sumith Pilapitiya の監修で、コンポスト施設の維持管理マニュアルを発行した。マニュアルは、3 つの言語で作成され講義や現場での研修に使用されている。

・コンポスト施設の維持管理研修

NSWMSC は地方自治体の管理者や作業員がプラントの運転開始前に施設の維持管理にかかる知識・技術を得られるよう Balangoda か Weligama での最低 1 週間の現場研修をアレンジしている。コンポストプラントでの研修は数を増し、経験ある管理者が増加している。

(8) OVI 3.8:NSWMSC が、モニタリングに関し地方自治体を支援する。＜評価：A＞

NSWMSC は、以下の 2 つの方法による地方自治体のモニタリングを支援している。したがって本指標の評価は A とする。

・モニタリングコミッティ

地方自治体内に住民を含むモニタリングコミッティの設置を指示し、建設した施設の運転状況をモニタリングする。このモニタリングコミッティは、NSWMSC スタッフも入り 3 ヶ月ごとに開催し、コミッティメンバーは評価シートを使い、施設の状態をモニターする。

・州廃棄物管理委員会

州に設置した廃棄物管理委員会を通して、廃棄物管理アクションプランの進展をモニタリングする。Kuliyapitiya で、2010 年 4 月より派遣中の JOCV と連携しながら開始したもので、現在 Kuliyapitiya UC、Matara MC、Wennappuwa PS にて取り入れられている。

(9) OVI 3.9: 17 個以上の地方自治体の廃棄物管理アクションプランが策定される。＜評価：A＞

NSWMSC は 12 のアクションプラン策定と 9 つのフィージビリティスタディ実施を支援し、これらを含む 14 の地方自治体をモデルプロジェクトに定めた。

表 11　アクションプラン（A/P）とフィージビリティスタディ（F/S）の支援数

地方自治体の名称	A/P	F/S
1. Kuliyapitiya UC	X	X
2. Nawalapitiya UC	X	X
3. Matara MC	X	X
4. Badulla MC	*	X
5. Wennappuwa PS	X	X
6. Tangalle UC&PS	X	X
7. Kurunegala MC	X	X
8. Ambalangoda UC	X	
9. Dambulla PS	X	
10. Ratnapura MC	X	X
11. Wattegama UC	X	X
12. IDP camp in Cheddikulam PS	X	
13. Mannar UC	X	
14. Not yet selected	**	
Total	12	9

*Budulla MC は JICA の開発調査実施時期に得た知見により自身でアクションプランを作成した。
**14 番目のモデルプロジェクトは現在選定中であり、アクションプランは 2010 年中作成予定。

上記 14 のモデルプロジェクトに加えて、NSWMSC は 3 つのアクションプラン（Chilaw PS、Mahiyanganaya PS と Thalawa PS）を支援した。よって 17 の廃棄物管理のアクションプランが 2010 年中に策定される予定である。したがって本指標の評価は A とする。

(10) OVI 3.10: 策定されたアクションプランの 50%以上が実施される。＜評価：A＞

14 のモデルプロジェクトのうち、8 つのプロジェクトが実施された。したがって本指標の評価は A とする。

表 12　地方自治体での廃棄物管理プロジェクトの現状

地方自治体名	開始年度	進捗
1. Kuliyapitiya UC	2007	★稼働中
2. Nawalapitiya UC	2007	★稼働中
3. Matara MC	2007	★稼働中
4. Badulla MC	2007	★稼働中
5. Wennappuwa PS	2008	建設中
6. Tangalle UC&PS	2008	建設中
7. Kurunegala MC	2008	建設中 ※本事業は主管がNWSMSCからピリサルプロジェクトに移管された。
8. Ambalangoda UC	2008	(A/P実施に向け準備中)
9. Dambulla PS	2008	(A/P実施に向け準備中)
10. Ratnapura MC	2009	(A/P実施に向け準備中)
11. Wattegama UC	2009	(A/P実施に向け準備中)
12. IDP camp in Cheddikulam PS	2009	★稼働中
13. Mannar UC	2010	(A/P策定中)
14. Not yet selected	2010	(対象自治体選定中)

成果4

地方政府・州議会省が廃棄物管理国家戦略に貢献するために、NSWMSCより必要な情報が提供される。

成果 3 の総合評価は **A/B** と判断する。3 個の指標のうち、A が 2 つ、A/B が 1 つであり、NSWMSC は引き続きスリランカの廃棄物管理にかかる情報及び政策決定に有益な情報発信を積極的におこなう必要がある。

(1) OVI 4.1: NSWMSC が国内の廃棄物管理の現状を理解できる。＜評価：A＞

NSWMSCは、2009年、2010年に実施した質問表調査により、廃棄物管理にかかる基本データを収集し、データベースを確立した。下表は、調査した地方自治体の数である。North Central、Western、Uva及びSouthern Provinceを除く5州において47.5%の地方自治体にかかる情報収集（現地調査含む）が行われた。またその後もNSWMSCは廃棄物関係者の人的ネットワークを通じて様々な情報を入手していることから、本指標の評価はAとする。

表 13　地方自治体数とプロジェクト数

州名	地方自治体数	2009年、2010年に実施した調査により情報収集がおこなわれた地方自治体数
1. Northern	34	11
2. Eastern	43	43
3. North Central	26	
4. North Western	32	32
5. Central	42	42
6. Western	48	
7. Sabaragamuwa	29	29
8. Uva	27	
9. Southern	49	
Total	330	157

(2)　OVI 4.2: 国家廃棄物管理の政策と戦略についての有意義な提言が、NSWMSC の年報に記載される。＜評価：A/B＞

NSWMSCの発する情報は、国家廃棄物管理政策を改訂する際にも非常に有益となるものである。廃棄物管理の国家政策は2007年に出されたことを踏まえ、NSWMSCは年報において、NSWMSCの発展と国の廃棄物管理の現状、重要な事項と提言を記載すべきである。しかし、2010年の年報はNSWMSCの進捗は記載されているものの、廃棄物処理の現状や国家廃棄物管理政策への提言等の内容は記載されていない。本プロジェクトの残余期間において、本活動の向上が期待される。したがって、本指標の評価はA/Bとする。

(3)　OVI 4.3: 国内、国外とのリンクと情報チャンネルが確立され維持される。＜評価：A＞

NSWMSCはJICAの廃棄物管理研修の元研修生の同窓会の事務局を行っている。これは国内最大の廃棄物管理関連団体であり、本プロジェクトの支援により会員名簿が作成されている。また、NSWMSCは、以下のような国内外の組織とのネットワークを保持しており、国内外の廃棄物関連の専門家ネットワークのハブ機能を持ちつつある。したがって、本指標の評価はAとする。

- 国連機関: UNOPS, UNICEF, UNDP, UNSCAP
- 海外ドナー: JICA, USAID, KOICA
- NGO: Asia Foundation, Sevanata, LIRNEasia, Energy Forum
- 大学: University of Peradeniya, University of Moratuwa, University of Colombo

第3章　評価5項目による分析

3-1　妥当性

本プロジェクトの妥当性は高い。

・スリランカ政府は、国家環境条例、廃棄物管理国家戦略、医療廃棄物管理国家政策等により廃棄物管理の推進に重点を置く他、2008年より地方自治体の廃棄物管理事業に国家予算を配賦する「ピリサル・プロジェクト」を開始するなど、政策上の優先順位が高いことが認められる。小規模な地方自治体や廃棄物管理技術者が存在しない州政府議会が独自に廃棄物管理計画を策定することは技術的に困難で非効率であることから、NSWMSCのサービスは国・州・地方自治体の各レベルで広く求められている。特に地方自治体関係者のNSWMSC支援に関する満足度は非常に高く、地方自治体関係者のほぼ全員が、NSWMSC支援と州政府支援なしにモデルプロジェクトはできなかったであろうと述べており、NSWMSC支援の意義と必要性を示している。

・我が国はODA戦略「対スリランカ国別援助計画」において、都市部でのインフラ整備、生活環境・社会環境の保全（上下水道・大気汚染・一般廃棄物処理等）が不可欠であり、日本は「美しいスリランカ」を実現・維持する援助プログラム・プロジェクトを形成する必要があるとしている。さらにJICAは援助重点分野のひとつとして「都市環境改善」プログラムをあげており、本件は右プログラムのコアプロジェクトのひとつに位置付けられている。

3-2　有効性

本プロジェクトの有効性は中程度である。

プロジェクトは、地方自治体によるコンポストプラント、埋立地、し尿処理施設など多数の目に見える成果を生み出した。その過程において、NSWMSCはその管理能力・技術力が格段に向上させ、自治体支援体制を構築し、結果的に地方自治体関係者のほぼ全員がNSWMSC支援と州政府支援なしにそれらモデルプロジェクトはできなかったであろうと述べており、組織として地方自治体の廃棄物管理を支援するための体制は整いつつある。ただし、コンポストプラント、埋立地、し尿処理施設などはあくまで効率的な廃棄物管理を実施するための道具にすぎず、各地方自治体は効率的な廃棄物管理を行うための仕組みづくりを行う必要がある。NSWMSCには廃棄物管理システムの構築に係るより一層のキャパシティ向上と地方自治体への支援実施が求められており、プロジェクト終了までの5ヶ月に行うべき重要な課題である。NSWMSCがスタッフ数（特に技術職）を増員し、この点に留意した日本人専門家による技術移転を重点的に行えばプロジェクト目標の達成が可能である。

3-3　効率性

本プロジェクトの効率性は中程度である。

人員配置不足を除き、スリランカ側・日本側の投入は当初計画通り実施され、十分に成果につながっている。人員配置不足については依然課題が残るものの、中間評価以降以下の点で大きな改善がなされている。

・2009年2月に実施した中間レビューでは、NSWMSCのスタッフ不足により全員が業務に追われ、日本人専門家も彼らの業務の「請負要員」となりがちであったことから、技術移転の機会を失っており、効率性に課題ありと判断せざるを得ない状況にあった。しかし、中間レビュー以降はローカルリソース（州エンジニア、大学教授、その他知見を有するリソースパーソン等）との協力関係を強化し、州政府が地方自治体を直接支援し、NSWMSCはガイドラインの配布やリソースパーソンを招いての技術研修等を行うといったような体制ができるようになった。そのため効率性は格段に向上したと評価できる。

3-4　インパクト

本プロジェクトのインパクトは高い。

・本プロジェクトにて選定した地方自治体において適正技術を用いたモデルプロジェクトを実施することにより、その他の地方自治体の廃棄物管理を励行する効果をもたらしている。例えばスリランカのコンポストプラントの数は、2006年時点では17ヶ所であったが、2010年には56ヵ所に拡大し、地方自治体330の17%を占めるようになっており、これだけの普及に至った背景には、本プロジェクトのインパクトがあったものと評価できる。

・他方、コンポストプラント等廃棄物管理施設を建設すれば廃棄物問題は解決されるといった施設第一主義の傾向がみられる。そういった施設はあくまで廃棄物管理のための道具であり、施設建設後も廃棄物管理のために様々な活動が必要であるとの理解を普及させる必要がある。なお、モデル地方自治体のひとつであるKuliyapitiya UCでは、廃棄物施設建設後、さらに廃棄物管理システムが効果的に実施されるよう、コミュニティの協力を得ながら分別収集を採用し始めており、こういったグッドプラクティスの広がりが期待される。

・また、プロジェクトにより、いくつかの州政府内に廃棄物管理委員会を組織されたことから、組織フレームについても大きなインパクトをもたらしている。

3-5　持続性

本プロジェクトの持続性は概ね高い。

・本プロジェクトでは技術支援が主であり、施設建設の資金は、スリランカ側で省予算やピリサルプロジェクトによってほぼ確保されている。国際ドナーなど外部資金に依存していないことから、財政上の自立発展性は確保されていると評価できる。しかし数年たつと、ピリサルプロジェクトは終了し、地方自治体は廃棄物管理施設のためその他の資金を探す必要が生じる。そのため、地方自治体向きの小規模融資制度を検討する必要がある。

・プロジェクトの最終ステージでは、地方自治体における技術や組織面のさらなるキャパシティ向上に力を注ぐ必要がある。プロジェクト期間中にモデルプロジェクトにてグッドプラクティスを示し、その後NSWMSCが優れたスタッフとともに活動を継続すれば地方自治体の技術や組織面の自立発展性は確保される。特に、NSWMSCは廃棄物管理施設の維持管理及び廃棄物管理システムの構築にかかる地方自治体支援のキャパシティを向上させる必要がある。

・モデルプロジェクトの実施を通して、NSWMSCは州政府等の重要な関係者と協力しながら地方自治体の廃棄物管理を支援する体制を構築した。今後はモデルプロジェクト対象州以外の地域においても同様の体制づくりが展開できれば持続性は強化される。

3-6　効果発現に貢献した要因

(1) 計画内容に関すること

・プログラムアプローチの採用：地方政府・州議会省が2006年にNSWMSCを設置して以降、本プロジェクトは地方自治体のアクションプラン策定や、コンポストプラント等のモデル事業の実施を通して能力向上を行ってきた。現在は州政府を巻き込み、地方自治体の廃棄物管理を支援するメカニズムを構築中であり、こうしたアプローチは次第に浸透し発展してきている。これまでの成果は一つのプロジェクトで得られたものではなく、1990年代後半から開発調査や技術協力プロジェクト、さらには青年海外協力隊や研修事業等様々なアプローチによりなし得たものである。そのような戦略的な協力アプローチがキャパシティ・ディベロップメントには重要である。

・組織レベルのキャパシティ向上に適切な実施体制の構築：NSWMSCは地方政府・州議会省のもとに設置されたため、NSWMSCは地方自治体に対し廃棄物管理にかかる働きかけを直接行うことができる。さらに州政府レベルのより強力なコミットメントと、地方自治体間のネットワークの構築により、より効果的なメカニズムの構築が進んでいる。今後、州レベルでの廃棄物管理推進を進めるためには、省常設の廃棄物管理委員会を設置することが重要である。

(2)実施プロセスに関すること

・NSWMSCの個人、組織キャパシティ・アセスメント方法：JICA専門家、NSWMSCスタッフはユニークなキャパシティ・アセスメント方法を採用している。それは毎年プロジェクトに関する質問表を使って行うものであり、個人と組織のキャパシティを数値として可視化でき、また、それらによりプロジェクトの進捗及び課題をも把握することができる。

3-7　結論

評価5 項目に関し、妥当性は高い。有効性・効率性については中程度であり一部課題が残ることからプロジェクトのより一層の努力が必要であるものの、プロジェクト期間中にプロジェクト目標を概ね達成可能であると結論づけることができる。また、その他様々なインパクトの発現、及び持続性が確認された。

第 4 章　提言・教訓

4-1　提言

(1) NSWMSC の人員配置

プロジェクト終了後含め、今後NSWMSCが地方自治体への廃棄物管理にかかる効果的な技術支援を継続的に行うためには、最低2名の技術者が必要である。現在空席であるコアスタッフ（次長1名、課長1名）を早急に配置することが期待される。

(2) 州政府レベルとの連携及び地方自治体間の連携

州毎に状況は異なるものの、地方自治体支援のためには州政府との連携が重要である。５州ではすでに廃棄物管理に関しNSWMSCとの協力関係ができているが、他の州においては協力関係が必ずしも構築されてはいない。また、廃棄物管理を先行、グッドプラクティスを蓄積している地方自治体が彼らの経験及びノウハウをその他の地方自治体と共有する等、地方自治体間のネットワーク強化も重要である。

(3) 研修による人的資源の開発

地方自治体レベルでのキャパシティは依然、質・量ともに不足している。自立発展する廃棄物管理を実現するため、州政府や地方自治体の技術スタッフや環境、保健、コミュニティ開発に関わるスタッフへの研修が必要である。NSWMSC は、州政府や地方自治体のスタッフのキャパシティ強化のため、今後も様々な研修やワークショップを開催する必要がある。JICA の国別研修スキームが活用できれば有益と考えられる。

(4) アクションプラン策定マニュアルの作成

NSWMSC スタッフは、本プロジェクトを通し、地方自治体の廃棄物管理のアクションプラン策定を支援するためのキャパシティを獲得した。

JICA 専門家はこれまではアクションプラン策定を通した技術移転に重きを置いてきたが、今後はユーザーのためのアクションプラン策定に移行する時期だと述べており、合同評価団もこの考えを支持する。アクションプランで最も重要なことはユーザーに十分活用・実施されることである。プロジェクトにおけるアクションプラン策定方法を見直し、地方自治体自身がより質の高いアクションプランを短時間で策定できるようになれば、州政府や地方自治体の技術者にとって非常に有益であろう。

(5) 廃棄物管理システムの構築・管理

プロジェクトで支援したモデルプロジェクトでは、コンポストプラントなどの廃棄物管理施設が建設され、地方自治体の廃棄物問題は徐々に緩和されつつある。しかし持続的な廃棄物管理事業の実施、施設の運転・維持管理、合理的な廃棄物管理フローには依然懸念が残る。個々の施設はあくまで廃棄物管理の道具に過ぎず、地方自治体は、其々の状況に応じた効果的な廃棄物管理システム（施設の運転・維持管理や分別、収集運搬、リサイクル等を含む一連の流れ）を構築する必要がある。NSWMSC 及び地方政府・州議会省は、財務面での持続性確保、既存施設の運転や維持管理にかかるアドバイスや指導の上、持続性的な廃棄物管理システム構築・管理のための支援を行う必要がある。プロジェクト残余期間で、JICA 専門家は、施設が建設され、稼働している地方自治体である Kuliyapitiya UC 及び Matara MC において、廃棄物管理システム管理を支援する計画であり、これを評価する。

(6) 住民意識向上とマスメディアへのアプローチ

地方自治体が(5)で述べた廃棄物管理システムを実施する上で、特に実際の分別、収集等でのキーとなる関係者である住民の巻き込みがこれまで十分になされているとは必ずしも言えない。プロジェクトはアクションプランの説明等プロジェクトの先進的な活動を紹介するによって廃棄物管理にかかる住民の理解促進（意識向上）や行動変容の重要性をアピールする必要がある。

(7) ステアリング・コミッティーの継続

プロジェクトのステアリングコミッティ（SC）は、本プロジェクトの実施監理のみならず、関係者間の廃棄物管理にかかる情報交換「ス」国の廃棄物管理にかかる議論、多数の廃棄物管理プロジェク間の調整などを行う場として重要な役割を果たしてきた。このため、本プロジェクト終了後もSCを継続することが重要である。

4-2 教訓

(1) ステアリング・コミッティーの役割

ステアリングコミッティ（SC）が、プロジェクトの実施監理のみならず、関係者間の廃棄物管理にかかる情報交換も行うことで、廃棄物管理にかかる議論、多数の廃棄物管理プロジェク間の調整、戦略的議論に貢献した。

(2) 個人、組織キャパシティ・アセスメント方法

本プロジェクトでは質問票によるキャパシティ・アセスメントを実施した。管理キャパシティ・技術キャパシティ・業務環境の3つの項目について、NSWMSC自身及び日本人専門家がそれぞれ採点を行い、その結果を毎年記録した。この方法により、個人と組織のキャパシティを数値として可視化でき、また、それらによりプロジェクトの進捗及び課題をも把握することができた。

(3) 実施体制の構築

初期段階ではNSWMSCが地方自治体に直接働きかけ廃棄物管理事業の支援を行ったが、プロジェクトの後半では州政府やローカルリソースの活用、及び地方自治体間のネットワークの構築により、より効果的なメカニズムの構築が強化された。

付属資料１　協議議事録(M/M)(英文合同評価報告書含む)

付属資料２　評価グリッド

付属資料３　質問表

MINUTES OF MEETING
FOR
JOINT TERMINAL EVALUATION
ON
"CAPACITY UPGRADING PROJECT FOR
NATIONAL SOLID WASTE MANAGEMENT SUPPORT CENTER
(CUP-NSWMSC)"

Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Japanese Terminal Evaluation Team (hereinafter referred to as "the JICA Team"), headed by Dr. Mitsuo Yoshida, to the Democratic Socialist Republic of Sri Lanka (hereinafter referred to as "Sri Lanka") from 28 July to 17 August 2010 for the purpose of Joint Terminal Evaluation on "Capacity Upgrading Project for National Solid Waste Management Support Center" (hereinafter referred to as "the Project"), with the Sri Lank an Evaluation Team headed by Mr. D.P. Hettiarachchi, Additional Secretary of the MPCLG.

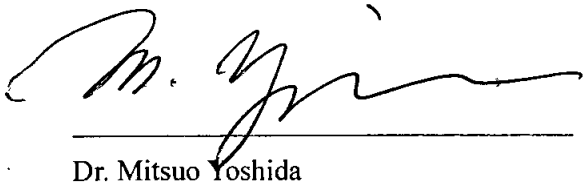
The Sri Lanka-Japan Joint Evaluation Team (hereinafter referred to as "the Team") was jointly organized for the purpose of conducting the Joint Terminal Evaluation of the Project and drafted the Joint Terminal Evaluation Report (hereinafter referred to as "the Report"), which contains the result of the Joint Terminal Evaluation based on project design matrix (PDM version 3) and five evaluation criteria and recommendations to the Project.

Based on the discussion in the Project Steering Committee held in 12 August 2010 the contents of the Report were accepted.

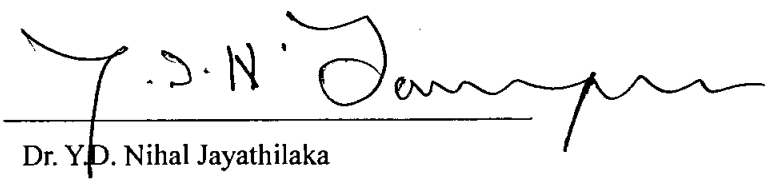
As a result of the series of discussions, the Team and the authorities concerned of the Government of Sri Lanka agreed with the Report.

Attachment 1 : Joint Terminal Evaluation Report
Attachment 2 : List of the participants of the meeting

Colombo, 12 August 2010



Dr. Mitsuo Yoshida
Leader
Japanese Terminal Evaluation Team
Japan International Cooperation Agency
Japan



Dr. Y.D. Nihal Jayathilaka
Secretary
Ministry of Local Government and
Provincial Councils
Sri Lanka

Appendix 2

National Steering Committee - CUP- NSWMSC 12.08.2010

No.	Name	Ministry/Institute
1	Mr.Eric Elayapaarachchi	Addl.Secretary (Dev.), Ministry of LG & PC
2	Mr. D.P. Hettiarachchi	Addl., Ministry of LG & PC
3	Mrs.L. Mangalika	Director,NSWMSC
4	Asi.Director-Ms.Ajitha Batugoda	Assit Director, Japan Division,
5	Asi.Director- Rohan	Asst Director ,Department of National Planning
6	Mr. R.P Samarakkodi,	Director,Waste Management Authority
7	Mr.M.J.J.Fernando	Director,Pilisaru Project
8	Mr. H.Sumanapala	Commissioner of Local Government (WP)
9	Mr. Viraj Perera,	Commissioner of Local Government (NCP)
10	Mr.W.M.M.B.Weerasekara,	Commissioner of Local Government (NWP)
11	Mr. Udayakumar,	Commissioner of Local Government (EP)
12	Dr.Yoshida	Leader-Terminal Evaluation Team
13	Dr.Noda	Evaluation Team
14	Mr. Akira Doi	Chief Advisor,JICA Expert ,JICA Sri Lanka Office.
15	Mr. Noriaki Sadamoto,	Second Secretary,Embassy of Japan.
16	Dr.D.P.Serasinghe.	Project Specialist,JICA Sri Lanka Office.
17	Mr. N. SATO	JICA Expert ,JICA Sri Lanka Office
18	Mr. H. Hideo SATO	JICA Expert ,JICA Sri Lanka Office
19	Mrs. M. Geethani	Asst. director (Act.)- NSWMSC
20	Mrs. Chandrika Kasturiarachchi	Development Officer -NSWMSC
21	Mrs. Rumali Thilakarathne	Development Assitant -NSWMSC
22	Miss. Mala Maduwanthi	Mag. Assistant -NSWMSC
23	Miss Wasantha Kumari	Mag. Assistant -NSWMSC
24	Mrs. L.A. Chandrakanthi	Mag. Assistant -NSWMSC

Appendix 1

Joint Terminal Evaluation Report

for

The Capacity Upgrading Project for the National Solid Waste Management Support Centre (CUP-NSWMSC)

in the Democratic Socialist Republic of Sri Lanka

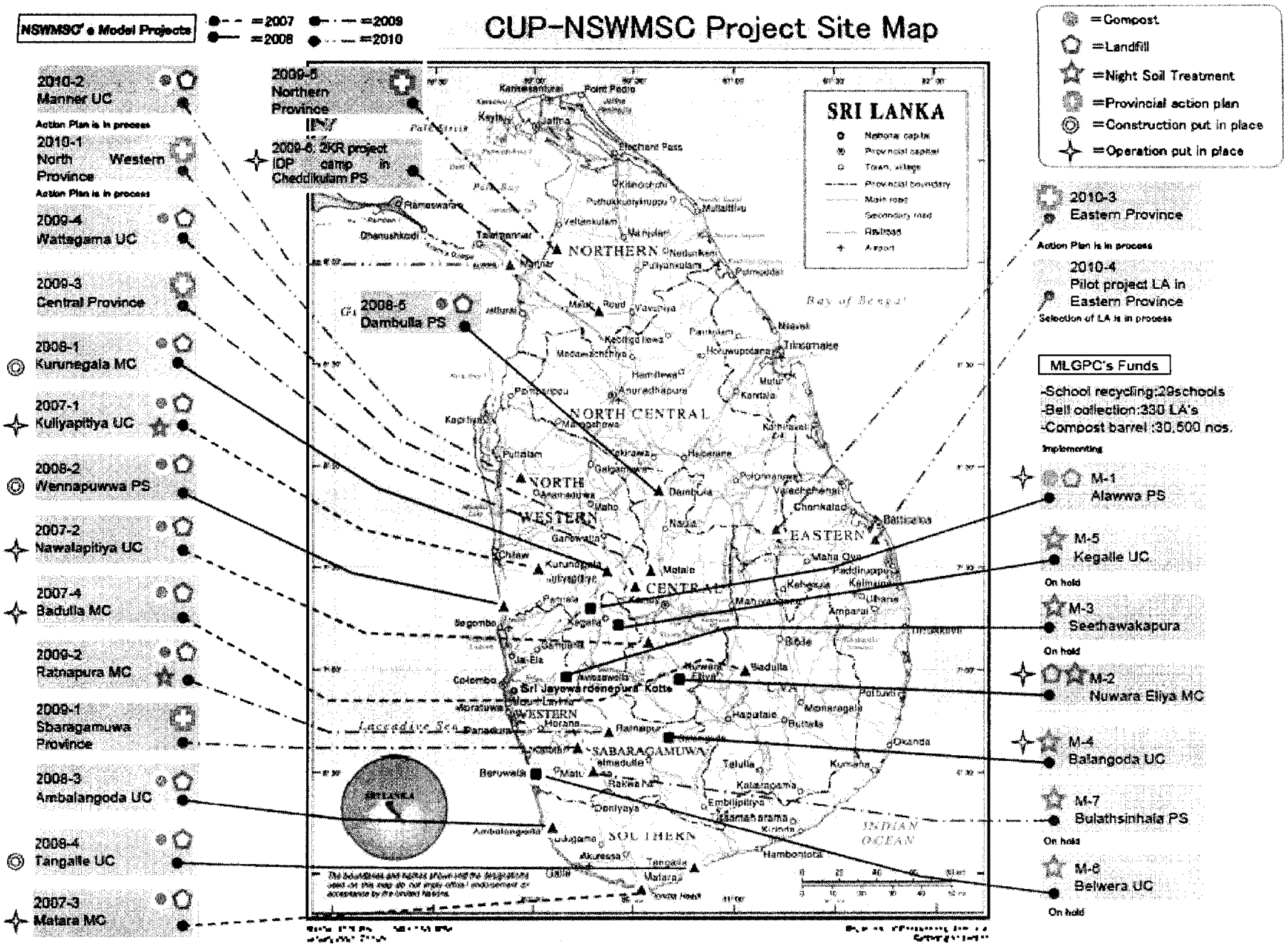
*****

12 August 2010

Sri Lanka - Japan

Joint Evaluation Team

CUP-NSWMSC Project Site Map

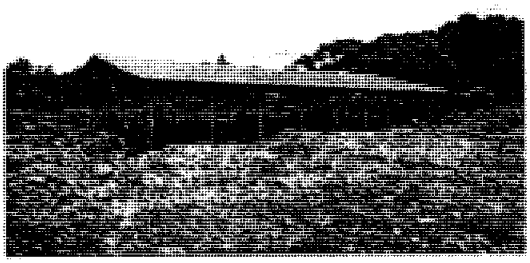


PROJECT PHOTOS

1st Kick-off Meeting on 29 July 2010

NSWMSC with Director Ms. Mangelika

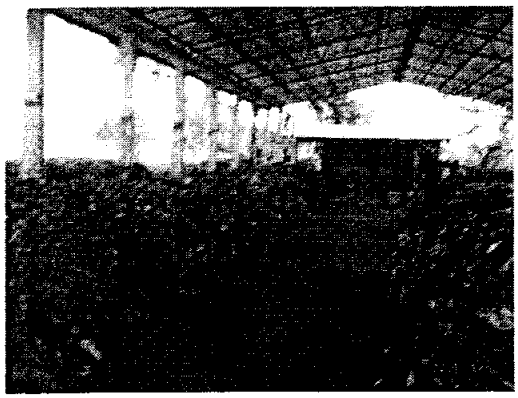
Composting plant at Kuliyapitiya UC



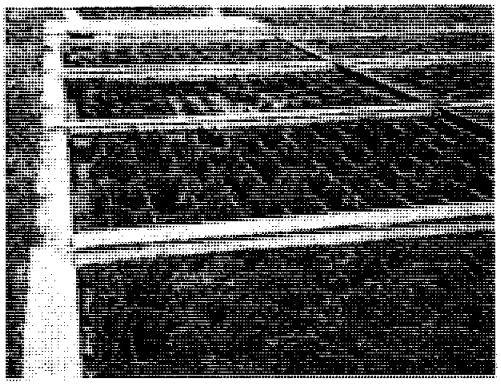
Rehabilitation of old disposal site at Kurunegala MC

