

スリランカ民主社会主義共和国
乾燥地域の灌漑農業における
総合的管理能力向上計画
終了時評価調査報告書

平成 26 年 2 月
(2014年)

独立行政法人国際協力機構
スリランカ事務所

スリ事
JR
14-001

**スリランカ民主社会主義共和国
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序 文

独立行政法人国際協力機構は、スリランカ民主社会主義共和国と締結した討議議事録（R/D）に基づき、技術協力プロジェクト「乾燥地域の灌漑農業における総合的管理能力向上計画」を2007年6月から4年間の予定で実施しています。

このたび当機構は、本プロジェクトの協力期間の終了に向け、スリランカ民主社会主義共和国側と合同でこれまでの活動実績や目標達成状況について総合的な評価を行うとともに、今後の方向性を協議するため、2010年11月25日から12月15日にかけて終了時評価調査を実施しました。

本報告書は、同調査団によるスリランカ民主社会主義共和政府関係者との協議及び評価調査結果等を取りまとめたものであり、本プロジェクト並びに関連する国際協力の推進に活用されることを願うものです。

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

平成26年2月

独立行政法人国際協力機構
スリランカ事務所長 青 晴海

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現地調査写真



ラジャンガナ地区
農民組織（F0）へのインタビュー



カドウルガスダマナ地区
パラシュート移植法用の苗畑



クルネーガラ県
カウンターパートとの協議

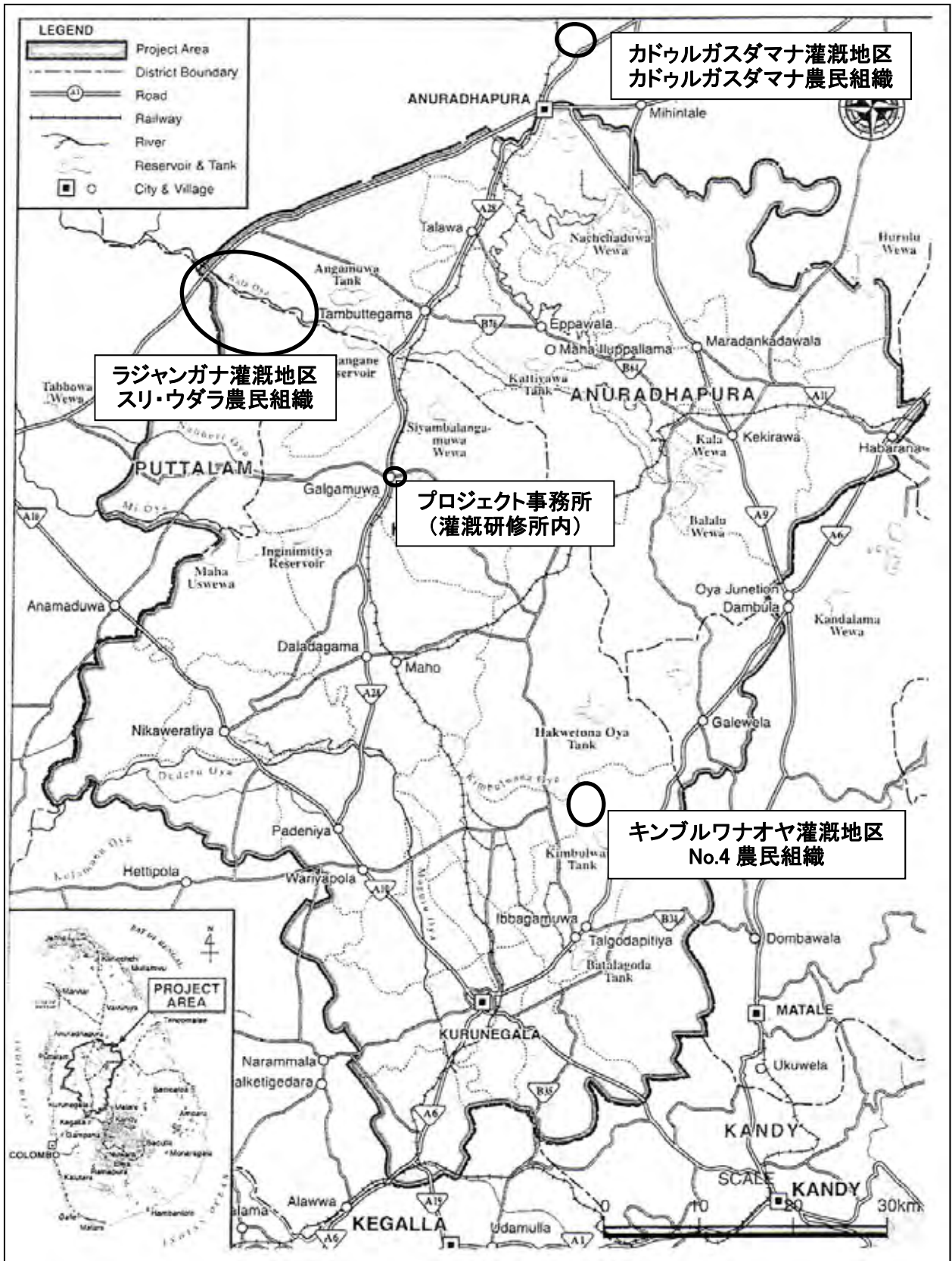


キンブルワナオヤ地区
畜産活動



ラジャンガナ地区
整備された灌漑水路及び農道

プロジェクト位置図



評価調査結果要約表

1. 案件の概要		
国名：スリランカ民主社会主義共和国	案件名： 乾燥地域の灌漑農業における総合的管理能力向上計画	
分野：農業・農村開発	援助形態：技術協力プロジェクト	
所轄部署：JICAスリランカ事務所	協力金額：2億4,000万円（評価時点）	
協力期間	(R/D)：2007年6月1日～ 2011年5月31日	先方関係機関：灌漑・水資源管理省（MIWRM）
		日本側協力機関：農林水産省
		他の関連協力： 開発調査「灌漑分野に係る総合的管理能力向上計画調査」 ・ 有償資金協力「農村経済復興開発事業（PEACE）」
1-1 協力の背景と概要		
<p>スリランカ民主社会主義共和国（以下、「スリランカ」と記す）の乾燥地域の農村部では、農外雇用・所得の機会が限られ、中小規模農家の大半が低い所得水準から脱却できない状況にある。乾燥地域は国土の約70%を占め、コメ生産量が全体の約80%という穀倉地帯であり、中小規模農家の水稲生産は灌漑に大きく依存しており、低い収益性、不適切な末端施設の維持管理、非効率的な水管理、といった問題点を抱えている。</p> <p>これらの課題を解決するためには、中小規模の稲作農家を対象に、生産コストの削減、水利用の効率化等による土地生産性の向上、畑作の導入による生産の多様化、組織化（農民の組織化、土地利用の集団化、集出荷の共同化等）による生産性向上などを組み合わせた総合的な改善策が必要である。特に、灌漑農業分野においては、水資源の効果的かつ公平な利用を通じた灌漑面積の拡大及び畑作物の生産拡大等による生産性及び所得の向上が不可欠であり、そのためには関連する政府職員及び農民組織に対する総合的な灌漑管理能力の向上が求められている。</p> <p>このような背景の下、JICAは政府職員及び農民組織の灌漑分野に係る総合的な管理能力を高めるための計画を作成することを目的として、2005年10月から2006年7月にわたり、開発調査「灌漑分野に係る総合的管理能力向上計画調査」を実施した。同調査は、乾燥地域を代表するアヌラダプラ県に位置する灌漑地区2カ所を対象とし、灌漑、農業、流通・加工各セクターの主要問題点とその改善方向を示したうえで当該セクターの能力向上計画を取りまとめた。本プロジェクトは同調査の結果を受け、スリランカ政府の要請を踏まえ、農業生産性の向上に向けた政府職員〔大規模灌漑・水管理を担う灌漑・水資源管理省（Ministry of Irrigation and Water Resource Management：MIWRM）灌漑管理部、灌漑局職員を中心としつつ、普及・研修を担う農業省職員、小規模灌漑・水管理を担う農業開発省及び州政府農業・畜産関連現場職員等〕と農民組織の能力向上を実現する体制を確立することを目標に、2007年6月より実施されてきている。</p>		

1-2 協力内容

本案件は、スリランカ対象2県において、農業生産性を向上させるために政府職員と農民組織の能力向上を図る総合的な研修体制を確立することを目標とする。具体的には①農民組織の運営管理、②灌漑施設管理・水管理、③農業生産、④流通加工の4分野における政府職員と農民組織の能力強化・改善、及びカウンターパートを指導員とし他の政府職員の能力向上を図るための体制整備、に係る技術協力を行う。

(1) 上位目標

対象地域において農家の農業所得が向上する。

(2) プロジェクト目標

農業生産性を向上させるために、政府職員と農民組織の能力向上を図る総合的メカニズムが確立される。

(3) 成果

1. モデルサイトにおいて、農民組織の運営管理に関する政府職員と農民組織の能力が強化・改善される。
2. モデルサイトにおいて、灌漑施設管理・水管理に関する政府職員と農民組織の能力が強化・改善される。
3. モデルサイトにおいて、農業生産に関する政府職員と農民組織の能力が強化・改善される。
4. モデルサイトにおいて、マーケティング・加工に関する政府職員と農民組織の能力が強化・改善される。
5. モデルサイトで開発・改善された研修・ファシリテーション技術を、政府職員や研修機関が、他の職員・機関に普及するためのメカニズムが提案される。

(4) 投入

日本側：総投入額 2億4,000万円（評価時点）

長期専門家派遣：延べ4名

短期専門家派遣：延べ4名

スリランカ人専門家：延べ5名

研修員受入：本邦研修17名（評価調査後の予定4名を含む）

機材供与：2,104万8,114円

ローカルコスト負担：7,459万4,668.64 スリランカ・ルピー（計画額を含む）

スリランカ側：カウンターパート配置：延べ129名

プロジェクト執務室及び付帯施設

2. 評価調査団の概要

調査者	担当分野	氏名	所属・職位
	団長・総括	大塚 卓哉	JICAスリランカ事務所 次長
	農業生産/流通加工/普及	金森 秀行	JICA国際協力専門員
	農民組織/灌漑・水管理	野村 栄作	農林水産省農村振興局整備部設計課海外 土地改良技術室 課長補佐
	評価分析	板垣 啓子	株式会社グローバル・リンク・マネジメン ト 研究員
	計画管理	園山 英毅	JICAスリランカ事務所 企画調査員

調査期間 2010年11月25日～12月15日 評価種類：終了時評価

3. 評価結果の概要

3-1 実績の確認

(1) プロジェクト目標の達成状況

プロジェクト目標「農業生産性を向上させるために、政府職員と農民組織の能力向上を図る総合的メカニズムが確立される」の達成状況：プロジェクトが実施した調査によれば、研修受講者の研修満足度は政府職員（99%。なお、習得知識・技術の実践割合は94%）、農民（100%）と共に高く、モデルサイトの全農民組織（Farmer's Organization：FO）の能力評価の結果も著しく改善されている〔2007年11月のベースライン調査時と比較し、2010年11月の最新調査時（以下、「終了時評価時点」）には3地域平均154%の上昇率〕。研修諮問委員会や作業委員会の活動についても確認され、協力期間終了までにプロジェクト目標が達成される見込みは高いと判断される。

(2) アウトプットの達成状況

成果1「モデルサイトにおいて、農民組織の運営管理に関する政府職員と農民組織の能力が強化・改善される」：プロジェクトで実施された研修について政府職員への質問票調査において、研修への満足度は100%、習得知識・技能の実践割合も94%から100%となっている。2つ以上の研修に参加した回答者の全員が習得知識・技能を実践している。モデルサイトではFOが既にコミュニティ開発計画及び集落開発行動計画（Community Action Plan：CAP）を策定・実施しており、加入資格保有農民の加入割合も全FOで100%を達成した（ベースライン調査時は2カ所の対象地域では75%、83%と指標が達成されていなかった）。年次総会へのFO構成員の参加率にも著しい改善がみられ（ベースライン調査時は10～25%であったが、終了時評価時点では46～72%に上昇）、全FOにおいておのおの4分野（灌漑、稲作、家庭菜園、畜産）の部会が下部組織として設置されている。したがって、本成果は既に達成されたと判断される。

成果2「モデルサイトにおいて、灌漑施設管理・水管理に関する政府職員と農民組織の能力が強化・改善される」：灌漑及び水管理の分野で実施された研修に対する政府職員の満足度は全研修について100%、習得知識・技能の実践割合は67～100%、平均で86%であり、指標の目標値を達成している。一方、モデルサイトにおいては、対象の

全FOが水路や農道、その他の末端灌漑施設の改修を行っており、水管理についても各FOが水管理計画を策定しており、それに基づいた適切な配水が行われている（中間レビュー時には水管理計画策定に係る活動は開始したばかりであり、成果を確認することは困難であった）。したがって、本成果は既に達成されたと判断される。

成果3「モデルサイトにおいて、農業生産に関する政府職員と農民組織の能力が強化・改善される」：農業生産に関連して実施されたさまざまな研修に対する政府職員の満足度及び習得知識・技能の実践割合は共に92～100%、平均で98%であり、指標の目標値を達成している（本指標については中間レビュー時に既に達成済）。これら農業生産技術に関する研修に参加したモデルサイトの農民も、習得知識・技術を活用している。営農多様化に関しては、3モデルサイトのすべてにおいて、FOの部会の活動を通じ、家庭菜園や畜産などの活動が導入されたほか、キンブルワナ（Kimbulwanaoya）及びラジャンガナ（Rajangana）では乾期の水田での作物多様化が試みられた。なお、全FOにおいて配水計画に基づく作付計画が策定・実施されており、農業投入材の共同購入システムも導入されている。以上より、本成果は既に達成されたと判断される。

成果4「モデルサイトにおいて、マーケティング・加工に関する政府職員と農民組織の能力が強化・改善される」：マーケティング・加工の分野において、市場情報や起業促進に関連した研修を実施しており、質問票調査の対象となった全政府職員の全員（100%）が、研修内容は満足すべきものであり、習得内容を自らの業務に活用していると回答している。モデルサイトの農民はカシューナッツ、ライム、コメなどの加工とマーケティングに関する研修を受講しており、これらの加工技術を活用した収入向上活動が計画・開始されている。したがって、本成果は既に達成されたと判断される。

成果5「モデルサイトで開発・改善された研修・ファシリテーション技術を、政府職員や研修機関が、他の職員・機関に普及するためのメカニズムが提案される」：本成果の指標となる活動は今般調査時点では未実施であるが、研修活動のモニタリングや評価など、本成果達成に向けた準備活動が進められており、2011年3月に実施予定の総合的研修プログラム、ワークショップ及びセミナーの詳細計画内容も検討されている。これらの活動が予定どおりに実施される可能性は高く、本成果がプロジェクト終了時までには達成される見通しは高いと判断される。

(3) 中間レビューにおける各提言への対応

1) 農民組織管理

コミュニティ・ディベロップメント、リーダーシップ育成、農家における農業会計に関する研修が政府職員と農民に施された/施される予定である。また、農民の潜在的ニーズを明確にするべく、フォローアップCAPワークショップが行われた/行われる予定である。

2) 灌漑施設管理・水管理

- ① モデルサイトにおいて地理情報システム（Geographic Information System : GIS）を継続的に適用し更新していくため、灌漑技師事務所職員へのGISシステム研修等が実施され、また同事務所内への専任部署設置、専門人材の配置が行われた。
- ② 農民組織の管理能力向上のためのすべての灌漑スキームへの専任プロジェクト・マネジャー配置については、人員不足のため実現できていない。
- ③ 現場で働く政府職員が本プロジェクトの活動に滞りなく従事できるよう、車両燃料・日当予算をスリランカ政府側も分担した。
- ④ 灌漑施設の改修にかかわる準備作業の遅延を防ぐため、灌漑局の幹部職員によるモニタリング会合が4回実施され、かつ週ごとの関係者会合が実施された。

3) 農業生産、流通・加工

- ① 稲作に関し、農民組織の小委員会内に25～30名から成る部会がさらに組織され、小委員会の機能性や活動の効率性が高まった。また、農民組織の要望に応じ、共同出荷、加工、農産物の付加価値の向上に係る政府職員及び農民への研修等が実施された。
- ② 家庭菜園に関しても、政府職員及び農民への、共同販売や農産物付加価値の向上に係る研修等が実施された。また、小規模の家庭菜園を実施する場合に、純所得や栄養状態の改善を通じた生活改善をめざし、一連の営農技術（a package of farming techniques）の導入が図られた。
- ③ 畜産に関し、農業会計の記録管理、乳製品の品質改善・加工、企業家精神育成に関する研修等が実施された。また、現地で入手可能な原材料による混合飼料とコンポスタの生産に係る研修等が実施された。

