エチオピア連邦
水・灌漑・電力省
給水衛生局

エチオピア国
飲料水用ロープポンプの普及による
地方給水衛生・生活改善プロジェクト

プロジェクト事業完了報告書

平成 28 年 12 月
（2016 年）

独立行政法人
国際協力機構（JICA）

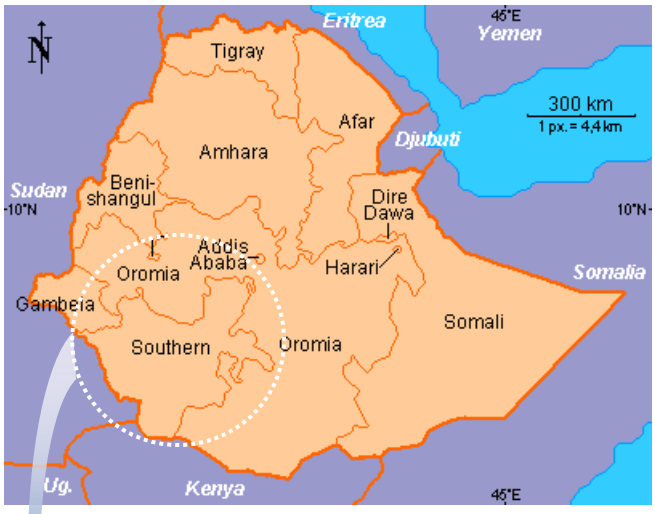
株式会社アースアンドヒューマン
コーポレーション

環境
JR
16-142

位　置　図

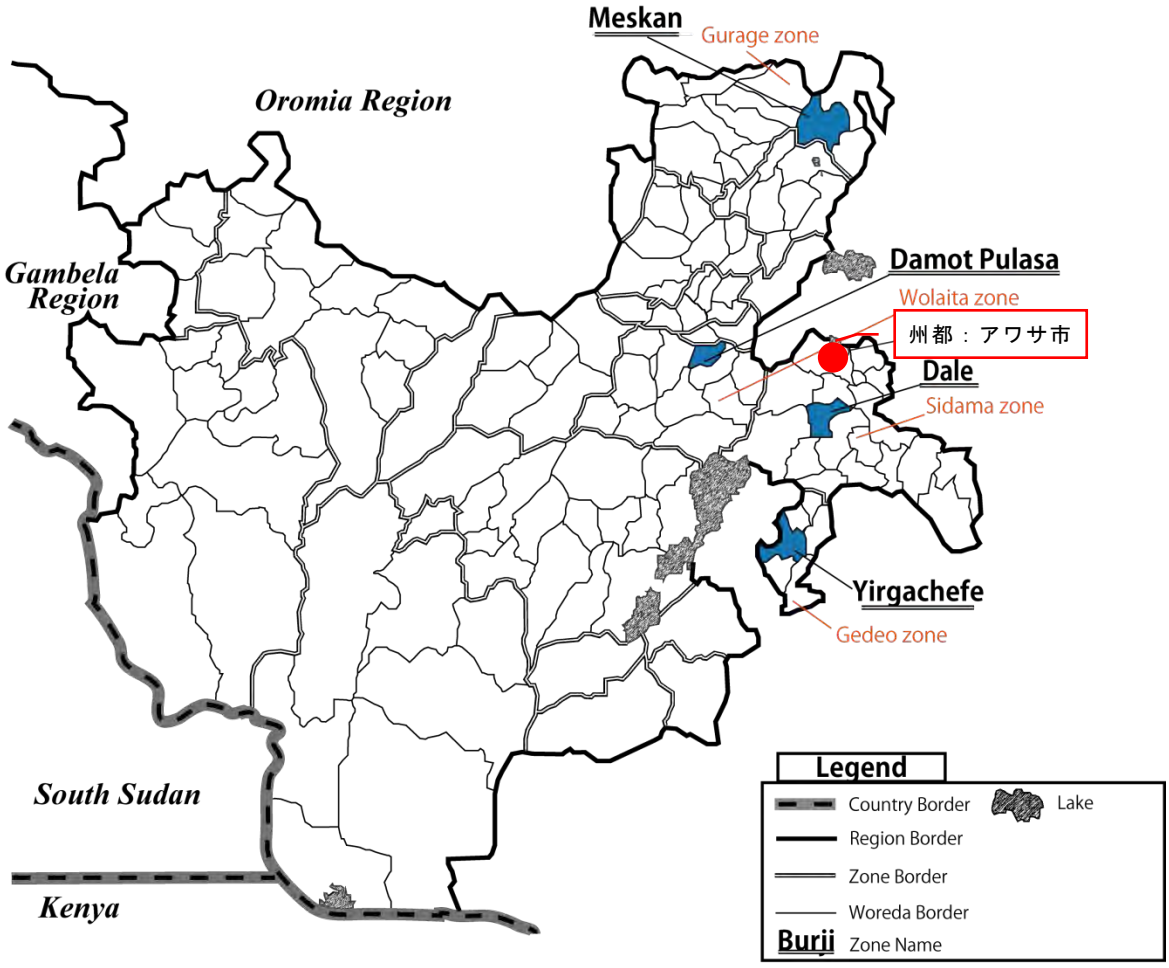
【エチオピア連邦共和国】

【エチオピア国州別マップ】



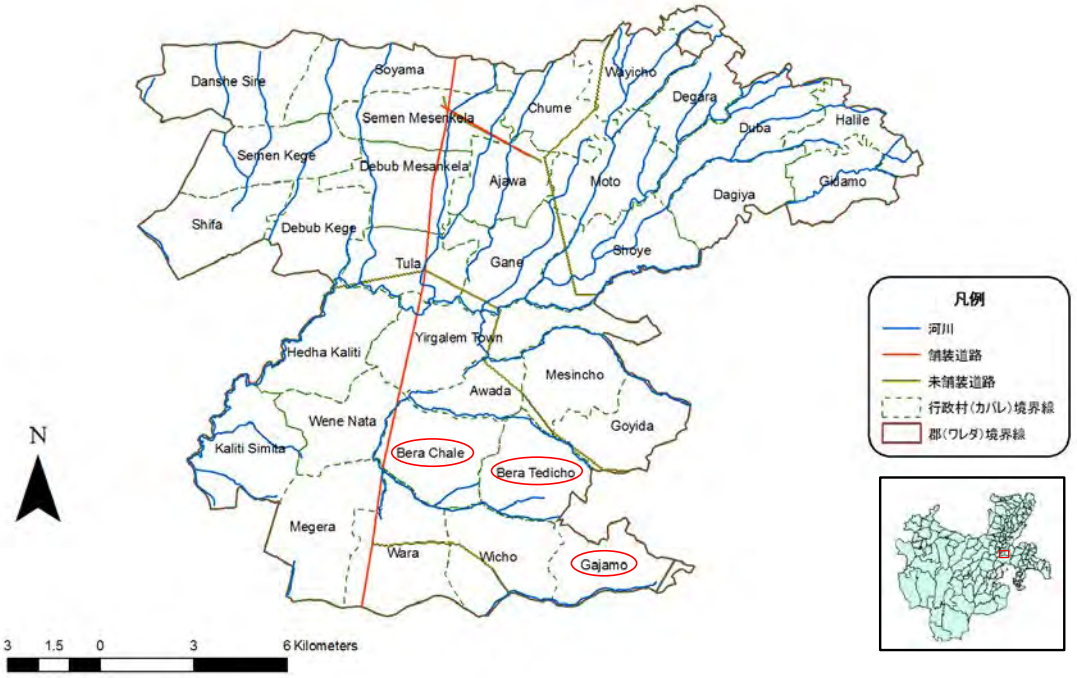
出典：http://www.idp-uk.org

【南部諸民族州マップ】



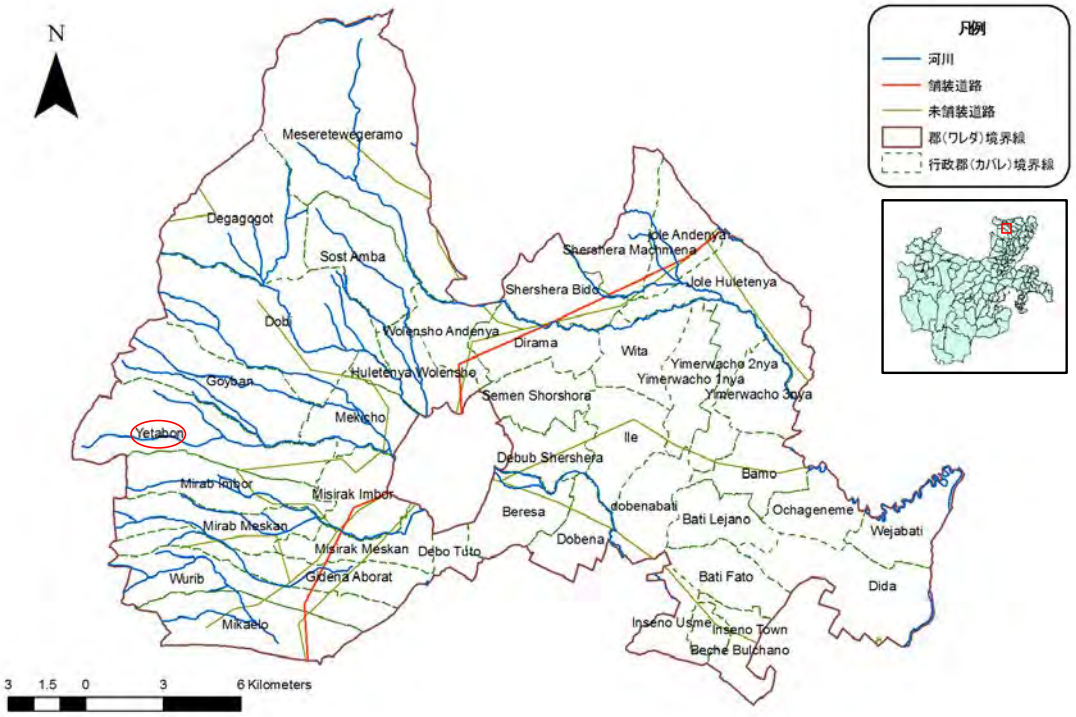
プロジェクト対象地域地図

ダレ郡（Dale Woreda）

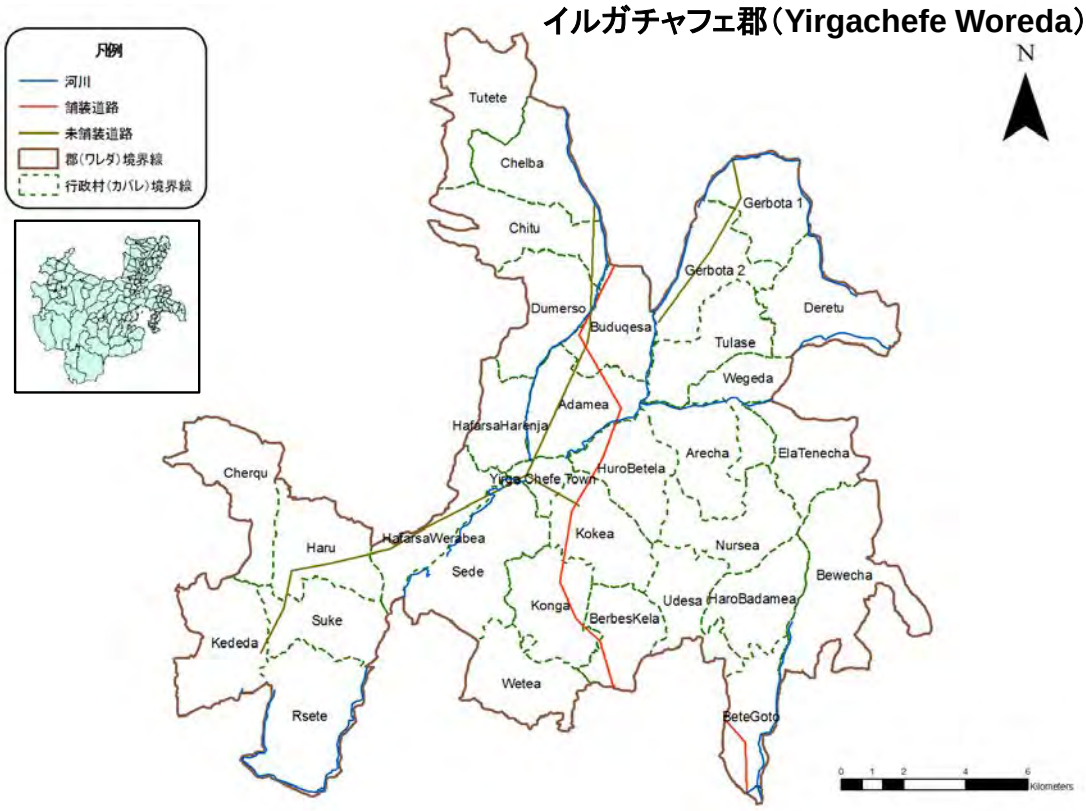


ダモットプラサ郡（Damot Pulasa Woreda）

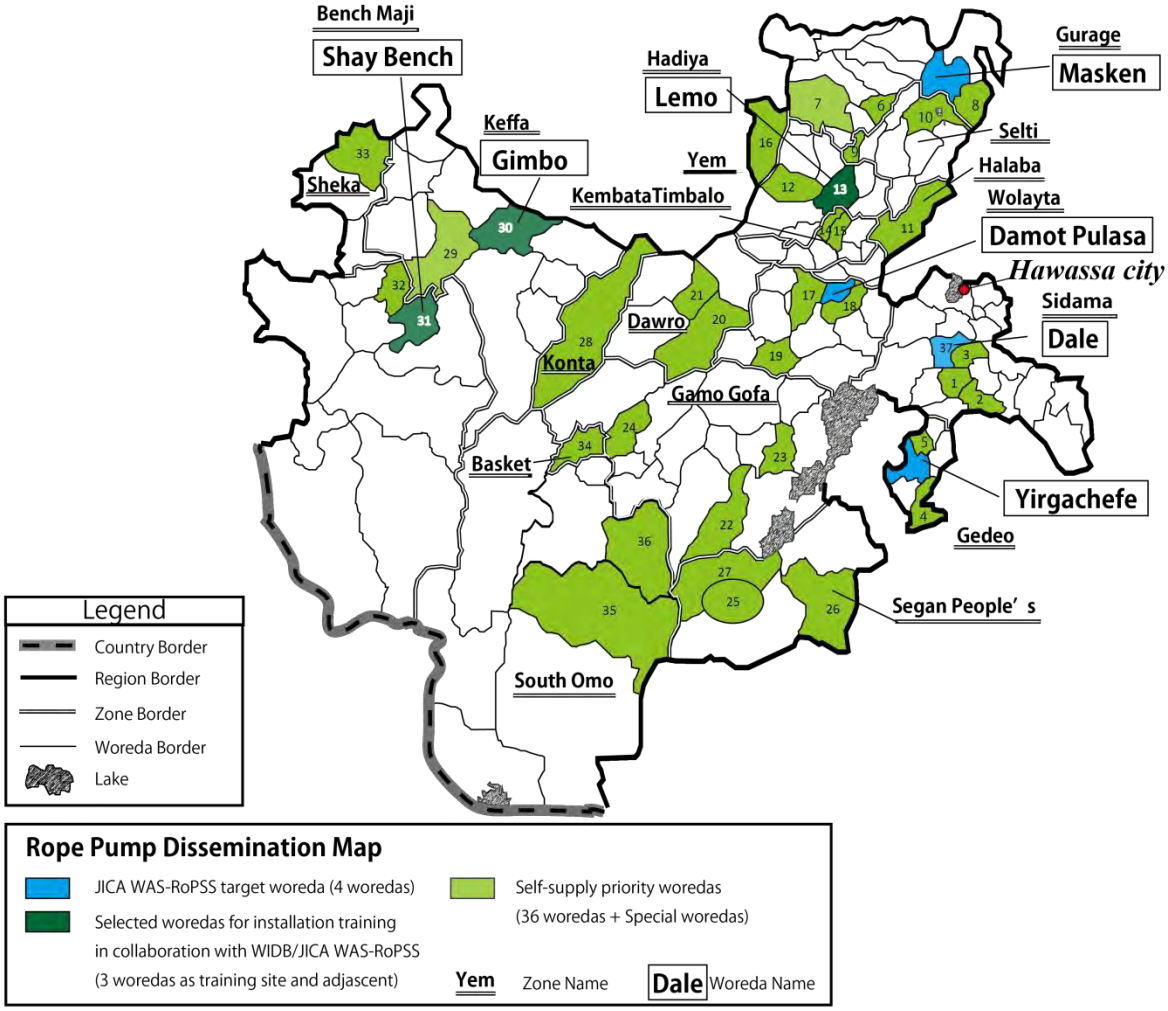
マスカン郡（Meskan Woreda）



イルガチャフェ郡（Yirgachefe Woreda）



プロジェクト対象地域と 10,000 台支援地域地図



プロジェクト活動写真集

国務大臣へ表敬訪問
（2013 年 4 月、アディスアベバ)

終了時評価団によるプロジェクト対象地視察
（2016 年 6 月)

成果 1

アムハラ・南部諸民族・オロミア 3 州における
ロープポンプユーザー調査
（2013 年 4 月～6 月)

手掘り井戸所有世帯へのインタビュー調査
（2013 年 6 月～7 月、マスカン郡)

標準化ワークショップ
（2014 年 5 月、アディスアベバ)

ロープポンプ設置に関する講師研修
（2014 年 11 月、ダレ郡)

成果 2

ユーザーとビレッジテクニシャンの合同会議
（2015 年 1 月、マスカン郡)

ロープポンプ製造研修（上級者コース)
（2015 年 2 月、アワサ)

ビレッジテクニシャン対象
ロープポンプ設置研修
（2015 年 5 月、ダモットプラサ郡)

ユーザーへのロープポンプ維持管理研修
(設置研修の一環)
（2015 年 5 月、ダモットプラサ郡)

ビレッジテクニシャン対象
ロープポンプ設置研修
（2015 年 12 月、イルガチェフェ郡)

井戸カバー製造研修
（2016 年 2 月、ハディヤ県レモ郡)

ロープポンプ製造の技能検定（COC）
（2016 年 4 月、アワサ）

ロープポンプ設置の技能検定（COC）
（2016 年 4 月、アワサ)

講師研修レビュー（サイト訪問）
（2016 年 4 月、ダレ郡)

ロープポンプ品質管理と維持管理に関する
戦略ワークショップ
（2016 年 8 月、アディスアベバ)

成果 3

ロープポンプ普及戦略とセルフサプライ研修
（2014 年 5 月、アワサ)

ロープポンプ普及活動
（2014 年 4 月、マスカン郡)

郡レベルのロープポンプ
普及計画策定ワークショップ
（2014 年 6 月、アワサ)

ロープポンプ金融の融資契約
（2014 年 12 月、ダレ郡)

ロープポンプ普及オリエンテーション
（南部諸民族州水灌漑開発局による大量調達に
対する支援活動)
（2015 年 12 月、アワサ)

ロープポンプユーザーを対象とした
返済キャンペーン
（2016 年 4 月、ダレ郡)

成果 4

ウォーターセーフティプランと水質検査研修
（JOCV と連携)
（2014 年 9 月～10 月、アワサ)

学校の保健衛生教育の一環として
家庭での水処理方法の紹介
（2015 年 1 月、ダレ郡)

郡水事務所と郡保健事務所職員対象
水質検査 OJT
（2015 年 2 月、ダモットプラサ郡)

農業研修のグループディスカッション
（2015 年 4 月、イルガチェフェ郡)

成果 5

ロープポンププロモーションビデオ撮影
（2014 年 12 月、ダレ郡)

セルフサプライフェアーのサイドイベント：
国外からのゲストによる
プロジェクト対象地視察
（2015 年 3 月、マスカン郡)

セルフサプライフェアーでの展示会場
（(2016 年 3 月、アディスアベバ)

最終セミナー
（2016 年 10 月、アディスアベバ)

プロジェクト事業完了報告書

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添付資料

略語表

略語	英文	和文
A4A	Aqua for All	アクア・フォー・オール
BS	British Standard	英国規格
COC	Certificate of Competency	技能検定／技能検定証書
ECAE	Ethiopian Conformity Assessment Enterprise	エチオピア適合性評価公社
ESA	Ethiopia Standards Agency	エチオピア規格庁
ETB	Ethiopian Birr	エチオピアブル
EWTEC	Ethiopia Water Technology Centre	エチオピア給水技術センター
EWTI	Ethiopia Water Technology Institute	国立給水技術学校
GI pipe	Galvanized pipe	亜鉛メッキパイプ
HDPE pipe	High Density Polyethylene pipe	高密度ポリエチレン管
HEW	Health Extension Worker	保健普及員
HWTS	Household Water Treatment and Storage	世帯での浄水処理と保存
IRC	International Water and Sanitation Centre	国際水衛生センター
ISO	International Organization for Standardization	国際標準化機構
JCC	Joint Coordination Committee	合同調整委員会
JICA	Japan International Cooperation Agency	国際協力機構
JOCV	Japan Overseas Cooperation Volunteers	青年海外協力隊
MF	Micro Finance	小規模金融
MIDI	Metal Industry Development Institute	金属加工産業開発研究所
MoWIE	Ministry of Water, Irrigation and Electricity	水灌漑電力省
MWA	Millennium Water Alliance	ミレニアム・ウォーター・アライアンス
NGO	Non-Governmental Organization	民間非営利組織
O&M	Operation and Maintenance	維持管理
OJT	On the Job Training	職場研修
OMFI	Omo Micro Finance Institute	オモ小規模金融機関
PDM	Project Design Matrix	プロジェクト・デザイン・マトリクス
QC	Quality Control	品質管理
RP	Rope Pump	ロープポンプ
SC	Steering Committee	ステアリングコミティ
SNNPR	Southern Nations, Nationalities and Peoples' Region	南部諸民族州
SSTF	Self-supply Task Force	セルフサプライ・タスクフォース
SWOT	Strength, Weaknesses, Opportunities, Threat analysis	強み、弱み、機会、脅威（TOWS 分析）
TOT	Training Of Trainers	講師研修
TVET	Technical and Vocational Education and Training	職業訓練
TVETC	Technical and Vocational Education Training College	職業訓練校
UAP	Universal Access Plan	ユニバーサル・アクセス計画
UNICEF	The United Nations Children's Fund	国連児童基金
uPVC pipe	Unplasticized Polyvinyl Chloride pipe	硬質ポリ塩化ビニル管
WAS-CAP	The Water Sector Capacity Development Project in Southern Nations, Nationalities and People's Regional State in the Federal Democratic Republic of Ethiopia	エチオピア国南部諸民族州給水技術改善プロジェクト

略語	英文	和文
WASH	Water, Sanitation and Hygiene	水と衛生プログラム
WAS-RoPSS	The Project for Rural Water Supply, Sanitation and Livelihood Improvement through Dissemination of Rope Pumps for Drinking Water	飲料水用ロープポンプの普及による地方給水衛生・生活改善プロジェクト
WBS	Work Breakdown Structure	作業分解図
WHO	World Health Organization	世界保健機構

用語説明

用語	説明
セルフサプライ	セルフサプライ・ポリシーガイドラインの定義によれば、「個人世帯もしくは少数世帯のグループがその大部分もしくは全額を負担して給水施設の改善を行うこと」となっている。セルフサプライは、エチオピア国では 2012 年の「セルフサプライ・ポリシーガイドラインによって、国の政策として進められることとなった。 エチオピアのみならず、ジンバブエ、タンザニア、ウガンダなどを初め、アフリカ諸国でセルフサプライによる給水施設改善が進められており、エチオピアは国家として「セルフサプライ」を位置付けた先進的な国の一つである。
セルフサプライ・タスクフォース	One WASH の枠組みの中で、農村 WASH 技術委員会の下部に位置付けられる、作業グループ。農村 WASH コーディネーターを筆頭に、水灌漑電力省代表、NGO（IRC、A4A、MWA、Water.org など）代表、JICA、本プロジェクトが主要なメンバーで、そのほか UNICEF、WHO 代表も名を連ねる。 「タスクフォース」に先行して、2010 年頃より上記の「セルフサプライ・ポリシーガイドライン」を策定した主要メンバーが「セルフサプライ・ワーキンググループ」として活動を続けていたが、その主要メンバーが継続して関わっている。 主な活動は、月例会議、アドボカシー、人材相互交流や経験交流、ニュースレター発行、セルフサプライフェア実施など。本プロジェクトはそれらの活動の主導的役割を担っていた。
ビレッジ・テクニシャン	農村地域に居住し、地域住民へロープポンプの設置・維持管理にかかるサービスを提供する民間人材。職名は、本プロジェクトが命名したもの。本プロジェクトではビレッジ・テクニシャン育成のための技術研修を行い、南部諸民族州内で 41 名のビレッジ・テクニシャンが技能検定に合格した。 プロジェクト終了後も、ビジネス・ベースでサービスを提供することが期待されている。
ロープポンプ	ロープとピストン（もしくはワッシャー）を用いた揚水装置の一種。「ロープ・アンド・ワッシャー・ポンプ」と呼称する場合もある。 その起源については諸説あるが、1000 年以上も昔、中国で生まれた揚水装置がその最も初期のものと言われる。1970 年代ころから、欧州の技術者により、途上国向けの廉価な揚水装置として簡易化され普及されている。 エチオピアにおいては、セルフサプライ拡大のための低コスト技術の一つとして注目され、普及されている。
One WASH 国家計画	2013 年に、エチオピア国給水・衛生分野において、改善された施設へのアクセスの改善と衛生行動の改善などを目的に、水、保健、財務、教育などの関係省庁が連携して策定した上位国家計画。セルフサプライは、農村 WASH 改善の一つの方策として位置付けられている。
プロジェクトと深く関わりのある NGO	
アクア・フォー・オール	オランダを本拠地とする国際 NGO。
IRC 国際水衛生センター	オランダを本拠地とする国際 NGO。
ミレニアム・ウォーター・アライアンス	アメリカを本拠地とする NGO の集合体。IRC、A4A、Water.org などはその主要メンバーである。これらのメンバーNGO は、さらに事業を実施するパートナーNGO と共に事業を運営している（例：ワールドビジョン、カトリック・リリーフ・サービスなど）。
Water.org	アメリカを本拠地とする国際 NGO

第1章 プロジェクトの概要

1.1 業務の背景

エチオピア国（以下、エチオピア）では、安全な水を供給するための施設整備が遅れており、給水率はサブサハラアフリカ平均 61%に比べて 44%と低い（WHO/UNICEF 2012 年現在)。このため、エチオピア政府は、給水セクターの開発五か年計画であるユニバーサル・アクセス計画（Universal Access Plan: UAP）を策定し、2015 年までに全国レベルの給水率を 98.5%にすることを目指した。また、農村部の給水率については、年間平均 7%を向上させるという高い数値目標を掲げた。

こうした状況の中、日本は無償資金協力や技術協力プロジェクトを通して、エチオピアの農村部における給水施設の整備に貢献してきた。殊に、住民の自己負担による初期投資と維持管理が可能であるロープポンプの支援については、他ドナーに先駆け、技術協力プロジェクトの「地下水開発・水供給訓練計画（1998～2013 年)」、「南部諸民族州給水技術改善計画（2007～2010 年、以下、WAS-CAP)」を通じて、ロープポンプと浅井戸を活用した「セルフサプライ 」型給水施設の技術改良と試行的設置を行ってきた。これらの実績を受け、水灌漑電力省は 2012 年に「セルフサプライ・ポリシーガイドライン」を策定し、住民の自助努力によるセルフサプライ型給水施設の普及を推進している。

このロープポンプは簡便な技術で製造が可能で安価なため、UAP2 においても中心的技術として期待されている 。しかし、安価簡便であるが故に、模倣品、粗悪品が出回る問題が生じたり、また行政による普及戦略や住民が購入する際の経済支援策の不足などにより、その普及は限定的なものであった。セルフサプライによるロープポンプのさらなる普及を目指すためには、国レベルでの普及戦略や住民への購入支援、商品としてのロープポンプの信頼性の確立が必須である。

上述のような背景から、エチオピア政府は 2010 年 8 月、わが国に対して技術協力による支援を要請した。同要請を受けて、2013 年 3 月から「飲料水用ロープポンプの普及による地方給水衛生・生活改善プロジェクト（WAS-RoPSS)」が開始された。

1.2 PDM の変遷

プロジェクト開始後、UAP2 を踏襲して策定された給水と衛生を総合的に扱う One WASH 国家計画が実施段階に入り、南部諸民族州においてロープポンプの大量調達計画が実施された。この環境の変化に鑑み、2015 年 2 月に実施された中間レビューにおいて、PDM1.1（2012 年 7 月版）の改訂にかかる協議が行われ、改訂版（PDM2.1）のドラフト内容が合意された。同年 7 月、改訂版 PDM のドラフトを基に JICA とエチオピア政府による協議が行われ、会議議事録による PDM3.1 が日本、エチオピア双方で正式に合意された。これに基づき、第 3 年次からのプロジェクト業務は、PDM3.1 の枠組みで計画、管理を行うことになった。変更後の PDM3.1 は添付資料 1 の通りである。

1.3 プロジェクトのアウトライン

本プロジェクトは、業務計画書に基づき、対象地域においてロープポンプの規格を提案し、「セルフサプライ・ポリシーガイドライン」に基づき普及を促し、地域の給水衛生改善と生活改善を図るものである。上位目標、プロジェクト目標および期待される成果は以下の通りである。

(1) プロジェクトの上位目標

飲料水用ロープポンプ南部諸民族州で普及され、生活改善をとおした給水衛生状況の改善の実践がなされる。

(2) プロジェクト目標

対象地域において給水衛生状況の改善と生活改善のために飲料水用ロープポンプの普及がなされる。

(3) 期待される成果

成果 1: 連邦レベルで飲料水用ロープポンプおよびその設置方法の仕様が規格化される
成果 2: 飲料水用ロープポンプの製造、設置技術、維持管理に関する戦略が策定される
成果 3: プロジェクト対象郡における行政・半官半民組織による衛生啓発を含むロープポンプ普及活動が促進される
成果 4: プロジェクト対象地域における衛生啓発を含むロープポンプ使用の実践がビレッジ・テクニシャンおよび普及員により継続的に支援される
成果 5: プロジェクトの知見が普及ツールとして取りまとめられ、全国で認知される

1.4 プロジェクト実施期間

本プロジェクトは 2013 年 3 月から 2016 年 12 月までの 3 年 9 か月の期間で実施された。各年次の実施期間は以下の通り。

第 1 年次：2013 年 3 月～2014 年 7 月
第 2 年次：2014 年 8 月～2015 年 8 月
第 3 年次：2015 年 10 月～2016 年 12 月

1.5 実施機関と実施体制

本プロジェクトが関係する先方の主な政府機関は、以下の通りである。

- 主要官庁：水灌漑電力省給水衛生局
- 実施機関：南部諸民族州水灌漑開発局およびターゲット郡の水・鉱物・エネルギー事務所
- その他のカウンターパート機関：南部諸民族州保健局、農業環境保護局、TVET局、オモ小規模金融機関、女性・青少年局

各機関に配置されたカウンターパートリストは、添付資料 2 の通りである。

1.6 プロジェクト対象地

本プロジェクトの対象地域は、南部諸民族州における給水施設改善へのニーズアセスメントやロープポンプ普及の適正審査に基づき、カウンターパート機関、JICA 事務所との協議を経て、2013 年 11 月に以下の通り 4 郡 10 行政村に決定された。

表 1-1: プロジェクト対象地域

県	郡	行政村（対象地域）
ゲデオ	イルガチャフェ	チェルバ チト ドゥメルソ
シダマ	ダレ	ベラチャレ ベラダディチョ ガジャモ
ワライタ	ダモットプラサ	ガメカベチョ ヘレナコルケ トムトメメンタ
グラゲ	マスカン	イェタボン

1.7 投入実績

プロジェクト期間中の日本側およびエチオピア側の投入実績合計は以下の通りである。

1.7.1 日本側投入実績

日本側の投入実績は、専門家派遣合計が 95.23MM、現地業務費約 1 億 6 千万円である。

表 1-2: 日本人専門家投入実績

現地業務			
氏名	担当分野	渡航回数	派遣人月
北詰秋乃	総括/普及・流通戦略	11 回	24.60 人月
小野健	副総括/普及・流通	7 回	11.30 人月
原田容逸	機械工学/機械デザイン	8 回	10.50 人月
宇佐美栄邦	掘削技術/施工管理	6 回	6.53 人月
内田貴子	農業（小規模灌漑・栽培）	11 回	14.23 人月
本間絵奈	衛生/コミュニティ開発	11 回	24.67 人月
石井絢乃	小規模金融/農村生活改善	2 回	2.00 人月
菅井純	小規模金融/農村生活改善	1 回	1.00 人月
		小計	94.83 人月
国内業務			
宇佐美栄邦	掘削技術/施工管理	-	0.40 人月
		小計	0.40 人月
		合計	**95.23 人月**

1.7.3　エチオピア側投入実績

エチオピア側カウンターパート投入実績は、添付資料 2 を参照のこと。ローカルコスト等の負担は、以下の通り。

表 1-3: エチオピア側ローカルコスト負担

コスト負担機関	内容
水灌漑電力省 （アディスアベバ事務所）	事務所スペース、光熱費 会議室
南部諸民族州水灌漑開発局 （アワサ事務所）	事務所スペース、光熱費 10,000 台のロープポンプ調達・普及活動に関する州・県・郡水事務所職員の出張費

第2章 プロジェクトの活動実績と成果

2.1 業務の実施方針と方法

2.1.1 セルフサプライ政策とロープポンプの普及

本プロジェクトにおいて、ロープポンプ普及に際し中心的な理念となる「セルフサプライ」は、2012 年に発行された「セルフサプライ・ポリシーガイドライン」に定義され、従来の供給主導型の普及では裨益者にあたる農村住民が、「自ら財的投資を行って給水改善を行うこと」とされている。セルフサプライはエチオピアの水と衛生（以下、WASH）セクターの上位計画である One WASH 国家計画（2013 年）の中で、農村給水普及の重要な手段の一つとして位置付けられており、水灌漑電力省農村 WASH 技術委員会の下に設置されたセルフサプライ・タスクフォースでは、セルフサプライで農村給水人口の 20%をカバーすることを目指している。また南部諸民族州では、現在安全な水へのアクセスが確保されていない人口のうち 20%をセルフサプライでカバーする目標を立てている。主な給水関係機関とプロジェクトの関係を図 2-1 に整理した。

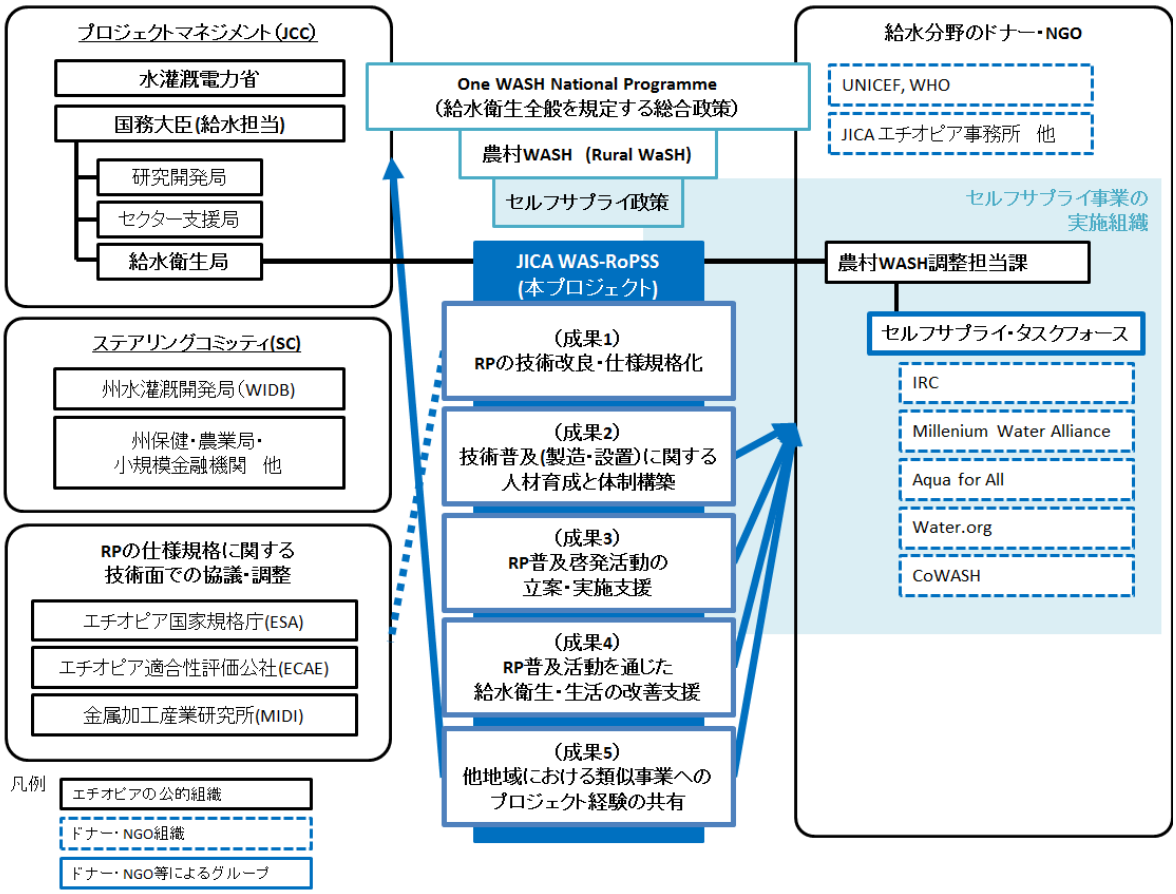


図 2-1: 主要な給水関係機関とプロジェクトの関係

ロープポンプは、セルフサプライで廉価な技術として重要視されている。また、給水改善のみならず、女性の水汲み労働の軽減や労働時間の短縮、子供の井戸への落下防止、井

戸の多目的利用による生産活動への利用など、農村住民の生活改善に資することが期待されている。本プロジェクトでは、このように多面的に農村生活の向上に資するロープポンプ技術の特徴に着目し、農村地域でのロープポンプの需要拡大と持続的なロープポンプの供給を促す普及方法の検討と実践を行った。

2.1.2　プロジェクトのアプローチ

本プロジェクトは、2.1.1 で述べた「セルフサプライ・ポリシーガイドライン」に基づき、セルフサプライによるロープポンプの普及を通して給水・衛生状況を改善し、農村地域住民の生活改善を図ることを目標とした。ロープポンプ普及を促すため、本プロジェクトではまずロープポンプの技術面での改良に取り組み、ポンプ構造とロープポンプを取り付ける井戸の上部施設の改良、製造価格の低減のための調査や各種試験を行った。また、普及に必要な環境を整備するために、上記の結果を踏まえて、ロープポンプの仕様規格化、認証制度、小規模金融からの資金調達を含む導入促進制度の検討、製造・設置業者等の人材育成活動を行った。

次に、上述のポリシーガイドラインに則り、南部諸民族州の 4 郡を対象に、普及活動の支援を行った。支援に当たっては上述した各活動の成果を活かしつつ、小規模灌漑や衛生改善活動等を通して住民のインセンティブと需要を喚起するとともに、農村部の生活改善に結びつくような包括的なアプローチを採用した。村落レベルでの普及活動においては、水・農業・保健・金融セクター行政官や普及プロモーター、修理などを行う民間のサービス提供者などと共に普及・啓発活動を行った。給水政策に対するプロジェクトの貢献を図 2-2 の通り整理した。

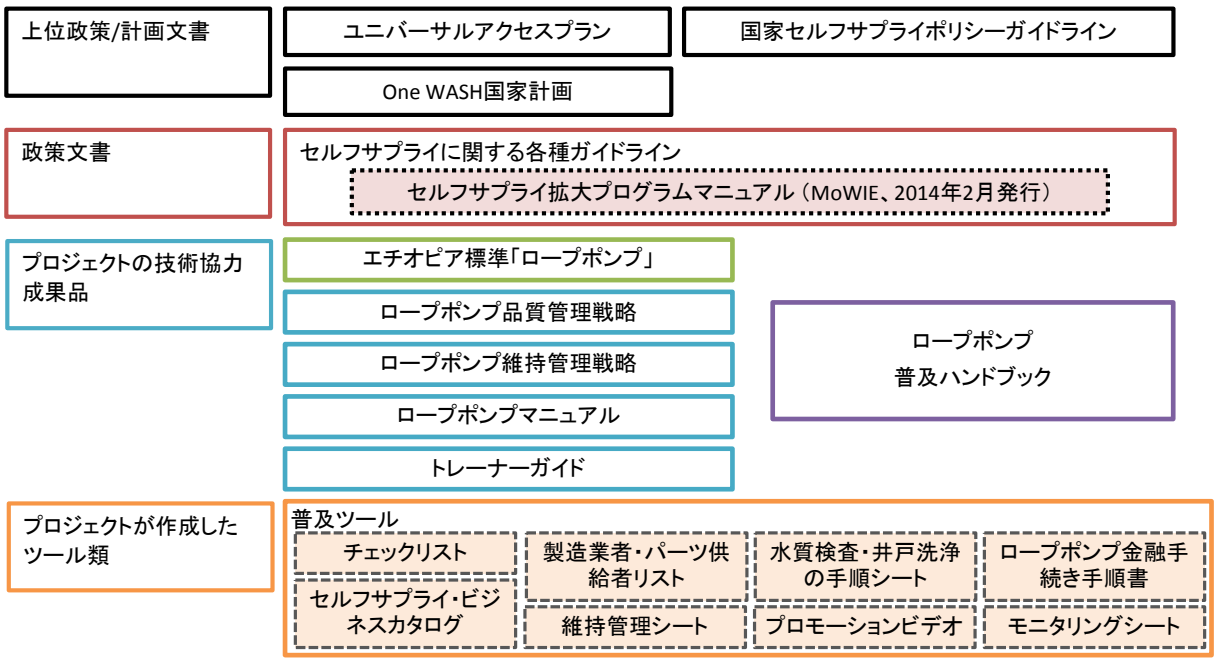


図 2-2: エチオピアの給水政策とプロジェクトの貢献

2.1.3　プロジェクト実施のフレームワーク

本プロジェクトでは、5 つの成果の発現により、プロジェクト目標の達成を図った。図 2-3 では、国および州レベルでの活動と郡や村落レベルでの活動をそれぞれステップ 1（成果 1 および 2)、ステップ 2（成果 3、4、5）に分類して提示している。

成果 1 の活動ではロープポンプ構造の改良と国レベルでの標準化、成果 2 では主に州レベルにおけるロープポンプ普及拡大の環境整備の一環として、品質管理、パーツ供給、人材育成の仕組みづくりに取り組んだ。成果 3 では、ロープポンプ普及に必要な行政によるプロモーション活動の方法を整備すると共に、ポンプ購入や井戸の上部工事のための資金が必要な住民がアクセスできる小規模金融サービスの構築を行った。成果 4 では、パイロット地域でのロープポンプ普及、設置・維持管理支援を実践しながら、ロープポンプ普及・流通に係る一連のプロセスの整理および実践に基づく教訓の抽出を行った。また、これらの活動を通じた経験と教訓の取りまとめを行い、成果 5 では「ロープポンプ普及ハンドブック」を作成し、全国レベルでの認知と周知を行うと同時に、南部諸民族州全域におけるプロジェクト知見の拡大を図った。

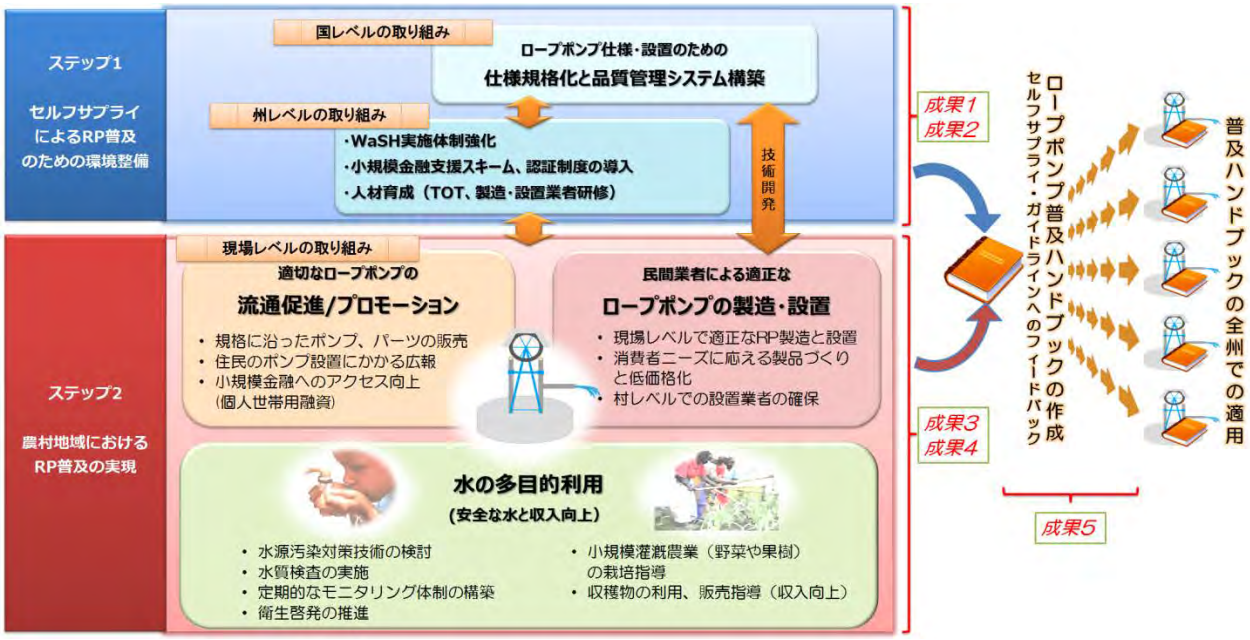


図 2-3: プロジェクト実施のフレームワーク

本プロジェクトの活動内容は多岐にわたり、関係者も多様であるため、複数のセクターや行政レベルのカウンターパート機関および民間のパートナー達と、協働で作業を行った。特に、技術の標準化や政策環境面でロープポンプ普及を支える行政機関のファシリテーターとしての役割と、セルフサプライ市場を担う民間の小規模・零細企業や民間人材の重要性に着目し、プロジェクト終了後も技術の維持、普及拡大が図られるような人づくりや仕組みづくり、関係者の連携強化などに留意して活動を行った。

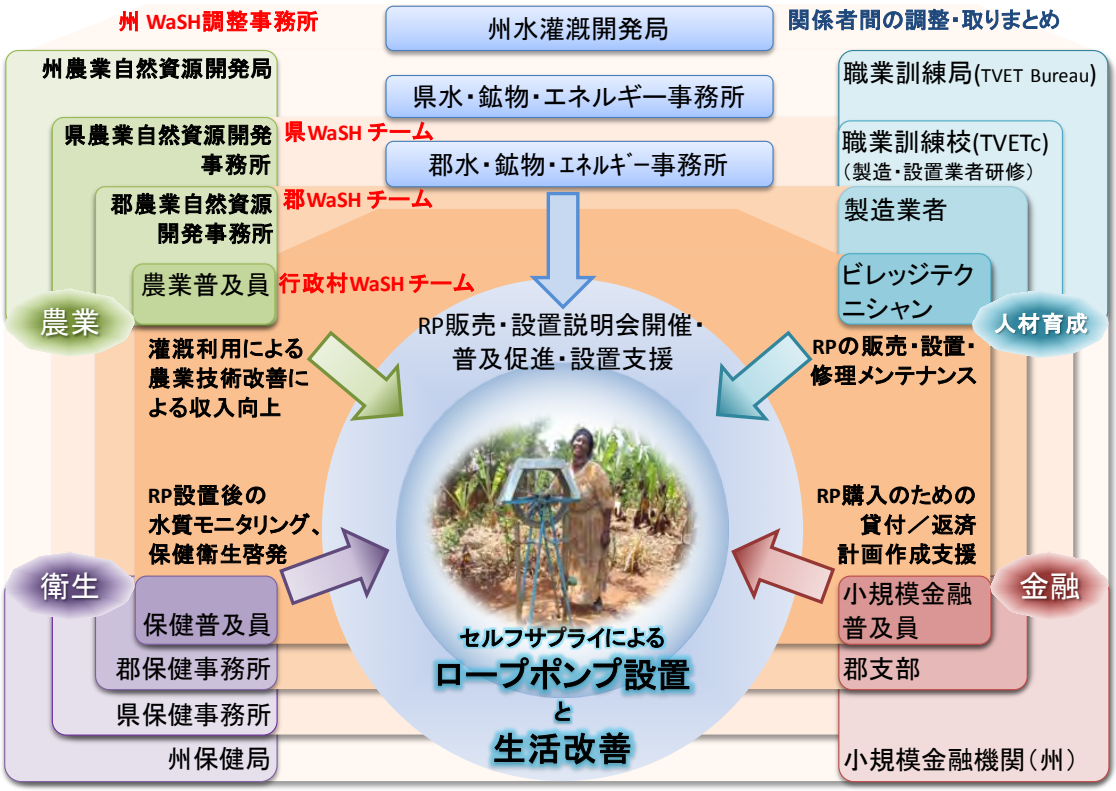
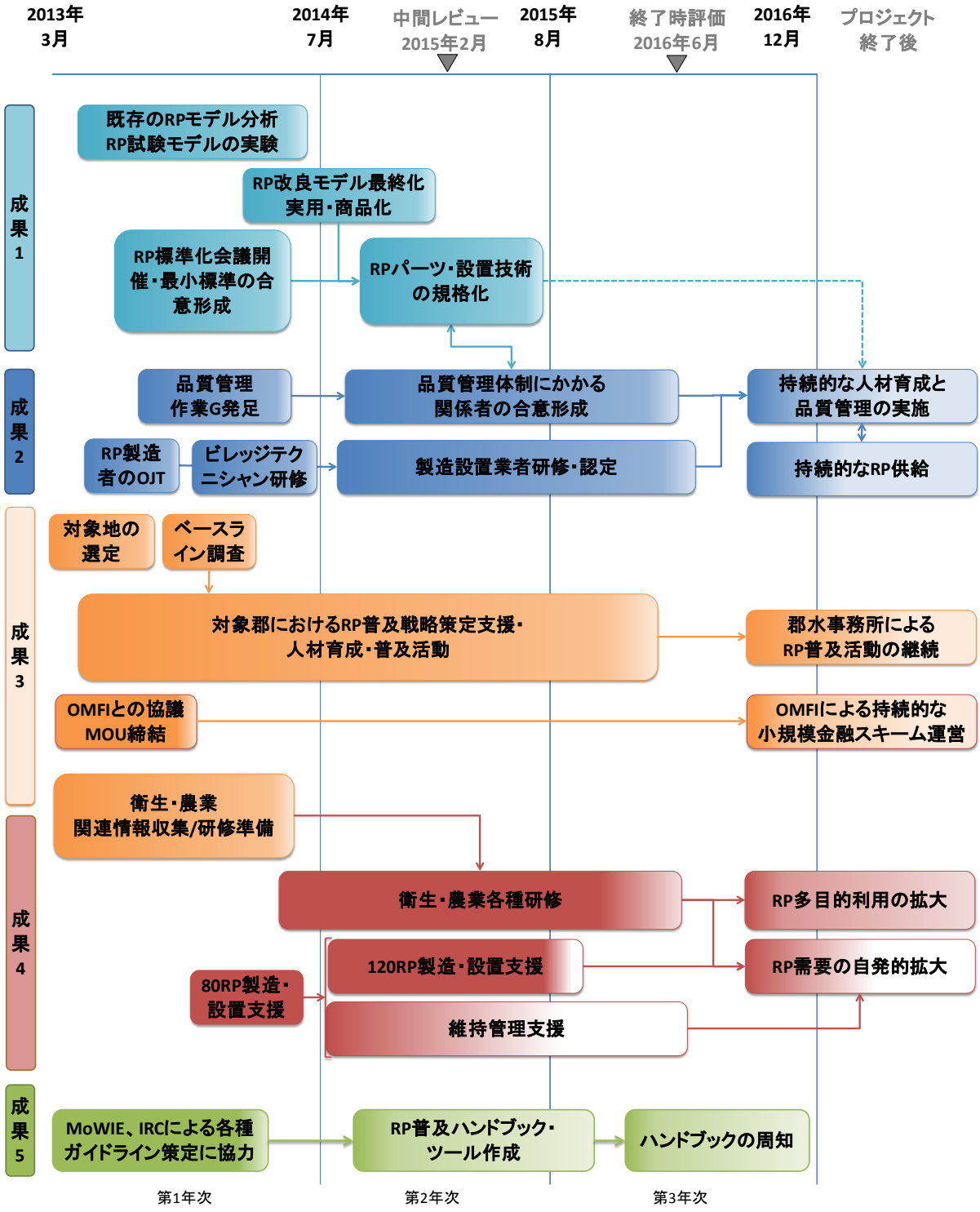


図 2-4: プロジェクトの関係者

2.2 活動計画の内容

各成果の活動の流れと成果との関係を以下の図に示す。また、業務フローチャートを添付資料 3 に示す。また、計画と実績表を添付資料 4 に示す。



OMFI: オモ小規模金融機関、MoWIE：水灌漑電力省、IRC：国際水衛生センター

図 2-5: 各成果に対する活動の進捗とその関係

2.3 プロジェクト管理にかかる活動実績と成果

2.3.1 プロジェクト管理にかかる活動概要

プロジェクトは、アディスアベバ市内にある水灌漑電力省内の事務所、アワサ市内にある南部諸民族州水灌漑開発局敷地内にある事務所の 2 か所にて運営・管理を行った。日本人専門家とローカルスタッフから成るプロジェクトチームは、カウンターパートとプロジェクトの活動方針や運営に関わる課題などを共有し、合意形成できるように定期、不定期の会議等を開催した。カウンターパートとの協働作業、合意形成過程を通じて、技術移転とともにカウンターパート側の当事者意識や責任感の醸成に努めた。

2.3.2 合同調整委員会と州レベルのステアリングコミッティの開催

プロジェクトの活動方針や各年次の活動計画の検討、成果の共有などの目的で、国レベルの合同調整委員会（JCC）と州レベルのステアリングコミッティを開催した。JCC は、主に水灌漑電力省関係者、日本人専門家、JICA 関係者等が参加して、アディスアベバ市内にて 7 回実施した。またステアリングコミッティは、州レベルのカウンターパート機関（水、保健、農業、女性・子供、職業訓練各セクター局、小規模金融機関など）、日本人専門家、JICA 関係者などが参加して、アワサ市内にて 8 回実施した。会議のメンバーリスト、概要及び議事録は添付資料 5 を参照。

2.3.3 広報活動

プロジェクトでは、活動の広報及びロープポンプ普及のための広報ツール等の作成・配布を行い、広くプロジェクトの周知とセルフサプライおよびロープポンプの普及に努めた。また、JICA 広報や他機関による広報の機会も積極的に活用し、プロジェクト広報を行った（添付資料 6）。

表 2-1: 広報ツール等作成・配布実績

ツール名	発行時期・頻度	広報ターゲット
ロープポンプニュースレター（英語・アムハラ語）*	2013 年 5 月～9 月隔月発行、第 1～3 号	カウンターパート、JICA 関係者、国内外のセルフサプライ関係機関など
セルフサプライニュース（英語・一部アムハラ語）*	2013 年 11 月～2016 年 10 月隔月発行、第 1～15 号	カウンターパート、JICA 関係者、国内外のセルフサプライ関係機関など
ブリーフノート（日本語・英語）	2014 年 7 月～2016 年 11 月年 1 回更新	JICA 広報
プロジェクト紹介パンフレット（英語）	年 1 回更新	カウンターパート、JICA 関係者、国内外のセルフサプライ関係者、各種イベント参加者など
A Better Life with Rope Pump（プロモーションフィルム）	2015 年 2 月作成後、プロジェクトの各イベントで上映	研修、ワークショップ、セミナーなどプロジェクトが実施した各種イベントの参加者、セルフサプライフェア参加者など
広報グッズ（T シャツ、バッグ、ノートパッド、ステッカー）	セルフサプライフェア（2015 年 3 月、2016 年 3 月）に合わせて作成	イベント（セルフサプライフェア）参加者

*添付資料 7

2.3.4　中間レビューおよび終了時評価調査への協力

2015 年 2 月に中間レビュー調査、2016 年 6 月に終了時評価調査がそれぞれ実施され、プロジェクトは JICA およびカウンターパート機関の指示に従い、それらの調査準備、現地情報収集、評価結果取りまとめへの協力を行った。それぞれの調査結果の概要は、第 3 章にて報告する。

2.3.5　成果品の作成と提出

以下の成果品をカウンターパートと協働で作成し、JICA 本部およびエチオピア事務所へ提出した。また、英文報告書はカウンターパート各機関へ配布した。成果品の一覧は以下の通り。

表 2-2: 成果品一覧

成果品名	提出年月
業務計画書（第 1 年次～第 3 年次）（和）	2013 年 3 月、2014 年 8 月、2015 年 10 月
インセプションレポート（和・英）	2013 年 5 月
業務進捗報告書（第 1 号～第 5 号）（和・英）	2013 年 8 月、2014 年 2 月、7 月、2015 年 8 月、2016 年 7 月
中間報告書（和・英）	2015 年 4 月
プロジェクト事業完了報告書（和・英）	2016 年 12 月

表 2-3: 技術成果品一覧

技術成果品名	添付ツール
ロープポンプ製造・設置・維持管理マニュアル（アムハラ語）	・維持管理シート ・ロープポンプ図面一式
ロープポンプ品質管理戦略（英語）	・エチオピア標準（ロープポンプ）* ・製造チェックリスト ・設置・維持管理チェックリスト ・維持管理シート ・価格計算ツール ・トレーナーガイド ・ロープポンプ製造にかかる必須技能リスト ・ロープポンプ設置にかかる必須技能リスト
ロープポンプ維持管理戦略（英語）	・維持管理シート ・ビレッジテクニシャン・サービスメニュー ・製造業者・パーツ供給者リスト ・セルフサプライ・ビジネスカタログ ・モニタリングシート
ロープポンプ普及ハンドブック（英語、アムハラ語）	・ロープポンプ金融手続手順書 ・水質検査・井戸の浄水処理情報シート

*エチオピア標準（添付資料 9）は、エチオピア企画庁（ESA）から発行されている国家標準であり、厳密には技術成果品には当たらないが、プロジェクトの技術協力の結果生まれたものである。

2.3.6　その他の活動

(1)　南部諸民族州のロープポンプ大量調達・普及への支援

南部諸民族州水灌漑開発局は、本プロジェクトの第 1 年次に 10,000 台のロープポンプ調達と普及事業を開始した。この調達は、プロジェクト活動と並行して行われたため、本プロジェクトへの貢献要素と阻害要素を可能な限り予測・分析した。それを基に同局との話合いを重ねた結果、同局が計画する活動の一部支援をプロジェクト活動の内容として取り込み、追加支援を行うこととなった（追加活動一覧は添付資料 8 を参照）。同局と合意した具体的な追加活動は以下の通りで、活動の詳細と成果は成果 2 及び成果 3 の項で報告する。

表 2-4: 南部諸民族州ロープポンプ大量普及への追加支援活動

年次	活動
第 2 年次	技術的助言（ロープポンプ仕様、入札方式、普及計画など）
	設置業者の人材育成（プロジェクト対象地以外の 4 県 4 郡対象）
	ロープポンプ普及オリエンテーション（同 4 県 4 郡対象）
	ロープポンプ金融説明会（同 4 県 4 郡対象）
	水質検査 OJT（同 4 県 4 郡対象）
第 3 年次	ロープポンプ普及オリエンテーション（州のセルフサプライ強化対象 36 郡）
	ロープポンプ設置導入研修（同 36 郡）
	ロープポンプ設置研修（プロジェクト対象外 3 県 6 郡対象）
	井戸カバー製造研修（同 3 県 6 郡対象）

(2)　セルフサプライ・タスクフォースへの参加

本プロジェクトは、プロジェクト期間を通して、水灌漑電力省のセルフサプライ担当部署が招集するセルフサプライ・タスクフォース（2013 年まではセルフサプライ・ワーキンググループ）の主要参加者として、その定期会合や協働活動に積極的に参加し、経験交換や技術人材の交流などを行った。

本プロジェクトは、エチオピア国内でセルフサプライを実践する数少ないプロジェクトの一つであり、その活動内容や方法、活動を通して得られる教訓などは、省を初め、水セクター関係者の貴重な経験として蓄積されている。協働作業の成果としては、セルフサプライニュースの定期発行、セルフサプライフェアの開催、セルフサプライ・ビジネスカタログの作成・配布などが挙げられる。また、水灌漑電力省高級管理職員（国務大臣等）への政策提言を共同作成した。

2.4　成果 1 にかかる活動実績と成果

2.4.1　成果 1 の概要：ロープポンプの改良と標準化

成果 1 に関しては、ロープポンプ構造の改良と標準化ならびに手掘り井戸の改良に取り組んだ。ロープポンプ構造の改良では、2 つの改良モデルを開発した。基本パーツの構造寸法や材料の「最小仕様」を標準化した。この標準は、省内での承認を経てエチオピア規格庁（ESA）へ提出され、国家規格として承認された。

手掘り井戸の改良では、井戸カバーやレデューサー、井戸壁の崩壊を防ぐ方法や低予算の井戸掘削後方などを検討した。これらの検討結果から、有用な情報を「テクニカル・ノート」に取りまとめた。

2.4.2　ロープポンプ各種試験と改良

プロジェクトは、ロープポンプの各パーツの改良と試験を行い、2014 年モデル、ポールモデルの 2 つの普及モデル（次頁 Box を参照）を開発した。また、各モデルの製造・設置・維持管理に関するマニュアルを作成した。