Composting Plant at Kuliyapitiya, Sorting Work

Recovered Items for Recycle at Kuliyapitiya



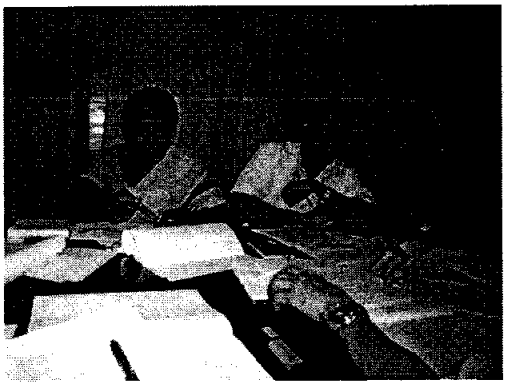
Composting Plant with Windrow at Kuriyapitiya



Night Soil Treatment Facility at Kuliyapitiya

Pre-meeting for 2nd Kick-off Meeting on 5 August

2nd Kick-off Meeting with Secretary Dr. Jayathilaka



Joint Evaluation Meeting on 10 August

Joint Evaluation Meeting on 10 August

CONTENTS

LIST OF ANNEX

ABBREVIATIONS AND ACRONYMS

ACLG	Assistant Commissioner of Local Government
ADB	Asian Development Bank
ACLG	Assistant Commissioner of Local Government
CBO	Community-Based Organization
CD	Capacity Development
CDO	Community Development Officer
CDT	Capacity Development Target
CEA	Central Environmental Authority
CLG	Commissioner of Local Government
C/P	Sri Lankan Counterpart to Japanese Expert
CPHI	Chief Public Health Inspector
DEO	Divisional Environmental Officer
EIA	Environmental Impact Assessment
EPL	Environmental Protection License
EPR	Extensive Producers Responsibilities
F/S	Feasibility Study
IEE	Initial Environmental Examination
JGGA	Japanese Grassroots Grant Assistance (GGA)
JICA	Japan International Cooperation Agency
LA	Local Authority
LLDF	Local Loans and Development Fund
MC	Municipal Council
MENR	Ministry of Environment and Natural Resources
MHN	Ministry of Health and Nutrition
MLGPC	Ministry of Local Government and Provincial Councils
M/M	Minutes of Meeting
MOENR	Ministry of Environment and Natural Resources
MOH	Medical Officer of Health
MSW	Municipal Solid Waste
MSWM	Municipal Solid Waste Management
NGO	Non-Governmental Organization
NIPHS	National Institute of Public Health and Science
NSSWM	National Strategy for Solid Waste Management
NSWMSC	National Solid Waste Management Support Centre
O&M	Operation and Maintenance
OVI	Objectively Verifiable Indicator
PC	Provincial Council
PDM	Project Design Matrix
PHI	Public Health Inspector
PO	Plan of Operation
P/R	Progress Report
PS	Pradeshiya Sabha
R/D	Record of Discussion
S/C	Steering Committee
SLILG	Sri Lankan Institute of Local Governance
SWM	Solid Waste Management
UC	Urban Council
UDA	Urban Development Authority
3 Rs	Reduce, Reuse and Recycle

1 Sri Lanka Rupee (Rs.) : 0.75970 Japanese Yen (as of 12 August 2010)

1 OUTLINE OF THE EVALUATION STUDY

1.1 Background of the Evaluation Study

(1) In Sri Lanka, the seriousness of the environmental problems caused by waste has been on the rise due to a surge in the amount of waste generated, attributed mainly to economic growth and a lack of effective countermeasures being taken. Although the National Strategy for Solid Waste Management was formulated in 2000, no significant improvement in solid waste problems have been observed due to a lack of capacity of both LAs, who are responsible for the execution of SWM, and Provincial Councils, who are responsible for their supervision. In addition the cost of SWM amounts to 20 % to 50% of the LA's annual budget, resulting in decreasing public services to the residents. It is an acute and serious issue to improve the SWM and to establish the sustainable management system to maintain and improve the services provided by the LA government.

(2) In order to tackle these problems, JICA executed "The Study on Improvement of Solid Waste Management in Secondary Cities in Sri Lanka (JICA SWM Study)" from March 2002 to December 2003. In this Study, action plans for seven selected local towns were formulated and the implementation of various pilot projects resulted in visible improvements. In addition, the Study found that LAs experienced difficulty in executing proper SWM if no technical assistance was provided, and Provincial Councils without in-house SWM engineering staff found it hard to supervise LAs in improving SWM. Therefore, the Study recommended establishing a system which would provide assistance to LAs by the central government. In concrete terms, it recommended the establishment of a NSWMSC and strengthening the system for financial assistance to enable LAs to carry out SWM projects. In addition to the JICA SWM Study, since 2003, JICA has conducted the country-focused training course titled "Local Administration for Environmental Protection in Sri Lanka - Learn Nagoya City" to train the LA officials. The country-focused training course was reorganized in 2009 as "Solid Waste Management by Local Governments in Sri Lanka", which is currently conducting.

(3) However, the MLGPC had come to a deadlock in implementing the Study's recommendations due to the insufficient stock of SWM knowledge and human resources. Therefore, in August 2004, the Sri Lankan government requested the Japanese government to provide technical assistance in order to materialize the aforementioned recommendations and to initiate long-term improvement measures. In addition, the NSWMSC was established internally in July 2006, and officially approved by the cabinet in January 2007, with plans to strengthen the organization in the years to come.

(4) In response to the request, JICA dispatched a preliminary study team in November 2006 and confirmed the validity of the project implementation. The M/M, which stipulated the project outline, the executing system and distribution of tasks, was compiled and the Record of Discussion (R/D) was signed in January 2007.

(5) In order to allow NSWMSC to fully exercise its capabilities, it was necessary to simultaneously develop the problem solving capacities of relevant organizations including the assistance given to LAs, in order to establish inter-municipal cooperation of SWM concerns, as well as the improvement of institutional and social systems related to SWM. In addition, it was expected that assistance would be given to those in the private sector working on SWM in Greater Colombo, the economic centre of Sri Lanka. However, at this time, the project is concentrating on strengthening the NSWMSC to properly assist the LAs on a priority basis to formulate and implement a sustainable SWM action plan.

(6) One year and 10 months after the commencement of the Project, a joint mid-term evaluation was conducted to evaluate whether the Project has been achieving the expected outputs towards the

achievement of the Project purpose. The mid-term evaluation had left 9 recommendations to be followed by the Government of Sri Lanka (GOSL).

(7) This time, a joint terminal evaluation between Sri Lankan and Japanese teams is conducted to examine the developments and achievement of the required and recommended items based on the five evaluation criteria. This report shows a series of discussions of both sides and conclusions agreed upon by them along with site visits.

1.2 Objectives of the Evaluation Study.

The specific objectives of the terminal evaluation are outlined as follows:

(1) to review and confirm the implementation process and achievement of the Project

(2) to evaluate the Project in terms of five evaluation criteria, namely Relevance, Effectiveness, Efficiency, Impact and Sustainability, based on the Project Design Matrix (PDM)

(3) to review and evaluate changes in external conditions

(4) to make recommendations for further improvement to be done in the remaining period of the Project

(5) to draw lessons that can be applied to other similar ongoing and future projects

1.3 Methodology of Evaluation

The Project was evaluated based on the Project Design Matrix (PDM), which is a summary table of this Project. The mid-term evaluation was conducted based on the PDM version 1. Since then the modified PDM version 2 was approved by the Steering Committee (SC) in March 2009, and after some modification the PDM version 3 was approved by the SC in September 2009. This methodology was to monitor the development of the Project more clearly and objectively. Therefore, the terminal evaluation was carried out based on the PDM version 3 (PDM 3).

1.3.1 Evaluation Procedure

In order to evaluate the development of the Project, the Joint Evaluation Team (the Team) applied various methods such as a questionnaire, interview survey and observation of project sites as well as a reference survey. The Team analyzed and evaluated the Project in terms of the achievement level of the Project, the implementation process, and five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact and Sustainability) through discussion meetings. Finally, the Team made recommendations based on the results to complete the Project in the remaining period.

1.3.2 Points for the evaluation

Achievement level and Implementation of the Project

The achievement levels in terms of Inputs, Activities, Outputs, and Project Purposes were assessed in comparison with the PDM 3 and the respective PO (ANNEXES 1 and 2) as well as the actual results of the Project. The implementation process of the Project was also confirmed using various viewpoints such as decision making, monitoring, communication and human resource development.

Rating based on the Objectively Verifiable Indicator (OVI)

The result of evaluation based on OVI is expressed with evaluation rating, which is classified into the following five categories defined by the Team (see the Evaluation Grid in ANNEX 3):

A: It will be satisfactorily achieved by the end of the Project.

B: It will be fairly but not fully achieved by the end of the Project.

C: It will be difficult to be achieved by the end of the Project.

A/B is the rating between A and B.

B/C is the rating between B and C.

Five Evaluation Criteria

Table 1: Five evaluation criteria

Relevance: An overall assessment of whether the project purpose and overall goal are in line with recipient and donor policy, and with recipient needs
Effectiveness: Status of the achievement at the Project purpose level
Efficiency: A measure of the production or output of the Project in relation to the total resource input
Impact: The positive and negative changes, produced directly and indirectly as the result of the Project
Sustainability: An overall assessment of the extent to which the positive changes achieved by the Project can be expected to last after the completion of the Project

1.4 Members of the Joint Evaluation Study Team

Sri Lankan Side

Mr. D.P. Hettiarachchi, Additional Secretary of the MPCLG (Leader of Sri Lankan side)
Mr. Mahesh Jaltota, Assistant Director of CEA
Ms. L. Mangalika, Director of NSWMSC
Ms. M. Geethani, Assistant Director of NSWMSC

Japanese Side

Dr. Mitsuo Yoshida (Leader of Japanese side)
Dr. Priyantha Serasinghe (Cooperation Planning), Representative, JICA Sri Lanka Office
Dr. Norihiro Noda (Evaluation Analysis), Consultant
Mr. Akira Doi (Observer), Chief Advisor, JICA Expert Team/ Kokusai Kogyo Co., Ltd.

1.5 Schedule of the Evaluation Study Team

The schedule is as follows:

Date		Schedule
28.Jul	Wed	Arrival of Dr. Noda (Evaluation Analysis)
29.Jul	Thu	AM Meeting with JICA SL & TV conference with the JICA HQ PM Kickoff Meeting with NSWMSC and others
30.Jul	Fri	Meeting with NSWMSC and others on evaluation method, explanation of the schedule, etc.
31.Jul	Sat	Reporting
1.Aug	Sun	Reporting
2.Aug	Mon	AM & PM Interviews to C/P, Collecting information
3.Aug	Tue	AM Interviews to C/P, Collecting information PM Interview to CEA
4.Aug	Wed	AM & PM Interviews to C/P Arrival of Dr. Yoshida
5.Aug	Thu	AM 2nd Kick-off Meeting between Japanese and Sri Lankan Teams, and others PM Colleting information, Internal meeting on the progress of evaluation
6.Aug	Fri	AM Identification of Issues for project termination with JICA SL PM Discussion with C/P, Collecting information, Modification of Draft Evaluation Report
7.Aug	Sat	Site visit to Kuliyapitya UC and North Western PC
8.Aug	Sun	Site visit to Ratnapura MC and Sab. PC
9.Aug	Mon	Collecting information, Modifying the evaluation report, Internal meeting
10.Aug	Tue	AM Joint Evaluation Meeting to discuss a draft joint terminal evaluation report PM Modifying the draft report
11.Aug	Wed	AM Preparing the final version of the Joint Evaluation Report PM Internal meeting, Preparing presentation materials for the Steering Committee
12.Aug	Thu	AM Finalization of the Joint Evaluation Report based on the comments PM Steering Committee to discuss the contents of the Report
13.Aug	Fri	Reporting to JICA SL with the Terminal Evaluation Report and signing M/M
14.Aug	Sat	Departure of Dr. Yoshida
15.Aug	Sun	Collection of additional documents related with the Terminal Evaluation Report
16.Aug	Mon	Reporting to JICA SL
17.Aug	Tue	Departure of Dr. Noda

2 THE PROJECT DESIGN

The Project, which aims to develop the capacity of relevant stakeholders on SWM, began in March 2007 with the project period being four years. The expected Overall Goal, Project Purpose and Outputs are as follows. (PDM 3 is attached in Annex 1)
The Objectively Verifiable Indicators (OVIs) are also defined for monitoring the progress of each Output, Project Purpose, and Overall Goal.

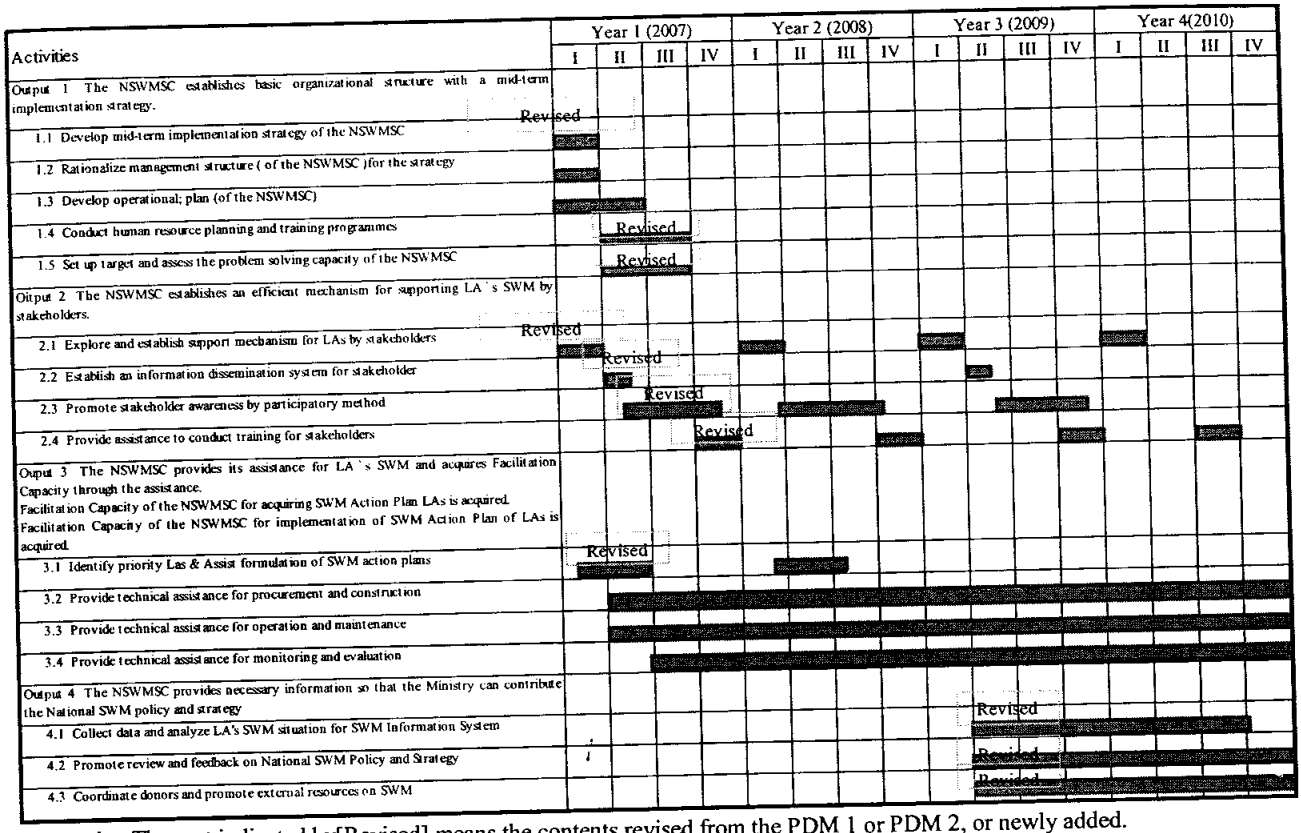
Overall Goal
Local Authorities (LAs) improve solid waste management (SWM) One (1) OVI was defined.

Project Purpose
The NSWMSC acquires capacity for supporting SWM activities of the local authorities with close collaboration of relevant stakeholders so that the local authorities can implement the SWM activities in accordance with the National Strategy for Solid Waste Management. Seven (7) OVIs were defined.

Output 1
NSWMSC establishes the basic organizational structure with the mid-term implementation strategy. Five (5) OVIs were defined.
Output 2
The NSWMSC establishes an efficient mechanism for supporting LA's SWM by stake holders. Six (6) OVIs were defined.
Output 3
Facilitation Capacity of the NSWMSC for implementation of SWM Action Plans of LAs is acquired Ten (10) OVIs were defined.
Output 4
NSWMSC provides necessary information so that the Ministry can contribute to the National SWM policy and strategy. Three (3) OVIs were defined.

Source: CUP-NSWMSC PDM version 3 (see ANNEX 1)

Table 2: Plan of Operation (outline)



Remarks: The part indicated by[Revised] means the contents revised from the PDM 1 or PDM 2, or newly added.

Source: CUP-NSWMSC PO (see ANNEX 2)

3 ACHIEVEMENTS AND IMPLEMENTATION PROCESS

3.1 Inputs

3.1.1 Inputs from the Sri Lankan Side

According to the R/D signed by both sides in January 2007, the Sri Lanka side is under obligation to provide a total of 24 personnel consisting of management level counterparts and administrative staff as well as sufficient office and utility facilities. At present, only 7 of the 24 personnel positions have been filled and they have been involved in all types of SWM works for the Project. In particular, employment of engineers has been insufficient except the Director of NSWMSC. It is to be noted that the filling rate at management and working levels are as low as serious to conduct the Project properly.

Both sides have made every effort to find a solution to this situation, and three engineers were employed in 2009 but not continued. Thus the problem still exists after the mid-term evaluation. A further effort would be required. Consequently, only one Director and one Assistant Director together with the Japanese Expert Team are covering a large proportion of the NSWMSC's activities, now. This causes enormous workloads to the NSWMSC and wasting the opportunity of technology transfer from the JICA Expert Team for Sri Lankan side

The NSWMSC office was prepared prior to May 2007, when the Japanese Experts Team had started the required activities. The total floor space is 92m^2 which provides enough space for around 15 people. Necessary utilities, such as electricity and water, have been provided too for usual work.

	Agreed in R/D	*Actual Placement*
Director (1)	*Director has been appointed.*	
Deputy Director (3)		*(None of Technical Support, Information Management, Management Support has been appointed)*
Assistant Director (5)		*Only one Assistant Director has been appointed. (Technical Support x 2, Information Management x 1, Management Support x 2 are required)*
Staff (12)		*Only 5 staffs have been appointed.*
Driver (2)	Office Assistant (1)	

Modified from the Mid-term Joint Evaluation Report (2009)

Figure 1: Actual placement of staff (C/P) in the NSWMSC comparing to the initial plan

Actual inputs of human resources by Sri Lankan sides are summarized since the mid-term evaluation until recently as below:

Position	Name	2009									2010		
		April	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Director	L. Mangalika												
Acting Director	Dilan Fernandopulle	.....	.....										
Deputy Director	L. Mangalika	———	———	Promoted									
Deputy Director	R. M. M. B. Ratnayake					——	Transferred						
Assistant Director	M. Geethani												
Assistant Director	R. P. Darmasena					——	Retired						
E.K.D.R.Edirisinghe	Assistant Director							———	———	———	Retired		
Development Officer	K.C.P. Kasturiarachchi												
Development Assistant	Chanaka Wijesekara							Resigned					
Development Assistant	Rumali Tillekeratne												
Management Assistant	J.R.M.N. Jayalath												
Management Assistant	M.P.D.C.W. Kumari												
Management Assistant	L.A. Chandrakanthi			———	.....	.....	.....	.....	.....	.....	.....	———	
Office boy	Sanjeewa												
Driver	Dhammika Nanda Kumara												
Driver	H.A.R. Pushpa Kumara												

Note: a dot line means that the person took a long leave.

Figure 2 Actual Assignments of NSWMSC Staffs

- Ms. L. Magalika, the former deputy director, was promoted to Director in June 2009.
- Mr. Ratnayake and Mr. Darmasena were employed as Deputy Director and Assistant Director respectively in July 2009. However, Mr. Ratnayake was transferred to the other department and Mr. Damasena selected the early retirement.
- Mr. Edirisinghe was employed between the middle of October until the middle of January. In the middle of January, he selected the early retirement.
- Mr. Chanaka Wijesekara who had been worked since the beginning of CUP-NSWMSC got retired.
- Mrs. LA Chandrakanthi took a maternity leave from May 2009. She came back to the work in the middle of January 2010.

The number of staffs was too few to carry out the tasks according to the schedule. It caused the delay of the work and gave too much workload to the existing staffs. It consequently forced both to sacrifice the time for training on SWM, resulting in opportunity loss.

The below table shows the annual budgets which have been allocated from MLGPC to cover the cost for conducting the SWM works for the local Governments (LAs). Ministry's budget and expenditure for SWM are constantly increased since 2006, and in 2010 a budget of 30 million Rs has been allocated.

Table 3: Ministry's Budget & Expenditure for SWM

Fiscal year	2006	2007	2008	2009
Budget (million Rs)	10	15	35	30
Actual expenditure (million Rs)	8.5	11.4	13.5	32
Number of Benefitted LAs	64	51	48	110

Source: MLGPC

3.1.2 Inputs from the Japanese Side

Listed below are the details regarding main inputs provided by JICA (see ANNEX 4).

(1) Dispatch of Japanese experts
The following experts were dispatched and assigned as Table 1.

- Chief Advisor/Capacity Development (Mr. A. Doi)
- Solid Waste Management Planning/3Rs (Mr. N. Sato)
- Final Disposal Planning/Environmental consideration (Mr. M. Ido, Mr N. Yamazaki)
- Promotion of PPP and Social Consideration (Ms. M. Nakamura, Ms. T. Tamura)
- Financial Management/Fund Planning (Mr. T. Ogawa)
- Project Coordination (Ms. A. Iwamoto, Mr. R. Matsumoto)

(2) Training in Japan
Five NSWMSC staffs have attended a JICA SWM group training course.

1) Ms. K.C.P. Kasturiarachchi from Aug. 21 to Oct. 24 2007
Urban Solid Waste Management (Osaka Training Centre)
2) Mr. Chanaka Wijesekara from Oct. 29 to Dec. 15 2007
Solid Waste Management for Southwest Asia Discussion for Realizing the Improvement Measure
3) Ms. Lanka Wedagedara from Oct. 29 to Dec. 15 2007
Solid Waste Management for Southwest Asia Discussion for Realizing the Improvement Measure
4) Ms. J.R.M.N. Jayalath from Oct. 15 to Nov. 22 2007
Local Administration for Environmental Protection in Sri Lanka
5) Ms. Rumali Tillekeratne from Oct.12 to Dec. 5 2008
Solid Waste Management for Southwest Asia Discussion for Realizing the Improvement Measure
6) Ms. L. Mangalika from March 12 to Apr. 12 2008
Waste Management System

With the exception of No.3, all of the staff who received training continue to work for the Project.

(3) Provision of equipment.
A list of equipment provided by both sides is detailed in ANNEX 6.

3.2 Achievements of the Project & Implementation Process

3.2.1 Project Purpose

<Project Purpose> The NSWMSC acquires capacity for supporting SWM activities of the local authorities with close collaboration of relevant stakeholders so that the local authorities can implement the SWM activities in accordance with the National Strategy for Solid Waste Management

The results of joint evaluation on present level of achievement of the Project Purpose in accordance with the following seven (7) OVIs defined by PDM3 (ANNEX 1) are as follows:

(1) Full staffing

OVI P1: 100% of the proposed staff (1 Director, 2 Deputy directors, 3 Assistant director and 8 staff) are to be assigned as of the end of 2010.

The staffing issue has been discussed intensively between two countries, because the Project shall be jointly coordinated to produce fruitful results. The Japanese side had fulfilled its inputs of the Expert Team and equipment as proposed in the R/D. On the other side the Sri Lankan side had provided the office, but the qualified staffing has been delayed long. In response to the Mid-term Evaluation about the delay of staffing, MLGPC has been planned the recruitment. However, this planned staffing has been delayed also this time. The Team found this really regrettable, as shown in the table below.

Table 4: Proposed Staffing and Actual Staffing
Remarks: MLGPC decided to reduce the staff positions of NSWMSC in 2010 as below.

	Director	DD	AD	Staff
Revised proposed positions in NSWMSC	1	1	1	8
Actual staffing	1	0	(1)	5

1) Hard-working of the present staff of NSWMSC: The current shortage of staff hinders the efficient technical transfer, while limiting the number of staff to receive the technical transfer, being unable to secure sufficient time to receive training in their already busy working condition. Despite such very tight staff allocation, NSWMSC assisted to implement many SWM projects in 2009 (total Rs.204 million in cost). Most of its staff often works in the office even on Saturday and Sunday, and it proves that they have been highly committed to their work. Therefore, it is expected that NSWMSC would achieve the targeted technical capacity even with less than the proposed number of staff.

2) Recruitment of additional staff: Even after taking such constructive factor into account, employing more staff, technical staff in particular, is urgently needed. The additional secretary of MLGPC informed us that two young technical staff would be employed for NSWMSC soon. If this is materialized, NSWMSC will be highly likely to obtain the targeted technical capacity even though the total number of staff will be still less than the proposed.

Planned staffing has not yet achieved. The situation is becoming serious because the working load increases due to the progress of NSWMSC activities, but the number of human resource is not increased. The Team found that the proposed staffing is very difficult to be achieved by the end of the Project in February 2011.

The Secretary of MLGPC committed that two engineers will be assigned the positions in NSWMSC within August 2010. It is very important for NSWMSC and the Team welcomed such decision.

The Team concluded that the evaluation rating based on OVI P1 is B, under the conditions of newly assignment of two engineers to NSWMSC.