4) その他

- ① 県レベルの合同調整委員会（Joint Coordinating Committee : JCC）及び全国レベルの合同調整委員会（National Joint Coordinating Committee : NJCC）が開催され、プロジェクト目標にある「総合的なメカニズム（integrated mechanism）」という言葉について、関係者間により定義が明確化され、合意された。
- ② 研修結果に係る体系だったモニタリング手法が作成され、同手法に則って質問票調査が2度実施された。
- ③ 中間評価後、県レベルのJCCミーティングが年4回、中央レベルのJCCミーティングが1回実施された。
- ④ カウンターパート（Counterpart : C/P）研修、課題別研修、企業家精神育成のための研修、リーダーシップ/コミュニティ開発研修及びGISシステム研修が実施され、政府職員の能力強化が推進された。
- ⑤ マニュアル類が最終化され（一部作成中）、関連分野の研修所に配布された。
- ⑥ モデルサイトで開発された研修・ファシリテーションの手法をほかの地区にも普及するためのメカニズムについて検討する委員会が設置され、協議が継続的に実施されている。また、6カ所の普及サイトが選定され、現況調査が実施された。さらに、

2011年3月には本メカニズム提唱のためのワークショップが開催予定である。

- ⑦ 農業・畜産関係の研修所の代表者が次回作業委員会に加わる予定である。
- ⑧ 2009年12月に全国レベルの合同調整委員会（NJCC）にて改訂版プロジェクト・デザイン・マトリックス（Project Design Matrix：PDM）が承認された。

3-2 評価結果の要約

(1) 妥当性

スリランカの国家開発計画、実施機関の政策・計画に大きな変更はなく、本プロジェクトの方向性は日本の協力政策にも沿っていることが確認された。また、研修受講者が研修を高く評価し、習得技術の活用による便益が営農や所得改善をもたらしていることから、本プロジェクトは受益者ニーズに対する適切な対応であったと判断できる。よって本プロジェクトの妥当性は依然として高いと評価される。

(2) 有効性

プロジェクト目標については、協力期間内に達成が見込まれており、プロジェクト実施の有効性は高いといえる。また、アウトプットがプロジェクト目標に至る論理性は妥当なものであり、プロジェクトの各成果とその相互関連がプロジェクト目標達成に大きく貢献していると考えられる。

(3) 効率性

本プロジェクトの運営において、日本・スリランカ側双方の投入、活動は成果達成におおむね効果的に結びついているが、カウンターパート配置や本邦研修実施時期など、一部の投入に関しては問題も指摘されており、本プロジェクトの効率性は中程度と判断される。

(4) インパクト

プロジェクトの活動に関連したポジティブな効果、影響が確認され、ネガティブな効果、影響は特定・報告されなかった。灌漑施設及び水管理の改善による農業生産性と所得の向上、組織運営の改善などが見込まれることから、上位目標達成へのインパクトはやや高いと判断される。

(5) 持続性

農業生産性の向上と政府職員・農民の能力向上の必要性はスリランカの関連政策において強く認識されており、政策面での持続性は高いが、多岐にわたる実施機関の調整役割を担う組織と役割分担の特定が今後の課題であり、制度的な自立発展性を確保するためにはスリランカ側のさらなる努力が必要である。組織・財政面での持続性に関し、モデルサイトのFOについては一定程度期待できるが、実施機関側には制約が認められる。プロジェクトにより導入された技術については政府職員・農民ともに受容度が高く、技術面での自立発展性は高いと判断される。以上より、持続性については中程度と判断される。

3-3 効果発現に貢献した要因

(1) 計画内容に関すること

広範なプロジェクトの活動領域と、限られた数の日本人専門家の投入にかんがみ、プロジェクトによって雇用された4名のスリランカ人専門家の活動による貢献は大きかったと考えられる。

(2) 実施プロセスに関すること

プロジェクトが採用したグループ・アプローチは、政府職員と農民の双方によって有効性が高いと評価されている。グループを基盤とした活動は、政府職員にとっては農民へのサービス提供を容易にし、また農民にとっては個々人では得られない集合的な便益へのアクセスが確保されるという利点がある。

3-4 問題点及び問題を惹起した要因

(1) 計画内容に関すること

モデルサイトが広範囲に散在していたことと、各モデルサイトへの物理的なアクセスの問題によって、プロジェクト関係者のモデルサイト訪問の頻度及び活動への関与の確保は少なからぬ時間と経費を要するものとなり、プロジェクトの日常的な活動運営に困難をもたらした。メールや携帯電話など利用可能な手段のすべてを活用し、個別の関係者と頻繁に連絡を取り合うなど、円滑に活動が進捗するよう、プロジェクトチームによる多大な努力が払われた。

(2) 実施プロセスに関すること

特になし。

3-5 結論

調査の結果、本プロジェクトの活動が遅滞・障害なく実施され、期待された成果がおおむね得られたことが確認された。今後の継続的な努力によって、プロジェクト目標は協力期間内に成功裏に達成される見込みであり、本プロジェクトはR/D記載の期間をもって終了するものとする。

3-6 提言

(1) 上位目標の確実な達成に向けた取り組み

スリランカ政府には、プロジェクト終了後も継続的にプロジェクトの成果を活用・普及していくことが求められており、その具体的な方法として以下が想定される。

- ① 短期的取り組み：プロジェクトの成果品であるマニュアルやハンドブック等の関連機関による研修活動への即時利用
- ② 中期的取り組み：各関係機関の既存の計画や活動へのプロジェクト成果の一部ないし修正コンポーネントの組み込み
- ③ 長期的取り組み：プロジェクトが実施した全活動の総合的な実施

(2) 成果普及のための制度的位置づけを有する専任の調整機能及び財源確保の必要性

将来的なプロジェクト成果の普及を確実にするためのスリランカ側の取り組みとして、異なるレベルの多様な政府機関及び農民との調整を図る役割を制度的に担う、専任の調整機能を配し（政府職員・農民・その他関係機関の総合化のため、異なる政府レベルと部署の調整を行う一定権限をもった常設の政府職員配置等）、かつ必要な予算を確保することが不可欠である。

(3) プロジェクト成果の継続的なモニタリングと評価

モデルサイトにおいてプロジェクトの成果として発現した優れた取り組みや効果的な活動運営を継続させ、さらなる便益を農民にもたすため、実施機関及びJICAによる継続的なモニタリングと評価が行われるよう提言する。

3-7 教訓

(1) FO構成員間の便益の公平な分配

組織への帰属意識や組織所属の利益に対する農民の評価は、FOの継続的な運営に資するものであり、その観点で、モデルサイトのFOが回転資金を効果的に運用し、原資と受益者数の増加を達成していることは重視すべき点である。組織加入の恩恵が構成員間で公平に分配されることは、FOの組織的求心性と運営管理改善の促進につながると考えられる。

(2) プロジェクト実施に係る情報の公開

活動実施に係る情報公開という透明性、例えば、灌漑施設改修工事の経費が看板に示されていたこと等は、関係者の間で高く評価されている。このような透明性は、受益者の信頼獲得に貢献し、情報の不足や意図的な操作によって起こり得る潜在的な対立を回避するという観点からも有用な方策であると考えられる。

Summary of Terminal Evaluation Results

1. Outline of the Project	
Country: Sri Lanka	Project Title: The Project for Increasing the Capacity of Integrated Management in Irrigated Agriculture in Dry Zone
Issues/Sector: Rural Development	Cooperation Scheme: Technical Cooperation Project
Division in Charge: Rural Development Department	Total Cost : 240 million (JPY) (at the time of the evaluation)
Period of Cooperation	(R/D):1 June 2007 – 31 May 2011 (4 years)
	Partner Country's Implementing Organization: Ministry of Irrigation and Water Resources Management (MIWRM)
	Supporting Organizations in Japan: Ministry of Agriculture, Forestry and Fisheries
Related Cooperation: <u>The Study on Increasing Integrated Management Capacity on Irrigation Sector</u> <u>Pro-Poor Economic Advancement and Community Enhancement Project</u>	
1-1 Background of the Project	
<p>In the dry zone in Sri Lanka, that covers about 70% of the total land area and contributes about 80% of the national rice production, many small- and medium-scale farmers remain at low income level, having very limited employment and income opportunities in non-agriculture sector. Their livelihood depends largely on irrigated paddy cultivation, yet with problems including low rice productivity, poor operation and maintenance of irrigation facilities, and inefficient water management. In order to address these problems, farm families require an integrated improvement approach that combines measures for reducing production cost, increasing land productivity by improving water use efficiency, diversifying agricultural production by introducing non-rice crops, and increasing crop productivity by strengthening farmers organizations.</p> <p>Responding to the request from the Government of Sri Lanka (GOSL), Japan International Cooperation Agency (JICA) carried out “the Study on Increasing the Capacity of Integrated Management in Irrigation Sector” from 2005 to 2006 in Anuradhapura, Kurunegala and Puttalam districts. The Study identified major problems and countermeasures for irrigation, agronomy and marketing & processing in the area, and formulated a plan to increase the capacity of government officials (Central Level- Irrigation Department, Irrigation Management Department, Department of Agriculture, Ministry of Agricultural Development and Agrarian Services/Provincial Level- Agriculture and Livestock related officers) and farmers organizations for the integrated management in irrigated agriculture.</p> <p>In July 2005, in order to put the plan into practice, GOSL requested to the Government of Japan (GOJ) to carry out a new technical cooperation project called “the Project for Increasing the Capacity on the Integrated Management in Irrigated Agriculture”, and in accordance with the R/D signed in March 2007, it has been implemented since June 2007 for a period of four years.</p>	
1-2 Project Overview	
(1) Overall Goal	
Agricultural income of the farm families in the target area is increased.	

<p>(2) Project Purpose</p> <p>An integrated mechanism is established to improve agricultural productivity through capacity building of government officers and farmer organizations (FOs)</p> <p>(3) Output:</p> <p><u>Outputs in the model sites</u></p> <ol style="list-style-type: none"> 1) Capacity of the government officers and FOs is enhanced in the field of management of FOs. 2) Capacity of the government officers and FOs is enhanced in the fields of irrigation facility management and water management. 3) Capacity of the government officers and FOs is enhanced in the field of agricultural production. 4) Capacity of the government officers and FOs is enhanced in the fields of marketing and processing. <p><u>Outputs in the training institutes</u></p> <ol style="list-style-type: none"> 5) A mechanism is proposed for the government officers and training institutes to disseminate the improved training/facilitation skills developed in the model sites, to other officers and institutes. <p>(4) Inputs</p> <p>Japanese Side: 240 million (JPY) (at the time of the evaluation)</p> <table border="0"> <tr> <td>Long-term Experts: 4</td> <td>Equipment</td> <td>21,048,114 Japanese Yen</td> </tr> <tr> <td>Short-term Experts: 4</td> <td>Local Operation Cost</td> <td>74,594,668.64 Sri Lankan Rupees</td> </tr> <tr> <td>Sri Lankan Experts: 5</td> <td></td> <td></td> </tr> <tr> <td>Trainees Received: 13 (4 are to be dispatched)</td> <td></td> <td></td> </tr> </table> <p>Sri Lankan Side</p> <table border="0"> <tr> <td>Counterpart personnel</td> <td>129</td> </tr> <tr> <td>Land and Facilities</td> <td></td> </tr> </table>	Long-term Experts: 4	Equipment	21,048,114 Japanese Yen	Short-term Experts: 4	Local Operation Cost	74,594,668.64 Sri Lankan Rupees	Sri Lankan Experts: 5			Trainees Received: 13 (4 are to be dispatched)			Counterpart personnel	129	Land and Facilities	
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2. Evaluation Team			
Members of the Evaluation Team	Team Leader	T. OTSUKA	Senior Representative, JICA Sri Lanka Office
	Agricultural Production / Marketing & Processing / Extension Services	H.KANAMORI	Senior Advisor, JICA HQ
	Farmers Organization/ Irrigation Facility & Water Management	E. NOMURA	Deputy Director, Overseas Land Improvement Cooperation Office, Rural Development Bureau, Ministry of Agriculture, Forestry and Fisheries, Japan
	Evaluation & Analysis	K. ITAGAKI	Researcher, Social Development Department, Global Link Management, Inc.
	Planning Management	H. SONOYAMA	Project Formulation Advisor, JICA Sri Lanka Office
Period of Evaluation	25 November 2010 – 15 December 2010		Type of Evaluation: Terminal Evaluation

3. Results of Evaluation	
3-1. Project Performance	
(1) Project Purpose	
As for the trained government officers, the degree on satisfaction on the training among the respondents of the questionnaire survey reaches 99% in aggregation, while 100% of the farmers who	

responded to the questionnaire survey expressed their satisfaction. The results of the Capacity Assessment of the FOs in the model sites, which assessed the performances and managerial aspects of the FOs, also show a considerable degree of improvement (Compared to the Baseline Survey conducted in November 2007, there was in average 154% increasing rate in average of three model sites).

In response to the recommendations made by the Mid-term Review, the Project has held series of discussions with relevant institutions to build consensus on the definition of the integrated mechanism to be established, as well as to reinforce the functions of the Training Advisory Committee (TAC) through the NJCC meetings. The Working Groupsⁱ (WGs) i.e. Financial Management WG, Irrigation WG, Agriculture WG, and Livestock WG, have actively been involved in the planning and conduct of training activities as well as in the compilation of the training manuals.

Based on the confirmation on the above, the Team assumed that the Project purpose would likely be achieved by the end of the Project.

(2) Outputs

Output 1 has been fully achieved by the time of the Study. The Project has conducted the questionnaire

surveys in 2010 to grasp the feedback on the training activities implemented by the Project, and all of the government officers who have been trained rated the training as satisfactory. As for the level of application of the trained skills and methods in the field, the rates of those who practice range from 94 to 100% among the different training. In addition, all (100%) of officers who have been trained on 2 and more subjects responded that they are utilizing the skills/methods learned in their field activities. In the model sites, all the FOs formulated Community Development Plans and CAP, and have duly been implementing those plans. All of these FOs now cover 100% of the eligible farmers in the respective areas. There have been notable improvements in the attendance of the Annual General Meeting (AGM) of the FOs, achieving the target set (At the time of Baseline Survey, the attendance rate for AGM was 10-25% but at the time of the Study, it has increased up to 46-72%). Also, there have been four sub-committees, namely, irrigation, paddy, homestead development and livestock, organized as a part of the formal structures in all of the FOs in the model sites.

Output 2 has been fully achieved by the time of the Study. In the field of irrigation and water management,

the Project has conducted training for the government officers. Among the respondents of the questionnaire survey, the levels of satisfaction on the training programme were 100%, and the degree of utilization of learning in the field activities was 67-100% (in average, 86%). In the model sites, all of the FOs have reconstructed canals, farm roads, and other tail end irrigation facilities and structures. The Team also confirmed that the FOs have formulated irrigation schedules with regular monitoring on water management (At the time of the Mid-term Review, it was difficult to make sure the achievements of the output because this activity has just started,).

Output 3 has been fully achieved by the time of the Study. The Project has extensively conducted various

training in the field of agricultural production for the government officers. Among the respondents of the questionnaire survey, the levels of satisfaction on the training programme and the degree of utilization of learning in the field activities were both 92-100% (in average 98%), which were already

achieved by the Mid-term Review. In the model sites, the Project has provided training to the farmers on paddy production, homestead development and livestock. The Team confirmed that the farmers utilize their learning in actual production activities. As for the diversification of farm management, the farmers have introduced vegetable production and livestock production through respective sub-committee activities in all of three model sites. It was also reported during the field interviews that some farmers in Kimbulwanaoya and Rajangana have experienced the crop diversification in the paddy field during the dry seasons. As for the collective planning, all of the FOs have introduced the collective purchase of production inputs, which has successfully been implemented.

Output 4 has been fully achieved by the time of the Study. As for the training in the fields of marketing and processing, the Project has trained the government officers on marketing information and entrepreneurship development. All (100%) of the 36 government officers responded to the questionnaire survey rated the training programme as satisfactory and indicated that they are practicing the learnt skills/methods in the field activities.