2.4.3　ロープポンプ仕様の標準化

ロープポンプの各パーツの最小仕様について、水灌漑電力省、ロープポンプ製造業者、職業訓練校講師、ロープポンプ技術普及に携わる関係機関と協議、検討を重ね、合意した。合意した内容は ESA での検討を経て、エチオピアの国家標準として承認された（添付資料 9）。

標準文書は、ロープポンプ品質管理戦略文書と共に、ファイナルセミナーにてカウンターパート機関やセルフサプライ関係者に広く周知・配布された。

Box 1: プロジェクトで行ったロープポンプの主な改良点

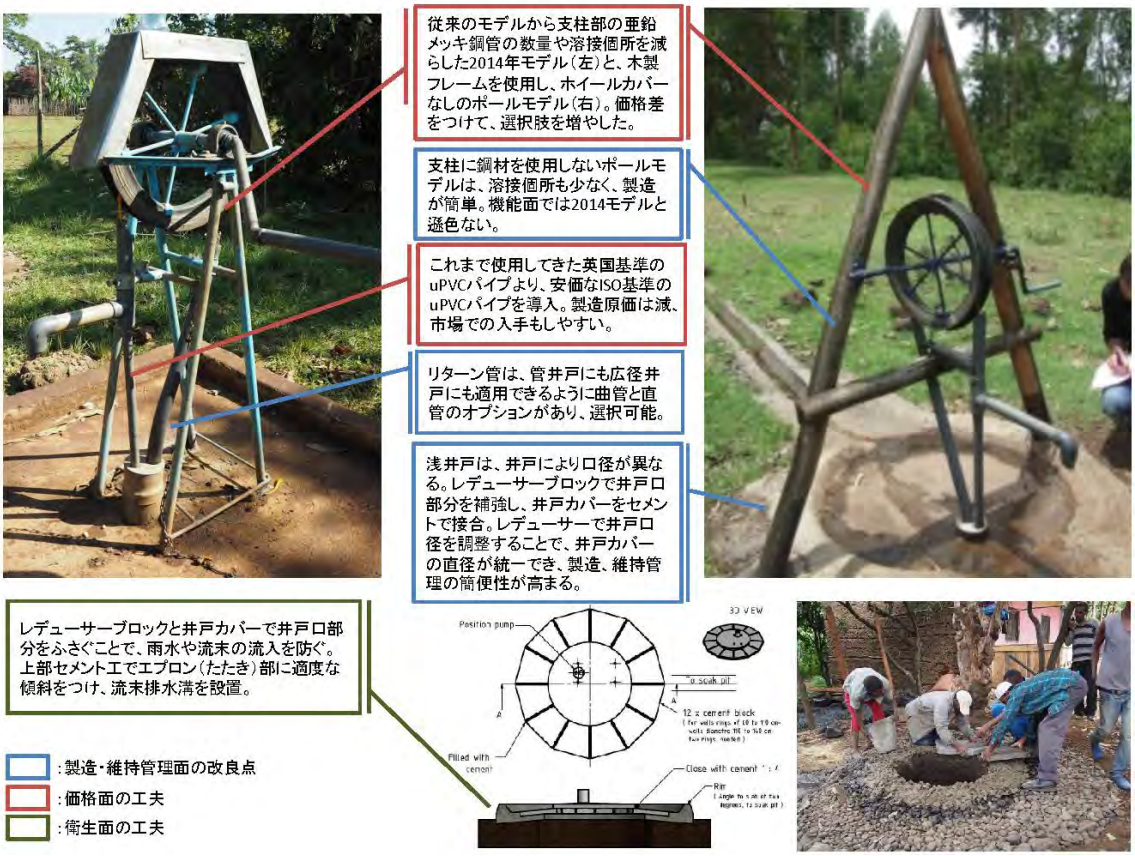
以下に、プロジェクトが行ったロープポンプ本体とロープポンプ井戸の主な改良点を取りまとめた。

ロープポンプ本体の主な改良点

ロープポンプ部位	主な改良点	
	2014 年モデル	ポールモデル
ブッシング	ハンドル取付時に軸を調整しやすいようにブッシングの長さを延長	
ハンドル部	ハンドルの長さを短縮し鋼材を削減（コスト削減）	
構造部	鋼材と溶接部位削減による生産コスト低減と製造の簡素化	木製フレームの使用による低コストモデルの実現
ガイドボックス	サイズ縮小によるコスト低減	
揚水管	ISO 仕様採用による互換性向上、コスト低減（ISO 仕様管の市場価格は従来の BS 仕様より安価）、市場での入手も容易	
リターン管	直管、曲管のオプションがあり、管井戸、手掘り井戸の両方に対応可能	
価格（従来の JICA モデル価格［1.446ETB= 約 8,676 円］を 100%とした場合の比較）	1,281ETB（約 7,686 円）（88.6%）	748 ETB（約 4,484 円）（51.7%）

*注：上記の価格には、井戸の深さや水位によって価格が左右される揚水管、リターン管、異形管、井戸上部工事の価格は含まれていない。本体価格の比較は、アディスアベバ市場の資材価格を基に計算した。生産価格は地域や購入時期によって変動する資材や労働価格によって変化する。

ETB:エチオピアブル（=約 6 円）



ロープポンプ本体および井戸上部工事の改良点

2.4.4　ロープポンプと手掘り井戸にかかる改良研究

上記 Box1 に示した 2 種のロープポンプ普及モデルの改良点に加え、ロープポンプ及び手掘り井戸改良にかかる以下の点について検討と試験を行い、その結果を「テクニカル・ノート」として取りまとめた。これらの検討項目は、ロープポンプの各部位や手掘り井戸の今後の改良に役立つと考えられる項目の中から選定した。汎用試験などの過程が必要であるため、井戸カバーとレデューサーブロックを除き、Box1 で示した汎用モデルにはその結果を反映していない。主な検討事項と結果は以下の通り。

表 2-5: ロープポンプ技術及び井戸改良にかかる改良点の検討結果概要

検討事項	検討結果
ロープポンプ用井戸カバーおよびレデューサーブロックの構造計算並びに強度に関する検討	プロジェクトが普及したロープポンプ用井戸カバー並びにレデューサーブロックは、マニュアル通りの品質を確保して作られている限りは、予測可能な使用条件を満たす強度を備えている。
ロープポンプのフレーム部改良の検討	マニュアルにて普及しているロープポンプのフレームは、2 本の GI パイプを溶接加工した A 字型のものであるが、溶接の代わりに曲げ加工を施した U 字型フレームの製造について検討。地方での製造も可能であり、強度は A 字型フレームより高いことが判明。
ロープポンプ用揚水管の検討	紫外線に弱い硬質ポリ塩化ビニル（uPVC）管の代替として高密度ポリエチレン（HDPE）管を揚水管として活用する可能性を検討。可能ではあるが、加工等に課題が残ることが分かった。
コンクリート製ガイドボックス導入の検討	普及型のスチール製ガイドボックスに代えて、コンクリート製ガイドボックスの普及可能性を検討。機能、耐久性とも問題ないことが判明。コスト面ではスチール製より安価。
強雨などによる井戸崩壊への対応	予想外の強雨による井戸の崩壊が複数個所で報告された。井戸の崩壊を防ぐにはライニング [1]を施すことが最適と考えられるが、費用などの要素を検討した後、井戸所有者の判断により、その対処方法が決定されるべきである。
井戸崩壊防止と水質汚染低減のための竹ケーシング設置の検討	TVETC アワサ校と協働で、試験井戸 2 カ所にて竹ケーシング（直径 80 ㎝高さ 1m）の挿入、設置を実施したが、ケーシング形状、強度確保の点で実用化が困難であることが判明した。研究・開発は TVETC アワサ校引き継ぐこととなった。
低コストの掘削工法検討	マニュアルドリリング並びに小型掘削機による泥水循環工法の試験を実施した。コスト面ではマニュアルドリリングが最も安価であることが明らかとなった。一方、不透水層以下の被圧地下水や風化した岩盤の亀裂水に貯留している量水の地下水は、いずれの工法でも掘り抜くことは困難で、水質面でのメリットは従来の浅井戸と同様であり、セルフサプライには敵しないと判断された。

[1] ライニング（英語：lining）とは、物体の表面 または内面に、定着可能な物質・物体を比較的厚く覆う表面処理のことを意味する。また、その被膜自体を指していう場合もある。
（https://ja.wikipedia.org/wiki/%E3%83%A9%E3%82%A4%E3%83%8B%E3%83%B3%E3%82%B0）
手掘り井戸のライニングは井戸の内壁保護を目的として行われる。多くの場合コンクリートリングなどを挿入する。

2.5　成果 2 にかかる活動実績と成果

2.5.1　成果 2 の概要：ロープポンプの品質管理と維持管理戦略策定

成果 2 については、主にロープポンプ製造と設置にかかる一定品質の維持と供給の安定、並びに村落世帯に設置されたロープポンプの維持管理に資する仕組みづくりと人材育成に取り組んだ。

ロープポンプ製造における品質管理に関しては、製造業者の企業内での品質管理能力の強化、業者の必要技能の特定、および認定制度の検討を行った。これらの結果は、「ロープポンプ品質管理戦略」としてまとめ、ファイナルセミナーにて関係者に周知・配布された。一方、ロープポンプの品質を大きく左右するパーツ供給については、主に供給・流通業者や価格に関する情報を整理し、製造業者に役立つ情報の取りまとめを行った。

また、製造・設置業者への人材育成のため、職業訓練（TVET）システムを活用したロープポンプ技術移転の方法の検討を行い、講師の育成と製造・設置業者の研修を実施し、ロープポンプ製造および設置に関する人材育成をおこなった。

2.5.2　ロープポンプ品質管理戦略

プロジェクトでは、ロープポンプ製造業者、設置者、普及を進める関係各機関等の関係者との協議や研修を通して品質管理体制の検討を進め、以下の方針で品質管理体制を整備することを提案した。検討結果は「ロープポンプ品質管理戦略」として取りまとめ、ファイナルセミナーにて関係者に周知・配布した。

- ✓ ロープポンプ仕様の国家標準の遵守
- ✓ ロープポンプ製造および設置に関するチェックリストの作成と企業内品質管理の促進
- ✓ 職業訓練校を活用したロープポンプ技術者の育成
- ✓ ロープポンプ製造・設置にかかる技能検定制度の導入
- ✓ 民間セクターのビジネス開発とカスタマーサービス改善

上記の戦略文書は 2016 年 10 月に実施したプロジェクト最終セミナーで関係者に周知され、配布された。

2.5.3　ロープポンプ技術にかかる技術者の育成・支援

プロジェクトでは、ロープポンプ技術研修講師育成研修（1.5 か月間）、ロープポンプ製造研修（1 か月）、ロープポンプ設置・維持管理研修（21 日間もしくは 15 日間）などを通して、ロープポンプ技術講師、製造業者、設置業者（ビレッジ・テクニシャン）の育成と技術向上、またユーザーのための維持管理技術研修を行った。これまで研修に参加したロープポンプ講師、製造業者、ビレッジ・テクニシャン等の数は、表 2-6 の通り。

表 2-6: ロープポンプ技術研修実績

研修名 / 所属先・職名	TOT（講師研修）	RP 製造 (上級者コース)	RP 製造 (初級コース)	設置・維持管理研修	累計研修受講者数
TVETC 講師	12			12	24
民間	4	6	7	17	34
州水灌漑開発局	1			1	2
県水事務所職員（プロジェクト対象地外）				4	4
郡水事務所職員				11	11
郡水事務所職員（プロジェクト対象地外）				17	17
ビレッジ・テクニシャン				49	49
ビレッジ・テクニシャン（プロジェクト対象地外）				69	69
RP ユーザー（世帯）				204	204
合計	17	6	7	384	414

RP:ロープポンプ、TVETC：職業訓練学校

上記の研修で育成された技術者の技術習熟度を客観的に測る方法として、エチオピアの職業訓練システムにおいて既に構築されている技能検定試験（COC）を導入し、技術者の技能検定を奨励した。南部諸民族州技能検定センター（Center of Competencies）と協力して試験内容を検討した後、ロープポンプ製造にかかる技能検定試験（1 回）と、ロープポンプ設置・維持管理にかかる技能検定試験（2 回）を実施した。それぞれの試験受験者数と合格者の内訳は表 2-7 の通り。

表 2-7: COC 試験受験者および合格者数とその内訳

所属機関/職名	製造		設置	
	受験者数	合格者数	受験者数	合格者数
TVETC 講師			12 (1)	11
州水灌漑開発局			1	1
プロジェクト対象地郡（県）行政官			9 (1)	8
プロジェクト対象地外郡（県）行政官			7	7
製造業者	10	10	8	7
プロジェクト対象地ビレッジ・テクニシャン			37 (14)	17
プロジェクト対象地外ビレッジ・テクニシャン			37	24
セルフサプライ・パートナー機関からの派遣（TVETC 講師）			3	3
民間ロープポンプ技術者			3	3
合計	10	10	117 (16)	81

( ) 内は再受験者数

技能検定に合格したロープポンプ製造業者 10 名は、自主的に「ロープポンプ製造業者組合」を設置することで合意し、アワサを拠点とする組合として発足した。2016 年 10 月現在、組合の活動計画を策定中である。

2.5.4　ロープポンプに必要な資材・パーツに関する検討

プロジェクトでは、資材・パーツに関するワークショップ等を通して、水灌漑電力省、ロープポンプ製造業者、ロープポンプ技術普及に携わる NGO 等を含む開発パートナー、職業訓練校講師等との協議、検討を行い、ロープポンプに必要な資材やパーツの入手について話し合いを重ねてきた。これらの話し合いで、uPVC 管、異形管、ピストン、亜鉛メッキのボルトとナットなどは、地方の小売店では入手が困難であることが確認された。解決策として、パーツ取扱店のリストを作成して調達先の周知を行った他、地方の小売店に対するパーツ取扱いへの働きかけなどを行った。

また、セルフサプライ・タスクフォース定例会議において、パーツのサプライヤーに対してロープポンプ製造業者への小口発注への対応を促すこと、原材料やパーツ輸入に関する関税緩和の措置の可能性などについて問題提起を行った。ロープポンプのパーツは、現行の市場規模では、市場原理に基づくビジネスとしての成長が困難なことから、行政介入による特別措置などによるパーツ流通の活性化が必要であると考え、提案書を作成し行政側への働きかけを行った（添付資料 10 参照）。セルフサプライ・タスクフォースが作成した、省の高級管理職への政策提言では、パーツ・資材の行政介入についての検討を促す提案を行った。

2.5.4　ロープポンプ維持管理戦略

ロープポンプは、他の揚水技術と比べて比較的簡単に維持管理ができるという利点がある。農村地域に住むロープポンプユーザーが維持管理に関する知識と技術を身に着け、日々の管理や、簡単な修理を行うことが期待されている。上記 2.5.3 の活動を通して育成したビレッジ・テクニシャンは、ロープポンプ設置の際に、ユーザーへの維持管理指導を行っている。プロジェクトでは、以下の 3 段階の維持管理体制による持続的なロープポンプの維持管理を推奨している。

1）日々の点検や週一回のオイル差し、ロープの点検などはユーザーが行う
2）ユーザーが手におえない故障やロープ交換などのサービスは、ビレッジ・テクニシャンが料金を取ってサービス提供する
3）ビレッジ・テクニシャンの手に余る故障などの対応については、ユーザーが料金を支払って、最寄りの街で営業するロープポンプ製造業者がサービス提供する

上記の内容を含む維持管理戦略は、カウンターパート機関や製造業者等を含む関係者間で協議・検討され、「ロープポンプ維持管理戦略」として文書に取りまとめ、ファイナルセミナーにて周知された。

2.5.5　南部諸民族州のロープポンプ大量調達・普及への支援

南部諸民族州水灌漑開発局が 2014 年より実施しているロープポンプの大量調達・普及事業への支援の一環として、プロジェクト対象外の水行政官およびビレッジ・テクニシャンを対象としたロープポンプの設置･維持管理技術研修を行った。その成果は、上記表 2-6、2-7 で示した。

カファ県では、2016 年 7 月に同県内で実施した設置・維持管理研修の後に、ビレッジ・テクニシャンによる設置活動が活発に行われている。一方、第 2 年次にプロジェクト対象地域内に他県の郡行政官やビレッジ・テクニシャンを招いて実施した設置・維持管理研修の後、これらの県での活動はあまり活発に行われていない。第 3 年次にプロジェクトが実施したモニタリング結果でもこの違いは明らかであり、技術普及を実施する地域に、研修の一環として設置したロープポンプが地域住民の目に見える形で存在することで、これらが住民の需要を喚起し、普及促進に一役買ったと考えられる。

2.6　成果 3 にかかる活動実績と成果

2.6.1　成果 3 の概要：郡 WASH チームによるロープポンプ普及と衛生啓発

成果 3 においては、南部諸民族州のパイロット地域におけるロープポンプ普及活動の実践を通して、ロープポンプ普及にかかる一連の活動方法と手順を検証し、取りまとめることを狙いとした。

普及活動においては、セルフサプライの理念に基づき、単なる揚水装置としてのロープポンプの価値のみならず、ロープポンプ設置に伴う上部構造の建設による井戸改善とそれに伴う飲料水へのアクセス向上や時間効率の改善など、村落の生活面でのプラスの変化をもたらす可能性に着目し、行政の既存の普及サービスなどを活用して、ロープポンプ需要を創出する工夫を行った。

また、オモ小規模金融機関と共に、ロープポンプの購入と井戸改善を資金的に支える小規模金融スキームを確立し、その運用を通してロープポンプ普及を促進した。

2.6.2　小規模金融

セルフサプライによるロープポンプ技術普及のための環境整備の一環として、ロープポンプを購入希望する農村住民がアクセスできる小規模金融スキームの整備と実施支援を行った。小規模金融スキームは、南部諸民族州内で広いサービスネットワークを既に構築しているオモ小規模金融機関（OMFI）とプロジェクト、南部諸民族州水灌漑開発局の 3 者でその内容を協議・検討し、2014 年 2 月に覚書による協力合意を行い、運用を開始した。プロジェクト期間中にプロジェクト対象地で金融契約を行ったのは 204 世帯に上り、その返済状況は 2016 年 5 月末時点で 25.2%～51.7%と、郡によってばらつきが見られる（表 2-8 参照）。

同スキームは、農村住民が給水分野への投資を行う際に活用できる初めての小規模金融で、同州水灌漑開発局が実施する大量のロープポンプ普及事業における金融スキームについても、本プロジェクトの方法が踏襲された。

ロープポンプ購入希望者が金融契約を行い、ロープポンプを設置し、返済を行う一連の方法と手順は、OMFI ロープポンプ金融手順書（添付資料 11）に取りまとめられ、プロジェクト対象地の OMFI 関係者、州内のセルフサプライ重点各郡へも配布されたほか、セルフサプライフェアやファイナルセミナーでも周知・配布された。

表 2-8: プロジェクト対象地のロープポンプ金融返済状況（2016 年 5 月 31 日現在）

	ダレ郡	ダモット郡	マスカン郡	イルガチャフェ郡	合計
RP 設置台数	94 台	12 台	41 台	51 台	198 台
融資契約世帯数	93[*1] 世帯	12 世帯	39 世帯	50[*1] 世帯	194 世帯
返済期限を迎えた世帯数	50 世帯	12 世帯	39 世帯	27 世帯	128 世帯
返済期限を迎え返済を開始した世帯数	39 世帯	12 世帯	21 世帯	16 世帯	88 世帯
返済期限を迎えていないが返済を開始した世帯数	29 世帯	0 世帯	0 世帯	16 世帯	45 世帯
返済開始世帯数	68 世帯	12 世帯	21 世帯	32 世帯	133 世帯
融資総額（ETB）	421,166	53,065	123,409	222,753	820,393
返済額（ETB）	8,780	3,350	12,134	28,576	52,840
返済率[*2]	51.7%	25.2%	35.5%	64.8%	—

[*1] ダレ郡とイルガチャフェ郡はデモンストレーションを目的としてロープポンプを保健センターに設置しているため、融資契約はしていない。

[*2] 返済率はロープポンプ金融スキーム覚書に従って、4 か月の猶予期間後 2 年間で 4 回に分けて返済する返済計画に基づき、設置日から 2016 年 5 月 31 日の時点で返済するべき金額と実際に返済した金額の割合を出した。

2.6.3 郡 WASH チームによるロープポンプ普及・流通活動の実施支援

プロジェクトでは、プロジェクト対象 4 郡におけるロープポンプ普及活動を通して、その普及方法や手順を確立し、その内容は「ロープポンプ普及ハンドブック」として取りまとめた。その主な特徴は以下の通り。

- WASH チーム＋（プラス）（郡役所、水・保健・教育・金融セクターを含む、One WASH 国家計画に定められた WASH チームに、農業セクターを加えたグループ）による技術普及活動の推奨
- 民間サービスプロバイダー（ロープポンプ製造業者、ビレッジ・テクニシャンによる技術サービス提供や、世帯用浄水器や浄水剤を販売する業者）との連携促進
- ロープポンプユーザーによる維持管理、飲料水に関する衛生啓発、生計向上活動の継続的普及活動の促進

上記の普及方法や普及ツールは、県および郡レベルの行政官へのオリエンテーションや各種研修、セルフサプライフェア等のイベントにおいて繰り返し紹介し、その周知と浸透に努めた。

2.7 成果 4 にかかる活動実績と成果

2.7.1 成果 4 の概要：ロープポンプ維持管理と多目的利用促進

成果 4 では、ロープポンプ購入後の世帯に対して、ロープポンプ井戸の維持管理強化支援を行った。また、生産活動や衛生改善に役立つ普及活動や啓発活動を行い、ロープポンプを活用した水の衛生改善や生計向上につながる知見や技術の取りまとめを行った。

2.7.2 プロジェクト対象地におけるロープポンプ設置と維持管理活動

2016 年 6 月現在、プロジェクト対象地におけるロープポンプ設置状況は表 2-9 に示す通りである。

表 2-9: プロジェクト対象地におけるロープポンプ設置状況（2016 年 10 月 10 日現在）

郡名	設置台数	設置世帯数	行政村名	行政村ごとの設置台数	行政村ごとの設置世帯数	備考
ダレ郡	95 台	94 世帯	ベラチャレ	37 台	36 世帯	1 台保健センターに設置
			ベラタディチョ	37 台	37 世帯	
			ガジャモ	21 台	21 世帯	
ダモットプラサ郡	12 台	12 世帯	ヘレナコルケ	1 台	1 世帯	
			トムトメメンタ	3 台	3 世帯	
			ガメカベチョ	8 台	8 世帯	
マスカン郡	44 台	40 世帯	イェタボン	44 台	40 世帯	4 台の試験モデルを 2014 モデルへ変更（再設置）
イルガチャフェ郡	59 台	58 世帯	ドゥメルソ	13 台	13 世帯	
			チト	19 台	18 世帯	1 台保健センターに設置
			チェルバ	27 台	27 世帯	
合計	210 台	204 世帯				

設置されたロープポンプは、上記 2.5.4 で述べた通り、3 段階（ユーザー、ビレッジ・テクニシャン、製造業者）のレベルで維持管理、修理等が行われることが期待されている。井戸の問題で稼働していない箇所を除くと、2016 年 7 月時点の稼働率は 97.5%と、概してこの方法による維持管理活動は順調に行われていると判断できる。

2.7.3 衛生啓発

プロジェクトでは、ロープポンプ技術普及のための衛生啓発と、ロープポンプ購入後のユーザーに対する衛生啓発活動を担う人材育成支援を実施し、保健関係人材（郡保健事務所職員、保健センター、保健所職員、保健プロモーター[2]、保健普及員）による継続的な啓発活動の実施を促した。主な研修は以下の通り。

[2] 保健普及活動のために、草の根レベルで配置される住民代表。保健普及員の指導の下で活動し、主に住民への保健普及・啓発活動を行う。

表 2-10: 衛生関連研修実績

研修名	対象者
ウォーターセーフティープランと簡易水質検査キット研修	対象地域県および郡の保健及び教育事務所職員など
セーフウォーターチェーン研修	プロジェクト対象 4 郡の保健関係職員、対象行政村の保健普及員、WASH チームなど
水質検査および井戸の塩素消毒 OJT	対象郡および選定されたセルフサプライ重点郡の水および保健行政職員など
ロープポンプ普及オリエンテーション（衛生コンポーネント）	対象郡および選定されたセルフサプライ重点郡の水・保健・農業・アドミ・金融関係職員など

上記の水質検査については、ロープポンプ設置前、設置後（雨期、乾期）の水質検査を、州水灌漑開発局の水質専門家および青年海外協力隊員との協力の下、継続して実施した。

上記に加え、ユーザーへの啓発活動の一環として、簡易水質検査シート（ペトリフィルム [3]）を用いた衛生啓発活動、世帯用浄水処理方法（浄水剤、浄水フィルターなど）のデモンストレーションを行った。また、エチオピアで使用されている浄水処理の方法の比較検討を行い、その結果を比較表に取りまとめ、カウンターパートなどと共有した（添付資料 12）。

更に、セルフサプライの拡大事業において、衛生啓発との連携は不可欠なものであり、保健セクター行政機関の協力が非常に重要であることから、州保健局と水灌漑開発局の間の協議をファシリテートした。両機関は、保健セクター側の協力と衛生啓発活動の強化について合意し、議事録に署名した（添付資料 13）。

2.7.4 ロープポンプの多目的利用による生活改善の促進

ロープポンプ技術普及のためのインセンティブとして、またロープポンプ購入・設置後の生計向上の手段として、野菜栽培等による収入向上や営農指導による効果的な農業生産促進の研修を実施した。

ロープポンプ技術普及のための住民説明会においては、郡農業事務所職員や各行政村に派遣されている農業普及員がロープポンプを活用した野菜栽培等の可能性を説明し、ロープポンプ技術導入を勧めた。また、ロープポンプを購入したユーザーを含む対象行政村住民に対し、営農や栽培について研修等を行い、農業技術の向上による生計向上への努力を促した。

ロープポンプ設置後の野菜栽培など、ユーザーによるグッドプラクティスは、後述する「ロープポンプ普及ハンドブック」で紹介した他、「グッドプラクティス集（添付資料 14）」として取りまとめ、カウンターパート機関等と共有した。

[3] 3M ペトリフィルムは、3M 社食品衛生管理製品のひとつで、微生物分野や微生物培養などによく用いられており、微生物の検出および測定を効果的に行うことができる。プロジェクトでは、3M ペトリフィルム培地 E-coli および大腸菌群数測定用 EC プレートを用いている。
（https://en.wikipedia.org/wiki/Petrifilm、
http://www.mmm.co.jp/microbiology/products/petrifilm/EC.html)

2.8　成果 5 にかかる活動実績と成果

2.8.1　成果 5 の概要：普及ツールの取りまとめと周知

水灌漑電力省は、2014 年にセルフサプライ拡大プログラムマニュアルを策定し、セルフサプライにおける計画立案や普及の方法を取りまとめた。本プロジェクトで当初作成を予定していた「ロープポンプ普及ガイドライン」は、このマニュアルと内容的に重複するものであり、想定していた目的は、上記のマニュアルが代替できると判断された。

そのため成果 5 においては、普及ガイドラインに代わって、より実践レベルで役立つ「ロープポンプ普及ハンドブック」を作成することになった。このハンドブックでは、プロジェクト活動の経験から得られる知見や教訓を盛り込んだ。

また、セルフサプライとロープポンプ技術普及のための各種イベント（セルフサプライフェアなど）を通して、プロジェクトの知見を周知し、セルフサプライとロープポンプ技術の普及に努めた。

2.8.2　ロープポンプ普及ハンドブックの作成

本プロジェクトのロープポンプ普及活動を通して得た知見や教訓をとりまとめ、「ロープポンプ普及ハンドブック」を作成した。プロジェクトチームが分担して執筆したドラフトは、カウンターパートやセルフサプライ関係機関と繰り返し行われた話合いと推敲を経てとりまとめられ、2016 年 9 月から 10 月にかけてアワサとアディスアベバでそれぞれ実施した「ハンドブック検討ワークショップ」において、水・農業・金融の各レベル行政官、セルフサプライや技術普及に携わる NGO、ロープポンプ製造業者などと共有・検討し、最終化した。図 2-6 は、プロジェクト活動を通じて作成した文書やツールを階層別に示したものである。

2.8.3　セルフサプライフェア（世界水の日）の実施支援

2015 年および 2016 年の 3 月、世界水の日に因んだ「セルフサプライフェア」を開催した。本イベントは水灌漑電力省のセルフサプライ・タスクフォースと協働で実施したもので、特に 2016 年のイベントは、タスクフォースの主催でイベントが計画・運営されるように促し、水灌漑電力省を含む関係者の当事者意識を醸成する工夫をした。

セルフサプライに関して開催された一連のイベントは、以下の通り。

表 2-11: セルフサプライフェア関連イベント概要

開催年	活動内容	主な参加者	主催者
2015	世界水の日（セルフサプライ）展示会	水セクター関係者多数、一般	水灌漑電力省
	セミナー「水と持続的開発」（2 日間のセミナーのうち、1 日はセルフサプライ・セミナー）	セルフサプライ関係機関（NGO、ドナー、プロジェクト等） 水灌漑電力省職員 水関連研究者など	水灌漑電力省 セルフサプライ・グループ（本プロジェクト、IRC、 A4A、MWA など）
	ビジネス・マッチング	セルフサプライ技術に関わる民間業者	A4A

開催年	活動内容	主な参加者	主催者
	セルフサプライ・ビジネスカタログ作成		A4A、本プロジェクト
2016	ロープポンプ関係者会議	水灌漑電力省、製造業者、ビレッジ・テクニシャン、NGO、セルフサプライの活動実施中のパートナー郡行政事務所等（計 70 名程度）	本プロジェクト
	世界水の日セレモニー	省からの招待者	水灌漑電力省
	ビジネススキル研修	TVETC 講師、ビレッジ・テクニシャン、製造業者（57 名）	本プロジェクト
	セルフサプライ・セミナー（セミナーの位置プログラムとして：RP 普及功労者表彰）	水灌漑電力省、州水灌漑開発局代表、国際機関、NGO、TVETC 校長および講師、ビレッジ・テクニシャン、製造業者など（計 140 名程度）	セルフサプライ・タスクフォース（本プロジェクト）
	世界水の日（セルフサプライ）展示会	省の招待者およびセルフサプライ関連業者（45 企業および機関）	水灌漑電力省 セルフサプライ・タスクフォース
	セルフサプライ・ビジネスカタログ作成	展示会参加者および主要なセルフサプライ関連業者（RP、浄水フィルター、浄水剤、パーツ・資材サプライヤー、その他）	セルフサプライ・タスクフォース

IRC：国際水・衛生センター、A4A：アクア・フォー・オール、MWA：ミレニアム・ウォーター・アライアンス　いずれも国際 NGO

これらのイベントは 2 年連続大盛況で、水セクターにおける「セルフサプライ」のプレゼンスを高め、関係者の士気を高めることに貢献した。2016 年のイベントでは、水セクター以外の参加を積極的に促した。農業の世帯灌漑プログラム、エネルギー分野ではバイオガス・プログラム、保健セクターのサニテーション・マーケティング関係者の参加を得ることができ、セクターを超える連携意識を高めることにも貢献した。

2.8.4　プロジェクト成果の周知

プロジェクト最終成果の発表の場として、2016 年 10 月 25 日と 28 日、アディスアベバとアワサでそれぞれ、ファイナルセミナーを開催した。

第3章 プロジェクト目標の達成度

3.1 PDM 指標に対する成果達成状況

PDM3.1 に基づくプロジェクトの成果達成状況を表 3-1 に取りまとめた。

表 3-1: PDM 指標の達成状況（PDM3.1）（2016 年 9 月末現在）

No.	指標	2016 年 9 月現在の達成状況	達成度
【上位目標】飲料水用ロープポンプ（以下 RP）が南部諸民族州で普及され、生活改善をとおした給水衛生状況の改善の実践がなされる。			-
1	水の衛生に関する改善方法を知っている RP ユーザーが 80%を超える	-	-
2	生活が改善したと認識した RP ユーザーが 80%を超える	-	-
【プロジェクト目標】プロジェクト地域における給水衛生状況の改善と生活改善のために飲料水用ロープポンプの普及促進がなされる			100%
1	プロジェクトにおいて RP をセルフサプライで設置した RP ユーザー数が 200 となる	プロジェクト対象地において 210 台の RP が設置され、ユーザー世帯数は 204 となった。	100%
2	水の衛生に関する改善方法を知っている RP ユーザーが 90%を超える	エンドライン調査では、171 世帯中全世帯が何らかの改善方法を知っていると回答。主な内訳は「水場の掃除（100%）」「家畜を遠ざける（99%）」「井戸の周りに柵（60%）」など。また、HWTS の方法を知っていると回答したのは 44%。	100%
3	生活が改善したと認識した RP ユーザーが 90%を超える	モニタリングでは、158 中 140 の回答者が、ロープポンプにより生活が変化したと回答（89%）。エンドライン調査では、RP 設置に関して 93%が満足していると回答し、RP の使用を通じた生活の改善の実感については、98.3%が改善したと回答した	100%
【成果】 1. 連邦レベルで飲料水用ロープポンプおよびその設置方法の仕様が規格化される。			100%
1.1	RP 技術が品質と価格面で改良され、2 つ以上の改良 RP モデルが 2015 年末までに稼働している	2 種の改良 RP モデルが開発され、南部諸民族州の製造業者への技術移転が行われた。改良型モデル（2014 モデル）を普及モデルとして選定した後の製造、設置台数は 120 台。	100%
1.2	RP の最小標準仕様が関係者間で合意される	2015 年 7 月、関係者間で最小標準仕様が合意された。	100%
1.3	2016 年末までに RP の最小仕様に関する申請書類が少なくとも 1 件 ESA に申請される	合意されたロープポンプの最小仕様は、2015 年 11 月、水灌漑電力省より ESA に提出された。2016 年 4 月、同申請書は ESA に承認された。	100%
2. 飲料水用ロープポンプの製造・設置方法に関する品質管理のための戦略が策定される。			100%
2.1	2016 年末までに RP の製造･設置品質管理（ QC ）の文書が作成される	ロープポンプ製造・設置に関するチェックリストがそれぞれ更新・作成された。同チェックリストを使用して、TVET システム（COC）を活用したロープポンプ製造・設置の技能検定が実施された。QC 戦略文書が策定された。	100%

No.	指標	2016 年 9 月現在の達成状況	達成度
2.2	2016 年末までに RP 資材供給網の方法論が文書化される	パーツ調達に関するワークショップが開催され、地方でのパーツ調達について話し合いが行われた。パーツショップのリストが作成された。資材供給に関する文書を作成し、ファイナルセミナーでカウンターパート等と共有した。	100%
2.3	2016 年末までに世帯用 RP の維持管理方法に関する文書が作成される	維持管理戦略が策定された。	100%
2.4	RP 製造・設置・維持管理に関する講師育成研修を修了した受講者数が 14 名を超える	16 名の対象者（TVET 講師 12 名、民間セクター4 名）に対する講師研修（TOT）が実施され、研修修了者はビレッジ・テクニシャンに対する設置・維持管理研修の講師を務めた。	100%
2.5	RP 製造研修を修了した受講者数が 8 名を超える	RP 製造業者の上級者向け研修が 6 名の対象者（民間 RP 製造業者）に対して実施された。また、初級者コースは 7 人の対象者に対して実施された。10 名の製造業者が COC 試験に合格。	100%
2.6	RP 設置・維持管理研修を修了した受講者が 150 名を超える	118 名のビレッジ･テクニシャン、33 名の州・県・郡水行政職員、12 名の TVETC 講師、4 名の民間業者、13 名の製造業者が RP 設置維持管理研修（技術研修）を受講した（合計 180 名）。また、設置したすべての RP 井戸ユーザー（204 世帯）に維持管理研修を実施した。合計 384 名。 41 名のビレッジ･テクニシャン、16 名の州・県・郡水事務所技術職員、11 名の TVET 講師が COC 試験に合格。	100%
2.7	RP 製造業者・設置者のリストが作成される	2015 年 2 月に整備され随時更新中。2016 年 3 月には A4A と協働でセルフサプライ・ビジネスカタログを作成した。2016 年 10 月に再度カタログ情報を更新。ファイナルセミナーで配布。	100%
2.8	リストに記載のある RP 製造業者･設置者の 80%以上が RP 資材取扱い業者・小売業者との連絡方法を認識している	エンドライン調査では、リストに記載のある製造業者の 88%が資材取扱業者・小売業者との連絡方法を認識している。	100%
3. 行政機関・関係機関による対象地域で飲料水用 ロープポンプの普及活動が強化される。			100%
3.1	RP 購入のための小規模金融スキームが設立される	OMFI がロープポンプ金融を設立。204 世帯中 204 世帯が OMFI とのロープポンプ金融契約を締結した。	100%
3.2	衛生啓発を含む RP 普及活動の手法と手順が定義される	RP 設置のための井戸選定基準と普及活動の手法が検証され、郡レベル以下の行政職員や普及員によって普及活動が実施されている。	100%
3.3	すべての郡 WASH チームが普及活動に参加する	WASH 年間計画の立案ワークショップ（2014 年 6 月、2015 年 6 月）では、ロープポンプ普及手法や手順が、WASH チーム（州、県および郡の水、農業、保健、教育の行政官および小規模金融機関の職員）と共有された。また、全ての対象地域で、ロープポンプ普及活動に農業、保健、小規模金融の担当官および普及員が参加した。	100%

No.	指標	2016 年 9 月現在の達成状況	達成度
3.4	RP 普及ハンドブックが、成果 3 に関連する活動の経験・教訓をもとに作成される	2016 年 9 月～10 月にアワサおよびアディスアベバで実施されたハンドブック検討ワークショップにおいて、最終化された。	100%
4. プロジェクト対象地域における衛生啓発を含む RP 使用の実践がビレッジ・テクニシャンおよび普及員により継続的に支援される			100%
4.1	プロジェクトにより設置され稼働している RP の割合が 90%以上である	エンドライン調査時点で、98%のロープポンプが稼働中である（120 台中 117 台）[4]。	100%
4.2	RP ユーザーのうち保健普及員から支援を受けたユーザーの割合が 90%を超える	上記 3.3 の活動では、2 年次のみで合計 3700 人の住民が参加した。 エンドライン調査では、96.4%が水の衛生に関する啓発を保健普及員から受けたと回答した。 グッドプラクティス集を取り纏め、関係者と共有。	100%
4.3	RP ユーザーのうち農業普及員から支援を受けたユーザーの割合が 85%を超える	保健普及と同様、上記 3.3 の活動では、2 年次のみで 3700 人の住民が参加した。ユーザー世帯を含む 199 名が農業研修に参加した。 エンドライン調査では、94.5%が（保健、農業、ビレッジ・テクニシャンも含む）普及員からの生計改善に関する支援を受け、その情報に満足したと回答した。 なお、VT を含めた普及員（保健、農業、小規模金融）からの情報提供に対する満足度は 5 点満点で 4.68 点であった。[5] グッドプラクティス集を取り纏め、関係者と共有。	100%
5. プロジェクトの知見が普及ツール類に取りまとめられ全国に周知される			100%
5.1	プロジェクトの知見が普及ツールとして取りまとめられ、全国で認知される	2015 年、2016 年 3 月にそれぞれ実施したセルフサプライフェアでは、セルフサプライとプロジェクト活動のプロモーションに大きく貢献した。 RP マニュアル、O&M シート、OMFI ブックレット、水質検査シートなどハンドブックの添付資料として取りまとめ、ファイナルセミナーで配布した。 2016 年 10 月、アワサおよびアディスアベバでファイナルセミナーを開催し、プロジェクト成果の周知を行った。	100%

[4] 調査した 171 か所の井戸の内、井戸の問題（井戸の崩壊、水位の低下など）で稼働していない井戸 51 か所を除いて稼働率を計算。稼働しているロープポンプ 117 台／稼働している井戸 120 基＝97.5%。2016 年の乾期には、厳しい干ばつのため、井戸が枯れたり水位が低下した井戸が多数（49 か所）あった。ポンプの問題で稼働していない井戸は 3 か所のみであった。

[5] 設問「Did you get useful information to improve your livelihood through Village mechanics, HEW, DA, MF agents?」に対し、「とても満足」=5 点、「十分」=4 点、「情報を受け取った」=3 点、「満足していない」=2 点、「まったく満足していない」=1 点で回答を点数化し、全回答の平均値を求めた。設問の主旨は、普及活動で得られる情報の受け手として普及員からの情報提供に関する満足度を測ることであり、ロープポンプ普及活動は複数のセクターの行政官や普及員が集まって行うことが多いため、セクター別としない設問とした。

3.2 中間レビュー調査結果概要とプロジェクトの対応

2015 年 2 月に実施された中間レビューでは、以下の 7 点がプロジェクトに提言された。その内容とプロジェクトの対応を、以下の通り表 3-2 に整理した。

表 3-2: 中間レビューの提言に対するプロジェクトの対応

提言	プロジェクトの対応
南部諸民族州水灌漑開発局によるロープポンプ大量調達への支援	・ ロープポンプの調達に関する技術的助言を継続 ・ プロジェクト対象外の 4 郡を対象に、プロジェクトで育成した職業訓練校（TVETC）の講師を活用し、郡技術職員とビレッジ・テクニシャン対象のロープポンプ設置・維持管理研修を実施（第 2 年次、実施済） ・ 対象外 4 郡の水・保健・農業事務所の技術者を対象としたロープポンプの普及のオリエンテーションおよびオモ小規模金融機関（OMFI）職員を対象とした小規模金融スキームに関する説明会を実施（第 2 年次、実施済） ・ 州内のセルフサプライ重点郡 36 郡（14 県 4 特別郡）を対象としたロープポンプ普及オリエンテーションを実施（第 3 年次、実施済） ・ 上記 36 郡を対象としたロープポンプ設置・維持管理導入研修を実施（第 3 年次、実施済） ・ 上記 36 郡の内、6 郡（3 県）を対象としたフルスケールの設置・維持管理研修を実施（第 3 年次、実施済） ・ 上記 6 郡のモニタリングを実施（第 3 年次、実施済） ・ プロジェクトのこれまでの経験・知見を取りまとめた普及ハンドブックを作成、共有（第 3 年次、実施済）
ロープポンプ井戸の水質への配慮	・ 家庭浄水処理の普及や啓発活動などの衛生行動の改善に向けた取り組みを継続（第 2～3 年次、実施済） ・ ロープポンプ設置前の井戸選定段階での硝酸、亜硝酸検査を実施（第 2 年次より実施） ・ プロジェクト対象外 4 郡（設置研修と同じ郡）の水・保健職員を対象に、水質検査の職場研修（OJT）を実施（第 2 年次、実施済） ・ 州内のセルフサプライ重点郡 36 郡（14 県 4 特別郡）を対象としたロープポンプ普及オリエンテーションにおいて、衛生研修を実施（第 3 年次、実施済）
ロープポンプ普及に伴う衛生教育活動の方法検討	・ ロープポンプの普及に即した形に衛生啓発活動の手順や実演方法を整理し、普及ツールとして取りまとめる（第 3 年次、実施済） ・ 上記のツールの内、水質検査、井戸の塩素消毒に関するツールを作成（第 3 年次、実施済み） ・ 州水灌漑開発局と州保健局が衛生啓発にかかる会議議事録に署名（第 3 年次、実施済）
ロープポンプを活用した小規模農業の改善（優良事例の取りまとめ）	・ 優良事例の収集、取りまとめ（第 3 年次、実施済）。
維持管理手法の早期取りまとめと共有	・ 維持管理手法の取りまとめを行い、育成人材や行政の役割を含むロープポンプ維持管理戦略文書を作成し、関係者と共有（第 3 年次、実施済）。 ・ ツールとして、維持管理シートを作成、配布（第 3 年次、実施済）。
関連機関間の調整	・ 他機関によるロープポンプ普及活動において、補助金の有無など普及方法の違いから、住民側の混乱を生まないよう、行政機関、開発パートナー間の調整が重要である。エチオピア側への提言であるため、カウンターパートへの調整の働きかけ（継続）

提言	プロジェクトの対応
	・ 引き続き他の開発機関によるセルフサプライ普及などの活動に関する情報を収集し、カウンターパートと共有（継続）
PDM の修正	・ PDM 改訂に際し、カウンターパート、JICA 本部、エチオピア事務所との協議プロセスへの協力（第 2 年次、実施済）

3.3 終了時評価調査結果概要とプロジェクトの対応

2016 年 6 月 13 日から 7 月 1 日、日本からの団員 3 名、エチオピア側の団員 2 名からなる合同評価調査団により、終了時評価調査が行われた。結果概要は以下の通り。

3.3.1 5 項目評価結果概要

5 項目評価の結果概要は下表の通り。

表 3-3: 5 項目評価結果概要

評価 5 項目	評価結果	評価理由
妥当性	高い	エチオピアおよび JICA の政策・方針に合致
有効性	高い	PDM 上のほぼ全ての指標が満たされている
効率性	高い	日本側、エチオピア側の投入は計画通り行われた
インパクト	比較的高い	州水灌漑開発局によるロープポンプ設置が計画されている県や郡において、上位目標が 3 年以内に達成される可能性がある程度見込まれる TVETC の自発的な活動によるロープポンプ研修が実施されている。一部のビレッジ・テクニシャンが起業化の手続き中。
持続性	中程度	政策面：政策面での持続可能性は高い。品質管理における国家標準や COC 試験など制度面でのアドバンテージがある一方、市場の未成熟などの不安要素がある。 組織・財政面：RP 普及活動、品質管理、製造・設置・維持管理面において、組織・財政面の大きな課題は無い。 技術面：技術面での持続性について、TVET の活用、COC 試験制度、品質管理戦略などがプラス要因である。 その他：多くのユーザー世帯は水処理を行わずに飲用しているため、衛生啓発の強化が必要。

3.3.2 提言

終了時評価調査からの提言は、以下の通り、プロジェクトの期間中の提言とプロジェクト終了後の提言がある。以下、終了時評価結果概要から抜粋する。

(1) プロジェクト期間中の提言

1) RP のスペアパーツを扱う零細業者への政策的補助の検討

水灌漑電力省及び州水灌漑開発局は、RP 製造業者協会や商業局などと協議し、零細業者に対する支援策を検討する必要がある。

2) セルフサプライ・ガイドラインの遵守

州水灌漑開発局は、住民負担でロープポンプを普及することを規定したOMFIとの覚書及びセルフサプライ・ガイドラインを遵守するとともに、補助金付き配布は大規模な干ばつへの一時的な対応であり、原則として各世帯が 100%負担した上でロープポンプの購入を促進する姿勢を変更していないことを明確にし、関係機関に対して発信し、住民間の混乱を避ける必要がある。

(2) プロジェクト終了後の提言

1) プロジェクトの成果の活用

本プロジェクトでは、セルフサプライによるロープポンプ普及のための基盤が構築された。特に、ロープポンプ最少仕様の基準の承認、小規模金融を通じた普及促進、TVETCを活用した技術研修の実践や知見のマニュアル化、COCによるロープポンプ技術者の技術レベルの検査、ビレッジ・テクニシャンの育成は、持続的なロープポンプの普及にあたり欠かすことができない。水灌漑電力省、州水灌漑開発局、その他ドナー等を含む関連機関は、これらのシステムや方法論などを活用し、セルフサプライの実施促進や、南部州におけるロープポンプの普及展開を図ることが求められる。

2) ロープポンプの最少仕様の適用促進

ロープポンプの最少仕様が国家基準として承認されたものの、関係機関に対して本基準に基づくロープポンプ調達促進を行うためには、戦略的に関係機関に働きかける必要がある。そのため、水灌漑電力省は及び州水灌漑開発局は、セルフサプライ・タスクフォースと協議し、最少仕様の適用促進に関する戦略を検討する必要がある。

3) ロープポンプの設置・維持管理に必要な人材育成の拡大

県、及び郡水事務所と連携し、質を担保したロープポンプの設置・維持管理をプロジェクト対象外にも展開するために、州水灌漑開発局は、TVETCやCOCを取得した郡水事務所の職員等を活用し、郡水事務所の技術職員やビレッジ・テクニシャン等の人材育成をプロジェクト対象外にも拡げる必要がある。また、州政府は県、郡、村などの各レベルでロープポンプ普及活動を継続するための予算を確保していくことが求められる。

4) 郡水事務所と保健普及員による、衛生啓発活動の継続

浄水処理の重要性が浸透しているとは言い難いため、郡水事務所及び保健普及員により、今後も家庭用浄水処理の方法や衛生教育をコミュニティレベルで継続することが望ましい。

5) 農業局との連携

ロープポンプから取水した水は、飲料水と農業用水の双方に活用されることが求められるが、農業用に限定して整備されたロープポンプは、飲料用の規格を満たしていない場合が多い。州水灌漑開発局は、農業局に対して必要な技術的助言や情報を提供し、農業局が

設置するロープポンプが飲料用としても基準を満たすためのサポートを行うことが望ましい。

3.3.3　教訓

以下は、終了時評価調査で得られた教訓である（終了時評価結果概要より抜粋）。

(1)　TVETC を活用した人材育成

ロープポンプの製造・設置・維持管理について、TOT による TVETC 教員の育成を通じて、民間のロープポンプ製造業者がプロジェクト対象サイトで育成された。加えて、TVETC 教員と郡水事務所の技術職員が設置・維持管理技術をビレッジ・テクニシャンに対してカスケード式に技術移転したことで、技術が広域に伝播した。また、TVETC 教員の能力強化に加え、COC に基づく試験を整備したことも、継続的な人材育成を行う仕組みを構築したと言える。このように、既存の TVETC を活用しつつ、地場の技術者や産業を育成することでプロジェクトの持続性を確保する方法は、ロープポンプに限らず他の普及展開プロジェクトにも活用可能なものである。特に、技術者の育成等を通じての普及展開を図るプロジェクトにおいては、計画段階から TVETC の活用を視野に入れたアプローチの検討が、有効であると考えられる。

(2)　小規模金融機関との連携を通じた普及展開

上述のビレッジ・テクニシャンの育成に加え、小規模金融のスキームを用いて普及活動を行うことで、従来と比較し住民側の維持管理意識を高めつつロープポンプを普及することができている。このように、受益者である住民側のオーナーシップを高めることで持続性を高めるアプローチは、他の普及展開プロジェクトでも参考にし、プロジェクトの計画段階から検討を行うことが、効果的であると考えらえる。

3.3.4　終了時評価の提言へのプロジェクトの対応

終了時評価調査終了後、プロジェクトが行った上記 3.3.2 の提言に対する対応について表 3-4 に取りまとめた。

表 3-4: 終了時評価の提言に対するプロジェクトの対応

プロジェクト期間中の提言	
提言	**プロジェクトの対応**
ロープポンプのスペアパーツを扱う零細業者への政策的補助の検討	・ セルフサプライ・タスクフォース会議において、ロープポンプ製造業者や設置業者らのパーツ・資材調達を支援する行政措置について、問題提起。同様の課題意識をタスクフォースのメンバーも抱えていること、行政措置の必要性を確認。本課題についてタスクフォースとして協議、検討を継続することで合意 ・ セルフサプライ・タスクフォースが水灌漑電力省の高級管理職に対して、セルフサプライの重要性を訴える「ブリーフィングノート」にパーツ・資材調達に関する行政の介入検討を提言する旨、提案 ・ パーツ調達に関する提案のアイデアを文書に取りまとめ、カウンターパート、セルフサプライ・タスクフォースと共有。11 月 8 日にプロジェクトとタスクフォース間の協議の結果、水灌漑電力省（特にセルフサプライ・タスクフォース）にて提案内容の検討が進められることとなった。
セルフサプライ・ガイドラインの遵守	・ ハンドブック作成ワークショップやファイナルセミナーにおいて、州水灌漑開発局へポリシーガイドライン遵守について再確認 ・ セルフサプライ・タスクフォースの会議などにおいて、南部諸民族州の状況を共有し、省からの働きかけを促進 ・ アディスアベバの最終セミナーにおいて、省側が発表したロールアウト戦略*に、セルフサプライ・ポリシーガイドラインの遵守について言及 ・ アワサの最終セミナーにおいて、南部諸民族州水灌漑開発局がセルフサプライ・ガイドラインの遵守を約束（10,000 台の普及は、プロモーション目的で例外的に少数世帯グループへの補助金付き配布を行うが、それ以降は国のガイドラインを遵守すると明言） ・ 上記ロールアウト戦略にて、水灌漑電力省（特にセルフサプライ・タスクフォース）による各州のモニタリングや教訓の抽出を行うことにも言及
プロジェクト終了後の提言	
提言	**プロジェクトの対応**
プロジェクトの成果の活用	・ MWA の計画ワークショップでのプロジェクト成果品活用への呼びかけ ・ A4A、IRC などセルフサプライ普及実施機関との面談などを通して、プロジェクト成果の活用と継続提案 ・ アディスアベバの最終セミナーにおいて、省側のロールアウト戦略*にて、本プロジェクトで作成したマニュアル、ハンドブックやツール類の活用、人材育成活動の拡大などについて言及。セミナー参加者からは省側が責任を持ってプロジェクト成果を活用することについて支持する声が多数。省はセルフサプライ・タスクフォースを中心にフォローアップを行うことを明言。 ・ プロジェクトは、各州へ配布する、マニュアル、ハンドブック並びにツール類を水灌漑電力省へ供与。同省は各州への配布手配中
ロープポンプの最小仕様の適用促進	・ プロジェクトで作成した「ロープポンプ品質管理戦略」に最小仕様適用について明記し、ツールとして標準文書を添付 ・ 同戦略文書は、アディスアベバ及びアワサでの最終セミナーで参加者に配布された他、セルフサプライ重点州（ティグライ、アムハラ、オロミア、南部諸民族、ベニシャングル・グムズ各州）の水灌漑開発局へ水灌漑電力省が配布する予定

ロープポンプの設置・維持管理に必要な人材育成の拡大	・ プロジェクトがカファ県で実施したロープポンプ設置・維持管理研修に、MWA グループのカウンターパート（TVETC 講師）2 名が参加。COC 試験も受験し、合格 ・ IRC が計画しているオロミア州でのロープポンプ講師育成の計画で、南部諸民族州の TVETC 講師を活用したい由、申し入れがあり、プロジェクトを通じて IRC に適切な人材を紹介した ・ アディスアベバの最終セミナーにて発表されたロールアウト戦略*に人材育成の拡大について言及 ・ プロジェクトが実施した TOT レビューにて提出された各 TVETC の活動計画には、TVETC アワサ、ワライタソド、アルバミンチ、ウォルキテ、ホサナ、ボンガ各校においてロープポンプ研修計画ありとの記載あり
郡水事務所と保健普及員による、衛生啓発活動の継続	・ プロジェクトが作成した「ロープポンプ普及ハンドブック」に、衛生啓発活動の重要性、必要な技術等を紹介 ・ 最終セミナーにおいて発表されたロープポンプ普及のロールアウト戦略に衛生啓発活動の継続について言及 ・ 最終 JCC 会議において、水灌漑電力省給水衛生局長が、保健普及員等による衛生啓発の重要性について言及
農業局との連携	・ プロジェクトが作成した「ロープポンプ普及ハンドブック」に、水の多目的利用と小規模灌漑について言及 ・ 最終セミナーにて発表されたロールアウト戦略に、農業セクターとの連携促進について言及。南部諸民族州水灌漑開発局代表は、農業セクターとロープポンプ普及の方法（補助金の有無など）を統一することについて、両局が合意していることを強調。

*添付資料 15 参照

3.4 上位目標達成見込み

上位目標：
飲料水用ロープポンプが南部諸民族州で普及され、生活改善をとおした給水衛生状況の改善の実践がなされる。
指標：
1) 水の衛生に関する改善方法を知っているロープポンプユーザーが 80%を超える
2) 生活が改善したと認識したロープポンプユーザーが 80%を超える

3.4.1 南部諸民族州におけるロープポンプ技術普及の可能性

上位目標の達成に向けて、指標では測らないが指標に寄与する重要な要素と考えられるロープポンプ技術普及の可能性について、内部要因と外部要因を以下に整理した。

表 3-5: 南部諸民族州におけるロープポンプ普及に関する内部要因と外部要因

内部要因（強み）	内部要因（弱み）
・ 州水灌漑開発局のコミットメント ・ 州内各地に配布された 10,000 台のロープポンプ ・ 訓練を受けた製造業者、ビレッジ・テクニシャン、郡職員の存在 ・ TVETC6 校で技術研修が実施可能 ・ OMFI のロープポンプ金融スキーム ・ 本プロジェクトで作成したマニュアル、ハンドブック、ツール類	・ 州水灌漑開発局の人的体制が脆弱 ・ 州・県・郡の予算措置が不十分 ・ 県・郡水事務所の関心と理解不足 ・ 訓練を受けた人材の活用が不十分 ・ 訓練を受けた人材の不足 ・ 横の連携が弱い（TVET、保健、農業など） ・ 補助金導入など一貫しない普及方針

外部要因（機会）	外部要因（脅威）
・ 国のセルフサプライ政策 ・ セルフサプライ・タスクフォースの南部諸民族州の活動に関する高い関心 ・ セルフサプライ・タスクフォースメンバーの支援の可能性（未定） ・ 青年海外協力隊派遣の可能性 ・ プロジェクト対象地のユーザーの技術に対する信頼とポジティブな評価	・ 他機関によるロープポンプの無償配布などによる住民の混乱とセルフサプライへの関心不足

3.4.2 ロープポンプを活用した生活改善、衛生改善の可能性

上位目標（生活・衛生改善）の達成に向けて、内部要因と外部要因を以下に整理した。生活改善、衛生改善に関する指標には、設置したロープポンプの稼働・非稼働という要素が大きく貢献すると考えられることから、指標の測り方（満足度を測る母数はロープポンプを設置した全ての世帯か、稼働しているポンプの所有世帯か）や測る時期（雨期か乾期か、干ばつのあった年か豊作の年か）などによって変動が大きいため、目標の達成度を予測するのは極めて困難である。事後評価調査では、調査期間のみの定点観測で情報を取るのではなく、上記の要素（ロープポンプの稼働・非稼働、季節性、平均値に対するその年の降雨量や農業出来高等）を考慮した情報収集を行う必要がある。例えば、「生活が改善したか」というロープポンプユーザーの認識を調査する場合、当該者の井戸が使える状態であるか（ロープポンプポンプの稼働非稼働とは別[6]）、ロープポンプの問題の有無、また、調査を実施する直近の農作期の収量が自然災害や少雨等によって深刻な影響を受けていないかなど、周辺情報も合わせて収集し、分析することを提案する。

表 3-6: 上位目標（生活・衛生改善）達成のための内部要因と外部要因

内部要因（強み）	内部要因（弱み）
・ 州水灌漑開発局と保健局の衛生啓発に関する協力合意 ・ 各行政村に配置されている普及員（保健、農業）の存在 ・ 既存のユーザーの良い実践例 ・ 世帯用浄水剤やフィルターなど安価な水処理製品の存在と民間業者の働き	・ 県・郡水事務所の関心と理解不足 ・ 普及員の関心と理解不足 ・ 水の衛生に関する住民の関心不足 ・ 何らかの理由で稼働しないロープポンプがあった場合の技術への不審やユーザーの不満
外部要因（機会）	外部要因（脅威）
・ 国のセルフサプライ政策 ・ セルフサプライ・タスクフォースの南部諸民族州の活動に関する高い関心 ・ セルフサプライ・タスクフォースメンバーの支援の可能性（未定） ・ 青年海外協力隊派遣の可能性	・ 干ばつや自然災害などにより、ロープポンプユーザーの生活が一時的に困窮する可能性

[6] ロープポンプは多くの場合浅井戸に設置するため、乾期の水位の低下の影響を受けやすい。手掘りの浅井戸を活用している住民は、水位の低下が起こった時に掘り増しをして対応するのが通常である。プロジェクトでは、ロープポンプ設置前の乾期に水位計測を含む井戸の技術審査を行っているが、プロジェクト期間中 3 年連続で雨量不足だった地域では、ポンプ設置後、多くの井戸で乾期に掘り増しが必要となった。井戸の問題はあっても、ロープポンプ自体に問題がないことが多いため、事後評価時には注意が必要である。

3.4.3　上位目標達成のための戦略

SWOT クロス分析（TOWS 分析）の手法を用いて、上記 3.4.1、3.4.2 で列記した内部要因および外部要因から、上位目標達成のための戦略を検討した。結果は表 3-7 の通り。

表 3-7: 上位目標達成のための戦略（TOWS 分析）

	外部要因（機会） 表 3-5、3-6 に列記した機会	**外部要因（脅威）** 表 3-5、3-6 に列記した脅威
内部要因（強み） 表 3-5、3-6 に列記した強み	**Maxi-Maxi 戦略** ・本プロジェクトで作成した文書やツールの活用 ・ESA 標準の遵守 ・TVETC を活用した人材育成の拡大 ・COC 試験の採用と検定合格者の活用促進 ・ロープポンプ金融の拡大 ・保健人材による衛生啓発と世帯での水処理啓発強化	**Maxi-Mini 戦略** ・農業・保健を含む他セクターとの連携強化 ・コミュニティの意識向上
内部要因（弱み） 表 3-5、3-6 に列記した弱み	**Mini-Maxi Strategy** ・郡 WASH チームによるプロモーション活動の強化 ・民間サービス業者の開発と強化 ・SSTF への支援要請 ・青年海外協力隊支援を活用したロープポンプ普及と衛生/世帯での水処理啓発の強化	**Mini-Mini Strategy** ・セルフサプライ事業（南部諸民族州の大量ロープポンプ普及事業）のモニタリングと教訓抽出

Maxi-Maxi 戦略：強みを活かして機会を勝ち取るための方策
Maxi-Mini 戦略：強みを活かして脅威を縮小するための方策
Mini-Maxi 戦略：機会を活用して弱みを克服するための方策
Mini-Mini 戦略：弱みと脅威を低減するための方策