(2) NSWMSC's management capacity

OVI P2: NSWMSC's management capacity achieves 70% of the target.

The Project applied questionnaire-based capacity assessment method as shown in Annex 9 (see Project Document). The Team has found out that NSWMSC's management capacity has reached 70% of the target level. (after Project Progress Report No.3 (2010), p.19, Evaluation Grid in ANNEX 3) The assessment results of capacity development indicator of NSWMSC assessed by all NSWMSC members and Chief Advisor are shown in Tables 5 and 6.

Table 5: Capacity Development Indicators of NSWMSC assessed by NSWMSC members

Year	2007	2008	2009	2010
Management capacity	0%	56%	62%	70%
Technical Capacity	0%	37%	47%	45%
Working Environment	23%	68%	67%	61%
Capacity Assessment Indicator (CDI) of NSWMSC	8%	53%	59%	58%

Source: Project Progress Report No.3

Table 6: Capacity Development Indicators of NSWMSC assessed by Chief Advisor

Year	2007	2008	2009	2010
Management capacity	0%	50%	64%	71%
Technical Capacity	0%	12%	29%	57%
Working Environment	23%	79%	76%	72%
Capacity Assessment Indicator (CDI) of NSWMSC	8%	47%	57%	67%

Source: Project Progress Report No.3

The management capacity of NSWMSC assessed by NSWMSC staff members reached to 70%. Chief Advisor assessed it as 71% and therefore both assessment results are very close. It indicates that the management capacity is estimated to have already reached the target of 70%.

Thus, the Team concluded that the evaluation rating based on the OVI P2 is A.

(3) Achievement of Technical Capacity

OVI P3: NSWMSC's SWM knowledge and skills achieve 70% of the target

The "SWM knowledge and skill" here means the NSWMSC's technical capacity on SWM at organization level. According to the results of capacity assessment (see Tables 5 and 6; after Project Progress Report No.3 (2010), p.13), the result assessed by NSWMSC staff members indicates 45% and that by the Chief Advisor 57%, which are below the target level of 70%.
The technical capacity of NSWMSC has been measured by using 55 assessment items every year since 2007. The growth trend of capacity development indicator implies that the technical capacity of NSWMSC is undoubtedly developed since 2008. The technical capacity which was 0% in 2007 achieved 45% in the staff assessment and 57% in Chief advisor's assessment in February 2010. However the result also implies to achieve the target of 70% very difficult at the end of the project. Relative delay of the capacity development is mainly due to the shortage of

technical staff. In order to make quicker capacity growth, staffing of engineer to NSWMSC is essential, and the more intensive training for staff is necessary.

Thus, the Team concluded that the evaluation rating based on the OVI P3 is B.

(4) Working Environment

OVI P4: NSWMSC' working environment achieve 70 % of the target

The Results of assessment on the working environment is as follows (see Tables 7 and 8; Project Progress Report No.3 (2010), p.19):
The average of assessment is only 72-61% in 2010 and it declined from 76-67% in 2009. This is because the expenditure greatly increased in 2010 while the number of NSWMSC staff decreased. This fact clearly shows that NSWMSC staffs are very much dissatisfied with the existing human resource in NSWMSC.
The delay of the improvement of working condition is mainly due to the lack of staff and the poor condition for official trip to remote area. It is highly likely to achieve the target if additional staff will be assigned to NSWMSC vacant positions.

Thus, the Team concluded that the evaluation rating based on the OVI P4 is B.

(5) Ministry's SWM Expenditure

OVI P5: Ministry's SWM expenditure exceeds 50 million Rs. per year

The actual achievements are as shown as the following table:

Table 7: Annual Expenditure of MLGPC for SWM project (Source: MLGPC)

Year	2006	2007	2008	2009	2010
Budget (million Rs)	10	15	35	30	40

NSWMSC assisted to disburse Rs, 200 million in total (Rs. 32 million from Ministry's budget, Rs. 72 million from Pilisaru Project and Rs, 100 million from 2KR counterpart fund). The national budget for 2010 which was approved by the Parliament in July 2010. MLGPC was approved of Rs. 40 million for SWM projects in 2010, although it requested Rs. 120 million, due to the austere fiscal policy of the Government of Sri Lanka.

Beside MLGPC's budget, NSWMSC has got approval to utilize Rs. 45 million of Pilisaru Project (Rs. 23.447 million for Tangalle project and Rs. 21.532 million for Wennappuwa project). It is able to utilize Rs. 85 million in total for SWM projects in 2010.

These facts indicate that the expenditure from MLGPC budget related a part of NSWMSC activities but not full scale. The expenditure solely from MLGSC budget is less than Rs. 50 million, but there are other expenditures from other fund and if these expenditures are added into the MLGPC's expenditure, total expenditure distinctly exceed the target level of expenditure, Rs.50 million.

Thus, the Team concluded that the evaluation rating based on the OVI P5 is A.

(6) NSWMSC's Budget for Site Survey

OVI P6: NSWMSC's budget to be used for the execution of the site surveys reaches 1 million per year,

Although NSWMSC has never needed to spend the budget for this purpose, a part of Ministry's budget which is even more than Rs. 1 million is able to be allocated for this purpose.

Thus, the Team concluded that the evaluation rating based on the OVI 6 is A.

(7) Maintenance of Network

OVI P7: NSWMSC maintains good network with various stakeholders.

The Team found that NSWMSC maintains good network with stakeholders as follows:

1) NSWMSC works as a secretariat for JICA SWM training Ex-participants Association, conducts the selection of appropriate trainees for JICA SWM training in Japan and the preparation of necessary document, and requests and receives JOCV volunteer for environmental education. Furthermore, NSWMSC executed the sanitary improvement project for the 300,000 internally displaced persons in Vavuniya IDP camp by obtaining the 2KR counterpart fund from the Embassy of Japan in 2009.

2) Director of NSWMSC attends the regular meeting and Apex meeting of the Pilisaru Project, and maintains daily contact with Pilisaru Project department so that NSWMSC could get approval to utilize Rs. 20 million in 2008, Rs. 72 million in 2009 and Rs. 45 million in 2010.

3) NSWMSC maintain the usual contact with Waste Management Authority belonging to Western Provincial Government.

4) NSWMSC is assisting the UNOPS' project in Ampara district in terms of the operation and maintenance of the facilities constructed, in response to the request by UNOPS so that these facilities can be taken over by local authorities smoothly.

5) As for individuals, NSWMSC has been getting the great condtibution by Dr. Sumith Pilapitiya who is an environmental officer of World Bank Sri Lanka office, Prof. BFA Basnayake of University of Peradeniya, Dr. Mahesh of University of Moratuwa, Mr Nimal Prematilaka, PHI of Balangoda UC, etc. for lecturers and teaching the practical technique for composting.

6) As for donors and NGOs, NSWMSC keeps contact with USAID, Lirnerasia, AustAID, SEVANATA, Arthachariya.

The Team found that the Project has significant improvement in cooperation with Provincial councils and other stakeholders instead of giving direct assistance towards LAs.

The mid-term evaluation pointed out that the involvement by provincial councils was to a very small degree. Responding to this point, the NSWMSC has developed more collaboration with the provincial councils.

The Team also found that the NSWMSC is now going to be a kind of information hub among national and international stakeholders on SWM, which will make possible in future to help necessary coordination among various activities and cooperation projects on SWM in Sri Lanka.

Thus, the Team concluded that the evaluation rating based on the OVI P7 is A.

(8) Conclusive Judgment for Project Purpose Level

Of these indicators, there are 4 points of A, 1 point of A/B, and 2 points of B. Present level of achievement in some factors is rather low because of limited number of technical staff assigned in NSWMSC.

However, the Team found remarkable progress in every indicator in spite of insufficiency of NSWMSC staff. Thus the Team judges that within the restriction of current conditions, the core issue of Project Purpose, "NSWMSC acquires capacity for supporting SWM activities of the LAs", can be basically achieved by the end of the Project if NSWMSC continue the efforts in the course of the Project.

Thus, the Team concluded that integrated evaluation rating based on the OVIs for the Project Purpose in PDM3 is A/B.

3.2.2 Outputs

The Outputs of the Project are planned four items according to the PDM3. The Team evaluated the achievement of these Outputs based on the Objectively Verifiable Indicators (OVI) defined by the PDM3as follows:

<Output 1> The NSWMSC establishes basic organizational structure with a mid-term implementation strategy.

The Team concluded that the Output 1 can be mostly achieved by the end of NSWMSC, but there is a certain difficulty particularly in staffing of NSWMSC.

(1) Mid-term Plan of NSWMSC

OVI 1.1: NSWMSC formulates and updates a comprehensive mid-term plan for NSWMSC.

NSWMSC Mid-term Plan which was produced in March 2009 was revised in September 2009 by taking the changes of PDM and Project Document into account. NSWMSC's operation programme in 2010 was prepared in line with the Mid-term Plan.

The Mid-term Plan will be again revised, considering its capacity and needs, before the end of the Project, so that NSWMSC will be able to execute the activities based on the Mid-term Plan by itself.

Thus, the Team concluded that the evaluation rating based on the OVI 1.1 is A.

(2) Effectively Working Staff

OVI 1.2: Each staff of NSWMSC can effectively work with understanding its tasks.

The management structure has been successfully established in the early phase of the Project. However, the required staffs have not been assigned to the positions. The present system is maintained on the hard-working staff.

The Project Document 2010 which shows the activities schedule for 2010 has been distributed to every staff with explanation. Every staff concentrates on her work during the working hour because each staff has understood the Projects, the works and the tasks which she is in charge of.

Thus, the Team concluded that the evaluation rating based on the OVI 1.2 is A.

(3) Working Process and Decision

OVI 1.3: NSWMSC can execute activities with clear work process and decision making process.

The progress of plan of operation was monitored and the progress was discussed at every monthly meeting in NSWMSC. The workflow sheet was prepared and used for the work process management and decision making. NSWMSC staffs are producing various manuals together with Japanese experts, to conduct training in LAs. Manuals have been prepared 6 kinds in 3 languages by the Project. Because the instruction by Director of NSWMSC is always very quick and clear, all NSWMSC staff work with clear idea of work process and decision making process.

Thus, the Team concluded that the evaluation rating based on the OVI 1.3 is A.

(4) Self-learning Materials

OVI 1.4 All staff training materials produced are compiled for self learning.

The lectures and trainings on SWM lecture for NSWMSC staff were executed by the JICA Expert Team more than 40 times (see ANNEX 5). Study tour for Kuliyapitiya project was also conducted for NSWSC staff. These training materials are compiled for self-learning by themselves. They seem to get more interested in the jobs because they could get the basic capacity to learn by themselves through the experience and knowledge gained in the course of the Project.

NSWMSC staffs are also producing various manuals together with Japanese experts, to conduct trainings in LAs. Manuals have been prepared 6 kinds in 3 languages by the Project (see ANNEX 7).

Thus, the Team concluded that the evaluation rating based on the OVI 1.4 is A.

(5) Basic Understanding on SWM

OVI 1.5: All staff in NSWMSC can work on SWM with basic understanding.

Most of the Project activities were carried out jointly with the NSWMSC staff and the JICA Expert Team as an on-the-job training. The participation level of both sides depends on the activity. For example, NSWMSC did the procurement work almost 100% by themselves, but they could participate in the feasibility study (F/S) work less than 50% (see ANNEX 8). It seemed that they have got basic understanding on SWM and a capacity to do some tasks.

Thus, the Team concluded that the evaluation rating based on the OVI 1.5 is A.

(6) Overall evaluation of the Output 1

Based on the evaluation using above five OVIs, all the OVIs are rated as A, the Team has come to conclude that the Output 1 has can be satisfactorily achieved (Rating A) by the end of NSWMSC, but there is a certain difficulty in staffing of NSWMSC which should be minimized in the remaining period of the Project by recruiting two engineers immediately.

<Output 2> The NSWMSC establishes an efficient mechanism for supporting LA's SWM by stakeholders.

Six (6) OVIs were defined for assessing the achievement of the Output 2 (see PDM3 in Annex 1 and Evaluation Grid in Annex 3). The results of evaluation by the Team are as follows:

(1) Establishment of SWM Committee

OVI 2.1: SWM committee is established in more than 5 PCs and they start to function.

The first indicator is to examine whether SWM Committees have been established in more than 5 PCs or not, and how they have been function for the local authorities. The Team was informed that NSWMSC started to assist 3 provincial governments (Sabaragamuwa, Central, Northern) in the field of SWM in 2009 and started to assisted 2 provincial governments (Eastern and North Western) in 2010. However it was found out that their activities are presently still very limited because of no permanent staff assigned and no permanent organization established. The continuous assistance should be given to the Provinces, though there are large differences in each Province.

Thus, the Team concluded that the evaluation rating based on the OVI 2.1 is A.

(2) Execution of the action plans formulated in the Provinces

OVI 2.2: Provincial SWM action plan is formulated in more than 5 provinces and it is executed.

The provincial SWM action plan has been prepared for each of three Provinces (Sabaragamuwa, Central, Northern), and they have understood the SWM condition of each local authority correctly. They have started to execute the improvement measures and also to review the activity plan.

As for Eastern Province and North Western Province, the survey for formulating the SWM action plan started in June and July 2010, respectively, and their action plans are under the formulation to be completed by the end of 2010. However the execution of the action plans of these two Provinces (Eastern Province and North Western Province) will be difficult within the period of the Project.

Thus, the Team concluded that the evaluation rating based on the OVI 2.2 is A/B.

(3) Dissemination of SWM information

OVI 2.3: NSWMSC can disseminate information with regard to SWM to stakeholders through various means.

The Team found that NSWMSC could basically disseminate information with regard to SWM to stakeholders through various means.

NSWMSC News has been until the publication in January 2009. After that, both NSWMSC News published in July and August 2009 were prepared by NSWMSC staff themselves. They wrote NSWMSC News in Sinahala and it was translated into Tamil and English. This capacity development implies that some of NSWMSC could get the capacity to understand most of activities which NSWMSC executes.

There is also a website, where various materials could be downloaded free to the interested stakeholders. However renewal of the website is updated rather slowly as every three months, as well as the News being published quarterly.

Thus, the Team concluded that the evaluation rating based on the OVI 2.3 is A.

(4) NSWMSC Website and News

OVI 2.4: NSWMSC's website is updated more than 4 times a year, and NSWMSC News is sent to all stakeholders quarterly.

NSWMSC published "NSWMSC NEWS" in November 2007, June 2008, January 2009, July 2009, October 2009, March 2010, and June 2010. It is distributed to all 330 local authorities in the country, all members of JICA SWM Training Ex-participant Association and other relevant institutions. From NSWMSC NEWS (July 2009), NSWMSC staff edits and prepares it without the JICA Expert's assistance. The articles for NSWMSC NEWS are first written in Sinhala language and then translated into Tamil and English.

The frequency of NSWMSC News publication is increasing and likely to achieve four times a year in 2010. The website is scheduled to be updated when NSWMSC NEWS is published. The Team was informed that the Website has been opened, but due to limitation of Ministry's web system, updating is quite limited. The Team understood that the publication of NSWMSC News would require a certain effort and somehow difficult due to staff shortage. However the Team basically appreciated the efforts of NSWMSC in this direction.

Thus, the Team concluded that the evaluation rating based on the OVI 2.3 is A/B.

(5) Promotion of guidelines and manuals

OVI 2.5: NSWMCS can promote guidelines and manuals produced to be used by stakeholders.

Most of the NSWMSC staffs (non-engineers) were far behind of basic knowledge of SWM, and could not explain it in public in 2007 when the NSWMSC started. However thanks to the guidelines and manuals produced by the Project, they have gained the basic knowledge on SWM (see ANNEX 7).

The various materials produced require the different capacities for staff to promote the knowledge and techniques discussed in the materials, depending on the contents. However, the increase of technical staff in NSWMSC is necessary for these technical reference manuals to be more widely spread and fully utilized.

Thus, the Team concluded that the evaluation rating based on the OVI 2.5 is A.

(6) Conducting trainings and their utilization

OVI 2.6: SWM training is conducted to cover 5 PCs and more than 20% of trainees utilize the knowledge learnt.

NSWMSC has conducted trainings three times in 2009 to cover 8 Provinces (see ANNEX 5). The total number have accounted for 560 persons as the following table (source: CUP-NSWMSC, 2010).

Table 8: The number of trainees in SWM raining.

Target provinces	North western North central Southern	Uva Central Sabaragamuwa	North Eastern	8 Provinces
Month	June	August	December	-
Venue	Colombo	Colombo	Trincomalee	-
3days course for Technical staff	70	70	Merged by non-technical course	140
3 days course for Non-Technical staff	70	70	70	210
1 Day course for high ranking officer	70	70	70	210
Total	210	210	140	560

The Team suggested that this follow-up would be needed to scrutinize actual demands in the local agencies.

Thus, the Team concluded that the evaluation rating based on the OVI 2.6 is A.

(7) Evaluation of the achievement of Output 2

The Team has come to conclusion that the Output 2 has been already mostly achieved, i.e. 2 A/B ratings and 4 A ratings, in the targets of six (6) OVIs, and the Output 2 will be achieved by the end of the Project (Rating A).

<Output 3> Facilitation Capacity of the NSWMSC for implementation of SWM Action Plans of LAs is acquired

The results of evaluation using following ten (10) OVIs are as follows:

(1) Formulation of action plans

OVI 3.1: NSWMSC can assist LAs to formulate SWM action plans.

A SWM action plan was formulated for each 3 LAs in 2007, 5 LAs in 2008 and 3 LAs in 2009, 11 LAs in total. In addition, in 2008 NSWMSC staff formulated a SWM action plan for Tangalle PS and Kurunegala PS by themselves.

It is evaluated that the NSWMSC staffs have gained the capacity to manage to formulate a SWM action plan for a LA through these experiences, although they have to spend long time and the quality of plan should be improved. In coming final stage of the Project, the target for NSWMSC staff is to shorten the time spent for formulation of action plan and to improve the quality of plan.

Thus, the Team concluded that the evaluation rating based on the OVI 3.1 is A.

(2) Assistance for land acquisition

OVI 3.2: NSWMSC can assist LAs to acquire new lands.

NSWMSC assisted Kuliyapitiya UC and Nawalapitiya UC to officially acquire the land for the model projects by involving the high ranking officers of MLGPC. Although the administrative procedure of transferring the land ownership in Sri Lanka is very complicated, it is evaluated that NSWMSC has obtained the certain level of capacity to facilitate.

Thus, the Team concluded that the evaluation rating based on the OVI 3.2 is A.

(3) Legal permission and approval

OVI 3.3: NSWMSC can assist LAs to get legal permission and approval.

NSWMSC assisted several LAs such as Kuliyapitiya UC, Nawalapitiya UC, Badulla MC, Matara MC, Tangalle UC, Wennappuwa PS to apply environmental clearance for the model project to CEA and all of these LAs were successfully granted it by CEA. As for Nawalapitiya UC, NSWMSC assisted the LA to conduct the initial environmental evaluation (IEE) in response to the request by CEA and IEE was approved.

The Team evaluated that NSWMSC has acquired the capacity in getting legal approval for small scale SWM facilities through the experiences.

Thus, the Team concluded that the evaluation rating based on the OVI 3.3 is A.

(4) Management of social problems

OVI 3.4: NSWMSC can assist LAs to manage social problems.

NSWMSC assisted several LAs such as Kuliyapitiya UC, Nawalapitiya UC, Badulla MC, Matara MC to organize the public hearing for neighborhoods to get acceptance for the project before the construction.

In addition, NSWMSC has decided to suspend the project of the night soil low cost treatment tank in Kegalle UC and Seethawakapura UC due to the strong public opposition. Through these valuable experiences, NSWMSC could learn the difficulty and the importance of social consideration and public involvement for the project planning & implementation. It is necessary for NSWMSC to experience more cases of social issue, without which management capacity cannot be acquired.

Thus, the Team concluded that the evaluation rating based on the OVI 3.4 is B.

(5) Funds for projects

OVI 3.5: NSWMSC can assist LAs to get funds for projects.

NSWMSC can assist LAs to get funds for projects. NSWMSC assisted LAs to utilize Rs, 200 million in total for SWM projects in 2009; Rs.32 million from Ministry's SWM budget, Rs. 72 million from Pilisaru project and Rs. 100 million from 2KR counterpart fund.

Particularly notable point is all the funds for projects have been raised from Sri Lanka's own capital, and not depended on grant aid.

Thus, the Team concluded that the evaluation rating based on the OVI 3.5 is A.

(6) Assistance in procurement

OVI 3.6: NSWMSC can assist LAs in procurement work (detailed design, tender, contract, supervision, project account).

After completion of F/S, a local consultant was contracted to conduct the detailed design. Then a construction company was contracted for establishing the facility such as composting plant. However, the procurement procedure of a local consultant was very time consuming and troublesome and in addition the supervision of the local consultant was again very time consuming and troublesome.

Reflecting this experience, NSWMSC selected the policy to draw a detailed design and conduct supervision by technical staff of LAs. For this purpose, the Project prepared a "Design Manual for a Small Scale Compost Facility".

The Team evaluated that this Design Manual facilitates technical staff to properly design the appropriate compost facility and take off the quantity of materials and prepare the tender document. The facilities for Tangalle project and Wennappuwa project have been designed by using this Manual by technical staff of the LAs. The Team has noticed that NSWMSC can now assist LAs in procurement (detailed design, tender, contract, supervision, project account).

Thus, the Team concluded that the evaluation rating based on the OVI 3.6 is A.

(7) Assistance in operation and maintenance

OVI 3.7: NSWMSC can assist LAs in operation and maintenance.

The operation and maintenance is the long-lasting process to be conducted by LAs to provide services to the residents within the financial capacity.

NSWMSC produced the guidelines for the compost operation with the supervision by Dr. Sumith Pilapitiya who has taught how to operate Weligama compost plant at site since 2006. This guideline was prepared in three languages and used for lecture and also for practical reference for the site operation.

As for the supervision for the compost plant, it was too hard for current NSWMSC staff to do it because they do not have site experience and difficult to often visit the sites in remote areas. Therefore, NSWMSC has gained the cooperation from various resource persons in Sri Lanka (see Evaluation Grid in Annex 3). Before the commencement of operation of these plants, the supervisors and workers of the LAs received practical training by the resource persons for more than a week either in Balangoda compost plant or Weligama compost plant. Such arrangement for training was assisted by NSWMSC. Training for compost plant operation is increasingly organized and the number of experienced supervisors on compost facility is also increasing.

Thus, the Team concluded that the evaluation rating based on the OVI 3.7 is A.

(8) Monitoring assistance

OVI 3.8: NSWMSC can assist LAs in monitoring

The Project has been monitoring the operation condition of the facility constructed such as a compost plant, by instructing a LA to establish a monitoring committee which involves the

neighbours. The monitoring committee is held every 3 months with a participation of NSWMSC staff and each member assesses the operation condition by using the assessment sheet. This type of monitoring is carried out at four model project sites in the Project.

The other type of monitoring is to monitor the progress of the SWM action plan. This type of approach has just started in Kuliyapitiya project with the participation of JOCV volunteer dispatched from April 2010. NSWMSC concentrates on Kuliyapitiya UC, Matara MC and Wennappuwa PS to establish the efficient SWM system by getting public cooperation.

It is obvious that NSWMSC has been involved in assisting LAs in monitoring in two ways as mentioned above.

Thus, the Team concluded that the evaluation rating based on the OVI 3.8 is A.

(9) Number of action plans

OVI 3.9: More than 17 SWM action plans for LAs are formulated.

13 LAs were assisted to formulate the SWM action plan and 9 LAs were assisted for the feasibility study. The definition of model project is applied to the LA, which receives the technical assistance for action plan formulation and/or feasibility study.

The total number of model projects is 14, consisting of 13 A/P and 9 F/S.

Table 9: Number of A/P & F/S

Name of local authorities	A/P	F/S
1. Kuliyapitiya UC	X	X
2. Nawalapitiya UC	X	X
3. Matara MC	X	X
4. Badulla MC	*	X
5. Wennappuwa PS	X	X
6. Tangalle UC&PS	X	X
7. Kurunegala MC	X	X
8. Ambalangoda UC	X	
9. Dambulla PS	X	
10. Ratnapura MC	X	X
11. Wattegama UC	X	X
12. IDP camp in Cheddikulam PS	X	
13. Mannar UC	X	
14. Not yet selected	X	
Total	13	9

*Budulla MC has prepared A/P by own efforts, where technical knowledge acquired in the JICA Development Study was utilized.

In addition to these model projects, NSWMSC also support three action plans of LA project of compost plant, in Chilaw PS, Mahiyanganaya PS, and Thalawa PS. Therefore total 17 SWM action plans for LAs are formulated or supported. Therefore the target is almost fulfilled.

Thus, the Team concluded that the evaluation rating based on the OVI 3.9 is A.

(10) Materialization of formulated projects

OVI 3.10: More than 50% of projects formulated in the action plans are materialized.

8 out of 14 model projects, 50% of the total, have been implemented, as shown below:

Table 10: Status of SWM project in Local Authorities

Name of local authorities	Start year	Current condition
1. Kuliyapitiya UC	2007	Operation
2. Nawalapitiya UC	2007	Operation
3. Matara MC	2007	Operation
4. Badulla MC	2007	Operation
5. Wennappuwa PS	2008	Under construction
6. Tangalle UC&PS	2008	Under construction
7. Kurunegala MC	2008	Responsibility of technical assistance has been transferred from NSWMSC to Pilisaru Project for the implementation
8. Ambalangoda UC	2008	
9. Dambulla PS	2008	
10. Ratnapura MC	2009	Detailed design work is in process.
11. Wattegama UC	2009	
12. IDP camp in Cheddikulam PS	2009	Operation
13. Mannar UC	2010	Action plan formulation is in process.
14. Not yet selected	2010	

Thus, the Team concluded that the evaluation rating based on the OVI 3.10 is A.

(11) Evaluation of the Achievement of Output 3

The Output 3 is the main part in the practical activities by NSWMSC. Based on the evaluation results of above ten OVIs, the Team concludes that Output 3 can be achieved by the end of the Project (Rating A).

<Output 4> the NSWMSC provides necessary information so that the Ministry can contribute the National SWM policy and strategy.

In order to assess the achievement of the Output 4, the following three OVIs were defined by PDM3. The results of joint evaluation based on these OVIs are as follows:

(1) SWM conditions in the country.

OVI 4.1: NSWMSC can understand the present SWM conditions in the country.

The Team found that NSWMSC has established basic database according to the questionnaire surveys as conducted by NSWMSC in 2009 & 2010. The table below shows the number of surveyed LAs. 47.5 % of the existing LAs have been surveyed in 5 Provinces, excluding North Central, Western, Uva and Southern Provinces.

Table 11: List of the surveyed Provinces and number of LAs

Name of province	No. of LAs	No. of LAs of which data collected in 2009 and 2010
Northern	34	11
Eastern	43	43
North Central	26	
North Western	32	32
Central	42	42

Western	48	
Sabaragamuwa	29	29
Uva	27	
Southern	49	
Total	330	157

Thus, the Team concluded that the evaluation rating based on the OVI 4.1 is A.

(2) Recommendations to National SWM Policy

OVI 4.2: Valuable recommendations to National SWM policy and strategy are included in NSWMSC annual report.

The Team found that the National Policy on SWM was issued in 2007, in the beginning stage of the establishment of NSWMSC. NSWMSC publishes the annual report which should contain the progress of NSWMSC, the general present SWM condition in the country, the important issues and the recommendations. However the annual report in 2010, for example, contains only the progress of NSWMSC, and it did not include the general present SWM condition in the country nor recommendation for policy consideration. However, information generated by NSWMSC will be very informative for revising the National SWM Policy. The Team explained that more efforts be made in this direction in the final stage of the Project.
Thus, the Team concluded that the evaluation rating based on the OVI 4.2 is A/B.

(3) National and international links

OVI 4.3: National and international institutional links and communication channels are established and maintained.

NSWMSC is playing a secretariat role for JICA Ex-participant Association of SWM Training Course which is one of the biggest SWM-related officers' associations/network in Sri Lanka. The address book has been published under the support of the Project.
NSWMSC maintains the communication channels with the following international and national institutions, where the NSWMSC is becoming a connecting point or hub with national/international professionals in SWM.