In the model sites, the farmers were provided with the training on processing of agricultural products such as cashew, lime and rice, as well as on marketing. The farmers shared with the Team that they appreciate what they learnt and that they put these learning into practice to improve their income.

Output 5 is expected to be achieved by the end of the Project.

By the time of this evaluation study, the Project has already initiated preparatory activities to achieve this output, such as monitoring of training activities through questionnaire surveys, although the actual events to be assessed as indicators are yet to be conducted. The Project is planning to organize an integrated training programme, seminar and workshop in March 2011.

(3) Responses to the recommendations by the Mid-term review

In response to the recommendations at the Mid-term review team in November 2009, the following actions have been undertaken.

(3)-1. Management of FOs

Training of the government officers and the farmers for the subjects of community development, leadership and farm accounting was/will be conducted. In order to clarify potential needs of the farmers, Follow-up CAP workshops was/will be conducted.

(3)-2. Irrigation facility and water management

1) In order to update and apply the GIS system to the Project sites continuously, GIS trainings, GIS management unit set up and GIS specialist appointment was done.

2) Due to the shortage of the staff, assignment of the project managers on the full-time basis has not realized.

3) Government of Sri Lanka shares payment for field work subsistence allowance and fuel cost in order to facilitate their involvement of the Project.

4) In order to avoid any delay in preparation of rehabilitation work, Irrigation monitoring meetings by the senior officers of Irrigation Department were conducted four times and regular weekly meetings at 3 model sites with the field officers were continuously implemented.

(3)-3. Agricultural production, marketing and processing

1) Paddy: Small groups were formed within the Paddy sub-committees for easy implementation of project activities. In addition, training/OJT for government officers and farmers of collective marketing and processing were conducted based on request of FOs

2) Homestead Development: A package of farming techniques in small scale home gardening was introduced in order to improve quality of life through increasing net income and improving nutrition condition.

3) Livestock: Further trainings on the record keeping and farm accounting, quality improvement of daily products, entrepreneurship for small scale farmers and reparation of curd and milk toffees were implemented. In addition, trainings on small scale compound animal feed production and compost making were implemented.

(3)-4. General

1) District JCC and National JCC were conducted and the definition of 'Integrated Mechanism' was approved.

2) "Progress Activities and Systematic Monitoring" paper was prepared by the Project for the systematic monitoring of training results and Questionnaire survey to government officers, FO office bearers and farmers were conducted for two times.

3) The District JCC meetings were held quarterly and the National JCC meetings were conducted once, after the Mid-term review.

4) Counterpart training, Group training, Training for Entrepreneurship for small scale businesses, Leadership/Community development training and GIS training were conducted in order to promote Capacity building of the government officers.

5) All manuals were (will be) authorized at District JCC and printed and delivered to relevant organizations and institutions.

6) A committee was appointed to discuss and propose a mechanism for dissemination. Also, 6 new sites have been identified as potential dissemination sites and basic information was collected on the present status of these sites. In addition, a workshop will be held to propose a mechanism to disseminate improved training/facilitation skills at March 2011.

7) Representatives of several training institutes related to agriculture and livestock will be included in the next Working Committee.

8) Modified PDM was approved by the National JCC at December 2009.

3-2 Summary of Evaluation by Five Criteria

3-2-1 Relevance

The Relevance of the Project is evaluated as high.

(1) Relevance to the policies of the GOSL

The Project is still consistent with the policies of GOSL, as there has not been any major change in the Mahinda Chintana (2006-2016) and the plans and programmes of the implementing agencies.

(2) Consistency with the Japanese Aid Policy

Poverty reduction and minimization of the poverty gap have been the priority areas of the country assistance policy for Sri Lanka, and agricultural and rural development is considered as one of the vital

cooperation strategies. In the Rolling Plan of JICA for Sri Lanka in 2009, the Project is assumed to contribute to the cooperation programme on “Agricultural and Fishery Community and Rural Community Development,” the main focus of which is put on eradicating the economic and social imbalances. Thus the Project is considered to be quite consistent with the Japanese aid policies.

(3) Relevance of the Project design

There is a strong need to increase agricultural productivity and income of the farm families in irrigated areas in the Dry Zone. The Project is aiming to enhance the technical capacity not only of the government officers both in irrigation and agricultural sectors but also of the farmers’ organizations. This approach is thus considered to be a practical and appropriate response to the needs of the capacity improvement to further promote irrigated agriculture.

(4) Relevance to the needs of target beneficiaries

In the target areas, there were not much organizational activities and there had been the problems of water distribution and low productivity, resulting in the low income of farmers. Through the Project activities, the water distribution has improved through rehabilitation of irrigation facilities, and with the introduction of organizational activities by respective sub-committees of the FOs, productivity of their farming activities have conspicuously been increased. Thus, the Project is evaluated as an appropriate response to the needs of the beneficiaries.

3-2-2 Effectiveness

The effectiveness of the Project is evaluated as high.

(1) Achievement of the Project purpose

Both of the degree of satisfaction on the training and the rate of application of the learning among the government officers and farmers are high, implying the usefulness of the capacity building programme of the Project. As to the integrated mechanism to improve agricultural production, preliminary discussions have been held to set an agreed definition as well as the consensus on the actions to be taken, thus it is anticipated that the Project would be able to propose feasible and effective mechanism. Since the Project will continue further discussions to examine and to realize the mechanism, the Project purpose would likely be achieved by the end of Project.

(2) Contribution of outputs to the achievement of the Project purpose

The logical sequence between the outputs and Project purpose is appropriate and the outputs contribute to the achievement of the Project purpose in a mutually interrelated manner.

3-2-3 Efficiency

The efficiency of the Project is evaluated as moderate.

(1) Japanese and Sri Lankan Experts

Both Japanese long-term and short-term experts have properly been dispatched. Japanese and Sri Lankan Experts carried out their expected roles and worked closely in harmony with the counterpart personnel and other stakeholders.

(2) Equipment and machinery

The equipment and machinery required for the Project activities and technical transfer have duly been provided and most of the equipment provided has fully been utilized and kept in good conditions.

(3) Training of counterpart personnel in Japan

The duration and subjects of counterpart training in Japan were adequate. The learning from those training has been evaluated as helpful in carrying out not only the activities of the Project but also their regular duties in the future. However, it was unfortunate that no counterpart personnel was sent for training during the first two years, as these training opportunities could have helped not only to enhance

the capacities but also to promote the motivation and commitment of the personnel at earlier stage.

(4) Inputs from the Sri Lankan side

Provision of the office space with office equipment, water and electricity facilities, and so forth has contributed to the smooth implementation of the Project. Although a large number of counterpart personnel were assigned, the designation of coordinators in the respective institutions did not function as expected. It was also pointed out that there were delays in the assignment of some counterpart personnel especially at the field level, which affected the processes of the initial activities of the Project.

3-2-4 Impacts

The Impact of the Project is evaluated as positive.

(1) Impact on the overall goal level

Positive impacts on the agricultural productivity and income of the farmers are anticipated, yet under the condition that the necessary interventions for dissemination of approaches, methodologies and technologies that the Project has introduced to the other parts of the target areas would continuously be extended through the efforts by GOSL.

(2) Positive Impacts

Farmers have enjoyed better yields and possession of more capitals, leading to the improvement of their household economies. There have also been social and behavioral changes such as better understanding among co-farmers, self-confidence gained through the exposure to external institutions, and so forth. Other ripple effects of the Project to the neighboring areas are also reported, such as the voluntary involvement of a FO in the downstream areas in the rehabilitation work in the model site and technology transfer to other farmers.

(3) Negative Impacts

There has not been any negative impact of the Project reported or observed at the time of the terminal evaluation.

3-2-5 Sustainability

The sustainability of the Project is evaluated as moderate.

(1) Policy and Institutional Sustainability

Since the irrigation development for the improvement of agricultural production is given high priority in the current policy of GOSL, the policy support would continuously be secured for the coming years. As for the institutional sustainability, there would still be some questions related to the dissemination of the achievements in the model sites to the other areas by identifying proper entities to take over the roles to integrate various services rendered by different government institutions. Therefore, the sustainability in policy aspects is assessed as high, while further efforts should be made to secure institutional sustainability.

(2) Organizational and Financial Sustainability

The activities of the Project have been carried out in line with the existing organizational structures of the implementing agencies within the scopes of their mandates but in an integrated manner, thus the coordination would be a challenge in the future. Their limited financial resources would inevitably lead to the scale down of the activities. The insufficient human resource allocation against wide geographical coverage is another constraint. These factors would cast some questions in the organizational and financial sustainability for the part of the implementing agencies. On the other hand, the organizational and financial sustainability at the beneficiaries' level would adequately be secured, as the FOs in the model sites have been equipped with the trained office bearers and accumulated enough experiences to properly manage their

activities to continue their revolving funds operations.

(3) Technical Sustainability

The farming techniques introduced are the basic ones that have been proven to bring positive results in the productivity. The levels of adoption of these techniques among the government officers and the farmers are satisfactorily high. The FOs have already been equipped with necessary technical knowledge and experiences to continue the operation by their own. Hence the technical sustainability is generally assessed as high.

3-3 Factors that Promoted Realization of Effects

(1) Factors concerning the Planning

The Project has mobilized the local experts in carrying out its activities. As the number of Japanese experts was limited despite of the wide scope of the Project activities, involvement of these local experts has contributed to the smooth implementation of the Project

(2) Factors Concerning the Implementation Process

The group approach of the Project was appreciated as one of the keys to effective and successful implementation. The government officers have seen that the approach has made it easier for them to communicate with and serve to their clientele farmers, while the farmers realize that they can achieve and benefit more as a group rather than as individuals.

3-4 Factors that Inhibited Realization of Effects

(1) Factors concerning the Planning

Accessibility to and the scattered location of the model sites were considered as the major factors that created difficulties in the day-to-day operations of the Project, which affected the frequency and degree of the involvement in the field activities by the Project personnel. The Project has made much efforts for smooth coordination and frequent contacts through mobile phones and e-mails.

(2) Factors Concerning the Implementation Process N/A

3-5 Conclusion

The Project has successfully been implemented without any major or critical problem and will achieve its outputs by the end of the technical cooperation period. Prospect of achieving the Project purpose is evaluated high, thus, it is concluded that the Project will be terminated as stipulated in the R/D.

3-6 Recommendations

(1) Efforts to be made to ensure the attainment of the overall goal

It is recommended for GOSL to continuously utilize the outputs of the Project in various dissemination efforts, such as:

- 1) A short-term application: Tangible outputs of the Project such as manuals and handbooks may promptly be utilized in any relevant training to be conducted by the respective institutions.
- 2) A medium-term application: There should be existing programmes and activities of the participating agencies where the Project's outputs can be integrated and utilized with proper alignments.
- 3) A long-term application: All of the components of the Projects would be implemented.

(2) Designation of full-time coordinator with institutional authority and necessary budget for the dissemination of Project's outputs

The GOSL should ensure the proper institutional arrangement for future dissemination of the Project outputs that are composed of the activities mandated to different line agencies and institutions at different levels. It is recommended for the GOSL to assign full-time personnel with institutional authority and necessary budget to coordinate the participating agencies and farmers in the future efforts

to be made for dissemination.

(3) Continuous monitoring and evaluation of the Project's outputs

In order to sustain the good practices and effective operations of activities introduced by the Project and to further expand the benefits, continuous monitoring and evaluation should be undertaken by implementing agencies as well as JICA.

3-7 Lessons Learned

(1) Fair distribution of benefits among the FO members

Among the FOs in the model sites, the feeling of belonging and recognition of benefits among the members are found as key elements of sustainable operations. In all of the FOs participated in the Project, the revolving fund schemes have successfully been managed and the funds are increasing in volume, which has made it possible for them to provide revolving fund to a larger number of members. Such fair distribution of benefits among the members can be considered as one of the vital means to foster the cohesiveness and to promote performances of the FO.

(2) Transparency of the Project implementation

It was pointed out with appreciation that the Project has publicly opened up in a transparent manner the information on the implementation including inputs such as the cost of rehabilitation by putting the information on the signboards. This kind of transparency is considered to contribute not only to mobilize trusts from the target beneficiaries, but also to avoid any conflicts caused by the lack or possible manipulation of activity-related information.

第1章 終了時評価調査の概要

1-1 調査団派遣の経緯と目的

本調査は、スリランカ民主社会主義共和国（以下、「スリランカ」と記す）政府の要請に基づき2007年6月から始まった技術協力プロジェクト「乾燥地域の灌漑農業における総合的管理能力向上計画（Increasing the Capacity of Integrated management in Irrigated Agriculture in Dry Zone : ICIM）」が2011年5月に終了を迎えるにあたり、以下を目的として実施された。

- ① PDMに基づいてプロジェクトの実績及び実施プロセスを確認・検証する。
- ② 評価5項目（妥当性・有効性・効率性・インパクト・自立発展性）に基づきプロジェクトの評価を行う。
- ③ 評価結果を踏まえ、プロジェクト目標・上位目標の達成に向けた提言や他案件への教訓を導き出す。

1-2 調査団の構成と調査期間

1-2-1 調査期間

2010年11月25日～12月15日（うち11月25日～12月5日は、評価分析団員による先行調査）。調査日程案の詳細は付属資料2中のAnnex 1を参照。

1-2-2 団員構成

日本側・スリランカ側双方の以下の団員で構成される合同評価調査団が組織された。

<日本側>

	担当分野	氏名	所属・職位
1	団長・総括	大塚 卓哉	JICAスリランカ事務所 次長
2	農業生産/流通加工/普及	金森 秀行	JICA国際協力専門員
3	農民組織/灌漑・水管理	野村 栄作	農林水産省農村振興局整備部設計課 海外土地改良技術室 課長補佐
4	評価分析	板垣 啓子	株式会社グローバル・リンク・マネジ メント 研究員
5	計画管理	園山 英毅	JICAスリランカ事務所 企画調査員

<スリランカ側>

1	総括	R.G. Wickramarathna	灌漑・水資源管理省灌漑局 人事課長
2	農業生産/流通加工/普及	R.M. Herath Banda	農業省・農業局 農業エコノミスト
3	農民組織/灌漑・水管理	Priyani Rajamanthree	北西部州技術局 チーフ灌漑技官
4	農業生産/流通加工/普及	M.D. Poyathilaka	灌漑・水資源管理省 農業専門官

1-3 プロジェクトの概要

1-3-1 プロジェクト実施の背景

スリランカの乾燥地域の農村部では、農業以外に雇用の機会が限られ、農外所得が期待できず、中小規模農家の大半が低い所得水準から脱却できない状況にある。乾燥地域は国土の約70%を占め、コメ生産量が全体の約80%という穀倉地帯であり、中小規模農家の水稲生産は灌漑に大きく依存しており、低い収益性、不適切な末端施設の維持管理、非効率的な水管理、といった問題点を抱えている。

これらの課題を解決するためには、中小規模の稲作農家を対象に、生産コストの削減、水利用の効率化等による土地生産性の向上、畑作の導入による生産の多様化、組織化（農民の組織化、土地利用の集団化、集出荷の共同化等）による生産性向上などを組み合わせた総合的な改善策が必要である。特に、灌漑農業分野においては、水資源の効果的かつ公平な利用を通じた灌漑面積の拡大及び畑作物の生産拡大等による生産性及び所得の向上が不可欠であり、そのためには関連する政府職員及び農民組織に対する総合的な灌漑管理能力の向上が求められている。

このような背景の下、JICAは政府職員及び農民組織の灌漑分野に係る総合的な管理能力を高めるための計画を作成することを目的として、2005年10月から2006年7月にわたり、開発調査「灌漑分野に係る総合的管理能力向上計画調査」を実施した。本開発調査は、乾燥地域を代表するアヌラダプラ県に位置する灌漑地区3カ所を対象とし、灌漑、農業、流通・加工各セクターの主要問題点とその改善方向を示したうえで当該セクターの能力向上計画を取りまとめた。

本プロジェクトは同調査の結果を受け、スリランカ政府の要請を踏まえ、農業生産性の向上に向けた政府職員（大規模灌漑・水管理を担う灌漑・水管理省灌漑管理部、灌漑局職員を中心としつつ、普及・研修を担う農業省職員、小規模灌漑・水管理を担う農業開発省及び州政府農業・畜産関連現場職員等）と農民組織の能力向上を実現する体制を確立することを目標に2007年6月より実施されてきている。