上表で導き出された戦略の中から、最も重要と思われる点を第 4 章の提言で説明する。

第4章 上位目標達成に向けての提言

4.1 上位目標達成に向けた終了時評価の提言

第 3 章で述べた通り、2016 年 6 月に実施された終了時評価調査で、上位目標達成のために以下の提言が成された。詳細は上記 3.3.2 項を参照のこと。尚、上記 3.4.3 項で行った TOWS 分析においても、以下の提言と同様の戦略が導き出されている。

1) プロジェクトの成果の活用：ロープポンプ最小仕様の適用、小規模金融を通じた普及促進、TVETC を活用した技術研修、COC によるロープポンプ技術者の技能検定と認定人材の活用、ビレッジ・テクニシャンの育成等
2) ロープポンプの最小仕様の適用促進：水灌漑電力省及び州水灌漑開発局による最小仕様の適用促進に関する戦略検討
3) ロープポンプの設置・維持管理に必要な人材育成の拡大：プロジェクト対象地以外へのビレッジ・テクニシャン育成拡大、ロープポンプ普及活動のための州政府の予算確保
4) 郡水事務所と保健普及員による、衛生啓発活動の継続：郡水事務所及び保健普及員によるコミュニティレベルでの世帯浄水処理・保存指導や衛生教育の継続
5) 農業局との連携：農業局が計画する予定のロープポンプ普及計画のために有用な技術情報の提供

4.2 プロジェクトの経験に基づくその他の提言

上記 3.4.3 項で説明した TOWS 分析による上位目標達成への戦略には、内的な強みと外的な機会を活用する一方、内的な弱みと外的な脅威を克服するための方策が含まれている。本項では、その方策の中から、4.1 で述べた終了時評価ミッションからの提言に含まれていないが、重要と考えられる事項を以下の通り抽出した。

4.2.1 セルフサプライ普及促進にかかる方向性：民間活用とプロモーション活動

本プロジェクトは南部諸民族州水灌漑開発局のロープポンプ大量調達・普及事業の一部の活動を支援することとなり、ロープポンプ普及技術、設置・維持管理技術などの技術移転を州内の県・郡行政官やビレッジ・テクニシャンを対象に行った。しかしながら、本プロジェクトが直接技術指導を行った地域では一定の成果が上がったものの、同局が普及活動した地域では芳しい成果が上がらなかった。その原因としてプロジェクト対象外の地域では、郡水事務所を中心とする行政機関が、従来型の供給主導型の給水事業を行ったことが挙げられる。一方、ロープポンプ普及は、セルフサプライの考えの下従来型の供給主導型とは異なり、需要喚起や市場への働きかけを含む別のアプローチが必要である。

セルフサプライの考え方では、地域の個人世帯が主に自宅の給水施設を改善するための自己投資を決意することが必要であり、従来のトップダウン方式の行政指導では、必ずし

も世帯の自己投資を促すことはできない。行政機関が行ったロープポンプ普及活動の進捗が芳しくないのは、このトップダウン型の考え方が一つの大きな要因と考えられる。また、行政主導で行うセルフサプライ普及には、以下のような構造的な課題があると考える。

- 水灌漑開発局および県・郡水事務所のセルフサプライ普及にかかる計画・管理能力の不足
- 供給主導型の目標設定と行政指導（一定期間内での数値目標達成を重視、プロモーション活動の軽視、再委託による給水施設・改善しか経験がない）
- 郡水事務所の脆弱な実施体制とプロモーション活動能力の不足（人材不足、予算不足）
- 設置技術者（ビレッジ・テクニシャン）の不足

プロジェクトは、先行の JICA 事業などからの教訓を活かし、水行政の普及活動だけに依存するのではなく、ロープポンプユーザー、民間業者、行政機関などの連携を重視しながら、包括的なアプローチでセルフサプライとロープポンプの普及に努めた。この方策は好を奏し、プロジェクト対象地ではビレッジ・テクニシャンやロープポンプのユーザー世帯が情報を媒介し、近隣住民にロープポンプのメリットが伝わるなど、技術普及の広がりが見られた。

以上のことから、行政側が意図する加速的なセルフサプライ拡大を図るためには、村落レベルでの需要を創出することが肝要であり、ロープポンプなどの製品販売促進を含む技術プロモーション活動の継続的実施が必要である。また、それを担う民間人材の育成と活性化が重要な点と考えられる。民間の人材や企業が地方レベルで活躍するためには、何らかの動機づけがなければ経済的なメリットはないため、動機づけのための仕組みづくりを行政が担う必要がある。

4.2.2 継続的なプロモーション活動

上述の通り、継続的なプロモーション活動は、セルフサプライ及びロープポンプ普及の重要なカギとなる。プロジェクトは、「ロープポンプ普及ハンドブック」を取り纏め、経験に基づく普及方法や手順を紹介している。このハンドブックは、プロジェクトが開催した最終セミナーなどのイベントでカウンターパート機関やセルフサプライ関係機関に配布された。また、各種普及ツールも様々な研修やワークショップなどで関係者に配布された。今後も、これらの文書やツールが水灌漑電力省や南部諸民族州水灌漑開発局によって配布・周知され、広く関係者に活用されることが望ましい。

また、2015 年、2016 年に実施されたセルフサプライフェアのようなイベントは、民間業者（ロープポンプ製造業者、ビレッジ・テクニシャン）や行政機関、開発パートナーなどが出会い、交換する理想的な機会であり、継続が望まれる。また、このような機会を地方都市などでも実施することにより、機会に恵まれない地方の民間業者などに出会いやビジネス機会の発見に貢献する可能性が高まると考える。

4.2.3　民間業者活性化

上述の通り、行政側の主導によるセルフサプライ／ロープポンプ普及促進には限界があり、民間業者の働きは更なる活性化が必要な分野であると考える。南部諸民族州におけるロープポンプ技術普及に関し、ロープポンプ製造業者やビレッジ・テクニシャン（ロープポンプ設置業者）は本プロジェクトが実施した研修を通して、技能検定（COC）の資格授与、品質管理の技術と知識を得て、今後の活躍が期待される。さらに、本プロジェクトの派生的な成果として、技能検定試験に合格した製造業者が「ロープポンプ製造業者組合」を設立したり、ワライタソドやアワサの製造業者は、ロープポンプパーツを含むパーツ販売店を設立している。

ロープポンプ供給においては、民間のロープポンプ製造業者（多くの場合地方の鉄工所など）の活躍が期待されるが、いくつかの課題が残る。例えば、南部諸民族州水灌漑開発局が実施したロープポンプの大量調達・普及事業では、入札による調達が行われた。大量発注は、仕様の統一した製品が調達できること、粗悪品を除外できることや一台当たりの単価を下げることなど正のインパクトがある。一方、現在の入札形態では、必ずしも良い製品が正しく設置できるとは限らないことや地方の小規模製造業者が入札に参加できない負のインパクトがある。本プロジェクトは、セルフサプライ政策に準じ、比較的小規模な地方のロープポンプ製造業者への研修や支援を行った。小規模、零細業者が今後もロープポンプ製造を持続していくためには、上記のような大量調達においても何らかの形で参加できるような配慮が必要である。また、ロープポンプ製造に必要な資材やパーツへのアクセス改善、農村地域での需要喚起・拡大など、ロープポンプ製造が魅力的なビジネス機会として成長していくことが望ましい。

他方、ロープポンプの設置・維持管理の技術を有するビレッジ・テクニシャンは、農村部に居住しているという利点を活かし、地元のロープポンプ所有者への有料の技術サービス提供、ロープポンプ技術の普及促進、ロープポンプ製造業者と住民の橋渡し役など、多面的なサービス提供が可能である。本プロジェクトの活動を通して技能認定されたテクニシャンのうち、イルガチャフェ郡のビレッジ・テクニシャングループが会社を起業し、入札への参加などの機会を拡大しようと努力している。これらの民間人材が継続してサービス提供を行うためには、製造業者の場合と同様、地方農村でのロープポンプ需要の創出・拡大が一つの大きな課題である。

このように、民間業者のビジネス経営の持続拡大と、ロープポンプの需要創出・拡大は相互に依存し合う要素であり、ロープポンプ普及拡大に欠かせない重要な要素である。行政機関は、民間業者の健全で持続的な経営を政策・制度面などから支援し、また、関係行政機関や民間業者、支援機関などが行う需要喚起のためのプロモーション活動をファシリテートする役割を担うことが望ましい。

4.2.4　南部諸民族州におけるロープポンプ普及事業のモニタリングと教訓の抽出

南部諸民族州では、2006 エチオピア予算年度（2013/2014 年）からロープポンプの大量調達と普及事業が開始されたが、本事業において県及び郡水事務所に配布されたロープポ

ンプとパイプ等の資材の多くは、住民の手に届いておらず、各地での普及活動、設置工事の加速化が求められている。

同局では普及加速化を進める方策として、2～3 世帯以上の世帯グループに対する補助金付きのロープポンプ配布（ロープポンプを無償配布、設置代をユーザーが支払う）を開始したが、小規模金融スキームのデザイン上、2～3 世帯のグループへの無償配布ができない設定となっている。スキームのデザイン変更手続きが早急に行われることが求められている。一方、セルフサプライ普及に携わる NGO などの経験から、補助金付き普及はセルフサプライ普及に混乱を生む可能性があることが指摘されているため、2～3 世帯の世帯グループに対する補助金付き技術普及は、技術普及の方法として適切であるか、その効果や問題点を検証し、その後のセルフサプライ/ロープポンプ普及の教訓として生かされることが望ましい。

第5章 プロジェクト実施運営上の課題・工夫・教訓

5.1 プロジェクト実施運営上の課題

5.1.1 南部諸民族州水灌漑開発局によるロープポンプ大量調達・普及事業

南部諸民族州水灌漑開発局のロープポンプ大量調達・普及事業は、プロジェクトの第 1 年次から開始された。プロジェクトの計画策定時には明らかにされていなかった同事業との連携や調整は、プロジェクト期間を通して、最も重要で困難な課題となった。計画された活動への軽微な変更に加え、プロジェクトは第 2 年次に 1 回、第 3 年次に 1 回、契約変更を伴う活動の追加を行った。これらの活動計画変更を行うにあたり、大きく分けて 2 点の課題があった。

一つ目は、水灌漑開発局側の不十分な戦略と計画によって起こり得る、本プロジェクト活動への負の影響の回避という課題である。4.2.1 項で述べた通り、同局の計画では供給主導型の方法でデザインされたため、「セルフサプライ」事業としながらも、プロモーション活動の軽視、不十分な人材育成などの問題が散見された。このため、プロジェクトチームは、本プロジェクトが実施する普及活動とは必ずしもその方法が整合しない行政事業とも関わることとなり、行政事業との調和を図りつつ本プロジェクトの成果を挙げる新たな方策を模索することとなった。

その方策の一環として、プロジェクトではメインのカウンターパート機関である水灌漑開発局の職員を極力巻き込みながらも、同局の職員だけに依存せず、他の関係機関とも関係を構築し、エチオピア国内におけるセルフサプライ普及に必要な周辺環境や実践方法を模索することにした。プロジェクトが一定の成果を挙げた、小規模金融のロープポンプ金融スキーム設置や、TVET システムを活用した人材育成、COC による技能検定試験などは、このような考察と現場での試行錯誤の産物である。

二つ目は、度重なる水灌漑開発局側の計画変更、方針変更である。例えば同局は、ロープポンプ普及の進捗を加速化するため、2016 年 4 月、補助金付きのロープポンプ配布（ロープポンプを無償配布、設置代はユーザー負担）を開始した [7]。このような一貫しない方策は、住民や普及活動に携わる行政官などへの混乱を招く恐れがあるため、プロジェクトチームは、同補助金の保留や地域限定的な適用について助言したが、同局は補助金実施に踏み切った。必ずしも国の政策と一致しない補助金付きロープポンプ配布については、セルフサプライ・タスクフォースなどでも課題として共有し、今後も関係者が共有すべき課題としてモニタリングと教訓の抽出を行うよう、提言した。

このように、プロジェクトチームは、必要に応じて JICA 本部やエチオピア事務所と相談しながら、回避しがたい環境の変化に対し柔軟に対応しながらリスク分散に努め、他州や他機関でも参考になる共通な課題や教訓をタスクフォースなどの場で広く共有するよう

[7] セルフサプライ政策では 10 世帯以上の世帯グループに対する上限 50%の補助金を認めているが、2～3 世帯のグループへの補助金は、政策では定められておらず、同局が協力合意した OMFI との覚書にも定められていない。

努力した。この結果、大きな混乱や競合による問題を回避し、カウンターパートやセルフサプライ関係機関から一定の評価を受ける成果を挙げることができた。

5.1.2　カウンターパートの当事者意識の醸成とインセンティブ

プロジェクト全期間を通して、カウンターパートの出張費にかかる不平・不満が大変多く、プロジェクト活動に少なからず影響を与えた。

プロジェクトチームは、一貫した対応方針と共通のルールの適用を徹底する一方、活動の成果を目に見える形で提示するなど、協働作業へのインセンティブ向上と当事者意識の向上に努めた。不満を訴える行政官もいたが、プロジェクトが開催する研修や各種イベントへの参加出席率はおおむね 7〜8 割程度と良好で､本プロジェクトの成果に対する評価が著しく低下することはなかった。

5.2　プロジェクト実施運営上の工夫

5.2.1　多くのステークホルダーを巻き込んだアプローチ

本プロジェクトの最大の特徴の一つは、多岐にわたる関係者の巻き込みである。水行政はもちろん、保健、農業、金融、教育、職業訓練、女性、民間（製造業者、ビレッジ・テクニシャン、サプライヤー）などのセクターを巻き込み、セルフサプライとロープポンプ技術普及におけるそれぞれの役割を模索し、各分野のアクターと柔軟に連携しながら活動を進めた。

各分野の関係者の巻き込みに際し、必要に応じて上位機関（例：州の保健局や農業局）との話合いや合意形成を行い、下部組織の職員が現場での業務を行いやすいように工夫した。また、電話などを駆使して連絡を密に取り合い、主要な関係者との人間関係構築を図った。

各種イベントでは、広い範囲の関係者を呼び、カウンターパート同士が他セクターや階層の違う関係者と出会い、共有する場を設ける様に工夫した。特に、セルフサプライフェアでは、水灌漑電力省の上位職員から村レベルで活動するビレッジ・テクニシャンやロープポンプユーザーまで同じ会場に集め、参加者の出会いと交換の場を演出した。

このような関係者の縦・横の関係の構築は、縦割り行政が一般的な途上国で、行政機関のみで行うことは容易ではない。JICA プロジェクトのように中立的な立場でこそ、このような縦・横の関係構築の支援を行うことができるため、プロジェクト目標をただ達成するだけではなく、各関係機関を有機的に連携させ、持続性を意識したマネジメント体制を構築することが、プロジェクトの本来の成果に繋がるものであると考える。

5.2.2　既存情報やシステムの活用

ロープポンプ技術は、2004 年にエチオピア国内に紹介され、技術改良や普及活動が行われてきた。本プロジェクトでは、先行した活動で既に研究された技術情報を極力活用し、その蓄積の上に更なる情報や技術を積み重ねる努力をした。また、先行案件の教訓を活用するよう心掛けた。

さらに、新たに導入する活動については、小規模金融機関におけるサービスネットワーク、TVET による職業訓練システムや COC による技能検定など、可能な限り地域に既存のシステムを活用するよう工夫した。

既存の技術情報やシステムの活用は、コスト面や人材投入面で効率化が図られることに加え、既に構築されたシステムへの関係者の信頼も獲得することとなり、プロジェクト成果の高い評価につながった。例えば、技能検定（COC）試験の導入については、プロジェクト独自に発行する研修修了証を与えるよりも、既に社会的な信頼の高い COC 認定を行うことにより、技術を体得した研修修了者への周囲の信頼は非常に高まり、カウンターパートからも COC 取得した技術者本人からも、非常に喜ばれる結果となった。

5.2.3　セルフサプライ関連機関との協働・連携作業と政策提言

本プロジェクトの大きな強みの一つは、セルフサプライ普及に携わるコンサルタントや国際機関、NGO 関係者との継続的な連携・協力関係であった。セルフサプライ・タスクフォースの定例会議を通して経験共有、情報交換を継続した他、セルフサプライの関連活動における相互の人材交流、研修参加者の相互受け入れ、現場視察受け入れなどを積極的に行った。

また、彼らとの協働作業についても主導的に参加し、セルフサプライニュースの発行やセルフサプライフェアの開催などを通して、セルフサプライ分野の重要なアクターとして関係者から信頼を得てきた。2015 年 3 月のセルフサプライフェアにおいては、国外からもゲストを招き、オランダ、スイス、タンザニア、イギリスなどで活躍する本分野の最先端の人材からも協力を得ることができた。これらの作業を通じ、水灌漑電力省の関係者のセルフサプライに関する関心を促し、JICA 協力のプレゼンスも高まったと考えている。本プロジェクトで行った支援内容や成果は国際会議の場などでも紹介されるなど、その経験は国外の他機関や関係者にも参考にされている。

このような周囲の意識向上や信頼獲得への努力の結果を踏まえ、セルフサプライ・タスクフォースとして、さらなる関係者の関心の獲得と活動活性化に向けた政策提言を行うこととし、水灌漑電力省の国務大臣に対するブリーフィングの準備を行った。

5.2.4　民間の技術サービス活用促進

JICA の先行案件では主に行政官の技術研修を実施したものの、行政官の交代や研修後のロープポンプ技術普及活動の不在のため、研修効果が十分に持続していなかった。その教訓を活かし、本プロジェクトでは、村落レベルの技術習得者を育成し、ロープポンプの設置・維持管理サービスは彼らに担わせるという方針で人材育成を行った。

また、先行案件でも多数研修を受けたが、行政や NGO など外部から仕事が来るのを期待して、依存的に仕事を待っているロープポンプ製造業者が多いことに気づき、プロジェクト活動の一環として、彼らのビジネス管理についての意識と技術向上を狙いとした研修を取り入れた。

更に、彼らのビジネス・プロモーションの一助になるよう、アクア・フォー・オールと協働でセルフサプライ・ビジネスカタログを作成し、研修対象となったロープポンプ製造業者とビレッジ・テクニシャンの個人情報を広く関係者に配布した。

民間の技術サービス活用については、エチオピアの水セクターに限らず、アフリカ諸国の開発に必要な要素として重視されつつある。JICA の他国や他セクターの支援においても、本プロジェクトの経験や教訓は有用なものと考える。

5.3 教訓

5.3.1 終了時評価調査で明らかになった教訓

2016 年 7 月に実施された終了時評価調査では、以下のような教訓が引き出された。詳細は 3.3.3 項を参照されたい。

1) TVETC（職業訓練学校）を活用した人材育成：TVETC 教員の能力強化に加え、技能検定試験を整備したことで、継続的な人材育成を行う仕組みが構築された
2) 小規模金融機関との連携を通じた普及展開：ビレッジ・テクニシャンや小規模金融のスキームを用いた普及活動により、住民側の維持管理意識を高めつつ効果的なロープポンプ普及が実施できた

5.3.2 プロジェクトが経験から学んだその他の教訓

1) 実践経験に基づく技術情報の文書化の重要性

プロジェクトでは、活動で得た知見・ノウハウや、実践経験から得られた教訓を極力文書として取りまとめるよう努めた。プロジェクトが活動を通して作成した「テクニカル・ノート」「ロープポンプ製造・設置・維持管理マニュアル」「ロープポンプ品質管理戦略」「ロープポンプ維持管理戦略」「ロープポンプ普及マニュアル」は全て、プロジェクトの実体験に基づく資料であり、実証試験の結果である。

ロープポンプは、プロジェクト開始より 10 年ほど前から改良、普及されてきたものであるが、その多くの技術情報は極一部のロープポンプ専門家（民間の製造業者／トレーナー）の個人情報として「人」に属すものであった。本プロジェクトでは、出来る限りそれらの情報を客観的にとりまとめ、汎用できる技術情報として文書化し、関係者の手元に届けることを目指した。現場での実践や文書化の過程で、これまで十分に検証や統一化がされていなかった技術情報や、製造業者たちが経験的に積み上げていくような試行錯誤の一部を関係者との協働作業でとりまとめたことは、多くのロープポンプ技術関係者に役立つものと信じている。

2) 実体験を通じた方法論の検討

プロジェクトは、ロープポンプ技術の改良や標準化という技術開発と、その技術の実践現場での普及という 2 つの大きな課題に対して活動を展開してきた。この 2 つの側面の活動を同時並行で進めることにより、運営面での困難はあったものの複数の利点を得ることができた。

一つ目は、技術開発や標準化の作業において、実体験に基づく技術の検証や検討が可能であったことである。机上の空論ではなく、現場で直面した技術上の課題や問題点に向き合い、改善することで、技術を使用する者のニーズに則し、実効性の高い技術の改善や、製造業者の経験や実態に則した標準化などの結果を生むことができた。

二つ目は、「技術」を知り技術改善に取り組むプロジェクトが、普及の実践にも取り組むことにより、関係者の信頼を得たことである。ロープポンプ技術に精通した国内外のスタッフを投入し、必要に応じて現場で技術的問題にも対応することができた。農村地域の住民が、馴染みのない「ロープポンプ」という新たな技術の採用を決め、それに必要な自己投資を決断する際に、プロジェクトの持つ技術情報や人材に対する信頼がそれを後押しすることになったと考える。

添付資料

―目次―

Project Name: The Project for Rural Water Supply, Sanitation and Livelihood Improvement through Dissemination of Rope Pumps (RPs) for Drinking Water

Duration: March 2013 to December 2016 (4 Years)

Implementing Agency: Ministry of Water, Irrigation and Energy (MOWIE), Water Resources Bureau of SNNPR

Direct Target Group: Water Resources Bureau of SNNPR, Woreda Water, Mine and Energy Offices in the target areas, Private Service providers concerned with RPs

Beneficiaries: Users of RPs

Project Target Areas: 10 kebeles in 4 Woredas of SNNPR

Working Version 3.1 31 July, 2015

Narrative Summary	Verifiable Indicator	Means of Verification	Assumptions
【Overall Goal】 Water supply and sanitation conditions and livelihood in rural areas are improved through dissemination of RPs for Drinking Water in Southern nations, Nationalities and People's Region.	As of the year 2019, in three (3) years after the termination of the Project, in Southern nations, Nationalities and People's Region. 1. The percentage of users who knows the methods of improving hygiene and sanitation becomes more than 80% among the RP users. 2. The percentage of RP users who find that their livelihood is improving becomes more than 80%.	• Data/information of MOWIE (Federal, Regional, Woreda) on water supply and sanitation facilities and served population (sample surveys if necessary) • National WASH Inventory • Documents related to Self-supply technology dissemination under Self-supply policy	
【Project Purpose】 Situations of water supply, sanitation and livelihood are improved through dissemination of RPs for Drinking Water in project target areas.	1. The number of RP users who installed RPs by Self-Supply which are manufactured in the project becomes 200. 2. The percentage of RP users who knows the methods of improving hygiene and sanitation becomes more than 90% among the RP users. 3. The percentage of RP users who find that their livelihood is improving becomes more than 90%.	• Various reports of the Project • Data/records of Woreda Water, Mine and Energy Offices • Results of monitoring survey of RP wells • Results of End-line survey	Self-supply policy in One WASH National Program is continued.

Narrative Summary	Verifiable Indicator	Means of Verification	Assumptions
【Outputs】 1. Specifications of RPs for Drinking Water and installation technologies are standardized at the federal level.	1.1 RP technologies are improved in terms of quality and cost reduction, and 2 or more improved RP models are operational by the end of year 2015. 1.2 Minimum standard specification of RPs is agreed among the stakeholders by the end of year 2016. 1.3 At least one (1) application for minimum standardized specification of RPs is applied to ESA, by the end of year 2016.	• Specification of improved RP models • Survey on the satisfaction of related stakeholders (manufacturers, installers, users) concerning on RPs • Documents on application for standardization of RP • Various reports of the Project •	Hindering factors for dissemination of RP technology (e.g. imitation and/or poor-quality products) are not significantly increased.
2. Strategies are formulated for manufacturing, installation technologies, operation and maintenance of RPs for Drinking Water.	2.1 Documentation for the quality control (QC) is prepared for manufacturing and installation of RPs by the end of year 2016. 2.2 Documentation for the Supply chain methodology for RPs parts distribution is prepared by the end year 2016. 2.3 Documentation for the O&M methodology for household RPs is prepared by the end year 2016. 2.4 The number of the trainees of TOT on RP manufacturing, installation and maintenance who completed the training becomes more than 14. 2.5 The number of the trainees of training on RP manufacturing who completed the training becomes more than 8.	• Documents on QC • Documents on Supply chain methodology • Documents on O&M methodology • Reports on TOT and manufacturing training • List of RP manufacturers and installers • List of RP parts providers/ retailers • Manual on RP manufacturing, TOT manual, Guide for RP installation • Various reports of the Project	There is no significant change in the RP parts market, not in favour of RP manufacturers and installers.

Narrative Summary	Verifiable Indicator	Means of Verification	Assumptions
	2.6 The number of the trainees of training on RP installation, operation and maintenance who completed the training becomes more than 150. 2.7 Lists of RP manufacturers and installers are in place. 2.8 80% or more of the listed RP manufacturers and installers are aware of how to access to the RP parts providers/retailers.		
3. Promotion activities on RP including hygiene education are accelerated by the governmental and semi-governmental organization in the target Woredas.	3.1 Micro-Finance scheme for purchasing of RPs is established. 3.2 Methodology and procedures in promotion activities on RP including hygiene education are defined. 3.3 All Woreda WASH Teams are involved in the promotion activities. 3.4 The RP dissemination handbook. is developed based on the experiences and lessons from the activities for Output 3.	• Implementation plans of the target Woredas • Various reports of the Project • Lists of Woreda WASH Team members involved in RP technology promotion in the target Woredas • Results of RP technology and self-supply concept awareness test during various trainings/workshops • Documents of Water Resources Bureau related to Self-supply and RP dissemination	Micro finance institutes continue with certain schemes which can be utilized by the rural dwellers for RP purchases.
4. Practices of RP use including hygiene are supported continuously by the village technicians and extension workers in the target areas.	4.1 The percentage of functional RPs which are installed in the project is more than 90%. 4.2 The percentage of RP users who received support from health extension workers becomes more than 90%. 4.3 The percentage of RP users who	• List of installed RP wells • Data/records of Woreda Water, Offices on water facilities • Monitoring records on RP wells • Various reports of the Project, • Questionnaire survey to RP	

Narrative Summary	Verifiable Indicator	Means of Verification	Assumptions
	received support from agriculture extension workers becomes more than 85%.	users	
5. Project knowledge and experiences are compiled as dissemination tools and acknowledged in nation-wide	5.1 The dissemination tools with reflection of the Project's experiences are delivered to water resources bureaus of each region	• Dissemination tools • Distribution record of dissemination tools	
【Activities】 1.1 Develop and improve various types of RPs to meet different needs, and tested. (*1) 1.1.1 Survey and make lists of RPs which are currently utilized 1.1.2 Improve each part of existing RPs 1.1.3 Test the existing and develop RPs in terms of durability, safety, functionality, compatibility, cost effectiveness, design, easiness of installation and O&M, protection of contamination 1.1.4 Test low-cost designs of structure of well head of traditional hand dug well and concrete-slab and propose feasible methods/measures to minimize contamination 1.1.5 Test low-cost drilling and construction technologies and do comparative analysis 1.2 Facilitate the standardisation process of RP specifications and its installation technologies 1.2.1 Organize meetings to examine specifications for RPs among the stakeholders concerned 1.2.2 Facilitate the approval processes of the RP in collaboration with MoWIE 1.2.3 Facilitate the necessary procedures for standardization by ESA 1.3 Formulate operation manuals for manufacturing, installation and O & M of RPs, based on the experiences and lessons learned from the activities for Output 1. 2.1 Propose quality control systems of manufacturing and installing of RPs 2.1.1 Clarify roles and responsibilities of the stakeholders in quality control systems of RPs 2.1.2 Propose certification systems for RP manufacturers 2.1.3 Assist in organizing a certain type of association for self-help among the private manufactures, installers		【Inputs】 I. <u>The Japanese side</u> 1) Experts i. Chief advisor / Dissemination strategy ii. Mechanical engineering / Mechanical design iii. Drilling technologies iv. Dissemination v. Agriculture vi. Micro-finance / Improvement of rural livelihood vii. Sanitation and hygiene viii. Other necessary fields 2) Equipment 3) Training in Japan, third countries and in Ethiopia 4) Cost for operation 2. <u>The Ethiopian side</u> 1) Counterpart personnel 2) Equipment 3) Facilities (office space) 4) Cost for operation	

Narrative Summary	Verifiable Indicator	Means of Verification	Assumptions
2.2 Consider O&M methodology for household RPs. 2.3 Consider supply chain methodology for RP parts distribution. 2.4 Facilitate consensus building on the concept and methodology of capacity development for RP manufacturing and installation with WRB and TVET Bureau 2.5 Assist in carrying out trainings on capacity development for RP manufacturing, installation, operation and maintenance 2.5.1 Carry out TOT on manufacturing and installation of RPs for TVETC trainers and private RP manufacturers utilizing operation manuals 2.5.2 Assist existing trainers in carrying out manufacturing training for the existing RP manufacturers 2.5.3 Assist trained trainers in carrying out manufacturing training for newly identified potential RP manufacturers 2.5.4 Assist trained trainers in carrying out installation trainings for Woreda technicians and village technicians through RP installation practices 2.6 Prepare list of manufacturer and village technicians, suppliers of RP materials and parts 3.1 Formulate Regional strategies for accelerating RP dissemination 3.1.1 Survey and identify existing water supply facilities 3.1.2 Draft Regional strategies for accelerating RP dissemination based on the analysis of shallow well locations, economic status, livelihood, and access to Drinking Water in rural areas in line with "the National Guidelines for Self-Supply in Ethiopia" and other related policy documents 3.2 Select target Woredas/areas for accelerating promotion activities on RP including hygiene education. 3.2.1 Categorize Woredas/areas base on the above strategies 3.2.2 Select target Woredas/areas together with the regional RP Team based on the above categorization and propose it to JCC for approval 3.3 Incorporate promotion activities on RP including hygiene education into the existing plans in the target Woredas 3.3.1 Collect and analyse necessary information in order to carry out the project activities 3.3.2 Identify incentives (e.g., introduction of cash crops) for target groups/areas and			---------- 【Pre-Conditions】

添-5

Narrative Summary	Verifiable Indicator	Means of Verification	Assumptions
methodology in line with the self-supply concept 3.4 Introduce micro-finance institution to support for RP purchase 3.4.1 Identify appropriate micro-finance scheme and sign MOU with the micro-finance institution at the regional level 3.4.2 Organize workshops to introduce the identified micro-finance scheme to the personnel of micro-finance institutions in the target Woredas 3.4.3 Assist micro-finance institution in monitoring the operation of micro finance scheme 3.5 Carry out the promotion activities on RP including hygiene education with Woreda WASH Teams and extension workers 3.5.1 Assist Woreda WASH Teams and extension workers in organizing community meeting/workshops in the selected target areas for introduction of improvement of shallow wells, RPs and supportive options for financial arrangement 3.5.2 Assist the loan applicants in taking necessary procedures for RP purchase in the target areas 3.5.3 Assist village technicians in installing RP at the users' wells through OJT of them. 3.6 Develop RP dissemination handbook based on the experiences and lessons learned from the activities for Output 3. 4.1 Assist village technicians, extension workers and Woreda WASH Teams in improving operation and maintenance of RP 4.1.1 Assist village technicians in maintaining RP 4.1.2 Assist village technicians, extension workers and Woreda WASH Teams in monitoring RP use in technical aspect 4.1.3 Assist extension workers and Woreda WASH Teams in sharing experiences and good practices on operation and maintenance of RP at the community meeting mentioned above 3.5.1 4.2 Assist health extension workers in disseminating hygiene practices 4.2.1 Review way of hygiene education associate with promotion activities on RP 4.2.2 Assist health extension workers in instructing how to treat water at household level 4.2.3 Assist health extension workers in monitoring hygiene practice by RP users 4.2.4 Assist health extension workers in sharing experiences and good practices of			

Narrative Summary	Verifiable Indicator	Means of Verification	Assumptions
hygiene at the community meetings mentioned above 3.5.1 4.3 Assist agriculture extension workers in disseminating practices for livelihood improvement. 4.3.1 Compile good practice of small scale agriculture with utilizing of RPs. 4.3.2 Assist agriculture extension workers in instructing how to practice livelihood improvement 4.3.3 Assist agriculture extension workers in monitoring practice for livelihood improvement by the RP users 4.3.4 Assist agriculture extension workers in sharing experiences and good practices of improvement of livelihood at the community meeting mentioned above 3.5.15.1 5.1 Compile experiences and lessons learned from activities for Outputs 1 up to 4 as dissemination tools. 5.2 Facilitate to organize workshops to acknowledge experiences and lessons learned from project with dissemination tools in nation-wide.			

Abbreviation: ESA: Ethiopian Standard Authority, EWTI: Ethiopian Water Technology Institute, MOU: Memorandums of Understanding, O&M: Operations and Maintenance, SNNPR: Southern Nations, Nationalities and People's Region, TOT: Training of Trainers, TVETC: Technical, Vocational and Educational Training College

Note*1: There are various use of RPs, such as individual household or community water supply, irrigation various scales.
1.1.2 Parts: wheel, wheel cover, bearing, counter rotation device, rope etc.
1.1.5 Drilling and construction technologies: hand dug well, tube well

Counterpart List

(as of November 10, 2016)

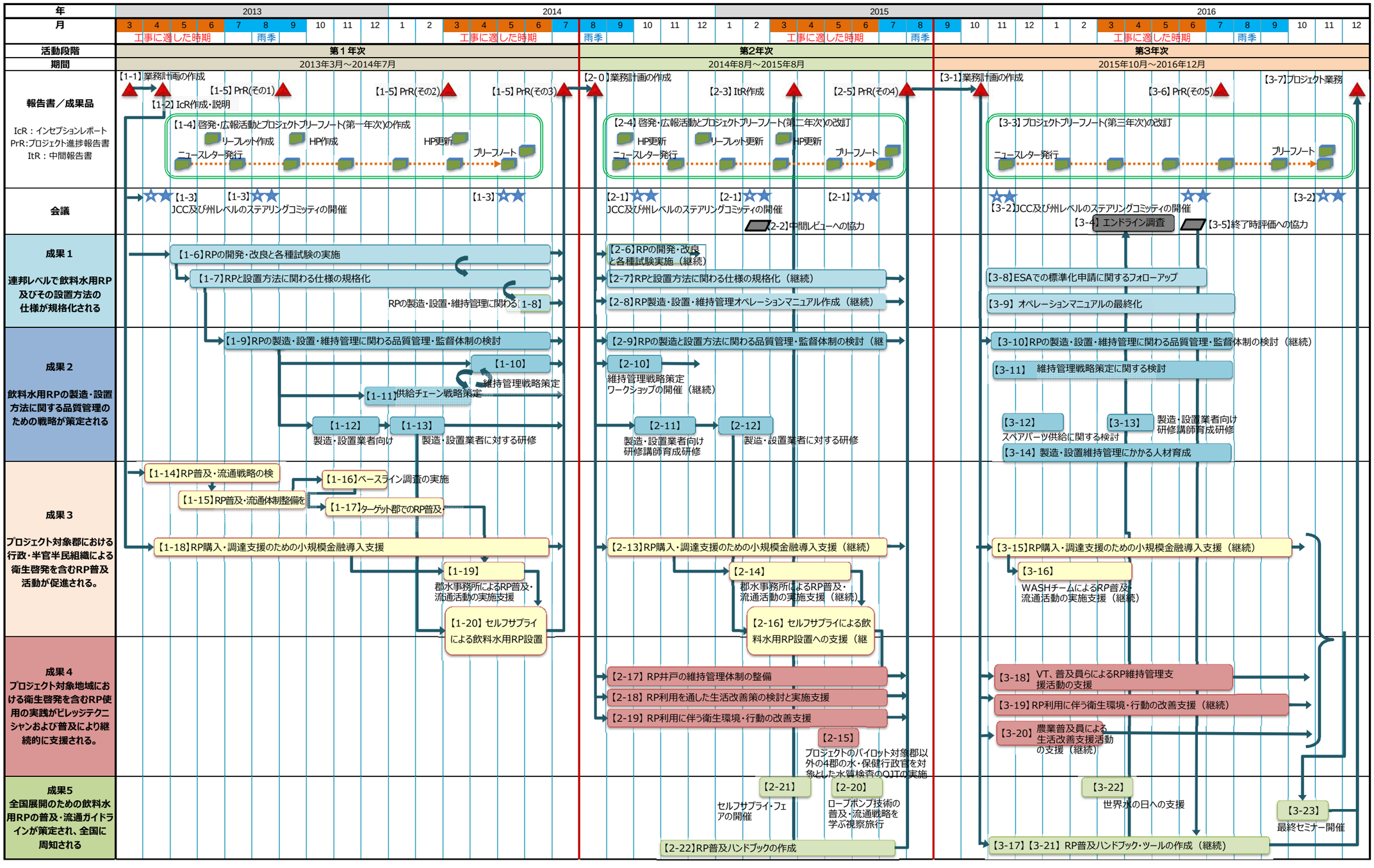
Name	Title	Department / Organisation
Mr. James Deng Choltot	State Minister / Project Director	MoWIE
Mr. Yohannes G / Medhen*	Director / Project Manager (Till December 2013)	Water Supply and Sanitation Directorate, MoWIE
Mr. Nuredin Mohammed	Director / Project Manager (Since December 2013)	Water Supply and Sanitation Directorate, MoWIE
Dr. Markos Wijore	Director /Head of EWTI (Till June 2016)	Sector Support Directorate, MoWIE / Ethiopia Water Technology Institute
Mr. Abiti Getaneh	Director	Research and Development Directorate, MoWIE
Mr. Abebe Mekonnen*	Head (Till July 2013)	Ethiopia Water Technology Centre
Mr. Abiy Girma	National WASH Coordinator	National WASH Coordination Office
Ms. Zewditu Yilma	UNICEF Project Coordinator (Till July 2014)	Self Supply Office
Mr. Agash Asmamewe	National Consultant / Self-supply Focal Person (Since July 2014)	Water Supply and Sanitation Directorate, MoWIE
Mr. Tamane Hailu	Rural WASH Coordinator	Water Supply and Sanitation Directorate, MoWIE
Mr. Eyasu Guta	Technical/ Program Support Officer	Water Supply and Sanitation Directorate, MoWIE
Mr. Tedros Tadele	Engineer on Electro Mechanics	Water Supply and Sanitation Directorate, MoWIE
Mr. Abbas Mohamed*	Head (Till December 2013)	Water and Irrigation Development Bureau, SNNPR
Mr. Tesfaye Yigezu	Head (Till January 2015)	Water and Irrigation Development Bureau, SNNPR
Mr. Samuel Tamiru	Head (Since January 2015)	Water and Irrigation Development Bureau, SNNPR
Mr. Letta Yetamu	Vice Head, (Since March 2015)	Water and Irrigation Development Bureau, SNNPR
Mr. Tadela Kibru	Core Process Owner, Water Resources Study and Management Core Process (Till November 2015)	Water Resource Bureau, SNNPR
Mr. Melkamu Worko	Core Process Owner, Water Resources Study and Management Core Process (Since December 2015)	Water and Irrigation Development Bureau, SNNPR
Mr. Eyasu Mamo	Water Quality Expert (Till May 2014)	Water and Irrigation Development Bureau, SNNPR
Mr. Kassahun Woldegeorgis	Core Process Owner, Water Supply Schemes and Material Maintenance Administration Core Process	Water and Irrigation Development Bureau, SNNPR
Mr. Kassu Eshete	Socio-economist	Water and Irrigation Development Bureau, SNNPR
Mr. Dereje Haile	Mechanic	Water and Irrigation Development Bureau, SNNPR
Mr. Lebenu Lemma	Water Quality Expert under Water Resources Study and Management Core Process	Water and Irrigation Development Bureau, SNNPR
Mr. Andualem Shirko	Water Quality Expert under Water Resources Study and Management Core Process	Water and Irrigation Development Bureau, SNNPR
Mr. Abdela Yimar	Hydrogeologist	Water and Irrigation Development Bureau, SNNPR
Mr. Mulugeta Mussie*	WRB WASH Coordinator (Till July 2014)	Water and Irrigation Development Bureau, SNNPR
Mr. Bekele Kassaye	WASH Coordinator (Since July 2014)	Water and Irrigation Development Bureau, SNNPR

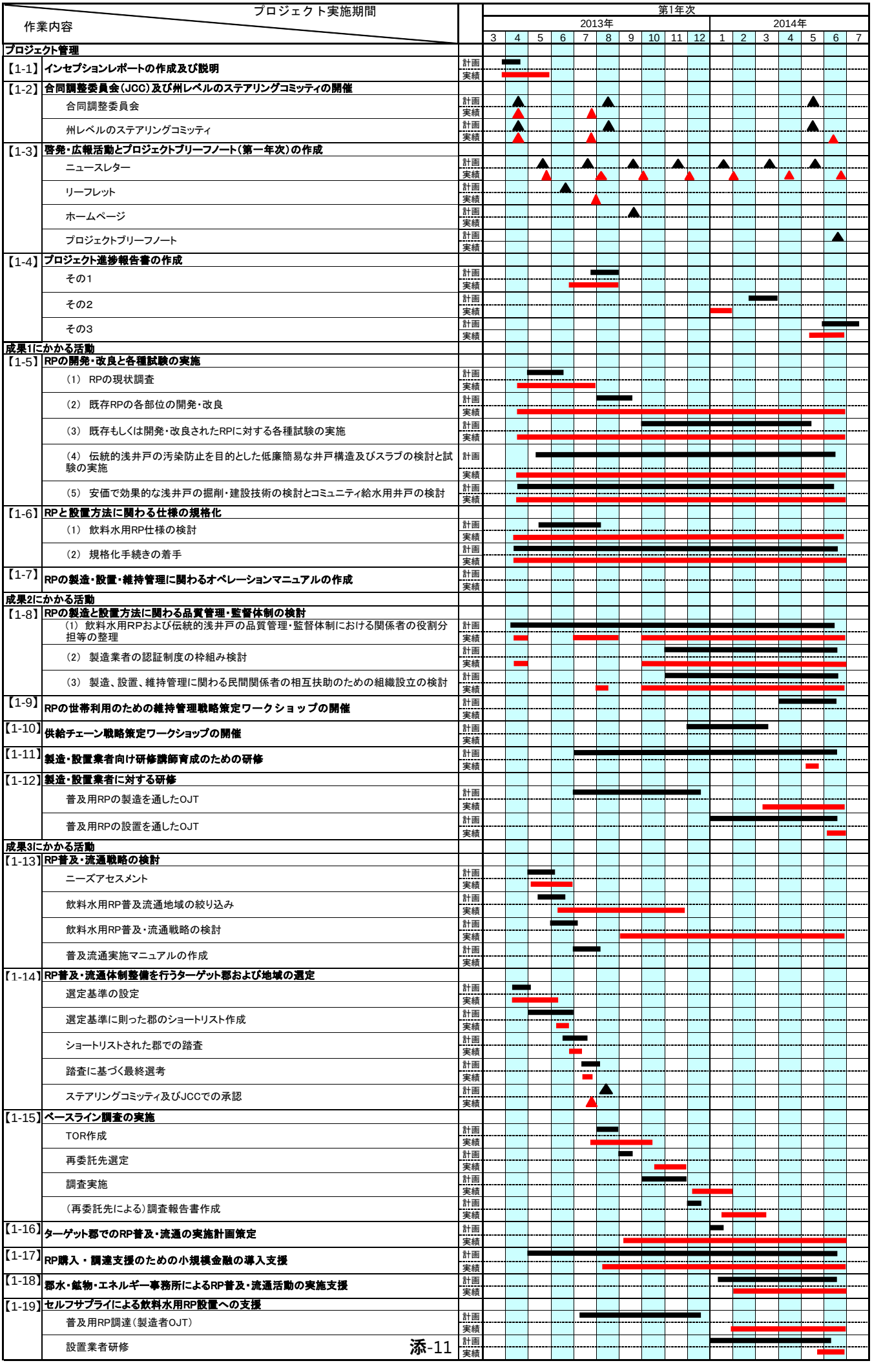
Name	Title	Department / Organisation
Mr. Shimeles Debele*	Head of Credit Department (Till November 2014)	Omo Micro Finance Institution
Mr. Ashebir Alemu	Director of Credit Directorate (Since December 2014)	Omo Micro Finance Institution
Mr. Mekuria Mesekele	Rural Credit Officer	Omo Micro Finance Institution
Mr. Tegegneworku Serawit	Senior Rural Credit Officer	Omo Micro Finance Institution
Mr. Atnafu Asfaw	Deputy Bureau Head and Core process Owner of Human Resource Development	TVET Bureau SNNPR
Mr. Fisseha Hariso Burra*	Dean (till April 2016)	Technical and Vocational Education Training Collage (TVETC) Hawassa
Mr. Gedion Teka*	Technical Coordinator for Technical Transfer (Till October 2014)	TVETC Hawassa
Mr. Ketema Getaneh	Technical Coordinator for Technical Transfer (Since October 2014)	TVETC Hawassa
Mr. Mahamednur Faris	Process Owner of Natural Resources Division, Agriculture Bureau	Bureau of Agriculture and Natural Resource Conservation, SNNPR
Mr.Debebe Woldemariam	Irrigation Engineer	Bureau of Agriculture and Natural Resource Conservation, SNNPR
Mr. Desalegn Gullo	Hygiene and Sanitation Focal Person, Disease Prevention and Health Promotion	Health Bureau, SNNPR
Mr. Solomon Gebre*	Hygiene and Sanitation Focal Person, Disease Prevention and Health Promotion (Till May 2014)	Health Bureau, SNNPR
Mrs. Woinshet Mengesha	Hygiene and Sanitation Focal Person, Disease Prevention and Health Promotion (Since May 2014)	Health Bureau, SNNPR
Mr. Male Mate	Hygiene and Sanitation Focal Person, Disease Prevention and Health Promotion (Since May 2014)	Health Bureau, SNNPR
Mr. Firew Bekele	Women Children and Youth Affairs Bureau	Women Children and Youth Affairs Bureau, SNNPR

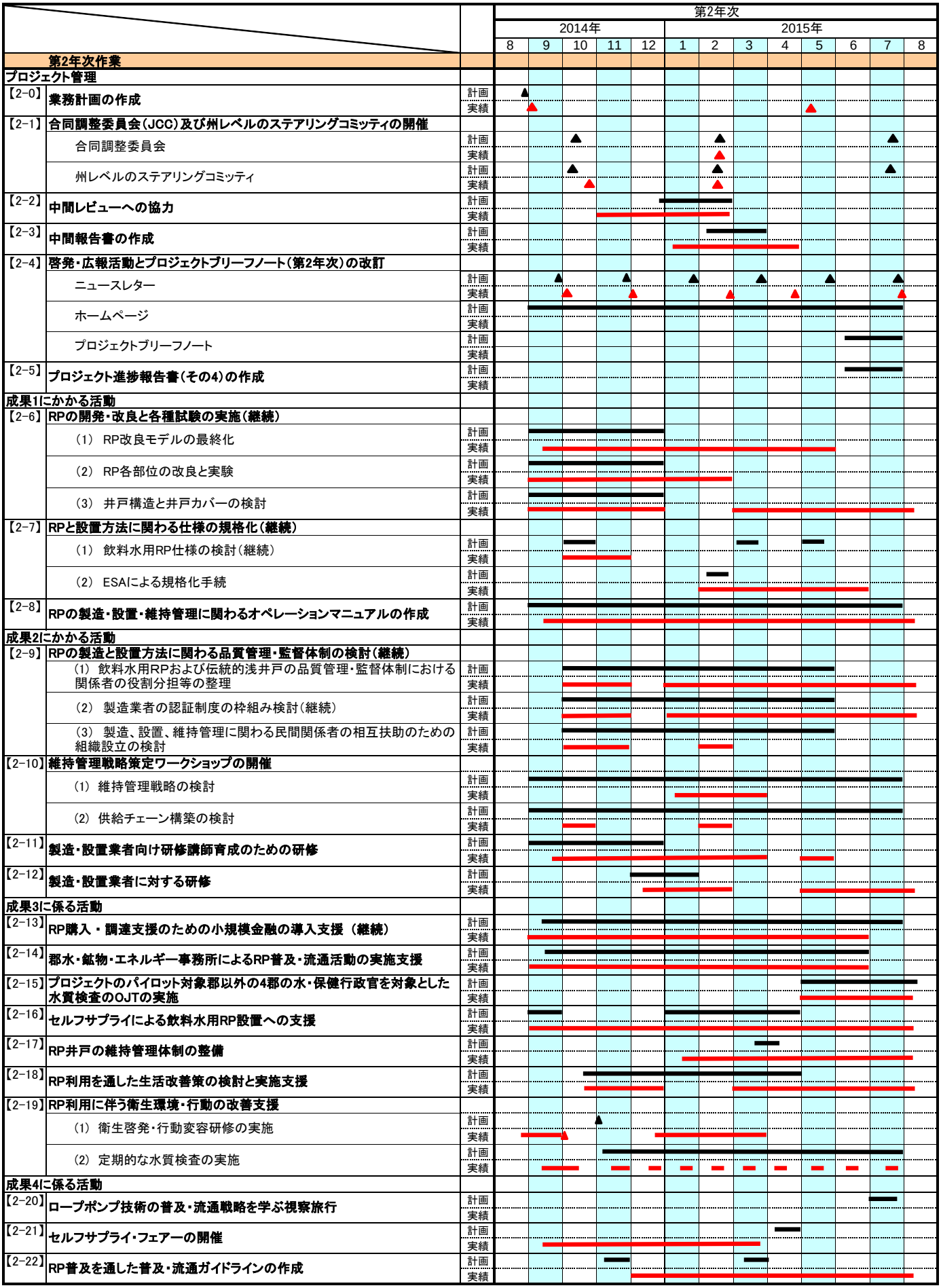
*The counterpart who left the position.

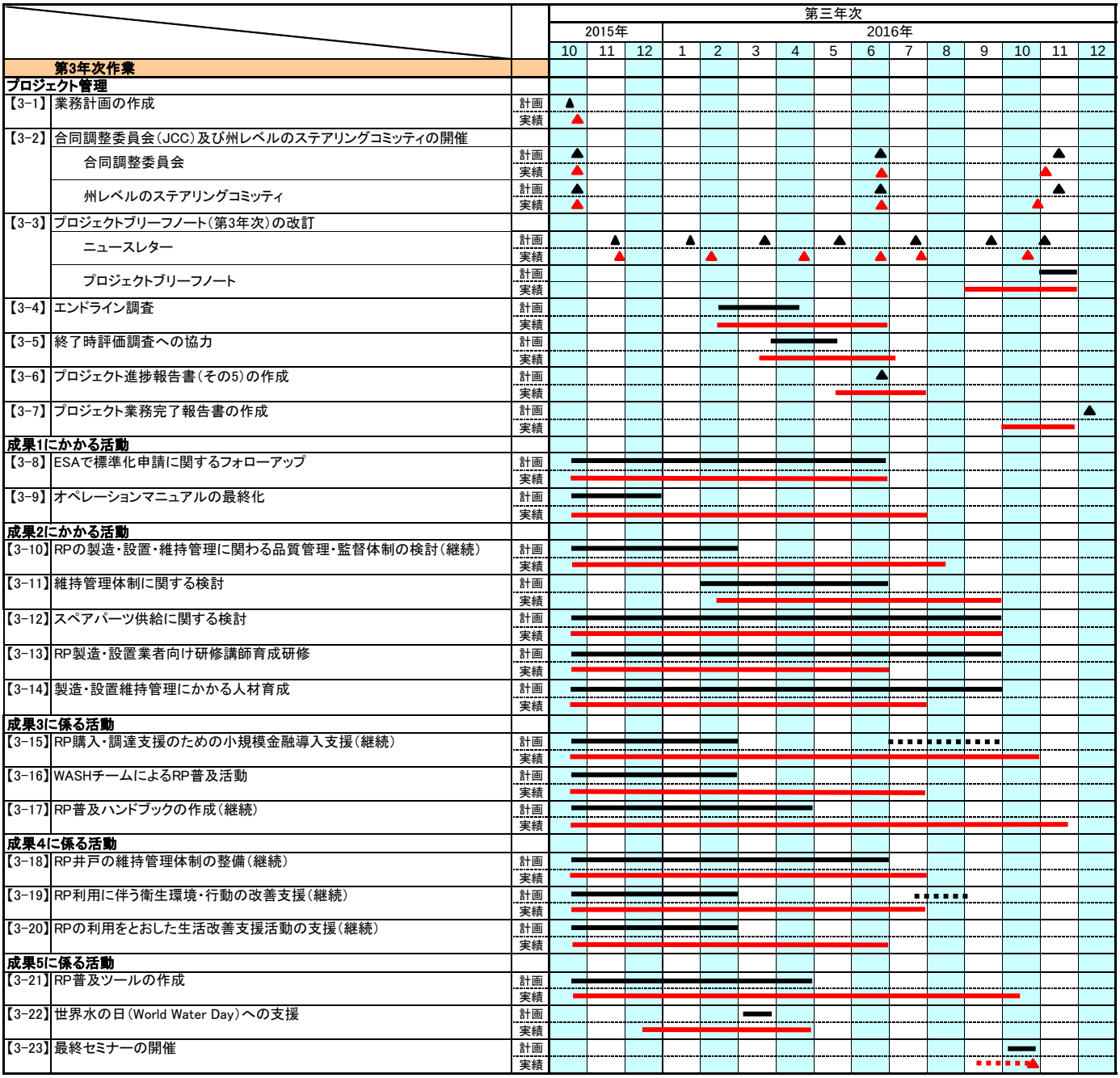
MoWIE: Ministry of Water, Irrigation and Electricity

業務フローチャート


年
月
2013
2014
2015
2016
3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12
工事に適した時期
雨季
工事に適した時期
雨季
工事に適した時期
雨季
工事に適した時期
雨季
活動段階
第１年次
第2年次
第3年次
期間
2013年3月～2014年7月
2014年8月～2015年8月
2015年10月～2016年12月
報告書／成果品
IcR：インセプションレポート
PrR:プロジェクト進捗報告書
ItR：中間報告書
【1-1】業務計画の作成
【1-2】IcR作成・説明
【1-5】PrR(その1)
【1-5】PrR(その2)
【1-5】PrR(その3)
【1-4】啓発・広報活動とプロジェクトブリーフノート(第一年次)の作成
リーフレット作成
HP作成
HP更新
ブリーフノート
ニュースレター発行
【2-0】業務計画の作成
【2-3】ItR作成
【2-5】PrR(その4)
【2-4】啓発・広報活動とプロジェクトブリーフノート(第二年次)の改訂
HP更新
リーフレット更新
HP更新
ブリーフノート
ニュースレター発行
【3-1】業務計画の作成
【3-6】PrR(その5)
【3-7】プロジェクト業務
【3-3】プロジェクトブリーフノート(第三年次)の改訂
ブリーフノート
ニュースレター発行
会議
【1-3】
【1-3】
JCC及び州レベルのステアリングコミッティの開催
【1-3】
【2-1】
【2-1】
JCC及び州レベルのステアリングコミッティの開催
【2-1】
【2-2】中間レビューへの協力
【3-2】JCC及び州レベルのステアリングコミッティの開催
【3-4】エンドライン調査
【3-5】終了時評価への協力
【3-2】
成果１
連邦レベルで飲料水用RP及びその設置方法の仕様が規格化される
【1-6】RPの開発・改良と各種試験の実施
【1-7】RPと設置方法に関わる仕様の規格化
RPの製造・設置・維持管理に関わる【1-8】
【2-6】RPの開発・改良と各種試験実施（継続）
【2-7】RPと設置方法に関わる仕様の規格化（継続）
【2-8】RP製造・設置・維持管理オペレーションマニュアル作成（継続）
【3-8】ESAでの標準化申請に関するフォローアップ
【3-9】オペレーションマニュアルの最終化
成果２
飲料水用RPの製造・設置方法に関する品質管理のための戦略が策定される
【1-9】RPの製造・設置・維持管理に関わる品質管理・監督体制の検討
【1-10】
維持管理戦略策定
【1-11】供給チェーン戦略策定
【1-12】
製造・設置業者向け
【1-13】
製造・設置業者に対する研修
【2-9】RPの製造と設置方法に関わる品質管理・監督体制の検討（継
【2-10】
維持管理戦略策定
ワークショップの開催（継続）
【2-11】
製造・設置業者向け
研修講師育成研修
【2-12】
製造・設置業者に対する研修
【3-10】RPの製造・設置・維持管理に関わる品質管理・監督体制の検討（継続）
【3-11】 維持管理戦略策定に関する検討
【3-12】
スペアパーツ供給に関する検討
【3-13】
製造・設置業者向け
研修講師育成研修
【3-14】製造・設置維持管理にかかる人材育成
成果３
プロジェクト対象郡における行政・半官半民組織による衛生啓発を含むRP普及活動が促進される。
【1-14】RP普及・流通戦略の検
【1-15】RP普及・流通体制整備を
【1-16】ベースライン調査の実施
【1-17】ターゲット郡でのRP普及
【1-18】RP購入・調達支援のための小規模金融導入支援
【1-19】
郡水事務所によるRP普及・流通活動の実施支援
【1-20】セルフサプライによる飲料水用RP設置
【2-13】RP購入・調達支援のための小規模金融導入支援（継続）
【2-14】
郡水事務所によるRP普及・流通活動の実施支援（継続）
【2-16】セルフサプライによる飲料水用RP設置への支援（継
【3-15】RP購入・調達支援のための小規模金融導入支援（継続）
【3-16】
WASHチームによるRP普及・流通活動の実施支援（継続）
成果４
プロジェクト対象地域における衛生啓発を含むRP使用の実践がビレッジテクニシャンおよび普及により継続的に支援される。
【2-17】RP井戸の維持管理体制の整備
【2-18】RP利用を通した生活改善策の検討と実施支援
【2-19】RP利用に伴う衛生環境・行動の改善支援
【2-15】
プロジェクトのパイロット対象郡以外の4郡の水・保健行政官を対象とした水質検査のOJTの実施
【3-18】VT、普及員らによるRP維持管理支援活動の支援
【3-19】RP利用に伴う衛生環境・行動の改善支援（継続）
【3-20】農業普及員による生活改善支援活動の支援（継続）
成果５
全国展開のための飲料水用RPの普及・流通ガイドラインが策定され、全国に周知される
【2-21】
セルフサプライ・フェアの開催
【2-20】
ロープポンプ技術の普及・流通戦略を学ぶ視察旅行
【2-22】RP普及ハンドブックの作成
【3-22】
世界水の日への支援
【3-23】
最終セミナー開催
【3-17】【3-21】RP普及ハンドブック・ツールの作成（継続）


作業内容
プロジェクト実施期間
第1年次
2013年
2014年
3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7
プロジェクト管理
【1-1】インセプションレポートの作成及び説明
【1-2】合同調整委員会（JCC）及び州レベルのステアリングコミッティの開催
合同調整委員会
州レベルのステアリングコミッティ
【1-3】啓発・広報活動とプロジェクトブリーフノート（第一年次）の作成
ニュースレター
リーフレット
ホームページ
プロジェクトブリーフノート
【1-4】プロジェクト進捗報告書の作成
その1
その2
その3
成果1にかかる活動
【1-5】RPの開発・改良と各種試験の実施
（1） RPの現状調査
（2） 既存RPの各部位の開発・改良
（3） 既存もしくは開発・改良されたRPIに対する各種試験の実施
（4） 伝統的浅井戸の汚染防止を目的とした低廉簡易な井戸構造及びスラブの検討と試験の実施
（5） 安価で効果的な浅井戸の掘削・建設技術の検討とコミュニティ給水用井戸の検討
【1-6】RPと設置方法に関わる仕様の規格化
（1） 飲料水用RP仕様の検討
（2） 規格化手続きの着手
【1-7】RPの製造・設置・維持管理に関わるオペレーションマニュアルの作成
成果2にかかる活動
【1-8】RPの製造と設置方法に関わる品質管理・監督体制の検討
（1） 飲料水用RPおよび伝統的浅井戸の品質管理・監督体制における関係者の役割分担等の整理
（2） 製造業者の認証制度の枠組み検討
（3） 製造、設置、維持管理に関わる民間関係者の相互扶助のための組織設立の検討
【1-9】RPの世帯利用のための維持管理戦略策定ワークショップの開催
【1-10】供給チェーン戦略策定ワークショップの開催
【1-11】製造・設置業者向け研修講師育成のための研修
【1-12】製造・設置業者に対する研修
普及用RPの製造を通したOJT
普及用RPの設置を通したOJT
成果3にかかる活動
【1-13】RP普及・流通戦略の検討
ニーズアセスメント
飲料水用RP普及流通地域の絞り込み
飲料水用RP普及・流通戦略の検討
普及流通実施マニュアルの作成
【1-14】RP普及・流通体制整備を行うターゲット郡および地域の選定
選定基準の設定
選定基準に則った郡のショートリスト作成
ショートリストされた郡での踏査
踏査に基づく最終選考
ステアリングコミッティ及びJCCでの承認
【1-15】ベースライン調査の実施
TOR作成
再委託先選定
調査実施
（再委託先による）調査報告書作成
【1-16】ターゲット郡でのRP普及・流通の実施計画策定
【1-17】RP購入・調達支援のための小規模金融の導入支援
【1-18】郡水・鉱物・エネルギー事務所によるRP普及・流通活動の実施支援
【1-19】セルフサプライによる飲料水用RP設置への支援
普及用RP調達（製造者OJT）
設置業者研修
計画
実績