- UN institution: UNOPS, UNICEF, UNDP, UNSCAP
- International Donor: JICA, USAID, KOICA
- NGOs: Asia Foundation, Sevanata, LIRNEasia, Energy Forum
- University: University of Peradeniya, University of Moratuwa, University of Colombo

Thus, the Team concluded that the evaluation rating based on the OVI 4.2 is A.

(4) Evaluation of the Achievement of Output 4

Based on the above three OVIs, the Team has found the Output 4 has been almost satisfactorily achieved and suggested that additional improvements would be possible in the remaining period of the Project.

The Team concluded that the Output 4 will be achieved by the end of the Project if MLGPC start to examine National SWM Policy based on information provided by the NSWMSC (Rating A/B).

4 EVALUATIONS BY FIVE CRITERIA

In the context of Capacity Development, five criteria are interrelated and interactive. Therefore, there may be repeated issues in each criterion.

4.1 Relevance

Relevance: An overall assessment of whether the Project Purpose and Overall Goal are in line with Sri Lankan and Japanese policy, and with Sri Lankan needs

The Team concluded that Relevance of the Project is generally secured.

(1) Relevancy with the Policy Position of the Government of Sri Lanka

The Team concluded that the Project is fairly relevant to the policy of the Government of Sri Lanka. This is because SWM is prioritized at National level, Provincial level, as well as LA level, and the services of the NSWMSC are widely welcomed by Provincial Councils and LAs. One of proofs is the fact that most of sources of fund for SWM facility construction projects were provided by the Government of Sri Lanka.

For example, as explained in the Project Achievement analysis part (Section 3.2), the level of satisfaction with NSWMSC's assistance is very high among stakeholders on target LAs. All of them stated the model projects could not be realized without the support from the NSWMSC and Provincial government. This is proof of the significance and necessity of the NSWMSC support.

The Team also appreciated the firm commitment and great leadership of the MLGPC on the SWM issue and evaluated that it is a noteworthy fact.

(2) Priority in Japanese ODA strategy

The Team concluded that the Project is fairly relevant to the Official Development Assistance (ODA) strategy of the Government of Japan. In the ODA strategy of Japan towards Sri Lanka, Japanese policy clearly states that Japan cooperates for keeping the island as a beautiful country through improvement of infrastructure, and conservation of living & social environment in the urban areas, as well as improvement of the urban environment, which is one of the key areas of JICA cooperation.

4.2 Effectiveness

Effectiveness: Status of the achievement at the Project Purpose level

The Team evaluated that Effectiveness is secured.

The Project produced a number of visible outputs like several compost plants, landfill, and night soil treatment facilities. However, such facility is merely a component for securing effective SWM but not SWM system itself. The Project has still a room for upgrading the Capacity for supporting LAs on SWM system understanding and operation, without which the Project Purpose would not be completely achieved.

The Capacity Upgrading for NSWMSC to support LAs with Provincial Councils on SWM system management and operation & maintenance of constructed facilities is, thus, the main issue for the coming 5 months period by the end of the Project.

4.3 Efficiency

Efficiency: A measure of the production or Output of the Project in relation to the total resource input

Apart from the staff shortage issue, Provincial Councils and LAs showed their satisfaction with the inputs and supports from NSWMSC and relevant Ministries. Thus, the Team came to the conclusion that Efficiency is well secured in general.

The Team also identified the following points which were significantly improved since the Mid-term Evaluation. As pointed by the Evaluation, there was a big opportunity being lost because of the shortage of core staff of NSWMSC, in the first half period of the Project. Actually, the Japanese Expert Team dispatched for NSWMSC was working as "filler personnel", because of the shortage of counterpart staff in NSWMSC. The Effectiveness was not favorable in the first half period.

In the second half period of the Project, NSWMSC could successfully establish collaborative relations with the Provincial Councils for supporting LAs, so much more efficient contribution became possible to Project Purpose level.

The cooperation has been developed with available local resources, namely provincial engineers, academic professionals, experienced implementers in local level, and so on. Since the Mid-term Evaluation, the cooperation with these local resources has been significantly developed.

In the course of second half period of the Project, NSWMSC could support to establish SWM Committee or organization in four Provinces, which realized continuous support and cooperation framework between NSWMSC, Provincial Councils, and LAs. For example, in the process of the action plan making, provincial officers were involved in and they made necessary support to LAs under the support of NSWMSC for formulating and implementing action plan.

4.4 Impact

Impact: The positive and negative changes, produced directly and indirectly as the result of the Project

The Team recognized from the findings of the joint evaluation survey that the following various impacts are emerging from the Project:

The number of compost plant in Sri Lanka was 17 in 2006 before the commencement of the Project, but now (2010) the number of functioning compost plant reaches 56 LAs of total 330 LAs over Sri Lanka (17%), which probably shows an significant impact of the Project, introducing compost plant for improving SWM in LAs.

The model project with appropriate technologies in a LA have had a propagating effect, which demonstrated and encouraged to other LAs that there is a feasible direction in their SWM. It can be recognized as positive impacts.

Most of the LAs were becoming so called "product-oriented" which is attracting many stakeholders because they think SWM problems can be sorted out by having a compost plant, for example. However, the "product" is a tool and they will have to realize that even after they acquire the plant, there might be many other things to be done in SWM. Some target LAs such as Kuliyapitiya came to in-depth understanding on optimization of SWM system and now is introducing a source-separation and collection method under the cooperation of community.

There has been important sign of a big impact in institutional framework such as organizing SWM Committee or organization in Provincial level because of the Project.

4.5 Sustainability

Sustainability: An overall assessment of the extent to which the positive changes achieved by the Project can be expected to last after the completion of the Project

The sustainability after the completion of the Project will be secured if NSWMSC develops the capacity to support LAs in operation and maintenance of facility and SWM system management. These issues are previously pointed by Mid-term Evaluation and by the JICA Expert Team, but so far such activity is very limited.

The most important factor is major funds for the construction of facilities have been almost all supported by Sri Lankan side such as MLGPC budget and Pilisaru project. There was no strong dependency to external fund like grant aid by international donors. It means basically the financial sustainability is secured. In the Project, the main support was for capacity upgrading in technical and organizational sides.

The Team concluded that some concentrated efforts are necessary in the final stage of the Project for much more capacity upgrading in technical and organizational sides, in particular at LA level. After getting good practice in the targeted LAs, if NSWMSC continue its work with qualified staff the sustainability on technical and organizational sides will be secured.

The core parts of the Project are being done by a Sri Lankan engineering staff, NSWMSC Director, and the Japanese Expert Team. Thus the NSWMSC will face enormous challenge in future if present condition would not change.

There is growing involvement of key stakeholders, such as provincial government in the process of the model projects. If the involvement is realized in much more provinces, the sustainability will be strengthened.

However, after a few years, many local authorities will have to seek another source of funds for SWM. It is necessary to prepare small-scale fund mechanism that is appropriate for LA level SWM project, without which the sustainability is not fully secured.

5 FINDINGS FROM CAPACITY DEVELOPMENT PERSPECTIVE

Capacity Development (CD) refers to the on-going process of enhancing the problem-solving abilities by taking into account all the factors at individual, organizational and societal levels. In the public sector, it is very essential to focus institutions, policies, and social systems as well as improving the competence of individuals and an organization. Because sustainable and effective outcomes cannot be realised without such a mechanism and system which is called "enabling environment".

In this aspect, the Team identified the findings as follows:

(1) Importance of broader and progressive 'Programme' approach to solve problems

The MLGPC first established National Solid Waste Management Support Centre (NSWMSC), and the Project succeeded human resources development of the NSWMSC through preparing action plans with LAs, producing visible outputs/products such as composting plants through conducting model projects with LAs, and is now going to develop a support mechanism with Provincial councils to LAs, which is gradually broader and progressively deepening approach to provide solutions to waste problems.
For donor side, JICA, it is important that such gradually broader and progressively deepening approach was made possible through 'Programme approach' but through single cooperation project approach. In fact, the Project was implemented under more than ten years history, project/programme finding & formulation, Development Study, and technical cooperation project since late '90s. Training course and grass-roots JOCV volunteer programme have also integrated in the Programme. Such strategic cooperation approach, Programme Approach, is the key issue to success the cooperation for Capacity Development.

(2) Capacity upgrading at institutional level through appropriate implementation structure

The NSWMSC was established under the MLGPC, and there are many advantages because of this institutional/organizational setting. The Ministry can exert its power and authority to Provincial councils to LAs in order to provide necessary assistances on improvement of SWM through the supports by the NSWMSC.

The Team found significant development in establishing effective mechanism, for instance, having stronger involvements of Provincial level and enhancing networks among LAs in accordance with the present provision of structure.

(3) Capacity Assessment at individual and organizational levels of NSWMSC

There are many proofs of improvement of capacities at individual and organizational levels of NSWMSC. The JICA Expert Team and NSWMSC counterparts applied unique capacity assessment using annual questionnaire survey (see Annex 8) in the Project, which visualized, anyhow successfully, the acquisition state of capacities at individual and organizational levels. The capacity assessment at individual and organizational levels also demonstrated to show the progress and challenge of the Project in practical manner.

At the same time, however, the NSWMSC has not yet come to sufficient level of capacity as a whole, mainly because of staff shortage. This is one of the largest restrictions for the Project to realize Capacity upgrading.

6 RECOMMENDATIONS

The Team made the following recommendations for the final period of the Project activities before the termination:

(1) Personnel Placement in NSWMSC

Core staff vacancies (1 Deputy Director and 1 Assistant Directors) should be filled as soon as possible. At least two engineers are urgently necessary for implementing the Project successfully in its final stage. Technology transfer program shall be done for these engineers by JICA Expert Team after the assignment.

(2) Collaboration with Provincial Level for Supporting LAs

Strong involvement of Provincial level is essential for supporting LAs, although it depends on each province's situation. Five Provinces have been cooperated with NSWMSC on SWM issue in LAs, but so far, such cooperation mechanism has not yet fully established with the other Provinces.
Networks among stakeholders, for example a leading LA which experienced good practice on improvement of SWM to other LAs, should also be strengthened in order to share the experience and technical know-how.

(3) Human Resource Development through Training

To strengthen above mechanism, there are needs in training for engineering staff of Provincial councils and LAs, as well as technical, environment, health and community development staffs in LAs for sustainable SWM implementation. In other words, it is important to produce a human resource base for the SWM at local level. Technical capacity is still insufficient in local level. Various types of training course or workshops shall continuously organized by NSWMSC. The Country-focused Training on SWM in Japan is very effective in the context.

(4) Preparation of Manual for formulating Action Plan

NSWMSC has gained the capacity to formulate a SWM action plan for a LA through the Project experiences, although the NSWMSC staff has to spend relatively long time for the planning, and the quality of action plan prepared should be also improved. In order to upgrade the capacity of NSWMSC staff, above-mentioned experiential approach applied in the Project was effective, but it is necessary to shorten the time spent for formulation and to improve the quality of the plan.
JICA Expert Team proposed that it is the time to change the purpose of formulation of action plan from the technical transfer to the formulation of a user-oriented action plan because the most important factor for the action plan is to be fully utilized and implemented. The Joint Evaluation Team supports the idea. It is recommended to review the formulation experience of action plan in the Project so than more qualified action plan can be quickly formulated by local level, which is probably very useful for Provincial engineers and LAs officers.

(5) Importance of System Management Practice in SWM

In the most model projects supported by the Project, SWM facility such as compost plant has been constructed and then the waste problems in LAs are gradually mitigating.
However, there are some concerns about sustainable implementation of SWM activities, operation & maintenance of facility, and rational setting of the waste management flow under the existence

of the facility in LAs. Individual facility is just a component of SWM, and establishing an effective and efficient system for solid waste management is required under the actual conditions of LAs.
It means, "system management" is essential for implementing and optimizing sound SWM with a newly constructed SWM infrastructure.
In coming final stage of the Project period, the JICA Expert Team is planning to support such system management issue in selected LAs, such as Kuliyapitiya UC and Matara MC, where facility has been constructed and operated. The Joint Evaluation Team supports the proposal. It is recommended for NSWMSC and relevant stakeholders to handle such a system management issue in selected model projects. The issue on source separation, rational collection & transportation, recycling, etc. should be examined based on given conditions. In the system management, at the same time, it should be considered how to ensure the sustainability on SWM operation & maintenance and economic viability. The NSWMSC and the MLGPC should give necessary advices and direction on system management including its operation & maintenance and economic viability issues.

(6) Public Awareness and Mass Media

One of key stakeholders has been left behind. The Project should take the opportunity and show leading practices and project activities, like Action Plan Presentation, to raise awareness of civil society on SWM and appeal the importance of change in public general's behaviour. In particular the final stage of the Project, various opportunities is expected to arise.

(7) Continuation of Steering Committee

The Project Steering Committee is playing important role not only for the Project implementation but for information exchange among stakeholder on SWM in LAs. The Steering Committee is providing a place for discussion about the present state of SWM in Sri Lanka, coordination among various SWM projects, strategic talks, and so on. Thus the Team recommends for MLGPC to continue such committee meeting after the end of the Project.

ANNEXES

Annex 1: Project Design Matrix version 3 (PDM3) (Revised & approved in September 2009)

Project Title: Capacity Upgrading Project for the National Solid Waste Management Support Centre (CUP-NSWNSC)

Project Area: NSWMSC office (Colombo), Provincial Councils and Local Authorities selected in the project

Duration: 48 months (March 2007-February 2011)

Primary target: The National Solid Waste Management Support Centre (NSWMSC), Ministry of Local Authorities and Provincial Councils, Relevant officials of Provincial and Local Authorities

Narrative Summary	Objectively Verifiable Indicators
Overall Goal Local Authorities and relevant stakeholders improve solid waste management.	The number of grade C and D local authorities' in terms of SWM condition in 2010 will be reduced by 50% by 2015. Grade is determined by rating four aspects (hygiene condition of town, hygiene condition, negative impact on natural environment and on living environment of the disposal site). Each aspect is given points (0: Good, 1: Fair, 2: Serious) and the rating score is the sum of these points., Grade A : Good, rating 0-1, Grade B: Fair, rating 2-3, Grade C: Bad, rating 4-6, Grade D: Very bad, rating 7-8
Project Purpose The NSWMSC acquires capacity for supporting SWM activities of Las with close collaboration of relevant stakeholders so that Las can implement the SWM activities in accordance of the National Strategy for Solid Waste Management.	**In order for NSWMSC to obtain the sustainability of its operation.** 1. 100% of the proposed staff (1 Director, 2 Deputy directors, 3 Assistant director and 8 staff) are to be assigned as of the end of 2010. 2. NSWMSC's management capacity achieves 70% of the target. 3. NSWMSC's SWM knowledge and skills achieves 70% of the target. 4. NSWMSC's working condition achieves 70% of the target. 5. Ministry's SWM expenditure exceeds 50 million per year. 6. NSWMSC's budget to be used for the execution of site survey reaches 1 million Rs per year. 7. NSWMSC maintains good network with various stakeholders.
Output 1 The NSWMSC establishes basic organizational structure with a mid-term implementation strategy.	**In order for NSWMSC to have the basic function,** 1. NSWMSC formulates and updates a comprehensive mid-term plan for NSWMSC. 2. Each staff of NSWMSC can effectively work with understanding its tasks. 3. NSWMSC can execute activities with clear work process and decision making process. 4. Staff training materials produced are compiled for self learning. 5. All star in NSWMSC can work on SWM with basic understanding.
Output 2 The NSWMSC establishes an efficient mechanism for supporting LA's SWM by stakeholders.	**In order for NSWMSC to work in cooperation with stakeholders, especially for the provincial councils:** 1. SWM committee is established in more than 5 PCs and they start to function. 2. Provincial SWM action plan is formulated in more than 5 provinces and it is executed. 3. NSWMSC can disseminate information with regard to SWM to stakeholders through various means. 4. NSWMSC website is updated more than 4 times a year, and NSWMSC News is sent to all stake holders quarterly. 5. NSWMSC can promote guidelines and manuals produced to be used by stakeholders. 6. SWM training is conducted to cover 5 PCs and more than 20% of trainees utilize the knowledge learnt.
Output 3 The NSWMSC provides its assistance for LA's SWM and acquires Facilitation Capacity through the assistance. Facilitation Capacity of the NSWMSC for formulating SWM Action Plan Las is acquired. Facilitation Capacity of the NSWMSC for implementation of SWM Action Plan of Las is acquired.	**In order for NSWMSC to assist LAs:** 1. NSWMSC can assist LAs to formulate SWM action plans. 2. NSWMSC can assist LAs to acquire new lands. 3. NSWMSC can assist LAs to get legal permission and approval. 4. NSWMSC can assist LAs to manage social problems. 5. NSWMSC can assist LAs to get funds for projects. 6. NSWMSC can assist LAs in procurement (detailed design, tender, contract, supervision, project account). 7. NSWMSC can assist LAs in operation and maintenance. 8. NSWMSC can assist LAs in monitoring. 9. More than 17 SWM action plans for LAs are formulated. 10. More than 50% of projects formulated in action plans are materialized.
Output 4 The NSWMSC provides necessary information so that the Ministry can contribute National SWM policy and strategy.	In order for NSWMSC to actively influence society: 1. NSWMSC can understand the present SWM conditions in the country. 2. Valuable recommendations to National SWM policy and strategy are included in NSWMSC annual report. 3. National and international links and communication channels are established and maintained.

Activities		Input
1.1	Develop mid-term implementation strategy of the NSWMSC	<Japanese side>
1.2	Rationalize management structure (of the NSWMSC)for the strategy	Long-term experts
1.3	Develop operational; plan (of the NSWMSC)	Chief Adviser / Capacity Development
1.4	Conduct human resource planning and training programmes	Solid Waste Management
1.5	Set up target and assess the problem solving capacity of the NSWMSC	Final Disposal / Environmental Consolidation
2.1	Explore and establish support mechanism for Las by stakeholders	Promotion of Public Participation Programme and
2.2	Establish and information dissemination system for stakeholder	Social Consideration
2.3	Promote stakeholder awareness by participatory method	Financial Management / Fund Planning
2.4	Provide assistance to conduct training for stakeholders	
3.1	Identify priority Las & Assist formulation of SWM action plans	Shorts-term experts
3.2	Provide technical assistance for procurement and construction	
3.3	Provide technical assistance for operation and maintenance	Training in Japan
3.4	Provide technical assistance for monitoring and evaluation	
4.1	Collect data and analyze LA7s SWM situation for SWM Information System	Equipment
4.2	Promote review and feedback on National SWM Policy and Strategy	
4.3	Coordinate donors and promote external resources on SWM	

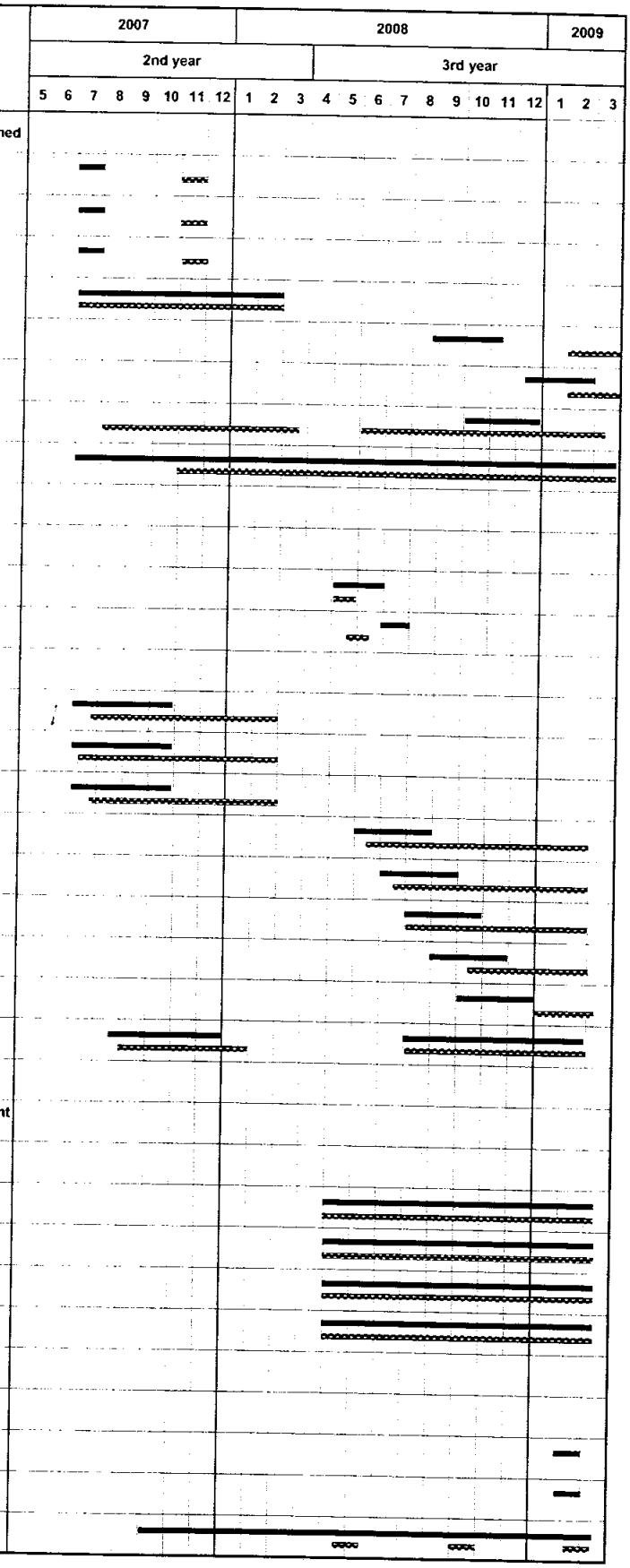
Means of Verification	Key Assumptions (Important Assumptions)
NSWMSC annual report	-
Project monitoring and evaluation Fortnightly progress meeting records Steering Committee records Interview to stakeholders 1. Attendance record 2. Capacity assessment of NSWMSC 3. Capacity assessment of NSWMSC 4. Capacity assessment of NSWMSC 5. Ministry's budget 6. Ministry's budget 7. Progress report, observation survey and interview survey	★ There is a fair coordination mechanism among stakeholders ★ SWM is regarded as a priority by Government and other decision makers ★ Clear responsibilities and duties are assigned and accepted by all involved parties ★ Provinces and Local governments allocate the necessary resources to implement the action plan of LS's SWM ★ Full commitment to public participation procedures from all tiers of government and stakeholders ★ Payment for services takes place, except in case of genuine hardship ★ Local governments have commitment to implement waste collection services ★ Financial resources (incl. loans or subsidies) are available for LA's and greater investment by authorities in SWM
Project monitoring and evaluation Fortnightly progress meeting records Steering Committee records Interview to stakeholders 1. Mid-term plan 2. Observation and interview survey 3. Observation and interview survey 4. Annual report, Progress report 5. Capacity assessment	★ Country budget forecasts remain on track to make the NSWMSC strategy feasible ★ No accelerating inflation ★ Sufficient, suitably qualified staff available and retained within (the) NSWMSC ★ Obstacles of LA's financial can be overcome and LAs take steps toward sound public finance
Project monitoring and evaluation Fortnightly progress meeting records Steering Committee records Interview to stakeholders 1. Progress report 2. Provincial SWM action plan 3. Progress report 4. History of update 5. Capacity assessment and observation 6. Questionnaire survey	
Project monitoring and evaluation Fortnightly progress meeting records Steering Committee records Interview to stakeholders 1. Capacity assessment & achievement 2. Capacity assessment & achievement 3. Capacity assessment & achievement 4. Capacity assessment & achievement 5. Capacity assessment & achievement 6. Capacity assessment & achievement 7. Capacity assessment & achievement 8. Capacity assessment & achievement 9. Questionnaire survey 10. Questionnaire survey	
Project monitoring and evaluation Fortnightly progress meeting records Steering Committee records Interview to stakeholders 1. NSWMSC's annual report 2. NSWMSC's annual report	

3. NSWMSC's annual report	
Input	★ Newly introduced SWM system accepted by communities
<Sri Lankan side> Ministry's SWM budget Office space and utility C/P staff Director: 1 Deputy Director: 3 Assistant Director: 5 Staff: 12, Driver: 2 Expense and allowance for lodging for staff and drivers	Pre-condition ★ SWM is regarded as a priority issue by Government and other decision makers ★ Surfeit financial resource available at the NSWMSC ★ Timely recruitment of Management Staff ★ Political and social stability exist.