1-3-2 実施期間

2007年6月～2011年5月（4年間）

1-3-3 カウンターパート機関

灌漑・水資源管理省

1-3-4 裨益対象者及び規模

(1) 対象地域：

アヌラダプラ県及びクルネガラ県

(2) モデルサイト：

	県	地区	農民組織	灌漑面積
1	アヌラダプラ県	ラジャンガナ	スリ・ウダラ	180ha
2	アヌラダプラ県	カドゥルガスダマナ	カドゥルガスダマナ	105ha
3	クルネガラ県	キンブルワナオヤ	No.4	95ha

(3) 直接裨益者：

モデルサイト3カ所の灌漑・農業関連政府職員（約100名）及び農家（約600戸）

(4) 間接裨益者：

対象地域2県の灌漑・農業関連政府職員（約2,300名）及び農家（約25万5,000戸）

1-3-5 プロジェクト・デザイン

詳細は付属資料2のAnnex2「PDM」を参照。

上位目標
対象地域において農家の農業所得が向上する。
プロジェクト目標
農業生産性を向上させるために政府職員と農民組織の能力向上を図る、総合的メカニズムが確立される。
成果（アウトプット）
1 モデルサイトにおいて、農民組織の運営管理に関する政府職員と農民組織の能力が強化・改善される。
2 モデルサイトにおいて、灌漑施設管理・水管理に関する政府職員と農民組織の能力が強化・改善される。
3 モデルサイトにおいて、農業生産に関する政府職員と農民組織の能力が強化・改善される。
4 モデルサイトにおいて、マーケティング・加工に関する政府職員と農民組織の能力が強化・改善される。
5 モデルサイトで開発・改善された研修・ファシリテーション技術を、政府職員や研修機関が、他の職員・機関に普及するためのメカニズムが提案される。

第2章 終了時評価調査の方法

本調査は、JICA新事業評価ガイドライン（第1版）に基づき、プロジェクト・サイクル・マネジメント（Project Cycle Management : PCM）の評価手法を採用して、日本、スリランカ双方の評価者から構成される合同評価調査団により実施された。

2-1 評価項目

本調査にあたっては、以下の評価5項目の観点からの検討を行い、評価を実施した。

妥当性	プロジェクトのターゲットグループのニーズへの整合性、プロジェクト内容の先方政府と援助側の政策や優先順位との整合性、プロジェクトの戦略やアプローチの妥当性に関する視点
有効性	プロジェクトの達成見込みと、その達成がアウトプットの達成によりもたらされるかに関する視点
効率性	アウトプットの達成状況と投入がいかにアウトプットの達成に転換されているか（量的、質的観点）に関する視点。他のアプローチと比して最も効率的な方法を適用しているかも必要に応じ問う。
インパクト （予測）	上位目標の達成見込みと、プロジェクトの直接/間接的影響。また、正/負、予期した/予期していない影響も確認する。
持続性 （見込み）	プロジェクト終了後にプロジェクトがもたらした影響と持続性を問う視点

2-2 データ収集・分析手法

本調査にあたっては、以下のデータを収集・検討するほか、現地調査において、日本人専門家、スリランカ人専門家及びカウンターパートへの聞き取り、プロジェクト対象地域踏査及び受益者との会合などを通じ、情報を収集した。

- ① 討議議事録（R/D）、プロジェクト・デザイン・マトリックス（Project Design Matrix : PDM）、詳細実施計画（PO）などプロジェクト計画資料
- ② 運営指導調査報告書及び協議議事録（M/M）
- ③ プロジェクト活動進捗報告書
- ④ 日本側、スリランカ側投入の詳細
- ⑤ プロジェクト活動進捗及び成果に関するプロジェクト作成資料

これらの情報に基づき、PDMに掲げられた指標と照らしてプロジェクトの進捗及び成果達成状況を確認したうえで、合同評価調査団内で検討を行い、上記評価5項目の観点から調査結果の分析を行った。本調査報告については2010年12月15日に開催された合同調整委員会（JCC）において内容を報告し、関係者の了解を得た。

第3章 プロジェクトの実績及び実施プロセス

3-1 投入実績

3-1-1 日本側投入

以下に、日本側の投入として、専門家派遣、現地国内研修、機材供与、現地業務費支出、建物・施設等の実績について記述する。

(1) 専門家派遣

日本人長期専門家は、「チーフ・アドバイザー/農民組織」「灌漑施設・水管理」及び「研修/業務調整」の3分野で延べ4名が、2007年6月より、プロジェクトの終了時までの期間で派遣されている。また、これまでに4名の短期専門家がGISや水管理等の分野におけるカウンターパートへの指導に携わってきている（以下、表3-1参照）。

表3-1 日本人専門家派遣実績

	専門分野	任 期
長期専門家		
1	チーフ・アドバイザー/農民組織	2007.6～2009.5
2		2009.6～
3	灌漑施設・水管理	2007.6～
4	研修/業務調整	2007.6～
短期専門家		
1	GIS	2008.1～3
2	圃場水管理	2008.11～11
3	末端水路における水管理	2010.6～9
4	農業協同組合	2010.9～10

出所：プロジェクト記録

本プロジェクトにおいては、上記の日本人専門家に加え、プロジェクトの経費により、4分野で5名のスリランカ人専門家が雇用され、日本人専門家やカウンターパートとともにプロジェクト運営に携わっている。これらスリランカ人専門家の詳細は下表3-2に示すとおりである。

表3-2 スリランカ人専門家配置実績

No	専門分野	任 期
1	コミュニティ開発	2007.9～
2	農業生産/マーケティング及び加工	2007.10～
3	灌漑/水管理	2009.7～2009.10
4		2009.11～
5	情報技術	2007.10～

出所：プロジェクト記録

(2) 研修員受入（カウンターパート研修）

これまでに13名のカウンターパートが、「参加型灌漑管理システム」など、プロジェクト活動に関連した分野の本邦研修に参加している。また、プロジェクト終了までにあと4名のカウンターパートの本邦研修が予定されている。これら研修参加者の内訳については英文合同評価報告書ANNEX 6を参照。

(3) 機材供与

プロジェクト活動の実施にあたり、コンピュータ、プリンタなどの事務機器、車両、設計・測量関連機材、研修用視聴覚機材など、総額2,104万8,114円相当の機材が供与されている。供与機材の詳細については英文合同評価報告書ANNEX 5を参照。

(4) 日本側ローカルコスト負担

日本側によるローカルコスト負担の支出内訳は、下表3-3のとおりであり、プロジェクト終了までに総額約7,500万スリランカルピー相当額のローカルコスト負担が行われる見込みである。

表 3 - 3 日本側ローカルコスト負担

(単位：スリランカルピー)

年度 ^{(*)1}	2007	2008	2009	2010 ^{(*)2}	2011 ^{(*)3}	合計
金額	14,790,681.76	23,616,013.72	21,676,573.16	26,712,572.99	4,341,400.00	74,594,668.64

注：(*)1) 日本の会計年度（4月～3月）。(*)2) 見込額を含む。(*)3) 計画額。

出所：プロジェクト作成

3-1-2 スリランカ側投入

(1) カウンターパートの配置

本プロジェクトには、実施機関である灌漑・水資源管理省（Ministry of Irrigation and Water Resource Management：MIWRM）の灌漑局及び灌漑管理部に加え、農業省、農村開発省、畜産省及び対象地域を管轄するそれら各省の州・県事務所、また、稲作研究開発試験場（Rice Research and Development Institute：RRDI）や天然資源管理センター（Natural Resources Management Center：NRMC）など関連の試験研究・研修機関から延べ129名のカウンターパートが配置された。詳細については英文合同評価報告書ANNEX 7のカウンターパートリストを参照。

(2) 土地、施設等の提供

スリランカ側より、Galgamuwaの灌漑研修所内のプロジェクト事務所と同事務所の付帯資機材が提供されたほか、電話回線設置工事費が負担された。またプロジェクトの現場活動やセミナー等への出席に係るカウンターパートの旅費の一部負担も行われている。

3-2 成果達成状況

本プロジェクトにおいては、「モデルサイトにおける農民組織運営、灌漑施設維持管理、農業生産、マーケティング及び加工分野での政府職員及び農民組織（FO）の能力の向上」が活動成果として設定されている。今回調査の結果、以下のとおり、成果1から4までは既に達成されており、成果5を達成するための活動が2011年3月に予定され、実施準備が整っていることを確認した。したがって、協力期間内に成果が適正に達成されることが見込まれると判断される。各成果の指標達成度については、英文合同評価報告書ANNEX 8を参照。

成果1：モデルサイトにおいて、農民組織（FO）の運営管理に関する政府職員と農民組織の能力が強化・改善される。
指標： プロジェクトの研修に参加した政府職員のうち、 <ul style="list-style-type: none"> 1-1 80%を上回る職員が「研修に満足した」と回答する。 1-2 60%を上回る職員が、研修で学んだ技術や方法を少なくとも2つ以上、現場において実践する。 3つのモデルサイトにおける政府職員によるファシリテーションや普及サービスの結果、 <ul style="list-style-type: none"> 1-3 すべての農民組織がコミュニティ開発計画及びコミュニティ行動計画（CAP）を策定し、実行する。 1-4 少なくとも95%の資格のある農民が農民組織の会員となる。 1-5 農民組織の年次総会や定例会合の参加者数が少なくとも50%上昇する。 1-6 各農民組織に1より多くのサブコミッティーが設立される。

プロジェクトでは関連政府職員を対象として、ベースライン調査手法、コミュニティ行動計画（CAP）ワークショップ手法、財務管理などに関する研修を実施しており、それら政府職員からのフィードバックを得る目的で2010年に行われた質問票調査では、31名から回答が寄せられている。同質問票調査の結果は下表3-4のとおりであり、全回答者が研修に満足している。また、習得知識・技能の実践割合も94%から100%となっている。指標1-2についても、2つ以上の研修に参加した回答者の7名全員が習得知識・技能を実践している。

表 3-4 政府職員の研修満足度及び習得知識・技術の実践状況

研修内容	アンケート回答者数	研修に満足した回答者数・割合		習得知識・技能を実践した回答者数・割合	
		回答者数	%	回答者数	%
ベースライン調査手法	9	9	100	9	100
CAPワークショップ手法	17	17	100	16	94
財務管理	5	5	100	5	100
合計	31	31	100	30	97

出所：Questionnaire Survey on Training Programmes（2010年5～6月及び10～11月）
（プロジェクト作成資料）

モデルサイトでは、対象の全FOが既にコミュニティ開発計画及びCAPを策定し、活動を実施しており、加入資格保有農民の加入割合も全FOで100%を達成している（2007年11月のベースライン調査時には2カ所の対象地域では加入割合が75%、83%と指標が達成されていなかった）。次表3-5

に示すとおり、年次総会へのFO構成員の参加率には著しい改善がみられる〔ベースライン調査時は10～25%であったが、2010年11月の最新調査時（以下、「終了時評価時点」）では46～72%に上昇〕。また、すべてのFOにおいておのおの4分野（灌漑、稲作、家庭菜園、畜産）の下部委員会（Sub-Committee部会）が下部組織として設置されており、各委員会の独自の組織規程が整備されている。

以上より、本成果は既に達成されたと判断される。

表3-5 F0への農民の加入割合及び年次総会出席率

	Kimbulwanaoya		Rajangana		Kadurugasdamana	
	2007年 11月	2010年 11月	2007年 11月	2010年 11月	2007年 11月	2010年 11月
加入資格保有農民数	169	173	300	300	61	54
FO加入者数	127	173	250	300	61	54
加入割合	75%	100%	83%	100%	100%	100%
年次総会参加者数	15	125	25	165	15	25
参加率	12%	72%	10%	55%	25%	46%

出所：Achievement Grid of Activities and Indicators（プロジェクト作成資料）

成果2：モデルサイトにおいて、灌漑施設管理・水管理に関する政府職員と農民組織の能力が強化・改善される。

指標：

プロジェクトの研修に参加した政府職員のうち、

2-1 80%を上回る職員が「研修に満足した」と回答する。

2-2 60%を上回る職員が、研修で学んだ技術や方法を少なくとも1つ、現場において実践する。

3つのモデルサイトにおける政府職員によるファシリテーションや普及サービスの結果、

2-3 すべての農民組織が末端灌漑施設を修復する。

2-4 すべての農民組織が灌漑スケジュールを策定できるようになる。

2-5 すべての農民組織が灌漑スケジュールに基づき適切な水管理を実施する。

灌漑及び水管理の分野において、プロジェクトでは関連政府職員を対象として、リハビリテーション、水管理、維持管理（Operation and maintenance：O&M）、圃場水管理、GIS作図システム等の研修を実施した。これらの研修に対する満足度と、習得知識・技能の実践割合は次表3-6に示すとおりであり、指標の目標値を達成している。

表 3-6 政府職員の研修満足度及び習得知識・技術の実践状況

研修内容	アンケート 回答者数	研修に満足した 回答者数・割合		習得知識・技能を実践し た回答者数・割合	
		回答者数	%	回答者数	%
リハビリテーション	12	12	100	12	100
水管理	12	12	100	11	92
維持管理 (O&M)	12	12	100	10	83
圃場水管理	12	12	100	12	100
GIS作図システム	21	21	100	14	67
合計	69	69	100	59	86

出所：Questionnaire Survey on Training Programmes (2010年5～6月及び10～11月)
(プロジェクト作成資料)

モデルサイトにおいては、対象の全FOが水路や農道、その他の末端灌漑施設の改修を行っており、その詳細は下表3-7に示すとおりである。また、調査団は、これらのFOが、Rajanganaでは3地区に分かれ、Kimbulwanaoya及びカドゥルガスダマナ (Kadurugasdamana) では全体をカバーする水管理計画を策定しており、それに基づいた適切な配水を行っていることを確認した。各FOでは正式に指定された担当者が配水量測定を行っており、現在、次期作 (2011年ヤラ期) の配水計画策定準備が進められている。

以上より、本成果は既に達成されたと判断される。

表 3-7 FOによる末端灌漑施設改修状況

施設	Kimbulwanaoya	Rajangana	Kadurugasdamana
三次水路延長 (m)	2,820	1,100	1,090
圃場水路延長 (m)	-	4,525	1,750
農道延長 (m)	2,820	4,965	1,540

出所：JICA/ICIM rehabilitation list of FO community contract agreement (プロジェクト作成資料)

<p>成果3：モデルサイトにおいて、農業生産に関する政府職員と農民組織の能力が強化・改善される。</p>
<p>指標：</p> <p>プロジェクトの研修に参加した政府職員のうち、</p> <p>3-1 80%を上回る職員が「研修に満足した」と回答する。</p> <p>3-2 60%を上回る職員が、研修で学んだ技術や方法を少なくとも1つ、現場において実践する。</p> <p>3つのモデルサイトにおいて、政府職員によるファシリテーションや普及サービスの結果、25%を超える農民が、</p> <p>3-3 研修で学んだイネ・野菜・果実栽培や畜産に関する技術を少なくとも1つ実践する。</p> <p>3-4 野菜/果実栽培あるいは畜産による営農の多様化を導入する。</p> <p>3-5 作付計画に基づいた共同栽培を実施する。</p>

プロジェクトでは、農業生産に関するさまざまな研修を実施しており、関連政府職員がこれらの研修に参加した。稲作に関しては土壌分析及び営農管理、高品質種子利用及び野外学校の2研修が実施されたほか、家庭菜園、畜産、プロセス文書化（Process Description：PD）手法についても研修が行われた。これらの研修に対する満足度と、習得知識・技能の実践割合は下表3-8に示すとおりであり、指標の目標値を達成している。

表 3 - 8 政府職員の研修満足度及び習得知識・技術の実践状況

研修内容	アンケート回答者数	研修に満足した回答者数・割合		習得知識・技能を実践した回答者数・割合	
		回答者数	%	回答者数	%
稲作（土壌分析及び営農管理）	14	14	100	14	100
稲作（高品質種子利用・野外学校）	10	10	100	10	100
家庭菜園	12	11	92	11	92
畜産	7	7	100	7	100
PD手法	17	17	100	17	100
合計	60	59	98	59	98

出所：Questionnaire Survey on Training Programmes（2010年5～6月及び10～11月）
（プロジェクト作成資料）

モデルサイトの農民もこれら農業生産技術に関する研修に参加しており、今般調査を通じて、農民の間でこれらの研修内容が高く評価されており、習得知識・技術が活用されていることが確認された。営農多様化に関しても、3モデルサイトのすべてにおいて、FOの下部委員会の活動を通じ、農民は家庭菜園や畜産などの活動を導入している。また、インタビューでは、Kimbulwanaoaya及びRajanganaで、農民が乾期の水田における作物多様化を試みたことが報告された。なお、全FOにおいて配水計画に基づく作付計画が策定・実施されており、農業投入材の共同購入システムも導入されている。