第2年次
2014年
2015年
8 9 10 11 12 1 2 3 4 5 6 7 8
第2年次作業
プロジェクト管理
【2-0】 業務計画の作成
【2-1】 合同調整委員会（JCC）及び州レベルのステアリングコミッティの開催
合同調整委員会
州レベルのステアリングコミッティ
【2-2】 中間レビューへの協力
【2-3】 中間報告書の作成
【2-4】 啓発・広報活動とプロジェクトブリーフノート（第2年次）の改訂
ニュースレター
ホームページ
プロジェクトブリーフノート
【2-5】 プロジェクト進捗報告書（その4）の作成
成果1にかかる活動
【2-6】 RPの開発・改良と各種試験の実施（継続）
（1） RP改良モデルの最終化
（2） RP各部位の改良と実験
（3） 井戸構造と井戸カバーの検討
【2-7】 RPと設置方法に関わる仕様の規格化（継続）
（1） 飲料水用RP仕様の検討（継続）
（2） ESAによる規格化手続
【2-8】 RPの製造・設置・維持管理に関わるオペレーションマニュアルの作成
成果2にかかる活動
【2-9】 RPの製造と設置方法に関わる品質管理・監督体制の検討（継続）
（1） 飲料水用RPおよび伝統的浅井戸の品質管理・監督体制における関係者の役割分担等の整理
（2） 製造業者の認証制度の枠組み検討（継続）
（3） 製造、設置、維持管理に関わる民間関係者の相互扶助のための組織設立の検討
【2-10】 維持管理戦略策定ワークショップの開催
（1） 維持管理戦略の検討
（2） 供給チェーン構築の検討
【2-11】 製造・設置業者向け研修講師育成のための研修
【2-12】 製造・設置業者に対する研修
成果3に係る活動
【2-13】 RP購入・調達支援のための小規模金融の導入支援（継続）
【2-14】 郡水・鉱物・エネルギー事務所によるRP普及・流通活動の実施支援
【2-15】 プロジェクトのパイロット対象郡以外の4郡の水・保健行政官を対象とした水質検査のOJTの実施
【2-16】 セルフサプライによる飲料水用RP設置への支援
【2-17】 RP井戸の維持管理体制の整備
【2-18】 RP利用を通した生活改善策の検討と実施支援
【2-19】 RP利用に伴う衛生環境・行動の改善支援
（1） 衛生啓発・行動変容研修の実施
（2） 定期的な水質検査の実施
成果4に係る活動
【2-20】 ロープポンプ技術の普及・流通戦略を学ぶ視察旅行
【2-21】 セルフサプライ・フェアーの開催
【2-22】 RP普及を通した普及・流通ガイドラインの作成
計画
実績


第三年次
2015年
2016年
10 11 12 1 2 3 4 5 6 7 8 9 10 11 12
第3年次作業
プロジェクト管理
【3-1】業務計画の作成
【3-2】合同調整委員会（JCC）及び州レベルのステアリングコミッティの開催
合同調整委員会
州レベルのステアリングコミッティ
【3-3】プロジェクトブリーフノート（第3年次）の改訂
ニュースレター
プロジェクトブリーフノート
【3-4】エンドライン調査
【3-5】終了時評価調査への協力
【3-6】プロジェクト進捗報告書（その5）の作成
【3-7】プロジェクト業務完了報告書の作成
成果1にかかる活動
【3-8】ESAで標準化申請に関するフォローアップ
【3-9】オペレーションマニュアルの最終化
成果2にかかる活動
【3-10】RPの製造・設置・維持管理に関わる品質管理・監督体制の検討（継続）
【3-11】維持管理体制に関する検討
【3-12】スペアパーツ供給に関する検討
【3-13】RP製造・設置業者向け研修講師育成研修
【3-14】製造・設置維持管理にかかる人材育成
成果3に係る活動
【3-15】RP購入・調達支援のための小規模金融導入支援（継続）
【3-16】WASHチームによるRP普及活動
【3-17】RP普及ハンドブックの作成（継続）
成果4に係る活動
【3-18】RP井戸の維持管理体制の整備（継続）
【3-19】RP利用に伴う衛生環境・行動の改善支援（継続）
【3-20】RPの利用をとおした生活改善支援活動の支援（継続）
成果5に係る活動
【3-21】RP普及ツールの作成
【3-22】世界水の日（World Water Day）への支援
【3-23】最終セミナーの開催
計画
実績

Joint Coordination Committee Members

Chair Person	
State Minister	Ministry of Water, Irrigation and Electricity (MoWIE)
Members (Ethiopian side)	
Director and representatives	Water Supply and Sanitation Directorate, MoWIE
Director	Research and Development Directorate, MoWIE
Director	Sector Support Directorate, MoWIE
Representative	Ethiopia Water Technology Institute
Representative	One WASH National Programme
Self-supply Focal Person	MoWIE
Representative	Ministry of Finance and Economic Cooperation
Members (Japanese side)	
Representative	Japanese Embassy
Representative	JICA Ethiopia Office
Representative	Project Team

Regional Steering Committee Members

Chair Person	
Head	Water and Irrigation Development Bureau (WIDB)
Members (Ethiopian side)	
Core Process Owner and representatives	Water Supply Scheme and Material Maintenance Administration Core Process, WIDB
Self-supply Focal Person	WIDB
Representative	Bureau of Agriculture and Natural Resource Conservation
Representative	Bureau of Health
Representative	Technical and Vocational Educataion and Training Bureau
Representative	Women and Youth Affairs Bureau
Representative	TVETC Hawassa
Representatives	NGOs and development partners
Members (Japanese side)	
Representative	JICA Ethiopia Office
Representative	Project Team

Summary of Regional Steering Committee and Joint Coordination Committee Meetings

Title	1st SC Meeting	1st JCC Meeting
Date	April 19, 2013	April 16, 2013
Venue	Office of Bureau Head's, Water Resources Bureau, SNNPR	Meeting Room, Ministry of Water and Energy
Participants	・ WRB/SNNPR Representatives (Process ・ Owner, Rope Pump Team, Water Quality ・ Expert, WaSH Coordinator) ・ Representatives of sector bureaux (Women, ・ Youth and Culture, Agriculture and Rural Development) ・ JICA Ethiopia Office ・ JICA Experts	・ Director of Water Supply and Sanitation Directorate ・ Director of Sector Support Directorate ・ Head of EWTEC ・ Representative of WaSH Programme ・ Representative of Self Supply Office ・ Representative of WRB/SNNPR ・ Director of Bilateral Cooperation of MoFED ・ JICA Ethiopia Office ・ JICA Experts
Agenda	・ Discussions and approval of Inception Report ・ Methods and process of target area selection, etc.	・ Discussions and approval of Inception Report ・ Methods and process of target area selection, etc.
Major Achievement	・ Inception Report approved ・ Methods and process of target area selection discussed and agreed	・ Inception Report approved ・ Decision on the methods and the process of target area selections shall be authorized to Steering Committee in SNNPR
Title	2nd SC Meeting	2nd JCC Meeting
Date	July18, 2013	July 22, 2013
Venue	Lewi Campus Café, Hawassa	Hawassa Meeting Room, Ministry of Water and Energy
Participants	・ WRB/SNNPR (Process Owners, Rope Pump Team, Water Quality Expert) ・ Dean of TVETC/Hawassa ・ Representatives of sector bureau (Agriculture and Rural Development, Health) ・ IRC, World Vision ・ JICA Ethiopia Office ・ Project Team (JICA Experts, Local Experts)	・ Director of Sector Support Directorate ・ Director and representative of Research and Development Directorate ・ Representative of WaSH Programme ・ Representative of Self Supply Office ・ Head and representative of WRB/SNNPR ・ JICA Ethiopia Office ・ Project Team (JICA Experts, Local Experts)
Agenda	・ Sharing and discussion on Progress Report-I ・ Approval of selection of the target woredas ・ Discussion and approval of project logo, short message, and nickname ・ Sharing the results of RP Users' Survey in Three Regions	・ Sharing and discussion on Progress Report-I ・ Approval of selection of the target woredas ・ Discussion and approval of project logo, short message, and nick-name ・ Sharing the results of RP Users' Survey in Three Regions
Major Achievement	・ Selection of the target woredas approved ・ Project logo, short message and nick-name approved	・ Selection of the target woredas approved ・ Project logo, short message and nick-name approved

Title	3rd SC Meeting	3rd JCC Meeting
Date	June 18, 2014	June 23, 2014
Venue	South Star Hotel, Hawassa	Meeting Room, MoWIE
Participants	・ WRB/SNNPR Representatives (Process ・ Owners, Socio-economist, Mechanic) ・ Representatives of sector bureaus (Agriculture, TVETC) ・ World Vision ・ JICA Ethiopia Office ・ Project Team (JICA Experts, Local Experts)	・ State Minister ・ Directors of Water Supply and Sanitation ・ WASH Coordinator, Rural WASH Coordinator ・ Representatives of WASH Coordination Office ・ One WASH Secretariat ・ JICA Ethiopia Office (Senior Representative, ・ Project Formulation Officer, Programme Officer) ・ Project Team (JICA Experts, Local Experts)
Agenda	・ Progress Report ・ Sharing results of RP field test and RP models for promotion ・ Sharing plan of actions for Period 2	・ Progress Report ・ Sharing results of RP field test and RP models for promotion ・ Sharing plan of actions for Period 2
Major Achievement	・ Progress Report III shared and discussed ・ New RP models introduced and discussed ・ Plan of actions for Period 2 approved	・ Progress Report III shared and discussed ・ New RP models introduced and discussed ・ Plan of actions for Period 2 approved
Title	4th SC Meeting	4th JCC Meeting
Date	October 23, 2014	February 19, 2015
Venue	Lewi Campus Café, Hawassa	Meeting Room, MoWIE
Participants	・ WRB/SNNPR Representatives (Vice Head, Process Owner, WASH Unit, Socio-economist, Mechanic, Hydrogeologist) ・ Bureau of Agriculture ・ UNICEF, International Rescue Committee, World Vision ・ Representative of JICA Ethiopia Office, ・ Project Team (JICA Experts, Local Expert) ・	・ Director of Water Supply and Sanitation ・ Representative of WRB/SNNPR ・ Joint Mid-term review team (JICA HQ, Consultant, Ethiopian members) ・ JICA Ethiopia Office ・ Project Team (JICA Experts, Local Experts)
Agenda	・ Progress of the activities in Period 1 ・ Sharing the activities in Period 2 ・ Discussion on draft revised PDM	・ Presentation and discussion on the results of mid-term review ・ Discussion on PDM revision
Major Achievement	・ Progress of the project activities was shared ・ Draft revised PDM was discussed and comments were collected	・ Results of mid-tem review were shared ・ Revision of PDM was proposed

Title	5th SC Meeting	
Date	July 27, 2015	
Venue	Hawassa	
Participants	・ Deputy Head of Water Resources Bureau ・ Regional WASH Representative ・ Zonal Water Office ・ OMFI Representatives ・ JICA Ethiopia Office ・ Project Team (JICA Experts, Local Experts)	
Agenda	・ Sharing of the progress of Period 2 ・ Proposal and discussions of Plan of Activities for Period 3 ・ Report on PDM revision	
Major Achievement	・ Progress of Period 2 was shared ・ Proposed plans of Period 3 was approved	
Title	6th SC Meeting	5th JCC Meeting
Date	October 28, 2015	October 30, 2015
Venue	Lewi Café, Hawassa	MoWIE
Participants	・ Drinking Water Supply Administration Core ・ Process Owner ・ Self-supply Focal Person ・ Coordinator, Regional WASH Programme ・ OMFI Representative ・ IRC Representative ・ JICA Headquarters ・ JICA Ethiopia Office ・ Project Team (JICA Experts, Local Experts)	・ Director, Water Supply and Sanitation Directorate ・ Director, Research and Development Directorate ・ National WASH Coordination Office Representative ・ Small and Micro Enterprise Development Office ・ Representative ・ National consultant in charge of Self-supply ・ JICA Headquarters ・ JICA Ethiopia Office ・ Project Team (JICA Experts, Local Experts)
Agenda	・ Presentation of achievement in Period 1 and 2 ・ Presentation of plan of activities in Period 3 ・ Sharing of revised version of PDM ・ Discussion on Project activities	・ Presentation of achievement in Period 1 and 2 ・ Presentation of plan of activities in Period 3 ・ Sharing of revised version of PDM ・ Discussion on Project activities
Major Achievement	・ Approval of the plan of action in Period 3 ・ Endorsement of the revised version PDM (version 3.1)	・ Approval of the plan of action in Period 3 ・ Endorsement of the revised version PDM (version 3.1)

Title	7th SC Meeting	6th JCC Meeting
Date	June 24, 2016	June 30, 2016
Venue	Lewi Café, Hawassa	Getfam Hotel, Addis Ababa
Participants	・ Drinking Water supply Administration Core ・ Process Owner ・ Self-supply Focal Person ・ TVET Bureau Representative ・ OMFI Representative ・ BoH Representative ・ BoA Representative ・ Terminal Evaluation Mission ・ JICA Ethiopia Office ・ Project Team (JICA Experts, Local Experts)	・ Director, Water Supply and Sanitation Directorate ・ National WASH Coordination Office Representative ・ National Consultant on Rural WASH ・ MoFEC Representative ・ Terminal Evaluation Mission ・ JICA Ethiopia Office ・ Project Team (JICA Experts, Local Experts)
Agenda	・ Presentation on results of Terminal evaluation（Achievement of PDM indicator and Evaluation with 5 criteria） ・ Lessons learned and Recommendations ・ Discussion	・ Presentation on results of Terminal evaluation（Achievement of PDM indicator and Evaluation with 5 criteria） ・ Lessons learned and Recommendations ・ Discussion
Major Achievement	・ Approval of the results of Terminal Evaluation	・ Approval of the results of Terminal Evaluation
Title	8th SC Meeting	7th JCC Meeting
Date	October 29, 2016	November 3, 2016
Venue	Central Hotel, Hawassa	Getfam Hotel, Addis Ababa
Participants	・ Drinking Water Supply and Material Maintenace Administration Core Process Owner ・ Self-supply Focal Person ・ TVETC instructors ・ OMFI Representatives ・ Zonal / Woreda Water Offices ・ Zonal / Woreda Administration Offices ・ Zonal / Woreda Health Offices ・ Zonal / Woreda Agriculture Offices ・ RP manufacturers ・ Village Technicians ・ OMFI Branches / Sub-branches ・ JICA Ethiopia Office ・ Project Team (JICA Experts, Local Experts)	・ State Minister ・ Director, Water Supply and Sanitation Directorate ・ National WASH Coordination Office Representative ・ National Consultant on Rural WASH ・ Small and Micro Enterprise Development Office ・ MoFEC Representative ・ JICA Ethiopia Office ・ Project Team (JICA Experts, Local Experts)
Agenda	・ Discussion on challenges and future direction for RP dissemination in SNNPR	・ Presentation on Project outline and achievements ・ Roll Out Strategy ・ Discussion
Major Achievement	・ Project successfully completed ・ Positive momentum for RP dissemination	・ Project successfully completed ・ Handing over of the printed materials and tools

SC: Regional Steering Committee, JCC: Joint Coordination Committee

MINUTES OF THE PROJECT JOINT COORDINATION COMMITTEE FOR THE PROJECT FOR RURAL WATER SUPPLY, SANITATION AND LIVELIHOOD IMPROVEMENT THROUGH DISSEMINATION OF ROPE PUMPS (RPS) FOR DRINKING WATER

Date: Tuesday, 16th April, 2013

Venue: Conference Room #011, Ministry of Water and Energy

Time: 14:30-

Chairperson: Ato Yohannes Ghebremedhen, Director, Directorate of Water Supply and Sanitation, Ministry of Water and Energy

Summary of discussion:
Participants of JCC as attached as ANNEX-I discussed and agreed upon as follows.

1. Approval of the Inception Report

The Project Team presented and proposed a draft of Inception Report of the Project. The Ethiopian authorities agreed in principle to the contents of the Report. Some minor changes to be made are as follows; insert description on advantages of RP, attach Japanese experts dispatch schedule, add Agriculture Research Centre as a development partner to coordinate and collaborate with. In addition, for the purpose of harmonization with all other stakeholders, the project will conduct a national level workshop if JICA approves budget for it.

Besides, there were some clarifications made according to the questions raised;

- Role of the TVET is to provide training on manufacturing installation and maintenance. The project will use the existing system of micro and small scale enterprise development which is enhanced by TVET.

- The duration of the project is four years because the Project has variety of activities such as technical improvement of the RP, exploring local shallow well protection, standardize RP which require coordination among the stakeholders, promotion of activities involving agriculture, health and micro finance, horizontal coordination at the level of Woreda and Kebele, introducing new concept of micro finance, etc. Some of the activities are challenging, for example, micro finance. This is a key for RP dissemination according to the guideline. The Project is going to actualize this concept, in other words, the Project will make the RPs to be an easily accessible, low-cost technology to attract rural people to motivate them to purchase it through micro finance scheme. Simultaneously, the RP shall provide quality water for drinking. It shall be noted that the project is aiming at sustainability of activities hence financial support will not be done.

- It is difficult for the Project to contribute to the Ministry's One WaSH programme common fund. However, the Project and JICA office will make effort on intensive coordination with One WaSH. Since the project component is part of the One WaSH program, the project is expected to produce output which will contribute to the programme, as WASCAP did in the past.

- The Project Team is recognizing that the RP is more effective for household supply rather than communal supply. Tentatively the project is planning to provide RP to the target households and the households will refund the cost for RP to micro finance institute.

- The Ministry side proposed to place a "Project Coordinator", who will be dealing with day to day

work of the project. They suggested from their past experiences that the Project Manager is occupied with his duty most of the time, therefore he cannot spare enough time for the Project. The Ministry side will discuss to assign a personnel.

- The Sector Coordinator pointed out a necessity of communication with Ministry of Education, TVET Agency and Ministry of Health since the project covers variety of activities such as School health programme, technical / vocation education and water quality. The Project Team will involve these organizations.

2. Process of Selection of Target Areas

Ethiopian and Japanese sides (hereafter referred to as "both sides") agreed on the process of target areas selection in general. The criteria will include willingness of accepting the RP and project activities from the Woredas. For the procedure, it is necessary to have detail discussion at the Steering Committee held in SNNPR.

3. AOB

Both sides confirmed to purchase three (3) vehicles for project purpose. JICA will procure and SNNPR will take care of tax, insurance and any other cost from the next year budget.

Minutes certified by

Yohannes G/Medhen
Water Supply and Sanitation Directorate
Director

Mr. Yohannes Ghebremedhen
Director,
Directorate of Water Supply and Sanitation,
Ministry of Water and Energy

北吉秋乃

Ms. Akino Kitazume
Chief Advisor / Dissemination Strategy,
JICA Project Team

ANNEX-I

List of Participants in the First JCC

Ministry of Water and Energy

Mr. Yohannes Geberemeden	Director, Water Supply & Sanitation Directorate
Dr. Markose Wijore	Director, Sector Support Directorate
Mr. Awoke Gulilat	MoWE
Mr. Tegenu Zergwe	WASH Consultant
Mr. Kassu Eshete	Socio-Economist, SNNPR Water Resources Bureau

Other Organizations

Mr. Dereje Girma	Director, MoFED
Mr. Ababa Mekonnen	Head, EWTEC

JICA Ethiopia Office

Mr. Yukiyasu Sumi	Project Formulation Advisor, Water Sector
Mr. Ephreme Fufa	Programme Officer, Water Sector

Project Team

Ms. Akino Kitazume	Chief Advisor / Dissemination Strategy
Ms. Takako Uchida	Agriculture
Ms. Ayano Ishii	Micro finance
Ms. Kaina Homma	Hygiene and Sanitation

MINUTES OF THE PROJECT JOINT COORDINATION COMMITTEE FOR THE PROJECT FOR RURAL WATER SUPPLY, SANITATION AND LIVELIHOOD IMPROVEMENT THROUGH DISSEMINATION OF ROPE PUMPS (RPS) FOR DRINKING WATER

Date: Monday, 22nd July, 2013
Venue: Conference Room #011, Ministry of Water and Energy, Addis Ababa
Time: 9:30- 12:30
Chairperson: Dr. Markose Wijore, Director, Directorate of Sector Support, Ministry of Water and Energy

Summary of discussion:
Participants of JCC as attached as ANNEX-I discussed and agreed upon as follows.

1. Presentation of the highlights of the Progress Report I Draft

The Project Team, represented by Ms. Akino Kitazume, the Chief Advisor of the Project, made a presentation on essence of the Progress Report I - refer to the handout document for the detail. Major activities were explained with pictures and challenges for the coming period were addressed.

2. Report on the Project Target Woreda Selection

The selection committee, represented by Mr. Kassu Eshete, Socio-Economist, WRB-SNNPR, described on the progress of the target woreda selection. He tabled out the criteria and the data collected by the Project team through cooperation of stakeholder organizations. He further explained that the selection committee with approval from the Steering Committee, four (4) woreda are suggested, namely; Yergachefe in Gedeo Zone, Dale in Sidama Zone, Damot Pulasa in Wolaita Zone and Meskan in Gurage Zone.

During the discussion session, following comments and clarifications were made;

- Concerning selection criteria, water quality, ground water potential, equity in zone selection were crucial. Ground water potential were studied according to the available data. Woreda are selected from different zones for distribution of resources. Water quality will be carefully considered when the area will be selected in the woreda, since the contamination is not covering whole area of one woreda but only partially.
- A criterion on "willingness of the people" was also on discussion. Since the RP operation and maintenance will be done by the users, even the willingness is subjective criteria, it should be focused. In addition, economical capacity was measured to see self supply potential; the Project Team considered production, cash crop, etc.
- The Project is aiming at contributing to the national target. To have specific goal, baseline survey

will be conducted after the area selection. The survey will disclose the actual situation at the ground. According to the concrete figure/data, the project team will come up with figures on how far the project is expected to achieve and how it will contribute to the national target.

- Technical skill transfer will be done by different approaches, producing guideline, holding seminar, conducting training on manufacturing and installing, integrating RP technology to TVETC curriculum, etc. The manufacturers will be invited for these activities even they are not residing in the project target areas.
- The Project is aligning with One WaSH Programme by following the policy on self supply as self supply is a part of One WaSH Programme. The Project will continue to consult with One WaSH plan and to discuss on how the Project can fit in.

After thorough clarification and discussions, the participants approved the suggested 4 woreda as the Project target woreda, promising that the issues raised will be integrated during the implementation.

3. Plan of Actions for the coming 1 Year

The Project Team, represented by Mr. Takeshi Ono, Deputy Chief Advisor of the project, illustrated the upcoming activities. One modification from the Inception Report was made on training on manufacturer. To have improved model RP training, the full scale training will be conducted in the 2nd year when the model is confirmed.

4. Presentation on the Project Logo, Catch Copy and Leaflet Draft

The Project Team from Ms. Kaina Homma, JICA Expert, presented project images for the promotion activity.

The logo → The image is on the right

The short message (English) → Better life with Rope Pump

The short message (Amharic) → "Yeteshale Nuro Begemad Pump"

The nick name (English)→ WAS-RoPSS stands for "Water and Sanitation – Rope Pump Self Supply"

The nick name (Amharic)→ "Wuhan Betirete"

Project Logo

In the discussion, Wuhan Begile, which was proposed by the Steering Committee, was changed to "Wuhann Betirete" because "Begile may sometimes connote "selfishness". In addition, the logo picture is the old Rope Pump. Therefore the rope pump picture will be changed once the improved model is decided.

5. Presentation on the RP Users' Survey and its discussion

The Project Team from Mr. Girma, the Technical Coordinator of the Project, elaborated on the RP users' survey conducted from May to June, 2013. For the detail, refer to the presentation slides and the report.

During the Question and Answer session, following comments and clarifications were made;

- RP technology is a promising technology, which is worth considering its sustainability. To achieve sustainability, the project activities must cover the following aspects, technological, social, financial, institutional areas.
- Aspects on technological improvement of RP, an officer from WRB-SNNPR pointed out that water level fluctuation is the main reason in Southern Region that RP being taken out from the well. From the discussion, it was indentified that the problem can be solved by proper "installation" and "designing". During the site selection, static water level of the well should be measured in dry season and rainy season. At the same time, it is necessary to have an interview with the users on the condition of HDW. Site selection training must be done for both village mechanics, who will install the RP, and users so that they understand hydrogeological condition. During the designing stage, water lifting amount limitation, hydrogeological information, material quality and skill of workers should be examined and specified.
- Aspects on institutional framework, manufacturer should have code of conduct.
- Aspects on social issue, concerning the survey result showing more than 50% of the population do not care about water quality, it is essential to promote and raise awareness of the community.

6. Closing Remarks

Mr.Abiti Getaneh, Director of Research and Development Directorate, in his closing remarks, thanked all the participants for their contributions. He also thanked JICA for its support. He expressed his anticipation of the success of the Project as described in TOR and promised that MoWE will fully cooperate with it.

Meeting was closed at 12:00.

Minutes certified by

MARKOS WIJORE (Dr.)
Director, Water Sector Support and Capacity Building Directorate

Dr. Markose Wijore
Director,
Directorate of Sector Support,
Ministry of Water and Energy

for **Ms. Akino Kitazume**
Chief Advisor / Dissemination Strategy,
JICA Project Team

ANNEX-I

List of Participants in the Second JCC

Ministry of Water and Energy

Dr. Markose Wijore	Director, Sector Support Directorate
Mr. Abiti Getaneh	Director, Research and Development Directorate
Mr. Abiy Girma	WaSH Programme Coordinator
Ms. Azalech Solomon	Assistant Researcher, Research and Development Directorate
Mr. Awoke Gulilat	M&E Expert
Mr. Abas Mohamed	Director, SNNPR Water Resources Bureau
Mr. Kassu Eshete	Socio-Economist, SNNPR Water Resources Bureau

JICA Ethiopia Office

Mr. Yukiyasu Sumi	Project Formulation Advisor, Water Sector
Mr. Ephreme Fufa	Programme Officer, Water Sector

Project Team

Ms. Akino Kitazume	Chief Advisor / Dissemination Strategy
Mr. Takeshi Ono	Deputy Chief Advisor
Ms. Kaina Homma	Hygiene and Sanitation
Mr. Girma Senbeta Ararso	Technical Coordinator
Mr. Henok Teka	Assistant Surveyor
Ms. Afra Mohamed	Secretary

MINUTES OF THE THIRD JOINT COORDINATION COMMITTEE MEETING FOR THE PROJECT FOR RURAL WATER SUPPLY, SANITATION AND LIVELIHOOD IMPROVEMENT THROUGH DISSEMINATION OF ROPE PUMPS (RPS) FOR DRINKING WATER (WAS-RoPSS)

Date: Monday, 23rd June, 2014
Venue: Conference Room #101, Ministry of Water, Irrigation and Energy, Addis Ababa
Time: 9:30- 13:00
Chairperson: H.E. Kebede Gerba, State Minister Ministry of Water, Irrigation and Energy

Summary of discussion:
The 3rd JCC was conducted according to the agenda as attached in Annex-1.
Participants of JCC, as attached as Annex-2, discussed and agreed upon as follows.

The meeting was opened by H.E. Kebede Gerba, the State Minister, stating that the rope pump is a technology which is focused among the stakeholders in the water sector for improving water supply in the country and this meeting will be discussed on how the project implemented the rope pump dissemination in SNNPR.
Following the H.E. Kebede's opening remarks, Mr. Takusaburo Kimura, JICA Senior Representative, made a brief explanation of the project by highlighting on self-supply involving the private sector. He expressed that the discussion in this JCC meeting will spearhead the sector issues and assess the project for future enhancement.

1. Presentation of the highlights of the Progress Report III Draft

The Project Team, represented by Ms. Akino Kitazume, the Chief Advisor of the Project, made a presentation on essence of the Progress Report III by reviewing the 1st year project activities (Refer to the Annex-3 for presentation slides). She added the project progress by showing figures on percentage of achievement by outputs to clearly see the standing point as of now. Finally she has pinpointed some outstanding issues and lessons learnt in this first period of the project.

2. Presentation on the progress in rope pump improvement

The Project Team, represented by Mr. Yoichi Harada, JICA Expert, presented on the activities done for improving rope pump model. He prepared slides with pictures showing different models. Also, he explained about what was tested and its results. At the end of the presentation, 2 final models, called 2014 Model and Pole Model were announced; 2014 model is a modification of the existing models and less expensive, pole model is a budget model with no metal frame.

3. Plan of Actions for the Period 2

The Project Team, represented by Ms. Akino, explained the activities in next project period together with the input balance image of the whole period of the project, illustrating how much the input will change towards end of the project period.

During the discussion session, following comments and clarifications were made;

- There were several suggestions made from JICA and the Project side. ①Spontaneous request is difficult to be integrated in the project activities. It is appreciated if the activity plan of federal and regional will be informed in well advance so that the Project and JICA will be able to discuss how well the Project can respond to the request. Following one plan principle of One WASH National Program, both Ethiopian and Japanese sides need to work together for harmonized annual planning. ②Quality of water should be considered since the rope pumps are installed on shallow wells, which can be easily contaminated. Initiative by the zonal and woreda level on the sanitation awareness raising is appreciated. ③To create ownership of the Ethiopian Government side, it is necessary to appoint focal person from the Ministry and WRB who can practically work in the project. The Ministry appointed Mr. Tamiru, National WASH Coordinator, and Mr. Tamene, Rural WaSH Coordinator, to be the focal person of the project. From the WRB, Mr. Tesfaye will appoint accordingly.
- Mr. Tamene from Water Supply Directorate and Mr. Eyasu Guta from Water Sector Working Group gave summary of the field visit to two project target woredas, Meskan and Dale. During the visit, they found that the project was well known to the woredas and the people in the communities are keen to adopt the technology. On the other hand, there were some limitations, i.e., among the 12 wells which was installed rope pumps, 3 were not functioning with several reasons. The remarks from the visits were; ①activities related to sanitation was missing, ②well owners did not know how to maintain the rope pump, ③supply chain is not yet established, ④water quality inspection at the household level should be done. In addition, database of hydrogeology of the areas have to be reviewed to avoid the area which the wells will dry up. It was recommended to acquire the hydro-geological map on shallow ground water, which was studied by DFID and University of Addis Ababa. About the issue on 3 non-functioning wells, the project experts added pipes to reach water or deepen the wells to solve the problems. Since the ministry has several ideas on how to avoid or solve these problems, it will be discussed in detail in a separate session.
- Head of WRB, Mr. Tesfaye, commented that the Project is supporting the process of procurement of 10,000 rope pumps. With suggestions from the project, a series of discussions were made between Bureau of Agriculture to align the dissemination modality and control the quality of rope pumps. BoA has pended the process of a bulk procurement of rope pumps. Furthermore, a steering committee was established in the region for self-supply. In the next step, demand creation and capacity building of manufacturers in SNNPR will be done in collaboration with WAS-RoPSS Project. Currently in the region, 50 NGOs are involved in small-scale technologies. To have one modality in the region, WRB is writing letter to Zonal and Woreda level to establish task force. The bureau requested the project to share the good practices and outputs frequently so that the bureau will scale-up simultaneously using same approach.
- The Government of Ethiopia is requiring report both financial and physical activities every quarter. Not only WAS-RoPSS Project but also all other JICA projects should be included in the quarterly reports of the regional level or federal level. JICA Ethiopia agreed with submission of reports as per request.
- The process of study on rope pump and standardization was again explained during the discussion. It was emphasized that the rope pump improvement was mainly focusing on lowering the cost so

that it will be affordable to the communities. At the same time, manufacturers were consulted in several meetings to be transparent in standardization process.

- To incorporate trainings in TVETC curriculum, the project have started discussion with Dean of TVETC Hawassa. TOT for manufacturing rope pump will be integrated in electro-mechanical course. In addition, TVETC's curriculum "GLOWS" has self-supply component. Besides, there will be ad hoc "tailor-made" training courses for short-term.

After thorough discussion and clarification, the participants understood the project progress and agreed its plan for the next project period.

4. Closing Remarks

Mr. Nuredin Mohammed, Director of Water Supply and Sanitation Directorate, in his closing remarks, expressed that this meeting made the project progress clear to the participants and what is next step. He reminded that all the participants have taken own assignments, therefore, we shall work together.

Meeting was closed at 13:00.

Minutes certified by

H.E. Kebede Gerba
State Minister
Ministry of Water, Irrigation and Energy

北詰 秋乃

Ms. Akino Kitazume
Chief Advisor / Dissemination Strategy,
JICA Project Team

Annex-1

The 3rd Joint Coordinating Committee Meeting

June 23, 2014, Conference Room, Ministry of Water, Irrigation and Energy

Programme

Time	Content	Presenter
09:00	Opening Remarks	H.E. Kebede Gerba, State Minister
09:05	Remarks from JICA Ethiopia Office	Mr. Takusaburo Kimura, Senior Representative, JICA Ethiopia Office
09:10	Presentation of the highlights of the Progress Report III Draft	Ms. Akino Kitazume, Chief Advisor, RP Project
09:40	Presentation and Discussion on the Progress in RP Improvement	Project Team
10:20	Discussions	
10:40	Plan of Actions for the Period 2	Project Team
11:00	Discussions	Participants
11:30	AOB	
12:00	Closing Remarks	Ato Nuredin Mohammed, Acting Director, Water Supply and Sanitation Directorate

Chairperson: H.E. Kebede Gerba, State Minister

Annex-2

List of Participants in the Third JCC

Ministry of Water and Energy

H.E. Kebede Gerba	State Minister
Mr. Nuredin Mohammed	Director, Water Supply and Sanitation Directorate
Mr. Abiy Girma	WaSH Programme Coordinator
Mr. Eyasu Guta	Technical Programme Support Officer
Mr. Tamiru Gedefa	National WASH PMU Coordinator
Mr. Tamene Haile	R.W. F.
Mr. Asefa Birru	Officer
Mr. Fanta Feyisa	Officer
Mr. Agash Asmamew	Officer
Mr. Tesfaye Yigezu	Head, SNNPR Water Resources Bureau

JICA Ethiopia Office

Mr. Takusaburo Kimura	Senior Representative
Mr. Itsuro Takahashi	Project Formulation Advisor, Water Sector
Mr. Ephrem Fufa	Programme Officer, Water Sector

Project Team

Ms. Akino Kitazume	Chief Advisor
Mr. Yoichi Harada	Mechanic Engineer
Ms. Takako Uchida	Agriculture
Ms. Kaina Homma	Hygiene and Sanitation
Mr. Girma Senbeta Ararso	Technical Coordinator
Ms. Afra Mohamed	Secretary

MINUTES OF MEETING BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY
AND
MINISTRY OF WATER, IRRIGATION AND ENERGY
OF THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA
ON
JAPANESE TECHNICAL COOPERATION PROJECT
FOR
THE PROJECT FOR RURAL WATER SUPPLY, SANITATION AND LIVELIHOOD IMPROVEMENT THOROUGH DISSEMINATION OF ROPE PUMPS (RPS) FOR DRINKING WATER

The Government of the Federal Democratic Republic of Ethiopia (hereinafter referred to as "Ethiopia") and Japan International Cooperation Agency (hereinafter referred to "JICA") jointly organized the Mid-Term Review Team (hereinafter referred to as "the Team"), headed by Mr. Toshio Murakami, for the purpose of conducting the mid-term review for "The Project for Rural Water Supply, Sanitation and Livelihood Improvement through Dissemination of Rope Pumps (RPs) for Drinking Water" (hereinafter referred to as "the Project"). The Team has carried out intensive study and analysis of the activities and achievements of the Project, and prepared the Joint Mid-Term Review Report attached hereto (hereinafter referred to as "the Report"), and presented it to the Joint Coordination Committee (JCC) held on February 19th, 2015.

The representatives of the Japanese side and the Ethiopian side agreed to report to their respective authorities concerned the matters referred to in the Report to ensure that necessary measures are taken for the smooth and successful implementation of the Project.

Addis Ababa, February 20, 2015

Mr. Toshio Murakami
Team Leader
Japan International Cooperation Agency

Mr. Nuredin Mohammed
Director, Water Supply and Sanitation Directorate
Ministry of Water, Irrigation and Energy
The Federal Democratic Republic of Ethiopia

ATTACHED DOCUMENT

1. Amendment of PDM

The Team explained the draft of PDM Ver.2.1 which was agreed basically by related organizations in Southern Nations, Nationalities and Peoples' Region. Ethiopian side insisted that target site of Overall Goal should be whole nation of Ethiopia and RP should be used for drinking water. The Team replied that it was not necessary to amend target area of Overall Goal unless any additional inputs were not required.

2. Support to the ongoing procurement of RPs by Water Resource Bureau, Southern Nations, Nationalities and Peoples' Region

The Team has considered supporting measures to the ongoing procurement of RPs by Water Resource Bureau, Southern Nations, Nationalities and Peoples' Region (hereinafter referred to as "WRB") through Mid-Term Review since the main target of the Project is dissemination of RPs. The Team explained the draft of supporting measures as below and Ethiopian side understood it.

- Procurement :
  Continue to advice in technical aspect
- Promotion activities :
  Support to formulate a promotion plan through sharing the experiences and lessons learned which are compiled as Dissemination Hand Book.
- Capacity Development for installation :
  Support some part of trainings which are supposed to be carried out by Woreda technicians to village technicians utilizing TVET trainers who are trained in the Project.

The Team justified the prerequisite conditions which were required to be undertaken by Ethiopian side in order to carry out supporting measures mentioned above and Ethiopian side agreed it.

- Additional assignment of necessary C/Ps (2 persons from WRB are desirable)
- Payment of daily allowances and accommodation fee for C/Ps from WRB and Zone Water Offices.
- Selection of target Woredas and Kebeles for trainings
- Selection and mobilization of village technicians
- Mobilization and coordination necessary officers and extension workers
- Necessary Arrangement for Micro-finance scheme
- Activities which are required after trainings.(ex. Supports for installation, operation and maintenance, improvement of water supply, sanitation and livelihood)

Federal Democratic Republic of Ethiopia
Ministry of Water, Irrigation & Energy

JICA
Japan International Cooperation Agency

Action plan with clear demarcation of responsibility between WRB and the Project should be developed based on the above mentioned recommendations and prerequisite conditions.

3. Water Quality and Hygiene Education

The Team explained items below.

- According to the result of water quality test on RPs which were installed in the project, the Team found it difficult to meet all standards for drinking water since installed RPs were on existing traditional dug wells. Moreover, it was shown that water quality of RPs could be improved to some extent with physical improvement of RP wells including other necessary work.
- The project needs to put emphasis on hygiene education including household water treatment which are needed to utilize water of RPs for drinking considering the difficulties on protection of traditional dug wells from contamination which comes from surface.
- For the reason stated above, it is needed for the project to emphasize the water quality of RPs and necessity of hygiene education in the promotion of RPs though the project has already taken care of it.

After the explanation by the team, there were some opinions regarding to water quality as follows.

- RP can provide safe water with appropriate site selection, technical assistance on well construction and physical protection.
- Safety water should be secured at the water points.
- It is difficult to prevent contamination from surface and aquifer completely as far as utilizing traditional dug well.
- Household water treatment is needed to utilize water of RP for drinking since self-supply technologies such as RP are the ways to improve water quality gradually
- Contribution of site selection alone will not ensure prevention of contamination since colon bacillus can be detected anywhere.

4. Procurement of motorbike

Ethiopian side requested Japanese side to procure motorbikes for 4 Woredas in view of the shortage of their budget in order to follow project activities by themselves. Japanese side will verify relevance with the JICA headquarters as the team has not been authorized to decide procurement and its prerequisite conditions.

END

Attached Document: Joint Mid-Term Review Report

Mid-Term Review Report

on

The Project for Rural Water Supply, Sanitation and Livelihood Improvement through Dissemination of Rope Pumps (RPs) for Drinking Water (WAS-RoPSS)

February 2015

The Joint Mid-Term Review Team

TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS

EWTEC	Ethiopia Water Technology Centre
EWTI	Ethiopia Water Technology Institute
HHWT	Household water treatment
IDE	International Development Enterprise
IRC	International Water and Sanitation Centre
JCC	Joint Coordination Committee
JICA	Japan International Cooperation Agency
MOH	Ministry of Health
MOU	Memorandum of Understanding
MoWIE	Ministry of Water, Irrigation and Energy
NGO	Non-governmental organization
OJT	On the job training
OMFI	OMO Micro finance institute
PDM	Project Design Matrix
SC	Steering Committee
SNNPR	Southern Nations, Nationalities and Peoples' Region
TOR	Terms of reference
TOT	Training of trainers
TVETC	Technical and Vocational Education Training Collage
UAP	Universal Access Plan
WAS-CAP	The Water Sector Capacity Development Project in Southern Nations, Nationalities and People's Regional State in the Federal Democratic Republic of Ethiopia
WASH	Water, Sanitation and Hygiene
WAS-RoPSS	The Project for Rural Water Supply, Sanitation and livelihood Improvement through Dissemination of Rope Pumps for Drinking Water
WHO	World Health Organization
WRB	Water Resource Bureau

1. Outline of the Review

1-1. Background

In the Federal Democratic Republic of Ethiopia, hereinafter referred to as 'Ethiopia', the proportion of the population with access to safe water was as low as 44%, at the time of the preparation of the project, while the average of Sub-Saharan African countries was 61%. The government of Ethiopia set the target of water supply coverage of 98.5% by 2015 in the Universal Access Plan 2, UAP2, which is a five-year development plan of the water and sanitation sector. In particular, it focuses on the rural water supply, as the average increment of the coverage rate is set about 7% annually.

Japan International Cooperation Agency, hereinafter referred to as 'JICA', as a development partner of Ethiopia for a long time, has provided financial and technical assistances in rural water supply sub-sector for the last several decades, namely, "Eleven Centres Water Supply and Sanitation", "Project for Water Supply in Southern Nations, Nationalities and Peoples' Regional State", and "The Project for Water Supply in Afar Region". In addition, several technical cooperation projects, such as Ethiopia Water Technology Centre Project (EWTEC) and the Water Sector Capacity Development Project in Southern Nations, Nationalities and People's Regional State in the Federal Democratic Republic of Ethiopia (WAS-CAP) contributed to human and organizational capacity development, as well as technical extension. These two projects also contributed to the new sphere of rural water supply technology, rope pumps, hereinafter referred to as 'RP'. RP, as a low cost water lifting device which can be self-supplied by the rural people, was improved and introduced by these projects.

RP is now increasingly valued as one of the low cost technologies for 'Self-supply' as the government placed it in its national guidelines and plans. However, dissemination of RPs has yet been limited so far for several reasons. For instance, some untrained local manufacturers forged RPs, which were low in quality and caused malfunctioning. These low quality RPs in turn contributed to bad reputations and lowered the market values of RPs in some areas. The absence of the appropriate financial support system to the rural people also contributed to the slow expansion of the RP market. It is therefore essential that the government has clear national strategies for accelerating the dissemination of RPs, which may include the financial support system for the rural people, as well as improvement of RP as a valued market commodity. The government of Ethiopia has requested technical assistance to JICA in August 2010, and JICA has conducted the Detailed Project Planning Study in March-April 2012 and June 2012. As a result, it was found that the government of Ethiopia has already made a good progress in the acceleration of Self Supply, and that the technical assistance shall not be limited only to improvement and standardization of RPs but shall extended to dissemination and marketing of RPs. Both parties agreed the project design and signed the Record of Discussion in August 2012, and the Project was officially launched in March 2013.

About two years have passed since the Project for Rural Water Supply, Sanitation and Livelihood Improvement through Dissemination of Rope Pumps (RPs) for Drinking Water hereinafter referred as to "the Project" was launched in March 2013. Considering the fact that the Project is to be completed in December 2016, the Mid-term Review is to be conducted with an aim to review activities and outputs which come up in the Project, and extract lessons from the result to make recommendations on the activities for the remaining period of the Project.

1-2. Objectives

(1) To review the activities of the project and its process of implementation based on the PDM ver1.1.

(2) To analyze and discuss the achievement of the project in terms of five evaluation criteria (relevance, effectiveness, efficiency, impact and sustainability).

(3) To identify and recommend measures for solving problems on the project operation to related agencies of Ethiopia and Japan based on the result of (1) and (2), and to discuss the activity plan of the project for the rest of the cooperation period.

(4) To propose to revise the Project Design Matrix (PDM) and Plan of Operation (PO) based on the results of discussions.

(5) To prepare and agree on the Mid-term review report with the Government of Ethiopia and to exchange the Minutes of Meetings (M/M).

1-3. Outline of the Project

The outline of the Project is shown as follows and the details are as described in the PDM ver.1.1 (Annex 1):

(1) Overall Goal:

Water supply and sanitation conditions and livelihood in rural areas are improved through dissemination of RPs for drinking water in the whole nation of Ethiopia.

(2) Project Purpose:

Situations of water supply, sanitation and livelihood are improved through dissemination of RPs for drinking water.

(3) Outputs:

1) Specifications of RPs for drinking water and installation technologies are standardized at the national level.

2) Strategies are formulated for manufacturing and installation technologies of RPs for drinking water.

3) Rural livelihood and sanitation and hygiene are improved through dissemination and marketing systems of RPs for drinking water in the target areas.

4) Guidelines are formulated for dissemination of RPs for drinking water, and acknowledged

nation-wide.

1-4. Evaluation Methodology

1-4-1. Method of Review

The Mid-term Review was conducted in accordance with the latest "JICA Guidelines for Project Evaluations" issued in June 2010. The review was performed using PDM as a reference. Current project status and outcomes were assessed on the basis of the evaluation grid (Annex 4) from the aspects of the five criteria of relevance, effectiveness, efficiency, impact, and sustainability.

The Mid-term Review Team conducted surveys at the project sites through the interviews and questionnaires to the Ethiopia project personnel, other related organizations, and the Japanese experts involved in the Project to review the Project on the basis of the evaluation grid.

1-4-2. Five Evaluation Criteria for the Review

Description of the five evaluation criteria that were applied in the analysis for the Mid-term Review is given in Table 1 below. The relationship between the five evaluation criteria and PDM (Overall Goal, Project Purpose, Outputs and Inputs) are also described in the following (Figure 1).

Table 1: Description of Five Evaluation Criteria

Criteria	Definitions
Relevance	Degree of compatibility between the development assistance and priority of policy of the target group, the recipient, and the donor.
Effectiveness	A measure of the extent to which an aid activity attains its objectives.
Efficiency	Efficiency measures the outputs in relation to the inputs. It is an economic term which is used to assess the extent to which aid uses the least costly resources possible in order to achieve the desired results. This generally requires comparing alternative approaches to achieving the same outputs, to see whether the most efficient process has been adopted.
Impact	The positive and negative changes produced by a development intervention, directly or indirectly, intended or unintended. This involves the main impacts and effects resulting from the activity on the local social, economic, environmental and other development indicators.
Sustainability	Sustainability is concerned with measuring whether the benefits of an activity are likely to continue after donor funding has been withdrawn Projects need to be environmentally as well as financially sustainable.

Source: "JICA Guidelines for Project Evaluations", June 2010

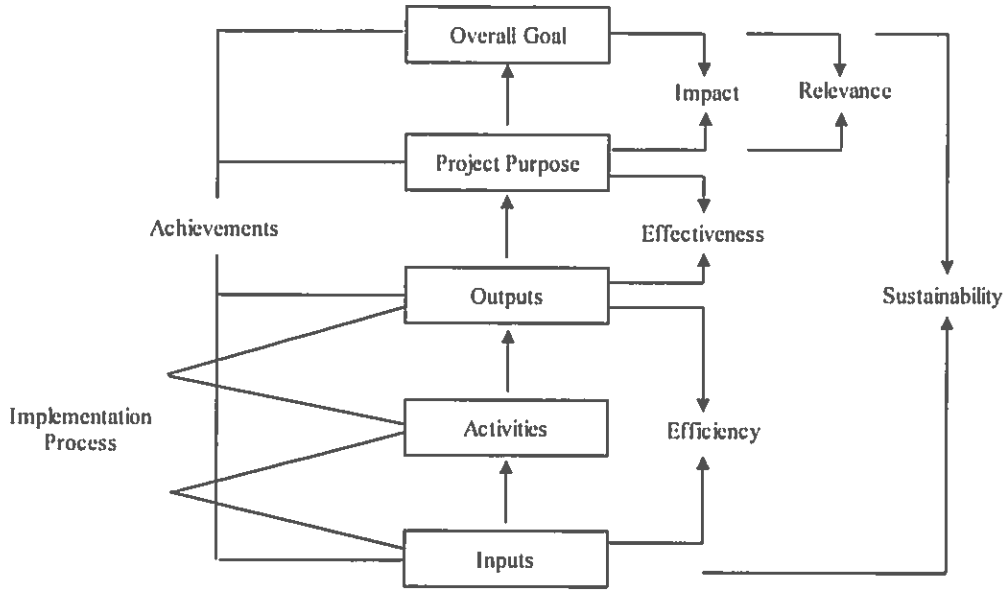


Figure 1: Relationship between the Five Criteria and PDM
Source: "Practical Methods for Project Evaluation" March 2004

1-4-3. Collection Methods and Data Sources

The data collection methods and main data sources are specified as shown in the evaluation grid. The specific methods and sources are described below.

Data Collection Methods	Data Sources: Respondents to the Mid-tem Review
■ Interview ■ Questionnaire	■ MoWIE ■ Regional Water Resource Bureau ■ EWTI ■ TVETC ■ WASH Coordination Office ■ OMFI ■ Woreda Water Resource Office ■ Regional Health Bureau ■ Woreda Health Office ■ Regional Agriculture Bureau ■ Woreda Agriculture Office ■ Other Cooperation partners

■ Document review	■ Project Progress Report ■ National Water Policy ■ Documents related to One WASH National Programme ■ Manual for Self supply ■ Other related documents

1-5. Members of the Joint Mid-term Review

<Ethiopia Side>

Name	Title	Position and Organization
Mr. Agash Asmamaw,	National Consultant, Rural WASH	MoWIE
Mr. Bekele Belete,	Socio Economist	SNNPR WRB

<Japanese Side>

Name	Title	Position and Organization
Mr. Toshio Murakami	Team leader	JICA
Mr. Masanori Yamazaki	Planning of Survey	JICA
Mr. Teppei Okano	Evaluation Analysis	Icons Inc.

1-6. Schedule of the Joint Mid-term Review

The Mid-term Review was conducted during the period between February 1st and February 20th, 2015 (Annex 3).

2. Achievements of the Project

2-1. Records of Inputs

(1) Japanese Side

1) Dispatch of the Experts

Name	Position	Total M/M
Ms. Akino Kitazume	Chief Advisor / Dissemination Strategy	9.27
Mr. Takeshi Ono	Deputy Chief Advisor / Dissemination	8.43
Mr. Yoichi Harada	Mechanical Engineering / Mechanical Design	7.00
Mr. Hidekuni Usami	Drilling Technologies /Construction Management	4.50
Ms. Takako Uchida	Agriculture (Micro-irrigation / Cultivation)	7.70
Ms. Ayano Ishii	Micro Finance/Improvement of Rural Livelihood	2.00
Mr. Jun Sugai	Micro Finance/Improvement of Rural Livelihood	1.00
Ms. Kaina Homma	Sanitation and Hygiene	9.40

*As of the end of December 2014

2) Inspection tour in other country

An inspection tour in other country (Nicaragua) is planned to be organized in 2015.

3) Project operation cost

As of the end of January 2015, the amount of 74 million Japanese Yen has been spent for the project operation expenses such as training, local transport expenses and local staff salary.

4) Provision of equipment

As of the end of January 2015, the amount of 4.1 million Japanese Yen has been spent for provision of equipment, such as PC, Printer, Projector and generator.

(2) Ethiopian Side

1) Staff Allocation (Project counterparts)

Organization	Title	Name
MoWIE	State Minister / Project director	H.E. Kebede Gerba
Water supply and Sanitation Directorate, MoWIE	Director / Project Manager	Mr. Nuredin Mohammed
MoWIE	Acting Director / Ethiopia Water Technology Institute	Dr. Markos Wijore
Research and Development Directorate, MoWIE	Director	Mr. Abiti Getaneh
Water supply and Sanitation Directorate, MoWIE	UNICEF Project Coordinator	Ms. Zewditu Yilma
National WASH Coordination Office	National WASH Coordinator	Mr. Abiy Girma
Water supply and Sanitation Directorate, MoWIE	Rural WASH Coordinator	Mr. Tamane Hailu
SNNPR Regional Water Resource Bureau	Bureau Head Water supply facility and governance	Mr. Samuel Tamiru
SNNPR Regional Water Resource Bureau	Process owner for Water resource research and management	Mr. Tadela Kibru
SNNPR Regional Water Resource Bureau	Water quality Expert	Mr. Kassahun Kulgrored
SNNPR Regional Water Resource Bureau	Social Economics Division	Mr. Kassu Eshete
SNNPR Regional Water Resource Bureau	Machinery Division	Mr. Dereje Haile
SNNPR Regional Water Resource Bureau	Machinery Division	Mr. Mentesnot Yohanes
SNNPR Regional Water Resource Bureau	Hydrogeology Division	Mr. Asbdela Yimar
SNNPR Regional Water Resource Bureau	Regional WASH Coordinator	Mr. Bekele Kassaye

Organization	Title	Name
OMO Micro Finance Institute	Manager, Saving Department	Mr. Ahebir Alemu
Hawassa TVETC	School Director	Mr. Fisseha Hariso Burra
Agriculture and Rural Development Bureau	Manager, Natural Resources Section	Mr. Mahamednur Faris
Health Bureau	Sanitation Engineer , Disease prevention /Health Promotion	Mr. Desalegn Gullo
Health Bureau	Sanitation Engineer, Disease prevention /Health Promotion	Mr. Male Mate
Women and Youth Bureau	Women and Youth	Mr. Firew Bekele

2) Office space for Japanese Experts

Ethiopian side has provided office space for Japanese experts in MoWIE office in Addis Ababa and WRB office in Hawassa. Although the office space has been provided in EWTI compound in Addis Ababa, it has been closed.

2-2. Accomplishment of Activities

Overall, most of the activities of the Project have been carried out as scheduled. However there are several modification of schedule and delays in the activities such as TOT for RP manufacturing and installation, revision of PDM based on the result of baseline survey and promotional activities and subsequent activities of RPs in Damot Pulasa Woreda (3 Kebeles).

Regarding to the implementation of TOT, it has been postponed since the field test of RPs required more time to develop better model. TOT was rescheduled to be carried out in the next half of the project since it is considered to become more effective utilizing the experiences from the process of development and improvement of RPs. The revision of PDM has not been completed as scheduled due to the delay in the finalization of the baseline survey as well as continuous postponement of the JCC meeting. The revision of PDM has been discussed at the time of Mid-term review and is expected to be agreed at the following JCC. The installation of RPs in Damot Pulasa has not been undertaken yet because the demands for it have remained low from the time of baseline survey. The Project pays regard to the Woreda's initiative on demand creation of RPs and continues effort to convince the Woreda officers and community in the area. On the other hand, other activities, such as training for Safe Water Chain, Manufacturers of Rope Pumps and Micro Credit Scheme have been implemented as scheduled in all Woreda including Damot Pulasa.

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2-3. Achievement of Outputs

The team conducted survey and evaluated the achievement level of outputs based on the PDM ver1.1. However some numerical targets have not been fixed at the time of Mid-term review since the authorization of the result of baseline survey among stakeholders which is needed for determination of it required time more than expected.

Output 1	Specifications of RPs for drinking water and installation technologies are standardized at the national level.

It is difficult to measure achievement of Output 1 since the numerical targets have not been fixed at the time of Mid-term review. On the other hand, the application of standardization of RP parts is in the finalizing process though related activities has been slightly delayed because the development of new RPs required several times of trial and error.

Indicator 1.1:
"__kinds of developed RPs for drinking purpose are practically used and commercialized by the year of 2016."

The achievement of the indicator cannot be measured since the numerical target has not been fixed. Up to date, 2 models of developed RPs are expected to be practically used by the end of 2016.

The Project has conducted surveys to confirm the situation of existing RPs and RP users. Based on the result of it, 4 new models of RPs were developed and a comparative test was done together with the existing 2 JICA RP models (bearing and bushing) in the 1st year of the project. 2 models were selected from these 6 new models as the promotional model. The drawing of the models are about to be finalized at the time of Mid-Term review.

Indicator 1.2:
"More than 1 application for standardization of the specifications of RPs for drinking water is submitted to ESA, which may include construction technology for RPs well, and protection methods from the contamination for traditional hand dug well."

The indicator is likely to be achieved in 2015. Since all necessary application documents are ready to submit to ESA. The items for minimum standard of RP parts were discussed and agreed in the workshop for the specification of RPs and quality control was held in collaboration with main counterparts such as MoWIE and WRB SNPPR. The drawing works for specifications of RPs are under the operation on the basis of the standards of improved RP models. At the time of

the Mid-term review, the project is collecting information about application of standardization. In addition, the project recommend the pipes and fitting with ISO standards considering accessibility in the market, price and compatibility.

Indicator 1.3:
"Manuals for manufacturing, installation and O&M are completed for all the RPs for drinking water, practically used and commercialized."

The indicator is likely to be achieved during the project period. The operation manuals for RP production, installation, operation and maintenance are under the formulation at the time of Mid-term review and it is supposed to be finalized by April 2015.

Indicator 1.4:
"More than __number of developed and improved RPs for drinking water is manufactured by the year of 2016."

The achievement of the indicator cannot be measured since the numerical target has not been fixed. Up to date, 80 units of RPs were manufactured and 120 units of RPs are planned to be manufactured out of the planned 200 units of RPs.

Indicator 1.5:
"Stakeholders concerned are satisfied with the developed and improved RPs in terms of such as durability, safety, functionality, compatibility, cost effectiveness, design, easiness of installation and O&M, protection of contamination, etc."

It is difficult to judge the achievement of the indicator at the time of Mid-term review since the developed and improved RPs have not widely used yet in the target area. The indicator will be measured in the remaining term of the project by a survey for all users who installed RPs.

Output 2	Strategies are formulated for manufacturing and installation technologies of RPs for drinking water.

Output 2 is likely to be achieved during the project period. Operation and maintenance strategies for manufacturing and installation technologies of RPs for drinking water have been considered in the working group which consists of MoWIE and related organization of SNNPR and supposed to be formulated by April 2015.

Indicator 2.1

"Documentation for the quality control (QC), such as operational structure, O&M, supply chain of spare parts, etc. is completed for manufacturing and installation of drinking water RPs by the year ___."

The indicator is likely to be achieved during the project period though the due year of this output has not been fixed yet. The quality control strategy has been considered in the working group and workshops for RP standardization was held on May 16, 2014. The roles of stakeholders have discussed and documentation for the quality control is assumed to be developed through the workshop.

Indicator 2.2

"Workshops for diffusing knowledge of QC strategy are held __times by the year ___."

The achievement of the indicator cannot be measured since the numerical target has not been fixed. Quality control strategy and role of each actor is discussed in the RP standardization work shop and the workshop was held twice, in August 2013 and May 2014. The number of participant was about 20 each time. The workshop is planned to be held twice a year in the remaining term of the project.

Indicator 2.3

"TOT for manufacturing and installation of RPs are held __ times, and __ numbers of trainers are trained."

The achievement of the indicator cannot be measured since the numerical target has not been fixed. TOT for manufacturing and installation of RPs is held once, and 17 numbers of trainers were trained. These trainees will be trained on manufacturing of RPs in March 2015. The trainings carried out and the number of trained trainers is as shown in table 2.

Table 2. TOT for installation of RPs

Title	Participants	Instructor	Place	Duration
TOT for installation of RPs	12 (2 lecturers each from 6 TVETCs), 4 (Candidates of lecturer from private sector), 1 (Regional Water Resource Bureau)	Project RP Specialist	Hawassa Dale	November 17-29, 2014

Source: Project documents

Indicator 2.4
Training for the RPs manufacturers and artisans for installation are held __times and __numbers of manufacturers and artisans are trained.

The achievement of the indicator cannot be measured since the numerical target has not been fixed. The trainings were carried out and the number of trained trainers is as shown in table 3.

Table 3. Training for the RPs manufacturers and artisans

Title	Participants	Instructor	Place	Duration
OJT through production of 80 RPs	4 (Existing RP manufacturers)	Project RP Specialist	Hawassa, Wolaita Sodo, Arba Minch	March – April, 2014
Training on well cover production	1 (Existing RP manufacture), 2 (potential local manufacturers)	Project RP Specialist,	Hawassa, Butajira	April 29-30, May 25-27, 2014
Training on reducer production	5 (Village Technicians of Meskan) , 6 (Village Technicians of Yirgachefe)	Project RP Specialist,	Meskan Yirgachefe	May 1-2, June 12-13, 2014
RP installation training	17 (11 Village Technicians and 6 Woreda Water Officers)	Project RP Specialist	Meskan Yirgachefe	June 17- July 3, 2014
RP installation and O&M training	18 (6 Village technicians and 2 Woreda Water Officers of Dale, 6 Village technicians and 2 Woreda Water Officers of Yirgachefe, 2 Woreda Water Officers of Damot Pulasa)	Project RP Specialist and 3 Trainers trained by TOT	Dale and Yirgachefe	December 15-27, 2014
Advance course for RP manufacture	6 RP local manufacturers	Private RP specialist	Hawassa	February 9 - 21, 2015

Source: Project documents

Output 3	Rural livelihood, and sanitation and hygiene are improved through dissemination and marketing systems of RPs for drinking water in the target areas.

Output 3 is likely to be achieved during the project period. Through the promotional activity, the roles of each stakeholder and utilization method of RP technology in the target areas have been identified and the information is reflected to the dissemination activates of the Project. At this time, it is observed some RPs users put in practice the small-scale irrigation by RP and HHWT for drinking water. Besides, most of users are instructed about repayment plan of micro credit scheme. Even though the number of RP installed in the Project at this time is not a large number to compare with the number of the households in the target areas, the people have been increasingly attracted by RP technologies as they have physically observed the improvement made on the neighbor's life through RPs. Therefore, it is expected that the number of the people who apply for purchasing of RPs is increasing in the remaining term of the Project.