Annex 2: Plan of Operation

Plan of Operation for PDM 0 and PDM 1

Code No	Activity
1	**Institutional management capacity of NSWMSC is strengthened**
1.1	1.1 Assess the capacity of the NSWMSC
1.2	Rationalize the management structure
1.3	Develop the operational processes
1.4	Establish information management systems on SWM
1.5	Develop a midterm implementation plan of the NSWMSC
1.6	Promote, review and give feedback on National SWM Policy and Strategy
1.7	Conduct human resource planning and training programmes
1.8	Coordinate donors and promote external resources on SWM
2	**NSWMSC Acquires the Facilitation Capacity for LAs to Formulate SWM Action Plans**
2.1	Collect data and analyze LAs' SWM situation
2.2	Identify priority LAs
2.3	Assist in the formulation of SWM action plans
	Kuliyapitiya UC
	Nawalapitiya UC
	Matara UC
	Kurunegala MC
	Wennappuwa PS
	Tangalle US
	Dambulla PS
	Ambalangoda UC
2.4	Provide assistance to conduct training for stakeholders
3	**NSWMC Acquires the Facilitation Capacity for LAs to Implement SWM Action Plans**
3.1	Provide technical assistance for procurement and construction
	Kuliyapitiya UC
	Nawalapitiya UC
	Matara UC
	Badulla MC
3.2	Provide technical assistance for operation and maintenance
3.3	Provide technical assistance for monitoring and evaluation
3.3.1	Assist in the establishment of the monitoring and evaluation system
3.3.2	Assist in the preparation of the comprehensive evaluation report
3.3.3	Assist in the provision of good practices



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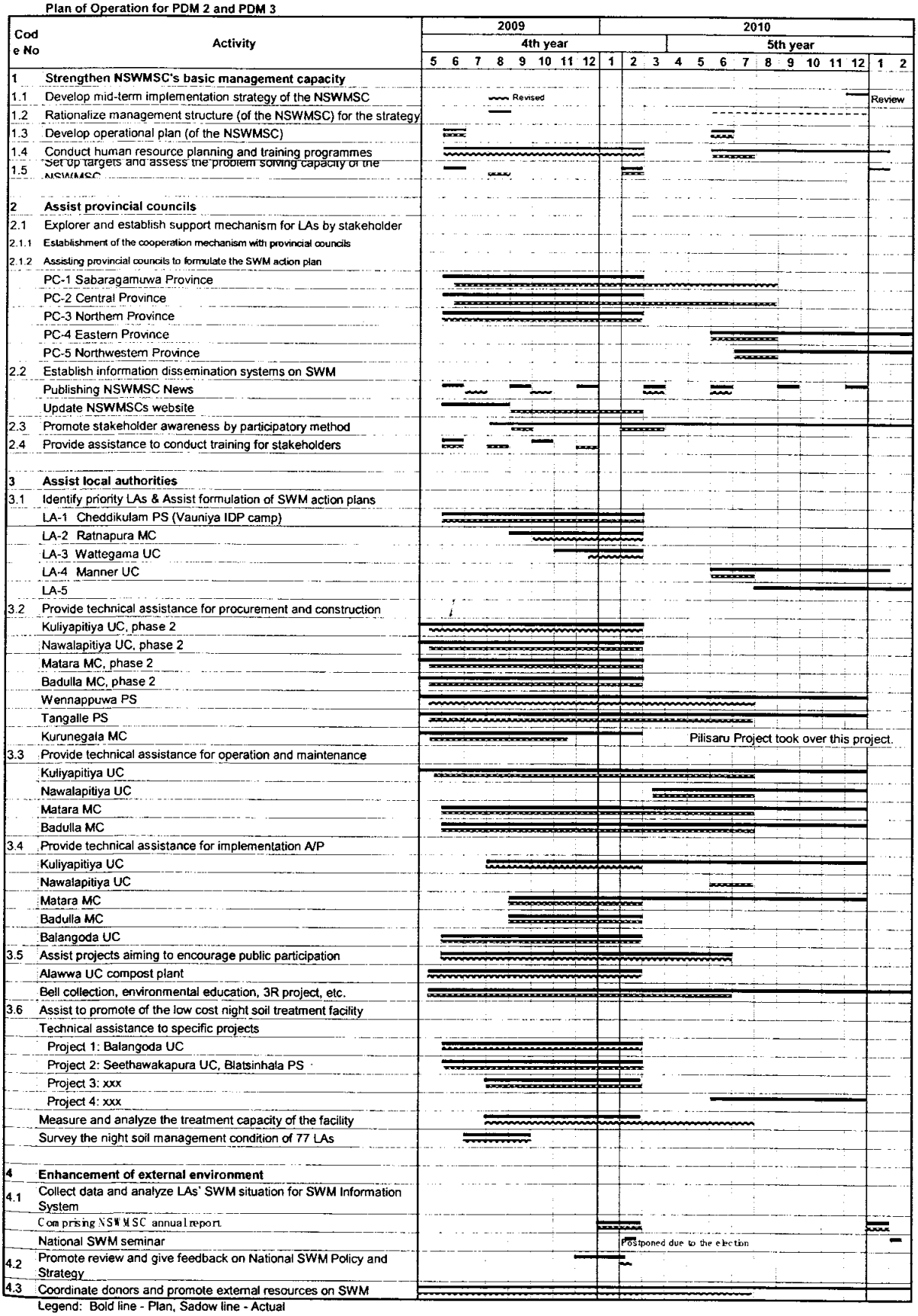
Plan of Operation for PDM 2 and PDM 3



Code No	Activity
1	**Strengthen NSWMSC's basic management capacity**
1.1	Develop mid-term implementation strategy of the NSWMSC
1.2	Rationalize management structure (of the NSWMSC) for the strategy
1.3	Develop operational plan (of the NSWMSC)
1.4	Conduct human resource planning and training programmes
1.5	Set up targets and assess the problem solving capacity of the NSWMSC
2	**Assist provincial councils**
2.1	Explorer and establish support mechanism for LAs by stakeholder
2.1.1	Establishment of the cooperation mechanism with provincial councils
2.1.2	Assisting provincial councils to formulate the SWM action plan
	PC-1 Sabaragamuwa Province
	PC-2 Central Province
	PC-3 Northern Province
	PC-4 Eastern Province
	PC-5 Northwestern Province
2.2	Establish information dissemination systems on SWM
	Publishing NSWMSC News
	Update NSWMSCs website
2.3	Promote stakeholder awareness by participatory method
2.4	Provide assistance to conduct training for stakeholders
3	**Assist local authorities**
3.1	Identify priority LAs & Assist formulation of SWM action plans
	LA-1 Cheddikulam PS (Vauniya IDP camp)
	LA-2 Ratnapura MC
	LA-3 Wattegama UC
	LA-4 Manner UC
	LA-5
3.2	Provide technical assistance for procurement and construction
	Kuliyapitiya UC, phase 2
	Nawalapitiya UC, phase 2
	Matara MC, phase 2
	Badulla MC, phase 2
	Wennappuwa PS
	Tangalle PS
	Kurunegala MC
3.3	Provide technical assistance for operation and maintenance
	Kuliyapitiya UC
	Nawalapitiya UC
	Matara MC
	Badulla MC
3.4	Provide technical assistance for implementation A/P
	Kuliyapitiya UC
	Nawalapitiya UC
	Matara MC
	Badulla MC
	Balangoda UC
3.5	Assist projects aiming to encourage public participation
	Alawwa UC compost plant
	Bell collection, environmental education, 3R project, etc.
3.6	Assist to promote of the low cost night soil treatment facility
	Technical assistance to specific projects
	Project 1: Balangoda UC
	Project 2: Seethawakapura UC, Blatsinhala PS
	Project 3: xxx
	Project 4: xxx
	Measure and analyze the treatment capacity of the facility
	Survey the night soil management condition of 77 LAs
4	**Enhancement of external environment**
4.1	Collect data and analyze LAs' SWM situation for SWM Information System
	Comprising NSWMSC annual report
	National SWM seminar
4.2	Promote review and give feedback on National SWM Policy and Strategy
4.3	Coordinate donors and promote external resources on SWM

Legend: Bold line - Plan, Sadow line - Actual

Annex 3: Evaluation grid of the terminal evaluation

Evaluation Grid of Terminal Evaluation, August 2010
Capacity Upgrading Project for NSWMSC (CUP-NSWMSC), Sri Lanka
Verification of Performance (based on PDM version 3)

Rating: A (satisfactorily achieved), B (fairly but not fully achieved,) and C (difficult to be achieved) by the end of the Project.
The rating A/B and B/C are the intermediate ones between A and B, and between B and C, respectively

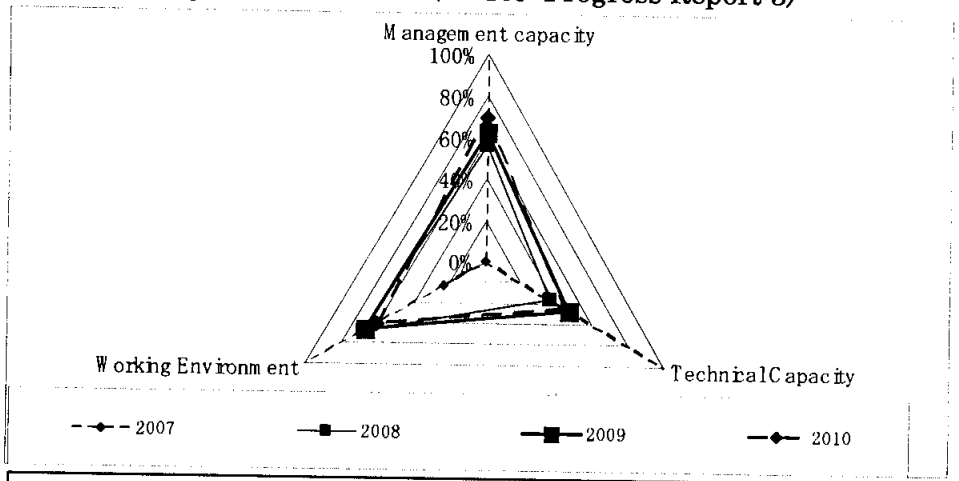
Overall Goal, Project Purpose & Outputs	Actual Achievement
Overall Goal	Verifiable Performance
Local Authorities (LAs) improve solid waste management (SWM). **<Remarks>** **The Improvement of SWM means:** **In 50% or more of LAs in Sri Lanka:** **1. The hygiene problems in the town caused by waste are overcome and the town maintains sanitary conditions;** **2. The negative environmental and social impacts are mitigated within a legally and socially permissible level;**	NSWMSC has conducted field surveys with the Japanese experts in 5 provinces, and analyzed the present conditions of LAs' SWM, as shown in the table (source from CUP-NSWMSC, 2010): (Classification of SWM Grade: Grade A : **good** with rating of 0-1, Grade B: **fair** with rating of 2-3, Grade C: **bad** with rating of4-8 and Grade D : **very bad** with rating of 7-8)

Province	Grade A	Grade B	Grade C	Grade D
Sabaragamuwa	21%	28%	31%	21%
Central	21%	48%	10%	21%
Northern	27%	64%	0%	9%
Eastern	26%	30%	26%	19%
North Western	13%	48%	13%	26%
Total	21%	40%	18%	21%

According to the Overall Goal setting in PDM3, the number of LAs of Grade C & D in terms of SWM conditions in 2010 will be reduced more than 50% in 2015.
It is too early to estimate the possibility of achievement of Overall Goal in 2015, because present survey is limited only for 5 provinces and the situation of SWM in remaining 4 provinces has not been survey. However if the data from these 5 provinces represent general situation of SWM in Sri Lanka, the 50% of Grade C & D's LAs means about 20% of LAs. Thus, improvement of SWM in those 20% of LAs is large but not impossible if NSWSC continue the efforts under well-organized cooperation with each provincial government and other stakeholders.

Project Purpose	
The NSWMSC acquires capacity for supporting SWM activities of the local authorities with close collaboration of relevant stakeholders so that the local authorities can implement the SWM activities in accordance with the National Strategy for Solid Waste Management	
Indicator	Verifiable Performance
In order for NSWMSC to obtain the sustainability of its operation: 1. 100% of the proposed staff (1 Director, 2 Deputy directors, 3 Assistant director and 8 staff) are to be assigned as of the end of 2010. **Rating = B**	The staff working for NSWMSC as of August 2010 consists of 1 Director, 0 Deputy Director, 1 Assistant Director, 5 staff and in addition 2 drivers and 1 office boy. 2 Deputy Directors, 2 Assistant Directors, and 3 staff are yet to be employed for NSWMSC by the end of 2010. < Hard-working of the present staff of NSWMSC> The current shortage of staff hinders the efficient technical transfer, while limiting the number of staff to receive the technical transfer, being unable to secure sufficient time to receive training in their already busy working condition. . Despite such very tight staff allocation, NSWMSC assisted to implement many SWM projects in 2009 (total Rs.204 million in cost). Most of its staff often works in the office even on Saturday and Sunday, and it proves that they have been highly committed to their work. Therefore, it is expected that NSWMSC would achieve the targeted technical capacity even with less than the proposed number of staff. <Recruitment of additional staff> Even after taking such constructive factor into account, employing more staff, technical staff in particular, is urgently needed. The Secretary of MOLGPC committed us that two technical staff, engineers, will be employed for NSWMSC within August 2010, and NSWMSC will be highly likely to obtain the targeted technical capacity even though the total number of staff will be still less than the proposed.
2. NSWMSC's management capacity achieves 70% of the target. **Rating=A**	The management capacity of NSWMSC has been measured by using 33 assessment items every year since 2007. The capacity is evaluated by NSWMSC staff themselves and Chief Advisor separately (see Annex 8). The management capacity which was 0% scored in 2007, but achieved 70% in the staff assessment and 71% in Chief advisor's assessment in February 2010. Therefore, the indicators show that the target has been achieved.

Assessment by NSWMSC staff (source: Progress Report 3)



Year	2007	2008	2009	2010
Management capacity	0%	56%	62%	70%
Technical Capacity	0%	37%	47%	45%
Working Environment	23%	68%	67%	61%
Capacity Assessment Indicator (CDI) of NSWMSC	**8%**	**53%**	**59%**	**58%**

Assessment by Chief Advisor

Year	2007	2008	2009	2010
Management capacity	0%	50%	64%	71%
Technical Capacity	0%	12%	29%	57%
Working Environment	23%	79%	76%	72%
Capacity Assessment Indicator (CDI) of NSWMSC	**8%**	**47%**	**57%**	**67%**

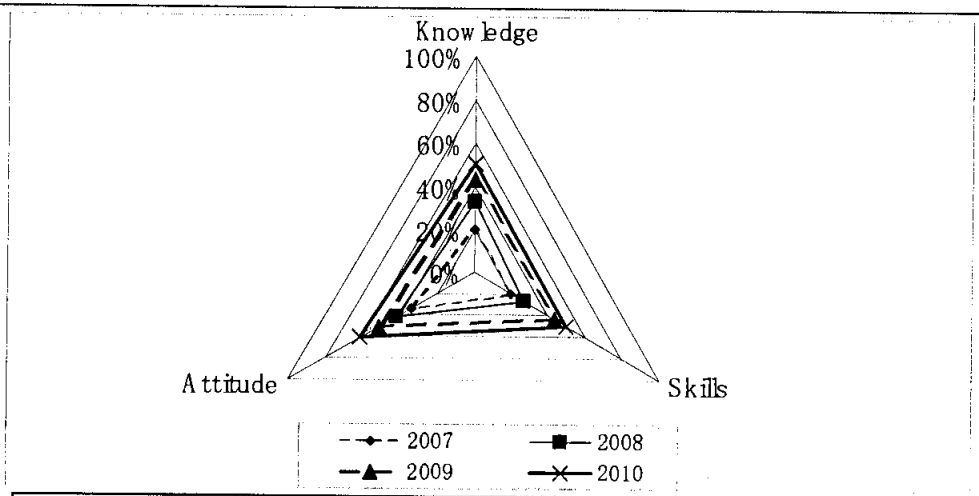
3. NSWMSC's SWM knowledge and skills (technical capacity) achieves 70% of the target **Rating = B**	The technical capacity of NSWMSC has been measured by using 55 assessment items every year since 2007, in the same manner as described above. The technical capacity which was 0% in 2007 achieved 45% in the staff assessment and 57% in Chief advisor's assessment in February 2010. The delay of the capacity development is mainly due to the lack of technical staff. It is essential to deploy new technical staff urgently and provide them with an intensive SWM training in order to achieve the target.

4. NSWMSC's working environment achieves 70% of the target. **Rating = B**	The working environment of NSWMSC has been measured by using 24 assessment items every year since 2007 in the same manner as described above. The working environment was 23% in 2007 but scored 61% in the staff assessment and 72% in Chief advisor's assessment in February 2010. The delay of the improvement of working condition is mainly due to the lack of staff and the poor condition for business trip. It is highly likely to achieve the target if additional staff will be assigned to NSWMSC vacant positions.
5. Ministry's SWM expenditure exceeds Rs 50 million per year. **Rating = A**	NSWMSC assisted to disburse Rs, 200 million in total (Rs. 32 million from Ministry's budget, Rs. 72 million from Pilisaru Project and Rs, 100 million from 2KR counterpart fund). The national budget for 2010 which was approved by the Parliament in July 2010. MLGPC was approved of Rs. 40 million for SWM projects in 2010, although it requested Rs. 120 million, due to the austere fiscal policy of the Government of Sri Lanka. Beside MLGPC's budget, NSWMSC has got approval to utilize Rs. 45 million of Pilisaru Project (Rs. 23.447 million for Tangalle project and Rs. 21.532 million for Wennappuwa project). It is able to utilize Rs. 85 million in total for SWM projects in 2010.
6. NSWMSC's budget to be used for the execution of site surveys reaches Rs 1 million per year. **Rating = A**	Although NSWMSC has never needed to spend the budget for this purpose, a part of Ministry's budget which is even more than Rs. 1 million is able to be allocated for this purpose.

7. NSWMSC maintains good network with various stakeholders. : **Rating = A**	• NSWMSC works as a scretariat for JICA SWM training Ex-participants Assotiation, conduct the selection of appropriate trainees for JICA SWM training in Japan and the preparation of necessary document, and requestes and receives JOCV volunteer for environmental education. Furthermore, NSWMSC executed the sanitary improvement project for the 300,000 internally displaced persons in Vavuniya IDP camp by obtaining the 2KR counterpart fund from the Embassy of Japan in 2009. • Director of NSWMSC attends the regular meeting and Apex meeting of the Pilisaru Project, and maintains daily contact with Pilisaru Project department so that NSWMSC could get approval to utilize Rs. 20 million in 2008, Rs. 72 million in 2009 and Rs. 45 million in 2010. • NSWMSC maintain the usual contact with Waste Management Authority belonging to Western Provincial Government. • NSWMSC is assisting the UNOPS project in Ampara district in terms of the operation and maintenance of the facilities constructed, in response to the request by UNOPS so that these facilities can be taken over by local authorities smoothly. • As for individuals, NSWMSC has been getting the great condtibution by Dr. Sumith Pilapitiya who is an environmental officer of World Bank Sri Lanka office, Prof. Ben Basanayaka of University of Peradeniya, Dr. Mahesh of University of Moratuwa, Mr Nimal Prematilaka, PHI of Balangoda UC, etc. for lecturers and teaching the practical technique for composting. • As for donors and NGOs, NSWMSC keeps contact with Caritas, USAID, Linerasia, AustAID, SEVANATA, Arthachariya, etc.
Conclusive Judgment for Project Purpose: **Rating = A/B**	Of these indicators, there are 4 points of A, 1 point of A/B and 2 points of B. Present level of achievement in some factors is rather low because of limited number of staff assigned in NSWMSC. However, the Team found remarkable progress in every indicator in spite of insufficiency of NSWMSC staff. Thus the Team judges that within the restriction of current conditions, the core issue of Project Purpose, "NSWMSC acquires capacity for supporting SWM activities of the LAs", can be basically achieved by the end of the Project if NSWMSC continue the efforts in the course of the Project.

Output 1	
NSWMSC establishes the basic organizational structure with the mid-term implementation strategy.	
Indicator	Verifiable Performance

1. NSWMSC formulates and updates a comprehensive mid-term plan for NSWMSC. **Rating = A**	NSWMSC Mid-term Plan which was produced in March 2009 was revised in September 2009 by taking the changes of PDM and Project Document into account. NSWMSC's operation programme in 2010 was prepared in line with the Mid-term Plan. The Mid-term Plan will be again revised, considering its capacity and needs, before the end of the Project, so that NSWMSC will be able to execute the activities based on the Mid-term Plan by itself.
2. Each staff of NSWMSC can effectively work with understanding its tasks. **Rating = A**	The Project Document 2010 which shows the activities schedule for 2010 has been distributed to every staff with explanation. Every staff concentrates on her work during the working hour because each staff has understood the Projects, the works and the tasks which she is in charge of.
3. NSWMSC can execute activities with clear work processes and decision making process. **Rating = A**	Because the instruction by Director of NSWMSC is always very quick and clear, all NSWMSC staff work with clear idea of work process and decision making process.
4. Staff training materials produced is compiled for self learning. **Rating = A**	Various technical reference materials have been prepared in CUP-NSWMSC project. (Refer to Annex 7). The soft data of all these documents are saved in the NSWMSC cabinet in its host computer and the hard copies are neatly kept in the book cabinet. All staff is able to find and refer these materials easily.
5. All staff in NSWMSC can work on SWM with basic understanding. **Rating = A**	The capacity of each staff has been measured by using 83 assessment items every year since 2007. All subjects to be learnt by staffs are listed up and classified into three categories; knowledge, skill, and attitude. This is a capacity assessment sheet for staff. Each staff's capacity is assessed by herself and JICA Chief Advisor, separately. The average score of self-assessment of all staffs, which was 25% in 2007, achieved 55% in February 2010 (See the chart and table below; source CUP-NSWMSC, 2010). It is expected to achieve about 65% which is deemed to be the level having the basic understanding on SWM.



Year	Baseline	Feb. 2008	Feb. 2009	Feb. 2010
Knowledge	20%	32%	43%	51%
Skills	20%	26%	43%	49%
Attitude	34%	42%	51%	61%
Total Average	25%	33%	46%	55%
Increment	-	8%	9%	9%

Conclusive Judgment for the Output 1: **Rating = A**	**The Output 1 can be satisfactorily achieved by the end of NSWMSC, but there is a certain difficulty in staffing of NSWMSC.**

Output 2

The NSWMSC establishes an efficient mechanism for supporting LA's SWM by stake holders.

Indicator	Verifiable Performance
1. SWM committee is established in more than 5 PCs and they start to function. **Rating = A**	NSWMSC started to assist 3 Provincial governments (Sabaragamuwa, Central, Northern) in the field of SWM in 2009 and started to assisted 2 Provincial governments (Eastern and North Western) in 2010. Except Northern Provincial Government, the "Provincial SWM Committee" was established in each Provincial government. Their activities are still very limited because of no permanent staff has been assigned and no permanent organization has been established, so far. However, Sabaragamuwa Provincial Government has taken an effective measure among their limited measures that is to

	transfer an engineer from the Provincial Government to Ratnapura MC, where serious waste problem occurs, to make an improvement of SWM. Central Provincial Government has proposed to establish the SWM Unit in the Provincial Government as its top priority measure in the Provincial SWM Action Plan. NSWMSC has started to cooperate with 5 Provincial governments (Sabaragamuwa, Central, Northern, Eastern, and North Western) since 2009, but Northern Province is the only one that has not established the Provincial SWM Committee. This is because Northern Provincial Government has been preoccupied with reconstruction works after the end of civil war and its office is still located in Eastern Province. Therefore, NSWMSC has taken the policy for Northern Province to directly assist ACLG (Assistant Commissioner of Local Government) office which locates in each District. In the sanitary improvement project for IDP camp in Vavuniya executed in 2009 by using 2KR Counterpart Fund, the Vavuniya ACLG office was responsible for the implementation of the site work. As for Eastern Province, the Provincial SWM Committee has decided to formulate the District SWM Action Plan for each District because the Province is too wide and long to supervise all local authorities. North Western Provincial SWM Committee had been established before NSWMSC started to assist it because it is rather independent. Because each Province has quite different SWM problems and different administrative capacity from each other, the most appropriate approach for each province is selected by the Project.
2. Provincial SWM action plan is formulated in more than 5 provinces and it is executed. **Rating = A/B**	The provincial SWM action plan has been prepared for each of 3 Provinces (Sabaragamuwa, Central, Northern), and they have understood the SWM condition of each local authority correctly. They have started to execute the improvement measures and also to review the activity plan. As for Eastern Province and North Western Province, the survey for formulating the SWM action plan started in June and July 2010, respectively, and their action plans are under the formulation to be completed by the end of 2010.
3. NSWMSC can disseminate information with regard to SWM to stakeholders through various means. **Rating = A**	NSWMSC has been publishing "NSWMSC NEWS" since November 2007 for disseminating information to stakeholders and public society. NSWMSC has constructed its website under the Ministry's website to show their activities and NSWMSC NEWS. In addition, various published materials by NSWMSC can be freely downloaded from its website. http://www.pclg.gov.lk/node/59 This website can be easily maintained by NSWMSC staff, although very limited functions are available because the Ministry's website is constructed by using free software. One of NSWMSC staff is able to update the website.

4. NSWMSC's website is updated more than 4 times a year, and NSWMSC News is sent to all stakeholders quarterly. **Rating = A/B**	NSWMSC published "NSWMSC NEWS" in November 2007, June 2008, January 2009, July 2009, October 2009, March 2010, and June 2010. It is distributed to all 330 local authorities in the country, all members of JICA SWM Training Ex-participant Association and other relevant institutions. From NSWMSC NEWS (July 2009), NSWMSC staff edits and prepares it without the JICA Expert's assistance. The articles for NSWMSC NEWS are first written in Sinhala language and then translated into Tamil and English. The frequency of NSWMSC News publication is increasing and likely to achieve four times a year in 2010. The website is scheduled to be updated when NSWMSC NEWS is published.
5. NSWMCS can promote guidelines and manuals produced to be used by stakeholders. **Rating = A**	Most of all NSWMSC staff could not speak in public in 2007 when the NSWMSC started. However, they have gained the capacity in public speech through experiencing the environmental education programmes for school children, and participating in the exhibitions and symposiums. The various materials produced require the different capacities for staff to promote the know ledges and techniques discussed in the materials, depending on the contents. Each material produced can be promoted by someone in NSWMSC, who has understood and can explain its contents. However, the increase of technical staff is necessary for these technical reference manuals to be more widely spread and fully utilized.
6. SWM training is conducted to cover 5 PCs and more than 20% of trainees utilize the knowledge learnt. **Rating = A**	The SWM training was executed by NSWMSC three times in 2009 and they covered 8 Provinces, leaving only Western Province uncovered, and the total number of trainees reached 560 persons as the following table (source: CUP-NSWMSC, 2010).

Target provinces	North western North central Southern	Uva Central Sabaragamuwa	North Eastern	8 Provinces
Month	June 2009	August 2009	December 2009	-
Venue	Colombo	Colombo	Trincomalee	-
3days course for Technical staff	70	70	Merged by Non-technical course	140
3 days course for Non-Technical staff	70	70	70	210
1 Day course for high ranking officer	70	70	70	210
Total	210	210	140	560

	It was initially planned to target for 6 Provinces. However, after the civil war was over, with the progress of reconstruction of, local authority staffs' of Northern and Eastern Provinces demand for learning SWM knowledge. In order to meet their demand, additional trainings were held with Tamil simultaneous interpreter for local authority staff in Northern and Eastern Provinces, where Tamil textbook on SWM was prepared by NSWMSC.
Conclusive Judgment for Output 2 : **Rating = A**	The Output 2 will be achieved by the end of Project.
Output 3	
Facilitation Capacity of the NSWMSC for implementation of SWM Action Plans of LAs is acquired	
Indicator	Verifiable Performance
1. NSWMSC can assist LAs to formulate SWM action plans. **Rating = A**	A SWM action plan was formulated for each 3 LAs in 2007, 5 LAs in 2008 and 3 LAs in 2009, and 11 LAs in total. In addition, in 2008 NSWMSC staff formulated a SWM action plan for Tangalle PS and Kurunegala PS by themselves. NSWMSC staffs have gained the capacity to formulate a SWM action plan for a LA through the experiences.
2. NSWMSC can assist LAs to acquire new lands. **Rating = A**	NSWMSC assisted Kuliyapitiya UC and Nawalapitiya UC to officially acquire the land for the model projects by involving the high ranking officers of MLGPC. Although the administrative procedure of transferring the land ownership in Sri Lanka is very complicated, NSWMSC has obtained the certain level of capacity to facilitate.
3. NSWMSC can assist LAs to get legal permission and approval. **Rating = A**	NSWMSC assisted Kuliyapitiya UC, Nawalapitiya UC, Badulla MC, Matara MC, Tangalle UC, Wennappuwa PS to apply the Environmental Clearance for the model project to CEA and all of these LAs were successfully granted it by CEA. As for Nawalapitiya UC, NSWMSC assisted the LA to conduct the Initial Environmental Evaluation (IEE) in response to the request by CEA and IEE was approved. As for the night soil treatment facility, NSWMSC assisted Balangoda UC and Seethawakapura UC to apply for Environmental Clearance and they obtained it. NSWMSC has successfully assisted many LAs to apply for Environmental Clearance during the CUP-NSWMSC project. Through these experiences, NSWMSC has obtained the capacity in acquiring legal approval for construction of small

	scale SWM facilities.
4. NSWMSC can assist LAs to manage social problems. **Rating = B**	NSWMSC assisted Kuliyapitiya UC, Nawalapitiya UC, Badulla MC, Matara MC to organize the public hearing for neighborhoods to get acceptance for the project before the construction. In addition, NSWMSC has decided to suspend the project of the night soil low cost treatment tank in Kegalle UC and Seethawakapura UC due to the strong public opposition. Through these valuable experiences, NSWMSC could learn the difficulty and the importance of social consideration for the project implementation.
5. NSWMSC can assist LAs to get funds for projects. **Rating = A**	NSWMSC assisted LAs to utilize Rs. 200 million in total for SWM projects in 2009; Rs.32 million from Ministry's SWM budget; Rs. 72 million from Pilisaru project; and Rs. 100 million from 2KR Counterpart Fund.
6. NSWMSC can assist LAs in procurement work. (detailed design, tender, contract, supervision, project account) **Rating = A**	At the Kuliyapitiya project, NSWMSC arranged to employ a local consultant for detailed design and supervision work by utilizing Pilisaru project fund. However, the procurement procedure of a local consultant was very time consuming and troublesome and in addition the supervision of the local consultant was again very time consuming and troublesome. Furthermore, the cost to employ the local consultant was too expensive comparing to the low construction cost of the proposed facility. Reflecting this experience, NSWMSC selected the policy to draw a detailed design and conduct supervision by technical staff of LAs. For this purpose, the Project prepared a Design Manual for a Small Scale Compost Facility. The prototype of the compost facility was designed and all necessary drawings were prepared and included in the Manual. If a user decides only the designed waste treatment amount per day, a user can find the all necessary drawings for the proposed facility. This Design Manual facilitates technical staff to properly design the appropriate compost facility and take off the quantity of materials and prepare the tender document. The facilities for Tangalle project and Wennappuwa project have been designed by using this Manual by technical staff of the LAs.
7. NSWMSC can assist LAs in operation and maintenance. **Rating = A**	NSWMSC produced a Guideline for the compost operation with the supervision by Dr. Sumith Pilapitiya who has taught how to operate Weligama compost plant at site since 2006. This Guideline was prepared in three languages and used for lecture and also for practical reference for the site operation of compost facility. As for the supervision for the compost plant, it was too hard for current NSWMSC staff to do it because they do not have site experience and difficult to often visit the sites in remote areas. Therefore, NSWMSC has gained the cooperation from various resource persons as shown below:

Kuliyapitiya	Mr. Nimal Prematilaka, PHI of Balangoda UC
Nawalapitiya	Prof. BFA Besnayake, University of Peradeniya
Matara	Dr. Sumith Pilapitiya, World Banka
Badulla	Mr. Nimal Prematilaka, PHI of Balangoda UC

<table>
<tr><td></td><td>Before the commencement of operation of these plants, the supervisors and workers of the LAs received practical training by the resource persons for more than a week either in Balangoda compost plant or Weligama compost plant. Such arrangement for training was assisted by NSWMSC.
Training for compost plant operation is increasingly organized and the number of experienced supervisors on compost facility is also increasing.</td></tr>
<tr><td>8. NSWMSC can assist LAs in monitoring.
Rating = A</td><td>The Project defines the monitoring work into two types.
One monitoring is to monitor the operation condition of the facility such as a compost plant. For this purpose, NSWMSC instructed a LA to organize a Monitoring Committee. The Monitoring Committee is held every 3 months with a participation of NSWMSC staff and each member, and they assess the operating condition by using the assessment sheet. This type of monitoring is carried out at four model project sites in the Project.
The other type of monitoring is to monitor the progress of the SWM action plan. This type of approach has just started in Kuliyapitiya project with the participation of JOCV volunteer dispatched from April 2010. NSWMSC concentrates on Kuliyapitiya UC, Matara MC and Wennappuwa PS to establish the efficient SWM system by getting public cooperation.</td></tr>
<tr><td>9. More than 17 SWM action plans for LAs are formulated.
Rating = A</td><td>The list of LAs which the Project is assisting is summarized in Annex 8 and locations are shown in the cover page map. Total 13 LAs, Kuliyapitiya UC, Nawalapitiya UC, Matara MC, Badulla MC, Wennappuwa PS, Tangalle UC&PS, Kurunegala MC, Ambalangoda UC, Dambulla PS, Ratnapura MC, Wattegama UC, IDP camp in Cheddikulam PS, Mannar UC, have been assisted to formulate the SWM action plan and 9 LAs were assisted for the feasibility study.
In the model project, LAs receive technical assistance for either the action plan formulation and/or the feasibility study. Badulla MC prepared the action plan by itself without NSWMSC's assistance because they had received the technical assistance for the action plan formulation by JICA Development Study in 2002 and 2003. NSWMSC's assistance to Badulla MC commenced after the action plan formulated, which is regarded as a model project. In addition to these model projects assissted by JICA Expert Team, NSWMSC also support three action plans of LA project of compost plant, in Chilaw PS, Mahiyanganaya PS and Thalawa PS. Therefore total 17 project in LA level has been formulated.</td></tr>
<tr><td>10. More than 50% of projects formulated in the action plans are materialized.
Rating = A</td><td>8 out of 14 model projects, 50% of the total, have been implemented as following table (source: CUP-NSWMSC,2010).
<table>
<tr><th>Name of local authorities</th><th>Start year</th><th>Current condition</th></tr>
<tr><td>1. Kuliyapitiya UC</td><td>2007</td><td>Operation</td></tr>
<tr><td>2. Nawalapitiya UC</td><td>2007</td><td>Operation</td></tr>
<tr><td>3. Matara MC</td><td>2007</td><td>Operation</td></tr>
<tr><td>4. Badulla MC</td><td>2007</td><td>Operation</td></tr>
<tr><td>5. Wennappuwa PS</td><td>2008</td><td>Under construction</td></tr>
<tr><td>6. Tangalle UC&PS</td><td>2008</td><td>Under construction</td></tr>
<tr><td>7. Kurunegala MC</td><td>2008</td><td>Responsibility of technical assistance has been transferred from NSWMSC to Pilisaru Project</td></tr>
</table></td></tr>
</table>

			for the implementation. Pilisaru Project has approved the implemerntation of this project.
	8. Ambalangoda UC	2008	
	9. Dambulla PS	2008	
	10. Ratnapura MC	2009	Detailed design work is in process.
	11. Wattegama UC	2009	
	12. IDP camp in Cheddikulam PS	2009	Operation
	13. Mannar UC	2010	Action plan formulation is in process.
	14. Not yet selected	2010	
	Total		

Conclusive Judgment for Output 3 : Rating = A	The Output 3 will be achieved by the end of the Project.
Output 4	
NSWMSC provides necessary information so that the Ministry can contribute to the National SWM policy and strategy.	
Indicator	Verifiable Performance
1. NSWMSC can understand the present SWM conditions in the country. **Rating = A**	The SWM questionnaire survey data for LAs is stored in the NSWMSC host computer. NSWMSC store all data and pictures collected during the survey for provinces which started since 2009.

Name of province	No. of LAs	No. of LAs of which data collected in 2009 and 2010
Northern	34	11
Eastern	43	43
North Central	26	
North Western	32	32
Central	42	42
Western	48	
Sabaragamuwa	29	29
Uva	27	
Southern	49	
Total	330	157

	SWM national policy, related law, regulation, guidelines, manuals are also stored in the cabinet.
2. Valuable recommendations to National SWM policy and strategy are included in NSWMSC annual report. :	NSWMSC publishes the annual report which should contain the progress of NSWMSC, the general present SWM condition in the country, the important issues and the recommendations. However The annual report in 2010 contains only the progress of NSWMSC. It did not include the general present SWM condition in the country.

Rating = B	
3. National and international institutional links and communication channels are established and maintained. **Rating = A**	NSWMSC is playing a secretariat role for JICA Ex-participant Association of SWM Training Course which is one of the biggest SWM-related officers' associations in Sri Lanka. NSWMSC maintains the communication channels with the following international and national institutions. ● UN institution: UNOPS, UNICEF, UNDP ● Donor: JICA, USAID, KOICA ● NGOs: Asia Foundation, Sevanata, Linerasia, ● University: University of Peradeniya, University of Moratuwa, University of Colombo
Conclusive Judgment for Output 4 : **Rating = A/B**	The Output 4 will be achieved by the end of the Project if MLGPC start to examine National SWM Policy based on information provided by the NSWMSC.

Annex 4: List of Actual Inputs of Japanese experts

Japanese Fiscal Year 2006

Expert Name	Position	Duration	Man-Month		
			Sri Lanka	Coordination	Japan
Akira Doi	Chief Advisor / Capacity Development	2007/3/5 - 2007/3/10			0.20
Mitsuko Nakamura	Promotion of PPP and Social	2007/3/5 - 2007/3/10			0.20
Akira Doi	Chief Advisor / Capacity Development	2007/3/11 - 2007/3/24	0.47		
Mitsuko Nakamura	Promotion of PPP and Social	2007/3/11 - 2007/3/24	0.47		
Naofumi Sato	Project coordinator	2007/3/17 - 2007/3/24		0.27	
Total			0.94	0.27	0.40

Japanese Fiscal Year 2007

Expert Name	Position	Duration	Man-Month	
			Sri Lanka	Coordination
Akira Doi	Chief Advisor / Capacity Development	2007/5/14 - 2007/7/27	2.50	
		2007/8/20 - 2007/11/22	3.17	
		2008/1/7 - 2008/3/16	2.33	
Naofumi Sato	Solid Waste Management Planning / 3Rs	2007/5/14 - 2007/9/5	3.83	
		2007/10/29 - 2008/2/6	3.37	
Masahiro Ido	Final Disposal Planning / Environmental consideration	2007/10/29 - 2007/12/27	2.00	
Mitsuko Nakamura	Promotion of PPP and Social	2007/8/22 - 2007/10/20	2.00	
Takehiko Ogawa	Financial Management/Fund Planning	2008/1/8 - 2008/3/16	2.30	
Aiko Iwamoto	Project coordinator	2007/5/28 - 2007/8/17		2.73
Total			21.50	2.73

Japanese Fiscal Year 2008

Expert Name	Position	Duration	Man-Month	
			Sri Lanka	Coordination
Akira Doi	Chief Advisor / Capacity Development	2008/4/29 - 2008/6/5	1.27	
		2008/8/12 - 2008/8/17	0.20	
		2008/8/26 - 2008/9/2	0.27	
		2008/9/8 - 2008/10/9	1.07	
		2008/10/13 - 2008/11/23	1.40	
		2008/12/21 - 2009/1/23	1.13	
		2009/1/25 - 2009/2/16	0.77	
		2009/2/19 - 2009/2/20	0.07	
		2009/2/28 - 2009/3/14	0.50	
Naofumi Sato	Solid Waste Management Planning / 3Rs	2008/5/20 - 2008/8/26	3.30	
		2008/9/26 - 2008/12/25	3.03	
		2009/1/9 - 2009/3/14	2.17	
Norikazu Yamazaki	Environmental consideration	2008/9/26 - 2008/11/18	1.80	
Tomoko Tamura	Promotion of PPP and Social Consideration	2008/10/2 - 2008/10/8	0.23	
		2008/10/10 - 2008/10/14	0.17	
		2008/10/16 - 2008/11/24	1.33	
		2008/11/28 - 2008/12/5	0.27	
Takehiko Ogawa	Financial Management/Fund Planning	2008/5/13 - 2008/6/19	1.27	
		2008/11/18 - 2008/12/30	1.43	
Ryohei Matsumoto	Project coordinator	2008/7/15 - 2008/9/26		2.47
Total			21.67	2.47

Japanese Fiscal Year 2009

Expert Name	Position	Duration	Man-Month	
			Sri Lanka	Coordination
Akira Doi	Chief Advisor / Capacity Development	2009/5/11 - 2009/6/10	1.03	
		2009/7/24 - 2009/10/3	2.40	
		2009/10/27 - 2009/10/28	0.07	
		2010/11/4 - 2010/11/4	0.03	
		2009/11/9 - 2009/11/29	0.70	
		2009/12/2 - 2010/1/2	1.07	
		2010/1/27 - 2010/2/1	0.20	
		2010/2/27 - 2010/3/13	0.50	
Naofumi Sato	Solid Waste Management Planning / 3Rs	2009/5/26 - 2010/8/15	2.73	
		2009/9/30 - 2009/11/28	2.00	
		2010/1/3 - 2010/3/6	2.10	
Norikazu Yamazaki	Environmental consideration	2009/6/17 - 2009/8/15	2.00	
Chiaki Nishi	Promotion of PPP and Social Consideration	2009/6/28 - 2009/7/25	0.93	
		2009/8/25 - 2009/10/29	2.20	
		2009/10/31 - 2009/11/7	0.27	
		2009/12/13 - 2009/12/17	0.17	
		2010/2/8 - 2010/2/20	0.43	
Takehiko Ogawa	Financial Management/Fund Planning	2009/10/28 - 2009/12/16	1.67	
Shinnosuke Oda	Project coordinator	2009/9/2 - 2009/10/1		1.00
Akira Doi	Project coordinator	2010/2/2 - 2010/2/16		0.50
Chiaki Nishi	Project coordinator	2010/2/21 - 2010/2/28		0.27
Naofumi Sato	Project coordinator	2010/3/7 - 2010/3/13		0.23
Total			20.50	2.00

Japanese Fiscal Year 2010

Expert Name	Position	Duration	Man-Month	
			Sri Lanka	Coordination
Akira Doi	Chief Advisor / Capacity Development	2010/6/6 - 2010/6/11	0.20	
		2010/6/18 - 2010/7/10	0.77	
		2010/8/3 - 2010/9/25	1.80	
		-	0.67	
		-	0.17	
		-	1.07	
Naofumi Sato	Solid Waste Management Planning / 3Rs	2010/5/23 - 2010/8/28	3.27	
		-	1.63	
		-	2.93	
Chiaki Nishi	Promotion of PPP and Social Consideration	2010/5/30 - 2010/6/26	0.93	
		2010/7/5 - 2010/8/5	1.07	
		-	1.00	
Takehiko Ogawa	Financial Management/Fund Planning	-	1.00	
Hideo Sato	Project coordinator	2010/6/25 - 2010/8/23		2.00
Total			16.50	2.00

Annex 5: List of the trainings

Category	Subject	Date
Lecture	Basic knowledge on Waste	04 Sep 2007
Lecture	Objectives of SWM	04 Sep 2007
Lecture	Basic Technical System Components	11 Sep 2007
Lecture	Various Waste Amounts	11 Sep 2007
Lecture	Waste Discharge / Generation Rate	19 Sep 2007
Lecture	Determination of Waste Amount	19 Sep 2007
Lecture	Waste Physical Composition Survey	27 Sep 2007
Lecture	Various Surveys on Waste Properties	27 Sep 2007
Lecture	Properties of Waste Composition	02 Oct 2007
Lecture	Properties of Waste by Source	02 Oct 2007
Lecture	Waste Stream	02 Oct 2007
Lecture	Waste Discharge and Storage	09 Oct 2007
Lecture	Various Waste Collection Methods	09 Oct 2007
Lecture	Equipment for Waste Collection and Transportation	18 Oct 2007
Lecture	Various Waste Transportation Systems	18 Oct 2007
Lecture	Manual Compost Method	23 Oct 2007
Lecture	(SWM course for new and additional staff) 11 staff participated	30 Oct. 2007
Lecture	Compost Method (Advance)	14 Nov 2007
Lecture	Problems caused by waste disposal	19 Dec 2007
Lecture	Landfill Operation Method	28 Dec 2007
Lecture	NIMBY Syndrome	21 Jan 2008
Lecture	Financial and funding was given to all staffs in NSWMSC.	25 Feb 2008
Lecture	Financial Management & Training	26 Feb 2008
Lecture	Basis for Accounting	29 May 2008
Lecture	Improvement of Coding System for SWM Services	11 June 2008
Lecture	Sample Application Form for LLDF-funded SWM Projects	13 June 2008
Lecture	Improvement on Active Use of LLDF Scheme for SWM Projects	13 June 2008
Lecture	Basic Mathematics for SWM 1	25 June 2008
Lecture	Basic Mathematics for SWM 2	2 July 2008
Lecture	Basic Mathematics for SWM 3	23 July 2008
Lecture	Basic Mathematics for SWM 4	30 July 2008
Lecture	Basic Mathematics for SWM 5	3 Sep 2008
Lecture	EIA and Waste Management	11 Nov 2008
Lecture	Let's improve your presentation skill	11 Nov 2008
Lecture	Formulation of Action Plan	1 Jan 2009
Lecture	Operation of Compost Plants	21 Jan 2009
Lecture	Utilization of Maps	28 Jan 2009
Lecture	Plan and Design of the Small Capacity Compost 1	19 Feb 2009
Lecture	Plan and Design of the Small Capacity Compost 2	24 Feb 2009
Lecture	Producing Environmental Map by using GPS and Google Earth	16 Jul 2009
Lecture	Preparation of Monitoring Report by LAs	23 Jul 2009
Lecture	Monitoring field visit and Reporting	6 Oct 2009
Lecture	Explanation on the new material "Good Practices"	4 Mar 2010
Lecture	Strategic Environmental Education	8 Mar 2010
IT training	- Establishment of personal account in the computer - Rule of share holders and saving files	25 Sep 2007
IT training	• User account, Folder management, Administrator account	17 Oct 2007

	management	
Field study	- Seven staff in MoLGPC were taken to landfill sites near Colombo.	30 May 2007
Field study	Maduwathi Chandrakanti, Kumari, Doi visited the Moon Plain Landfill Site in Nuwara Eliya to study the sanitary landfill.	14 Sep 2007
Field study	Visited the following site on 2nd Nov. - Biogas plant in Mutulajawela - Katana compost plant - Compost plant in Negombo - Compost plant in Chilaw	02 Nov 2007
Field study	Visited the Moon Plain landfill site in Nuwara Eliya to study the sanitary landfill.	05 Nov 2007
Field study	New leachate collection liner system at Peradenia University	12 Dec 2007
Field study	Visited Balangoda Compost plant to learn the windrow compost.	27 Dec 2007
Field study	Visit Kuliyapitiya compost plant and Alawwa compost plant	15 Jan 2009
Technical survey method	1) Existing & candidate Disposal site survey 2) Large discharger survey 3) Time and motion survey 4) Waste composition survey, 3 samples 5) Waste discharge rate survey, 100 samples for 7 days	23 July to 24 Aug. 2007
Non-technical survey method	1) Financial data, last 3 years 2) By-law, etc. 3) Interview survey for SWM related parties 4) Resources 5) Environmental education, public cooperation, community activities, NGOs,etc. 6) Public Opinion survey, 30 samples	23 July to 24 Aug. 2007

Annex 6: List of the provided equipment

No.	Name of equipment	Unit	Qty.
1	Note book computer	nos.	10
2	Desk top computer	nos.	4
3	UPS (Uninterruptible power supply)	nos.	4
4	Anti virus software	nos.	12
5	Microsoft office professional 2007	nos.	12
6	Software for designing, AutoCAD 2008	no.	1
8	A3 inkjet colour printer	no.	1
9	A4 Multifunctional laser printer(Printing, Scanning, Facsimile and photocopy)	no.	1
10	LCD projector	no.	1
11	Portable screen	no.	1
12	Network equipment	unit	1
13	Photo copy machine for A3 size	no.	1
14	Digital camera	no.	1
15	Sinhalee word processing software	nos.	12
16	Acrobat professional	nos.	2
17	Spring balance	nos.	900
18	Video camera	no.	1
19	GPS	no.	1

Annex 7: List of the produced technical reference materials

No	Name of Report (provided year)		
1	Solid waste management data base		
2	NSWMSC Mid term Plan	(English/Sinhala/Tamil)	
3	NSWMSC Annual Report	(English/Sinhala/Tamil)	
4	Counterpart Training Report	(English/Sinhala/Tamil)	
5	Manual on Funding and Financial Management for SWM projects		(English/Sinhala/Tamil)
6	Solid Waste Management Text book for Local Authority's		(English/Sinhala/Tamil)
7	SWM Action Plan for Matara MC	(English/Sinhala)	
8	SWM Action Plan for Kuliyapitiya UC	(English/Sinhala)	
9	SWM Action Plan for Nawalapitiya UC	(English/Sinhala)	
10	SWM Action Plan for Tangalle UC,PS	(English/Sinhala)	
11	SWM Action Plan for Ambalangoda UC	(English/Sinhala)	
12	SWM Action Plan for Wennapuwa PS	(English/Sinhala)	
13	SWM Action Plan for Kurunegala MC	(English/Sinhala)	
14	SWM Action Plan for Dambulla PS	(English/Sinhala)	
15	SWM Action Plan for IDP camp Chedikuram PS	(English)	
16	SWM Action Plan for Ratnapura MC	(English/Sinhala)	
17	SWM Action Plan for Wattegama UC	(English/Sinhala)	
18	SWM Action plan for local authority	(English/Tamil)	in process
19	SWM Action plan for Manner UC	(English/Tamil)	in process
20	Manual for Public Private Partnership in Solid Waste Management		(English/Sinhala/Tamil)
21	Solid Waste Management Text book for Local Authority's		(English/Sinhala/Tamil)
22	Manual for implementation of solid waste management projects		(English/Sinhala/Tamil)
23	Manual for Operation and Maintenance for SWM facilities		(English/Sinhala/Tamil)
24	Monitoring and Evaluation Manual for SWM project		(English/Sinhala/Tamil)
25	Design Manual for the small capacity compost plant		(English/Sinhala/Tamil)
26	Guidelines for Operation and Maintenance of Composting Facilities		(English/Sinhala/Tamil)
27	Guidelines for The Selection of Technical Assistance Scheme To Assist Local Authorities (English/Sinhala/Tamil)		
28	SWM Action Plan for Central province	(English/Sinhala)	
29	SWM Action Plan for Sabaragamuwa province	(English/Sinhala)	
30	SWM Action Plan for Northern province	(English)	
31	SWM Action Plan for Eastern province	(English/Tamil)	in process
32	SWM Action Plan for North western province	(English/Sinhala)	in process
33	Good practice	(English/Sinhala/Tamil)	
34	Feasibility study report Kuliyapitiya UC	(English)	
35	Feasibility study report Nawalapitiya UC	(English)	
36	Feasibility study report Badulla MC	(English)	
37	Feasibility study report Matara MC	(English)	
38	Feasibility study report Tangalle UC	(English)	
39	Feasibility study report Wennapuwa PS	(English)	
40	Feasibility study report Kurunegala MC	(English)	
41	Feasibility study report Ratnapura MC	(English)	
42	Feasibility study report Wattegama UC	(English)	
43	Feasibility study report Manner UC	(English)	in process
44	Feasibility study report Local authority in Eastern province	(English)	in process

Source: Japanese Expert Tem

Annex 8: Status of the model projects as of August 2010

No	LA	Province	Stage	2007	2008	2009	2010	Funds(Rs. m)	Remark
1.	Kuliyapitiya UC	North western	A/P	X				Pilisaru (31.3)	JOCV has been dispatched since June2010
			F/S	X					
			D/D		X				
			Construction		● Compost plant ● Landfill site ● Night soil treatment facility	● Compost plant ● Landfill site ● Night soil treatment facility			
			Operation			● Support for operation of compost plant	● Support for operation of compost plant ● Awareness program for collection improvement		
2.	Nawalapitiya UC	Central	A/P	X				Pilisaru (19.3)	ISG: Incline step grade
			F/S	X					
			D/D		X				
			Construction		● ISG Compost plant ● Landfill site	● ISG Compost plant ● Landfill site			
			Operation				● Support for operation of ISG compost plant		

No	LA	Province	Stage	2007	2008	2009	2010	Funds(Rs. m)	Remark
3.	Matara MC	Southern	A/P	X				Pilisaru (23.9)	
			F/S	X					
			D/D		X				
			Construction		● Compost plant ● Landfill site	● Compost plant ● Landfill site			
			Operation			● Support for operation of compost plant	● Support for operation of compost plant ● Awareness program for the collection improvement		
4.	Badulla MC	Uva	A/P	X				Pilisaru (32.5)	
			F/S	X					
			D/D		X				
			Construction		● Compost plant	● Compost plant	● Compost plant		
			Operation		● Support for operation of compost plant	● Support for operation of compost plant	● Support for operation of compost plant		
5.	Wennappuwa PS	North western	A/P		X			Pilisaru (21.5)	
			F/S		X				
			D/D			X			
			Construction				● Compost plant		

No	LA	Province	Stage	2007	2008	2009	2010	Funds(Rs. m)	Remark
6.	Tangalle UC&PS	Southern	A/P		X			Pilisaru (23.4)	
			F/S		X				
			D/D			X	X		
			Construction				● Compost plant ● Landfill site ● Night soil treatment facility		
7.	Kurunegala MC	North western	A/P		X			Pilisaru	
			F/S		X				
			D/D			X			
			Construction				● Compost plant ● Landfill site ● Night soil treatment facility		
8.	Ambalangoda UC	Southern	A/P		X				LA has attempted to acquire the land
9.	Dambulla PS	Central	A/P		X				LA has attempted to acquire the land
10.	Ratnapura MC	Sabaragamuwa	A/P			X			D/D of Compost plant, Landfill site and night soil treatment facility is
			F/S			X			

No	LA	Province	Stage	2007	2008	2009	2010	Funds(Rs. m)	Remark
			D/D				X		on going
11.	Wattegama UC	Central	A/P			X			
			F/S			X			
12.	IDP camp in Cheddikulam PS	Northern	A/P			X		Japan's 2KR Counterpart Funds (100)	
			Procurement			● Furniture for IDP camp office ● Dump truck ● Tractor ● Trailer ● Double cab ● Single cab ● Tipper lorry ● Backhoe loader ● Loader			
			Construction			● Installation of concrete pipe ● Rehabilitation of side drain			
13.	Mannar UC	Northern	A/P				X		
			F/S				X		
14.	Not yet selected	Easter	A/P				X		
			F/S				X		

ANNEX 9: Capacity Assessment Method applied in the Project

Source: Project Document and CUP-NSWMSC

Three kinds of capacity assessments have been conducted in the Project as follows.

a. Overall capacity assessment regarding solid waste management.
b. Capacity assessment of NSWMSC's staffs. The initial assessment was conducted from July to October as soon as he or she started work for NSWMSC.
c. Capacity assessment of NSWMSC at organizational level

1. Overall capacity assessment regarding solid waste management

The Overall capacity assessment regarding solid waste management was done by the JICA Expert Team in the beginning stage of the Project, which was reported as the "Overall Capacity Assessment Regarding Solid Waste Management (November 2007)". (see the Project Document Annex 2)

2. Capacity assessment of NSWMSC's staffs

a. Assessment Method

1) All subjects should be learnt by staffs were listed up and they were classified into three categories, knowledge, skill, and attitude. This is a capacity assessment sheet for staff (see Project Progress Report Nos. 1, 2, and 3).

2) Every staff assessed his or her capacity by her or himself in accordance with this capacity assessment sheet within one month after he or she was assigned to NSWMSC. This is a capacity baseline of the staff. In the initial assessment, only 0%, 25%, 50%, 75% and 100% were used for the assessment.

3) The 2nd assessment was conducted in February 2008. In the 2nd assessment, it was assessed by 1%.

4) The self-assessment data were summarized by three categories and the result was drawn by triangle radar chart. The result was fed back to each staff so that they can understand the self-capacity development progress and the remained subjects to be learnt.

5) All staffs capacity assessment results were summarized and they were expressed by the triangle radar chart.

6) The average of assessment result of each staff was calculated without weighing and the average was used as the capacity development target indicator.

7) The capacity development target was set up 70%.

Capacity Assessment of NSWMSC at organizational level

Assessment Method

1) All subjects should be learnt by NSWMSC were listed up and they were classified into three categories, managerial capacity, technical capacity, and work environment. This is a capacity assessment sheet for NSWMSC (see Project Progress Report Nos.1, 2, and 3).

2) The baseline assessment was conducted by Chief Advisor in May 2007, because there was no NSWMSC staff assigned.

3) In February 2008, all staffs in NSWMSC assessed the capacity of NSWMSC in accordance with the capacity assessment sheet for NSWMSC.

4) The average of the assessment made by all staff was calculated and drawn by the triangle radar chart.

5) The total capacity development indicator of NSWMSC was calculated and the target was set up as 70%

6) The capacity items which can be described quantitatively are measured and recorded.

Evaluation Grid of Terminal Evaluation, August 2010
Capacity Upgrading Project for NSWMSC (CUP-NSWMSC), Sri Lanka
Verification of Performance (based on PDM version 3)
Rating: A (satisfactorily achieved), B (fairly but not fully achieved,) and C (difficult to be achieved) by the end of the Project.

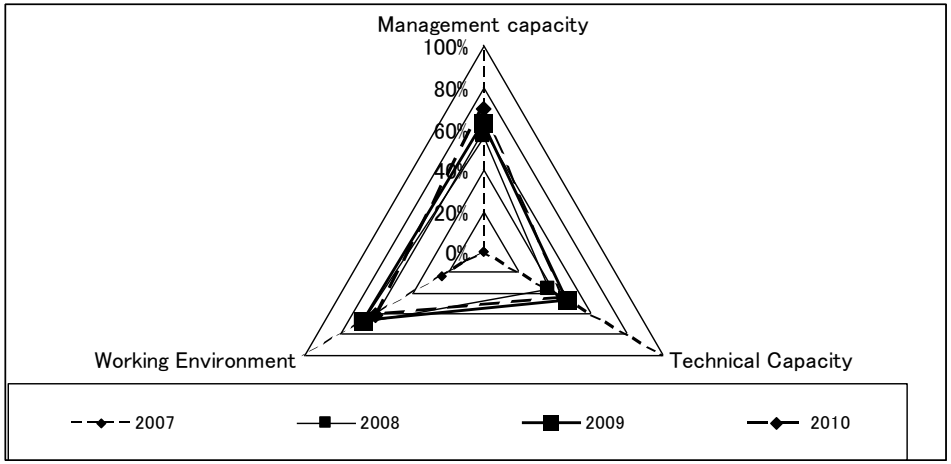
<table>
<tr><td>Overall Goal, Project Purpose & Outputs</td><td>Actual Achievement</td></tr>
<tr><td>Overall Goal</td><td>Verifiable Performance</td></tr>
<tr><td>Local Authorities (LAs) improve solid waste management (SWM).