以上より、本成果は既に達成されたと判断される。

表 3 - 9 農業生産に関する習得技術の活用状況

Item	Kimbulwanaoaya	Rajangana	Kadurugasdamana
FO構成員数	173	300	54
習得技術を活用した農民数	111	144	34
割合	64%	48%	63%

出所：Achievement Grid of Activities and Indicators（プロジェクト作成資料）

成果4：モデルサイトにおいて、マーケティング・加工に関する政府職員と農民組織の能力が強化・改善される。

指標：

プロジェクトの研修に参加した政府職員のうち、

4-1 80%を上回る職員が「研修に満足した」と回答する。

4-2 60%を上回る職員が、研修で学んだ技術や方法を少なくとも1つ、現場において実践する。

3つのモデルサイトにおいて、政府職員によるファシリテーションや普及サービスの結果、25%を超える農民が

4-3 改善されたマーケティング・加工手段を少なくとも1つ、実行する。

マーケティング・加工の分野において、プロジェクトでは市場情報や起業促進に関係した研修を実施しており、質問票調査の対象となった36名の政府職員の全員（100%）が、研修内容は満足すべきものであり、習得内容を自らの業務に活用していると回答している。

モデルサイトの農民はカシューナッツ、ライム、コメなどの加工とマーケティングに関する研修を受講しており、これらの加工技術を活用した収入向上活動が計画・開始されている。

以上より、本成果は既に達成されたと判断される。

表3-10 マーケティング及び加工に関する習得技術の活用状況

項目	Kimbulwanaooya		Rajangana		Kadurugasdamana	
	数	%	数	%	数	%
FO加入者数	173名		300名		54名	
習得した加工知識を活用した農民数	130	75	157	52	25	46
習得したマーケティング知識を活用した農民数	69	40	117	39	14	26

出所：Achievement Grid of Activities and Indicators（プロジェクト作成資料）

成果5：モデルサイトにおいて開発・改善された研修・ファシリテーション技術を、政府職員や研修機関が、他の職員・機関に普及するためのメカニズムが提案される。

指標：

5-1 総合的研修プログラムが少なくとも1度実施される。

5-2 モデルサイトにおいて開発・改善された研修・ファシリテーション技術を他の職員・機関に普及するメカニズムを提案するためのワークショップが1度開催される。

5-3 モニタリング及びフォローアップ研修の結果を総括するセミナーが少なくとも1度開催される。

本成果の指標となる活動は今般評価調査時点では未実施であるが、プロジェクトでは既に研修活動のモニタリングや評価など、本成果達成に向けた準備活動を進めてきている。総合的研修プログラム、ワークショップ及びセミナーの実施は2011年3月に予定されており、その詳細計画内容については英文合同評価報告書Annex9に示すとおりである。これらの活動が予定どおりに実施される可能性は高く、本成果についても、プロジェクト終了時までには達成される見通しは高いと判断される。

3-3 プロジェクト目標達成状況

プロジェクト目標：農業生産性を向上させるために、政府職員と農民組織の能力向上を図る総合的メカニズムが確立される。
指標： <ol style="list-style-type: none"> 1. 研修を受講した政府職員の満足度が少なくとも50%となる。 2. モデルサイトにおいて研修を受講した農民の、研修及び普及サービスに対する満足度が少なくとも50%となる。 3. モデルサイトにおいて農民組織の能力評価結果が少なくとも25%改善する。 4. 研修諮問委員会（TAC）が、作業委員会（WC）の支援により継続的に機能する。

研修を受講した政府職員に関する質問票調査の結果では、研修への満足度は全体で99%となっており、同調査における農民の満足度は100%に達している。モデルサイトのFOの能力評価の結果についても、下表3-11に示すとおり、著しい改善がなされている。

表3-11 F0の能力アセスメント結果

項目	Kimbulwanaoaya	Rajangana	Kadurugasdamana
ベースライン調査時の得点 (2007年11月)	14.3	15.3	17.3
現在の得点(2010年11月)	41.3	41.6	35
増加率	189%	172%	102%

出所：Achievement Grid of Activities and Indicators（プロジェクト作成資料）

中間レビュー調査の提言を踏まえ、プロジェクトではプロジェクト目標である、「農業生産性を向上させるための政府職員と農民組織の能力向上を図る総合的メカニズム」の定義及び研修諮問委員会（Training Advisory Committee：TAC）の役割強化に関し、日本・スリランカ側関係者により構成される全国レベルの合同調整委員会（NJCC）を通じて関係者間の協議を重ね、英文合同評価報告書ANNEX 10に示すとおり合意が形成されている。また、財務管理、灌漑、農業、畜産の各分野で設置された作業グループ¹（Working Groups：WG）は、研修活動の企画実施、マニュアルやハンドブックの策定に関する有益な支援を行ってきている。以上のことから、協力期間終了までにプロジェクト目標が達成される見込みは高いと判断される。

3-4 上位目標の達成見込み

上位目標：対象地域の農家世帯の農業所得が増加する。
指標： <ol style="list-style-type: none"> 1. 対象地域の農家の農業所得を25%向上させるためのシステムが確立される。 2. 対象地域の農家の農業生産性を25%向上させるためのシステムが確立される。

¹ 同グループは当初「実務委員会（Working Committee：WC）」と呼称されていたが、2010年7月のNJCCにおいて名称が変更されたため、本報告書ではWGと記載する。ただし、PDM上の表記については変更せず、従来の「WC」を踏襲する。

プロジェクトが試算したデータによれば、モデルサイトのサンプル農家における農業所得は、下表3-12のとおり、平均で141%増加している。

表3-12 モデルサイトにおける農民当たりの農業所得

項目	Kimbulwanaoaya	Rajangana	Kadurugasdamana	平均
ベースライン調査時の農業粗収入 (2007)	Rs. 77,464	Rs. 112,747	Rs. 114,717	Rs. 88,154
農業粗収入 (2010)	Rs. 215,718	Rs. 194,331	Rs. 251,237	Rs. 212,615
増加率	178%	72%	119%	141%

出所：Achievement Grid of Activities and Indicators (プロジェクト作成資料)

また、プロジェクトでは別途、イネと牛乳生産に関するデータを収集・分析しているが、自家消費を主眼とする家庭菜園の活動に関するデータの収集は困難であった。下表3-13に示すとおり、イネの単位収量はモデルサイトの農家平均では81%増加しており、地域全体との比較を勘案した修正増加率も32%に達している。なお、牛乳の生産量については平均で624%の増加率となっている。

表3-13 モデルサイトにおける農業生産性

項目	Kimbulwanaoaya	Rajangana	Kadurugasdamana	平均
ベースライン調査時のイネの単位収量 (2007) t/ha.	3.1	4.3	4.0	3.8
現在のイネの単位収量 (2010) t/ha	7.25	6.85	6.54	6.88
増加率	134%	59%	64%	81%
対象稲作地域における技術普及地域の割合	60%	30%	43%	40%
上記による修正増加率* (1)	80%	18%	27%	32%
ベースライン調査時の牛乳生産量 (2007) リットル/日/頭	1.1	0.9	0.3	0.76
現在の牛乳生産量 (2010) リットル/日/頭	6.5	6.0	4.0	5.5
増加率	491%	567%	1233%	624%

注：(1) 加重平均に基づき算出

出所：Achievement Grid of Activities and Indicators (プロジェクト作成資料)

これらのデータをみる限り、上位目標が達成される見込みについては一定程度期待できると考えられるが、そのためにはプロジェクト終了後のスリランカ政府の関係機関の継続的な努力によって、同様の支援がプロジェクト対象地域全体に広がる必要がある。なお、第4章に詳細を後述するが、協力終了後の持続可能性については、多岐にわたる実施機関の間で調整役割を担う組織とその役割分担を特定することが求められ、かつ普及に必要な予算が確保されることが前提条件となる。

3-5 プロジェクトの実施プロセス

3-5-1 意思決定とモニタリングのメカニズム

プロジェクトの最高意思決定機関として、日本・スリランカ側関係者により構成される全国レベルの合同調整委員会（NJCC）はこれまでに5回開催されており、プロジェクトの進捗と次期計画内容の確認・承認が行われている。さらに、詳細な活動内容に関する協議の場として対象地域のプロジェクト関係者から構成される、県レベルの合同調整委員会（District Joint Coordinating Committee：DJCC）が別途組織されており、日常的な運営に関する進捗確認や問題の解決にあたっている。また、モデルサイトの建設作業期間中は、灌漑局長を議長とする灌漑モニタリング会合（Irrigation Monitoring Meeting：IMM）が月例で開催されたほか、FOの代表や灌漑局の現場監督（Work Supervisor：WS）など現場レベルの関係者が毎週会合をもち、進捗確認や問題解決を図った。さらに、プロジェクト活動の技術的な側面に関しては、プロジェクト実施関係機関や試験研究・研修機関関係者から構成されるTAC及びWGが支援する体制となっており、研修計画や技術マニュアル及びハンドブックの策定などに携わってきた。プロジェクト事務所スタッフ間でも月例会合が開催されており、日常的なプロジェクト運営の問題や活動進捗に関する情報共有が行われている。このような複層的な意思決定及びモニタリングの体制は、多岐にわたる関係者間の調整を図るうえで効果的であり、プロジェクトの円滑な実施に貢献した。

3-5-2 プロジェクト関係者間のコミュニケーション

対象モデルサイト及び関係機関が散在していたこと、また、多数のカウンターパートや関係者を擁する体制であったことは、プロジェクト活動に係る適時かつ正確なコミュニケーションを確保するうえで困難をもたらす一因となった。遠隔地に配置されている、しかも多岐にわたる関係機関の担当者との間では、会合の開催など直接的な接触による調整には限界があり、また一部の関係者からは、カウンターパートがパートタイムの配置であったため、特に現地活動において彼らの活動参加の調整に困難を来した例も指摘された。メールや携帯電話など利用可能な手段のすべてを活用して、個別の関係者と頻繁に連絡を取り合うなど、活動の円滑な進捗のためにプロジェクトチームが行ってきた努力は高く評価すべきものと考えられる。

3-6 各分野における活動と実績

3-6-1 灌漑（水利施設のリハビリテーション、水管理強化）

(1) 活動

水利施設等のリハビリについてはCAPワークショップを通して現地踏査による水利施設及び農道の現状を把握し、改修の必要な範囲の特定、改善方法等について検討を行い、リハビリテーションの実施計画を策定した。また、リハビリの実施にあたっては、FOによる3カ年にわたる直営施工とし、オンザジョブ・トレーニング（on-the-job training：OJT）によりFOの水路、道路等の施工能力の取得/向上を図った。

水路、道路等の維持管理についてはこれまで自作地前を個別に行われていたものを共同作業とすることを基本とし、共有の施設であることの再認識を促した。水管理については、灌漑技術（Inigation Engineer：IE）事務所等による研修を行うとともに適切な水管理を可能とするため、末端水路ごとの配水計画を策定するとともに、末端水路管理グループ（Field

Canal Group : FCG) の設立、ゲート及び水位標の設置を行い、適切な水管理を可能なものとした。また、整備されたところから順次D水路、F水路の用水状況についてモニタリングを行い、その結果を基に配水計画の見直しを行ってきている。さらに、KimbulwanaoyaにおいてはFCGが配水計画に則した取水を実施したことにより、副次的に下流FOへの通水量が増加し関係改善がなされた。

On-farmにおける水管理について、試験展示圃場を設置し適切な水管理が水稻の単収増加及び節水を可能とすることを示した。

また、CAPワークショップではGISにより水田、水路・ゲート、作付状況等をマッピングした簡易な地図を示し、地区全体の水利状況についての認識力を高めた。また、水管理、工事計画及び維持管理計画の策定においてもGIS地図を用いて合意形成の促進を図った。

2) 実績

2010年のO&M費の徴収率がベースライン調査時(2007年)よりKimbulwanaoyaでは52%から95%に、Rajanganaでは70%から75%に、Kadurugasdamanaでは44%から75%に増加した。

3) 他地域への展開にあたっての留意点

D水路は、リハビリがFOの直営工事として農民の共同作業として行われたことから、共同による維持管理がなされているが、F水路の維持管理は以前と変わらず個別に行われており、より効率的な水管理のためには、F水路においても関係者による共同作業による維持管理作業をD水路リハビリと一体的に行うことが重要である。

二期作を行っている場合には、工事期間が制約されることから、水路や道路の直営工事にあたっては、FOの工事参加人数、能力等に即した工事量の決定に留意し、年次計画を作成する必要がある。

また、D水路、F水路の用水状況についてモニタリングを継続して行い、その結果を基に配水計画の見直しを行う必要がある。

3-6-2 農民組織

(1) 活動

CAPワークショップを開催し、CAPを作成するとともにFOの活動を活性化するための専門部会の設立を促した結果、3モデルサイトともに、灌漑部会、水田部会、家庭菜園部会、畜産部会が設立された。

リーダー研修、会計研修等を行いFOの中心となる人材の育成を行うとともに、各部会の活動に係る研修を行い、各部会の活動を促した。各部会の活動に係る政府職員は、FO、部会を訪問する頻度を高め、連携して細やかな支援を行った。このことにより、これまで疎遠であった政府職員と農民のコミュニケーションが改善され、FOへの農民の信頼性向上、FOの活性化が図られた。

(2) 実績

2010年のFO総会の開催数(通常総会の参加率)がベースライン調査時より、Kimbulwanaoyaでは1回(12%)から4回(72%)、Rajanganaでは1回(10%)から2回(55%)、Kadurugasdamana

では2回（25%）から4回（56%）に増加した。

(3) 他地区への展開にあたっての留意事項

FOの活性化を図るためにはCAPワークショップ、部会活動及びリハビリ等の共同作業等の導入が効果的であるが、導入のためには担当政府職員と農民の良好なコミュニケーションが不可欠であり、担当職員の頻繁な訪問と各専門部局の連携が可能となるような政府の適切な体制の構築が必要である。





3-6-3 農業生産

(1) 稲作

1) 活動

a) 組織強化と政府職員的能力強化

農民グループ（農民組織下の最小グループでsub-committeeと称される）の能力強化に先立って、再組織化と農民の講師となる政府職員的能力強化に係る活動が行われた。組織化について、プロジェクト実施に先立って農民組織（FO）が既に設立されていたが、組織的に弱体であった。そのためプロジェクトでは、FOの当事者意識強化に係る会合を開催して、FOの組織強化・生産部会（Sub-committee）の設立・集落開発行動計画（CAP）作成を行った。その生産部会のひとつが稲作農民グループである。次に、政府職員的能力強化について、普及に係る技術系職員的能力強化研修が実施された。普及について、Rajangana 灌漑地区は3県に及ぶために中央政府が普及を担当しているが、Anuradapura県のKadurugasdamana地区とKurunegala県Kimbulwanaoysa地区は北部州政府と北西州政府の農業局がそれぞれ担当している。プロジェクトのWorking Groupにより、これら関係州政府及び県の普及関係職員の研修ニーズを把握し、農業生産・流通加工に係るすべての研修教材が準備され、研修が実施された。

b) 農民グループの能力強化

能力強化は次の手順で実施された。

- ① 土壌分析と施肥指導：GISプログラムの一環として灌漑局の土地利用課によって土壌試料が収集され、灌漑局の稲作研究開発試験場（RRDI）によってそれら試料の分析が実施された。分析結果は農業局の天然資源管理センター（NRMC）によって

GIS地図に表示された。NRMCはGIS地図を基に施肥法と排水必要度に係る提案を行った。これらGIS地図は農業局職員が稲作地帯の作付体系/作物多様化の適正を判断するのに利用された。

- ② 適正稲作品種の選定と優良種子の導入：農業局の専門家が適正品種及び優良種子の選定と推薦を行った。同グループの農民は、プロジェクトが用意した回転資金（Revoluing Fund：RF）を使って優良種子を導入した。RFによる種子購入は初回のみであり、その後は同グループが自家増殖した。
- ③ 技術パッケージの普及：普及員が農民野外学校及び共同作業（on-the-job training：OJT）による研修を通じて技術パッケージを普及した。技術パッケージには深耕を含む代掻き・肥培管理・雑草管理・葉色板の使用・総合防除などが含まれており、共同作業及び圃場での展示によって農民に教授された。その際、新栽培技術としてのパラシュート播種法等及び普及手法としてのPD手法も導入された。