In addition, it is considered that one of the significant achievements in the first half of the project is the operationalization of the micro credit scheme for RPs dissemination with OMO Micro Finance Institute. That scheme can be utilized by other donors or governmental agencies for their dissemination of RPs through self-supply.

Indicator 3.1

"Implementation plans are formulated in all target Woredas by the ___ quarter of the year____."

The indicator has already been achieved by the end of 2014. As the activities related to the indicator, a project kick off meeting was held and around 50 participants from different offices; such as Water resource, Health, Education and Agriculture sector and other sector offices at Regional, Zone and Woreda participated . Potential of RP dissemination was analysed for each Woreda in the meeting. Also workshops for the formulation of implementation plan were held in June 2014. Implementation plan for RPs dissemination was formulated in Meskan Woreda under the cooperative assistance with IRC and Implementation plans for RP dissemination were formulated in Dale Woreda, Yirgachefe Woreda and Damot Pulasa Woreda through the workshop organized by the Project.

Indicator 3.2

"Promotional activities are carried out by Woreda Water, Mine and Energy Offices, and other sector office, such as health, for __households in the target areas."

The achievement of the indicator cannot be measured since the numerical target has not been fixed. The number of households which are targeted for promotional activity cannot be

count. For the first step of promotion of RPs, RP sensitization meeting was held as shown in table 4. Orientation session was held in Meskan Woreda in 24 to 25 April 2014 and the promotional activities have been started in each Woreda by the local consultant in collaboration with Water office, Health office, Agriculture office, OMFI and the Project in each Woreda. Through the several times of community meeting organized by this collaboration, more than 500 community people participated in the meeting for sensitization of RP with Self Supply. RPs for demonstration were installed in a health post in Bera Tedicho Kebele in Dalle Woreda and a health post in Chito Kebele in Yirgachefe Woreda.

Table4. RP sensitization meeting

Woreda	Date	Participants (Woreda level)	Participants (Kebele level)
Damot Pulasa	January 16-17, 2014	Woreda: Administration, Water, Health, Agriculture, Education, Women and Children Affairs Offices, OMO-MFI Branch and Sub-Branch Offices Kebele: Administration Office, Health Extension Workers, Development Agents, Credit Agents of OMO-MFI WRB/SNNPR, Zonal Water Offices	Inhabitants in the project target areas
Meskan	February 12-13, 2014		
Dale	February 19-21, 2014		
Yirgacheffe	February 26-27, 2014		

Source: Project documents

Indicator 3.3
"More than __ RPs for drinking water are installed."

The achievement of the indicator cannot be measured since the numerical target has not been fixed. In the implementation plan of the project, the planned target of installed RP until the end of 2016 is set as 200 and the project carries out the activities toward the target. 52 RPs were installed as of the end of December 2014. The number of installed RPs is behind the planned target at this time, though the people have been increasingly attracted by the RP technology as they physically observe the RPs in their Kebele.

Indicator 3.4
"More than __ households purchase RPs by utilizing micro-finance schemes."

The achievement of the indicator cannot be measured since the numerical target has not been fixed. Up to date, 52 RPs were purchased by utilizing micro finance schemes in the project.

As to the 200 RPs plans to be manufactured in the project are supposed to be purchased by utilizing micro finance schemes.

Indicator 3.5 "More than __% of micro-finance borrowers pay-off the loan within the terms of repayment."

The indicator is not appropriate to judge the achievement of the output. The repayment in the micro finance scheme has not started yet and the data is not available at this time. OMFI has assigned area agent in each Kebele and the agent follows up the creditor by the house to house visit base. The system has been working properly for other micro finance scheme and it shows OMFI has capacity to collect the loan from borrowers by their own system.

Indicator 3.6 "More than __% of the constructed/improved RP wells fulfill the minimum standard, in line with the standard set as Output 1."
Indicator 3.7 "More than __% of the constructed/improved RP wells are functional."
Indicator 3.10 "More than __% of the RP wells are found improved with certain sanitary and hygienic measures by the users."
Indicator 3.12 "Water contamination is reduced at more than __% of the RP wells supported by the Project."

The data to evaluate achievement of the indicator 3.6, 3.7, 3.10 and 3.12 are not available at this time because the installation of planned number of RPs has not been completed. The information should be collected at the end of the project.

Indicator 3.8 "The number of days required for the repair of RPs, and spare parts supply are within (# of days) and (# of days) respectively."

It is difficult to collect the data for the indicator because there is no concrete information measuring the down time of the RPs. The indicator should be reconsidered.

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Indicator 3.9
"More than __ households practice micro-irrigation by utilizing household-type RPs."

It is difficult to judge the prospect of the achievement of the indicator because the numerical target for the indicator has not been fixed. The practice of micro-irrigation are introduced by Woreda Agriculture office in the target areas since the multiple use of the RPs has been encouraged for income generation in order to reinforce their repayment of the micro credit loan. To assist their activities, the Project provided agriculture training once in Yirgachefe Woreda .

Indicator 3.11
"Water quality monitoring is carried out at more than __% of RP wells supported by the Project."

Water quality monitoring has been done at all the RP wells supported by the Project though the numerical target for the indicator has not been fixed.

Indicator 3.13
"The experiences and lessons from the activities for Output 3 are well-reflected to the Regional strategies."

It is difficult to judge the achievement of the indicator 3.13 at this time. The data or information is under the process of compiling. In the next half of the Project, the Project will compile their experience and reflect them in the dissemination tools.

Output 4	Guidelines are formulated for dissemination of RPs for drinking water, and acknowledged nation-wide.

The indicator should be reconsidered. At the beginning of the Project, there was no guideline developed by the Ethiopian government. However MoWIE formulated the Self-supply Acceleration Program in February 2012 and has already developed the Self-supply Acceleration Guidelines, the experiences and lessons of the Project are to be incorporated into these Guidelines instead of creating new. Project Team started to communicate with the stakeholders concerned, including MoWIE, IRC and other partners for collaborative efforts in updating and disseminating these Guidelines.

Indicator 4.1 "(# of times) workshops are held for (# of participants) participants to acknowledge the contents of the Guidelines."
Indicator 4.2 "The workshop participants recognize the Guidelines useful."
Indicator 4.3 "The Guidelines are distributed to all Water Resources Bureaus."

It is difficult to judge the achievement of the indicator 4.1, 4.2 and 4.3 as the situation has been changed from the time when the indicators were fixed. The Project will compile their experiences and lessons learned as dissemination tools corresponding to this change.

2-4. Achievement of Project Purpose

Project Purpose	Situations of water supply, sanitation and livelihood are improved through dissemination of RPs for drinking water.

The project purpose is likely to be achieved until the end of the project by the achievement of 6 indicators. The prospects of the achievement of the project are mentioned below.

Indicator 1 "The number of households/ population served drinking water by RP wells is increased by (# of households/ population), by the year 2016."

It is difficult to judge the achievement of the indicator since the definitions of the increased number and target area are not certain. In the most cases, the water quality of RP wells does not meet the Ethiopian standard for drinking water and it is needed to conduct HHWT when utilize the water of RP for drinking. The verifiable indicator needs to be reconsidered.

Indicator 2 "The number of the installed and operating RPs for drinking water is increased by (# of RPSs), by the year 2016."

It is difficult to judge the achievement of the indicator because the definitions of increase number and target area are not certain. Therefore it is needed to fix numerical target. WRB is currently under the process to procure and distribute 10,000 RPs to Woredas through Zone. In addition to that, though the roles of each governmental agency are getting clear, improvement of coordination between private and governmental sectors is needed. The dissemination tools for

RP will be developed in the remaining years of the project, besides, the operational procedure booklet of micro credit scheme which have been already developed.

Indicator 3
"The number of rural people who want to install RPs is increased."

It is difficult to judge the achievement of the indicator because the definitions of increase number and target area are not certain.

Indicator 4
"The operational rate of RPs for drinking water is kept more than __ %."

It is difficult to judge the achievement level of the indicator since the numerical target is not fixed. The project conducts activities to support operation and maintenance of RPs in collaboration with the stakeholders including private sector. The capacity building of local resources expected to contribute to keeping the operational rate of the installed RPs. In particular, the project has held workshops for operation and maintenance of RPs which target at private sector (producers, installers of RPs) and governmental sectors. Series of training also has been provided for village technicians and government staff in the target area.

Indicator 5
"The number of households practicing multi-purpose use of RPs, e.g. for micro-irrigation, by (# of households), by the year 2016."

It is difficult to judge the achievement level of the indicator 5 since the numerical target is not fixed. Besides, indicator 5 should be removed since most of RP users have utilized traditional dug well for multi-purpose before the installation of the RPs.

Indicator 6
"The number of RPs wells with improved water supply environment is increased by (# of facilities) by the year 2016."

It is difficult to judge the achievement level of the indicator 6 since the numerical target is not fixed. Besides, indicator 6 should be removed since number of it is not available. However, the number of RPs with improved water supply environment is expected to be increase since WASH team in each target Woredas and Kebeles have conducted sensitization activities to create awareness of the users and there has been good sign for improvement of water supply environment around

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installed RPs.

2-5. Prospect of Achievement of Overall Goal

Overall Goal	Water supply and sanitation conditions and livelihood in rural areas are improved through dissemination of RPs for drinking water in the whole nation of Ethiopia.

It is pre-matured to measure the achievement of Overall Goal at this stage with following reasons.

Indicator 1
"The water supply rate is improved in the whole nation."

Indicator 1 must be achieved regardless of the project. Besides, indicator 1 should be removed since it is difficult to fix valid numerical target.

Indicator 2
"The population served drinking water by the RP wells is increased in the whole nation."

It is difficult to predict prospect of the achievement of the indicator 2. Besides, indicator 2 should be removed since baseline of it is not available.

Indicator 3
"The number of the installed RPs is increased in the whole nation."

It is difficult to predict prospect of the achievement of the indicator 3 at this time since appropriate monitoring data have not been accumulated. Besides, indicator 3 should be removed since baseline of it is not available.

Indicator 4
"The number of traditional dug wells equipped with certain technical/ mechanical measures for contamination protection is increased."

It is difficult to judge the achievement level of the indicator since the numerical target is not fixed. Indictor 4 should be removed since baseline data of it is not available. On the other hands, incidental work for contamination protection has been conducted as to the RPs installed by the

project.

Indicator 5
"The number of households practicing multi-purposes of RPs, such as micro-irrigation, is increased."

It is difficult to judge the achievement level of the indicator 5 since the numerical target is not fixed. Besides, indicator 5 should be removed since most of RP users have utilized traditional dug well for multi-purpose before the installation of the RPs.

Indicator 6
"The number of water supply facilities is increased, where the users take certain sanitary and hygiene measures to minimize contamination."

It is difficult to judge the achievement level of the indicator 6 since the numerical target is not fixed. Besides, indicator 6 should be removed since baseline data of it is not available.

2-6. Implementation Process of the Project

The Project communicates with counterparts in day to day basis since the Project offices are located in the office of MoWIE, Addis Ababa and WRB SNNPR, Hawassa. This close relationship contributes smooth implementation of the project activities. On the other hand, the limitation of involvement of counterparts (particularly Agriculture and Health Office in Woreda) due to their daily works and frequent turnovers is considered as the inhibiting factors to the implementation process of the project.

On top of the daily communication with stakeholders, SC (Steering committee) and JCC (Joint coordinating committee) were established and have been functioning effectively. To date, Steering Committee has been held 4 times and Joint coordinating Committee had been held 3 times. JCC plays a role of advisory and coordination at the national level. SC holds twice a year and have function as a coordination body at the regional level. This framework was relevant to make the project implementation smooth. The agenda of the meetings are as follows;

Table 5. Agenda on SC and JCC

	Steering Committee	Joint Coordinating Committee
1st	-Inception Report was approved -Methods and process of target area selection discussed and agreed Date :19 April, 2013	-Inception Report was approved -Decision on the methods and the process of target area selections Date :16 April, 2013
2nd	- Selection of the target Woredas was approved - Project logo, short message and nick-name were approved Date : 18 July, 2013	- Selection of the target Woredas approved - Project logo, short message and nick-name were approved Date :22 July, 2013
3rd	- Progress Report III was shared and discussed - New RP models were introduced and discussed - Plan of actions for Period 2 was approved Date :18 June, 2014)	- Progress Report III was shared and discussed - New RP models were introduced and discussed - Plan of actions for Period 2 was approved Date :23 June, 2014
4th	- Progress report of Period 1 - Plan of Period 2 was shared and discussed - Revision of PDM and schedule were shared and discussed Date :23 October, 2015	Scheduled in 19 February 2015 - Revision of PDM - Discussion about Mid-term review result

Source: Project documents

3. Evaluation by Five Criteria

3-1. Relevance: High

(1) Necessity

The Project aims at dissemination of self-supply technology in line with the Universal Access Program 2 (UAP2) which is a five-year development plan of the water and sanitation sector. The government of Ethiopia set the target of water supply coverage of 98.5% by 2015 in the UAP 2, in particular, it focuses on the rural water supply, as the average increment of the coverage rate is set about 7% annually. The project is consistent with the needs of target area as well. The Project promotes RP as a low cost technology affordable for the rural residents to purchase RP utilizing the micro-finance scheme under the concept of self-supply.

(2) Priority

The project objective is consistent with Japan's aid policy and country cooperation plan of JICA. The main pillar of Japanese Country Assistance Program for Ethiopia is food security and aiming the establishment of the system for human security. In the policy, assistance for water supply and sanitation sector is one of priority area in Ethiopia, and it is equally important as the assistance in agriculture and rural development sector.

(3) Relevance of approach

The relevance of the approach is considered as high. The dissemination of self-supply is based on the premise that the users purchase the equipment by their own funds. Under the concept, with the continuous effort of the project team, the approach of the Project is appropriate all in all. On the basis of the Self supply policy of Ethiopia, the project designed inclusive approaches which include demand creation for the RPs in the local areas, technical assistance to dissemination of RP and training and sensitization. Particularly, introduction of methodology to utilize microfinance scheme meets to the concept of the self-supply dissemination and the model can be utilized for the other self-supply program by related organizations. Standardization of RP and TOT are also considered as effective approaches to secure the sustainability for quality control of RPs.

3-2. Effectiveness: Relatively High

(1) Achievement level of Project Purpose

It is difficult to evaluate the achievement of Project Purpose properly as numerical targets have not been fixed yet. Based on the proposed PDM Ver2.1, the project purpose is likely to be achieved until the end of the project since promotion, demand creation and capacity development for dissemination of RPs in the target areas have been strengthened.

(2) Causal Relations

The amendment of PDM ver1.1 is suggested in the Mid-term review, since the causal relations in the version is not appropriate. Moreover Output3 "Rural livelihood, and sanitation and hygiene are improved through dissemination and marketing systems of RPs for drinking water in the target areas." has similar meaning with project purpose and output 4 has already implemented by the government of Ethiopia. Therefore not only indicator but also whole structure of the PDM should be reconsidered.

3-3. Efficiency: Moderate

(1) Achievement of output

Most inputs that are necessary for the implementation of activities have been allocated as planned and converted into outputs. Output 1 and 2 have been achieved as scheduled level at the time of Mid-term review. Regarding to output 1, the application of standardization of RP is in the finalizing process as scheduled. The strategy for manufacturing and installation is on the process to formulate in the activities related to output 2. Trainings for capacity development have been carried out efficiently cooperating with related organization such as TVET, IRC, WHO and MIDI.

As to output 3, the number of installed RPs (52) have not reached even the target number of 1st year of the project since the RPs were not known well by the people and part of applicants canceled to purchase it at the beginning of the project though promotional activates has been conducted as scheduled. However the number of installed RPs is prospected to reach scheduled number as demands for RPs have been increased along with the dissemination of RPs. It is difficult to evaluate the achievement of Output 4 as the Guideline has been already developed by MoWIE though the project has partially contributed to formulate the guideline. To respond the situation, the project has been compiling their experiences and lessons learned as dissemination tools.

(2) Appropriateness of Inputs

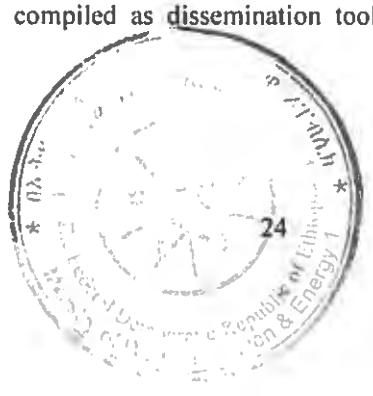
Japanese experts dispatched appropriately as planned. Regarding to the input of facilities and equipment such as PC, Printer, Projector, Generator, water quality test kit and other office equipment are provided in timely manner. These inputs contribute smooth operation of the Project. As to the input from Ethiopia, assignment of counterparts and provision of office space and other inputs were mostly implemented.

(3) Cost

No incompatible cost of input to Outputs is observed up to date.

3-4. Impact (Prospect): Immeasurable at this time

It is difficult to measure the impact of the Project at this time because some activities are on the way to be implemented. There is limitation on achieving of Overall Goal in other Regions as it is difficult to strengthen implementation system of them though the experiences and lessons learned of the project compiled as dissemination tools have significant implication to the nationwide.



3-5. Sustainability: Moderate

(1) Policy, Institutional Aspect

Priority of low cost technologies for water supply in UAP is expected to be continued after 2015 though the government of Ethiopia is under the process of formulating GTP2. The priority of self-supply in One-WaSH national program is also expected to be continued.

(2) Organizational and financial Aspect

As to sustainability regarding to Overall Goal, there remain some difficulties on organizational and financial aspect in Woreda. The major challenges are as follows.

- It might be difficult to enhance skills and experiences of Woreda technicians to properly capacitate village technicians in short term through only trainings conducted outside the project by WRB.
- The budget and means of transportation in Woreda office might not be enough to utilize transferred skills by themselves.

As to the budget for the training courses, TVET agreed to add RP technology program into regular curriculum in the MOU among TVET, WRB and the project. Therefore the budget for the course is likely to be secured. Regarding to the micro credit scheme, OMFI has shown willingness to continue the micro credit scheme for RPs utilizing funds collected form repayment of RPs which originally provided by the Project

(3) Technical Aspect

The Project has assisted tendering for the ongoing procurement of RPs and will continue assistance for inspection of them utilizing technical experiences. These assistances have been appreciated by WRB and will contribute to enhance the sustainability in technical aspect.

3-6. Contributing and inhibiting factors

(1) Ongoing procurement of RPs by WRB

The Ongoing procurement of 10,000 RPs by WRB has significant impact as follows.

- Contribution: Accelerate the dissemination of RPs.
  Facilitate expansion of market for materials and parts.
  Create business opportunity for installer.
- Inhabitation: Restrict with the occasion for small and middle manufacturers which are expected to do main role in self-supply with large-scale order.
  Affects to users' recognition for RP quality

(2) Requests on short notice from WRB and MoWIE

It is noted that there were various occasions that the project received requests for support

towards the ongoing and new plans of self-supply acceleration program by the WRB and MoWIE. The project attempted to accommodate most of the requests within their limited resources.

(3) Distribution of RPs by related organizations

The project has received some complaints as to the price of RPs since NGO has distributed RPs with 50% subsidies on Meskan Woreda.

Distribution of RPs freely by NGO in Damot Pulasa might have negative impact on dissemination of RPs through self-supply.

Agriculture Bureau, SNNPR has plan for procurement of RPs. It will have significant impact on dissemination of RPs once the plan implemented though self-supply though the plan has been postponed up to date.

(4) Daily allowances and accommodations for counterparts and necessary personals

Complaints caused by differences regarding to daily allowances and accommodations among the related organizations have discouraged the participation of counterparts and necessary personals.

3-7. Conclusions

In the first half of the project period, with a strong ownership of the WAS-RoPSS by the Government of Ethiopia and a good collaboration between WRB SNNPR and the Project team, the Project has been successfully conducted in general.

From the perspective of the five evaluation criteria, the relevance of the Project is assessed as high since the improvement of the situation of water supply, sanitation and livelihood is one of the high priorities for the Government of Ethiopia and the Project's approach is also in line with the national strategy, which promote the self-supply with increased participation and empowerment of the local resources in the operation under the One WASH national program. The effectiveness of the Project is assessed as relatively high. It is prospected that the project purpose to be achieved by the end of the project period and is expected judging from the prospect of achievement of the four project outputs. The efficiency of the Project is assessed as Moderate. Most inputs that are necessary for the implementation of activities have been allocated as planned and converted into outputs. It is premature to assess the Project's impact in improvement of the water supply and sanitation condition and livelihood in rural area through dissemination of RPs in the whole Nation at the time of the Mid-term Review since appropriate monitoring data have not been accumulated. The Sustainability of the Project is deemed as Moderate as well at the time of the Mid-term Review. For further improvement of the Project, the Mid-term Review Team recommends the measures presented in "3-8. Recommendations"

3-8. Recommendations

(1) Support to the ongoing procurement of RPs by WRB

Though WRB is going to disseminate 10,000 RPs in order to increase the water supply coverage, there are some difficulties not only in planning but also related capacity development at the moment. Since main target of the project is dissemination of RPs, the project should support their plan utilizing the experiences and lessons learned as possible. The supporting measures which were considered through Mid-Term Review are as follows.

- Procurement : Continue to advice from technical aspect
- Promotion activities : Support to formulate a promotion plan through sharing the experiences and lessons learned which are compiled as Dissemination Hand Book.
- Capacity development for installation of RPs : Support some part of trainings which are carried out by Woreda technicians to area technicians through utilizing TVET trainers who are trained in the project.

(2) Water Quality of RPs

According to the result of water quality test on RPs which were installed in the project, the team found it difficult to meet all standards for drinking water as far as utilizing traditional dug wells at the moment, though it was shown that water quality was improved to some extent with physical improvement of RP wells including incidental work.

Considering the difficulties on protection of traditional dug wells from contamination which comes from surface, the project needs to put emphasis on hygiene education including household water treatments which are needed to utilize water of RPs as drinking water.

For the reason stated above, it is needed for the project to emphasize the water quality of RPs and necessity of hygiene activities in the promotion of RPs though the project has already taken care of it.

(3) Way of Hygiene Education Activities

Some measures of household water treatment could compete with dissemination of RPs according to the way of hygiene education especially in promotion stage. There are some rooms to strengthen the current way of hygiene education associated with RP promotion, though related organizations (ex. Regional Health Bureau, Woreda Health Office, Health Extension Workers) have enough knowledge and have carried out hygiene education.

Therefore the project needs to strengthen the current method of hygiene education associated with RP promotion based on the experiences of the project and compile it as dissemination tools.

(4) Improvement of small scale agriculture with utilizing RPs

The project needs to put on emphasis to compile good practice of small scale agriculture with utilizing of RPs as dissemination tools based on the experiences of the project in consultation with other related organizations as agriculture extension workers have basic knowledge and have provided guidance by themselves.

(5) Importance of Operation and Maintenance

The project needs to compile method for operation and maintenance of RPs as part of dissemination tools as soon as possible since the project have come into the stage of dissemination after trial of improvement of RPs. It can also correspond to the demands for operation and maintenance of RPs which are expected to be increased rapidly according to the ongoing procurement of RPs by WRB.

(6) Coordination among related organizations

Ethiopian side needs to take necessary coordination among related organizations in order to prevent negative impact to dissemination of RPs through self-supply considering the facts stated below.

- Dissemination of RPs through self-supply could be hindered by activities of related organizations such as distribution of it freely or with subsidies and the ongoing procurement could have significant impact on it.
- Complaints caused by differences regarding to daily allowances and accommodations among the related organizations have discouraged the participation of counterparts and necessary personals.

(7) Amendment of PDM

Amendment of PDM is needed to implement project smoothly and effectively according to the result of the Mid-term review. Major points of amendment are as follows.

- Clarification of each target and activity
- Fixing of numerical indicators

3-9. Lessons learned

Fixing indicators in the early stage of the project

Fixing of the indicators should be done as soon as possible based on the result of baseline survey as there were some difficulties to evaluate progress of the project and consider the improvements of it without appropriate indicators. On one hand some of the indicators of PDM ver1.1 were not appropriate, on the other hand some indicators have not been fixed yet at the time of Mid-term review.

time of Mid-term review.

(ANNEXES)

ANNEX 1: PDM Ver.1.1

ANNEX 2: PO Ver1.1

ANNEX 3: Schedule of the Mid-term review

ANNEX 4: Evaluation Grid

ANNEX 5: List of Inputs

ANNEX 6: List of Interviewees

ANNEX 7: PDM Ver.2.1

Project Design Matrix: PDM
Project Name: The Project for Rural Water Supply, Sanitation and Livelihood Improvement through Dissemination of Rope Pumps (RPs) for Drinking Water
Duration: October 2012 - September 2016 (4 Years)
Implementing Agency: Water Supply and Sanitation Directorate, Ministry of Water and Energy (MOWE), Water Resources Bureau of SNNPR
Direct Target Group: Ministry of Water and Energy (MOWE), Water Resources Bureau of SNNPR, Woreda Water, Mine and Energy Offices at the target areas, Private service providers concerned with RPs
Indirect Target Group: Users of RPs (for drinking water) (people of the target areas)

Version 1.1: July 20, 2012

Narrative Summary	Verifiable Indicator	Means of Verification	Assumptions
【Overall Goal】 Water supply and sanitation conditions and livelihood in rural areas are improved through dissemination of RPs for drinking water in the whole nation of Ethiopia.	As of the year 2018-2020, in three (3) to five (5) years after the termination of the Project: 1. The water supply rate is improved in the whole nation. 2. The population served drinking water by the RP wells is increased in the whole nation. 3. The number of the installed RPs is increased in the whole nation. 4. The number of traditional dug wells equipped with certain technical/ mechanical measures for contamination protection is increased. 5. The number of households practicing multi-purposes of RPs, such as micro-irrigation, is increased. 6. The number of water supply facilities is increased, where the users take certain sanitary and hygiene measures to minimize contamination.	• Data/information on water supply and sanitation facilities and served population of MOWE (Federal, Regional, Woreda) (sample surveys)	
【Project Purpose】 Situations of water supply, sanitation and livelihood are improved through dissemination of RPs for drinking water.	1. The number of households/ population served drinking water by RP wells is increased by (# of households/ population), by the year 2016. 2. The number of the installed and operating RPs for drinking water is increased by (# of RPSs), by the year 2016. 3. The number of rural people who want to install RPs is increased. 4. The operational rate of RPs for drinking water is kept more than __ %. 5. The number of households practicing multi-purpose use of RPs, e.g. for micro-irrigation, by (# of households), by the year 2016. 6. The number of RPs wells with improved water supply environment is increased by (# of facilities) by the year 2016.	• Various reports of the Project • Data/records of Woreda Water, Mine and Energy Offices • Monitoring survey of RP well • Record and interview survey results of Woreda Agricultural Offices, Development Agents (DA) • Record and interview survey results of Woreda Health Offices, Health Extension Workers (HEW)	
【Outputs】 1. Specifications of RPs for drinking water and installation technologies are standardized at the national level.	1.1 __kinds of developed RPs for drinking purpose are practically used and commercialized by the year of 2016. 1.2 More than 1 application for standardization of the specifications of RPs for drinking water is submitted to ESA, which may include construction technology for RPs well, and protection methods from the contamination for traditional hand dug well. 1.3 Manuals for manufacturing, installation and O&M are completed for all the RPs for drinking water, practically used and commercialized. 1.4 More than __number of developed and improved RPs for drinking water is manufactured by the year of 2016. 1.5 Stakeholders concerned are satisfied with the developed and improved RPs in terms of such as durability, safety, functionality, compatibility, cost effectiveness, design, easiness of installation and O&M, protection of contamination, etc..	• Documents on standardization certificate • Standardization certificate • Various reports of the Project • Operation manuals • Surveys on the satisfaction level of manufacturers, installers and users of RPs	
2. Strategies are formulated for manufacturing and installation technologies of RPs for drinking water.	2.1 Documentation for the quality control (QC), such as operational structure, O&M, supply chain of spare parts, etc. is completed for manufacturing and installation of drinking water RPs by the year ___. 2.2 Workshops for diffusing knowledge of QC strategy are held __times by the year ___. 2.3 TOT for manufacturing and installation of RPs are held __times, and __ numbers of trainers are trained. 2.4 Training for the RPs manufacturers and	• Documents on management and supervision on RPs for drinking water and installation • Strategy documents for RPs promotion for the use of individual household • Strategy documents on establishment of spare-parts supply chain • Various reports of the Project	

3. Rural livelihood, and sanitation and hygiene are improved through dissemination and marketing systems of RPs for drinking water in the target areas.	artisans for installation are held __times and ___ numbers of manufacturers and artisans are trained. 3.1 Implementation plans are formulated in all target woredas by the ___ quarter of the year____. 3.2 Promotional activities are carried out by Woreda Water, Mine and Energy Offices, and other sector office, such as health, for __households in the target areas. 3.3 More than __ RPs for drinking water are installed. 3.4 More than __ households purchase RPs by utilizing micro-finance schemes. 3.5 More than __% of micro-finance borrowers pay-off the loan within the terms of repayment. 3.6 More than __% of the constructed/improved RP wells fulfill the minimum standard, in line with the standard set as Output 1. 3.7 More than __% of the constructed/improved RP wells are functional. 3.8 The number of days required for the repair of RPs, and spare parts supply are within (# of days) and (# of days) respectively. 3.9 More than __ households practice micro-irrigation by utilizing household-type RPs. 3.10 More than __% of the RP wells are found improved with certain sanitary and hygienic measures by the users. 3.11 Water quality monitoring is carried out at more than __% of RP wells supported by the Project. 3.12 Water contamination is reduced at more than __% of the RP wells supported by the Project. 3.13 The experiences and lessons from the activities for Output 3 are well-reflected to the Regional strategies.	• Implementation plans at the target woredas/areas • Various reports of the Project • Data/records of water supply facilities at Woreda Water Office • Data/records of micro-finance institutions • Monitoring record of RPs well • Interview surveys of the users • Strategies of RPs dissemination and marketing at the regional level	
4. Guidelines are formulated for dissemination of RPs for drinking water, and acknowledged nation-wide.	4.1 (# of times) workshops are held for (# of participants) participants to acknowledge the contents of the Guidelines. 4.2 The workshop participants recognize the Guidelines useful. 4.3 The Guidelines are distributed to all Water Resources Bureaus.	• Questionnaire/interview survey of the participants of dissemination workshops • Record of the workshops held • Record on distribution of the Guidelines	

【Activities】

1.1 Various types of RPs are developed and improved to meet different needs, and tested. (*1)
- 1.1.1 RPs, which are currently utilized, are surveyed and listed.
- 1.1.2 Each part of existing RPs are improved
- 1.1.3 The existing and developed RPs are tested in terms of such as durability, safety, functionality, compatibility, cost effectiveness, design, easiness of installation and O&M, protection of contamination.
- 1.1.4 Low-cost designs of structure for well head of traditional dug well and concrete-slab are tested, and proposed in order to minimize contamination.
- 1.1.5 Low-cost drilling and construction technologies of dug well are tested and proposed for community water supply.

1.2 Specifications of RPs and its installation technologies are standardized.
- 1.2.1 Specifications for RPs for drinking water are examined among the stakeholders concerned.
- 1.2.2 Approval processes of the specifications made in 1.2.1 are facilitated with MOWE.
- 1.2.3 Necessary procedures are taken for standardization by ESA.

1.3 Operational manuals are formulated for manufacturing, installation and O & M of RPs, as standardized above 1.2.

2.1 Quality control systems on manufacturing and installing RPs are proposed.
- 2.1.1 Responsibilities of the stakeholders are clarified on quality control systems of RPs for drinking water.
- 2.1.2 Certification systems for manufactures are proposed.
- 2.1.3 The possibility of organizing a certain type of association is explored for self-help among the private manufactures, installers and O&M providers.

2.2 O&M strategies are formulated for the household RPs.

2.3 Supply chain strategies are formulated for spare parts distribution.

2.4 TOT is carried out for TVETC instructors on manufacturing and installation of RPs (e.g., at EWTEC).

2.5 Training is carried out for manufactures and installers for RPs (e.g., at TVETC).

3.1 Regional strategies of accelerating RP use are formulated based on the findings from the needs assessment.

【Inputs】

1. The Japanese side:
1) Experts
- i. Chief Advisor/dissemination strategy
- ii. Mechanical engineering/ mechanical design
- iii. Drilling technologies
- iv. Dissemination
- v. Agriculture
- vi. Micro-finance/improvement of rural livelihood
- vii. Sanitation and hygiene
- viii. Other necessary fields

2) Equipment
3) Training in Japan, third countries and in Ethiopia
4) Cost for operation

2. The Ethiopian side:
1) Counterpart personnel
2) Equipment
3) Facilities (office space)
4) Cost for operation

3.1.1 Existing water supply facilities are surveyed and listed. 3.1.2 Regional strategies of accelerating RP use are drafted based on the analysis of economic status, livelihood, and access to drinking water in rural areas in line with "the National Guidelines for Self-Supply in Ethiopia." 3.1.3 Implementation plan and manuals are formulated, including responsibilities among the stakeholders for dissemination and distribution of RPs, livelihood and sanitation improvement, and necessary procedures based on the above regional strategies. 3.2 Target woredas/areas are selected for accelerating RP use and O&M. 3.2.1 Woredas/areas are categorized base on the above strategies. 3.2.2 Target woredas/areas are selected together with the regional RP Team based on the above categorization and proposed it to JCC for approval. 3.3 Implementation plans are formulated together with the target Woreda Water, Mine and Energy Offices based on the analysis on demand/supply, and available resources. (*2) 3.3.1 Necessary information is collected and analyzed. 3.3.2 Incentives (e.g., introduction of cash crops) for target groups/areas are identified. 3.3.3 Formulation of implementation plans of Woreda Water, Mine and Energy Offices is supported for rural water supply based on the collected/reviewed information. 3.4 Micro-finance is introduced for RP purchase by users. 3.4.1 Appropriate micro-finance scheme is identified, and MOU is signed by the micro-finance institution at the regional level. 3.4.2 Workshops are held to introduce the identified scheme to the personnel of micro-finance institutions at the target woredas. 3.4.3 Micro-finance institutions, households and communities are supported and monitored for implementation of micro-finance schemes. 3.5 RP promotion is carried out by Woreda Water, Mine and Energy Offices. 3.5.1 Workshops are held at the selected target woredas for introduction of improved shallow wells, RPs and options for financial arrangement. 3.5.2 Necessary grouping of households is supported for financing and installation of RPs in line with the woreda's implementation plan. 3.5.3 Individual and group-led households are supported when applying micro-finance, public subsidy and technical support in line with the woreda's implementation plan. 3.6 Individual and group-led households are supported in installation of RPs for drinking water in a self-supply manner. 3.6.1 Installers are supported in improvement of hand-dug wells (including cleaning and chlorination). 3.6.2 Local artisans are supported in construction of wells and installation of RPs. 3.7 O&M systems are established for individual and group-led households. (*3) 3.7.1 Necessary personnel and organizations for O&M are strengthened at a community level 3.7.2 Test operation of a spare-parts supply chain, which is prepared above 2.3, is carried out. 3.8 Livelihood improvement activities are supported (e.g. income generation, micro-scale irrigation). 3.9 Sanitation and hygiene activities are supported (e.g. regular water quality monitoring, workshops on sanitation and hygiene practices). 3.10 Regional strategies are finalized for accelerating use of RPs reflecting the results of 3.2-3.9. 4.1 Experiences and lessons learned are compiled from activities for Outputs 1-3. 4.2 Guidelines are formulated for rural water supply and livelihood improvement through dissemination of RPs based on the result of 4.1, and workshops are held to be acknowledged nationwide. 4.3 Some site(s) in other regions(s) is (are) selected for demonstration activities.		--- 【Pre-conditions】

Abbreviation: ESA: Ethiopian Standard Authority, EWTEC: Ethiopian Water Technology Center, MOU: Memorandums of Understanding, O&M: Operations and Maintenance, SNNPR: Southern Nations, Nationalities and People's Region, TOT: Training of Trainers, TVETC: Technical, Vocational and Educational Training College,

Note *1: There are various types of RPs, such as individual household or community water supply, irrigation various scales.
1.1.2 Parts: wheel, wheel cover, bearing, counter rotation device, rope etc.
1.1.5 Drilling and construction technologies: hand dug well, tube well

Note *2: Following items are included in the Woreda implementation plan, such as RP promotion activities, target numbers of installation, securing financial resources (procedures on subsidy/micro-finance), purchase and installation of RPs, sanitation and hygiene activities, and a support for income generation activities.

Note *3: Not eligible for subsidies for installation and construction of "Self-Supply water facilities", such as a well used by less than 10 households, and a well at individual households

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Annex 2

Plan of Operation (PO) :

The Project for Rural Water Supply, Sanitation and Livelihood Improvement through Dissemination of Rope Pumps (RPs) for Drinking Water

Western Calendar Year		2012	2013				2014				2015				2016			
Activities			1st Year				2nd Year				3rd year				4th Year			
			1/4	2/4	3/4	4/4	1/4	2/4	3/4	4/4	1/4	2/4	3/4	4/4	1/4	2/4	3/4	4/4
Output 1: Specifications of RP for drinking water and installation technologies are standardized at the federal level.																		
1.1	Various types of RP are developed and improved to meet different needs, and tested.																	
1.2	Specifications of RP and its installation technologies are standardized.																	
1.3	Operational manuals are formulated for manufacturing, installation and O & M of RP, as standardized above 1.2.																	
Output 2: Strategies are formulated for manufacturing and installation technologies of RP for drinking water																		
2.1	Quality control systems on manufacturing and installing RP are proposed.																	
2.2	O&M strategies are formulated for the household RP.																	
2.3	Supply chain strategies are formulated for spare parts distribution.																	
2.4	TOT is carried out for TVETC instructors on manufacturing and installation of RP (e.g., at EWTEC).																	
2.5	Training is carried out for manufactures and installers for RP (e.g., at TVETC).																	
Output 3: Rural livelihood, and sanitation and hygiene are improved through dissemination and marketing systems of RP for drinking water in the target areas.																		
3.1	Regional strategies of accelerating RP use are formulated based on the findings from the needs assessment.																	
3.2	Target woreda/areas are selected for accelerating RP use and O&M.																	
3.3	Implementation plans are formulated together with the target Woreda Water Offices based on the analysis on demand/supply, and available resources.																	
3.4	Micro-finance is introduced for RP purchase by users.																	
3.5	RP promotion is carried out by Woreda Water Offices.																	
3.6	Individual and group-led households are supported in installation of RP for drinking water in a self-supply manner.																	
3.7	O&M systems are established for individual and group-led households.																	
3.8	Livelihood improvement activities are supported (e.g., income generation, micro-scale irrigation).																	
3.9	Sanitation and hygiene activities are supported (e.g., regular water quality monitoring, workshops on sanitation and hygiene practices).																	
3.10	Regional strategies are finalized for accelerating use of RP reflecting the results of 3.2-3.9.																	
Output 4: Guidelines are formulated for dissemination of RP for drinking water, and acknowledged nation-wide.																		
4.1	Experiences and lessons learned are compiled from activities for Outputs 1-3.																	
4.2	Guidelines are formulated for rural water supply and livelihood improvement through dissemination of RP based on the result of 4.1, and workshops are held to be acknowledged nationwide.																	
4.3	Some site(s) in other regions(s) is (are) selected for demonstration activities.																	

Regional strategies are finalized for accelerating use of RP reflecting the results of 3.2-3.9.

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Schedule of the Mid-term review

Date	Schedule	Place
2015/2/2	Meeting with Mid-Term Review Team	Addis Ababa
2015/2/3 －2015/2/7	Interview with related organizations	
2015/2/8	Documentation of Mid-Term Review Report	
2015/2/9	Meeting with MoWIE	
	Interview with Related Organizations	Hawassa
2015/2/10	Interview with Related Organizations	
2015/2/11 －2015/2/12	Site Visit	Dale, Yirgachefe
2015/2/13	Discussion with WRB on Revision of PDM,PO	Hawassa
2015/2/14	Site Visit	Meskan
2015/2/15	Internal Meeting Documentation of Mid-Term Review Report	Addis Ababa
2015/2/16	Discussion with Joint Evaluation Members	
2015/2/17	Discussion with MoWIE and Project Team	
2015/2/18	Finalization of Mid-Term Review Report Preparation of JCC	
2015/2/19	JCC / Signing of MM (Acceptance of Mid-Term Review Report and Draft of Revised PDM,PO)	
2015/2/20	Report to EOJ and JICA Ethiopia Office	

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Evaluation Grid

The project for Rural Water Supply, Sanitation and Livelihood Improvement through Dissemination of Rope Pumps (RPs) for Drinking Water

Verification of Achievement Level

Items of Evaluation	Evaluation Items		Necessary Data	Evaluation
	Main question	Sub question		
Achievement level of Overall Goal	Water supply and sanitation conditions and livelihood in rural areas are improved through dissemination of RPs for drinking water in the whole nation of Ethiopia.	Is VI1) "The water supply rate is improved in the whole nation.." likely to be achieved?	· Data/information on water supply and sanitation facilities and served population of MoWIE (Federal, Regional, Woreda) (sample surveys)	· The indicator should be reconsidered. · It is difficult to predict prospect of the achievement of the indicator 1 since there is a limitation to duplicate the good practice of the Project only by the distribution of dissemination tools to other region. Therefore the indicator should be reconsidered.
		Is VI 2) "The population served drinking water by the RP wells is increased in the whole nation." likely to be achieved?		· It is difficult to predict prospect of the achievement of the indicator 2since there is a limitation to duplicate the good practice of the Project only by the distribution of dissemination tools to other region. Therefore the indicator should be reconsidered. The indicator should be reconsidered.
		Is VI 3) "The number of the installed RPs is increased in the whole nation." likely to be achieved?		· It is difficult to predict prospect of the achievement of the indicator 3 since there is a limitation to duplicate the good practice of the Project only by the distribution of dissemination tools to other region. Therefore the indicator should be reconsidered. The indicator should be reconsidered
		Is VI 4) "The number of traditional dug wells equipped with certain technical/ mechanical measures for contamination protection is increased." likely to be achieved?		· It is difficult to judge the achievement level of the indicator since the numerical goal is not fixed. On the other hands, incidental work for contamination protection has been conducted as to the RPs installed by the project. The indicator should be reconsidered.
		Is VI 5 "The number of households practicing multi-purposes of RPs, such as micro-irrigation, is increased." likely to be achieved?		· It is difficult to judge the achievement level of the indicator since the numerical goal is not fixed. It is not confirmed that there are the similar structures and capacity for sensitization activities as SNPPR in other regions. Experiences and lessons learned from the Project cannot be utilized only by the dissemination tools. The indicator should be reconsidered.
		Is VI 6) "The number of water supply facilities is increased, where the users take certain sanitary and hygiene measures to minimize contamination." likely to be achieved?		· I is difficult to judge the achievement level of the indicator since the numerical goal is not fixed. It is not confirmed that there are the similar structures and capacity for sensitization activities as SNPPR in other regions. Experiences and lessons learned from the Project cannot be utilized only by the dissemination tools. The indicator should be reconsidered.
Achievement level of Project Purpose	Situations of water supply, sanitation and livelihood are improved through dissemination of RPs for drinking water.	Is VI 1) "The number of households/ population served drinking water by RP wells is increased by (# of households/ population), by the year 2016." likely to be achieved?	· Various reports of the Project · Data/records of Woreda Water, Mine and Energy Offices · Monitoring survey of RP well · Record and interview survey results of Woreda Agricultural Offices, Development Agents (DA)	· It is difficult to judge the achievement of the indicator since the definition of increase number and target area is not certain. Most of RP users utilize RPs for multiple purposes such as drinking, livestock, housework, small scale irrigation and so on.
		Is VI 2) "The number of the installed and operating RPs for drinking water is increased by (# of RPSs), by the year 2016." likely to be achieved?	· Record and interview survey results of Woreda Health Offices, Health Extension Workers	· IWRB is currently under the process to procure and distribute 10,000 RPs in the SNNPR. In addition to that, though the role of each governmental agencies are getting clear, there is still some room for work on the improvement of cooperation structure between private sectors and governmental sectors.

[1] Verifiable Indicator

		Is VI 3) "The number of rural people who want to install RPs is increased." likely to be achieved?	(HEW)	· It is difficult to judge the achievement of the indicator because the definition of increase number and target area is not certain. During the dissemination activity in 2nd year, the Project plans to collect date of the number of rural people who want to install RPs. The date will be compared with the result of baseline survey and data collected in the 1st year.
		Is VI 4) "The operational rate of RPs for drinking water is kept more than __%." likely to be achieved?		· It is difficult to judge the achievement level of the indicator since the numerical goal is not fixed. The project conducts activities to support operation and maintenance of RPs in collaboration with the stakeholders including private sector.
		Is VI 5) "The number of households practicing multi-purpose use of RPs, e.g. for micro-irrigation, by (# of households), by the year 2016." likely to be achieved?		· It is difficult to judge the achievement of the indicator because the definition of increase number and target area is not certain. Besides, most of RP users already utilize traditional dug well for multi-purpose before the installation of the RPs.
		Is VI 6) "The number of RPs wells with improved water supply environment is increased by (# of facilities) by the year 2016." likely to be achieved?		· It is difficult to judge the achievement level of the indicator since the numerical goal is not fixed. However, the number of RPs with improved water supply environment is expected to be increase since WASH team in each target Woredas and kebeles have conducted sensitization activities for create awareness of the users and there has been good sign for improvement
Achievement level of Outputs	Output 1. Specifications of RPs for drinking water and installation technologies are standardized at the national level.	Is VI 1-1) "__kinds of developed RPs for drinking purpose are practically used and commercialized by the year of 2016." likely to be achieved?	· Documents on standardization certificate · Standardization certificate · Various reports of the Project · Operation manuals · Surveys on the satisfaction level of manufacturers, installers and users of RPs	· The achievement of the indicator cannot be measured since the numerical goal has not been fixed. Up to date, 2 models of developed RPs are expected to be practically used by the end of 2016.
		Is VI 1-2) "More than 1 application for standardization of the specifications of RPs for drinking water is submitted to ESA, which may include construction technology for RPs well, and protection methods from the contamination for traditional hand dug well." likely to be achieved?		· The indicator is likely to be achieved in 2015. Since all necessary application documents are ready to submit to ESA. The items for minimum standard of RP parts were discussed and agreed in the workshop for the specification of RPs and quality control was held in collaboration with main counterparts such as MoWIE and WRB SNPPR.
		Is VI 1-3) "Manuals for manufacturing, installation and O&M are completed for all the RPs for drinking water, practically used and commercialized." likely to be achieved?		· The indicator is likely to be achieved during the project period. The the operation manuals for RP production, installation, operation and maintenance is under the formulation at the time of Mid-term review and it is supposed to be finalized by April 2015.
		Is VI 1-4) "More than __number of developed and improved RPs for drinking water is manufactured by the year of 2016." likely to be achieved?		· The achievement of the indicator cannot be measured since the numerical goal has not been fixed. Up to date, 80 units of RPs were manufactured and 120 units of RPs are planned to be manufactured out of the planned 200 units of RPs.

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	Is VI 1-5) "Stakeholders concerned are satisfied with the developed and improved RPs in terms of such as durability, safety, functionality, compatibility, cost effectiveness, design, easiness of installation and O&M, protection of contamination, etc.. " likely to be achieved?		· It is difficult to judge the achievement of the indicator at the time of Mid-term review since the developed and improved RPs have not widely used yet in the target area. The indicator will be measured in the remaining term of the project by a survey for all users who installed RPs.
Output 2. Strategies are formulated for manufacturing and installation technologies of RPs for drinking water.	Is VI 2-1) "Documentation for the quality control (QC), such as operational structure, O&M, supply chain of spare parts, etc. is completed for manufacturing and installation of drinking water RPs by the year ___." likely to be achieved?	· Implementation plans at the target Woredas/areas · Various reports of the Project · Data/records of water supply facilities at Woreda Water Office · Data/records of micro-finance institutions · Monitoring record of RPs well · Interview surveys of the users · Strategies of RPs dissemination and marketing at the regional level	· The indicator is likely to be achieved during the project period though the due year of this output has not been fixed yet. The quality control strategy has been considered in the working group and workshops for RP standardization was held on May 16, 2014. The roles of stakeholders have discussed and documentation for the quality control is assumed to be developed through the workshop.
	Is VI 2-2) "Workshops for diffusing knowledge of QC strategy are held __times by the year ___." likely to be achieved?		· The achievement of the indicator cannot be measured since the numerical goal has not been fixed. Quality control strategy and role of each actor is discussed in the RP standardization work shop and the workshop was held twice, in August 2013 and May 2014. The number of participant was about 20 each time. The workshop is planned to be held twice a year in the remaining term of the project.
	Is VI 2-3) "TOT for manufacturing and installation of RPs are held __ times, and __ numbers of trainers are trained.." likely to be achieved?		· The achievement of the indicator cannot be measured since the numerical goal has not been fixed. TOT for manufacturing and installation of RPs is held once, and 17 numbers of trainers were trained. These trainees will be trained on manufacturing of RPs in March 2015.
	Is VI 2-4) "Training for the RPs manufacturers and artisans for installation are held __times and ___ numbers of manufacturers and artisans are trained." likely to be achieved?		· The achievement of the indicator cannot be measured since the numerical goal has not been fixed. The trainings were carried out.
Output 3. Rural livelihood, and sanitation and hygiene are improved through dissemination and marketing systems of RPs for drinking water in the target areas.	Is VI 3-1) "Implementation plans are formulated in all target Woredas by the ___ quarter of the year____." likely to be achieved?	· Implementation plans of the target Woredas · Various reports of the Project · Lists of staff involved in RP technology promotion in the target Woredas · Results of RP technology awareness test during various trainings/workshops · Data/records from OMO Micro Finance Institute · Documents of Water Resources Bureau related to Self-supply and RP dissemination · Questionnaire survey to RP users	· The indicator has already been achieved by the end of 2014. Implementation plan for RPs dissemination was formulated in Meskan Woreda under the cooperative assistance with IRC is received and Implementation plan for RP dissemination were formulated in Dale Woreda, Yirgachefe Woreda and Damot Pulasa Woreda through the workshop organized by the Project.
	Is VI 3-2) "Promotional activities are carried out by Woreda Water, Mine and Energy Offices, and other sector office, such as health, for __households in the target areas." likely to be achieved?		· The achievement of the indicator cannot be measured since the numerical goal has not been fixed. The number of household which are targeted at promotional activity cannot be count. Through the several times of community meeting organized by this collaboration, more than 500 community people participated the meeting for sensitization of RP with Self Supply.
	Is VI 3-3) "More than __ RPs for drinking water are installed." likely to be achieved?		· The achievement of the indicator cannot be measured since the numerical goal has not been fixed. In the implementation plan of the project, the planned goal of installed RP until the end of 2016 is set as 200 and the project carries out the activities toward the goal. To date, 52 RPs were installed as of the end of December 2014.

	Is VI 3-4) "More than __ households purchase RPs by utilizing micro-finance schemes." likely to be achieved?	· The achievement of the indicator cannot be measured since the numerical goal has not been fixed. Up to date, 52 RPs were purchased by utilizing micro-finance schemes in the project.
	Is VI 3-5) "More than __% of micro-finance borrowers pay-off the loan within the terms of repayment." likely to be achieved?	· The indicator is not appropriate to judge the achievement of the output. The repayment in the micro finance scheme has not started yet and the data is not available at this time.
	Is VI 3-6) "More than __% of the constructed/improved RP wells fulfill the minimum standard, in line with the standard set as Output 1." likely to be achieved?	· The data to evaluate achievement of the indicator are not available at this time because the installation of planned number of RPs has not been completed. The information should be collected at the end of the project.
	Is VI 3-7) "More than __% of the constructed/improved RP wells are functional." likely to be achieved?	· The data to evaluate achievement of the indicator are not available at this time because the installation of planned number of RPs has not been completed. The information should be collected at the end of the project.
	Is VI 3-8) "The number of days required for the repair of RPs, and spare parts supply are within (# of days) and (# of days) respectively." likely to be achieved?	· It is difficult to collect the data for the indicator because of there is no concrete information measuring the down time of the RPs. The indicator should be reconsidered.
	Is VI 3-9) ". More than __ households practice micro-irrigation by utilizing household-type RPs." likely to be achieved?	· It is difficult to measure the prospect of the achievement of the indicator, the numerical goal for the indicator has not been fixed and. The practice of micro-irrigation are introduced by Woreda Agriculture office in the target area since the multiple use of the RPs has been encouraged for income generation in order to promote their repayment of the micro credit loan.
	Is VI 3-10) "More than __% of the RP wells are found improved with certain sanitary and hygienic measures by the users." likely to be achieved?	· The data to evaluate achievement of the indicator are not available at this time because the installation of planned number of RPs has not been completed. The information should be collected at the end of the project.
	Is VI 3-11) "Water quality monitoring is carried out at more than __% of RP wells supported by the Project." likely to be achieved?	· Water quality monitoring has been done at all the RP wells supported by the Project though the numerical goal for the indicator has not been fixed.
	Is VI 3-12) "Water contamination is reduced at more than __% of the RP wells supported by the Project." likely to be achieved?	· The data to evaluate achievement of the indicator are not available at this time because the installation of planned number of RPs has not been completed. The information should be collected at the end of the project.
	Is VI 3-13) "The experiences and lessons from the activities for Output 3 are well-reflected to the Regional strategies." likely to be achieved?	· It is difficult to judge the achievement of the indicator 3.13 at this time. The data or information is under the process of compiling. In the next half of the Project, the Project will compile their experience and reflect them in the dissemination tools.
Output 4. Guidelines are formulated for dissemination of RPs for drinking water, and acknowledged nation-wide.	Is VI 4-1) "(# of times) workshops are held for (# of participants) participants to acknowledge the contents of the Guidelines." likely to be achieved?	· Questionnaire/interview survey of the participants of dissemination workshops · Record of the workshops held · Record on distribution of the

· It is difficult to judge the achievement of the indicator 4.1, as the situation has changed from the time when the indicators were fixed. The Project will compile their experiences and lessons learned as dissemination tools corresponding to this change.

		Is VI 4-2) "The workshop participants recognize the Guidelines useful." likely to be achieved?	Gudelines	· It is difficult to judge the achievement of the indicator 4.2 as the situation has changed from the time when the indicators were fixed. The Project will compile their experiences and lessons learned as dissemination tools corresponding to this change.
		Is VI 4-3) "The Guidelines are distributed to all Water Resources Bureaus." likely to be achieved?		· It is difficult to judge the achievement of the indicator 4.3 as the situation has changed from the time when the indicators were fixed. The Project will compile their experiences and lessons learned as dissemination tools corresponding to this change.
Input provided	Japan side 1. Dispatch of Japanese Experts 2. Equipment and materials necessary for the Project 3. Training in Japan and / or other countries	Are the quantity, quality and timing of input as planned?	· Project reports · Result of questionnaire survey and interviews with Japanese experts and the PM of Ethiopia side	1) Experts i. Chief advisor / Dissemination strategy ii.Mechanical engineering / Mechanical design iii.Drilling technologies iv.Dissemination v.Agriculture vi.Micro-finance / Improvement of rural livelihood vii.Sanitation and hygiene viii.Other necessary fields 2) Equipment 3) Training in Japan, third countries and in Ethiopia 4) Cost for operation 1st Year : 142,863,000 JPY 2nd Year : 93,780,750JPY 3rd Year : 94,024,350JPY
	Ethiopia side 1. Counterpart (C/P) personnel 2. Facilities and equipment necessary for the Project 3. Office for the Japanese experts 4.Expense necessary for the Project			1) Counterpart personnel 2) Equipment 3) Facilities (office space) 4) Cost for operation

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Verification of Implementation Process

Items of Evaluation	Evaluation Question		Basis of judgment and method	Necessary Data	Source	Evaluation result
	Main question	Sub question				
Progress of inputs and activities	1.1 Various types of RPs are developed and improved to meet different needs, and tested.		-Confirm the progress of inputs and activities by comparison between plan and actual achievement - Confirm the reason in case there is a gap between plan and actual achievement	-Records of Inputs and activities -Level of achievement -Cross relationship of activities	-Project reports -Interviews with Japanese experts and the PM of Ethiopia side	6 models and twelve (12) sets of test RPs were installed in Yetabon Kebele of Meskan Woreda for the purpose of field tests in January 2014, and regular monitoring was carried out by the monitor users and the local consultant on usability of RPs in each models, and the monitoring visit was conducted in May 2014 for final verification on the field test to make report on the test Improvement of well slabs was discussed and checked up from the viewpoint of the dimensions and the materials needed. Also in collaboration with TVETC Hawassas, bamboo casing was experimented in the three test wells. However, it was found that the water levels of the test wells declined lower than 10 cm in April 2014, and the experiments were in jeopardy. After a series of discussions with the counterparts of WRB, Project Team concluded that the experiments should be discontinued. The Project handed over all the information to TVETC and TVETC will continue research and development of these technologies without the assistance of the Project. In addition to above, in order to explore the technical options for low cost drilling/construction of wells, demonstrations of community tube wells were constructed in three (3) target areas of the project, Chitu of Yirgachefe Woreda, Bera Chale of Dale Woreda, and Helena Korke of Damot Pulasa Woreda. After completing the construction of each community tube well, RPs were installed for promotion and exhibition purposes.
		1.1.1 RPs, which are currently utilized, are surveyed and listed.				
		1.1.2 Each part of existing RPs are improved.				
		1.1.3 The existing and developed RPs are tested in terms of such as durability, safety, functionality, compatibility, cost effectiveness, design, easiness of installation and O&M, protection of contamination.				
		1.1.4 Low-cost designs of structure for well head of traditional dug well and concrete-slab are tested, and proposed in order to minimize contamination.				
		1.1.5 Low-cost drilling and construction technologies of dug well are tested and proposed for community water supply.				
	1.2 Specifications of RPs and its installation technologies are standardized.					The workshops for consensus building on the standard specification of RP were held twice in this reporting period. The workshops were held for 2 (two) working groups: 1) governmental officers and 2) private sector. The working group of governmental officers is aiming at establishment of quality control system, and the working group of private sector is aiming at standardizing the specifications of RPs. As a result of activities of working groups, there are some items of standardization identified and agreed. These items will be finalized. The workshop for the working group of private sector RP manufacturers was held in May 15, 2014 and the members had a consensus that selecting one RP structure model is not realistic, as many models are being produced.
		1.2.1 Specifications for RPs for drinking water are examined among the stakeholders concerned.				
		1.2.2 Approval processes of the specifications made in 1.2.1 are facilitated with MOWIE.				
		1.2.3 Necessary procedures are taken for standardization by ESA.				
	1.3 Operational manuals are formulated for manufacturing, installation and O & M of RPs, as standardized above 1.2.					Since the results of the activity 1-5and 1-6 should be incorporated into the manufacture training as well as the operation manuals. The the operation manuals for RP production, installation, operation and maintenance is under the formulation at the time of Mid-term review and it is supposed to be finalized by April 2015
	2.1 Quality control systems on manufacturing and installing RPs are proposed.					The workshops on RP standardization for the working group of government officers was held in May 2014. In the workshop, the participants understood that there are a variety of stakeholders from central to grassroots levels, involved in standardization and quality control and that it is necessary to clarify the roles of these stakeholders. The Working Group came to a consensus that it will continue discussing this issue and explore the possibility of certification system in consultation with MoWIE, ESA, ECAE, TVEC and others.
		2.1.1 Responsibilities of the stakeholders are clarified on quality control systems of RPs for drinking water.				
		2.1.2 Certification systems for manufactures are proposed.				
		2.1.3 The possibility of organizing a certain type of association is explored for self-help among the private manufactures, installers and O&M providers.				

2.2 O&M strategies are formulated for the household RPs.	Project Team supports trainings of private small and micro entrepreneurs and village technicians in RP manufacturing, installation, operation and maintenance.(On the job training of RP manufacturers, Training on well cover production, Training on reducer production and Training on RP installation)
2.3 Supply chain strategies are formulated for spare parts distribution.	Project Team studied the availability, future marketability, and the accessibility of RP parts for RP manufacturers and users, with special attention to the rural dwellers. In order to exchange views and opinions related to RP manufacturing and supply chain of the RP parts, the Project and WRB organized a workshop on material supply on June 11, 2014. Deputy Head of WRB, Representatives of WRB (Process Owners, Socio-economist and mechanic), Representative of One WASH Coordination Committee and Project Team were participated in the workshop.
2.4 TOT is carried out for TVETC instructors on manufacturing and installation of RPs (e.g., at EWTEC).	O&M strategies were discussed among Project Team and their counterparts. The strategies will be incorporated together with the promotion activities and installation/maintenance trainings.
2.5 Training is carried out for manufactures and installers for RPs (e.g., at TVETC).	Project Team held a series of discussions with TVETC for the planning of the TOT for the coming Period 2. TVETC generally agreed to incorporate RP manufacturing into their activities. There are two potential activities; 1) incorporating RP technology into the regular electro-mechanical course as part of the course on manual water lifting devices, and 2) organizing a short-term RP manufacture course for manufacturers. Project Team will continue to discuss details that relate to the above points with TVETC instructors.
3.1 Regional strategies of accelerating RP use are formulated based on the findings from the needs assessment.	Information collection for formulating strategies on dissemination of RP in Self Supply was conducted in the following three areas; agriculture, micro finance and hygiene and sanitation. From 1 to 3 May, 2014"Workshop for Formulation of RP Dissemination Strategy and Training on Self-supply" was held by the sub-contracted consultant as one of their activities. The objective of the workshop was to deepen the participants' understanding of Self-supply and to exercise how to plan activities for RP dissemination.
3.1.1 Existing water supply facilities are surveyed and listed	
3.1.2 Regional strategies of accelerating RP use are drafted based on the analysis of economic status, livelihood, and access to drinking water in rural areas in line with "the National Guidelines for Self-Supply in Ethiopia."	
3.1.3 Implementation plan and manuals are formulated, including responsibilities among the stakeholders for dissemination and distribution of RPs, livelihood and sanitation improvement, and necessary procedures based on the above regional strategies.	
3.2 Target Woredas areas are selected for accelerating RP use and O&M.	4 target Woreda/ Area (Yirgachefe/Gedeo Zone, Dale/Sidama Zone, Damot Pulasa/Wolaita Zone, Meskan/Gurage Zone) were selected.
3.2.1 Woredas/areas are categorized base on the above strategies	
3.2.2 Target Woredas/areas are selected together with the regional RP Team based on the above categorization and proposed it to JCC for approval.	
3.3 Implementation plans are formulated together with the target Woreda Water, Mine and Energy Offices based on the analysis on demand/supply, and available resources.	Baseline Survey was conducted by a local consultant between December 2013 and January 2014. The results and analysis were utilized for the Woreda Mini WASH Planning Workshop Since the finalization of the Baseline Survey was delayed than expected, the analysis and modification of strategies, indicators on PDM Woreda Self-supply action plan formulated in Meskan Woreda Kick-off Workshop for the target Woreda organized Woreda dissemination strategies formulated
3.3.1 Necessary information is collected and analyzed.	
3.3.2 Incentives (e.g. introduction of cash crops) for target groups/areas are identified.	