<Remarks>
The Improvement of SWM means:
In 50% or more of LAs in Sri Lanka:
1. The hygiene problems in the town caused by waste are overcome and the town maintains sanitary conditions;
2. The negative environmental and social impacts are mitigated within a legally and socially permissible level;
3. The collection and disposal of night soil is properly managed; and
4. Other types of wastes such as healthcare waste, slaughter waste, construction waste, non-hazardous industrial waste, etc. are satisfactorily managed.</td><td>NSWMSC has conducted field surveys with the Japanese experts in 5 provinces, and analyzed the present conditions of LAs’ SWM, as shown in the table (source from CUP-NSWMSC, 2010):

(Classification of SWM Grade: Grade A : good with rating of 0-1, Grade B: fair with rating of 2-3, Grade C: bad with rating of4-8 and Grade D : very bad with rating of 7-8)
<table>
<tr><th>Province</th><th>Grade A</th><th>Grade B</th><th>Grade C</th><th>Grade D</th></tr>
<tr><td>Sabaragamuwa</td><td>21%</td><td>28%</td><td>31%</td><td>21%</td></tr>
<tr><td>Central</td><td>21%</td><td>48%</td><td>10%</td><td>21%</td></tr>
<tr><td>Northern</td><td>27%</td><td>64%</td><td>0%</td><td>9%</td></tr>
<tr><td>Eastern</td><td>26%</td><td>30%</td><td>26%</td><td>19%</td></tr>
<tr><td>North Western</td><td>13%</td><td>48%</td><td>13%</td><td>26%</td></tr>
<tr><td>Total</td><td>21%</td><td>40%</td><td>18%</td><td>21%</td></tr>
</table>
According to the Overall Goal setting in PDM3, the number of LAs of Grade C & D in terms of SWM conditions in 2010 will be reduced fewer than 50% in 2015.
It is too early to estimate the possibility of achievement of Overall Goal in 2015, because present survey is limited only for 5 provinces and the situation of SWM in remaining 4 provinces has not been survey. However if the data from these 5 provinces represent general situation of SWM in Sri Lanka, the 50% of Grade C & D’s LAs means about 20% of LAs. Thus, improvement of SWM in those 20% of LAs is large but not impossible if NSWSC continue the efforts under well-organized cooperation with each provincial government and other stakeholders.</td></tr>
</table>

Project Purpose	
The NSWMSC acquires capacity for supporting SWM activities of the local authorities with close collaboration of relevant stakeholders so that the local authorities can implement the SWM activities in accordance with the National Strategy for Solid Waste Management	
Indicator	Verifiable Performance
In order for NSWMSC to obtain the sustainability of its operation: 1. 100% of the proposed staff (1 Director, 2 Deputy directors, 3 Assistant director and 8 staff) are to be assigned as of the end of 2010. **Rating = B/C**	The staff working for NSWMSC as of August 2010 consists of 1 Director, 0 Deputy Director, 1 Assistant Director, 5 staff and in addition 2 drivers and 1 office boy. 2 Deputy Directors, 2 Assistant Directors, and 3 staff are yet to be employed for NSWMSC by the end of 2010. < Hard-working of the present staff of NSWMSC> The current shortage of staff hinders the efficient technical transfer, while limiting the number of staff to receive the technical transfer, being unable to secure sufficient time to receive training in their already busy working condition. . Despite such very tight staff allocation, NSWMSC assisted to implement many SWM projects in 2009 (total Rs.204 million in cost). Most of its staff often works in the office even on Saturday and Sunday, and it proves that they have been highly committed to their work. Therefore, it is expected that NSWMSC would achieve the targeted technical capacity even with less than the proposed number of staff. <Recruitment of additional staff> Even after taking such constructive factor into account, employing more staff, technical staff in particular, is urgently needed. The additional secretary of MOLGPC informed us that two young technical staff would be employed for NSWMSC soon. If this is materialized, NSWMSC will be highly likely to obtain the targeted technical capacity even though the total number of staff will be still less than the proposed.
2. NSWMSC's management capacity achieves 70% of the target. **Rating=A**	The management capacity of NSWMSC has been measured by using 33 assessment items every year since 2007. The capacity is evaluated by NSWMSC staff themselves and Chief Advisor separately (see Annex 8). The management capacity which was 0% scored in 2007, but achieved 70% in the staff assessment and 71% in Chief advisor's assessment in February 2010. Therefore, the indicators show that the target has been achieved.

Assessment by NSWMSC staff (source: Progress Report 3)



Year	2007	2008	2009	2010
Management capacity	0%	56%	62%	70%
Technical Capacity	0%	37%	47%	45%
Working Environment	23%	68%	67%	61%
Capacity Assessment Indicator (CDI) of NSWMSC	**8%**	**53%**	**59%**	**58%**

Assessment by Chief Advisor

Year	2007	2008	2009	2010
Management capacity	0%	50%	64%	71%
Technical Capacity	0%	12%	29%	57%
Working Environment	23%	79%	76%	72%
Capacity Assessment Indicator (CDI) of NSWMSC	**8%**	**47%**	**57%**	**67%**

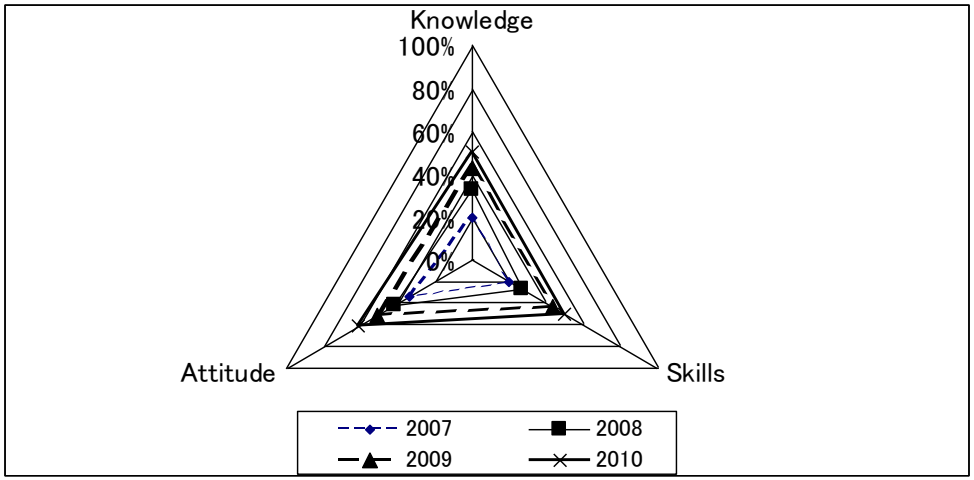
3. NSWMSC's SWM knowledge and skills achieves 70% of the target
Rating = B

The technical capacity of NSWMSC has been measured by using 55 assessment items every year since 2007, in the same manner as described above. The technical capacity which was 0% in 2007 achieved 45% in the staff assessment and 57% in Chief advisor's assessment in February 2010. The delay of the capacity development is mainly due to the lack of technical staff. It is essential to deploy new technical staff urgently and provide them with an intensive SWM training in order to achieve the target.

4. NSWMSC's working condition achieves 70% of the target. **Rating = A/B**	The working condition of NSWMSC has been measured by using 24 assessment items every year since 2007 in the same manner as described above. The working condition was 23% in 2007 but scored 61% in the staff assessment and 72% in Chief advisor's assessment in February 2010. The delay of the improvement of working condition is mainly due to the lack of staff and the poor condition for business trip. It is highly likely to achieve the target if additional staff will be assigned to NSWMSC vacant positions.
5. Ministry's SWM expenditure exceeds Rs 50 million per year. **Rating = A/B**	NSWMSC assisted to disburse Rs, 200 million in total (Rs. 32 million from Ministry's budget, Rs. 72 million from Pilisaru Project and Rs, 100 million from 2KR counterpart fund). The national budget for 2010 which was approved by the Parliament in July 2010. MLGPC was approved of Rs. 40 million for SWM projects in 2010, although it requested Rs. 120 million, due to the austere fiscal policy of the Government of Sri Lanka. Beside MLGPC's budget, NSWMSC has got approval to utilize Rs. 45 million of Pilisaru Project (Rs. 23.447 million for Tangalle project and Rs. 21.532 million for Wennappuwa project). It is able to utilize Rs. 85 million in total for SWM projects in 2010.
6. NSWMSC's budget to be used for the execution of site surveys reaches Rs 1 million per year. **Rating = A**	Although NSWMSC has never needed to spend the budget for this purpose, a part of Ministry's budget which is even more than Rs. 1 million is able to be allocated for this purpose.

7. NSWMSC maintains good network with various stakeholders. : **Rating = A**	● NSWMSC works as a scretariat for JICA SWM training Ex-participants Assotiation, conduct the selection of appropriate trainees for JICA SWM training in Japan and the preparation of necessary document, and requestes and receives JOCV volunteer for environmental education. Furthermore, NSWMSC executed the sanitary improvement project for the 300,000 internally displaced persons in Vavuniya IDP camp by obtaining the 2KR counterpart fund from the Embassy of Japan in 2009. ● Director of NSWMSC attends the regular meeting and Apex meeting of the Pilisaru Project, and maintains daily contact with Pilisaru Project department so that NSWMSC could get approval to utilize Rs. 20 million in 2008, Rs. 72 million in 2009 and Rs. 45 million in 2010. ● NSWMSC maintain the usual contact with Waste Management Authority belonging to Western Provincial Government. ● NSWMSC is assisting the UNOPS project in Ampara district in terms of the operation and maintenance of the facilities constructed, in response to the request by UNOPS so that these facilities can be taken over by local authorities smoothly. ● As for individuals, NSWMSC has been getting the great condtibution by Dr. Sumith Pilapitiya who is an environmental officer of World Bank Sri Lanka office, Prof. Ben Basanayaka of University of Peradeniya, Prof. Mahesh of University of Moratuwa, Mr Nimal Prematilaka, PHI of Balangoda UC, etc. for lecturers and teaching the practical technique for composting. ● As for donors and NGOs, NSWMSC keeps contact with Caritas, USAID, Linerasia, AustAID, SEVANATA, Arthachariya, etc.
Conclusive Judgment for Project Purpose: **Rating = A/B**	Of these indicators, there are 4 points of A, 2 points of A/B and 1 point of C. Present level of achievement in some factors is rather low because of limited number of staff assigned in NSWMSC. However, the Team found remarkable progress in every indicator in spite of insufficiency of NSWMSC staff. Thus the Team judges that within the restriction of current conditions, the core issue of Project Purpose, “NSWMSC acquires capacity for supporting SWM activities of the LAs”, can be basically achieved by the end of the Project if NSWMSC continue the efforts in the course of the Project.

Output 1	
NSWMSC establishes the basic organizational structure with the mid-term implementation strategy.	
Indicator	Verifiable Performance
1. NSWMSC formulates and updates a comprehensive mid-term plan for NSWMSC. **Rating = A**	NSWMSC Mid-term Plan which was produced in March 2009 was revised in September 2009 by taking the changes of PDM and Project Document into account. NSWMSC's operation programme in 2010 was prepared in line with the Mid-term Plan. The Mid-term Plan will be again revised, considering its capacity and needs, before the end of the Project, so that NSWMSC will be able to execute the activities based on the Mid-term Plan by itself.
2. Each staff of NSWMSC can effectively work with understanding its tasks. **Rating = A**	The Project Document 2010 which shows the activities schedule for 2010 has been distributed to every staff with explanation. Every staff concentrates on her work during the working hour because each staff has understood the Projects, the works and the tasks which she is in charge of.
3. NSWMSC can execute activities with clear work processes and decision making process. **Rating = A**	Because the instruction by Director of NSWMSC is always very quick and clear, all NSWMSC staff work with clear idea of work process and decision making process.
4. Staff training materials produced is compiled for self learning. **Rating = A**	Various technical reference materials have been prepared in CUP-NSWMSC project. (Refer to Annexes 6 and 7). The soft data of all these documents are saved in the NSWMSC cabinet in its host computer and the hard copies are neatly kept in the book cabinet. All staff is able to find and refer these materials easily.
5. All staff in NSWMSC can work on SWM with basic understanding. **Rating = A**	The capacity of each staff has been measured by using 83 assessment items every year since 2007. All subjects to be learnt by staffs are listed up and classified into three categories; knowledge, skill, and attitude. This is a capacity assessment sheet for staff. Each staff's capacity is assessed by herself and JICA Chief Advisor, separately. The average score of self-assessment of all staffs, which was 25% in 2007, achieved 55% in February 2010 (See the chart and table below; source CUP-NSWMSC, 2010). It is expected to achieve about 65% which is deemed to be the level having the basic understanding on SWM.



Year	Baseline	Feb. 2008	Feb. 2009	Feb. 2010
Knowledge	20%	32%	43%	51%
Skills	20%	26%	43%	49%
Attitude	34%	42%	51%	61%
Total Average	25%	33%	46%	55%
Increment	-	8%	9%	9%

Conclusive Judgment for the Output 1: **Rating = A**	The Output 1 can be satisfactorily achieved by the end of NSWMSC, but there is a certain difficulty in staffing of NSWMSC.
Output 2	
The NSWMSC establishes an efficient mechanism for supporting LA's SWM by stake holders.	
Indicator	Verifiable Performance
1. SWM committee is established in more than 5 PCs and they start to function. **Rating = A**	NSWMSC started to assist 3 Provincial governments (Sabaragamuwa, Central, Northern) in the field of SWM in 2009 and started to assisted 2 Provincial governments (Eastern and North Western) in 2010. Except Northern Provincial Government, the "Provincial SWM Committee" was established in each Provincial government. Their activities are still very limited because of no permanent staff has been assigned and no permanent organization has been established, so far. However, Sabaragamuwa Provincial Government has taken an effective measure among their limited measures that is to

	transfer an engineer from the Provincial Government to Ratnapura MC, where serious waste problem occurs, to make an improvement of SWM. Central Provincial Government has proposed to establish the SWM Unit in the Provincial Government as its top priority measure in the Provincial SWM Action Plan. NSWMSC has started to cooperate with 5 Provincial governments (Sabaragamuwa, Central, Northern, Eastern, and North Western) since 2009, but Northern Province is the only one that has not established the Provincial SWM Committee. This is because Northern Provincial Government has been preoccupied with reconstruction works after the end of civil war and its office is still located in Eastern Province. Therefore, NSWMSC has taken the policy for Northern Province to directly assist ACLG (Assistant Commissioner of Local Government) office which locates in each District. In the sanitary improvement project for IDP camp in Vavuniya executed in 2009 by using 2KR Counterpart Fund, the Vavuniya ACLG office was responsible for the implementation of the site work. As for Eastern Province, the Provincial SWM Committee has decided to formulate the District SWM Action Plan for each District because the Province is too wide and long to supervise all local authorities. North Western Provincial SWM Committee had been established before NSWMSC started to assist it because it is rather independent. Because each Province has quite different SWM problems and different administrative capacity from each other, the most appropriate approach for each province is selected by the Project.
2. Provincial SWM action plan is formulated in more than 5 provinces and it is executed. **Rating = A/B**	The provincial SWM action plan has been prepared for each of 3 Provinces (Sabaragamuwa, Central, Northern), and they have understood the SWM condition of each local authority correctly. They have started to execute the improvement measures and also to review the activity plan. As for Eastern Province and North Western Province, the survey for formulating the SWM action plan started in June and July 2010, respectively, and their action plans are under the formulation to be completed by the end of 2010.
3. NSWMSC can disseminate information with regard to SWM to stakeholders through various means. **Rating = A**	NSWMSC has been publishing “NSWMSC NEWS” since November 2007 for disseminating information to stakeholders and public society. NSWMSC has constructed its website under the Ministry’s website to show their activities and NSWMSC NEWS. In addition, various published materials by NSWMSC can be freely downloaded from its website. http://www.pclg.gov.lk/node/59 This website can be easily maintained by NSWMSC staff, although very limited functions are available because the Ministry’s website is constructed by using free software. One of NSWMSC staff is able to update the website.

<table>
<tr><td>4. NSWMSC's website is updated more than 4 times a year, and NSWMSC News is sent to all stakeholders quarterly.
Rating = A/B</td><td>NSWMSC published “NSWMSC NEWS” in November 2007, June 2008, January 2009, July 2009, October 2009, March 2010, and June 2010. It is distributed to all 330 local authorities in the country, all members of JICA SWM Training Ex-participant Association and other relevant institutions. From NSWMSC NEWS (July 2009), NSWMSC staff edits and prepares it without the JICA Expert’s assistance. The articles for NSWMSC NEWS are first written in Sinhala language and then translated into Tamil and English.
The frequency of NSWMSC News publication is increasing and likely to achieve four times a year in 2010. The website is scheduled to be updated when NSWMSC NEWS is published.</td></tr>
<tr><td>5. NSWMCS can promote guidelines and manuals produced to be used by stakeholders.
Rating = A</td><td>Most of all NSWMSC staff could not speak in public in 2007 when the NSWMSC started. However, they have gained the capacity in public speech through experiencing the environmental education programmes for school children, and participating in the exhibitions and symposiums.
The various materials produced require the different capacities for staff to promote the know ledges and techniques discussed in the materials, depending on the contents.
Each material produced can be promoted by someone in NSWMSC, who has understood and can explain its contents.
However, the increase of technical staff is necessary for these technical reference manuals to be more widely spread and fully utilized.</td></tr>
<tr><td>6. SWM training is conducted to cover 5 PCs and more than 20% of trainees utilize the knowledge learnt.
Rating = A</td><td>The SWM training was executed by NSWMSC three times in 2009 and they covered 8 Provinces, leaving only Western Province uncovered, and the total number of trainees reached 560 persons as the following table
(source: CUP-NSWMSC, 2010).

<table>
<tr><td>Target provinces</td><td>North western
North central
Southern</td><td>Uva
Central
Sabaragamuwa</td><td>North
Eastern</td><td>8 Provinces</td></tr>
<tr><td>Month</td><td>June 2009</td><td>August 2009</td><td>December 2009</td><td>-</td></tr>
<tr><td>Venue</td><td>Colombo</td><td>Colombo</td><td>Trincomalee</td><td>-</td></tr>
<tr><td>3days course for Technical staff</td><td>70</td><td>70</td><td>Merged by Non-technical course</td><td>140</td></tr>
<tr><td>3 days course for Non-Technical staff</td><td>70</td><td>70</td><td>70</td><td>210</td></tr>
<tr><td>1 Day course for high ranking officer</td><td>70</td><td>70</td><td>70</td><td>210</td></tr>
<tr><td>Total</td><td>210</td><td>210</td><td>140</td><td>560</td></tr>
</table>
</td></tr>
</table>

	It was initially planned to target for 6 Provinces. However, after the civil war was over, with the progress of reconstruction of, local authority staffs' of Northern and Eastern Provinces demand for learning SWM knowledge. In order to meet their demand, additional trainings were held with Tamil simultaneous interpreter for local authority staff in Northern and Eastern Provinces, where Tamil textbook on SWM was prepared by NSWMSC.
Conclusive Judgment for Output 2 : **Rating = A**	The Output 2 will be achieved by the end of Project.
Output 3	
Facilitation Capacity of the NSWMSC for implementation of SWM Action Plans of LAs is acquired	
Indicator	Verifiable Performance
1. NSWMSC can assist LAs to formulate SWM action plans. **Rating = A**	A SWM action plan was formulated for each 3 LAs in 2007, 5 LAs in 2008 and 3 LAs in 2009, and 11 LAs in total. In addition, in 2008 NSWMSC staff formulated a SWM action plan for Tangalle PS and Kurunegala PS by themselves. NSWMSC staffs have gained the capacity to formulate a SWM action plan for a LA through the experiences.
2. NSWMSC can assist LAs to acquire new lands. **Rating = A**	NSWMSC assisted Kuliyapitiya UC and Nawalapitiya UC to officially acquire the land for the model projects by involving the high ranking officers of MLGPC. Although the administrative procedure of transferring the land ownership in Sri Lanka is very complicated, NSWMSC has obtained the certain level of capacity to facilitate.
3. NSWMSC can assist LAs to get legal permission and approval. **Rating = A**	NSWMSC assisted Kuliyapitiya UC, Nawalapitiya UC, Badulla MC, Matara MC, Tangalle UC, Wennappuwa PS to apply the Environmental Clearance for the model project to CEA and all of these LAs were successfully granted it by CEA. As for Nawalapitiya UC, NSWMSC assisted the LA to conduct the Initial Environmental Evaluation (IEE) in response to the request by CEA and IEE was approved. As for the night soil treatment facility, NSWMSC assisted Balangoda UC and Seethawakapura UC to apply for Environmental Clearance and they obtained it. NSWMSC has successfully assisted many LAs to apply for Environmental Clearance during the CUP-NSWMSC project. Through these experiences, NSWMSC has obtained the capacity in acquiring legal approval for construction of small scale SWM facilities.

<table>
<tr><td>4. NSWMSC can assist LAs to manage social problems.
Rating = B</td><td>NSWMSC assisted Kuliyapitiya UC, Nawalapitiya UC, Badulla MC, Matara MC to organize the public hearing for neighborhoods to get acceptance for the project before the construction.
In addition, NSWMSC has decided to cancel the project of the night soil low cost treatment tank in Kegalle UC and Seethawakapura UC due to the strong public opposition. Through these valuable experiences, NSWMSC could learn the difficulty and the importance of social consideration for the project implementation.</td></tr>
<tr><td>5. NSWMSC can assist LAs to get funds for projects.
Rating = A</td><td>NSWMSC assisted LAs to utilize Rs. 200 million in total for SWM projects in 2009; Rs.32 million from Ministry’s SWM budget; Rs. 72 million from Pilisaru project; and Rs. 100 million from 2KR Counterpart Fund.</td></tr>
<tr><td>6. NSWMSC can assist LAs in procurement work. (detailed design, tender, contract, supervision, project account)
Rating = A</td><td>At the Kuliyapitiya project, NSWMSC arranged to employ a local consultant for detailed design and supervision work by utilizing Pilisaru project fund. However, the procurement procedure of a local consultant was very time consuming and troublesome and in addition the supervision of the local consultant was again very time consuming and troublesome. Furthermore, the cost to employ the local consultant was too expensive comparing to the low construction cost of the proposed facility.
Reflecting this experience, NSWMSC selected the policy to draw a detailed design and conduct supervision by technical staff of LAs. For this purpose, the Project prepared a Design Manual for a Small Scale Compost Facility. The prototype of the compost facility was designed and all necessary drawings were prepared and included in the Manual. If a user decides only the designed waste treatment amount per day, a user can find the all necessary drawings for the proposed facility. This Design Manual facilitates technical staff to properly design the appropriate compost facility and take off the quantity of materials and prepare the tender document. The facilities for Tangalle project and Wennappuwa project have been designed by using this Manual by technical staff of the LAs.</td></tr>
<tr><td>7. NSWMSC can assist LAs in operation and maintenance.
Rating = A</td><td>NSWMSC produced a Manual for the compost operation with the supervision by Dr. Sumith Pilapitiya who has taught how to operate Weligama compost plant at site since 2006. This Manual was prepared in three languages and used for lecture and also for practical reference for the site operation of compost facility.
As for the supervision for the compost plant, it was too hard for current NSWMSC staff to do it because they do not have site experience and difficult to often visit the sites in remote areas. Therefore, NSWMSC has gained the cooperation from various resource persons as shown below:
<table>
<tr><td>Kuliyapitiya</td><td>Mr. Nimal Prematilaka, PHI of Balangoda UC</td></tr>
<tr><td>Nawalapitiya</td><td>Prof. Ben Besanayaka, University of Peradeniya</td></tr>
<tr><td>Matara</td><td>Dr. Sumith Pilapitiya, World Banka</td></tr>
<tr><td>Badulla</td><td>Mr. Nimal Prematilaka, PHI of Balangoda UC</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><td></td><td>Before the commencement of operation of these plants, the supervisors and workers of the LAs received practical training by the resource persons for more than a week either in Balangoda compost plant or Weligama compost plant. Such arrangement for training was assisted by NSWMSC.
Training for compost plant operation is increasingly organized and the number of experienced supervisors on compost facility is also increasing.</td></tr>
<tr><td>8. NSWMSC can assist LAs in monitoring.
Rating = A</td><td>The Project defines the monitoring work into two types.
One monitoring is to monitor the operation condition of the facility such as a compost plant. For this purpose, NSWMSC instructed a LA to organize a Monitoring Committee. The Monitoring Committee is held every 3 months with a participation of NSWMSC staff and each member, and they assess the operating condition by using the assessment sheet. This type of monitoring is carried out at four model project sites in the Project.
The other type of monitoring is to monitor the progress of the SWM action plan. This type of approach has just started in Kuliyapitiya project with the participation of JOCV volunteer dispatched from April 2010. NSWMSC concentrates on Kuliyapitiya UC, Matara MC and Wennappuwa PS to establish the efficient SWM system by getting public cooperation.</td></tr>
<tr><td>9. More than 17 SWM action plans for LAs are formulated.
Rating = A/B</td><td>The list of LAs which the Project is assisting is summarized in Annex 7 and locations are shown in the cover page map. Total 13 LAs, Kuliyapitiya UC, Nawalapitiya UC, Matara MC, Badulla MC, Wennappuwa PS, Tangalle UC&PS, Kurunegala MC, Ambalangoda UC, Dambulla PS, Ratnapura MC, Wattegama UC, IDP camp in Cheddikulam PS, Mannar UC, have been assisted to formulate the SWM action plan and 9 LAs were assisted for the feasibility study.
In the model project, LAs receive technical assistance for either the action plan formulation and/or the feasibility study. Badulla MC prepared the action plan by itself without NSWMSC’s assistance because they had received the technical assistance for the action plan formulation by JICA Development Study in 2002 and 2003. NSWMSC’s assistance to Badulla MC commenced after the action plan formulated. This is regarded as a model project.</td></tr>
<tr><td>10. More than 50% of projects formulated in the action plans are materialized.
Rating = A</td><td>7 out of 14 model projects, 50% of the total, have been implemented as following table (source: CUP-NSWMSC,2010).
<table>
<tr><th>Name of local authorities</th><th>Start year</th><th>Current condition</th></tr>
<tr><td>1. Kuliyapitiya UC</td><td>2007</td><td>Operation</td></tr>
<tr><td>2. Nawalapitiya UC</td><td>2007</td><td>Operation</td></tr>
<tr><td>3. Matara MC</td><td>2007</td><td>Operation</td></tr>
<tr><td>4. Badulla MC</td><td>2007</td><td>Operation</td></tr>
<tr><td>5. Wennappuwa PS</td><td>2008</td><td>Under construction</td></tr>
<tr><td>6. Tangalle UC&PS</td><td>2008</td><td>Under construction</td></tr>
<tr><td>7. Kurunegala MC</td><td>2008</td><td>Responsibility of technical assistance has been transferred from NSWMSC to Pilisaru Project for the implementation</td></tr>
<tr><td>8. Ambalangoda UC</td><td>2008</td><td></td></tr>
</table>
</td></tr>
</table>

9.	Dambulla PS	2008	
10.	Ratnapura MC	2009	Detailed design work is in process.
11.	Wattegama UC	2009	
12.	IDP camp in Cheddikulam PS	2009	Operation
13.	Mannar UC	2010	Action plan formulation is in process.
14.	Not yet selected	2010	
	Total		

Conclusive Judgment for Output 3 : **Rating = A**	The Output 3 will be achieved by the end of the Project.
Output 4	
NSWMSC provides necessary information so that the Ministry can contribute to the National SWM policy and strategy.	
Indicator	Verifiable Performance
1. NSWMSC can understand the present SWM conditions in the country. **Rating = A**	The SWM questionnaire survey data for LAs is stored in the NSWMSC host computer. NSWMSC store all data and pictures collected during the survey for provinces which started since 2009.