2) 実績

能力強化の結果、Kimbulwanaoya 地区ではベースライン調査時（2007年11月）と比較して2009/10の雨期イネ単収が3.1 t/haから7.3 t/haに増加した。また、Rajangana地区では4.3 t/haから6.9 t/haに、Kadurugasdamana地区では4.0 t/haから6.5 t/ha増加した。なお、これら収量増加はサンプル調査の結果によるものである。

3) 考察

a) 開発に係る優位事項

- ① 技術普及が有効に実施されれば大きな単収増加が可能になる。
- ② パラシュート播種法は農民に受け入れられて一般化しつつある。
- ③ グループ活動による共同栽培が有益であることが農民に理解された。
- ④ 乾期（Yala）は作物多様化の可能性が高い。

b) 開発に係る制約事項

- ① 農民が栽培が容易であること・価格変動が比較的小さいことから稲作を志向することは作物多様化を難しくする。
- ② 稲作以外の作物に対する振興プログラムがないことは作物多様化を難しくする。

(2) 畜産

1) 活動

a) 組織強化と政府職員の能力強化

稲作と同様に農民グループの能力強化に先立って、再組織化と農民の講師となる政府職員の能力強化に係る活動が行われた。そして、FO傘下の生産部会のひとつとして畜産に係る農民グループが結成された。

b) 農民グループの能力強化

能力強化は次の手順で実施された。

- ① 生産意識強化に係る会合と視察旅行：農民グループのメンバーを対象に畜産の志向強化のための会合と視察旅行が実施された。そのなかで、獣医と畜産改良普及員が同メンバーを政府圃場に引率して畜産の重要性を紹介した。
- ② 展示圃設置と研修：視察後、各地区で5農家を選択して展示圃を設置し、それらを使って他の農民の研修が実施された。
- ③ RFによる新品種牛の購入と人工授精：プロジェクトがRF初回資金を支給して高能力品種牛の購入及び畜舎建築を図った。また、既存に使用されているウシについては人工授精を行って優良牛の生産を促進した。
- ④ 管理改善：牛乳の増産のため、普及員が農民に管理方法を訓練した。
- ⑤ 飼料改善：新品種の飼料（草）を導入した。また、栄養改善のために農民が材料を購入して配合飼料を生産した。
- ⑥ 共同出荷：牛乳生産が増したために農民グループによる共同出荷が可能になった。そこでプロジェクトが会社を紹介し、農民グループが会社と牛乳販売契約を結んで共同出荷が実現した。

2) 実績

能力強化の結果、Kimbulwanaoya地区ではベースライン調査時（2007年11月）と比較して2010年5月時点の畜牛飼養頭数は14頭から25頭に加え、牛乳生産性は1.1リットル/日/頭から6.5リットル/日/頭に増加した。Rajangana地区では同期間に、畜牛飼養頭数は20頭から50頭に加え、牛乳生産性は0.9リットル/日/頭から6.0リットル/日/頭に増加した。また、Kadurugasdamana地区では同期間に、畜牛飼養頭数は6頭から15頭に加え、牛乳生産性は0.3リットル/日/頭から4.1リットル/日/頭に増加した。

3) 考察

a) 開発に係る優位事項

- ① 牛乳増産は共同出荷を可能にする。
- ② 牛乳価格は品質による標準価格表によって決まるので価格変動が比較的小さい。

b) 開発に係る制約事項

- ① 畜産開発は畜舎改善・技術供与だけでなく高能力牛の購入及び畜舎建築のための資金供与が必須である。
- ② 農民の穀物生産志向が高く圃場が穀物生産に使用されることから、飼料用草地用地が制限される。

(3) 家庭菜園の振興

1) 活動

a) 組織強化と政府職員の能力強化

プロジェクト実施前は家庭菜園に係る組織的振興は実施されていなかった。このように前提条件が農業生産と異なったが、実施は稲作・畜産と同様に、農民グループの能力強化に先立って再組織化と農民の講師となる政府職員の能力強化に係る活動が行

われた。そして、FO傘下の生産部会のひとつとして家庭菜園に係る農民グループが結成された。

b) 農民グループの能力強化

能力強化は次の手順で実施された。

- ① 生産意識強化に係る会合と視察旅行：農民グループのメンバーを対象に家庭菜園振興のための会合と視察旅行が実施された。視察では、専門技術員と農業改良普及員が同メンバーを家庭菜園振興計画が成功している地域に引率した。
- ② 展示圃設置と研修：展示圃場が設置され、農民訓練が実施された。展示圃場数は農民グループに属するメンバー数によって決定された。訓練では、農民は圃場計画作成・間引法を教授された。また、土壌保全法の重要性・堆肥製造・土地の最大利用も教授された。
- ③ RFによる資材購入：農民がRFを用いて資材を購入し、研修で教授された管理を実践した。
- ④ 共同出荷：生産余剰が販売できる程度の生産規模になった場合、普及員とプロジェクトは農民の共同出荷を促進した。
- ⑤ 資材の共同購入：販売量が増した段階では、農民がRFを用いて資材を共同購入してコスト削減を図った。

2) 実績

バナナ・パパイヤ・トウガラシ等の新規作物が導入されて収入が増加した。例えば、Rajangana地区のパパイヤ栽培の場合、8農家が家庭菜園で平均12万6,000スリランカ・ルピー (Rs.) /農家の収入を得た。

3) 考察

a) 開発に係る優位事項

- ① 家庭菜園は小規模であるため、資金的支援なしに技術普及だけで生産増加できる可能性がある。

b) 開発に係る制約事項

- ① 出荷能力の小規模性と家庭内消費が優先であることは、生産地域の拡大と共同出荷を難しくする。
- ② 家庭菜園の生産物は価格変動が大きい。

3-6-4 マーケティング・加工

(1) 活動

1) 組織強化と政府職員の能力強化

農業生産と同様に、農民グループの能力強化に先立って再組織化と農民の講師となる政府職員の能力強化に係る活動が行われた。能力強化では、プロジェクトが農業改良普及員にベースライン調査・集落行動計画策定・プロセス文書化 (Process Discription : PD)

手法・指導者育成と集落開発・企業開発に係る研修を実施した。そのうち、企業開発は北西州政府の産業サービス局に研修を依頼し、農業改良普及員と農民に対して市場計画・生産計画・組織財政管理計画を含む企業開発について研修を実施した。

2) 農民グループの能力強化

能力強化は次の手順で実施された。

- ① 意識強化に係る会合と視察旅行：これら会合と視察は農業生産に係る活動の一環として実施された。
- ② 事業計画作成のための情報カタログの準備：農業改良普及員により流通加工に係る計画/実施法を解説した簡易カタログが作成された。
- ③ 研修の実施：農業改良普及員により、簡易カタログを用いて流通加工に係る研修が実施された。流通に関しては最適価格時の販売・共同販売・共同購入等に係る研修が、加工に関してはコメの加工品・乾燥ライム・カシュー加工品・乳製品に係る研修が実施された。
- ④ 共同販売・共同購入の促進：プロジェクトと農業改良普及員により、牛乳・パパイアについて共同販売・共同購入の促進活動が実施された。

(2) 実績

グループ共同購入によるコスト削減と加工は貯金増加と資材費の削減をもたらした。例えばKadurugasdamana農民組合の稲作グループ（22名）の例では、イネ種子の共同購入によって表3-14に示すコスト削減が得られた。

表 3-14 Kadurugasdamana農民組合のイネ種子の共同購入によるコスト削減額

コスト項目	個々で購入した場合	共同購入した場合	節減したコスト額
種子の運搬費	Rs 60* × 140 ^{ブッシュェル} = Rs 8,400	Rs 4,500 (トラックを借りて運搬)	Rs 3,900
肥料・農薬の購入費	70エーカーあたり Rs 153,000	Rs 117,260 (23%値引き)	Rs 35,740
計			Rs 39,640 (1農家あたり Rs 1,801)

注：*FOは単位ブッシュェルあたりRs60を農家から運搬日として徴収する

出所：ICIM

(3) 考察

1) 開発に係る優位事項

- ① 政府による資金供与もしくは肥料補助が実施される場合は共同購入の推進は容易である。
- ② RFの償還期限が長いので出荷時期を調整することで販売価格を上げることができる。

2) 開発に係る制約事項

- ① 仲業者が個々に訪問購入すること・補助金等の共同購入のためのインセンティブがないことから、コメの共同販売を推進することは比較的難しい。ただし、価格等の情報共有は一般に行われている。

3-6-5 農業普及

(1) 活動

1) 組織強化

プロジェクトでは既存のFOの当事者意識強化に係る会合を開催して組織強化を図り、さらに農民グループが設立され、農業生産・流通加工に興味のある農民がこれらグループに参加した。そして、各グループのニーズを確認するためのベースライン調査と集落行動計画策定ワークショップが開催され、グループ活動事項の明確化と集落行動計画策定がなされた。これら事項と計画は、知識・技能の普及だけでなくRFの準備とそのモニタリング・評価が内容として含まれる。

2) 普及員の能力強化

農業と畜産に係る普及員は方法展示・コンテスト開催・農民野外学校等の通常の普及方法を適用する能力はあるが、実施方法については多少弱点がある。

- ① 視聴覚普及教材（写真・スライド・映画）は研修センターでしか適用されていない。
- ② 情報通信手段が限られており、電話は農民からの支援要請だけに使用され、相談の手段としては活用されていない。
- ③ 新聞等の公共メディアは一部を除いては活用されていない。新聞による普及も限定的である。
- ④ 講義・相談・カウンセリング等の通常の技術移転能力について専門技術員はすべてを保持しているが、現場の普及員は必ずしも十分保持していない。

本評価調査の聞き取りでは、Kimbulwanaoya地区を担当する農業改良普及員の一人は約2,000農家を、畜産改良普及員は256農家を、Kadurugasdamana地区ではそれぞれ1,500～2,500農家と1,300農家を担当していた。すなわち、普及員数が不足していることがいえる。ただし交通手段については、両地区でインタビューした4名の普及員のうち、2名の農業改良普及員と1名の畜産改良普及員は自動二輪車を使っており、他の1名の畜産改良普及員は自動二輪車を持っていないが他の普及員の車両を活用しているように、多くの普及員は移動手段を保持している。この状況で普及を強化するため、本プロジェクトでは次の2つの方法を採用した。

- ① 農民グループの設置：個々の農民に対するのではなくグループに対して普及することで、普及員は一度に多くの農民に普及することができる。
- ② 普及能力の強化：「リーダーシップと集落開発」及び「PD手法」の研修は農業生産・加工流通に係る普及員の能力強化に役立っている。特にPD手法は、Kurunegala県とAnuradhapura県のカウンターパートへのインタビューで、現場の普及員が有効な普及

手段のひとつとして認識していると報告された。

この結果、本プロジェクトで研修を受講した普及員は、農業・畜産・加工流通に係る技術・知識の普及を効率的かつ効果的に実施した。さらに、本プロジェクトの採用したニーズ/需要調査に基づく農民の能力強化方法がこれら普及員の能力強化と総合されて、普及が強化された。すなわち、本プロジェクトで適用したアプローチと方法はPD手法以外はスリランカ既存のものであったが、それらを総合化したことが既存の普及アプローチを個々に用いるよりも大きな成果をもたらした。具体的には次の点が総合的アプローチの特徴としていえる。

- ① グループに対する普及：現場の普及員は個々の農民ではなく農民グループへ技術普及を行った。
- ② ニーズの総合化：農業関連活動による収入増加に係るすべての必要事項がワークショップで明らかにされ、それらを総合化した計画が策定・実施されたことが実績の増加に貢献した。例えば、市場流通が農業生産と組み合わせられて強化されたことで収入がさらに増した。
- ③ 普及員の動員：農業改良普及員・畜産改良普及員が動員され、プロジェクト対象地区外に多少の影響が出たが、プロジェクト対象地区への普及員の訪問回数は増えた。
- ④ 回転資金支給条件の緩和：プロジェクトでは既存の回転資金よりも支給条件を緩和した結果、普及した技術・知識の活用が強化された。なお、回転資金のモニタリング・評価システムを確立したことも、同活用強化に貢献している。ちなみに既存の政府の回転資金は対象が肥料と種子に限定して総コストの50%しか供与されないが、プロジェクトの回転資金は対象を限定せずに総コストの80%～100%が供与される。また、貸付期間も政府回転資金は6カ月だが、本プロジェクトではコメは6カ月だが畜産と家庭菜園は減却期間が2年間と長い。
- ⑤ 関係者間の関係強化：ワークショップ・研修等の活動を通じて異なるレベルと部署の政府職員と農民らの間の関係が強化された。

(2) 実績

農業生産（畜産を含む）・加工流通に係る技術・知識が約400農民に普及され、その農家1戸当たり平均粗収入がベースライン調査時（2007年11月）と比較して2010年の調査では2.4倍に増加した。収入の基礎は前述のサンプル調査による。

(3) 考察

1) 開発に係る優位事項

- ① ICIMモデルはグループ・アプローチが普及効率とその持続性を強化することを証明した。
- ② 政府の肥料配布システムはFO結成を義務づけているのでグループ参加の動機づけとして活用できる。
- ③ 一部に不足はあるが、普及員の交通手段はある程度確保されているといえる。
- ④ 普及員は普及手法・方法・教材に関しての問題はない。

- ⑤ 普及員等の講師としての能力に関する研修内容としてICIM研修カリキュラムは有効である。特にPD手法は有効である。
- ⑥ プロジェクトの研修に参加した普及員の能力は開発されている。

2) 開発に係る制約事項

- ① 最前線の普及員（農業改良普及員・畜産改良普及員）の数は対象農家数に対して不足している。
- ② 現場の普及員のプロジェクト対象地区への動員は、他に普及効率強化対策を行わない場合、対象外地区への普及サービス低下をもたらす。
- ③ 農民のグループ化は農業研究生産機構（Agricultural Research and Production Assistance : ARPA）が実施することになっているが、その活動は機能的でない。
- ④ 農業普及予算が限定的である。
- ⑤ 既存の信用供与の規模及び条件の制約は普及された技術の適用を制限する。
- ⑥ プロジェクトで能力強化した普及員のプロジェクト外の地区への異動はプロジェクトへの研修効果を低下させる。

3-7 中間レビュー調査の提言への対応

2009年11月に実施された中間レビュー調査においては、協力期間後半のプロジェクト活動の円滑な実施に向け、技術的側面及び運営管理上の側面に関する17の事項が提言されている。今般調査において、プロジェクトがこれらに対応するための努力を行ってきたことが確認された。その詳細な内容については英文合同評価調査報告書ANNEX 11に示すとおりである。

第4章 評価結果

4-1 評価5項目による評価結果

4-1-1 妥当性

以下の理由から、本プロジェクトの妥当性は高いものと評価される。

(1) スリランカ政府の政策・制度等との合致

スリランカ政府の国家開発10年計画であるMahinda Chintana（2006-2016）においては、農業開発が経済発展と貧困削減の重要な要素として重視されている。灌漑・水資源管理省の灌漑局や灌漑管理部など本プロジェクトの実施機関の政策や計画においても、小規模農家の農業生産に対する支援は重視されている。プロジェクト実施期間中にこれらの政策的方向性に変化はなく、本プロジェクトの方向性は依然としてスリランカ政府の政策、制度と合致している。

(2) 日本の開発援助政策との整合性

日本の対スリランカ国別援助計画においては、貧困削減と社会各層間の貧困格差の是正が重点分野とされており、農業及び農村開発は貧困削減に向けた協力戦略のひとつに挙げられている。同様に、JICAの2009年の国別事業実施計画のなかで、農業セクターは重点分野のひとつに挙げられており、本プロジェクトは社会経済格差の解消を目標とする「農漁村・地方開発プログラム」に位置づけられている。これらの観点から、本プロジェクトと日本の政府開発援助政策及びJICAの国別事業実施計画の整合性は確保されていると考えられる。

(3) プロジェクト・デザインの妥当性

乾燥地域における農家世帯の農業生産性及び所得の向上に対するニーズは高く、政府職員と農民組織双方の能力向上を狙いとする本プロジェクトは同ニーズに対応している。また、能力向上のための総合的なメカニズムの構築によって地域的な広がりを用意するというアプローチを採用した本プロジェクトの枠組みは、将来的な灌漑農業の促進に向けた適切なフレームワークであったといえよう。