3.3.3 Formulation of implementation plans of Woreda Water, Mine and Energy Offices is supported for rural water supply based on the collected/reviewed information.	
3.4 Micro-finance is introduced for RP purchase by users.	The MOU was signed on 10 February, 2014 by WRB, OMFI and the Project and 23 households purchased RPs with the scheme. t was found that demand creation in Self-supply is not easy as the multiple factors influence the perception of the people; power relationships in the community, political influences, the capacity and willingness of the extension workers who are involved in promotion, etc. Project Team has learnt lessons through the promotional activities in Period 1, which can be reflected to the activities in Period
3.4.1 Appropriate micro-finance scheme is identified, and MOU is signed by the micro-finance institution at the regional level.	
3.4.2 Workshops are held to introduce the identified micro-finance scheme to the personnel of micro-finance institutions at the target Woredas.	
3.4.3 Micro-finance institutions, households and communities are supported and monitored for implementation of micro-finance schemes.	
3.5 RP promotion is carried out by Woreda Water, Mine and Energy Offices	The RP sensitization meetings in the project target Woredas and kebeles were organized. On the first day of RP sensitization meetings, the main actors at Woreda and kebele levels participated in the meeting, and the outline of Self-supply policy, the outline of WAS-RoPSS Project, the approach for dissemination of RPs were presented and the RP technology and HHWT were demonstrated. Then the activities on promotion and demonstration of RPs at kebele level were facilitated by the participants of the Woreda meeting on the following day. The meeting in each kebele had more than 100 participants and they exchanged views in a lively way. Agriculture training held in Yirgachefe and Meskan Woredas.
3.5.1 Workshops are held at the selected target areas for introduction of improved shallow wells, RPs and options for financial arrangement.	
3.5.2 Necessary grouping of households is supported for financing and installation of RPs in line with the Woreda's implementation plan.	
3.5.3 Individual and group-led households are supported when applying micro-finance, public subsidy and technical support in line with the Woreda's implementation plan	
3.6 Individual households are supported in installation of RPs for drinking water in a self-supply manner.	In the Project Period 1, the Project has a plan to support the provision of 80 RPs as a seed fund for micro finance in the target areas. Based on the information collected in the Baseline Survey, Project Team made candidate lists for RP purchase in each target area.
3.6.1 Installers are supported in improvement of existing hand-dug wells (including cleaning and chlorination).	The activity will be conducted in the remaining term of the Project. 17 Village Technicians and 8 Woreda technical staff have been trained.
3.6.2 Local artisans are supported in construction of wells and installation of RPs.	
3.7 O&M systems are established for individual and group-led households.	
3.7.1 Necessary personnel and organizations for O&M are strengthened at a community level	The Project provided agriculture training once in Yirgachefe Woreda
3.7.2 Test operation of a spare-parts supply chain, which is prepared above 2.3, is carried out.	Water quality monitoring has been done at all the RP wells supported by the Project.
3.8 Livelihood improvement activities are supported (e.g. income generation, micro-scale irrigation).	
3.9 Sanitation and hygiene activities are supported (e.g. regular water quality monitoring, workshops on sanitation and hygiene practices).	
3.10 Regional strategies are finalized for accelerating use of RPs reflecting the results of 3.2-3.9.	In the next half of the Project, the Project will compile their experience and reflect them in the dissemination tools. The tools can be utilized for formulation of regional strategy
4.1 Experiences and lessons learned are compiled from activities for Outputs 1-3.	The activity will be conducted in the remaining term of the Project, reflecting the achievement for output 1 to 3

	4.2 Guidelines are formulated for rural water supply and livelihood improvement through dissemination of RPs based on the result of 4.1, and workshops are held to be acknowledged nationwide.				MoWIE has already developed the Self-supply Acceleration Program Guidelines, the experiences and lessons of the Project are to be incorporated into these Guidelines instead of creating new. Project Team started to communicate with the stakeholders concerned, including MoWIE, IRC and other partners for collaborative efforts in updating and disseminating these Guidelines.
	4.3 Some site(s) in other regions(s) is (are) selected for demonstration activities.				The activity will be conducted in the remaining term of the Project.
Method of technical transfer	Are there any problems in technical transfer?	Confirm the method of technical transfer	Result of activities Opinion from stakeholders	Project reports Questionnaire survey and interviews	The technical transfer to WRB, Woreda Health bureau, Woreda Agriculture Bureau, and each governmental agency at Woreda level were implemented through training program. The level of satisfaction for the training program is high. As a result of the training program, it is observed at the Training program provided by IRC that the level of understanding of concerned personnel of the Project was] higher than staff from other areas.
Relation between stakeholders	Have PSC and JCC held at regular interval and worked for issue resolution?	Confirm the situation of PSC and JCC	Opinion from stakeholders	Questionnaire survey and interviews	To date, Steering Committee was held 4 times and Joint coordinating Committee was held 3 times. The major achievements of the meetings are as follows;
	Have the Project team and counterpart sufficiently communicated with each other to share information?	Confirm the situation of the communication between stakeholders			Schedule coordination and communication with other government agency were mainly conducted by counterparts
	Have the system for chain command and division of roles been established?	Confirm the chain command and division of role			There is a good communication structure

	Steering Committee	Joint Coordinating Committee
1st	- Inception Report approved - Methods and process of target area selection discussed and agreed Date :April 19, 2013	-Inception Report approved -Decision on the methods and the process of target area selections shall be authorized to Steering Committee in SNNPR Date :16 April, 2013
2nd	- Selection of the target Woredas approved - Project logo, short message and nick-name approved Date : July 18, 2013	- Selection of the target Woredas approved - Project logo, short message and nick-name approved Date :July 22, 2013
3rd	- Progress Report III shared and discussed - New RP models introduced and discussed - Plan of actions for Period 2 approved Date :June 18, 2014)	- Progress Report III shared and discussed - New RP models introduced and discussed - Plan of actions for Period 2 approved Date :June 23, 2014
4th	- Progress report of Period 1 - Plan of Period 2 shared and discussed -Revision of PDM and schedule were shared and discussed Date :October 23, 2015	Scheduled in 19 February 2015 - Revision of PDM - Discussion about Mid-term review result

Ownership of the Project	Have the Ethiopia staffs (supervisors and C/Ps) adequately participated in project management and activities?	Confirm the situation of participation of Ethiopia staff	Result of activities Opinion from stakeholders	Project reports Result of questionnaire survey and interviews	Several CP from WRB have participated in the Project activities and 3 main CP who are in charge of Self supply and RP dissemination have adequate level of comprehension and responsibility for the project. However they have their regular service of WRB. Therefore the Project team coordinates their schedule considering the burden of their activities. The personnel from OMFI has actively participated the Project activities. They assume a leading role in the Micro Credit scheme for RP. . Although Regional Health Bureau shows their understanding of the project, their participation to training programs is limited.
	Has the Ethiopia Government allocated sufficient budget for the Project activities?	Confirm the budget of Ethiopia side	Financial condition Opinion from stakeholders	Project reports Related documents Result of questionnaire survey and interviews	CP has been assigned in WRB. There is no specific CP in MoWIE Office spaces were provided in MoWIE Adiss Ababa and WRB Hawassa. There is some challenge in the payment of daily allowance.
	Does the Ethiopia Government understand the contents of the Project well?	Confirm the level of understanding of Ethiopia side	Level of understanding on the contents of the Project by stakeholders	Result of questionnaire survey and interviews	CP in water sector understands the contents of the Project well, especially CP in WRB compliment the detail of the contents. Other CP such as EWTI, OMFI and other government office in other sector understand some part of the Project.
Collaboration with Other Projects	Has the Project adequately collaborated with other projects implemented either by JICA or other donors?	Confirm the situation of collaboration	Contents of collaboration with other donors Opinion from stakeholders	Project reports Result of questionnaire survey and interviews	The Project well communicates with other cooperation partners in WASH sector. The Project currently works for preparation of Self-supply fair with IRC, MWA and other partner. The fair will be held on word water week.
Factors affecting the Implementation Process	Have restructuring of implementing organizations or reshuffling of the supervisors and C/Ps affected the implementation of the Project?	Confirm the problem in the implementation process	Opinion from stakeholders	Project reports Result of questionnaire survey and interviews with Japanese experts, the PM of Ethiopia side and C/P	Due to the seminars for government employee related to National election, counterparts are often not in the office. The absence of counterparts affects the schedule of the monitoring and discussion of the project activities. A considerable number of the stakeholders at all level are dissatisfied about payment rate of daily allowance and accommodation fee. There may be a possibility that the condition affects to the efficiency and the result of technical transfer.

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Evaluation based on Five Evaluation Criteria

Items of Evaluation		Items of Evaluation		Items of Evaluation	Items of Evaluation	Items of Evaluation	Items of Evaluation
		Main question	Sub question				
Relevance	Necessity	Is the Project Purpose and the needs of Ethiopia side (target group) corresponded?			Development plan Related documents Opinion from stakeholders	Project reports Related documents Result of questionnaire survey and interviews with Japanese experts and the PM of Ethiopia side	The Project aims at dissemination of self-supply technology in line with the Universal Access Program 2 (UAP2) which is a five-year development plan of the water and sanitation sector. The government of Ethiopia set the target of water supply coverage of 98.5% by 2015 in the UAP 2, in particular, it focuses on the rural water supply, as the average increment of the coverage rate is set about 7% annually. The project is consistent with the needs of target area as well. The Project promotes RP as a low cost technology affordable for the rural residents to purchase RP utilizing the micro finance scheme under the concept of self-supply.
		Is the Project Purpose corresponded with the needs of target area and social situation?			Opinion from stakeholders		The outputs and activities planned to be implimented in the Project consistent to the needs of the WOWIE, SNNPR regional water resource bureau and sellected target Woreda.
	Priority	Are the Overall Goal and the Project Purpose consistent with the National Development Plan, Sector development plan, other relevant policies?			Documents concerning the policy of the sector Opinion from stakeholders		The project objective is consistent with Japan's aid policy and country cooperation plan of JICA. The main pillar of Japanese Country Assistance Program for Ethiopia is food security and aiming the establishment of the system for human security. In the policy, assistance for water supply and sanitation sector is one of priority area in Ethiopia, and it is equally important as the assistance in agriculture and rural development sector.
		Is the project objective consistent with Japan's aid policy and country cooperation plan of JICA?			Aid policy of Japan	Japan's aid policy	The main pillar of Japanese Country Assistance Program for Ethiopia is food security and aiming the establishment of the system for human security. In the policy, assistance for water supply and sanitation sector is one of priority area in Ethiopia, and it is equally important as the assistance in Agriculture and rural development sector. Moreover "Safe Water" is a focused agenda (human centered approach development) in Japan's initiative toward African development
	Suitability as a Means	It the Project's approach was appropriate as a strategy to improve the issue of water supply, sanitation and hygiene in Ethiopia?	Is the project's approach was appropriate.		Result of project activities Result of project implemented by other donors Opinion from stakeholders	Result of questionnaire survey and interviews with Japanese experts	The approach of the Project is appropriate. On the basis of the Self supply policy of Ethiopia, the project designed a inclusive approach which include training and sensitization of Self-supply, creation of needs for the RPs in the local community, financial and technical assistance to dissemination of RP. Bulk procurement of RPs by governmental agency (Regional Water Resource Bureau, Regional Agriculture Bureau) may cause for prevention of the growth of the local manufactures.
		Is the experience of technical cooperation projects of JICA utilized?	Situation of the experience of technical cooperation projects of JICA	Experience of similar project Opinion from stakeholders			and the document developed in the Water Sector Capacity Development Project in Southern Nations, Nationalities and People' s Regional State in the Federal Democratic Republic of Ethiopia (WAS-CAP) were utilized in the Mass procurement of RPs in SNNPR.
		Is the experience of Japan utilized?	Situation of utilization of Japanese experience	Advantage of Japan's experience Opinion from stakeholders			Assistance for RP disseminateion has been implemented by japan's Aid for more than 10 years.

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		Is the experience of Japan utilized?	Situation of utilization of Japanese experience	Advantage of Japan's experience Opinion from stakeholders			Assistance for RP disseminateion has been implemented by japan's Aid for more than 10 years.
	Others	Is there any change on the environment (policy, economy and society) surrounding the project?		Changes on the environment (policy, economy and society) surrounding the project	Opinion from stakeholders		WRB has secured 94 million Birr of budget for Self-supply Acceleration Programme for the 2006 Ethiopian fiscal year (2013/2014). The procurement of 10,000 RPs is a part of the planned activities and the open tender process was started in March 2014. The tender process was finalized and 5 lots of contracts were awarded to four RP manufacturers. Project Team was requested by WRB to give technical advices to the assigned experts, and the details of the inspection process are now under discussions between WRB and the Project. The success or failure of this procurement process will have critical implications for the success of the Project as the reputation of RP technology will be depending on the quality of these 10,000 RPs. The following points are to be considered as opportunities and risks for the effects of the Project activities;
Effectiveness	Achievement level of Project Purpose (Forecast)	Is the Project Purpose likely to be achieved?		Achievement level of verifiable indicator	Project reports Opinion from stakeholders	Project reports Related documents Result of questionnaire survey and interviews with Japanese experts	It is difficult to evaluate the achievement of Project Purpose properly as numerical goals have not been fixed yet. Based on the proposed PDM Ver2.1, the project purpose is likely to be achieved until the end of the project since promotion, demand creation and capacity development for dissemination of RPs in the target areas have been strengthened
		Is the setting up of indicators of Project Purpose appropriate?		Baseline survey, Verifiable indicator of other project			PDM including the indicators of Project Purpose is planned to be revised based on the baseline survey result.
	Causal Relations	Are outputs of the project contributed to achieve the project objective? (Achievement of project outputs has been caused by the Outputs.)		Logical consistency	Project reports Opinion from stakeholders		The causal relations in the version is not appropriate. It may be difficult to deplicate the experience of the project in 4 Woredas in SNPPR to federal level.since the situation is diferrent from place to place.
		Is there other necessary matter to achieve the objective of the project?		Necessary matter to achieve the objective of the project	Project reports Opinion from stakeholders		Nothing particular
		Is there other important assumption?	Other important assumption				Nothing particular
		What are the inhibiting or contributing factors to achieve the Project Purpose?		The inhibiting or contributing factors to achieve the Project Purpose			If the bulk procurement by WRB is not in line with Self supply policy, it might be a inhibiting factor for the dissemination of RPs
Efficiency	Achievement of output	Is the Output likely to be achieved as planned by adequate activities? If not, what is the inhibiting factor?		Comparison between plan and input	Achievement level and time of the Output Opinion from stakeholders	Project reports Result of questionnaire survey and interviews with Japanese experts, the	The team conducted survey and evaluated the achievement level of output based on the PDM ver1.1. However some quantitative indicators have not been fixed at the time of Mid-term review and it is diffficulet to measure achievement level.by line.

	It the indicators for each Output level appropriate?		Appropriateness of the indicators and its level	Achievement level Causal relation with Project Purpose	PM of Ethiopia side and C/P	Revision of PDM will be discussed at the Mid-Term review.
Appropriateness of Inputs	Are the activities appropriate to generate output?			Opinion from stakeholders		Most inputs that are necessary for the implementation of activities have been allocated as planned and converted into outputs. Output1 and 2 have been achieved as scheduled level at the time of Mid-term review.
	Was the dispatch of Japanese experts appropriate in terms of number, expertise, length and timing of their assignment?	Appropriateness of Japanese experts in terms of number, expertise, length and timing.	Result of dispatch of Japanese experts Opinion from stakeholders			Dispatch of Japanese expert has been conducted as planned.
	Was the provision of equipment from Japanese side appropriate in terms of types, quantity and timing of procurement?	Appropriateness of the provision of equipment in terms of types, quantity and timing.	List of procured equipment Opinion from stakeholders			Provision of equipment from Japanese side appropriate in terms of types, quantity and timing of procurement
	Has the training of C/Ps in other country appropriately undertaken in terms of number of trainees, contents (relevancy to the project activities), length and timing?	Appropriateness of the training of C/Ps in other country in terms of number of trainees, contents (relevancy to the project activities), length and timing	Result of Trainings Opinion from stakeholders			Training in other country is planned to be organized in 2nd year
	Has the assignment of C/P staff been appropriate in terms of number, position and competency?	Appropriateness of the assignment of C/P staff in terms of number, position and competency	Result of local cost Opinion from stakeholders			CP has not been assigned appropriately in MoWIE (there is no specific personnel) and there is an issue on the ownership of the Project. There is a shortage of the appropriate personnel in Woreda Health Bureau and it is difficult to conduct a training, OJT and other necessary technical transfers.
	Has the local cost support by the Japanese side been appropriate in terms of amount, use, and timing of disbursement?	Appropriateness of the local cost support by the Japanese side in terms of amount, use, and timing.	Situation of C/P assignment Opinion from stakeholders			Local cost support by the Japanese side been appropriate in terms of amount, use, and timing of disbursement
	Have the local cost support by the Ethiopia side been appropriate in terms of amount, use, and timing of disbursement?.	Appropriateness of the local cost support by the Ethiopia side in terms of amount, use, and timing of disbursement?	Result of local cost Opinion from stakeholders			Local cost covered by the Ethiopian side are office space and utilities.
Cost	Comparing to the similar projects (cooperation conducted by the JICA project and other donors), the Output and the Project Purpose are commensurate with the input costs?		Comparison with other project	Project budget Opinion from stakeholders	Project reports Related documents Result of questionnaire survey and interviews with Japanese experts	No incompatible cost of input to Outputs is observed up to date.

		Were the local resources utilized effectively?	Were the existing organizations or facilities utilized effectively?	Situation of utilization of the existing organizations or facilities	Project reports Opinion from stakeholders	Project reports Related documents Result of questionnaire survey and interviews with Japanese experts	Project support and collaborate with local technician and extension workers in grass roots level.
			Were the results of previous similar projects utilized effectively?	Situation of utilization of the results of previous similar project			Lessons learnt from WAS-CAP project are considered when to plan the promotion activities. Technical manuals created by WAS-CAP are utilized.
	Factors which affect the effectiveness of implementing process of the Project	Were there any causes which obstruct the effectiveness of the project		Causes which obstruct the effectiveness of the project			To contribute the governmental plan, the project needs to review the input to improve the work condition of Japanese exparts and local exparts as necessary. The assistance for TOT which requested from MoWIE in 1st year, created a negative effect for efficiency of the Project.
Impact	The Prospect of the Overall Goal Achievement	Is the Overall Goal expected to be achieved?	"Water supply and sanitation conditions and livelihood in rural areas are improved through Dissemination of RPs for drinking water in the whole nation of Ethiopia."	Prospect of achievement of the Overall goal	Opinion from stakeholders	Project reports Related documents Result of interviews with Japanese experts and the PM of Ethiopia side	It is pre-matured to measure the achievement at this stage. One WASH National Plan places the importance of Self-supply as a mode of service delivery indispensable to achieve the goals. This contributes to the establishment of enabling environment for the Project activities, while the expectations from the stakeholders to the Project increased.
		Is there other factor to inhibit the achievement of the Overall Goal?		Other factor to inhibit the achievement of the Overall Goal	Existence of inhibiting factors		The quality of 10,000 RP procured by WRBs may critically affect the reputation of RP technology.
	Causal relationship	Isn't there significant gap between the Overall Goal and the Project purpose? Does the achievement of the Project purpose contribute the achievement of the Overall Goal?		Logical consistency			There is a gap between the overall goal and the project purpose.
	Ripple effect	Is there other positive or negative effect except the Overall Goal?		Expectation of positive or negative effect	Opinion from stakeholders		It is predicted that the introduction of self supply technology is utilized for a disemination method regarding to the improvement of water supply and sanitation. The practical examples from the Project can be utilized by the organizations/individuals who are involved in self supply dissemination domestically and intanationally
Sustainability (prospect)	Policy, Institutional Aspect Organizational Aspect	Is the possibility to continue the political assistance high after the termination of the cooperation?		The possibility to continue the political assistance after the termination of the cooperation	Policy and Strategy	Project reports Related documents Result of questionnaire survey and interviews with Japanese experts, the PM of Ethiopia side and C/P	GTP/UAP is likely to be continued until 2015. It is predicted that the self-supply maintains its importance in the overarching policies and development plans of the country.
	Organizational Aspect	Is Ethiopia side likely to maintain and develop the organizational structure including appropriate staff assignment with which the Outputs achieved through the Project can be sustained after the technical cooperation terminates?		The prospect of organizational structure after the technical cooperation terminates	Organizational structure Opinion from stakeholders		The structure of Ethiopian government for self-supply dissemination is likely to be continues if the OWNP continues.

Financial Aspect	Is Ethiopia side likely to secure an adequate budget with which the Outputs achieved through the Project can be sustained after the technical cooperation terminates?	The prospect of budget of Ethiopia side after the technical cooperation terminates	Financial condition Opinion from stakeholders		・OWNP include the budget for self-supply and the budget is likely to be secured if OWNP continues. ・TVETC agreed to add RP technology course into regular curriculum. Therefore the budget for the course is likely to be secure. ・OMFI is expected to continue the RP credit scheme using funds collected form RP cost which originally provided by the Project
Technical Aspect	Is the method of technical transfer used in the Project likely to be maintained by C/P?	Prospect of situation for maintenance of technical transfer used in the Project	Opinion from stakeholders		Project has assisted tendering for mass procurement of RPs and will continue assistance for inspection of them utilizing technical experiences. These assistances have been appreciated by WRB and will contribute to enhance the sustainability in technical aspect.
	Is the maintenance of facilities and equipment made properly?	Situation of the maintenance of facilities and equipment.	Opinion from stakeholders		Equipment provided by the Project maintained by Woreda Water resource Bureau.
	Is the transferred technique suitable to disseminate to other areas?	Content of transferred technique	Opinion from stakeholders		Minimum specification of RP formulated by the project is expected to be standardize and utilized in whole nation. Also the dissemination tools developed by the Project will be distributed and used in other region of Ethiopia.
	Is the mechanism to disseminate the transferred technique to other area included in the Project?	The mechanism to disseminate the transferred technique to other area	Opinion from stakeholders		The Project plans to hold workshops and develop distribute guidelines in the activity related the Output 4.
Social, Cultural and Environmental Aspect	Is there any factor to inhibit the sustainability on Social, Cultural and Environmental aspects?	Factor to inhibit the sustainability on Social, Cultural and Environmental aspects	Opinion from stakeholders		tuneover of the related personnl

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Ministry of Water, Irrigation & Energy

List of input

List of Equipment

Item	Model Number	Plan			Record	
		Time	Place	Unit	Date	Condition
Laminator	LTA32E(A3 size)	1st Year	MoWIE Office	1	15-Mar 2013	Good
Projector	Sony /VPL-Dx100 LCD Projector	1st Year	MoWIE Office	1	11-Apr 2013	Good
UPS	1050VA	1st Year	MoWIE Office, Hawassa Office	2	27-May 2013	Good
Desk Top Computer	Dell/ optiplex GX790, core i3, 2GB, HDD 500GB, 19inch screen	1st Year	Hawassa Office	1	27-May 2013	Good
Projector	Sony /VPL-Dx100 LCD Projector	1st Year	Hawassa Office	1	6-Jun 2013	Good
Screen		1st Year	Hawassa Office	1	6-Jun 2013	Good
Bookbinding Machine	S-100	1st Year	MoWIE Office	1	6-Jun 2013	Good
Combination Printer-Copier-Scanner-Fax	HP M1212nf Laser Jet all in one machine Serial Number: CNGJ8F388N2	1st Year	Hawassa Office	1	27-Jun 2013	Good
Bookbinding Machine	S-100	1st Year	Hawassa Office	1	24-Feb 2014	Good
Lap Top Computer	TOSHIBA/satellite L855 core i5, 6GB, HDD 640GB, 15.6inch screen	1st Year	Hawassa Office (For Each Woreda)	4	27-Feb 2014	Good

List of Equipment Accompanied by Expert Dispatch

Item	Model Number	Plan			Record	
		Time	Place	Unit	Date	Condition
Digital Video Camera	Victor/ GZ-E320-R	1st Year	MoWIE Office	1	16-Mar 2013	Good
Digital Turbidity Meter	Kyoritsu Chemical Check.,corp. WA-PT-4DG	1st Year	MoWIE Office	1	28-Mar 2013	Good
Conductance Meter	Horiba/B-173	1st Year	MoWIE Office	1	28-Mar 2013	Good
Copier	1300678X (FT1X043, AR5620NGSF1), Sharp AR 5620N	1st Year	MoWIE Office	1	27-May 2013	Good
Copier	1300679X (FT1X043, AR5620NGSF1) Sharp AR 5620N	1st Year	Hawassa Office	1	27-May 2013	Good
Generator	RGD5000 Self Start	1st Year	Hawassa Office	4	9-Oct 2013	Good
Leaser Color Printer(A4)	HP M551n Color Laser Jet Printer	1st Year	MoWIE Office	1	11-Oct 2013	Good

Annex 5

List of Other Equipment

Item	Model Number	Year	Place	Number	Date	Condition
Lap Top Computer	TOSHIBA/satellite core i5, 4GB, HDD 500GB, 15.6inch screen, Serial Number:5C295467Q-9 Serial Number:7C038289Q-9	1st Year	MoWIE Office	2	27-May 2013	Good
Desk Top Computer	Dell/ optiplex GX790, core i3, 2GB, HDD 500GB, 19inch screen Serial Number: HHP8TS1, 38075626945	1st Year	MoWIE Office	1	27-May 2013	Good

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List of Interviewee

Date	Name	Title / Organization
3 February 2015 4 February 2015	Mr. Tamane Hailu,	Rural Water Desk Coordinator, MoWIE
3 February 2015 4 February 2015	Mr. Assefa Biru,	National Consultant, Rural WASH, MoWIE
3 February 2015 4 February 2015	Mr. Brhanu Wendaferew,	National Consultant, Rural WASH, MoWIE
3 February 2015	Mr. Abiy Grimam	Wash Coordination Office
4 February 2015	Mr. Tamiru Gedefa,	WASH Program Coordinator, MoWIE
4 February 2015	Mr. Nuredin Mohammed,	Director, Water and Sanitation Directorate, MoWIE
4 February 2015	Dr. Markos.Wijore	National Director, EWTI
4 February 2015	Mr. Abebe Mekonnen,,	Director, EWTI
4 February 2015	Mr. Tamiru Fekadu,	Director, EWTI
4 February 2015	Mr. Mesfin Mulugeta,	Coordinator, Water Sector Working Group Secretariat
4 February 2015	Mr. Eyassu Guta,	Program officer, Water Sector Working Group Secretariat
4 February 2015	Mr. Nuredin Mohammed,	Director, Water and Sanitation Directorate, MoWIE
5 February 2015	Mr. Zemen Deginetu	Supply Chain Manager, iDE-Ethiopia
5 February 2015	Mr. Melkam Jaleta,	Millennium Water Alliance
6 February 2015	Mr. Zeru Mulunhe	Metal Industry Development Institute
6 February 2015	Mr. Ayane.Y	Metal Industry Development Institute
6 February 2015	Mr. Arto suominen	Chief technical Advisor, COWASH
6 February 2015	Ms. Oona Rautiainen	Junior Expert COWASH

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Annex 6

6 February 2015	Mr. Atkelt Girmay	General Manager, Pamark Business
9 February 2015	Mr. Samuel Tamiru	Director, Water supply facility and governance, , WRB SNNPR
9 February 2015	Mr. Mr. Kassu Eshete	Social Economics Division, WRB SNNPR
9 February 2015	Mr. Kassahun Kulgrored	Water quality Expert, WRB SNNPR
9 February 2015	Mr. Bekele Kassaye	Regional Wash Coordination Officer
10 February 2015	Mr. Mekuria Meskele	Rural credit officer, OMO micro finance instutute
10 February 2015	Mr. Desalegn Gullo	Sanitation Engineer , Disease prevention /Health Promotion
10 February 2015	Mr. Dereje Haile	Machinery Division,, WRB SNNPR
11 February 2015	Mr. Addisu Fisher	Water Office, Dale Woreda
11 February 2015	Mr. Siyoum Mutato	Agriculture office, Dale Woreda
11 February 2015	Mr. Esayas Yasegn	Water Office, Dale Woreda
11 February 2015	Mr. Alman Demissie	Head,Water Office, Dale Woreda
12 February 2015	Mr. Mihret Door	Water office, Yirgachefe Woreda
12 February 2015	Mr. Tilahun Kula	Water office, Yirgachefe Woreda
12 February 2015	Mr. Fetachew Teseme	Water office, Yirgachefe Woreda
16 February 2015	Mr. Woltaji Terfa	WHO
16 February 2015	Mr. John Butterworth	Senior Program Officer, IRC
16 February 2015	Mr. Lemessa Mekonta	Associate consultant, IRC / SRS PLC

Japan International Cooperation Agency

Project Name: The Project for Rural Water Supply, Sanitation and Livelihood Improvement through Dissemination of Rope Pumps (RPs) for Drinking Water
Duration: March 2013 to December 2016 (4 Years)
Implementing Agency: Ministry of Water, Irrigation and Energy (MOWIE), Water Resources Bureau of SNNPR
Direct Target Group: Water Resources Bureau of SNNPR, Woreda Water, Mine and Energy Offices in the target areas, Private Service providers concerned with RPs
Beneficiaries: Users of RPs
Project Target Areas: 10 kebeles in 4 Woredas of SNNPR

Working Version 2.1 February 19, 2014

Narrative Summary	Verifiable Indicator	Means of Verification	Assumptions
【Overall Goal】 Water supply and sanitation conditions and livelihood in rural areas are improved through dissemination of RPs for Drinking Water in the whole nation of Ethiopia.	As of the year 2019, in three (3) years after the termination of the Project, in the whole nation of Ethiopia. 1. The percentage of users who knows the methods of improving hygiene and sanitation becomes more than 80% among the RP users. 2. The percentage of RP users who find that their livelihood is improving becomes more than 80%.	• Data/information of MOWIE (Federal, Regional, Woreda) on water supply and sanitation facilities and served population (sample surveys if necessary) • National WASH Inventory • Documents related to Self-supply technology dissemination under Self-supply policy	
【Project Purpose】 Situations of water supply, sanitation and livelihood are improved through dissemination of RPs for Drinking Water in project target areas.	1. The number of RP users who installed RPs by Self-Supply which are manufactured in the project becomes 200. 2. The percentage of RP users who knows the methods of improving hygiene and sanitation becomes more than 90% among the RP users. 3. The percentage of RP users who find that their livelihood is improving becomes more than	• Various reports of the Project • Data/records of Woreda Water, Mine and Energy Offices • Results of monitoring survey of RP wells • Results of End-line survey	Self-supply policy in One WASH National Program is continued.

Narrative Summary	Verifiable Indicator	Means of Verification	Assumptions
	90%.		
【Outputs】 1. Specifications of RPs for Drinking Water and installation technologies are standardized at the federal level.	1.1 RP technologies are improved in terms of quality and cost reduction, and 2 or more improved RP models are operational by the end of year 2015. 1.2 Minimum standard specification of RPs is agreed among the stakeholders by the end of year 2016. 1.3 At least one (1) application for minimum standardized specification of RPs is applied to ESA, by the end of year 2016.	• Specification of improved RP models • Survey on the satisfaction of related stakeholders (manufacturers, installers, users) concerning on RPs • Documents on application for standardization of RP • Various reports of the Project •	Hindering factors for dissemination of RP technology (e.g. imitation and/or poor-quality products) are not significantly increased.
2. Strategies are formulated for manufacturing, installation technologies, operation and maintenance of RPs for Drinking Water.	2.1 Documentation for the quality control (QC) is prepared for manufacturing and installation of RPs by the end of year 2016. 2.2 Documentation for the Supply chain methodology for RPs parts distribution is prepared by the end year 2016. 2.3 Documentation for the O&M methodology for household RPs is prepared by the end year 2016. 2.4 The number of the trainees of TOT on RP manufacturing, installation and maintenance who completed the training becomes more than 14. 2.5 The number of the trainees of training on RP manufacturing who completed the training becomes more than 8. 2.6 The number of the trainees of training on RP installation,	• Documents on QC • Documents on Supply chain methodology • Documents on O&M methodology • Reports on TOT and manufacturing training • List of RP manufacturers and installers • List of RP parts providers/ retailers • Manual on RP manufacturing, TOT manual, Guide for RP installation • Various reports of the Project	There is no significant change in the RP parts market, not in favour of RP manufacturers and installers.

Narrative Summary	Verifiable Indicator	Means of Verification	Assumptions
	operation and maintenance who completed the training becomes more than 150. 2.7 Lists of RP manufacturers and installers are in place. 2.8 80% or more of the listed RP manufacturers and installers are aware of how to access to the RP parts providers/retailers.		
3. Promotion activities on RP including hygiene education are accelerated by the governmental and semi-governmental organization in the target Woredas.	3.1 Micro-Finance scheme for purchasing of RPs is established. 3.2 Methodology and procedures in promotion activities on RP including hygiene education are defined. 3.3 All Woreda WASH Teams are involved in the promotion activities. 3.4 The RP dissemination handbook. is developed based on the experiences and lessons from the activities for Output 3.	• Implementation plans of the target Woredas • Various reports of the Project • Lists of Woreda WASH Team members involved in RP technology promotion in the target Woredas • Results of RP technology and self-supply concept awareness test during various trainings/workshops • Documents of Water Resources Bureau related to Self-supply and RP dissemination	Micro finance institutes continue with certain schemes which can be utilized by the rural dwellers for RP purchases.
4. Practices of RP use including hygiene are supported continuously by the village technicians and extension workers in the target areas.	4.1 The percentage of functional RPs which are installed in the project is more than 90%. 4.2 The percentage of RP users who received support from health extension workers becomes more than 90%. 4.3 The percentage of RP users who received support from agriculture extension workers becomes more than 85%.	• List of installed RP wells • Data/records of Woreda Water, Offices on water facilities • Monitoring records on RP wells • Various reports of the Project, • Questionnaire survey to RP users	

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Narrative Summary	Verifiable Indicator	Means of Verification	Assumptions
5. Project knowledge and experiences are compiled as dissemination tools and acknowledged in nation-wide	5.1 The dissemination tools with reflection of the Project's experiences are delivered to water resources bureaus of each region	• Dissemination tools • Distribution record of dissemination tools	
【Activities】 1.1 Develop and improve various types of RPs to meet different needs, and tested. (*1) 1.1.1 Survey and make lists of RPs which are currently utilized 1.1.2 Improve each part of existing RPs 1.1.3 Test the existing and develop RPs in terms of durability, safety, functionality, compatibility, cost effectiveness, design, easiness of installation and O&M, protection of contamination 1.1.4 Test low-cost designs of structure of well head of traditional hand dug well and concrete-slab and propose feasible methods/measures to minimize contamination 1.1.5 Test low-cost drilling and construction technologies and do comparative analysis 1.2 Facilitate the standardisation process of RP specifications and its installation technologies 1.2.1 Organize meetings to examine specifications for RPs among the stakeholders concerned 1.2.2 Facilitate the approval processes of the RP in collaboration with MoWIE 1.2.3 Facilitate the necessary procedures for standardization by ESA 1.3 Formulate operation manuals for manufacturing, installation and O & M of RPs, based on the experiences and lessons learned from the activities for Output 1. 2.1 Propose quality control systems of manufacturing and installing of RPs 2.1.1 Clarify roles and responsibilities of the stakeholders in quality control systems of RPs 2.1.2 Propose certification systems for RP manufacturers 2.1.3 Assist in organizing a certain type of association for self-help among the private manufactures, installers 2.2 Consider O&M methodology for household RPs. 2.3 Consider supply chain methodology for RP parts distribution. 2.4 Facilitate consensus building on the concept and methodology of capacity development for RP manufacturing and installation with WRB and TVET Bureau 2.5 Assist in carrying out trainings on capacity development for RP manufacturing,	【Inputs】 **1. <u>The Japanese side</u>** 1) Experts i. Chief advisor / Dissemination strategy ii. Mechanical engineering / Mechanical design iii. Drilling technologies iv. Dissemination v. Agriculture vi. Micro-finance / Improvement of rural livelihood vii. Sanitation and hygiene viii. Other necessary fields 2) Equipment 3) Training in Japan, third countries and in Ethiopia 4) Cost for operation **2. <u>The Ethiopian side</u>** 1) Counterpart personnel 2) Equipment 3) Facilities (office space) 4) Cost for operation	

Narrative Summary	Verifiable Indicator	Means of Verification	Assumptions
installation, operation and maintenance 2.5.1 Carry out TOT on manufacturing and installation of RPs for TVETC trainers and private RP manufacturers utilizing operation manuals 2.5.2 Assist existing trainers in carrying out manufacturing training for the existing RP manufacturers 2.5.3 Assist trained trainers in carrying out manufacturing training for newly identified potential RP manufacturers 2.5.4 Assist trained trainers in carrying out installation trainings for Woreda technicians and village technicians through RP installation practices 2.6 Prepare list of manufacturer and village technicians, suppliers of RP materials and parts 3.1 Formulate Regional strategies for accelerating RP dissemination 3.1.1 Survey and identify existing water supply facilities 3.1.2 Draft Regional strategies for accelerating RP dissemination based on the analysis of shallow well locations, economic status, livelihood, and access to Drinking Water in rural areas in line with "the National Guidelines for Self-Supply in Ethiopia" and other related policy documents 3.2 Select target Woredas/areas for accelerating promotion activities on RP including hygiene education. 3.2.1 Categorize Woredas/areas base on the above strategies 3.2.2 Select target Woredas/areas together with the regional RP Team based on the above categorization and propose it to JCC for approval 3.3 Incorporate promotion activities on RP including hygiene education into the existing plans in the target Woredas 3.3.1 Collect and analyse necessary information in order to carry out the project activities 3.3.2 Identify incentives (e.g., introduction of cash crops) for target groups/areas and methodology in line with the self-supply concept 3.4 Introduce micro-finance institution to support for RP purchase 3.4.1 Identify appropriate micro-finance scheme and sign MOU with the micro-finance institution at the regional level 3.4.2 Organize workshops to introduce the identified micro-finance scheme to the personnel of micro-finance institutions in the target Woredas 3.4.3 Assist micro-finance institution in monitoring the operation of micro finance scheme			---------- 【Pre-Conditions】

Narrative Summary	Verifiable Indicator	Means of Verification	Assumptions
3.5 Carry out the promotion activities on RP including hygiene education with Woreda WASH Teams and extension workers 3.5.1 Assist Woreda WASH Teams and extension workers in organizing community meeting/workshops in the selected target areas for introduction of improvement of shallow wells, RPs and supportive options for financial arrangement 3.5.2 Assist the loan applicants in taking necessary procedures for RP purchase in the target areas 3.5.3 Assist village technicians in installing RP at the users' wells through OJT of them. 3.6 Develop RP dissemination handbook based on the experiences and lessons learned from the activities for Output 3. 4.1 Assist village technicians, extension workers and Woreda WASH Teams in improving operation and maintenance of RP 4.1.1 Assist village technicians in maintaining RP 4.1.2 Assist village technicians, extension workers and Woreda WASH Teams in monitoring RP use in technical aspect 4.1.3 Assist extension workers and Woreda WASH Teams in sharing experiences and good practices on operation and maintenance of RP at the community meeting mentioned above 3.5.1 4.2 Assist health extension workers in disseminating hygiene practices 4.2.1 Review way of hygiene education associate with promotion activities on RP 4.2.2 Assist health extension workers in instructing how to treat water at household level 4.2.3 Assist health extension workers in monitoring hygiene practice by RP users 4.2.4 Assist health extension workers in sharing experiences and good practices of hygiene at the community meetings mentioned above 3.5.1 4.3 Assist agriculture extension workers in disseminating practices for livelihood improvement. 4.3.1 Compile good practice of small scale agriculture with utilizing of RPs. 4.3.2 Assist agriculture extension workers in instructing how to practice livelihood improvement 4.3.3 Assist agriculture extension workers in monitoring practice for livelihood improvement by the RP users 4.3.4 Assist agriculture extension workers in sharing experiences and good practices of improvement of livelihood at the community meeting mentioned above 3.5.15.1			

Narrative Summary	Verifiable Indicator	Means of Verification	Assumptions
5.1 Compile experiences and lessons learned from activities for Outputs 1 up to 4 as dissemination tools. 5.2 Facilitate to organize workshops to acknowledge experiences and lessons learned from project with dissemination tools in nation-wide.			

Abbreviation: ESA: Ethiopian Standard Authority, EWTI: Ethiopian Water Technology Institute, MOU: Memorandums of Understanding, O&M: Operations and Maintenance, SNNPR: Southern Nations, Nationalities and People's Region, TOT: Training of Trainers, TVETC: Technical, Vocational and Educational Training College

Note*1: There are various use of RPs, such as individual household or community water supply, irrigation various scales.
1.1.2 Parts: wheel, wheel cover, bearing, counter rotation device, rope etc.
1.1.5 Drilling and construction technologies: hand dug well, tube well

The Federal Democratic Republic of Ethiopia
Ministry of Water, Irrigation & Energy

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MINUTES OF THE FIFTH JOINT COORDINATIONCOMMITTEEMEETING
FOR
THE PROJECT FOR RURAL WATER SUPPLY, SANITATION AND LIVELIHOOD IMPROVEMENT THROUGH DISSEMINATION OF ROPE PUMPS (RPS) FOR DRINKING WATER (WAS-RoPSS)

Date: Friday, 30th October, 2015
Venue: Ground Floor Hall, Ministry of Water, Irrigation and Electricity, Addis Ababa
Time: 9:15-12:00
Chairperson: Ato Nuredin Mohammed, Director, Water Supply and Sanitation Directorate, Ministry of Water, Irrigation and Electricity

Summary of discussion:
The 5th JCC was conducted according to the agenda as attached in Annex-1.
Participants of JCC, as attached as Annex-2, discussed and agreed upon as follows.

The meeting was opened by Ato Nuredin Mohammed. The remark was followed by Mr. Kimiaki Jin, Country Representative of JICA, explaining about JICA's assistance in water sector and expressed his expectation to have good discussion on the Project.

1. Presentation on the Plan of Activities in Project Period 3

Mr. Agash Asmemaw, Self-supply Focal Person of MoWIE, gave overview of the WAS-RoPSS Project, explained the activities achieved in the past periods and presented the plan of Project Period 3. Following his presentation, the floor was opened for questions and answers, chaired by Mr. Nuredine. Clarified points are as follows;

- ✓ The documents on standardization are with Mr. Abiti and he promised to proceed for ESA approval. Meanwhile, it was suggested that the draft minimum standard document should be distributed to the manufactures.
- ✓ "Self-supply" to be understood by the stakeholders is a challenge since water supply facility has been given freely by the government before. Furthermore, NGOs are giving rope pumps free at this moment. In Self supply context, households have to purchase rope pumps by their own expenses.
- ✓ Unless the beneficiaries satisfy with the rope pump product, they will not repay the loan. The rope pumps have been providing benefits to the users in terms of safety and easy operation and OMFI has experiences in their schemes including repayment collection. The Project will focus on repayment during this project period since this is a key for expansion of rope pump dissemination.
- ✓ Financial report should be presented in the JCC meeting.
- ✓ The statuses of rope pumps installed are monitored by the Project in July and August 2015. Out of 152, 10 rope pumps were not functioning due to the following reasons; well dry up, rope cut, well collapse

and the rope pump structure damage by animal hitting. These problems have been fixed by the village technician according to the latest information which was gathered this month. Water quality test result will be presented in the next progress report.

- ✓ To have safer drinking water, hygiene and sanitation awareness creation activity should be continuously done with intense cooperation of Health Bureau.
- ✓ From the Research and Development Directorate, there was a strong request on holding a national level meeting on minimum standard for the direct stakeholders like regional water bureaux and manufacturers. The Project Team will consider accommodating it in the planned final seminar of the Project.
- ✓ Payment to village technicians is done by the users. There is a price list for each item of maintenance which was agreed among the Village Technicians and the RP users.

2. Presentation on the revised PDM and R/D

Mr. Ephrem highlighted the revision of PDM. The PDM was finalized in August 2015, signed by MoWIE and JICA. The major change is the target area set in overall goal, which was modified from "nation-wide" to "SNNPR". The document is available at the Project office. Mr. Nuredin suggested distributing the PDM to the JCC members.

3. Remark from JICA HQ

Mr. Yamagami made a remark for the meeting, reporting the site visit conducted a day before to one of the project target areas. He recognised that the users were pleased to have rope pumps in their compound. At the same time, water quality is a big concern, since people are using the water fetched from the rope pump wells directly for drinking without treatment. Collaboration with Health Bureau is critical to tackle this problem.

4. AOB

Mr. Ephrem explained that SNNPR is planning to distribute 10,000 rope pumps and the Project is suggesting some assistance to fill the gap. Mr. Agash mentioned that the previous support did not meet the regions expectation and warned JICA to take it into consideration. Method of training and utilizing microfinance scheme is also a concern of the Ministry. All the advices and suggestions from MoWIE should be forwarded to SNNPR.

5. Closing

The chairman thanked all the participants for the fruitful discussion. The Project team is expected to put its best efforts especially on water quality, hygiene and sanitation. On the other hand, standardization will be preceded by Mr. Abiti, sending the documents to required institutions for necessary approval. The chairman suggested MoWIE counterparts to visit a project site. At the same time, MoWIE will guide the Region to be able to take proper actions for Self-supply acceleration.

Meeting was closed at 11:20.

Minutes certified by

Mr. Nuredin Mohammed
Director, Water Supply and Sanitation Directorate,
Ministry of Water, Irrigation and Electricity

北吉 秋乃

Ms. Akino Kitazume
Chief Advisor / Dissemination Strategy,
JICA Project Team

Annex-1

The 5th Joint Coordinating Committee Meeting

October 30, 2015, Ground Floor Hall, Ministry of Water, Irrigation and Electricity

Chairperson: Nuredine Mohammed, Director

Programme

Content	Presenter
Opening Remarks	Nuredine Mohammed, Director
Remarks from JICA Ethiopia Office	Kimiaki Jin, Representative
Presentation on the Plan Activities in Project Period 3	Agash Asmamew, Project Team, MoWIE
Questions and Answers	
Presentation on the revised PDM and R/D	Ephrem Fufa, Project Officer
Questions and Answers	
Remarks from JICA HQ	Keisuke Yamagami, JICA HQ
Closing Remarks	Nuredine Mohammed, Director

Annex-2

The 5th Joint Coordinating Committee Meeting

Participants

Ministry of Water, Irrigation and Electricity

Nuredin Mohammed,	Director, Water Supply and Sanitation Directorate
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MINUTES OF MEETING BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY
AND
MINISTRY OF WATER, IRRIGATION AND ELECTRICITY
OF THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA
ON
JAPANESE TECHNICAL COOPERATION PROJECT
FOR
"THE PROJECT FOR RURAL WATER SUPPLY, SANITATION AND LIVELIHOOD IMPROVEMENT THOROUGH DISSEMINATION OF ROPE PUMPS (RPs) FOR DRINKING WATER"

The Terminal Evaluation Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") visited the Federal Democratic Republic of Ethiopia (hereinafter referred to as "Ethiopia") from 12th June to 1st July, 2016 for the purpose of reviewing the progress and the achievements of "The Project for Rural Water Supply, Sanitation and Livelihood Improvement through Dissemination of Rope Pumps (RPs) for Drinking Water" (hereinafter referred to as "the Project").

During its stay in Ethiopia, the Team visited the Project area, exchanged views and opinions with stakeholders on the Project and had a series of discussions with the officials of the Ethiopian organizations concerned. And the Joint Coordination Committee (hereinafter referred to as "the JCC') was held on 30th June, 2016.

As a result of discussions, the Team submitted the Joint Terminal Evaluation Report as attached and both sides agreed on the matters referred to in the report.

Addis Ababa, 30th June, 2016

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The Federal Democratic Republic of Ethiopia

Ministry of Finance and Economic Cooperation 5

JOINT TERMINAL EVALUATION REPORT
FOR
THE JAPANESE TECHNICAL COOPERATION PROJECT
FOR RURAL WATER SUPPLY, SANITATION AND LIVELIHOOD IMPROVEMENT THRUOGH DISSEMINATION OF ROPE PUMPS FOR DRINKING WATER
(WAS-ROPSS)
IN
THE FEDERAL DEMOCRATIC REPUPLIC OF ETHIOPIA

Japan International Cooperation Agency
and
Ministry of Water, Irrigation and Electricity
The Federal Democratic Republic of Ethiopia

JUNE 30, 2016

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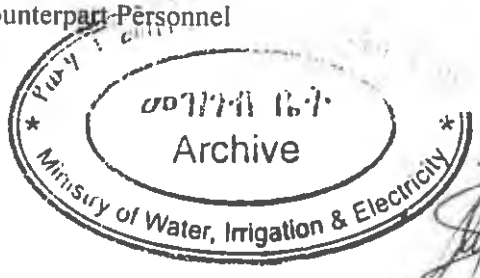
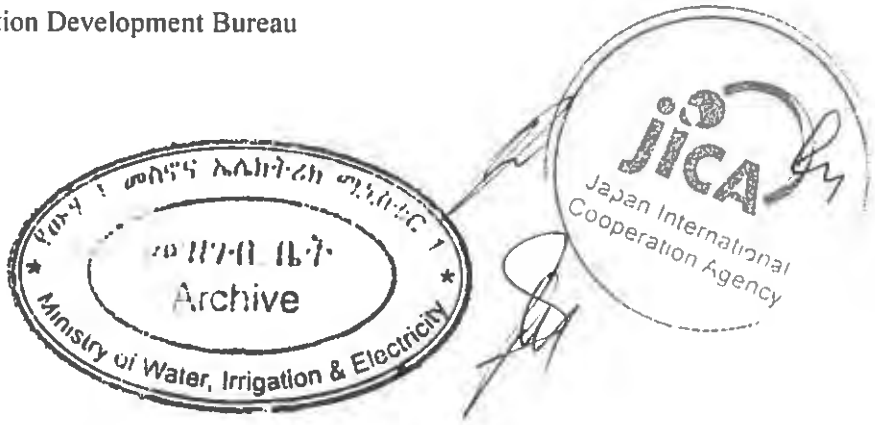


Abbreviations

BoA	Agriculture Bureau
BoH	Health Bureau
COC	Certificate of Competency
C/P	Counterpart
ESA	Ethiopia Standards Agency
ETB	Ethiopian Birr
EWTEC	Ethiopia Water Technology Centre
EWTI	Ethiopia Water Technology Institute
GI pipe	Galvanized Iron Pipes
HDPE	High Density Polyethylene
HWTS	Household Water Treatment and Storage
IRC	International Water and Sanitation Centre
ISO	International Organization for Standardization
JCC	Joint Coordination Committee
JICA	Japan International Cooperation Agency
MFI	Micro Finance Institute
MIDI	Metal Industrial Development Institute
MOU	Memorandum of Understanding
MoWIE	Ministry of Water, Irrigation and Electricity
NGO	Non-Governmental Organization
OMFI	OMO microfinance institute
PDM	Project Design Matrix
RP	Rope Pump
SNNPR	Southern Nations, Nationalities and Peoples' Region
TOT	Training Of Trainers
TVET	Technical and Vocational Education and Training
TVETC	Technical and Vocational Education Training Collage
UAP	Universal Access Plan
UNICEF	The United Nations Children's Fund
VT	Village Technician
WAS-CAP	The Water Sector Capacity Development Project in Southern Nations, Nationalities and People's Regional State in the Federal Democratic Republic of Ethiopia
WASH	Water, Sanitation and Hygiene
WAS-RoPSS	The Project for Rural Water Supply, Sanitation and Livelihood Improvement through Dissemination of Rope Pumps for Drinking Water
WHO	World Health Organization
WIDB	Water and Irrigation Development Bureau



1. INTRODUCTION

1-1. Objectives of the Terminal Evaluation

The Project for Rural Water Supply, Sanitation and Livelihood Improvement through Dissemination of Rope Pumps for Drinking Water (hereinafter referred to as "the Project") is a bilateral technical cooperation project between the Government of Japan through JICA and the Government of the Federal Democratic Republic of Ethiopia through Ministry of Water, Irrigation and Electricity (MoWIE), Water and Irrigation Development Bureau (WIDB) of Southern Nations, Nationalities and Peoples' Region (SNNPR). This three-year and nine-month project was launched in March 2013 and will be completed in December 2016[1]. With the remaining project period of about six months, JICA dispatched the Japanese Team to Ethiopia from 12 June to 1 July 2016, for evaluating the achievement of the Project. The Joint Terminal Evaluation team consisting of MoWIE and SNNPR WIDB officials and the Japanese Team has undertaken the terminal evaluation jointly.

Objectives of the terminal evaluation are as follows:

1) To review the degree of the achievement of inputs, outputs and the Project Purpose based on the Project Design Matrix (hereinafter referred to as "PDM") (Annex 1: PDM version 3.1);
2) To conduct a comprehensive evaluation of the Project from the viewpoints of five evaluation criteria (relevant, efficiency, effectiveness, impact, and sustainability)
3) To identify contributing and hindering factors of the progress of the Project;
4) To formulate recommendations for the Project and relevant parties with regard to the activities for the remaining period of the Project and after termination of the Project; and
5) To draw out lessons learned from the Project for future cooperation in the same field.

1-2. Methodology of the Terminal Evaluation

The Terminal Evaluation was conducted based on PDM (Version 3.1), which was agreed to revise during the Mid-Term Review in February 2015 and signed on 31 July 2015 (see Annex 1 PDM Version 3.2). The Joint Evaluation Team consisting of both the Ethiopian and Japanese sides conducted the evaluation based on the confirmation on the achievement of the Project and the implementation process with the five evaluation criteria. Based on its result, this Joint Evaluation Report was developed. The definition of the five evaluation criteria applied in the analysis for the evaluation is given in the table below.

Criteria	Definition as per the JICA Evaluation Guidelines
1. Relevance	Relevance of the plan for the Project has been reviewed in terms of validity of the Project objective and overall goal, in connection with the development policy of the Government of Ethiopia, the foreign assistance policy of the Government of Japan, the needs of beneficiaries, and the logical coherence of the Project.
2. Effectiveness	Effectiveness is considered by assessing the extent of achievement of the Project objective and the clarification of the relationship between the Project purpose and the outputs.
3. Efficiency	Efficiency of the implementation of the Project is analyzed with focus on the relationship between outputs and inputs in terms of time, quality and quantity of inputs.
4. Impact	Impact of the Project is evaluated on expectation level to achieve the Overall Goal and the basis of direct or indirect, positive or negative, intended or unintended influences generated by the Project.
5. Sustainability	Sustainability of the Project is evaluated on the political, institutional, financial and technical aspects for examining how the achievements of the Project would be sustainable after the period of the Project.

[1] Project period is divided as follows: Period 1(2013.03 - 2014.07), Period 2 (2014.07 - 2015.08), Period 3 (2015.09 – 2016.12).

Data collection methods used for the terminal evaluation were as follows:

- Review of the Project documents and policy documents
- Questionnaires of Ethiopian counterpart personnel (C/Ps), Japanese experts
- Key informant interviews to draw out opinions of the following stakeholders on the issues above: Ethiopian C/Ps in MoWIE, WIDB, TVETC, Metal Industry Development Institute (MIDI), Bureau of Agriculture (BOA) and Bureau of Health (BOH) RP manufacturers, Village Technicians, OMFI, RP users, RP self-supply partners (IRC, Millennium Water Alliance, Water.org, International Water and Sanitation Center, Aqua for all) and Japanese experts
- Site observations of TVETC, Village Technicians, RP users in the Project target sites (1. Dale Woreda, 2. Damot Pulasa, 3.Meskan Woreda, 4. Yirgachefe Woreda)

The list of C/Ps and stakeholders consulted is shown in Annex 3.

1-3. Members of the Joint Terminal Evaluation Team

The Terminal Evaluation of the Project was conducted jointly by both the Ethiopian and Japanese sides. Members of the team were as follows.

(1) Ethiopian side

Name	Title	Organization
Mr. Agash Asmamaw	Advisor on Rural WASH and focal person for self-supply	Ministry of Water, Irrigation and Electricity
Mr. Bekele Belete	Social Economist	Water, Irrigation and Development Bureau of SNNPR

(2) Japanese side

Name	Title	Position and Organization
Mr. Yuki Aratsu	Leader	Global Environment Department, JICA
Mr. Keisuke Yamagami	Evaluation Planning	Water Resources Team 2, Water Resources Group, Global Environment Department, JICA
Ms. Hiroyo Onozato	Evaluation Analysis	Global Link Management

1-4. Schedule of the Terminal Evaluation

The Terminal Evaluation was conducted during the period between 12 June until 1 July 2016 as in ANNEX 4.

2. OUTLINE OF THE PROJECT

2-1. Background

In the Federal Democratic Republic of Ethiopia (hereinafter referred to as 'Ethiopia'), the proportion of the population who has access to safe water was as low as 44%, at the time of the preparation of the project, while the average of Sub-Saharan African countries is 61% (2012, WHO/UNICEF). The Government of Ethiopia set the target of water supply access of 98.5% by 2015 in the Universal Access Plan 2, UAP2, which is a five-year development plan of the water and sanitation sector aligned with GTP I. In particular, it focuses on the rural water supply, as the average increment of the access rate is set about 7% annually (UAP2, MoWIE).

Japan International Cooperation Agency (hereinafter referred to as 'JICA'), as a development partner of Ethiopia for a long time, has provided financial and technical assistances in rural water supply sub-sector for the last several decades. In particular, it has been contributing to the new sphere of rural water supply technology,

rope pumps, hereinafter referred to as 'RP'. RP, as a low cost water lifting device which can be self-supplied by the rural people, was improved and introduced by two technical cooperation projects, namely, Ethiopia Water Technology Centre Project (EWTEC) and the Water Sector Capacity Development Project in Southern Nations, Nationalities and People's Regional State in the Federal Democratic Republic of Ethiopia (WAS-CAP).

RP is now increasingly valued as one of the low cost technologies for 'Self Supply' as the government placed it in its national guidelines and plans. However, dissemination of RP has yet been limited so far for several reasons. For instance, some untrained local manufacturers forged RP, which were low in quality and caused malfunctioning. These low quality RP in turn contributed to bad reputations and lowered the market values of RP in some areas. The absence of the appropriate financial support system to the rural people also contributed to the slow expansion of the RP market. Therefore, it is essential that the government have clear national strategies for accelerating the dissemination of RP, which may include the financial support system for the rural people, as well as improvement of RP as a valued market commodity.

In this context, the Government of Ethiopia has requested technical assistance to JICA in August 2010 and JICA conducted the detailed project planning study from March to April 2012 and in June 2012. As a results, it was found that the Government of Ethiopia has already made a good progress in the acceleration of the Self-Supply, and that the technical assistance shall not be limited to improvement and standardization of RP but shall be extended to dissemination and marketing of RP. Both parties agreed the project design and signed the Record of Discussion (R/D) in August 2012, and the Project was officially launched in March 2013.

2-2. Summary of the Project

The outline of the Project described in PDM Version 3.2 is as follows.

Overall Goal	Water supply and sanitation condition and livelihood in rural areas are improved through dissemination of RPs for Drinking Water in Southern nations, Nationalities and People's Region.
Project Purpose	Situation of water supply, sanitation and livelihood are improved through dissemination of RPs for Drinking Water in project target areas.*
Outputs	1) Specifications of RPs for Drinking Water and installation technologies are standardized at the federal level. 2) Strategies are formulated for manufacturing, installation technologies, operation and maintenance of RPs for Drinking Water. 3) Promotion activities on RP including hygiene education are accelerated by the governmental and semi-governmental organization in the target woredas. 4) Practices of RP use including hygiene are supported continuously by the village technicians and extension workers in the target areas. 5) Project knowledge and experiences are compiled as dissemination tools and acknowledged in SNNP and other Regions.

*The target areas are four geographical areas (one to three kebeles per area, in total ten kebeles in four selected woredas. Target Woredas & Kebeles: 1. Dale Woreda (Bera Chale, Bera Tedicho, Gajamo), 2. Damot Pulsa (Game Kebecho, Helen Korke, Tomtome Menta), 3.Meskan Woreda (Yetabon), 4. Yirgachefe Woreda (Chelba, Chitu, Dumerso). The selection was made in November 2013 based on the needs assessment in SNNPR.

3. ACHIEVEMENT OF THE PROJECT

Achievements of the Project are measured in terms of inputs, activities, outputs, project purpose and overall goals, all of which are in accordance with the PDM (Version 3.1) as in Annex 1.

3-1. Results of Inputs

3-1-1 Japanese Side

(1) Experts

Eight short-term experts have been dispatched as planned in the following various fields. The total period of dispatch is 83.77 man-month as of 31 May 2016 out of the planned 95.56 man-month till the end of the Project period.