Name of province	No. of LAs	No. of LAs of which data collected in 2009 and 2010
Northern	34	11
Eastern	43	43
North Central	26	
North Western	32	32
Central	42	42
Western	48	
Sabaragamuwa	29	29
Uva	27	
Southern	49	
Total	330	157

SWM national policy, related law, regulation, guidelines, manuals are also stored in the cabinet.

2. Valuable recommendations to National SWM policy and strategy are included in NSWMSC annual report. : **Rating = A/B**	NSWMSC publishes the annual report which should contain the progress of NSWMSC, the general present SWM condition in the country, the important issues and the recommendations. However The annual report in 2010 contains only the progress of NSWMSC. It did not include the general present SWM condition in the country.

3. National and international institutional links and communication channels are established and maintained. **Rating = A**	NSWMSC is playing a secretariat role for JICA Ex-participant Association of SWM Training Course which is one of the biggest SWM-related officers' associations in Sri Lanka. NSWMSC maintains the communication channels with the following international and national institutions. ● UN institution: UNOPS, UNICEF, UNDP ● Donor: JICA, USAID, KOICA ● NGOs: Asia Foundation, Sevanata, Linerasia, ● University: University of Peradeniya, University of Moratuwa, University of Colombo
Conclusive Judgment for Output 4 : **Rating = A/B**	The Output 4 will be achieved by the end of the Project if MLGPC start to examine National SWM Policy based on information provided by the NSWMSC.

Questionnaire Survey

Terminal Evaluation Report
for
The Capacity Upgrading Project for The National Solid Waste Management Support Centre
(CUP-NSWMSC)
in the Democratic Socialist Republic of Sri Lanka

August 2010

Joint Evaluation Team

CONTENTS

1. Objective of Terminal Evaluation

Every JICA's project is evaluated at different stages during the project cycle as seen in Figure 1 below. Evaluation is a tool for judging as objectively as possible the relevance and effectiveness of JICA's cooperation activities at four stages, namely 1) ex-ante, 2) terminal, 3) terminal (or final) and 4) ex-post.

The terminal evaluation for the Capacity Upgrading Project for the National Solid Waste Management Support Centre (hereinafter referred as "the Project"), will be conducted about six months before the completion of the Project, to evaluate whether the Project has achieved its expected four (4) outputs (based on PDM 3) and and consequently the project purpose. The terminal evaluation will be carried out by a joint evaluation team, which is consisted of both Sri Lanka and Japanese evaluation members. Sri Lanka evaluation members will be officially assigned by the authority of the responsible agencies prior to the terminal evaluation study.

The terminal evaluation is utilized to draw the conclusion on whether the Project should be revised, make recommendations for further improvement of the Project, and draw lessons for other similar projects of Sri Lanka and projects of JICA.

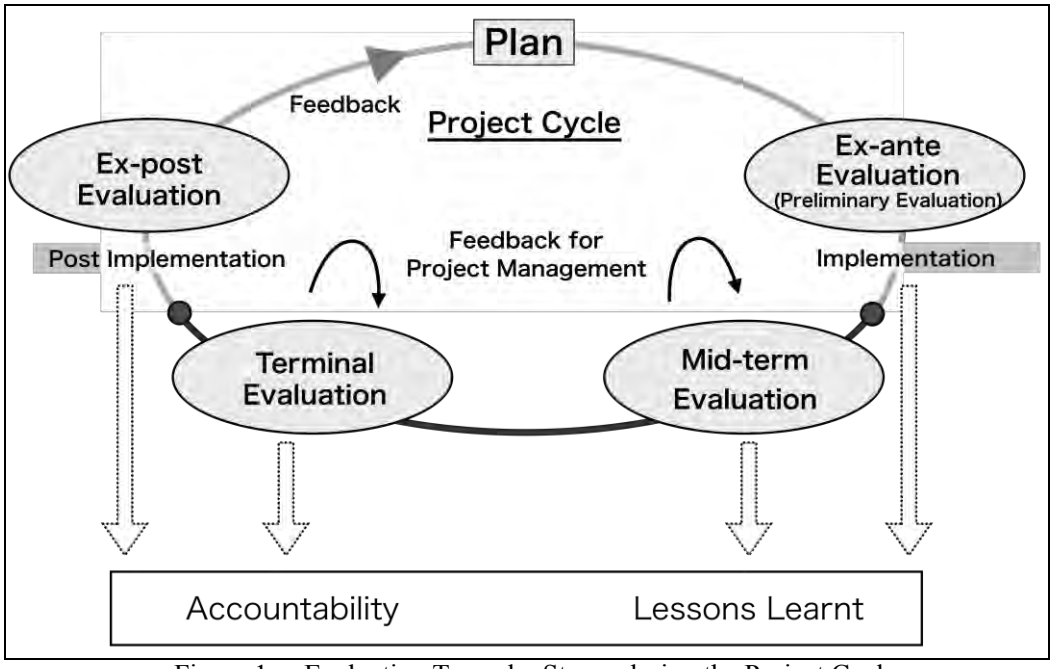
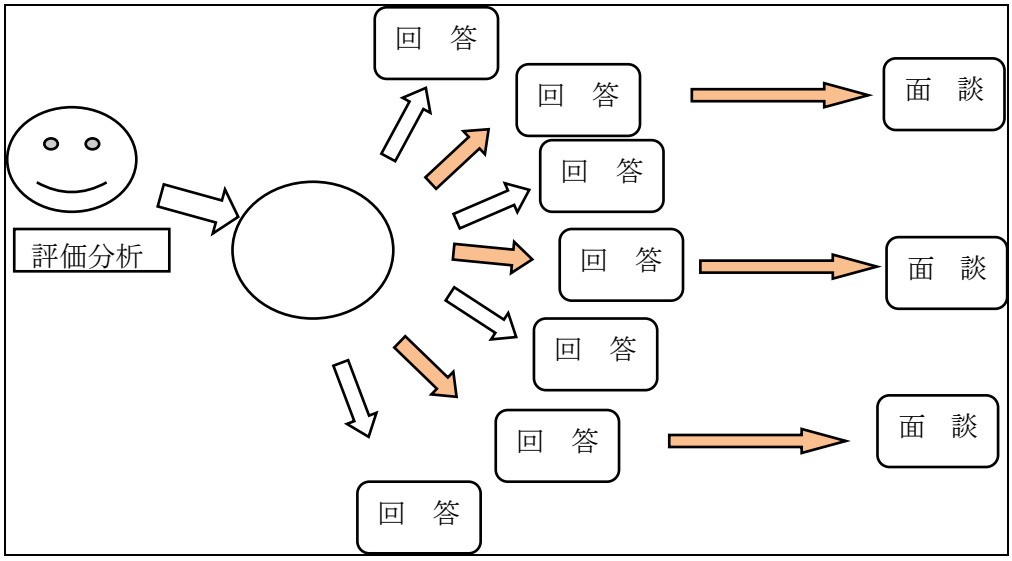


Figure 1: Evaluation Types by Stages during the Project Cycle

2. Evaluation Survey



3. Structure of the Project

The Project, which aims to develop the capacity of relevant stakeholders on solid waste management, has been carried out since March 2007 for the period of four years. The expected overall goal, project purpose and outputs are as follows.

Overall Goal
Local Authorities improve solid waste management

Project Purpose
The NSWMSC acquires capacity for supporting SWM activities of LAs with close collaboration of relevant stakeholders so that LAs can implement the SWM activities in accordance with the National Strategy for Sold Waste Management

Output 1
Institutional Management Capacity of the NSWMSC is strengthened
Output 2
Facilitation Capacity of the NSWMSC for formulating SWM Action Plans of LAs is acquired
Output 3
Facilitation Capacity of the NSWMSC for implementation of SWM Action Plans of LAs is acquired

Output 4
NSWMSC provides necessary information so that the Ministry can contribute to the National SWM policy and strategy.

(Source: PDM3 of the Project)

4. Steps of Terminal Evaluation

The terminal evaluation is intended to undertake the following tasks.

(1) to review and confirm the achievement and implementation process of the Project
(2) to evaluate the Project in terms of five evaluation criteria, namely **Relevance, Effectiveness, Efficiency, Impact and Sustainability**, based on the Project Design Matrix ver 3(PDM3)
(3) to review and evaluate changes in external conditions
(4) to reach the conclusion on whether the Project should be revised
(5) to make recommendation for further improvement of the Project to stakeholders
(6) to draw lessons that can be applied to other similar ongoing and future projects of JICA

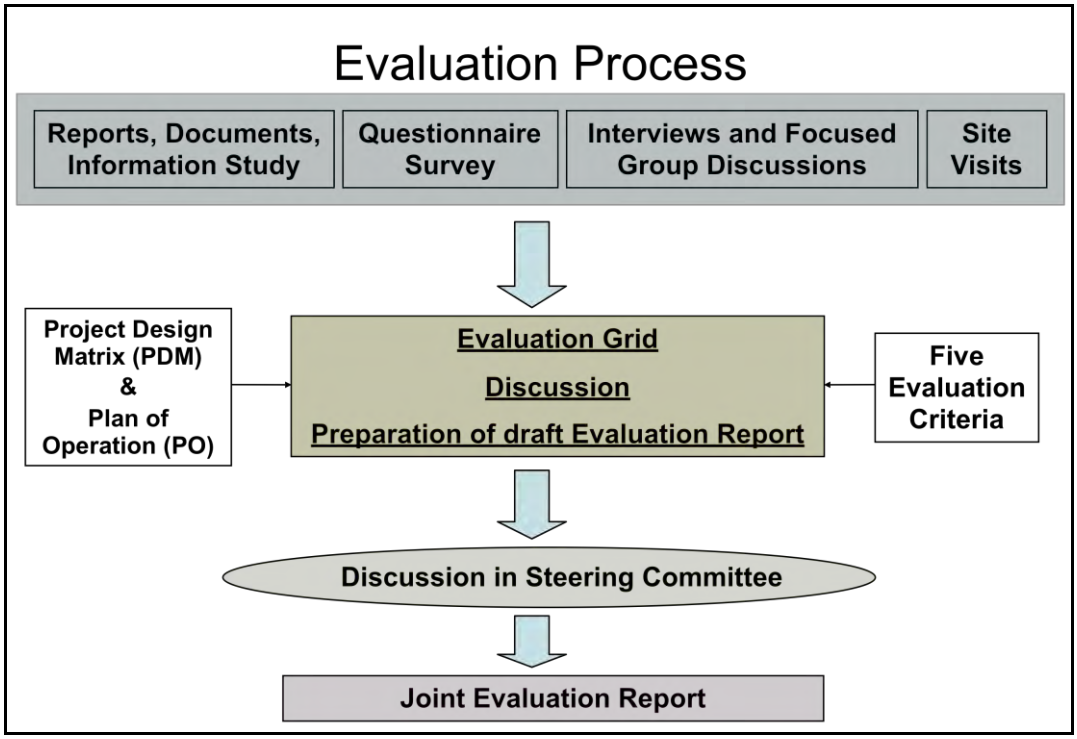


Figure 2: Evaluation Process of Terminal Evaluation

Figure 2 Flow Chart of Terminal Evaluation

Table 1: Five evaluation criteria

Relevance An overall assessment of whether the project purpose and overall goal are in line with recipient and donor policy and with recipient needs
Effectiveness Status of the achievement at the Project purpose level

Efficiency A measure of the production or output of the Project in relation to the total resource input
Impact The positive and negative changes, produced directly and indirectly as the result of the Project
Sustainability An overall assessment of the extent to which the positive changes achieved by the Project can be expected to last after the completion

5. Survey Method for Terminal Evaluation

Major survey methods, namely, interview survey and focus group discussion are briefly explained here.

(1) **Interview Survey:** A series of interviews are going to be conducted based on the questionnaire forms to different groups of people. Those are intended not only to evaluate the achievement of the Project but also to identify contributing and constraining factors to such situations.

Table 2: Interviewees and Main Points to Survey

Target	Main points to survey
Steering Committee Members	Present SWM situation in Sri Lanka Challenges and difficulties faced by the project Future plan for the NSWMSC Contribution of JICA's assistance Other donors' assistances
Ministry of Local Government & Provincial Councils	Challenges and difficulties faced by the project Future plan for the NSWMSC LAs' SWM projects Contribution of JICA's assistance
NSWMSC staff and management staff	Challenges and difficulties faced by the project Details in implementation process of the NSWMSC's activities LAs' SWM projects Network with related organisations Contribution of JICA's assistance
Relevant Ministry, like Ministry of Environment	Present SWM situation in Sri Lanka Performance of the NSWMSC Relationship with the project Other donors' assistances Opinion of general public about the SWM
Other Donors	Challenges and difficulties faced by the donor SWM related project NSWMSC's activities

Local Authorities (NSWMSC's target)	SWM situation SWM projects Opinion of general public about the SWM Challenges and difficulties faced by LAs Service delivery of the NSWMSC
Other Local Authorities	SWM situation SWM projects Challenges and difficulties faced by LAs Needs in SWM activities
JICA Experts	Challenges and difficulties faced by the project & experts Details in implementation process of the NSWMSC's activities Intervention from Capacity Development aspect
JICA Sri Lanka Office	Challenges and difficulties faced by the project Future plan for the CUP-NSWMSC Observations from Capacity Development aspect Collaborations with other donors' assistances

(2) **Focus Group Discussions (Group Interview) :**Some of the above interviews may take a form of focus group discussions.
(3) **Others: There** might be several Site Visits as well as necessary Reference Survey.

6. Members & Tentative Schedule of the Terminal Evaluation Study

Members of the Terminal Evaluation Study
Members of the terminal evaluation study are listed up in Table 3. The team consists of both Sri Lankan and Japanese members and former team member will be announced at the kick-off meeting.

Member List of the Terminal Evaluation Study
<Japanese Side>
Dr. Mitsuo Yoshida (Leader)
Dr. P. Serasinghe (Cooperation Planning), Representative, JICA Sri Lanka Office
Dr. Norihiro Noda (Evaluation Analysis), Consultant

7. Schedule of the Terminal Evaluation Study

Schedule of the terminal evaluation study is presented in Table 4.

Table 3: Schedule of the Terminal Evaluation Study

Week	Activities	Site Visits
1st week	Discussions	No schedule
2nd week	Discussions & Site visits	Kuliyapitiya UC Ratunapura MC

3rd week	Discussions & Steering Committee	No schedule

Attachment

List of Respondents

Step of Gap Analysis

Questionnaire

Summary of the questionnaire result

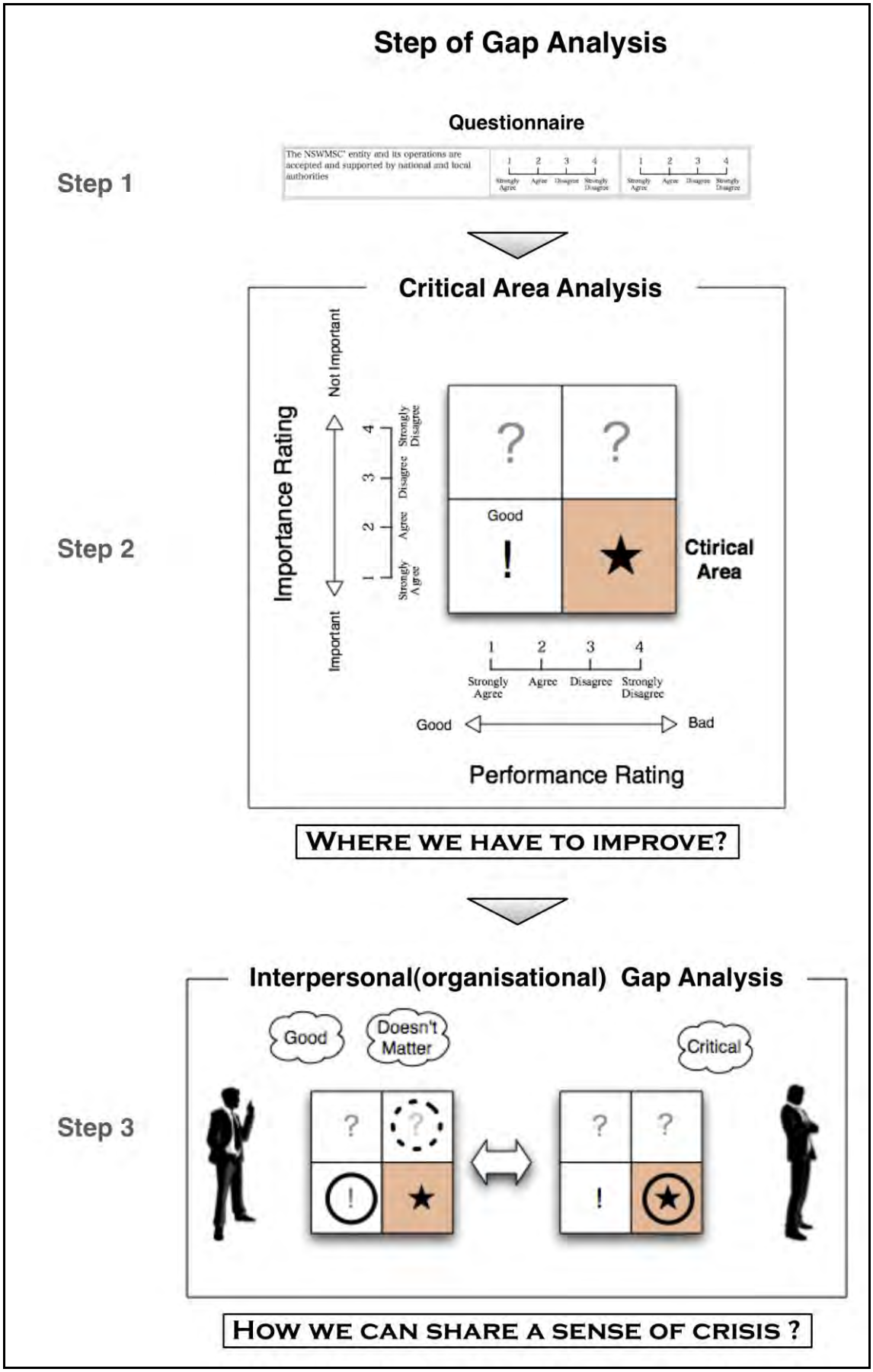
Summary of the Evaluation result on “the Evaluation of the Terminal Evaluation” by Steering Committee Members

(1) List of Respondents & Interviewees

The list below shows the respondents to the questionnaire and the interviewees at the terminal evaluation of the Project. The details are still subject to change, if anything more appropriate.

Organization	Position	Name	e-Mail address	Quest. sent	Response	Interviewed
1. Ministry of Local Government and Provincial Councils						
1) Additional Secretaries						
	AS	Fernando, M.L.S.		A		
	AS	Hettierachchi, P.				
	AS	Mr. Nordeen		A		
2)D, DD, AD of NSWMSC						
	Director	Mangalika, L.		A		
	DD	Geenthani, M.		A		
3) Staff of NSWMSC						
	Staff	Kasthuriarachchi, C.		A		
	Staff	Wjesekara, C.		A		
	Staff	Thilakarathna, R.				
	Staff	Jayalath, M.M.				
	Staff	Wasantha Kumari				
	Staff	Chandrakanthi, L.A.				
2. Targeted LAs						
Badulla MC	Commissioner, CPHI			A		
Matara MC	Commissioner, SW			A		
Kuliyapitiya	Secretary, SW			A		
Nawalapitiya UC	Secretary, PHI, EO			A		
Ambalangoda UC	Secretary			A		
Dambulla PS	Secretary			A		
Wennappuwa PS	Secretary			A		
Kurunegala MC	Commissioner and MOH			A		
3. Not targeted LAs						
Kegalle UC	Secretary			B		
Pandsuwasnuwara PS	Secretary			B		
Negombbo MC	Commisioner			B		
4. Provincial Councils						
CLG Office	Name of CLG	Name of CDO				
UVA	Hathialdeniya, D.M.T.B.	E.P.I.G. Pathirana-PA/CD		B		
North Central	Perena, Virai	E.D.R.W.S. Edirisigha-DA				
South	Pandikorala, Saman Dharshana	N.T.A. Jayawardana DA		B		
Western	Sumanapala, H.	M.A.S.T. Mallawaarachchi-CDO		B		
Central	Alahakoon, A.M.U.D.	B.J. Palitha-ED		B		
North Western	Bandaranayake, Wijitha	M.A.K. Marasinghat-LGO		B		
Sabaragamuwa	Premachandra, M.	J.H. Sirpala-CDO		B		
Nothern	Jonson, F.			B		
Eastern	Thayabaran, T.			B		
ACLG Office	Name of ACLG	Name of Engineer		B		
Matara	Yapa, N.W.	Jayananda, O.C.		B		
Galle	Muhandiramge, Chandima			B		
Hambanthola	Ruwansiri, B.S.G.	Rathnayaka, R.M.C.J.		B		
Kurunegala	ILangakoon, I. M.I.	Perera, I.K.I.L.		B		
Dambulla	Kumaragama, A.K.K.R.W.			B		

8. Step of Gap Analysis



(3) Questionnaire

Three (3) kinds of the questionnaires have been prepared and distributed to the possible stakeholders through the NSWMSC

Questionnaire A
Terminal Evaluation Plan for
Capacity Upgrading Project for NSWMSC (CUP-NSWMSC) Sri Lanka

Questionnaire for related Organizations for NSWMSC Members and JET)

This questionnaire was prepared to understand the status of the Capacity Upgrading Project for NSWMSC for Sri Lanka at the time of Terminal Evaluation (August 2010).

This questionnaire was prepared specially for the members who are directly contributing the project implementation.
0220
Name:
Position:
Organization:
1. Confirmation of Input from the Organization
Inputs planned in the PDM and actual inputs to the Project from your organization are to be compared.
2. Questions about Implementation Process
2.1 Monitoring
2.1.1 What is responsibility of your organization in the Project?
2.1.2 Is your organization implementing the project activities regularly? : Yes No
(if No, please specify why and propose how to improve it)
2.1.3 Is the implementing mechanism of your organization functioning adequately? : Yes No
(if No, please specify why and propose how to improve it)
2.1.4 Is the Joint Coordination Committee contributing to the Project adequately? : Yes No
(if No, please specify why and propose how to improve it)
2.2 Communication
2.2.1 How often are you communicating with other related organizations?
Very frequently Relatively frequently Rarely Never
(if you have some comments here, please write your opinions.)
2.2.2 How are you communicating with the JICA experts?
Very frequently Relatively frequently Rarely Never
(if you have some comments here, please write your opinions.)
2.3 Technology Transfer
2.3.1 How does your organization feel about the technology transfer of the Project?
Very well Fairly well Rarely Never
(if you have some comments here, please write your opinions.)
2.4 Activities
2.4.1 How is your organization going to solve the problem when you face it during the Project? Please provide us some examples.
2.4.2 Was there any change in activities of your organization in the Project since the initial stage of the Project (March 2007 or your employment)?: Yes No

(if Yes, please specify your experience)
2.5 Budget
2.5.1 Is your organization allocating the project budget as proposed? : Yes No
(if you have some comments on this, please specify)
3. Questions about Five Evaluation Criteria
3.1 Relevance
3.1.1 Does the Project adequately meet needs of your organization and the target group? : Yes No (if No, please explain the reason)
3.1.2 Is there any country specific conditions to be considered in the solid waste management planning? : Yes No
(if Yes, please specify your opinions)
3.1.3 Is the solid waste management urgent problem to be solved? : Yes No
(if Yes, please explain the reason)
3.1.4 The Projects adopted comprehensive approach that consists of 1) NSWMSC establishes its basic organizational structure, 2) NSWMSC establishes an efficient mechanism for supporting the local authorities, 3) NSWMSC provides its assistance for the local authorities and acquires facilitation capacities through the assistance, and 4) NSWMSC provides necessary information so that the Ministry can contribute National SWM policy and strategy. Is the Project approach appropriate? : Yes No
(if Yes, please specify your opinions)
3.1.5 Is there any expected ripple effect (positive project effect which was not planned)? : Yes No
(if Yes, please specify your opinions)
3.1.6 Will the project effect be disseminated fairly to the local authorities? : Yes No
(if No, please explain the reason)
3.1.7 Was the technology introduced from Japan for the Project appropriate? : Yes No
(please explain your opinions for both cases)
3.2 Effectiveness
3.2.1 Looking at the present situation, how much do you think the Project Purpose "The NSWMSC acquires capacity for supporting SWM activities of the local authorities with close collaboration of relevant stakeholders so that the local authorities can implement the SWM activities in accordance with the National SWM Strategy" has been achieved within the project period? Do you agree with this? : Yes No
(if No, please specify your opinions)
3.2.2 Is achievement level of the Project Purpose adequate at this stage? Please evaluate achievement level by using "Means of Verification" in PDM3. : Yes No
(if No, please explain the reason)
3.2.3 Are the four Outputs appropriate to achieve the Purpose? : Yes No
(if No, please explain the reason)
3.2.4 Is there any additional inhibiting factor to achieve the Project Purpose? : Yes No
(if Yes, please specify your opinions)
3.3 Efficiency
3.3.1 Is achievement level of the four Outputs adequate at this stage? Please evaluate achievement level by using "Means of Verification" in PDM3. : Yes No
(if No, please explain the reason)
3.3.2 Were the Activities appropriate to achieve the Outputs (see

PDM3)? : Yes No
(if No, please explain the reason)
3.3.3 Were the Inputs appropriate to achieve the Outputs (see PDM3)? : Yes No
(if No, please explain the reason)
3.3.4 Is there additional inhibiting factor to achieve the Outputs? : Yes No
(if Yes, please explain the reason)
3.3.5 Have Japanese experts been dispatched adequately in terms of their expertise, numbers of experts, period and timing? : Yes No
(if No, please specify your opinions)
3.3.6 Has provision of equipment been adequate in terms of variety, quantity and timing?
Yes No (if No, please specify your opinions)
3.3.7 Has allocation of budget for your activity been adequate in terms of quantity and timing?
Yes No, (if No, please specify your opinions)
3.3.8 Have training programs produced adequate practical improvement of solid waste management by participants compared to the cost of training programs? : Yes No
(if No, please specify your opinions)
3.3.9 Will the Output production be adequate compared to the proposed cost (see PDM3)?
Yes No (if No, please specify your opinions)
3.3.10 Will the Project Purpose be appropriate compared to the proposed cost? : Yes No
(if No, please specify your opinions)
3.4 Impact
3.4.1 Is the Overall Goal, which is "the local authorities improve their solid waste management", is likely to be achieved in the future?
Yes No (if No, please explain the reason)
3.4.2 Was there major change in the important assumptions for the Overall Goal? : Yes No
(if No, please explain the reason)
3.4.3 Is there additional inhibiting factor to achieve the Overall Goal? : Yes No
(if No, please explain the reason)
3.4.4 Is there expected ripple effect or anticipated negative impact of the project?
Yes No (if Yes, please specify your opinions)
3.4.5 Is there anticipated negative impact especially for gender, ethnic, socially structured group? : Yes No
(if Yes, please specify your opinions)
3.5 Sustainability
3.5.1 Will the local authorities be the organization to implement solid waste management even in the future? : Yes No
(if No, please explain the reason)
3.5.2 By considering policy and legal framework, are there prospects that the sustainability is secured? : Yes No
(if No, please explain the reason)
3.5.3 By considering organizational and financial aspects, are there prospects that the sustainability is secured (in terms of organizational capacity acquired by your organization, strength of ownership of your organization in the Project activities, availability of budget including operational expenses, etc.)? : Yes No
(if No, please explain the reason)

3.5.4 By considering technical aspects, are there prospects that the sustainability is secured (in terms of appropriateness of technologies developed and transferred, maintenance of provided equipment, possibility of maintaining dissemination system of the model project effect, appropriateness of applied technology in the model projects, etc.)? : Yes No
(if No, please explain the reason)
3.5.5 By considering social and environmental aspects, are there prospects that the sustainability is secured? : Yes No
(if No, please explain the reason)

Qustionnaires B and C are not presented here.

(4) Summary of the questionnaire result

(to be filled)