(4) 受益者ニーズとの整合性

対象地域において、インタビュー対象となった農民からは、プロジェクト開始以前には組織的な活動がほとんどなく、灌漑用水の配分にも非効率であったため、低生産性と低所得が問題であったことが報告された。モデルサイトの農民は、プロジェクト活動の灌漑施設改修を通じて配水が改善され、FOとその下部委員会（部会）の組織活動を通じて営農活動が著しく改善したことを高く評価しており、FOや下部委員会（部会）の代表者はこれらの便益を継続拡大するための活動に積極的に参加している。以上のことから、本プロジェクトは受益者ニーズに十分に合致したものであったと考えられる。

4-1-2 有効性

以下の検証から、プロジェクト実施の有効性は高いといえる。

(1) プロジェクト目標達成度

プロジェクト活動に参加した政府職員と農民はプロジェクトによる研修機会の提供を高く評価している。研修への満足度及び習得知識・技能の活用の度合いは高く、プロジェクトによる能力強化の有効性を示唆している。総合的メカニズムについても、これまでに共通理解を醸成するための関係者間協議が行われ、定義やその実現に向けた対応策についての整理がなされている。これらに基づき、プロジェクトが効果的かつ実施可能なメカニズムを提案できる可能性は高いと判断される。プロジェクトでは残る協力期間内にプロジェクトが提案するメカニズムの実行に向けた調整と協議を継続する予定であり、プロジェクト終了時点までに本目標が達成される見込みは高いと考えられる。

(2) プロジェクト目標達成への成果の貢献度

本プロジェクトの目標である「農業生産性を向上させるための政府職員と農民組織の能力向上を図る総合的メカニズムの確立」には、農業生産性の向上に向けた能力強化という側面と、メカニズムの確立という側面がある。前者に関しては農民組織の運営管理、灌漑施設及び水管理、農業生産、加工及びマーケティング分野での能力向上を図る成果1から4が対応しており、後者は前章でみたとおり、現在実施準備が進められている成果5の達成に向けた諸活動が対応する形となっている。したがって、プロジェクトの成果がプロジェクト目標に至る論理性は妥当なものであり、各成果とその相互関連がプロジェクト目標達成に大きく貢献していると考えられる。

(3) プロジェクトの有効性に対する貢献要因

プロジェクトが採用したグループ・アプローチは、政府職員と農民の双方から有効性が高いと評価されている。グループを基盤とする活動には、政府職員にとっては農民に対するサービス提供が容易になるという利点があり、農民にとっては個々人では得られない集合的な便益へのアクセスが確保されるという利点がある。

また、本プロジェクトへのスリランカ人専門家の配置は特筆すべき要因である。広範なプロジェクトの活動領域と、限られた数の日本人専門家の投入にかんがみ、プロジェクトによって雇用された4名のスリランカ人専門家のプロジェクトへの貢献は大きかったと考えられる。

(4) プロジェクトの有効性に対する阻害要因

モデルサイトが広範囲に散在していたことと、各モデルサイトへの物理的なアクセスの問題は、プロジェクトの日常的な活動運営に困難をもたらした。プロジェクト関係者のモデルサイト訪問の頻度及び活動への関与の確保は少なからぬ時間と経費を要するものであった。プロジェクト関係者、特に専門家の努力によりプロジェクト活動進捗や成果達成への直接的な影響は回避できたが、これらはプロジェクトの目標達成に対する阻害要因となり得た問題として留意すべき点であると考えられる。

(5) 外部条件の変化による影響

プロジェクトの実施過程に致命的な影響を及ぼすことはなかったが、協力期間中、以下の2つの外部条件に変化があった。1つはコメの販売価格が2006年から2008年にかけて高騰したため、農民がコメの生産を優先させ、メイズなどの作物を導入する営農多様化への取り組みに対する農民の参加意欲が減少した。また、2009年の乾期における干ばつは特にKimbulwanaoyaサイトのコメ生産を阻害し、作付面積の30%以上が収穫できないという事態に至った。このことは、モデルサイトにおけるオンザジョブ・トレーニング（on-the-job training：OJT）の実施プロセスと営農活動に関するデータ収集にとっての阻害要因となった。

4-1-3 効率性

本プロジェクトの運営において、日本・スリランカ側双方の投入、活動はおおむね成果の達成に効果的に結びついているが、一部の投入に関しては問題も指摘されており、本プロジェクトの効率性は中程度と判断される。

(1) 投入による成果の達成度

1) 専門家の投入

日本人専門家については、派遣の時期、専門分野ともに適切であった。カウンターパート、プロジェクトのその他関係者との関係性も良好であったことから、その活動による投入効果は高いものであった。また、なお本プロジェクトにおいては日本側の予算によるスリランカ人専門家も配置されており、プロジェクトの成果達成に貢献した。

2) 機材の投入

供与された機材は量・質ともに過不足のないものであり、ほとんどが良好な状態で管理され十分に活用されている。カウンターパートやその他のプロジェクト関係者は、既にこれらの機材の活用・維持管理に必要なノウハウや技術を習得している。

3) カウンターパート研修

カウンターパートの本邦研修の内容及び期間は適切であった。研修に参加したカウンターパートは、研修内容について、プロジェクト活動のみならず、将来的なおのこの業務遂行に際しても有用であると高く評価している。ただし、一部のプロジェクト関係者からは、スリランカ政府内部の事情によって、プロジェクト前半の2年間に研修が実施できなかったことについて、プロジェクト活動に必要な専門的知識・技術の習得の観点のみならず、カウンターパートの意欲やコミットメントをより早い段階で発現させるという観点からも残念なことだったというコメントが寄せられた。

4) スリランカ側の投入

土地、施設については、プロジェクト事務所及び付帯設備が提供されており、円滑なプロジェクトの運営に貢献してきた。カウンターパートについては、中央、州、県から多数の人員が配置された。当初は各組織において取りまとめの役割を果たすカウンターパートが指定されることになっていたが、それが十分には機能せず、調整が困難になっ

た側面がある。また、特に現場レベルのカウンターパートの一部の配置に遅れが生じたことは、プロジェクト開始当初の活動に若干の影響を及ぼしたことが指摘されている。

4-1-4 インパクト

本終了時評価調査では、プロジェクトの活動に関連し、ポジティブな効果、影響が確認され、ネガティブな効果、影響は特定されなかった。灌漑施設及び水管理の改善による農業生産性と所得の向上、組織運営の改善などが見込まれることから、上位目標達成へのインパクトはやや高いと判断される。

(1) 上位目標の達成に向けたインパクト

プロジェクトの上位目標に向けたインパクトに関しては、農業生産性と農家世帯の収入という2側面から確認する必要がある。今般調査においては、配水改善とFOの下部委員会(部会)活動の導入によって、農民の営農活動が改善され、農家世帯に追加的な収益をもたらしていることが確認された。FOや下部委員会(部会)の代表者は水管理、灌漑施設維持管理、生産活動に関してこれらの便益を継続させるべく積極的に組織活動に取り組んでいる。したがって、本プロジェクトにおいては、上位目標達成に向けた正のインパクトが発現していると考えられるが、上位目標の実現のためには、スリランカ政府関係機関により、本プロジェクトと同様のアプローチ、手法・技術が対象地域全体に普及するための努力(多岐にわたる実施機関の間で調整機能を担う組織とその役割分担の特定、普及に必要な予算確保)が前提となる。

(2) プロジェクト実施によるポジティブ・インパクト

今般調査を通じ、参加農民のレベルにおいて農業生産及び所得の面で正のインパクトが発現していることが確認された。下部委員会(部会)によってさまざまな活動が導入され、農民は収量増加や追加資本の獲得などの便益を得ており、世帯の経済状況が改善している。また、これらの直接的な便益のみならず、受益者レベルでは、グループとしての組織的活動の重要性認識や農民同士の関係改善、自らの活動に対する自信や外部組織との関係構築など社会的なインパクトも発現している。さらに、受益者のインタビューにおいて、近隣地域への波及、例えばKimbulwanaoyaサイト下流のFOが、同サイトの配水改善が下流にも便益をもたらすとして、同サイトのリハビリ事業に自主的に参加した例や、FO構成員が近隣地域の農家に対し、プロジェクトを通じて習得した新たな農業生産技術を指導した例なども報告された。

なお、灌漑局地方事務所(Regional Office of the Department of Irrigation : RDI)が現在、プロジェクト成果の試行的展開を、モデルサイト以外の6つのFOを対象として開始していることは特筆に値しよう。プロジェクトではDJCCを通じて関係機関との議論を行っており、これら試行的普及サイトへの間接的な支援を行っている。

(3) プロジェクト実施によるネガティブ・インパクト

今般の終了時評価調査において、特記すべきネガティブ・インパクトは報告・特定されなかった。

4-1-5 持続性

以下のとおり、本プロジェクトの持続性の見込みは中程度と判断される。

(1) 政策及び制度的持続性

農業生産性の向上と政府職員・農民の能力向上の必要性は現在の実施機関の政策や計画において重視されており、今後ともその政策的な方向性の継続が見込まれることから、本プロジェクトの政策的持続性は高い。制度的な持続性に関しては、モデルサイトで実施された活動をいかに他地域に展開するかという点で今後さらに留意すべき点が残っている。プロジェクト目標に掲げられた「総合的メカニズム」について、既に合意された定義が明確化されているが、多岐にわたる実施機関の間で、プロジェクトがこれまでに果たしてきた調整役割を担う組織と役割分担の特定が今後の課題であると考えられる。以上のことから、本プロジェクトの政策面での持続性は高いが、制度的な持続性を確保するためにはスリランカ側のさらなる努力が必要であると判断される。

(2) 組織及び財政的持続性

プロジェクトの活動はすべて、実施機関の組織体制に沿って、彼らのマンデートの範囲内で実施されている。プロジェクトに参加した組織・機関はプロジェクトが実施した各分野の活動を組み込めるようなおのおの活動計画を有しているが、それら異なる機関の活動を統合するような仕組みづくりが将来的な持続性に関する課題となっている。おのおの組織の財源が限られていることから、プロジェクト終了後の現場活動が、日本側ローカルコスト負担を含めたプロジェクト実施時の投入に比して圧倒的に小規模なものとなることは必然であり、規模縮小が予想される。これらの要因は実施機関側の組織及び財政的持続性に関する問題点として指摘できよう。

一方で、モデルサイトのFOと下部委員会（部会）に関しては、既にさまざまな研修を受けた役職員と構成員が活動経験の蓄積を有することから、一定程度自立的に活動を継続していける見込みがあると考えられる。FOの財務・会計は適正に処理されており、下部委員会（部会）を通じて運営されている回転資金の管理も適切であり、資金運営が継続できる見込みは高い。したがって、受益者レベルでの組織及び財政的持続性は高いと判断される。

(3) 技術的持続性

本プロジェクトで導入された技術は、生産性向上に資することが確認された基本的な技術である。農民による技術適用の割合が高いことが示唆されており、農民が継続的にこれらの技術を活用する意向も確認された。FOの運営や灌漑施設及び水管理に関しても、必要な技術・技能を習得した農民が実際の運営管理の経験を蓄積していることから、今後彼らがこれらの組織的活動を継続していく見込みは高い。また、政府職員のレベルでも、研修受講者の大半が、彼らの通常業務の範囲において習得技術を農民に継続的に指導できると自信を表明している。以上のことから、本プロジェクトの技術的持続性は高いと判断される。

4-2 結 論

合同評価調査団は、プロジェクト活動が遅延・障害なく実施され、期待された成果がおおむね得られたことを確認し、今後の継続的な努力によって、プロジェクト目標は協力期間内に成功裏に達成されるものと結論する。よって本プロジェクトはR/D記載の期間をもって終了するものとする。

第5章 提言及び教訓

5-1 提言

5-1-1 プロジェクト終了までに実施すべき事項

(1) 成果5の確実な達成に向けた取り組み

前章までに既述のとおり、プロジェクトの5つの成果のうち、「政府職員・研修機関が、改善された研修・ファシリテーション技術を普及していくメカニズムの提案」という成果は現時点では未達成である。今回調査においては、プロジェクトがワークショップを開催予定であり、既に実現可能で効果的なメカニズムを提案するための準備活動を進めていることを確認した。今後プロジェクトには、メカニズムを機能させるための適切な政府機関・研修機関を特定し、それぞれの役割を明確化するために、関係機関との一層の協議・検討を行うことが求められる。

(2) プロジェクト目標の確実な達成に向けた取り組み

プロジェクト目標の達成のためには、スリランカ政府内でプロジェクトが提案する「総合的メカニズム」に含まれる職員や組織に関して慎重な検討を行い、役割を特定するとともに、そのメカニズムを機能させるために必要なリソース（人員・財源）を確保することが肝要である。またこれに関連し、プロジェクト事務所及び供与機材の将来的な活用計画についても早期に議論・決定することを提言する。

(3) プロジェクト活動実施上の留意点

プロジェクトが策定するマニュアル及びハンドブックの最終化にあたり、技術リソースとなる組織の連絡先やウェブサイト情報などを含めることは将来的な利用者の利便に資するものと考えられる。また、参考文献や出典を明記することは著作権の保護の観点からも重要である。

プロジェクトでは中間レビュー調査の提言に沿って、マーケティングと加工分野のさまざまな研修を実施しており、これらの研修を受講した農民は現在それらの知識・技術を活用した収入向上活動を開始ないし計画している。したがって、これらの研修成果の確保の観点から、プロジェクトには、FOと下部委員会（部会）によるマーケティング・加工関連活動の実践を推進するような働きかけを行うことが求められる。

5-1-2 プロジェクト終了後に実施すべき事項

(1) 上位目標の確実な達成に向けた取り組み

プロジェクトの上位目標達成のためには、プロジェクトが実施した活動が一体化されて対象地域の他の政府職員・FOに普及されることが必要である。したがって、スリランカ政府には、プロジェクト終了後も継続的にプロジェクトの成果を活用・普及していくことが求められる。その具体的な方法として以下が想定される。

- ① 短期的取り組み：マニュアルやハンドブックなど、プロジェクトの具体的な成果品の関連機関による研修活動への即時利用
- ② 中期的取り組み：各関係機関の既存の計画や活動へのプロジェクト成果の一部ないし

修正コンポーネントの組み込み

③ 長期的取り組み：プロジェクトが実施した全活動の総合的な実施

スリランカ政府は既に独自の取り組みとして、対象地域内の4灌漑地区の6つのFOを対象とした試行的展開を開始しているが、それらの経験から将来的な普及にとって有用な示唆が得られるよう、これらの試行を計画どおりに実施・モニタリングすることは極めて重要であると考えられる。

(2) プロジェクト成果普及のための制度的位置づけを有する専任の調整機能及び財源確保の必要性

プロジェクト成果の実際の普及に際しては、制度的な取り組みが必要である。異なるレベルの多様な政府機関の所掌範囲に含まれる活動がパッケージとして提供されることが重要であるため、これらの多様な農民へのサービスを調整する役割が必要とされる。したがって、関係機関間及び農民との調整を図る役割を制度的に担う、専任の調整機能を配し（政府職員・農民・その他関係機関の総合化のため、異なる政府レベルと部署の調整を行う一定権限をもった常設の政府職員配置等）、かつ必要な予算を確保することが、将来的な普及を確実にするためのスリランカ側の取り組みとして不可欠である。

(3) プロジェクト成果の継続的なモニタリングと評価

モデルサイトにおいては、農民の便益の向上というプロジェクトの成果が顕著に発現している。優れた取り組みや効果的な活動運営を継続させ、さらなる便益を農民にもたらしため、実施機関及びJICAによる継続的なモニタリングと評価が行われるよう提言する。

5-2 教訓

5-2-1 FO構成員間の便益の公平な分配

今般調査において、モデルサイトのFOがいずれも円滑かつ効果的に運営されていることが確認された。組織に帰属しているという意識や組織所属によりもたらされる利益に対する農民の評価は、FOの継続的な運営に資するものであるが、その観点から、回転資金が円滑に運用され、原資の増加と受益者数の増加をもたらしていることは重視すべき点である。このように、組織からもたらされる恩恵が構成員間で公平に分配されることは、FOの組織的求心性と運営管理改善の促進につながると考えられる。

5-2-2 プロジェクト実施に係る情報の公開

今般調査のインタビューにおいて、プロジェクトが活動実施に係る情報を公開しているという透明性、例えば、灌漑施設改修の工事経費が看板に示されていたこと等が、関係者の間で高く評価されている。このような情報開示は、プロジェクト実施過程において、受益者の信頼獲得に貢献するものであり、特に援助事業に関する情報の不足や意図的な操作によって起こり得る潜在的な対立を回避するという観点からも有用な方策であると考えられる。

付 属 資 料

- 1 . Minutes of Meeting
- 2 . 合同評価報告書 (英文)

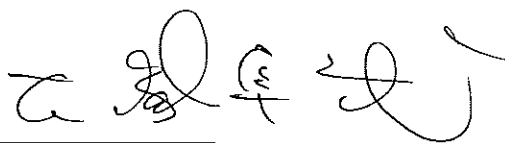
MINUTES OF MEETING
OF
THE JOINT COORDINATION COMMITTEE
FOR THE JOINT TERMINAL EVALUATION
ON THE JAPANESE TECHNICAL COOPERATION PROJECT
FOR INCREASING THE CAPACITY OF INTEGRATED MANAGEMENT IN
IRRIGATED AGRICULTURE IN DRY ZONE

Japan International Cooperation Agency (hereinafter referred to as "JICA") and the Government of the Democratic Socialist Republic of Sri Lanka (hereinafter referred to as "GOSL") jointly organized a Terminal Evaluation Study Team (hereinafter referred to as "the Team") and conducted the Terminal Evaluation Study on the Japanese Technical Cooperation Project for Increasing the Capacity of Integrated Management in Irrigated Agriculture in Dry Zone (hereinafter referred to as "the Project") from 25 November to 15 December 2010.