Table 3.1 - Placement Records of Japanese Experts (as of 31 May 2016)

Name	Fields of expertise	M/M	
		By Period	Total
Ms. Akino KITAZUME	Chief Advisor/ Dissemination Strategy	7.50 (Period 1) 7.00 (Period 2) 5.57. (Period 3)	20.07
Mr. Takeshi ONO	Deputy Chief Advisor/ Dissemination	6.93 (Period 1) 3.67 (Period 2) 0.00 (Period 3)	10.60
Mr. Yoichi HARADA	Mechanical Engineering/ Mechanical Design	5.00 (Period 1) 3.00 (Period 2) 1.73 (Period 3)	9.73
Mr. Hidekuni USAMI	Drilling Technologies/ Construction Management	4.50 (Period 1) 0.93 (Period 2) 0.73 (Period 3)	6.16
Ms. Takako UCHIDA	Agriculture (Micro-Irrigation/Cultivation)	6.20 (Period 1) 3.50 (Period 2) 3.53 (Period 3)	13.23
Ms. Ayano ISHII	Micro Finance/ Improvement of Rural Livelihood	2.00 (Period 1)	2.00
Mr. Jun SUGAI	Micro Finance/ Improvement of Rural Livelihood	1.00 (Period 1)	1.00
Ms. Kaina HONMA	Sanitation and Hygiene/ Community Development	6.77 (Period 1) 8.27 (Period 2) 5.93 (Period 3)	20.97
		Grand Total	83.77

(2) Provision of Equipment

By the time of the Terminal Evaluation, total amount of 4,536,800 Japanese Yen (equivalent to US $48,242)[2] has been disbursed for the costs of equipment provision including PCs, power supply generator, digital turbidity meter etc. The list of equipment is shown in Annex 5.

Table 3.2 - Expenses for provision of equipment (Unit: JPY)

Period 1 (2013.03 - 2014.07)	Period 2 (2014.07 - 2015.08)	Period 3 (*plan) (2015.09 – 2016.12)	Total (JPY)
4,104,800	0	432,000*	4,536,800

[2] For calculation, JICA official exchange rates are used as follows: @JPY91.84/USD (March 2013) for period 1, JPY103.41/USD (2014.07) for period 2, 121.81JPY/USD (2015.09) for period 3.

(3) Local Operational Costs

The amount of financial contribution from the Japanese side for local operational costs (RP training and material costs, office supplies, local consultants and staff, fuel, travel costs etc.) during the Project is 159,153,000 Japanese Yen (Equivalent to US $1,540,269)[3] at the time of the terminal evaluation.

Table 3.3 - Local Operational Costs (Unit: JPY)

Period 1 (2013.03 - 2014.07)	Period 2 (2014.07 - 2015.08)	Period 3 (*Plan) (2015.09 – 2016.12)	Total (JPY)
59,954,000	50,033,000	49,166,000	159,153,000

3-1-2 Ethiopian Side

(1) Assignment of Counterpart Personnel (C/P)

From the commencement of the Project, total of 41 persons were assigned as C/Ps from 9 organizations (MoWIE 11, WIDB 15, EWTI 1, OMFI 4, TVET bureau of SNNPR 1, TVETC – Hawassa 2, BOA 1, BOH 4, Women Children and Youth Affairs Bureau of SNNPR 1). The list of C/P is shown in ANNEX 6.

(2) Provision of buildings and facilities

Office space for the Project was provided in MoWIE in Addis Ababa and WIDB in Hawassa. Training facilities were provided in TVETC for RP manufacturing and installation training and at MIDI for welding training etc.

(3) Budgetary allocation

MoWIE and WIDB disbursed their budget for the Project activities as below.

- (MoWIE) The periodic review and mid-term review of the project etc. participated by C/Ps, Operation and facilitation of activities such as liaison with stakeholders.
- (WIDB) Training materials and pumps for RP installment and O&M training and distribution costs. Material costs (documents, stationary) for RP promotion orientation.

3-2. Achievement of the Activities

Overall activities were implemented as planned based on PDM (Annex 1) and Plan of Operations (PO) (Annex 2) with slight delays in finalization of the documents such as RP handbook. Major details of activity achievement for each Output are explained in the following section 3-3.

[3] For calculation, JICA official exchange rates are used as follows: @JPY91.84/USD (March 2013) for period 1, JPY103.41/USD (2014.07) for period 2, 121.81JPY/USD (2015.09) for period 3)

3-3. Achievement of the Outputs

Findings regarding the achievement of the expected outputs at the time of the terminal evaluation are as follows:

3-3-1. OUTPUT 1

Output 1: Specifications of RPs for Drinking Water and installation technologies are standardized at the federal level.	
Objectively Verifiable Indicators	**Achievement**
1.1. RP technologies are improved in terms of quality and cost reduction, and 2 or more improved RP models are operational by the end of year 2015.	• Two RP models (1. 2014 Model, 2. Pole Model) with upgraded specifications were selected for the promotion by the Project after developing four new models and conducting a series of comparative tests with other two existing models. • As a result of the improvement in structure frame with less welded parts, riser pipes[4], and guide box of RP, production costs of these two models are lower than the JICA Classic Model by 11.4% for 2014 Model and 48.3 % for Pole Model. Improvement was also made for reducer blocks, concrete well cover and apron to prevent drain water from flowing back to well. • Newly developed parts such as U-shape[5] frame, pre-casted rubber wheel and HDPE pipes were also tested for providing more technical options for RP manufacturing in future. • After 2014 model was selected for RP promotion, 120 units were produced. 120 units have been installed and functioning.
1.2. Minimum standard specification of RPs is agreed among the stakeholders by the end of year 2016.	• In July 2015, the Standardization Working Group[6] agreed and finalized the minimum standards of RP parts for its submission to the Ethiopia Standards Agency (ESA).
1.3. At least one (1) application for minimum standardized specification of RPs is applied to ESA, by the end of year 2016.	• In November 2015, MoWIE submitted the application for the minimum standardized specification of RP to ESA • On 31 March 2016, Technical inspection committee of ESA was held with participation of MoWIE and technical staff from the Project team for presenting technical information of the RP minimum standards. • In April 2016, the minimum standardized specification of RP was approved by ESA.

Output 1 has been achieved at the time of the terminal evaluation as shown in the indicators above.

The minimum standard specification of RP was approved by ESA. This achievement is beyond the target set within the Project period. The next step for MoWIE is to disseminate this national standard to relevant stakeholders including governmental bodies at the federal, regional and woreda levels as well as manufacturers.

[4] ISO standardized uPVC pipes were introduced for new models.

[5] Due to the reduced number of welded part, the strengthening of the frame was increased and the risk of corrosion was reduced since the bendable part does not have any opening on the pipe walls where the water could penetrate.

[6] The RP standardization Working Group was established in October 2013 to discuss the issue of RP standardizations composed of the representatives of MoWIE and WIDB, RP manufactures, NGOs and private RP trainers.

Output 2

Output 2: Strategies are formulated for manufacturing, installation technologies, operation and maintenance of RPs for Drinking Water.	
Objectively Verifiable Indicators	**Achievement**
2.1 Documentation for the quality control (QC) is prepared for manufacturing and installation of RP by the end of year 2016.	• By the Period 3, five types of the checklist[7] were developed for quality control of RP manufacturing and installation. • Through TVET system of Certificate of Competency (COC), technical certificate exams for RP manufacturing and installation have been introduced. • Draft strategy paper for the quality control was developed and will be finalized by October in 2016.
2.2 Documentation for the Supply chain strategies for RP parts distribution is prepared by the end year 2016.	• Workshop was held for discussing supply chain in the region with participations of RP manufacturers and C/Ps. The list of part shops was developed. The supply-chain strategy paper has been under development. It will be reviewed among related C/Ps and finalized by October 2016.
2.3 Documentation for the O&M strategies for household RPs is prepared by the end year 2016.	• O&M sheet, which illustrates the procedure of maintenance of RP, was developed after agreeing on the workflow of Village Technicians. Based on the results of the refresher training for Village Technicians held in March and April 2016, the strategy paper for the O&M has been under development and will be finalized by October 2016.
2.4 The number of the trainees of TOT on RP manufacturing, installation and maintenance who completed the training becomes more than 14.	• 16 trainees (12 from TVETC trainers, 4 from the private sector) completed two TOT sessions (1. Installation/O&M, 2. Manufacturing). They have been conducting RP installation and maintenance training for village technicians on sites.
2.5 The number of the trainees of training on RP manufacturing who completed the training becomes more than 8.	• 13 trainees completed RP manufacturing training (6 trainees for the advance course, 7 trainees for basic course.). • 10 RP manufactures passed the COC exam.
2.6 The number of the trainees of training on RP installation, operation and maintenance who completed the training becomes more than 150.	• The total number of trainees is more than 262 as below. By the Mid-term review, 52 Village Technicians, 26 officials from WIDB, Zone and Woreda Water Offices, 12 TVETC trainers, 4 from the private sector participated in RP installation and O&M training. In addition, 200 households of RP users participated in RP O&M training. • In total 27 passed COC for RP installation (10 TVETC instructors, 8 Village Technicians, 6 technical officials of Woreda Water Offices, 1 WIDB official, 2 Project office staff)
2.7 Lists of RP manufacturers and installers are in place.	• "List of Manufacturer & Supplier of Pipes and Fittings Pipes"[8] was developed through the workshop with participation of relevant C/Ps as well as RP manufacturers in February 2015. • "Village Technicians Catalogue" was developed in March 2016.

[7] 1. Quality Control checklist for RP manufacturing, 2. Quality Control checklist for RP Installation and construction of apron, drainage canal and soak away pit etc., 3. Checklist for techniques and qualification of RP manufacturers, 4. Checklist for techniques and qualification of Village Technicians as RP installers, 5. Checklist for qualification of RP technical trainers.

[8] The list includes the information of 8 pipe suppliers, 9 fitting suppliers, 7 metal product suppliers, 2 piston suppliers, 14 manufacturers, and 1 plastic-well liner ring supplier (as of March 2016).

2.8 80% or more of the listed RP manufacturers and installers are aware of how to access to the RP parts providers/ retailers.	• 88% of the RP manufactures in the list responded that they were aware of how to access to RP parts (The result of the questionnaire at the workshop in March 2016).

Output 2 has mostly been achieved at the time of the terminal evaluation as shown in the indicators above. Indicator 2-1, 2-2 and 2-3 target the formulation of strategies respectively for quality control of RP manufacturing & installation, supply chain of RP parts, and O&M of RP. These strategy papers have been under development and will be finalized by October in 2016. All other indicators have already been achieved.

The number of trainees by organizations is listed as below. After the Mid-Term Review, the Project has also started training activities to support WIDB's initiative in installation of 10,000 RP in SNNPR based on the Minutes of Meeting as explained in 3-6-3 (1). For instance, in Period 3, the Project team expanded its activities to delivering 1) installation and O&M training for zonal water offices and woreda water offices beyond the project target areas, 2) training for manufacturing the concrete well covers and reducer blocks, and 3) orientation for zonal and woredas' admin, water, health, agriculture and OMFI offices on RP dissemination and credit scheme.

Table 3.4 - Number of trainees by training courses and organization (12 June 2016)

Organization	1. TOT	2. RP manufacturing (advanced)	3. RP Manufacturing (Basic)	4. Installation and O&M	Accumulated No. of Trainees
TVETC Instructor	12	-	-	12	24
Private	4	6	7	17	34
WIDB	1	-	-	1	2
Zonal Water Office (Outside project target)	-	-	-	3	3
Woreda Water Office	-	-	-	11	11
Woreda Water Office (Outside project target)	-	-	-	9	9
Village Technicians	-	-	-	40	40
Village Technicians (Outside project target)	-	-	-	18	18
RP Users (household)	-	-	-	200	200
Total	17	6	7	311	341

Source: JICA Experts

3-3-2. Output 3

Output 3: Promotion activities on RP including hygiene education are accelerated by the governmental and semi-governmental organization in the target woredas.	
Objectively Verifiable Indicators	**Achievement**
3.1. Micro-Finance scheme for purchasing of RPs is established.	• Omo Microfinance Institute (OMFI) established "RP credit scheme" in February 2014[9]. • As of June 2016, 200 households signed contracts with OMFI to install RP.
3.2. Methodology and procedures in promotion activities on RP including hygiene education are defined.	• After examining and defining the selection criteria of wells and promotion method, RP promotion activities have been implemented by officials and extension workers and agricultural development agents in target Woredas and Kebeles.
3.3. All Woreda WASH Teams are involved in the promotion activities.	• WASH annual plan formulation workshop were held in June 2014 and June 2015 with participations by WASH teams (Region, Zone, Woreda officials of the Admin, Water, Agriculture and Health sectors) as well as OMFI staff in the Project target sites. • In all Project target sites, agriculture officials, health workers as well as OMFI agents participated in RP promotion activities. According to the terminal evaluation interviews, they will continue promotion as their regular tasks.
3.4. The RP dissemination handbook is developed based on the experiences and lessons from the activities for Output 3.	• Framework of the RP dissemination handbook was formulated and contents of promotion tools were revised in WASH planning workshop. From November 2015, the C/Ps and JICA Experts started developing the handbook. It will be finalized by October 2016.

Output 3 is highly likely to be achieved by the end of the Project period as shown in the indicators above. Promotion activities on RP including hygiene education have been accelerated by the WASH teams and OMFI etc. in the target woredas. After training for OMFI agents and woreda water office staff in December 2015 followed by the repayment campaign, RP users have started their loan repayment as shown in the table below.

Table 3.5 - Progress of repayment by RP finance scheme clients (as of 31 May 2016)

	Dale	Damot Pulasa	Meskan	Yirgachefe	Total
RP installed	94	12	41	51	198
Number of household using RP finance scheme	93	12	39	50	194
Number of households being due to repayment	50	12	39	27	128
Number of households started loan payment (of those due to repayment)	68 (39)	12 (12)	21 (21)	32 (16)	133 (88)
Loan amount (Birr)	421,166	53,065	123,409	222,753	820,393
Amount repaid (Birr)	8,780	3,350	12,134	28,576	52,840
Recovery rates (Actual amount repaid out of the amount to be paid back by 31 May 2016 according to the contract*) (%)	51.7	25.2	35.5	64.8	44.30

*After 4 months of grace period, clients start the repayments (4 times) during 2 years.

Source: Monthly report by JICA Experts (May 2016) based on the primary data from the OMFI monthly report.

[9] RP credit scheme by Omo MFI targets residents in SNNPR. Credit amount is 5,000ETB (amended from 4,000ETB in January 2015). Loan term is 1 to 2 years (bi-annual or annual). Interest is 18% flat plus 2% service fee. Collateral includes having at least half hectare of land, the title to an estate (land certificate) as collateral for RP credit from the kebele administration, forming a group collateral or having a house in urban areas as collateral issued from the municipalities.

3-3-3. Output 4

Output 4: Practices of RP use including hygiene are supported continuously by the village technicians and extension workers in the target areas.	
Objectively Verifiable Indicators	**Achievement**
4-1. The percentage of functional RP which are installed in the project is more than 90%.	• 97.5% of installed RP is functioning (117 RP wells units out of 120 functioning wells) according to the Project end-line survey[10]. Only 3 units were not functioning due to problems with pumps. • Besides during the terminal evaluation mission, it was observed about 92.5% of the RP were operational.
4-2. The percentage of RP users who received support from health extension workers becomes more than 90%.	• Promotion activities on RP including hygiene education were included to the existing plans in the target woredas and 3,700 persons participated in Period 2. • According to the Project end-line survey, 95% of RP users responded that they received extension support.
4-3. The percentage of RP users who received support from agriculture extension workers becomes more than 85%.	• 3,700 persons benefited from the promotion activities in Period 2. 199 persons including RP users participated in training in agriculture. • According to the Project end-line survey, 94.5% of RP users (119 responders) received information supports from extension workers on livelihood improvement.

Output 4 has been achieved at the time of the terminal evaluation as shown in above indicators.

Regarding water quality management, regular water examination has been conducted by woreda water offices and woreda health offices with supervision of the water quality expert from WIDB for installed RP in dry season and rainy season. With regard to household water treatment, the comparison of available household water treatment technologies and tools was conducted to derive advantages and disadvantages, and identify the most suitable option for rope pump wells as well as to design adequate awareness creation program for community meetings. On the other hand, in order to strengthen further promotion of water hygiene, water point sanitation, and household water treatment and storage in association with the Self-supply acceleration program, WIDB and BOH clarified and agreed upon their roles and responsibilities in the collaborative manner in April 2016[11].

3-3-4. Output 5

Output 5: Project knowledge and experiences are compiled as dissemination tools and acknowledged in SNNPR and other Regions.	
Objectively Verifiable Indicators	**Achievement**
5.1. The dissemination tools with reflection of the Project's experiences are delivered to water resources bureaus of each region.	• In self-supply fair, which was implemented in collaboration with self-supply partners in March 2015 and 2016, the Project's experiences were presented utilizing the Project leaflet, newsletters "Self-Supply News" as well as other public relation goods. During this event, RP manufacturers had opportunities for business promotion at the demonstration booth. Outside of the event, the Project organize the field tour for visitors from abroad which contributed on expansion of the information network beyond the

[10] 51 RP wells which had problems with the well (e.g. collapsed well, lowered water level) were excluded from the calculation for the function rates. The level of achievement may be varied depend on the figure of the indicator 4.1 which may change through the time, and the number of RP installed. In dry season in 2016, due to drought, many wells (49) lacked water or had the low water level. Only 3 units were not functioning due to problem with pumps.

[11] MOU among WIDB, BOH, JICA Ethiopia Office and WasRoPSS signed on 25 April 2016.

	borders. • Draft "RP dissemination handbook" has been prepared and will be finalized by October 2016. • RP manual, O&M sheets and OMFI booklet, Water quality test sheet etc. have already distributed within SNNPR in March 2016.

Output 5 is highly likely to be achieved by the end of the Project period as shown in above indicator. By reflecting the results of Output 1, 2, 3 and 4, WIDB with JICA Experts have been working on finalization of the "RP dissemination handbook." This handbook is consisting of a series of promotion methods and procedure including technical transfer contents by authorities in woredas and kebeles, training methods on water sanitation and hygiene promotion as well as RP credit scheme procedure. Once the handbook is finalized, it is expected to be distributed to water bureau as well as all bureaus and stakeholders concerned of every region by October 2016.

3-4. Achievement of the Project Purpose

Findings regarding the achievement of the Project Purpose at the time of the terminal evaluation are as follows:

Project Purpose: Situation of water supply, sanitation and livelihood are improved through dissemination of RP for Drinking Water in project target areas.	
Objectively Verifiable Indicators	**Achievement**
1. The number of RP users who installed RP by Self-Supply which are made in the project becomes 200.	• The number of households equipped with RP reached 200 on 13 June 2016. (see Table 3.6 for distributions by target woreda)
2. The percentage of RP users who knows the methods of improving water hygiene and sanitation becomes more than 90% among the RP users.	• According to the Project end-line survey, 100% of 171 households using RP knows at least one of the following methods of improvement. ✓ Cleaning the water points (100%) ✓ Keeping animals away from the water point (99%) ✓ Fencing around the well (60%) ✓ RP users knows the method of household water treatment and storage (HWTS) (44%)
3. The percentage of RP users who find that their livelihood is improving becomes more than 90%.	• According to the Project end-line survey (for 171 RP user-households), 98.3% responded that they found positive changes in the well-being of their family due to RP installation (40.4% very positive, 57.9% positive.)

Project Purpose has been achieved at the time of the terminal evaluation as shown in the indicators above. In Period 2, the serious water shortage due to lack of rain has limited the number of wells that can pass the technical assessment for RP installation especially at some target areas in Damot Pulasa woreda. Potential of ground water[12] in this area is relatively lower than other target areas. There were cases that water sources could not be identified after drilling[13], even though people still come to the Damot Pulasa woreda water offices for requesting RP.

[12] In technical term, it is called sub-surface water.
[13] e.g. At Lera health post in Damot Pulasa, drilling was conducted for 2 points, water did not come out.

Table 3.6: Distribution of Installed RP as of 13 June 2016

Woreda	Test/Demonstration	Installation Training	Installed by VTs	Total Number of RP installed (The number of households) *
Dale	1	42	53	96 (95)
Damot Pulasa	0	10	2	12 (12)
Yirgachefe	1	19	35	55 (54)
Meskan	12	8	21	41 (39)
Total	14	79	111	204 (200)

* The number of installed RP is larger than the number of households since 2 RP (pole model for trial purpose) were replaced with 2014 model for the same households and 2 demonstration RP were installed in a public space, Chito Health Center and Bera Chale Health Post.

3-5. Prospects for Achieving the Overall Goal

Findings regarding the achievement of the Overall Goal are as follows:

Overall Goal: Water supply and sanitation condition and livelihood in rural areas are improved through dissemination of RPs for Drinking Water in Southern nations, Nationalities and People's Region.	
Objectively Verifiable Indicators	**Achievement**
As of the year 2019, in three (3) years after the termination of the Project, in Southern nations, Nationalities and People's Region. 1. The percentage of users who knows the methods of improving water hygiene and sanitation becomes more than 80% among the RP users.	• The data is not available for the RP users outside the Project target areas at the time of the terminal evaluation. Referring to the data for the Project sites, the Project end-line survey found that the percentage of RP users who knew any method of improving was 100%. Therefore, it is assumable to say Overall Goal Indicator 1 is also achievable by applying the dissemination approach collaborating with health workers.
2. The percentage of RP users who find that their livelihood is improving becomes more than 80%.	• The data is not available for the RP users outside the Project target areas at the time of the terminal evaluation. Referring to the data for the Project sites, the Project end-line survey found that 98.3% of RP users recognized improvement in their well-being associated with installation of RP. Therefore, it is assumable to say the achievement of Overall Goal Indicator 2 is highly possible by applying the dissemination approach in collaboration with OMFI, agricultural extension workers and health workers etc.

It is assumable to say that Overall Goal indicators will be achieved to some extent in SNNPR 3 years after the end of the Project period. As long as the self-supply is continued as one of the modalities for implementation of One WASH national Program, MoWIE and WIDB will continue self-supply promotion. However, in order to achieve the Overall Goal in zones and woreadas where WIDB implements RP installation, WIDB needs to maintain the Project effects and approaches along with Quality Control strategy and RP part-supply strategy and continue collaboration with relevant authorities and private service providers in many ways as follows (1. Promotion of human resources development through COC of TVET system, 2. Introduction of RP credit scheme in the entire region, 3. Implementations of RP promotion utilizing developed RP dissemination tools). The progress of the self-supply acceleration program of WIDB as well as quality of delivering the current initiative by WIDB for RP installation (10,000 units) will definitely affect the achievement level of the Overall Goal.

3-6. Implementation Process

3-6-1 Overall Implementation Process

Overall implementation process has been appropriate.

- According to the PDM and PO revised appropriately after the Mid-term review, the Project activities have been implemented without major constraints.
- The Project applied adequate methods of technical transfer of RP manufacturing, installation and O&M through developing trainers by TOT and cascading down their knowledge to RP manufacturers and village technicians who directly deliver services to RP users in target kebeles.
- As for promotion of RP including hygiene education and livelihood improvement components, overall mobilization of human resources are appropriate to carry out the comprehensive approach. Relevant counterparts in regional and woreda levels from the WASH sector involve in delivering the promotion activities. Moreover, OMFI, as a major partner of the Project, offers the RP credit scheme, which made households in the target areas accessible to RP with self-supply.

3-6-2 Project Management

(1) Monitoring system

Monitoring system of the Project is functioning appropriately. Through baseline survey, end-line survey and monitoring survey, the Project monitors the status of RP function, changes of RP users in their livelihood, household water treatment and water point sanitation etc. in the target areas. Project also conducts regular monitoring of water quality of RP wells in dry season and rainy season.

(2) Communications among project team and with related organizations

Relationships among project team and related organizations were built for each Output in the good manner. Besides MoWIE and WIDB, multiple stakeholders have been involving in the Project. TVETC, OMFI, RP manufacturers, village technicians, MIDI and self-supply partners have played major roles in respective Outputs. In addition, by operating steering committee in the region, members have been able to communicate regularly and coordinate among them. Moreover, by issuing of newsletter "Self Supply News", the Project has been disseminating information of progress of the Project activities as well as activating the network among self-supply partners.

(3) Decision making process of the Project management

JCC meetings were held 5 times (2013.04.16, 2013.07.22, 2014.07.23, 2015.02.19, 2015.10.30) and JCC members appropriately discussed and approved the annual plan of the Project, revision of PDM etc. In addition, Steering committee was established in the region and has been held 6 times (2013.04.19, 2013.07.18, 2014.06.18, 2014.10.23, 2015.07.27, 2015.10.28) to practically manage the Project activities in target areas of SNNPR.

(4) Collaboration with other organizations

Self-supply taskforce members (International Water and Sanitation Center: IRC, Millennium Water Alliance, Water.org, Aqua for All, etc.) have been collaborating with the Project in human resource development of RP manufacturing and installation, promotion of RP, microcredit scheme, and overall acceleration of self-supply such as through co-organizing Self-Supply Fair in the past 2 years and issuing "Self-Supply News" bi-monthly.

3-6-3 Responses to the recommendations by the Mid-term review

In order to improve the implementation mechanism and environment of the activities during the remaining period, the Mid-term review team made the following recommendations (1) to (7). In response, following

actions have been undertaken.

(1) Support to WIDB for their on-going procurement of RP

WIDB has procured the large amount of RP (10,000 units) under its own initiative since 2014. As of April 2016, approximately 8,500 units out of 10,000 units were manufactured and distributed to zonal water departments and woreda offices in the region. After the Mid-term review, utilizing the experiences of the Project, the Project members have supported WIDB with its planning for procurement and installation of 10,000 RP to ensure quality control as a part of RP approaches. For all 14 zone and 36 woredas prioritized by the region, following major activities were implemented with support of the Project.

- Orientation session for woreda officials (administration, water, agriculture, health, OMFI) in all zones of SNNPR and 36 woredas prioritized for self-supply
- Providing "RP trainers' guide", TOT for TVETC trainers
- Introductory training on RP installation, operation and maintenance for 14 zones, 4 special woredas and 36 Self-supply priority woredas
- Training of manufacturing the concrete well cover and reducer blocks as well as installation and O&M training for 6 woredas of 3 zones (2-weeks RP installation training for woreda water offices and village technicians in 18 kebeles in 6 woredas).
- Distribution of promotion tools (Operation procedure for the RP credit scheme booklet, RP O&M sheets, Manuals for water test and chlorine sterilization of the wells)

However, according to JICA Experts, more active involvement by WIDB C/Ps are crucial especially for management of these training in order for JICA Experts to precisely handover the training procedure and technical points to WIDB C/Ps. In woreda offices outside of the Project target areas, staff are not fully aware of the action to be taken for the distributed RP and do not have know-how to prepare the installation materials to meet the specification of the ideal construction (e.g. reducer block, the well cover etc.). Following the same approach introduced by the Project, it is essential to build capacities of these woredas and kebeles through adequate technical training at TVETC in or nearby zone followed by practical training on sites so that the trainees from these woredas and kebeles can appropriately cascade down their trained skills and knowledge to others[14].

In addition, BOA is also planning procurement of RP for the household irrigation program[15]. These initiatives are reflections of the trend in SNNPR that RP promotion has been accelerated.

(2) Attention to the water quality of RP wells

Since RP are normally installed in the traditional dug wells which is relatively shallow, the Mid-term review team recommended that more emphasis should be put on the water quality of RP wells and hygiene education including household water treatments upon RP promotion. WIDB assesses fluoride whenever they conduct development of water resources. Project has continued conducting pre-test of water quality before RP installation and monitoring of water quality after the installation. At the same time, the Project has continued hygiene education for RP users through health workers and utilization of petrifilm, which is the test tool for coliform bacteria in water and make them visible. In addition, in response to the recommendation by Mid-Term Review team, test items were added (nitrate and nitrite) for the water quality test of the wells before RP installation.

[14] Adequate size of the trainees per course is less than 20 according to TVETC instructors (TVETC Wolayta, Wolkite, June 2016)

[15] BOA planned to procure 30,000 for last fiscal year. But the plan was not implemented. BOA has planned to procure 15,000 units for this fiscal year and managed to order production of 225 units. At the time of the terminal evaluation production was not completed yet.

Moreover, comparison test of 12 household water treatment methods of 6 categories (conventional practice, chlorine, flocculent-disinfectant, sand filter, ceramic filter, membrane filter) were also implemented and its result was compiled to the "Report on household water treatment options for rope pump wells". In order to strengthen further extension works for water, sanitation and hygiene, WIDB and BOH clarified their roles and signed the memorandum of understanding (MOU) on their collaboration for RP self-supply acceleration in April 2016. RP users observed during site visit of the terminal evaluation responded that they do not apply any treatment before drinking RP water. Even if HWTS is instructed to the RP users, if they do not practice daily, it is possible that water born disease can happen from the RP wells. This will affect reputation of RP.

(3) Improvement of hygiene education activities methods

Regarding hygiene education, Woreda Health Offices and health workers have sufficient technical knowledge. On the other hand, it is essential for the Project to compile experiences of the Project such as the method of hygiene education associated with RP promotion. The result of monitoring by the Project found that the transferring knowledge and information at the household level by health workers had more significant effect than sensitizing through group meetings in particular for sanitation of water points and water treatment methods. These lessons will be included to the RP dissemination handbook and shared with BOH.

(4) Improvement of small scale agriculture with utilizing RP

Agriculture extension workers have been providing technical guidance to farmers. On the other hand, it is essential for Project to compile good practices of small-scale farming with utilization of RP as dissemination tools and share with relevant organizations. In response, the Project team has been collecting information of good practices in livelihood improvement by RP users. Documentation of good practices and sharing with related organization is planned within the Project period.

(5) Importance of Operations and Maintenance

It is essential for the Project to share RP O&M methods with relevant organizations as the Project shifted from the stage of improving RP model to the stage of the RP promotion. In response, the RP manufacturing, installation, O&M manual has already been finalized in February 2016 and been distributed to the village technicians. O&M sheet, which contains diagrams, has been distributed to RP users for promotion.

(6) Strengthening the coordination among the related organizations

In order to prevent any negative impact on self-supply method for RP acceleration, the Mid-term review team recommended the Project to coordinate with other organizations concerning the following problems (1. grant giving by other organizations for purchasing and installation of RP, 2. The gaps in travel costs such as daily substance allowance and accommodation provided by different development partners).

In response, C/Ps of the Ethiopian side have been working on the coordination among related organizations as below.

- In order to promote RP self-supply, WIDB of SNNPR signed the agreement with OMFI for RP credit scheme in February 2016. Currently, WIDB has been responding to the regional government's order to let zone and woreda water offices distribute RP free to groups of households (2-3 per group) and let the groups to cover installation costs[16], which counts 50% of the total costs of RP itself and installation including materials for the well cover[17].

[16] Source: Letter issued by WIDB of SNNPR to 14 zones and 4 special woreda water offices (April 2016).

[17] WIDB' estimation of the total cost of RP, parts and installation is ETB4,305. WIDB covers RP and pipes (ETB2,117) which is 49.2%. Household bears the costs of the well cover (ETB 667) and installation fee for village technician (ETB 1,521) which consist of 50.82% of the total costs. (Source: WIDB, June 2016)

- On the other hand, there are organizations, which deliver activities of RP installation as grants and/or subsidies. Since it is difficult for WIDB to control these external activities, the hindering factor for self-supply remains that may cause confusion among different communities.
- Regarding issues of different rate setting of daily allowances and accommodation for government officials provided by development partners, Federal Ministry of Finance and Economic Cooperation discussed with development partners and issued the standard rates.

(7) Amendment of PDM

In response to the recommendation by the Mid-Term Review to clarify indicators and activities in PDM, C/Ps and JICA discussed and amended the PDM (revision of overall goal, revision and addition of the output and activities, revision of indicators) on 31 July 2015. Although the target of the Overall Goal indicator was for the national level coverage before the revision of PDM, it was revised to focus on SNNPR to make the indicators feasible to be achieved within 3 years after the completion of the Project.

3-6-4 Important assumption and/or problems which affect project activities

- There were unpredictable factors affected the Project implementation. In Period 2, the serious water shortage due to lack of rain has limited the number of wells that can pass the technical assessment for RP installation especially at some target areas in Damot Pulasa woreda. In addition, during fiscal year 2015/2016, there was drought effect in the country. In Period 3, in Meskan woreda, some of the RP wells have collapsed because of unpredictable flood due to heavy rain. According to Self-Supply policy, the project team has started to give Woreda water offices technical advice to take necessary measures. In addition, the Project experiences are going to be compiled as the Project's documents and be shared with the Project counterparts and relevant stakeholders.

4. RESULT OF THE EVALUATION BY FIVE CRITERIA

Each criteria is judged using 5 grades (High, Relatively high, Moderate, Relatively low and Low). Positive factor is indicated as [+]. Negative factor is indicated as [-].

4-1. Relevance

Relevance of the Project is high as evidenced by the following factors.

The objectives and activities of the Project are in line with policies and strategy of the Government of Ethiopia and the Government of Japan, as well as needs of the target group. Moreover, project's strategy and approach are appropriate for achieving the Project goal.

4-1-1. Consistency with the policy/strategy of Government of Ethiopia

- [+] The Project has been aligned with "Growth and Transformation Plan (2011-2015) (GTP-1)"[18] and "Universal Access Plan (UAP2)" since its launch. In line with GTP-1, UAP2 aimed to increase national water supply access from 68.5% (2010) to 98% and rural potable water supply access within 1.5km radius from 65.8% (2010) to 98% by 2015. It also stated that, in order to achieve 98% access, 93,827 schemes would be constructed and an estimated 100,000 traditional wells were expected to be upgraded to an acceptable standard in line with the self-supply policy guideline[19].

[18] Ministry of Finance and Economic Development. 2010. Growth and Transformation Plan 2010/11-2014/15 (P.77)
[19] MoWIE. 2011. Part I Revised Rural Water Supply UAP. (P.1)

- [+] The Project is also aligned with newly issued GTP-2 (2016-2020). As in GTP-2, The Government of Ethiopia aims to increase water supply access rates to 83.0% (rural 85%, urban 75%) and reduce non-functional rates of water supply facilities from 15.5% to 7%[20]. One of the four prioritized objectives is to ensure good governance in rural water supply enhancing sustainability, effectiveness and efficiency of the service. Acceleration and supports of self-supply are highlighted to achieve the objective. As one of the goals, it targets to establish water supply extension supporting system at kebele level to enhance implementation of self-supply at household and communal level self-supply water as well as to improve O&M of rural water supply schemes. In addition, in order to increase income, it is promoted to utilize self-supply water at household level for multiple purposes. As for human resources development for water supply, in order to support self-supply in communities and O&M, it is aimed to dispatch extension workers to kebeles and assist the community managed water supplies and train care takers and artisans.

- [+] To achieve the GTP2 target, WIDB of SNNPR has the regional self-supply acceleration program and annual budget plan with the aim to cover 20% of uncovered population (1,440,108 out of total regional population of 7,200,539 as of FY2015) by self-supply schemes[21].

- [+] The Project has been implemented following "National policy guidelines for Self-supply: guidelines to support contribution of improved Self-supply to universal access (2012)" issued by MoWIE. One WASH National Program (2013), which is the national program up to 2020 in the water, sanitation and hygiene sector, emphasizes the self-supply as the one of important modalities for promoting rural water supply.

4-1-2. Consistency with the Japanese aid policy and strategy

- [+] TICAD V commitment is to improve access to safe water and sanitary condition for 10 million people and poverty reduction for 15 million people[22]. Ethiopia is one of the prioritized countries for official development assistance in the water sector since the access rates for safe drinking water of Ethiopia is lower than the average rates of Sub-Sahara Africa.
- [+] Japanese development assistance policy for Ethiopia is to contribute on promotion of food security and industrialization through 4 prioritize areas (1. Agricultural and Rural Development, 2. Development of the private sector, 3. Infrastructure development, 4. Education). This Project is a part of the cooperation program for "Improving access to safe water and operation and maintenance" in the "Agricultural and Rural Development" field.

4-1-3. Appropriateness of Project's strategy and approach

The Project's strategy and approach are appropriate.

- [+] When the project was designed major issues found as follows.
  - Unstable quality of RP and their specifications in the market
  - Limited supplies of some parts to produce RP
  - Limited knowledge of community residents about RP in SNNPR
  - Insufficient number of private service providers of RP and training system
  - Lack of financial scheme for RP installment accessible by low-income rural dwellers
  - Insufficient measures to prevent contamination of water quality of dug wells

[20] Ministry of Finance and Economic Development. 2016. Growth and Transformation Plan 2016-2020 (P.31)
[21] Source: WIDB Regional SSA proposed activities and budget for the FY2015/2016. The annual budget plan for the amount of 10,000,000 ETB includes following activities: sensitization meeting, RP installation and manual well drilling training, link users with artisans and RP manufactures, linking Omo MFI with households supporting installation of RP, and monitoring and follow up.
[22] JICA. 2016. JICA's activities in Africa – TICAD V Five-Years Assistance 2013-2017

In order to tackle these issues, the Project framework consists of following components based on the principle of national self-supply policy; development of RP model specifications, improvement and standardization of RP models, quality control and human resources development for RP manufacturing and installment, RP promotion including hygiene and sanitation as well as livelihood improvement, and compiling the Project's experiences to the RP dissemination handbook and its dissemination nationwide.

- [+] The target groups of the Project include WIDB of SNNPR, Woreda Water, Mine and Energy Offices in the target areas and private service providers concerned with RP. The selection of the target groups is appropriate since they are all major actors in self-supply of RP. Especially, by including private service providers such as RP manufacturers and village technicians, the Project approach has been more strategized in terms of developing the RP business. Moreover, trained village technicians have been playing key roles in delivering sustainable O&M of RP with fees in their community. In addition, the collaboration with the development partners of self-supply brought about synergy in acceleration of RP self-supply.

4-2. Effectiveness

Effectiveness of the Project is high as evidenced by the following factors.

4-2-1. Achievement forecast of the Project Purpose and Outputs

- [+] As mentioned in 3-4, the Project Purpose has been achieved. At the time of the terminal evaluation, the number of households with RP reached 200. Operational rates of the RP are high at 97.5%. Since the trained village technicians have been continuing installment of RP, it is highly likely that the achievement level will increase more. On the other hand, 100% of 171 households with RP know any method of improving water hygiene and sanitation, which is beyond the target figure of 90%. Similarly, 98.3% responded that they found positive changes in their well-being associated with RP installation. This is also beyond the target figure of 90%. Therefore, the achievement level of these Project Purpose indicators is high.

- [+] There are several contributing factors for achievement of the Project Purpose. In addition to C/P organizations, cooperation among related organizations such as self-supply partners, TVET, OMFI, Woreda Agricultural Office and Woreda Health Office and local communities contributed for accelerating the achievement of the Project Purpose. Details are as follow.

Promoting Factor	Results
Utilization of the TVET system for implementation of Human resource development component	TVETC instructors who participated in TOT engaged in technical transfer and dissemination. In some TVETCs where trained instructor belongs, technical training for RP is planned and implemented even beyond the Project activities. In the past, there was only a few private trainers on RP. Now technical transfer of RP is actualized by TVETCs in different locations. In addition, by applying COC exam to the RP manufacturing and installation training, technical level of trainees can be measured objectively.
Development of private service providers 'Village Technicians' residing in villages and local small-scale enterprises	Regarding human resources development for RP installment and O&M, village technicians were developed to deliver service directly to RP users. Two village technicians are allocated for each target village. Before the Project, RP installation and O&M has been done by woreda water offices. Now villagers are able to conduct these technical services in their communities leading to more business opportunities.

Ensuring Quality Control through public institutions	As for welding techniques, MIDI provided cooperation and conducted training for RP manufacturers and TVETC instructors. MIDI has also worked on examining diameter of the U-shape frame to minimize its distortion, testing the strength of the frame as well as to produce the mold for the U-shape frame. Moreover, with cooperation by Chemical Construction Input Industry Development Institute, further comparative testing of riser pipes has been undertaken with High Density Polyethylene (HDPE), which is mainstreaming in Ethiopia, as an alternative for uPVC.
RP Promotion and livelihood improvement activities conducted by collaboration with WASH team in woreda and kebeles, microfinance institution and the agricultural sector.	Self-supply promotion has been implemented with the cross sector approach not limiting to the water sector. As a result, the platform was generated for relevant stakeholders in water, administration, health, education as well as the financial sector to complement each other to accelerate livelihood improvement including health education and technical transfer etc.

4-2-2. Causal relations of the Project Purpose and Outputs

- [+] The logic between 5 Outputs and the Project purpose is appropriate. The achievement of the Project Purpose has been led through different stages such as 1) improvement and standardization of RP technology, 2) development of human resources on manufacturing, installation and O&M associated with the TVET system, 3) development of microcredit scheme and promotion of RP, followed by 4) behavioral changes of residents towards their livelihood improvement upon RP installation.

- [+][-] Important assumptions for the attainment of the Project Purpose remain the same. However, it seems that some countermeasures may be necessary to improve the situation.

	Important assumption	Current situation
1	Hindering factors for dissemination of RP technology (e.g. imitation and/or poor-quality products) are not significantly increased.	• In term of quality control for WIDB's initiatives of procurement and installment of 10,000 RP in SNNPR, the technical assistance such as training and promotion tools are provided by the Project to stress importance of the quality control.
2	There is no significant change in the RP parts market, not in favour of RP manufacturers and installers.	• The market of RP is still at the immature stage and need to grow further by creating more demands by promoting quality of RP so that even for small-scale retailers in woredas can deal with RP parts and gain their profits, and RP manufacturers can increase their productivity and profits.
3	Micro finance institutes continue with certain schemes which can be utilized by the rural dwellers for RP purchases.	• It is expected to remain the same as WIDB has signed MOU with OMFI for RP credit scheme[23]. • Self-supply partner organization such as Water.org is also planning to expand its water credit activities[24] with collaboration with OMFI.

4-3. Efficiency

Efficiency of the Project is high as evidenced by the following factors.

[23] OMFI is concerned about the fact that WIDB did not have any consultation with OMFI about the change in contents of MOU regarding the WIDB's temporary measure for the WIDB to cover the RP unit cost and let RP users cover the installation costs which accounts for 50% the whole cost. (OMFI Hawassa, 20 June 2016)

[24] 'Water credit' is the program that Water.org implements for facilitating microcredit service for toilet and water facilities.

4-3-1. Achievement level of the Outputs

- [+] As explained in 3-3, Output 1 and 4 have been achieved by the time of the Terminal Evaluation. Achievement levels of Output 2, 3 and 5 are relatively high with a few remaining indicators, which are mostly related to the documentations of strategies, experiences, lessons learned, and good practices.
- [+] Several contributing factors are identified.

Contributing factors	Results
Utilization of local expertise and outputs of the previous projects (Output 1)	Local experts, some of whom had been cooperated with the previous projects by JICA, contributed on delivery of activities in RP technology improvement (including MIDI, Chemical Construction Input Industry Development Institute, Addis Ababa University, etc). RP models developed in the past were also utilized for improvement and comparative tests.
Utilization of trained TVETC instructors (Output 2)	RP trainers were developed among TVETC instructors from 6 locations in SNNPR. Consequently, technical transfer of RP manufacturing and installation were efficiently carried out at the regional and woreda levels.
Utilization of OMFI for development and implementation of RP self-supply credit scheme (Output 3)	Network of OMFI in the region contributed on efficient delivery of RP promotion activities. Their expertise in microfinance, mobilization of OMFI agents in woredas and information management network have brought about better understanding of self-supply microcredit scheme among RP users as well as WASH team members in woredas.
Utilization of existing organizations and structure working in kebeles (Output 4)	WASH team and Health Workers working directly with communities contributed on efficient delivery of health education activities etc. Trained village technicians contributed on RP installation and O&M service activities and played roles like extension workers.
Collaboration with self-supply partners (Output 5)	With collaboration with Self-supply partners, the Project activities such as promotion of self-supply and RP technology were delivered efficiently in terms of accumulation of expertise, and outreaching to the public, as well as cost sharing.

- [+] Hindering factors are associated with allocation of human resources especially in the field operations. As mentioned in 3-6-3 (2) & (3), in order to ensure RP users to manage water hygiene and sanitation for preventing contamination of the shallow wells, more strategic support allocation and operation by health workers and village technicians are essential for sustainability. In addition, changes in OMFI agents in some target woredas affected the processing of the work.

4-3-2. Causal relations between activities and outputs

- [+] Logic between activities and outputs is appropriate and overall implemented activities have effectively led to the production of Outputs as expected.

4-3-3. Appropriateness of inputs

(1) Japanese experts

- [+] As mentioned in 3-1, inputs from the Japanese side were appropriate in terms of number, expertise, and timing of dispatching experts for the Project framework. On the other hand, after Period 2, the Japanese side received request from WIDB for additional technical assistance upon procurement and promotion of 10,000 RP in SNNPR. This resulted in the change in Plan of Operation of the Project and extremely tight schedule with the heavier workload beyond the Project framework given the limited dispatch period of Japanese experts.

(2) Facilities and equipment

- [+] MoWIE in Addis Ababa and WIDB in Hawassa offered the Project Offices, which contributed on

efficient management of the Project by Japanese experts and local staff by communicating with C/Ps on daily basis. TVETCs provided their training facilities to conduct manufacturing training for RP manufacturers and Village Technicians. Similarly, Metal Industrial Development Institute offered their facilities for implementing training of welding for manufacturing RP parts as well as testing the strength of concrete and reducer blocks etc. Utilization of these local resources have contributed on generating Outputs in technical development of RP and human resource development in the efficient manner.

(3) Assignment of C/P

- [+] As indicated in 3-1-2, 9 related organizations allocated C/Ps who have been contributing on effective implementation of their respective Project activities while involvement of each personnel to the Project vary depending on their other duties besides the Project activities.

(4) Project cost

- [+] Both Ethiopian side and Japanese side have disbursed the budget for implementation of the Project activities including RP improvement costs, training and orientation costs, production costs for RP promotion tools and materials etc. in the timely manner. Exchanging human resources such as trainers among self-supply partners have led the efficient operations in term of costs. From the aspect of cost sharing, the synergy effects were identified as a result of the collaboration with other organizations and other scheme as follows.
  - ➢ Old models developed through previous projects were utilized for improvement of RP models. It was cost effective in terms of development and improvement costs. Technical tests were conducted with cooperation by national institutions such as MIDI, Chemical Construction Input Industry Development Institute, Addis Ababa University as well as private company. (for Output 1)
  - ➢ In terms of human resources development for RP manufacturers and village technicians, it was cost effective to involve TVETCs as cooperating parties and integrate training to the TVETC system. The cooperation by MIDI brought about the similar effect as well. (for Output 2)
  - ➢ Cooperation with OMFI for developing RP self-supply microcredit scheme was cost effective in terms of implementing activities. (for Output 3)
  - ➢ Assistance by Japan Overseas Cooperation Volunteers (JOCV) and WHO in delivering technical training on water quality test and safe water chain etc. (for Output 4)
  - ➢ It was efficient to collaborate with self-supply partners for organizing self-supply fair and to promote RP manufacturing and O&M. (for Output 5)

4-4. Impact

Impact of the Project is relatively high as evidenced by the following factors.

4-4-1. Prospect of achieving the Overall Goal

- [+] As mentioned in 3-5, it is assumable to say that the Overall Goal will be achieved in the zones and woredas, where WIDB implements the RP installation, in SNNPR three years after the completion of the Project. Self-supply policy will be maintained in One WASH National Program, which is the important assumption towards the Overall Goal. However, in order to achieve the Overall Goal, MoWIE and WIDB need to maintain the developed approaches and the effects of the Project along with Quality Control strategy and RP part-supply strategy, as well as to promote human resources development utilizing TVET COC, RP credit scheme and developed promotion tools by continuing partnership with relevant authorities and private service providers (RP manufacturers, RP parts retailers, village technicians).

4-4-2. Causal relations between Project Purpose and Overall Goal

- [+] Logic between Project Purpose and Overall Goal is appropriate. In response to the recommendation of Mid-term review, Overall Goal was revised to scale down its target areas from the national level to the regional level through amendment of PDM.

4-4-3. Ripple effects

Several ripple effects of the Project have been identified which shows positive impact. There was no negative impact of the Project implementation was observed.

- [+] In TVETCs in the region, TVETC instructors completed TOT conduct training of manufacturing improved models of RP for local small-scale enterprises. Some of these trained small-scale enterprises are receiving RP orders and providing manufacturing and installation services. Two of them, one in Wolayta and the other one in Hawassa, have been starting spare-part shops to deal with parts including those for RP.

- [+] In Yirgachefe woreda, a group of village technicians received the order from the private company for RP installment. This group is now processing for establishing an enterprise.

- [+] At national level, self-supply taskforce activated its activities through issuing of 'Self-supply newsletter', self-supply fair, and regular meetings. As a result, the network of the self-supply organizations has been enhanced. Moreover, Water.org, one of the self-supply partners is now seeking for the possibility of self-supply activities in SNNPR through new collaboration with OMFI.

4-5. Sustainability

Sustainability of the Project is moderate as evidenced by the following factors.

4-5-1. Policy aspect

Sustainability of the Project in terms of policy aspect is relatively high.

(1) Self-supply policy

- [+] As mentioned in 4-1, the current policy on self-supply is likely to continue. GTP-2 covers the period up to 2020 and it is expected that overall strategies of MoWIE and WIDB remain the same aiming to achieve rural water access of 85% by 2020. In addition, WIDB has implemented annual plan of water supply schemes development by zone and special woredas in SNNPR which aims to cover 20% of uncovered population (1,440,108 out of total regional population of 7,200,539, FY2015) in the region by self-supply.

- [+] [-] BOA has been planning for promotion of RP for irrigation at the household level. Although standard specification of the RP has been shared with BOA and utilized upon procurement of the RP, BOA provides RP as subsidies for farmers. BOA looks for WIDB's advice about how to install RP in the manner of preventing contamination of water and improve the water point by adequate construction[25]. In addition, since there are also NGOs that provide RP for grant, it is essential for WIDB to continue outreach activities to other organizations along with coordination with OMFI so that the self-supply policy on the RP promotion can be ensured.

[25] BOA of SNNPR, 20 June 2016

(2) RP quality control standard

- [+] In terms of policy aspect for quality control, ESA approved the minimum specification of RP developed through the series of technical tests by the Project. The approved RP specification has become the national standard.

- [-] Regarding supply network for RP parts, strategy has been under development through Output 2. However, some concerns remain as follows. In local market at the woreda level, small-scale enterprises engaging in RP manufacturing companies have difficulties in accessing spare parts such as uPVC, T-piece, and piston while they are accessible in Addis Ababa. As the RP market is still immature, there is little incentive for small retailers at the regional, zonal and woreda levels to deal constantly with RP spare parts. Consequently, there is a limitation in quantity of orders that can be handled by small-scale RP manufacturers due to their weak financial capacities. Therefore, it is pointed out that some measures need to be taken to publicize RP and promote the expansion of RP market as well as to discuss possibility of governmental intervention for small-scale retailers of parts and manufactures of RP.

(3) Human resource development policy for RP

- [+] In terms of policy for human resource development, TVETC set a policy to implement the skills test for RP manufacturing and installation utilizing the COC system. Since the COC exams for these two skills have been started in April 2016, sustainability of policy aspect for human resources development of RP production and installment has been secured.

4-5-2. Institutional and financial aspects

Sustainability in terms of institutional and financial aspect is moderate.

(1) RP promotion activities

- [+] In terms of institutional aspect, no great issue was found in organizational capacities and administrative framework of WIDB and woreda water offices in the Project target areas. Regarding RP promotion activities, no great issue was found in organizational capacities and administrative framework of woreda health offices. Based on MOU between the WIDB and BOH signed in April 2016, it is expected that administrative framework will be strengthened further. Moreover, since BOA and woreda agriculture offices locate agricultural work its mandate, it is expected that collaboration with the agricultural sector through RP promotion will continue.

- [+][-] In term of financial aspect, since WIDB has the MOU with OMFI for promotion of 10,000 RP, the financial source has been secured. However, further consultation is expected between two parties regarding the temporary measure planned by WIDB (50% sharing by households/group of 2-3 households). In addition, WIDB is making a new budget plan for RP promotion activities, however, it is only focusing on fiscal year 2016, and it does not have after the fiscal year 2017.

(2) Quality control of RP

- [+] The minimum standard specification of RP was approved by ESA through this Project. Therefore, quality control of RP is secured in terms of the regulation. Moreover, TVETC instructors (12) and RP manufacturers (13) were trained in producing RP with the standard specifications approved by ESA. Regarding the supply network of RP and spare-parts, information of RP manufacturers and spare-parts shops has been compiled and shared with relevant manufacturers. Besides, as mentioned above, RP manufacturers, who built the relationship through participating in a series of Project activities, are formulating the association for RP manufacturers to support each other to maintain the level of technology.

Two of them have started spare-part shop businesses to deal with all parts essential for controlling quality of RP. However, it is expected to discuss strategies for how to apply the national standard of the minimum specification for RP to all relevant organizations.

(3) RP manufacturing, installation and O&M

- [+] The survey team found that TVETCs do not have organizational and human resource issues. Each TVETCs have been conducting or planning training for RP manufacturing, RP installation, and RP O&M with their budget. TVETCs have been integrating the RP manufacturing course to their programs and providing RP installation and O&M training on request basis. This is why such a training course will be continued after the Project finishes.

- [+] About RP manufactures, 13 of them have taken the manufacturing course based on ESA standard through this Project, and 10 of them have passed the COC level manufacturing exam. Moreover, RP manufacturers trained through the Project have formulated the association of RP manufacturers in the region, and some of them have started spare-parts shop business, which will lead to activation of local market.

- [+] 6 Woreda water office technical staff and 8 village technician, who belong to each Pilot site of this project, have passed the COC level installation and O&M exam. WIDB is planning to assign at least 4 village technicians to every Woreda, and they are going to secure the budget for training for capacity building continuously.

- [-] However, it is expected that the number of RP spare-parts shops increase because RP local market has not been matured as mentioned above.

4-5-3. Technical aspect

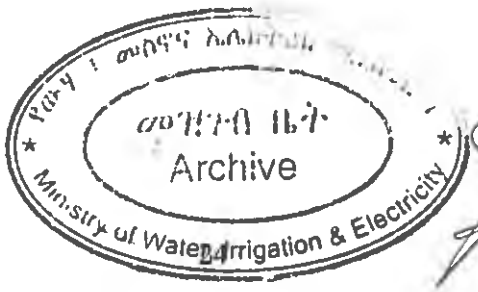
Sustainability of the technical aspect is high.

- [+] TVETC trainers, RP manufacturers and village technicians have been utilizing their skills and knowledge in their daily work. Moreover, they are transferring their knowledge and/or techniques to others utilizing various manuals developed through the Project. COC exams for RP manufacturing and RP installation provided are positive elements for the sustainability of technology. Since strategy paper for quality control as well as RP dissemination handbook have been under development, these are positive factors for technical sustainability as well.

4-5-4. Other aspect

Sustainability of other aspect is moderate.

[-] According to the Project's end-line survey, 100% of RP users reported that they knew at least one of the methods of improvement for water hygiene and sanitation. However it is important to give due attention to household water treatment and storage practices (e.g. boiling, filtering, using chemical, etc.) by woreda water offices and health workers, as RP users tend to drink water without any treatment even they understand the way to do it.



5. CONCLUSION

The Project has implemented planned activities and expected outputs have been emerged. First, two types of RP models and installation methods were developed at lower costs than the previous models. The minimum specifications of RP were developed and approved by ESA in April 2016. RP self-supply credit scheme was developed and introduced to make the sustainable financial system for RP self-supply. And human resources (manufacturers, TVETC instructors, Woreda experts, etc) for RP manufacturing and installation were developed and village technicians were allocated in target kebeles. Moreover, majorities of those completed TOT courses passed respective technical exams and obtained COC. Through these activities, essential environment for RP promotion and dissemination was prepared in the Project target areas. Utilizing these developed environment and resources, RP promotion and dissemination have been conducted with combination of hygiene and sanitation education as well as small-scale irrigation support resulting in acceleration of Self-supply and RP technology.

Rural dwellers take responsibilities for loan payment and enhanced ownership by the RP credit scheme. RP users in the pilot sites have been showing their understanding of objective of the microfinance. Moreover, since WIDB and OMFI signed the agreement for the cooperation, it is expected that RP dissemination as a part of self-supply activities utilizing the microfinance scheme should expand further in the region.

On the other hand, some factors hindering the sustainability were observed as pointed out in the Mid-term review as well. Especially, grant supports by other organizations for provision of RP have been causing confusions among rural dwellers and hindering the acceleration of self-supply. Therefore, it is essential to continue paying attention to this matter. The study found that there were some limitations due to immaturity of local spare-parts market in the region. Given this situation, RP manufacturers trained through the Project have formulated the association of RP manufacturers in the region and some of them have started spare-parts shop business, which will lead to activation of local market.

Based on studying through all of these achievements and external factors, *Relevance, Effectiveness, and Efficiency* are evaluated as high. *Impact* is relatively high. *Sustainability* is moderate. Since the Project Purpose has been achieved, the Joint Terminal Evaluation team concludes that it is appropriate to complete the Project in December 2016 as planned.

6. RECOMMENDATION AND LESSONS LEARNED

6-1. Recommendations

The Joint Terminal Evaluation Team recommends that the following actions should be taken so that the outcomes of the Project will be utilized and sustained after the Project.

6-1-1. Recommendations for the activities until the end of the Project Period

In order to secure the achievement of the Project, recommendations are made as follows.

(1) Discussion for assisting small enterprises dealing with RP manufacturing and spare-parts supply through policy support

Since the RP market is still immature, it is difficult for the manufacturers, installers and users to get access to spare-parts at the local level. Therefore, it is recommended for MoWIE and WJDB to discuss with the association of RP manufacturers, suppliers and village technicians in the region and the trade authority about possibilities of governmental intervention.

(2) Alignment to self-supply guideline

In line with self-supply principles, OMFI and WIDB signed bilateral MOU agreeing to disseminate RP household in the region. However, it is noted that WIDB allowed Zonal and Woreda water offices to provide subsidies (50% of whole purchase cost). Therefore, it is recommended for WIDB to respect the agreed MOU and self-supply guideline, and inform to relevant organizations that providing subsidy is the temporary measure for severe drought in the region.

6-1-2. Recommendations for the activities after the completion of the Project

In order to secure the sustainability of the Project and fill the gap to achieve the overall goal, recommendations are made as follows.

(1) Dissemination of the results and outcome of the Project

The Project has established the foundation of the Self-supply promotion and RP technology for dissemination practices, based on the real experiences. In particular, the standardization of rope pump specifications, micro finance scheme (RP credit scheme), technical training modules and manuals utilizing TVETC system, assessment of the RP technicians through COC system, training and assignment of village technicians at the village level are the elements that are essential for sustainable RP technology dissemination. It is highly recommended that MoWIE, WIDB and other relevant organization (including other self-supply donors) utilize these established systems, and follow the methods and procedures developed by the Project for further acceleration of Self-supply and expansion of RP dissemination in SNNPR.

In addition, it is recommended that WIDB take over coordinating roles among the relevant organizations (BOH, BOA, OMFI, etc) in order to check whether the established system functions well at all level.

(2) Adaption of ESA standardized RP specifications

The minimum specifications of RP was approved by ESA, however, simple dissemination of the ESA document will not lead to the adaptation of this ESA standardized RP specifications by stakeholders. Therefore, it is recommended for MoWIE to consider a strategy for the way forward through discussion with Self-supply taskforce and regional bureau in different sectors.

(3) Scaling-up of capacity building to village technicians and water office engineers

In order to sustain high quality of RP installation and O&M with collaboration with Zone and Woreda water offices beyond the Project sites, it is recommended for WIDB to scale-up the capacity building effects of the Project to village technicians and water office engineers through training by TVETC instructors and woreda water office engineers who obtained COC. In addition, it is also recommended that the regional government shall ensure the budget for continuous RP promotion activities at all level (Regional, Zonal and Woreda offices).

(4) Continuous sanitation and hygiene education activity by woreda water office and health workers

WIDB and BOH signed the memorandum of understanding in April 2016 aiming to strengthen their cooperation and clarify demarcations for acceleration of RP self-supply. Through the Project activities, the practice of sensitization in water hygiene at the grass-roots level has been strengthened. Therefore, it is recommended that woreda water office and health workers exert more effort for practicing HWTS and hygiene promotion at community level.

(5) Collaboration with BOA

Multiple uses of RP need to be emphasized for practicing at household level. BOA is planning installation of RP for the irrigation at the household level under the approved specification standard. Moreover, BOA has intention to utilize the Project outcomes including the construction design and method of RP installation. Therefore, it is recommended that WIDB gives BOA necessary technical advice and sharing information.

6-2. Lessons Learned

(1) Integrating capacity building component of the Project activities to the TVET system

One of the major factors that contributed on the success of this Project was collaboration with TVETCs in several locations within the regions. Through this collaboration with TVETC instructors who were trained in the TOT courses, small enterprises for RP manufacturing were developed in each target area. In addition, TVETC instructors and woreda water office engineers cascaded down installation and O&M techniques to community members, specifically village technicians. Making a COC standard exam also contributed to sustainable capacity building. Therefore, the method of ensuring the sustainability of the Project through developing local technical experts and industry utilizing the TVETCs is feasible to be applied to other projects, which has extension component not limited to the RP. Thus, it is recommended to consider utilizing the TVETCs in the case of formulating a project that aims to promote the product through capacity building of technical experts.

(2) Collaboration with the microfinance institution for RP promotion

It was a remarkable approach that the Project conducted RP promotion through collaboration with the microfinance institution. It had been a regular practice to distribute RP free to users through the SNNPR. However, the Project has been able to promote RP associated with changing RP users' mind-set towards operation and maintenance through developing village technicians as well as implementing promotion activities with the microcredit scheme. Likewise, it is recommended to consider such approach that increases the sustainability by enhancement of sense of ownership of the user side as beneficiaries from the designing stage of other projects with extension components.

End.

ANNEXES

ANNEX 1. Project Design Matrix (PDM)
ANNEX 2. Plan of Operations (PO)
ANNEX 3. List of Stakeholders Consulted
ANNEX 4. Schedule of Terminal Evaluation
ANNEX 5. List of Equipment Procured under the Project
ANNEX 6. Placement Records of Counterpart Personnel

ANNEX 1. Project Design Matrix (PDM)

Project Name: The Project for Rural Water Supply, Sanitation and Livelihood Improvement through Dissemination of Rope Pumps (RPs) for Drinking Water
Duration: March 2013 to December 2016 (4 Years)
Implementing Agency: Ministry of Water, Irrigation and Energy (MOWIE), Water Resources Bureau of SNNPR
Direct Target Group: Water Resources Bureau of SNNPR, Woreda Water, Mine and Energy Offices in the target areas, Private Service providers concerned with RPs
Beneficiaries: Users of RPs
Project Target Areas: 10 kebeles in 4 woredas of SNNPR

Working Version 3.1 31 July, 2015

Narrative Summary	Verifiable Indicator	Means of Verification	Assumptions
【Overall Goal】 Water supply and sanitation condition and livelihood in rural areas are improved through dissemination of RPs for Drinking Water in Southern nations, Nationalities and People's Region.	As of the year 2019, in three (3) years after the termination of the Project, in Southern nations, Nationalities and People's Region. 1. The percentage of users who knows the methods of improving water hygiene and sanitation becomes more than 80% among the RP users. 2. The percentage of RP users who find that their livelihood is improving becomes more than 80%.	• Data/information of MOWIE (Federal, Regional, Woreda) on water supply and sanitation facilities and served population (sample surveys if necessary) • National WASH Inventory • Documents related to Self-supply technology dissemination under Self-supply policy	
【Project Purpose】 Situation of water supply, sanitation and livelihood are improved through dissemination of RPs for Drinking Water in project target areas.	1. The number of RP users who installed RPs by Self-Supply which are made in the project becomes 200. 2. The percentage of RP users who knows the methods of improving water hygiene and sanitation becomes more than 90% among the RP users. 3. The percentage of RP users who find that their livelihood is improving becomes more than 90%.	• Various reports of the Project • Data/records of Woreda Water, Mine and Energy Offices • Results of monitoring survey of RP wells • Results of End-line survey	Self-supply policy in One WASH National Program is continued.
【Outputs】 1. Specifications of RPs for Drinking Water and installation technologies are standardized at the federal level. 2. Strategies are formulated for manufacturing, installation technologies, operation and maintenance of RPs for Drinking Water.	1.1 RP technologies are improved in terms of quality and cost reduction, and 2 or more improved RP models are operational by the end of year 2015. 1.2 Minimum standard specification of RPs is agreed among the stakeholders by the end of year 2016. 1.3 At least one (1) application for minimum standardized specification of RPs is applied to ESA, by the end of year 2016. 2.1 Documentation for the quality control (QC) is prepared for manufacturing and installation of RPs by the end of year 2016. 2.2 Documentation for the Supply chain strategies for RPs parts distribution is prepared by the end year 2016. 2.3 Documentation for the O&M strategies for household RPs is prepared by the end year 2016. 2.4 The number of the trainees of TOT on RP	• Specification of improved RP models • Survey on the satisfaction of related stakeholders (manufacturers, installers, users) concerning on RPs • Documents on application for standardization of RP • Various reports of the Project • • Document on QC • Documents on Supply chain methodology • Document on O&M methodology • Reports on TOT and manufacturing training • List of RP manufacturers and installers	Hindering factors for dissemination of RP technology (e.g. imitation and/or poor-quality products) are not significantly increased. There is no significant changes in the RP parts market, not in favour of RP manufacturers and installers.

Narrative Summary	Verifiable Indicator	Means of Verification	Assumptions
	manufacturing, installation and maintenance who completed the training becomes more than 14. 2.5 The number of the trainees of training on RP manufacturing who completed the training becomes more than 8. 2.6 The number of the trainees of training on RP installation, operation and maintenance who completed the training becomes more than 150. 2.7 Lists of RP manufacturers and installers are in place. 2.8 80% or more of the listed RP manufacturers and installers are aware of how to access to the RP parts providers/retailers.	• List of RP parts providers/ retailers • Manual on RP manufacturing, TOT manual, Guide for RP installation • Various reports of the Project	
3. Promotion activities on RP including hygiene education are accelerated by the governmental and semi-governmental organization in the target woredas.	3.1 Micro-Finance scheme for purchasing of RPs is established. 3.2 Methodology and procedures in promotion activities on RP including hygiene education are defined. 3.3 All Woreda WASH Teams are involved in the promotion activities. 3.4 The RP dissemination handbook is developed based on the experiences and lessons from the activities for Output 3.	• Implementation plans of the target Woredas • Various reports of the Project • Lists of Woreda WASH Team members involved in RP technology promotion in the target woredas • Results of RP technology and self-supply concept awareness test during various trainings/workshops • Documents of Water Resources Bureau related to Self-supply and RP dissemination	Micro finance institutes continue with certain schemes which can be utilized by the rural dwellers for RP purchases.
4. Practices of RP use including hygiene are supported continuously by the village technicians and extension workers in the target areas.	4.1 The percentage of functional RPs which are installed in the project is more than 90%. 4.2 The percentage of RP users who received support from health extension workers becomes more than 90%. 4.3 The percentage of RP users who received support from agriculture extension workers becomes more than 85%.	• List of installed RP wells • Data/records of Woreda Water, Mine and Energy Offices on water and sanitation facilities • Monitoring records on RP wells • Various reports of the Project, including the results of water quality tests • Questionnaire survey to RP users	
5. Project knowledge and experiences are compiled as dissemination tools and acknowledged in SNNP and other Regions.	5.1 The dissemination tools with reflection of the Project's experiences are delivered to water resources bureaus of each region.	• List of candidate for RP purchase • Dissemination tools • Distribution record of dissemination tools	
【Activities】 1.1 Develop and improve various types of RPs to meet different needs, and tested. (*1) 1.1.1 Survey and make lists of RPs which are currently utilized 1.1.2 Improve each part of existing RPs 1.1.3 Test the existing and develop RPs in terms of durability, safety, functionality, compatibility, cost effectiveness, design, easiness of installation and O&M, protection of contamination 1.1.4 Test low-cost designs of structure of well head of traditional hand dug well and concrete-slab and propose feasible methods/measures to minimize contamination		【Inputs】 1. **The Japanese side** 1) Experts i. Chief advisor / Dissemination strategy ii. Mechanical engineering / Mechanical design iii. Drilling technologies	

Narrative Summary	Verifiable Indicator	Means of Verification	Assumptions
1.1.5 Test low-cost drilling and construction technologies and do comparative analysis 1.2 Facilitate the standardisation process of RP specifications and its installation technologies 1.2.1 Organize meetings to examine specifications for RPs among the stakeholders concerned 1.2.2 Facilitate the approval processes of the RP in collaboration with MoWIE 1.2.3 Facilitate the necessary procedures for standardization by ESA 1.3 Formulate operation manuals for manufacturing, installation and O & M of RPs, based on the experiences and lessons learned from the activities for Output 1. 2.1 Propose quality control systems of manufacturing and installing of RPs 2.1.1 Clarify roles and responsibilities of the stakeholders in quality control systems of RPs 2.1.2 Propose certification systems for RP manufacturers 2.1.3 Assist in organizing a certain type of association for self-help among the private manufactures, installers 2.2 Consider O&M methodology for household RPs. 2.3 Consider supply chain methodology for RP parts distribution. 2.4 Facilitate consensus building on the concept and methodology of capacity development for RP manufacturing and installation with WRB and TVET Bureau 2.5 Assist in carrying out trainings on capacity development for RP manufacturing, installation, operation and maintenance 2.5.1 Carry out TOT on manufacturing and installation of RPs for TVETC trainers and private RP manufacturers utilizing operation manuals 2.5.2 Assist existing trainers in carrying out manufacturing training for the existing RP manufacturers 2.5.3 Assist trained trainers in carrying out manufacturing training for newly identified potential RP manufacturers 2.5.4 Assist trained trainers in carrying out installation trainings for woreda technicians and village technicians through RP installation practices 2.6 Prepare list of manufacturer and village technicians, suppliers of RP materials and parts 3.1 Formulate regional strategies for accelerating RP dissemination 3.1.1 Survey and identify existing water supply facilities 3.1.2 Draft Regional strategies for accelerating RP dissemination based on the analysis of shallow well locations, economic status, livelihood, and access to drinking water in rural areas in line with "the National Guidelines for Self-Supply in Ethiopia" and other related policy documents 3.2 Select target woredas/areas for accelerating promotion activities on RP including hygiene education. 3.2.1 Categorize woredas/areas base on the above strategies 3.2.2 Select target woredas/areas together with the regional RP Team based on the above categorization and propose it to JCC for approval 3.3 Incorporate promotion activities on RP including hygiene into the existing plans in the target woredas 3.3.1 Collect and analyse necessary information in order to carry out the project activities 3.3.2 Identify incentives (e.g., introduction of cash crops) for target groups/areas and methodology in line with the self-supply concept 3.4 Introduce micro-finance institution to support for RP purchase 3.4.1 Identify appropriate micro-finance scheme and sign MOU with the micro-finance institution at the regional level 3.4.2 Organize workshops to introduce the identified micro-finance scheme to the personnel of micro-finance institutions in the target woredas 3.4.3 Assist micro-finance institution in monitoring the operation of micro finance scheme		iv. Dissemination v. Agriculture vi. Micro-finance / Improvement of rural livelihood vii. Sanitation and hygiene viii. Other necessary fields 2) Equipment 3) Training in Japan, third countries and in Ethiopia 4) Cost for operation **2. <u>The Ethiopian side</u>** 1) Counterpart personnel 2) Equipment 3) Facilities (office space) 4) Cost for operation	----------

Narrative Summary	Verifiable Indicator	Means of Verification	Assumptions
3.5 Carry out the promotion activities on RP including hygiene education with Woreda WASH Teams and extension workers 3.5.1 Assist Woreda WASH Teams and extension workers in organizing community meeting/workshops in the selected target areas for introduction of improvement of shallow wells, RPs and supportive options for financial arrangement 3.5.2 Assist the loan applicants in taking necessary procedures for RP purchase in the target areas 3.5.3 Assist village technicians in installing RP at the users' wells through OJT of them. 3.6 Develop RP dissemination handbook based on the experiences and lessons learned from the activities for Output 3. 4.1 Assist village technicians, extension workers and Woreda WASH Teams in improving operation and maintenance of RP 4.1.1 Assist village technicians in maintaining RP 4.1.2 Assist village technicians, extension workers and Woreda WASH Teams in monitoring RP use in technical aspect 4.1.3 Assist extension workers and Woreda WASH Teams in sharing experiences and good practices on operation and maintenance of RP at the community meeting mentioned above 3.5.1 4.2 Assist health extension workers in disseminating hygiene practices. 4.2.1 Review way of hygiene education associate with promotion activities on RP 4.2.2 Assist health extension workers in instructing how to treat water at household level 4.2.3 Assist health extension workers in monitoring hygiene practice by RP users 4.2.3 Assist health extension workers in sharing experiences and good practices of hygiene at the community meetings mentioned above 3.5.1 4.3 Assist agriculture extension workers in disseminating practices for livelihood improvement. 4.3.1 Compile good practice of small scale agriculture with utilizing of RPs 4.3.2 Assist agriculture extension workers in instructing how to practice livelihood improvement. 4.3.3 Assist agriculture extension workers in monitoring practice for livelihood improvement by the RP users 4.3.4 Assist agriculture extension workers in sharing experiences and good practices of improvement of livelihood at the community meeting mentioned above 3.5.15.1 5.1 Compile experiences and lessons learned from activities for Outputs 1 up to 4 as dissemination tools. 5.2 Facilitate to organize workshops to acknowledge experiences and lessons learned from project with dissemination tools in nation-wide.			【Pre-Conditions】

Abbreviation: ESA: Ethiopian Standard Authority, EWTI: Ethiopian Water Technology Institute, MOU: Memorandums of Understanding, O&M: Operations and Maintenance, SNNPR: Southern Nations, Nationalities and People's Region, TOT: Training of Trainers, TVETC: Technical, Vocational and Educational Training College

Note*1: There are various use of RPs, such as individual household or community water supply, irrigation various scales.
1.1.2 Parts: wheel, wheel cover, bearing, counter rotation device, rope etc.
1.1.5 Drilling and construction technologies: hand dug well, tube well

ANNEX 2. Plan of Operations (PO)

The Project for Rural Water Supply, Sanitation and Livelihood Improvement through Dissemination of Rope Pumps (RPs)

Western Calendar Year		2012	2013			2014				2015				2016			
Activities			Period 1							Period 2				Period 3			
			1/4	2/4	3/4	4/4	1/4	2/4	3/4	4/4	1/4	2/4	3/4	4/4	1/4	2/4	3/4	4/4
Output 1: Specifications of RPs for Drinking Water and installation technologies are standardized at the federal level.																		
1.1	Develop and improve various types of RPs to meet different needs, and tested.																	
1.2	Facilitate the standardisation process of RP specifications and its installation technologies																	
1.3	Formulate operation manuals for manufacturing, installation and O & M of RPs, based on the experiences and lessons learned from the activities for Output 1																	
Output 2: Strategies are formulated for manufacturing, installation technologies, operation and maintenance of RPs for Drinking Water																		
2.1	Propose quality control systems of manufacturing and installing of RPs																	
2.2	Consider O&M methodology for household RPs																	
2.3	Consider supply chain methodology for RP parts distribution.																	
2.4	Facilitate consensus building on the concept and methodology of capacity development for RP manufacturing and installation with WRB and TVET Bureau																	
2.5	Assist in carrying out trainings on capacity development for RP manufacturing, installation, operation and maintenance																	
2.6	Prepare list of manufacturer and village technicians, suppliers of RP materials and parts																	
Output 3: Promotion activities on RP including hygiene education are accelerated by the governmental and semi-governmental organization in the target woredas.																		
3.1	Formulate Regional strategies for accelerating RP dissemination																	
3.2	Select target woredas/areas for accelerating promotion activities on RP including water hygiene education																	
3.3	Incorporate promotion activities on RP including water hygiene into the existing plans in the target woredas																	
3.4	Introduce micro-finance institution to support for RP purchase																	
3.5	Carry out the promotion activities on RP including hygiene education with Woreda WASH Teams and extension workers																	
3.6	Develop RP dissemination handbook based on the experiences and lessons learned from the activities for Output 3.																	
Output 4: Practices of RP use including hygiene are supported continuously by the village technicians and extension workers in the target areas.																		
4.1	Assist village technicians, extension workers and Woreda WASH Teams in improving operation and maintenance of RP																	
4.2	Assist health extension workers in disseminating water hygiene practices																	
4.3	Assist agriculture extension workers in disseminating practices for livelihood improvement.																	
Output 5: Project knowledge and experiences are compiled as dissemination tools and acknowledged in nation-wide																		
5.1	Compile experiences and lessons learned from activities for Outputs 1 up to 4 as dissemination tools																	
5.2	Facilitate to organize workshops to acknowledge experiences and lessons learned from project with dissemination tools in nation-wide																	

ANNEX 3: List of stakeholders consulted

(1) Ethiopian side

<Ministry of Water, Irrigation and Electricity>

Mr. Nuredine Mohammed	Director, Water Supply and Sanitation Directorate
Mr. Tamene Hailu	Rural WASH coordinator, WASH Coordination Office, Water Supply and Sanitation Directorate
Mr. Agash Asmamewe	National consultant/Self-supply focal person
Mr. Eyasu Guta	Technical/Program support officer, Water Supply and Sanitation Directorate

<Water, Irrigation and Development Bureau, SNNPR>

Mr. Samuel Tamiru Amade	Bureau head
Mr. Kassahun Woldegeorgis	Core Process Owner, Water Supply Schemes Administration Core Process
Mr. Kassu Eshete	Socio-economist
Mr. Lebenu Lemma	Water quality expert

<Bureau of Health, SNNPR>

Mr. Dessalegn Gullo	Hygiene & sanitation focal person, Disease Prevention & Health Promotion
Mr. Male Matie	Consultant, Disease Prevention Dept., Bureau of Health

<Bureau of Agriculture, SNNPR>

Mr. Seifu Atnfe	Irrigation Engineer, Natural Resources
Mr. Kahsay Haile	Agriculture Engineer

C/Ps and stakeholders in 4 target zone and woredas

<Gedeo zonal office>

Mr. Fisehayesus	Head of Zonal water & Zone Administration

1. Damot Pulsa Woreda

<Damot Pulsa Woreda water & mineral energy office>

Mr. Wadilo Wana	Head of Woreda Water office and Technical staff
Mr. Dawit Zekarias	Mechanics

<Damot Pulsa Woreda Health Point>

Mr. Takele Baffa	Disease prevention officer

<Lera Health Center>

Mr. Wondimu Zekarias	Staff

<Game Kabecho Health Point>

Ms. Felekech Mamo	Health Extension Worker, Game Kabecho Health Point
Ms. Nehimiya Giya	Women's group in Gome Kabecho

<Village technicians, RP users>

Mr. Degu Elias, Ms. Elian	Village Technician/RP user at Tomtomente Kebele
Mr. Markos Wonke	Village Technician/RP user at Tomtomente Kebele

2. Dale Woreda

<Dale Woreada Water office>

Mr. Hageretsion Abebe	Head of Dale woreda water office (Previous)
Ms. Esayas Yoseph	Head of Dale woreda water office(Newly appointed)
Mr. Zerihun Tadesse Coordinator	Portable water coordination, Dale woreda water office

<Dale Woreada Agriculture Office>

Mr. Seyoum Nutato	Agriculture/Coffee, Dale Woreada Agriculture Office

<Dale Woreada Health Office>

Mr. Addisu Fiseha	Health Point focal person, Dale Woreada Health Office

<Village technicians>

Mr. Yakob Dukamo	Village Technician, Bera chale, Dale woreada
Mr. Ashenafi Demisse	Village Technician, Bera chale, Dale woreada
Mr. Wondimu Laakemo	Village Technician, Bera tedicho, Dale woreada
Mr. Mesheshsa Alagaw	Village Technician, Bera tedicho, Dale woreada
Ms. Maereg Petros	Village Technician, Bera tedicho, Dale woreada
Mr. Tafesse Yutie	Village Technician, Gajamo, Dale woreada

3. Meskan Woreda

<Meskan Woreda Water Office>

Mr. Shafi Bediru	Meskan Woreda Water construction supervisor

<Village technicians, RP users >

Mr. Zeinu Oumet	Village Technicians/RP user, Yatabon kebele, Meskan Woreda
Mr. Abebe Zeleke	Village Technicians, Yatabon kebele, Meskan Woreda
Mr. Mohammed Shafo	Village Technicians, Yatabon kebele, Meskan Woreda
Mr. Shemisu Oumet	Village Technicians, Yatabon kebele, Meskan Woreda
Mr. Shirmolo Tesfa	RP user, Yatabon kebele, Meskan Woreda
Mr. Awole Oumer	RP user, Yatabon kebele, Meskan Woreda
Mr. Hussein Awole	RP user, Yatabon kebele, Meskan Woreda

4. Yirgachefe Woreda

<Yirgachefe Woreada Administration Office>

Mr. Zerihum Aseffa	Head of Administration, Yirgachefe Woreada Administration Office

<Yirgachefe Woreda Water Office>

Mr. Melkamu Tadele	Head, Yirgachefe Woreada Water Office
Mr. Girma Roba	Water Sector, Irrigation Section, Yirgachefe Woreada Water Office

<Yirgachefe Woreda Health Post>

Ms. Hirut Chenenisa	Health Post, Yirgachefe Woreada/RP user

<Village technicians, RP users>

Mr. Kassahun Janiyo	Village Technician, Dumerso, Yirgachefe Woreada
Mr. Daniel Assefa	Village Technician, Chilto, Yirgachefe Woreada
Mr. Ayanu Gemede	Village Technician, Chilba, Yirgachefe Woreada
Mr. Tarekgne Tadele	Village Technician, Dumerso, Yirgachefe Woreada
Mr. Esyas Tadesse	Village Technician, Dumerso, Yirgachefe Woreada
Mr. Ediget Feysso	Village Technician, Dumerso, Yirgachefe Woreada
Mr. Girma Gume	RP user, Chilba Kebele, Yirgachefe Woreada
Mr. Kifle Assefa,	RP user, Yirgachefe woreda

<OMO Micro Finance Institution>

Mr. Tegegnwork Serawit	Credit & Saving, Rural Credit Office, Hawassa head Office
Mr. Mekuria Meskele	Credit & Saving, Rural Credit Office, Hawassa head Office
Mr. Eyob Chinasho	Manager, Damot Pulsa OMFI sub-branch office
Mr. Agege Yunna	Manager, OMFI Dale woreada branch office
Mr.Mulugefa Bekele	OMFI Yirgachefe woreada branch
Mr. Fekadu Feyissa	OMFI Yirgachefe woreda branch
Mr. Firehywot Pesemo	Omo agent, Dumerssu Kebele
Mr. Tamirat Alemu	Omo agent, Chelba Kebele

<TVET Bureau>

Mr. Atnufu Asfaw	Deputy Bureau Head and Core Process Owner of Human Reosurce Development

<Wolkite TVETC>

Mr. Jemil Mussema	Instructor, Water Technology
Mr. Tefera Demissie	Instructor, Manufacturing

<Wolayita Sodo TVETC>

Mr. Yasin Boto,	Dean
Mr. Admasu Dabara,	Instructor, Manufacturing
Mr. Tarekegn Hoile,	Instructor, Manufacturing

<Metal Industry Development Institute>

Mr. Zeru Muluneh	Lead Engineer
Mr. Zerihlin Kedida	Senior Engineer
Mr. Girma Beyecha	Senior NDT Technician
Mr. Agash Asmamaw	National consultant/Self-supply focal person

<RP manufacturers>

Mr. Timotiyos Mehow	RP manufacturer/Spare shop owner, Wolayta Sodo
Mr. Samson Shegena	RP manufacturer/Owner Hope Electro-mechanical Engineering/RP manufacture, Hawassa
Mr. Berihun Getachew	RP manufacture/Owner of Berihun Getachew Metal & Wood Works Enterprise, Hawassa

(2) Self-supply partners

<Millennium Water Alliance>

Mr. Melkamu Jaleta	Country representative

<International Water and Sanitation Center>

Mr. Lemessa Mekonta	Program officer

<Water.org>

Mr. Salfiso Kitabo	Country director

<Aqua for All >

Mr. Bekele Damte

(3) Japanese side

<JICA Ethiopia Office>

Mr. Takeshi Matsuyama	Senior Representative
Mr. Ephrem Fufa	Programme Officer
Mr. Itsuro Takahashi	Project formulation Advisor

<JICA Experts>

Ms. Ms. Akiko KITAZUME	Chief Advisor/ Dissemination Strategy
Mr. Hidekuni USAMI	Drilling Technologies/ Construction Management
Ms. Takako UCHIDA	Agriculture (Micro-Irrigation/Cultivation)
Ms. Kaina HONMA	Sanitation and Hygiene

<Local consultant, Project staff>

Mr. Arjen van der Wal	Rope Pump / Drilling Specialist
Mr. Tewodros Tadese	Technical assistant
Mr. Muluken Girma	Promotion Assistant
Mr. Girma Senbeta	Technical Coordinator
Ms. Azalech Solomon	Assistant Technical Coordinator
Mr. Girma Belay	Office Assistant
Mr. Ermias Tekeste	Office Assistant

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ANNEX 4. Schedule of Terminal Evaluation

Date		Leader	Coordinator	Evaluation analysis
12-Jun	Sun			00:30 TOKYO/HANEDA - 06:15 DUBAI(EK313) 10:30 DUBAI - 13:35 ADDISABABA(EK723)
13-Jun	Mon			08:50-09:30 Meeting with JICA Ethiopia office 10:15-10:50 Interview with MoWIE WaSH Coordination Office] 14:30-14:55 Interview with MoWIE [Rural Water Desk Coordinator, Rural Wash)[Hygiene and Sanitation Directorate]
14-Jun	Tue			09:20-09:50 Interview with MoWIE [National consultant/Self-supply focal person] 10:00-10:20 Interview with Self-supply taskforce [WSWG Secretariat Self-supply Coordinator] 10:50-11:50 Interview with Water.org 14:00-15:00 Interview with Metal Industry Development Institute
15-Jun	Wed			09:00-10:00 Interview with International Water and Sanitation Centre 15:00-16:00 Interview with Millennium Water Alliance 16:30-17:15 Meeting with JICA Ethiopia Office
16-Jun	Thu			07:00-09:30 Journey From Addis – Wolkite TVETC 10:00-11:05 Interview with Wolkite TVETC 11:00-14:00 Journey from Wolikite to Wolayita 14:00-15:00 Lunch 15:30-16:35 Interview with Wolaita TVETC
17-Jun	Fri			08:30-09:20 Interview with Damot Pulsa Woreada Water office 09:30-10:00 Interview with RP manufacturer, part shop owner 10:00-11:00 Journey to Damot Pulasa 11:00-11:40 Interview with OMFI sub-branch office, Damot Pulsa 12:00-13:30 Damot Pulsa Woreda water & mineral engery office Damot Pulsa Woreda Health Point, Lera Health Center, Game Kabecho Health Point, Women's group in Gome Kabecho 14:00-14:30 House visits: RP user 15:30-16:00 House visits: RP user 16:15-16:30 Site visit: Helena Korke HP - drilling site 16:30-19:00 Journey to Hawassa
18-Jun	Sat			AM/PM Documentation of the Terminal Evaluation Report
19-Jun	Sun		00:30 TOKYO/HANEDA - 06:15 DUBAI(EK313) 10:30 DUBAI - 13:35 ADDISABABA(EK723) 15:00 ADDISABABA - 19:00 HAWASSA	AM: Documentation of the Terminal Evaluation Report PM: Internal meeting
20-Jun	Mon			10:30-10:50 Interview with WIDB [Water quality expert] 11:15-12:15 Interview with Agricultural Bureau SNNPR [Irrigation Engineer, Natural Resources] 14:15-14:35 Interview with WIDB [Core Process Owner, Water Supply Schemes Administration Core Process] 15:00-16:20 Interview with OMO micro-finance [Credit & Saving, Rural Credit Office] 16:50-17:15 Interview with RP users [Hope Electronical Mechanical Engineering] 17:25-18:00 Interview with TVET bureau [Deputy Bureau Head and Core Process Owner of Human Resource Development]
21-Jun	Tue			07:00-08:15 Journey from Hawassa to Dale 08:15-09:15 Breakfast in Yirgalem, Dale (while waiting for Almaw) 09:20-10:30 Interview with Woreda Water office, Woreda Health office 10:30-11:00 OMFI sub-branch office, Dale 11:15-11:35 Journey to the site 11:40-12:10 Interview with village technician, Dale woreada 12:10-13:00 Journey to Dilla 13:00-14:00 Lunch 14:00-16:00 Journey to Yirgachefe 16:00-16:30 Site visits: Chito HC 16:50-17:20 Site visits: RP user, Chilba, Yirgachefe Woreada (RP installation by village technician)
22-Jun	Wed			08:50-09:00 Interview with Yirgachefe Woreada Administration Office 10:50-11:10 House visit RP users, Yirgachefe 12:30-13:00 Interview with Gedeo Zonal Water Office 13:30-14:30 Lunch 14:30-18:00 Journey back to Hawassa
23-Jun	Thu			10:00-10:30 Interview with RPs manufacturers 11:00-16:30 Preparation for Steering Committee 16:30-16:40 Courtesy Call to Bureau Head, WIDB 17:45-18:30 Interview with WIDB [Socio-economic Expert]
24-Jun	Fri			09:20-12:00 Steering Committee with all relevant CPs in SNNPR PM Internal meeting
25-Jun	Sat	20:45 HANOI - 22:35	7:00 9:15 Journey to Meskan	

		BANGKOK(TG565)	9.15-10.00 Breakfast in Ziway 10:00-10:30 Journey from Butajira to Yetabon 10:30-11:30 Interview with Woreda Water office and village technician, House visits: 11:30-12:00 House visits: 12:00 14:00 Lunch, Meeting 14:05 16:35 Journey to Addis Ababa	
26-Jun	Sun	01:30 BANGKOK - 06:10 (ET629) ADDISABABA	Documentation of M/M and the Terminal Evaluation Report	
		PM Internal Meeting, Documentation of M/M and the Terminal Evaluation Report		
27-Jun	Mon	AM Meeting with Self-Supply Donor Working Group PM Drafting M/M		
28-Jun	Tue	AM/PM Checking the contents of Draft Terminal Evaluation Report and M/M with CPs PM Revision of the Terminal Evaluation Report and M/M		
29-Jun	Wed	Site visit: Meskan	AM/PM Checking the contents of Final Draft Terminal Evaluation Report and M/M with CPs PM Finalization of M/M and Terminal Evaluation Report	
30-Jun	Thu	AM JCC(Signing of M/M and the Terminal Evaluation Report) PM Wrap up meeting with CPs, Project team and JICA Ethiopia office		
1-Jul	Fri	8:30 AM Reporting to JICA office 10:30 AM Reporting to Embassy of Japan		
		15:40 ADDISABABA - 21:05 DUBAI(EK724)	PM Meeting with JICA Ethiopia office	15:40 ADDISABABA - 21:05 DUBAI(EK724)
2-Jul	Sat	02:50 DUBAI - 17:35 TOKYO/NARITA(EK318)	Internal meeting	02:50 DUBAI - 17:35 TOKYO/NARITA(EK318)

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ANNEX 5. List of Equipment procured under the Project

List of equipment

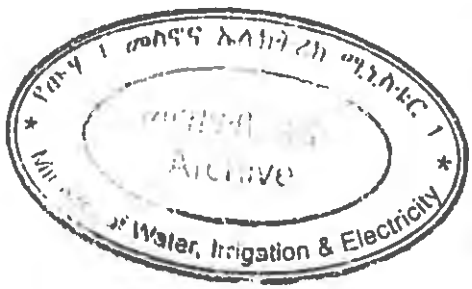
Item	Spec	Qty	Date of procurement	Year	Location	Condition
Laminator	LTA32E(A3 size)	1	2013.3.15	Period 1	MoWIE project office	Good
Projector	Sony /VPL-Dx100 LCD Projector	2	2013.4.11	Period 1	MoWIE project office	Good
			2013.6.6	Period 1	Hawassa project office	Good
UPS	1050VA	2	2013.5.27	Period 1	MoWIE project office, Hawassa project office	Good
Desktop Computer	Dell/ optiplex GX790, core i3, 2GB, HDD 500GB, 19inch screen	1	2013.5.27	Period 1	Hawassa project office	Good
Screen		1	2013.6.6	Period 1	Hawassa project office	Good
Book binding machine	S-100	2	2013.6.6	Period 1	MoWIE project office	Good
			2014.2.24	Period 1	Hawassa project office	Good
Printer-copier-scanner -fax	HP M1212nf Laser Jet all in one machine Serial Number: CNGJ8F388N2	1	2013.6.27	Period 1	Hawassa project office	Good
Laptop computer	TOSHIBA/satellite L855 core i5, 6GB, HDD 640GB, 15.6inch screen	4	2014.2.27	Period 1	Hawassa project office (for each woreda)	Good
Power generator	RGD5500	2	2016.2.4	Period 3	Hawassa project office	Good

List of equipment accompanied by dispatch of the JICA Experts.

Item	Spec	Qty	Date of procurement	Year	Location	Condition
Digital video camera	Victor/ GZ-E320-R	1	2013.3.16	Period 1	MoWIE project office	Good
Digital turbidity meter	Kyoritsu chemical check, corp/ WA-PT-4DG	1	2013.3.28	Period 1	MoWIE project office	Good
Conductance mater	Horiba/B-173	1	2013.3.28	Period 1	MoWIE project office	Good
Copier	1300678X (FT1X043, AR5620NGSF1), Sharp AR 5620N	1	2013.5.27	Period 1	MoWIE project office	Good
Copier	1300679X (FT1X043, AR5620NGSF1) Sharp AR 5620N	1	2013.5.27	Period 1	Hawassa project office	Good
Generator	RGD5000 Self Start	4	2013.10.9	Period 1	Hawassa project office	Good
Laser color printer (A4 size)	HP M551n Color Laser Jet Printer	1	2013.10.11	Period 1	MoWIE project office	Good

Other equipment

Item	Spec	Qty	Date of procurement	Year	Location	Condition
Laptop computers	TOSHIBA/satellite core i5, 4GB, HDD 500GB, 15.6inch screen, Serial Number:5C295467Q-9 Serial Number:7C038289Q-9	2	2013.5.27	Period 1	MoWIE project office	Good
Desktop computers	Dell/ optiplex GX790, core i3, 2GB, HDD 500GB, 19inch screen Serial Number: HHP8TS1, 38075626945	1	2013.5.27	Period 1	MoWIE project office	Good



ANNEX 6: Placement Records of Counterpart Personnel

(As of June 12, 2016)

Name	Title	Department / Organisation
Mr. James Deng Choltot	State Minister / Project Director	MoWIE
Mr. Yohannes G / Medhen*	Director / Project Manager (Till December 2013)	Water Supply and Sanitation Directorate, MoWIE
Mr. Nuredin Mohammed	Director / Project Manager (Since December 2013)	Water Supply and Sanitation Directorate, MoWIE
Dr. Markos Wijore	Director / Head of EWTI	Sector Support Directorate, MoWIE / Ethiopia Water Technology Institute
Mr. Abiti Getaneh	Director	Research and Development Directorate, MoWIE
Mr. Abebe Mekonnen*	Head (Till July 2013)	Ethiopia Water Technology Centre
Mr. Abiy Girma	National WASH Coordinator	National WASH Coordination Office
Ms. Zewditu Yilma	UNICEF Project Coordinator (Till July 2014)	Self Supply Office
Mr. Agash Asmamewe	National Consultant / Self-supply Focal Person (Since July 2014)	Water Supply and Sanitation Directorate, MoWIE
Mr. Tamane Hailu	Rural WASH Coordinator	Water Supply and Sanitation Directorate, MoWIE
Mr. Eyasu Guta	Technical/ Program Support Officer	Water Supply and Sanitation Directorate, MoWIE
Mr. Tewodros Tadele	Engineer on Electro Mechanics	Water Supply and Sanitation Directorate, MoWIE
Mr. Abbas Mohamed*	Head (Till December 2013)	Water Resource Bureau, SNNPR
Mr. Tesfaye Yigezu	Head (Till January 2015)	Water Resource Bureau, SNNPR
Mr. Samuel Tamiru	Head (Since January 2015)	Water and Irrigation Development Bureau, SNNPR
Mr. Letta Yetamu	Vice Head, (Since March 2015)	Water and Irrigation Development Bureau, SNNPR
Mr. Tadela Kibru	Core Process Owner, Water Resources Study and Management Core Process (Till November 2015)	Water Resource Bureau, SNNPR
Mr. Melkamu Worko	Core Process Owner, Water Resources Study and Management Core Process (Since December 2015)	Water and Irrigation Development Bureau, SNNPR
Mr. Eyasu Mamo	Water Quality Expert (Till May 2014)	Water and Irrigation Development Bureau, SNNPR
Mr. Kassahun Woldegeorgis	Core Process Owner, Water Supply Schemes Administration Core Process	Water and Irrigation Development Bureau, SNNPR
Mr. Kassu Eshete	Socio-economist	Water and Irrigation Development Bureau, SNNPR
Mr. Dereje Haile	Mechanic	Water and Irrigation Development Bureau, SNNPR
Mr. Lebenu Lemma	Water Quality Expert under Water Resources Study and Management Core Process	Water and Irrigation Development Bureau, SNNPR
Mr. Andualem	Water Quality Expert under Water Resources Study and Management Core Process	Water and Irrigation Development Bureau, SNNPR
Mr. Abdela Yimar	Hydrogeologist	Water and Irrigation Development Bureau, SNNPR
Mr. Mulugeta Mussie	WRB WASH Coordinator (Till July 2014)	Water Resource Bureau, SNNPR
Mr. Bekele Kassaye	WRB WASH Coordinator(Since July 2014)	Water and Irrigation Development Bureau, SNNPR
Mr. Shimeles Debele*	Head of Credit Department (Till November 2014)	Omo Micro Finance Institute (MFI)
Mr. Ashebir Alemu	Director of Credit Directorate (Since December 2014)	Omo Micro Finance Institute (MFI)
Mr. Mekuria Mesekele	Rural Credit Officer	Omo Micro Finance Institute (MFI)
Mr. Tegegne Worku	Senior Rural Credit Officer	Omo Micro Finance Institute (MFI)
Mr. Atnafu Asfaw	Deputy Bureau Head and Core process Owner of Human Resource Development	TVET Bureau SNNPR
Mr. Fisseha Hariso Burra	Dean (till April 2016)	Technical and Vocational Education Training College (TVETC) Hawassa
Mr. Gedion Teka	Technical Coordinator for Technical Transfer (Till October 2014)	TVETC Hawassa

Mr. Ketema Getaneh	Technical Coordinator for Technical Transfer (Since October 2014)	TVETC Hawassa
Mr. Mahamednur Faris	Process Owner of Natural Resources Division, Agriculture Bureau	Agriculture Bureau, SNNPR
Mr. Desalegn Gullo	Hygiene and Sanitation Focal Person, Disease Prevention and Health Promotion	Health Bureau, SNNPR
Mr. Solomon Gebre*	Hygiene and Sanitation Focal Person, Disease Prevention and Health Promotion (Till May 2014)	Health Bureau, SNNPR
Mrs. Woinshet Mengesha	Hygiene and Sanitation Focal Person, Disease Prevention and Health Promotion (Since May 2014)	Health Bureau, SNNPR
Mr. Male Mate	Hygiene and Sanitation Focal Person, Disease Prevention and Health Promotion (Since May 2014)	Health Bureau, SNNPR
Mr. Firew Bekele	Women Children and Youth Affairs Bureau	Women Children and Youth Affairs Bureau, SNNPR

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Minutes of the 6th Joint Coordination Committee Meeting

Date : June 30, 2016
Venue : Getfam Hotel, Addis Ababa
Participants: As attached,

Contents:

Opening Remark

Ato Nuredin Mohammed, Director of Water Supply and Sanitation Directorate made his opening remark. He thanked all the members gathered for the meeting. He also appreciated the Terminal Evaluation Team for their efforts for the thorough assessment of the achievements of the Project.

He expressed that the MoWIE learned a lot through the experiences with the project, in terms of Self-supply acceleration and rope pump dissemination. He applauded the project outcomes, in particular, standardization of the rope pump technology is regarded as one of the most remarkable achievements, while he gave a value to the project's contribution in showing a good model of promotion of Self-supply and low cost technology in collaboration with the inter-sectoral partners, including health, agriculture, TVET and finance sectors. Those achievements were observed by many stakeholders during the course of events of Self-supply Fair, in association with World Water Day. He said these results shall be taken over by the ministry as a part of the ministry's efforts of One WASH National Programme.

He concluded his remark with encouraging the participants to actively participate in the discussion over the results of the Terminal Evaluation Study.

Remark from Terminal Evaluation Team

Mr.Yuki Aratsu, Team Leader of the Terminal Evaluation Team expressed his appreciation to all the stakeholders of the project for their collaboration. He explained that the Terminal Evaluation was conducted jointly by the Ethiopian and Japanese members and the Joint Evaluation Team has successfully produced the evaluation report.

He mentioned that the project activities on PDM have mostly been completed. The major achievements are; development of new models of RP, minimum standard

specification, enough numbers of technical trainings, establishing the promotion model in collaboration with health agriculture, TVET and OMFI, and installation of 200 households who signed agreements with OMFI.

Quality control, parts supply strategies and RP dissemination handbook are under development and will be finalized within the project period. The project has created the model of RP dissemination, but further efforts should be exerted.

He expressed his sincere thanks to all the stakeholders for their cooperation and his wishes to the people in Ethiopia for better access to hygienic water.

Presentation on findings by Ms.Hiroyo Onozato

Ms.Hiroyo Onozato presented the findings of the Terminal Evaluation Study. She presented the achievement of the project according to the PDM, and 5 evaluation criteria.

The team evaluated that the relevancy, effectiveness and efficiency of the Project are high while impact is relatively high. Sustainability is evaluated as moderate, as some NGOs are providing the RPs as grant, immaturity of spare parts market is still a challenge. The details are as attached PPT.

Presentation on the Recommendations and Lessons Learnt

Ato Agash Asmamaw, a member of the Terminal Evaluation Team from MoWIE presented the recommendations and lessons learned from the study.

Before the completion of the project (during the remain project period);

1. Considering the policy support to assist small and micro enterprises dealing with rope pump manufacturing and spare-parts
2. For the government institution (e.g. WIDB) to align with the Self- supply guidelines, to respect the national guideline and the signed MOU

After completion of the project;

1. Dissemination of the results and outcome of the project
2. Adaption of ESA standardized rope pump specifications
3. Scaling- up of capacity building to village technicians and water office engineers
4. Continuous hygiene education activity by woreda water office and health workers
5. Collaboration with bureau of agriculture for multiple use of the water

Finally Mr.Agash presented the lessons learnt from the project like; using the existing system, that is integrating capacity building component of the project activities to the TVETC systems and collaboration with micro finances institution for rope pump promotion are useful. The details are as attached.

Discussion

The participants held an active discussion over the various issues related to the project and the results of the evaluation. The major points are summarized as follows.

**Keys ···· C: Comment, Q: Question, → : Reaction*

[Appreciation to the Project]

C: The Project Team achieved the objectives, especially bringing the new approach to Self-supply at the community level.

C: Major significance of the Project is not 200 RPs installed, but is the developed systems to actualize the RP dissemination/promotion. This system should be scaled up.

C: Use of HEWs and agriculture DAs are appreciable. What we could learn from the project is this part.

C: It was appreciable this project is located in SNNPR. All activities have been done together with JICA. Thank MoWIE to give a chance with the project to SNNPR.

[Method of evaluation]

C: Impact was rated relatively high. However the impact should be measured at the time of the impact evaluation and the data should be collected further with control. Some of the evaluated impact for this evaluation could not be the impact, which is solely from the project. "Outcome" should be the correct word.

→Joint Evaluation Team did not evaluate the impact at this point of time but the prospect. Impact will be attained in three years. The system that the project made should continue, then the impact should be attained.

→Final evaluation indication is a goal. Impact is outside the project area. It should be assessed.

Q: In the Steering Committee Meeting in Hawassa, it was discussed that sustainability of the project was rated relatively high, but it was changed to moderate. Why?

→Policy and institutional aspect, financial aspect and sanitation aspects are the factors considered. Sanitation activity is important. "Relatively high" is considered a bit too high and the evaluation team changed the score to "moderate".

[H&S]

C: Improvement of drinking water is the objective of the project. Improving drinking water is treatment. There must be treatment of water at the household level.

Q: Fencing practice was found 60%. It is very important to keep animals away. How these things were evaluated?

→Fencing practices were surveyed by the project but not by the evaluation team.

→The evaluation team observed that, in Yirgachefe, RPs were installed near to their houses. No fence seemed necessary. In Meskan, their RPs are far from house. Some are fenced.

[After the Project]

C: The remaining time for the project is only 6 months, and there is need of exit strategies.

C : The results of the Project should be sustained with the systems in SNNPR. There should be the exit strategy. There should be a scaling up strategy throughout the country.

C: SNNPR could serve as CoE for RP dissemination. With tools, the technical people in SNNPR should be trained.

→Strategy is important, but JICA's case, strategy is embedded to the whole design of the project. Some remaining activities in the remaining 6 months are the strategy. We are planning to conduct the national seminar in the project period.

→There are dissemination tools as well. The experiences of the project activities will be compiled and those shall indicate the scaling-up strategies.

→Discussing with the Self-supply partners for taking over some outcomes of the project.

JICA and the project will continue discussing with them.

→TVET trainers are good potential for SNNPR. WIDB would like to utilize them, e.g. Wolkite, Arba Minch.

→JICA is considering dispatch of JOCVs to support promotion and sanitation aspect in future.

[Alignment with Self-supply policy]

C: For WIDB of SNNPR, if the subsidy is allowed for a single household, it will be difficult in future, in terms of sustainability. Subsidising RPs should be restricted and monitoring the NGOs who are providing grants should be necessary. Awareness should be created.

→ WIDB has a budget of 1.2 million Birr to train 135 woredas. It has a plan to install 10,000 RPs. 7 million Birr is allocated to promote RPs from finance. 20% of unserved population is to be served with RPs.

→Every zone has potential. WIDB's decision on 50% subsidy is for promotion of the technology. In addition, in this year there are problems (of drought). 39 million Birr is allocated for supplying water to the people. The Bureau has discussed and came up with the idea that it needs to do more promotion. Main task is to install there RPs and attend the non-functional schemes.

→WIDB has discussed with OMFI and WIDB agreed to provide RPs in kind as seed money. Some misunderstanding happened over the change of the modality (but will be solved). Bureau does not disagree with the Self-supply policy.

[COC]

Q: Technicians trained were 50 but 27 passed the COC exam. What are the problems?

→ The indicator does not show the COC passing as an indicator.

→ Only 43 sat for the exam. 63% passed. Many candidate VTs were new for that kind of test and being nervous.

[Functionality of RPs and O&M]

C: The project reported that the functionality rate was 97.5% but the evaluation team calculated as 92%. In Meskan, 15 non-functional wells were found. The evaluation team calculated all related wells as functionality.

Q: O&M aspect. Artisans are trained. How the users communicate with technicians?

→ O&M aspect was well thought by the Project Team and improved. Earlier there are only woreda technicians attended the technical problems, whereas, after the trainings of the Project, there are Village Technicians who live in the rural villages to help users.

→ As for the spare parts, it was found through the experiences of the project that the RP parts alone cannot make business in the current market in Ethiopia, as the demands have not been matured. The Project Team recommends the government sector to consider a sort of intervention to support this situation.

→ Spare parts shops will be opened in SNNPR in future. WIDB is planning to open 26 shops.

[Business license]

C: Trade license could be one of the issues. It is necessary to be given by MoWIE at the moment, but, if Region can give it, things will be better.

→ MoWIE and WIDB will discuss further on this issue.

[Financial report]

C: MoWIE needs the financial report from the project. The finance issue was raised many times at JCCs.

→ The evaluation report already includes the finance.

→ JICA is communicating with MOFEC and can provide the figures. JICA's approach is not for financial, but technical support. It is good to note that the effectiveness of the project cannot be simply calculated by the cost. Physical and financial values are not solely the means to evaluate the technical cooperation.

→As agreed on ONWP, JICA needs to have a standard to document for one WASH, one report.

Closing Remark

Mr.Kimiaki Jin, Chief Representative of JICA Ethiopia Office made a closing remark expressing his gratitude to the successful JCC meeting. He appreciated the results of the evaluation with 3 aspects high, 1 relatively high and 1 moderate and extended his sincere appreciation to those who are involved in the project.

He emphasized that the remarkable outcome of the project is the established systems for RP dissemination and asserted that the Ethiopian counterparts can utilize, elaborate and further expand the RP while utilizing the established system. It was urged that scaling-up is a question to the Ethiopian side, as he observed most of successful projects being scaled up by the Ethiopian side, such as Kaizen, which has been scaled up through EKI without the consensus of JICA.

He also focused that the ambition of SNNPR to disseminate 10,000 RPs is important. Though some challenges are there. Ownership and strong willingness are important.

Mr.Jin closed the meeting with appreciation to all the participants at 12:00 pm.

Minutes certified by

Mr. Nuredin Mohammed	**Ms. Akino Kitazume**
Director, Water Supply and Sanitation Directorate,	Chief Advisor / Dissemination Strategy,
Ministry of Water, Irrigation and Electricity	JICA Project Team

Annex-1

Ministry of Water, Irrigation and Electricity (MoWIE) / Water and Irrigation Development Bureau (WIDB) / Japan International Cooperation Agency (JICA)

The Project for Rural Water Supply, Sanitation and Livelihood Improvement through Dissemination of Rope Pumps (RPs) for Drinking Water

(WAS-RoPSS Project)

The 6th Joint Coordination Committee Meeting

June 30, 2016, Getfam Hotel, Addis Ababa

Programme

Time	Content	Presenter
09:00	Opening Remarks	Representative, MoWIE
09:10	Remarks from Terminal Evaluation Team	Mr.Yuki Aratsu, Team Leader of Terminal Evaluation Team / Global Environment Department, JICA HQ
09:20	Presentation on the Findings of Terminal Evaluation Study	Ms.Hiroyo Onozato, Evaluation Consultant
09:40	Presentation on Recommendations and Lessons Leaned	Mr.Agash Asmamaw, Evaluation Member / Self-supply Focal Person, MoWIE
10:00	Tea Break	
10:30	Discussion and Approval of Evaluation Results	Participants
11:30	Closing Remark	Mr.Kimiaki Jin, Country Representative, JICA Ethiopia Office

Chairperson: Representative of MoWIE

List of Attendants
For the 6th JCC Meeting
June 30, 2016, at Getfam Hotel

Ministry of Water, Irrigation and Electricity

Nuredin Mohammed	Director, Water Supply and Sanitation Directorate
Tamiru Gedefa	National WASH PMU Coordinator
Dr. Almayehu Mekonnen	Lead National Consultant

Ministry of Finance and Economic Cooperation

Dereje Girma	Team Leader, Bilateral Cooperation

Water and Irrigation Development Bureau, SNNPR

Kassahun Woldegiorgis	Core Process Owner, Drinking Water Schemes Administration

Joint Terminal Evaluation Team

Yuki Aratsu	Global Environment Department, JICA HQ
Keisuke Yamagami	Global Environment Department, JICA HQ
Hiroyo Onozato	Evaluation Analysis, Global Link Management
Agash Asmamew	National Consultant, Self Supply
Bekele Belete	Socio-economist, WIDB

JICA

Kimiaki Jin	Representative, JICA Ethiopia Office
Ephrem Fufa	Programme Officer, JICA Ethiopia Office

WAS-RoPSS

Akino Kitazume	Chief Advisor / Dissemination Strategy
Hidekuni Usami	Drilling Technology
Girma Senbeta	Technical Coordinator
Azalech Solomon	Assistant Technical Coordinator
Muluken Girma	Promotion Assistant
Girma Belay	Driver / Office Assistant

Ministry of Water, Irrigation and Electricity / Japan International Cooperation Agency
Project for Rural Water Supply, Sanitation and Livelihood Improvement through
Dissemination of Rope Pumps (RPs) for Drinking Water

Minutes of the 7th Joint Coordination Committee Meeting

Date : November 3, 2016
Time : 9:25-11:30
Venue : Getfam Hotel, Addis Ababa
Participants: As attached in Annex 1

Contents:
The Seminar programme is attached as Annex 2.

1. Opening Remark

H.E. James Dengchol Tol, State Minister gave the opening remark, emphasizing that the Joint Coordination Committee that day was the 7th and the final one for the Project. He explained that Self-supply is one of the important sub-components of One WASH National Program and that the Ministry considers Self-supply promotion should be further accelerated and low cost technologies including Rope Pump should be widely spread to the rural people for betterment of their livelihoods. He appreciated the efforts of the Project for actualising the National Policy Guidelines for Self-supply on the real ground, and for making a firm ground to disseminate the rope pump technology, in particular, standardisation of RP specifications, human resource development utilising TVET and COC systems, and promotion of Self-supply through Self-supply Fair.

2. Remark by JICA Ethiopia Office

Mr. Takeshi Matsuyama, Senior Representative of JICA Ethiopia Office, congratulated the participants for successful completion of the Project, after 3 years and 9 months. He said he understood that the Project Team had been busy for the previous week to disseminate the outputs at Final Seminars in Addis Ababa and Hawassa. And that the 7th JCC was the final official event for the project.

He reminded the participants that the recommendations of the Terminal Evaluation were as follows; two recommendations before the termination of the Project, 1) discussion on spare parts issue for small enterprises, and 2) alignment of Self-supply guidelines; and after the termination of the Project, 1) dissemination of the Project outputs, 2) conforming to national standards, 3) scaling-up of human resource development, 4) promotion of hygiene and sanitation, and 5) collaboration with Bureau of Agriculture. He finally appreciated the efforts of the stakeholders and encouraged the Ethiopian counterparts to take over the Project outputs.

3. Presentation on the Project Outline and Achievements

Mr. Tamene Hailu, Rural WASH Coordinator of the ministry, presented the outline of the Project and the major achievements. See Annex 3 for the details.

4. Presentation on the Roll-out Strategies

Mr. Eyasu Guta, Technical/ Program Support Officer of the ministry, presented the Roll-out Strategies. See Annex 4 for the details.

5. Discussion on Roll-out Strategy

There were questions and comments from the participants. The summary is as follows;

(Q: question, C: comment, →: reaction)

[Roll-out Strategies]

Q: On the Roll-out Strategies, there were some points raised, who are responsible for each activity? Who are the stakeholders?

C: What suggested on the presentation are the points to focus, but not really strategies. The strategies should be clarified as to how we can do it. These suggested action points should be implemented not only in SNNPR, but also in other regions.

C: SNNPR has strategies, allocating the budget and disseminate 10,000 RPs. Ministry needs to have its own strategy to scale-up the Project outputs.

C: There are many organisations who work on Self-supply. For example, IRC, MWA and World Vision are working in RP technology. What important is how the Ministry can use this technology, and how it can utilise those organisations for dissemination of it.

C: Based on the project agreement, remarks are high in achievements.

[External Support]

C: There are still many remaining issues, such as creation of job opportunities, and financial support to those who were trained. JICA should continue its support to the end.

C: To scale-up this to other areas, MoWIE still need support from JICA.

→ In June 2016, Terminal Evaluation Team concluded that the outputs were produced, and that the Project would not be extended.

→ MoWIE has all the materials and have trained technicians. There are a lot of trained human resources already. MoWIE is encouraged to think about scaling up the project

outputs, rather than depending on the donors.

→ MoWIE may need to maintain the momentum in SNNPR.

→ JICA will consider the minimum support to follow-up the project.

→ JICA appreciates the acknowledgement the project output. The project was a comprehensive one, and efforts to establish the foundation. At the final seminar, MoWIE side said that they are the one to take over.

→ JICA's further support should not be expected too much. JICA will dispatch JOCVs for hygiene education aspect, in a small scale. Now it is MoWIE's turn to own the project.

[Water Quality]

Q: One of the major problems of RP and Self-supply is that it is not included in the water supply coverage. How can we have a technology which we include in the water supply coverage? What is the conclusion of the project about the water quality?

Q: Do RPs give the same water quality as other schemes?

→ RP is introduced as only a step of Self-supply ladder, on which the rural people make one step up to improve their water supply facilities, but not necessarily to guarantee 100% safe water immediately.

→ Shallow wells are often prone to contamination, and 100% protection from the contamination by the physical means is not easy.

→ The Project promoted a physical means to protect wells from contamination, such as installation of a well cover, construction of apron, drainage canal and soak away pit. In addition, Household Water Treatment and Storage (HWTS) was promoted in association with RP promotion, as RP installation alone may not give 100% protection from contamination.

→ The appropriateness of promotion of the technology in relation to water quality should not be the questions to the Project, as RP promotion is already in the policy papers and incorporated in various government plans. This should involve a political decision.

→ RP is only a water lifting device and not to do with water quality. It is not appropriate to discuss RP technology and water quality on the same ground.

→ Water quality, the wells are not gravel packed, not sealed. JICA checked water quality and disinfected, protected wells with aprons and drainage canal. It is

important to monitor the wells by woreda, and promote HWTS. Think about the cost of well protection and other means.

→ In Self-supply, consideration of cost is an important factor. Improvement of wells with physical means, such as lining can be considered in terms of protection from contamination. However, the cost matters in case of Self-supply, as the rural people need to self-finance improvement of water supply facilities. Lining with concrete rings may cost 15,000 – 20,000 Birr for a 10m-well, and whether or not rural individual household can afford it could be a question.

→ As far as the outcome of the Project is concerned, the turbidity became better. E-coli figures may be different in particular rainy season.

→ Water quality the reason why HEWs are involved in this project. Water is shallow and water can be easily contaminated.

→ A care needs to be taken, as the water sector HWTS is not a solution. No possibility of having drinking water in that area. Having water supply nearby is an issue.

[Shallow Groundwater Potential]

Q: In the presentation, it was said that 51 wells were non-functional due to water level decline. Was this kind or problems identified before project?

→ 51 wells were not functioning due to wells, but not due to pumps. A need of hydro-geological consideration during target area selection and well technical assessment is explained in the Handbook.

→ We need to delineate the areas where RPs are suitable.

→ Some studies were conducted by Addis Ababa University and Agricultural Transformation Agency (ATA).

→ We have to see seriously about the functionality. 97.5% is very big to compare with communal supply. These wells are for households, who have no other means for water supply. Individuals should be guaranteed with water supply. They do not have water in dry season.

[Subsidy]

Q: What are the problems of subsidy vs. non-subsidy? Is MoWIE planning to subsidise households?

→ The Project has not subsidised anyone.

[Others]

C: All questions raised by the participants should not be the questions only to the Project, but to be answered by the participants themselves, as the Project is phasing out and only the counterparts remain with the works.

6. Hand-over of Materials and Tools

After all the questions and answers were exhausted, Ms. Akino Kitazume, Chief Advisor of the WAS-RoPSS Project, handed a set of the materials and tools produced by the Project to Mr. Nuredin, representing Water Supply and Sanitation Directorate of MoWIE.

7. Closing Remark by Ato Nuredin Mohammed

Mr. Nuredin Mohammed, Director of Water Supply and Sanitation Directorate, expressed in his closing remark that the Project has been implemented over 3 years, and that the team has given lots of efforts. He reminded that the Terminal Evaluation has concluded that the Project achieved good results.

He expressed his gratitude to the Project Team for its efforts and struggles for the benefit of the rural community in Ethiopia. Activities for all 5 outputs were very important for the Ministry, in particular capacity building of human resources and the manuals produced. Finally he concluded that the Project was very successful, and MoWIE expects continuous support of JICA in the sector.

The meeting ended at 11:30 a.m.

End.

Minutes certified by

The Federal Democratic Republic of Ethiopia Ministry of Water, Irrigation & Electricity

Nuredin Mohammed
Water Supply & Sanitation Directorate
Director
Ministry of Water, Irrigation and Electricity

Rural Water Supply and Livelihood Improvement Dissemination Project in the Drought Prone Districts of Ethiopia

Ms. Akino Kitazume
Chief Advisor / Dissemination Strategy,
WAS-RoPSS Project

Annex 1

List of Participants

No.	Name	Position	Organisation
1	H.E. James Dengchol Tol	State Minister	MoWIE
2	Mr.Nuredin Mohammed	Director, Water Supply and Sanitation Directorate	MoWIE
3	Mr.Tamene Hailu	Rural WASH Coordinator	MoWIE
4	Mr.Tamiru Gedefa	One WASH National Program Program Management Unit	MoWIE
5	Dr.Alemayehu Mekonnen	National Consultant	MoWIE
6	Mr.Agash Asmamaw	National Consultant	MoWIE
7	Mr.Eyasu Guta	Technical / Program Support Officer	MoWIE
8	Mr.Asefa Gebrewold	Small and Micro Enterprise Streaming	MoWIE
9	Mr.Tedros Tadele	Electro-mechanical Engineer	MoWIE
10	Mr.Birhanu Wondifraw	Rural Consultant	MoWIE
11	Mr.Dereje Girma	Team Leader	Ministry of Finance and Economic Cooperation
12	Mr.Takeshi Matsuyama	Senior Representative	JICA Ethiopia Office
13	Mr.Atsushi Munakata	Project Formulation Officer	JICA Ethiopia Office
14	Mr.Ephrem Fufa	Program Officer	JICA Ethiopia Office
15	Ms.Akino Kitazume	Chief Advisor	WAS-RoPSS Project
16	Ms.Kaina Homma	Community Development	WAS-RoPSS Project
17	Mr.Girma Senbeta	Technical Coordinator	WAS-RoPSS Project
18	Ms.Azalech Solomon	Assistant Technical Coordinator	WAS-RoPSS Project
19	Mr.Tewodros Tadese	Technical Assistant	WAS-RoPSS Project
20	Mr.Muluken Girma	Promotion Assistant	WAS-RoPSS Project
21	Ms.Afra Mohammed	Secretary	WAS-RoPSS Project
22	Mr.Ermias Tekeste	Office Assistant	WAS-RoPSS Project
23	Mr.Yonas G/egziabher	Office Assistant	WAS-RoPSS Project

MoWIE: Ministry of Water, Irrigation and Electricity

Annex 2

Ministry of Water, Irrigation and Electricity (MoWIE) / Water and Irrigation Development Bureau (WIDB) / Japan International Cooperation Agency (JICA)

The Project for Rural Water Supply, Sanitation and Livelihood Improvement through Dissemination of Rope Pumps (RPs) for Drinking Water (WAS-RoPSS Project)

The 7th Joint Coordination Committee Meeting

November 3, 2016, Getfam Hotel, Addis Ababa

Programme

Time	Content	Presenter
09:00	Opening Remarks	Representative, MoWIE
09:10	Remarks from JICA Ethiopia Office	Mr.Takeshi Matsuyama, Senior Representative, JICA Ethiopia Office
09:20	Presentation on the Achievements of the Project	Mr.Tamene Haiu, MoWIE
09:40	Tea Break	
10:10	Presentation on Roll Out Strategy	Mr. Eyasu Guta, MoWIE
10:30	Discussion on Roll Out Strategy	MoWIE
11:20	Remark from JICA Ethiopia Office	Mr.Kimiaki Jin, Country Representative, JICA Ethiopia Office
11:30	Closing Remark	Representative, WIDB

Chairperson: Representative of MoWIE