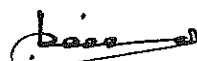
After the intensive study and analysis of the activities and achievements of the Project, the Team developed the Joint Terminal Evaluation Report (hereinafter referred to as "the Report") as attached hereto and presented it to the National level Joint Coordinating Committee (hereinafter referred to as "JCC").

JCC acknowledged the Report and agreed to take necessary actions to follow the recommendations made by the Team, to ensure the achievement of the Project Purpose and Overall Goal of the Project.

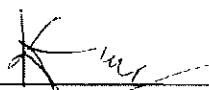
Colombo, 15 December 2010



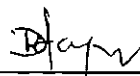
Mr. Takuya Otsuka
Senior Representative
Japan International Cooperation Agency
Sri Lanka Office



Mr. K.W. Ivan de Silva
Secretary
Ministry of Irrigation and Water Resources
Management



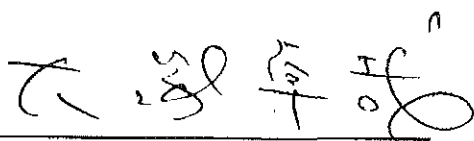
Mr. K.E. Karunathilake
Secretary
Ministry of Agriculture




Ms. C. Hapugoda
Director/Japan Division
Department of External Resources
Ministry of Finance and Planning

THE JOINT TERMINAL EVALUATION REPORT
ON
THE PROJECT FOR INCREASING THE CAPACITY OF INTEGRATED
MANAGEMENT OF IRRIGATED AGRICULTURE IN DRY ZONE
IN THE SOCIAL DEMOCRATIC REPUBLIC OF SRI LANKA

Colombo, December 15, 2010



Mr. Takuya Otsuka
Leader
Japanese Evaluation Team
Senior Representative
Japan International Cooperation Agency Sri Lanka Office
Japan



Mr. R.G. Wickramaratna
Leader
Sri Lankan Evaluation Team
Director (HR), Department of Irrigation
Ministry of Irrigation & Water Resources Management
Sri Lanka

List of Abbreviations

AI	Agriculture Instructor
CAP	Community Action Plan
DA	Development Asssitant
DAD	Department of Agrarian Development
DJCC	District Joint Coordination Committee
DOA	Department of Agriculture
DOAHP	Department of Animal Production and Health
EA	Engineering Assistant (Irrigation Engineer's Office staff)
FO	Farmers Organization
GIS	Geographic Information System
GOJ	Government of Japan
GOSL	Government of Sri Lanka
ICIM	Increasing the Capacity of Integrated management in Irrigated Agriculture in Dry Zone
ID	Irrigation Department
IDO	Institutional Development Officer
IMD	Irrigation Management Division
IE	Irrigation Engineer
IMD	Irrigation Management Division
JICA	Japan International Cooperation Agency
LDI	Livestock Development Instructor
MADAS	Ministry of Agricultural Development and Agrarian Services
MIWRM	Ministry of Irrigation and Water Resource Management
MOLD	Ministry of Livestock Development
NJCC	National Joint Coordination Committee
O&M	Operation and maintenance
PDM	Project Design Matrix
PD Method	Process Description Method
PEACE	Pro-poor Economic Advancement and Community Enhancement Project
PO	Plan of Operations
PRA	Participatory Rural Appraisal
RE	Resident Irrigation Engineer
RDI	Regional office of the Department of Irrigation
RPM	Resident Project Manager
RRDI	Rice Research and Development Institute
SMO	Subject Matter Officer (Provincial DOA staff)
TAC	Training Advisory Committee
VS	Veterinary Surgeon
WG	Working Group
WS	Work Supervisor (IE Office staff)

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ANNEXES

I. EVALUATION OF THE PROJECT

1. Objectives of Evaluation

This terminal evaluation study (hereinafter referred to as "the Study") on the Project for Increasing the Capacity on the Integrated Management in Irrigated Agriculture (hereinafter referred to as "ICIM" or "the Project") is conducted to:

- 1) Review the achievement and implementation process of the Project according to the Project Design Matrix (hereinafter referred to as the "PDM").
- 2) Evaluate the Project according to the Five Evaluation Criteria.
- 3) Make recommendations on measures to be taken to achieve the Project purpose and overall goal, and identify lessons learnt for other projects.
- 4) Write up and submit to the National Joint Coordinating Committee (hereinafter referred to as "NJCC") a Joint Terminal Evaluation Report on the evaluation results.

2. Methodology

(1) Joint Evaluation

The Project was jointly evaluated by the Sri Lankan and Japanese evaluation teams in accordance with the Record of Discussions (hereinafter referred to as "R/D"), the PDM and the Plan of Operations (hereinafter referred to as "PO"). The evaluation activities, including report analyses, field surveys, and interviews with staff of relevant institutions, beneficiaries, Japanese experts and other concerned personnel of the Project, were conducted based on the Five Evaluation Criteria described in the following section. The Joint Evaluation Team (hereinafter referred to as "the Team") was composed of four (4) members from the Sri Lankan side and five (5) members from the Japanese side who were not directly involved in the Project activities.

(2) Five Evaluation Criteria

The evaluation is preceded along with the following five criteria, which are the major points of consideration when assessing development projects.

- 1) Relevance: Relevance is to question whether the project purpose and overall goal are still in line with the priority needs and concerns at the time of evaluation.
- 2) Effectiveness: Effectiveness concerns the extent to which the project purpose has been achieved, or is expected to be achieved, in relation to the outputs produced by the projects.
- 3) Efficiency: Efficiency is a productivity of the implementation process: how efficiently the various inputs are converted into outputs.
- 4) Impact: Impact is any intended and unintended, direct and indirect, positive and negative change that is brought about as a result of the project.
- 5) Sustainability: Sustainability of the development project is to question whether the project benefits are likely to continue after the external aid has come to an end.

(3) Sources of Information Used for Evaluation

Following sources of information were used for this evaluation study.

- 1) Project planning documents such as R/D, PDM, Minutes of Meetings (hereinafter referred to as "M/M") and PO
- 2) Bi-annually periodical reports of the Project
- 3) Interviews and discussions with the Japanese and local experts
- 4) Interviews and discussions with the counterpart personnel
- 5) Record of inputs and utilization

- 6) Project documents on the progress and achievements of the Project
- 7) Field visits to the target area and discussion with the beneficiaries

3. Limitations of the Study

There have been the following limitations in this evaluation study, which may have somewhat influenced the results.

- 1) The Study was conducted in a limited time, thus there may have been any aspects which could not thoroughly be reviewed or analyzed.
- 2) The coverage of the interviewees is also limited to a part of the entire group of relevant personnel and beneficiaries of the Project, which implies the possibility that some findings may be skewed, reflecting the subjective opinions of the particular interviewed individuals.
- 3) Some of the data obtained from the Project are also based on the limited number of samples, which may have influenced the analysis of the tendencies.
- 4) Some of the Team members could not participate in the entire activities of the Study, which created some gap among individual members in terms of the understanding on and assessment of the achievements of the Project which are derived from field interviews and observations.

4. Members of the Joint Evaluation Team

<Japanese Members>

	Name	Assignment	Designation/Organization
1	Mr. Takuya Otsuka	- Team Leader	Senior Representative, JICA Sri Lanka Office
2	Dr. Hideyuki Kanamori	- Agricultural Production - Marketing & Processing - Extension Services	Senior Advisor, JICA HQ
3	Mr. Eisaku Nomura	- Farmers Organization - Irrigation Facility & Water Management	Deputy Director, Overseas Land Improvement Cooperation Office, Rural Development Bureau, Ministry of Agriculture, Forestry and Fisheries, Japan
4	Ms. Keiko Itagaki	- Evaluation & Analysis	Consultant, Global Link Management
5	Mr. Hideki Sonoyama	- Planning & Management	Project Formulation Advisor, JICA Sri Lanka Office

<Sri Lankan Members>

	Name	Assignment	Designation/Organization
1	Mr. R.G Wickramaratna	- Team Leader - Farmers Organization - Irrigation Facility & Water Management	Director (HR), Department of Irrigation, Ministry of Irrigation & Water Resources Management
2	Dr. R. M. Herath Banda	- Agricultural Production - Marketing & Processing	Agriculture Economist, Department of Agriculture, Ministry of Agriculture
3	Eng. Mrs. Priyani Rajamanthre	- Farmers Organization - Irrigation Facility & Water Management	Chief Irrigation Engineer, Engineering Department, North Western Provincial Council
4	Mr. M.D. Piyathilaka	- Agricultural Production - Marketing & Processing - Extension Services	Agriculture Specialist, Ministry of Irrigation & Water Resources Management

5. Schedule of the Joint Evaluation

The Study was conducted from November 25 to December 15, 2010. The detailed schedule is attached as ANNEX 1.

II. OUTLINE OF THE PROJECT

1. Background of the Project

In Sri Lanka, in the dry zone that covers approximately 70% of the total land area and contributes about 80% of the national rice production, many small- and medium-scale farm families remain at low income level. Those families living in rural Anuradhapura and its surrounding area, in particular, have very limited employment and income opportunities in non-agriculture sector. They depend largely on irrigated paddy rice cultivation for their livelihoods, yet faced by problems including low rice productivity, poor operation and maintenance of irrigation facilities, and inefficient water management.

In order to address these problems, farm families require an integrated improvement approach that combines measures for reducing production cost, increasing land productivity by improving water use efficiency, diversifying agricultural production by introducing non-rice crops, and increasing crop productivity by strengthening farmers organizations. Especially, in irrigated agriculture, it is necessary to increase agricultural production and income by expanding irrigation areas through effective use of water resources and crop diversification.

Responding to the request from the Government of Sri Lanka (GOSL), Japan International Cooperation Agency (JICA) carried out "the Study on Increasing the Capacity of Integrated Management in Irrigation Sector" from 2005 to 2006 in Anuradhapura, Kurunegala and Puttalam districts. The Study identified major problems and countermeasures for irrigation, agronomy and marketing & processing in the area, and formulated a plan to increase the capacity of government officials and farmers organizations for the integrated management in irrigated agriculture.

In July 2005, in order to put the plan into practice, GOSL requested to the Government of Japan (GOJ) to carry out a new technical cooperation project called "the Project for Increasing the Capacity on the Integrated Management in Irrigated Agriculture" and in accordance with the R/D signed in March 2007, it has been implemented since June 2007 for a period of four years.

In November 2009, as a result of the joint Mid Term Review conducted on the Project, activities and indicators set out in the PDM were partially modified. The revised PDM is found in the ANNEX 2, which is used for this terminal evaluation.

2. Framework of the Project

The Project's framework is described below (for details, see the PDM in ANNEX 2).

(1) Project title

The Project for Increasing the Capacity of Integrated Management in Irrigated Agriculture in Dry Zone

(2) Responsible organization

Ministry of Irrigation and Water Resources Management (MIWRM)

(3) Project duration

1 June 2007 – 31 May 2011 (4 years)

(4) Target area

Anuradhapura and Kurunegala Districts

(5) Target group

Farm families and relevant government officers in the target area

(6) Model Sites

- 1) Sri Udara Farmer Organization, Rajangana major irrigation scheme, Anuradhapura/Kurunegala Districts
- 2) No.4 Farmer Organization, Kimbulwanaoaya major irrigation scheme, Kurunegala District
- 3) Kadurugasdamana Farmer Organization, Kadurugasdamana medium irrigation scheme, Anuradhapura District

The location map of three model sites are shown in ANNEX 3.

(7) Overall goal

Agricultural income of the farm families in the target area is increased.

(8) Project purpose

An integrated mechanism is established to improve agricultural productivity through capacity building of government officers and farmer organizations (FOs).

(9) Outputs

Outputs in the model sites

- 1) Capacity of the government officers and FOs is enhanced in the field of management of FOs.
- 2) Capacity of the government officers and FOs is enhanced in the fields of irrigation facility management and water management.
- 3) Capacity of the government officers and FOs is enhanced in the field of agricultural production.
- 4) Capacity of the government officers and FOs is enhanced in the fields of marketing and processing.

Outputs in the training institutes

- 5) A mechanism is proposed for the government officers and training institutes to disseminate the improved training/facilitation skills developed in the model sites, to other officers and institutes.

III. ACHIEVEMENTS AND IMPLEMENTATION PROCESSES OF THE PROJECT

The Team reviewed the performance of the Project including inputs and output indicators to measure the achievement of the Project purpose as well as the implementation processes of the Project, the results of which are described in the following:

1. Inputs

The Team confirmed that the Project has availed the following inputs along with the plan stated in the PDM and the PO (the PO is attached as ANNEX 4).

(1) Japanese side

1) Dispatch of Japanese experts to Sri Lanka and assignment of Sri Lankan experts

Japanese long-term experts in the three (3) fields and short-term experts in four (4) fields were dispatched to the Project for technology transfer. The details of the Japanese experts are found in the following Table 3-1.

Handwritten initials and a signature.

Table 3-1: List of Japanese Experts

No	Name	Field of Expertise	Period of Assignment
Long Term Experts			
1	Tomoki Sato	Chief Advisor/Farmer Organization	2007/6-2009/5
2	Kazuo Shimazaki		2009/6- to date
3	Kenji Yasuda	Irrigation Facility Management/Water Management	2007/6- to date
4	Tetsuta Okada	Training (cum Coordination)	2007/6- to date
Short Term Experts			
1	Kazuhiro Ishizuka	GIS	2008/1-3
2	Toshiaki Namba	On farm water management	2008/11-11
3	Toshiaki Namba	Water Management on Tail End Canal	2010/6-9
4	Masahiro Matsuda	Agricultural Cooperative	2010/9-10

Source: Record of the Project

Aside from these Japanese experts, Sri Lankan experts in the four (4) fields were employed by the Project with the fund from the Japanese side to work closely with Japanese experts and counterpart personnel, whose details are given in the Table 3-2 below.

Table 3-2: List of Sri Lankan Experts

No	Name	Field of Expertise	Period of Assignment
1	K.D.S.M. Joseph	Community Development	2007/9- to date
2	B.M. Senarathna	Agricultural Production/ Marketing and Processing	2007/10- to date
3	G Fernando	Irrigation and Water Management	2009/7-2009/10
4	P.H. Ariyawansa		2009/11-to date
5	R. Bandara	Information Technology	2007/10-to date

Source: Record of the Project

2) Provision of machinery and equipment

Machinery and equipment of the total value equivalent to 21,048,114 Japanese Yen were provided for the Project activities. The details of the machinery and equipment provided by JICA are found in ANNEX 5.

3) Training of counterpart personnel in Japan

Thirteen (13) counterpart personnel have so far participated in the training in Japan on the subjects relevant to the scope of the Project activities, such as "sustainable irrigation development system," "participatory irrigation management system for sustainable water management and irrigation facility management," "participatory irrigation management system for paddies," and so forth. The training of four (4) more counterpart personnel is scheduled by the end of the Project period. The details of the Training of Counterpart Personnel are found in ANNEX 6.

4) Bearing of local costs

A total sum of 70,253,268.64 Sri Lankan Rupees has been provided to supplement a portion of local expenditure for JFY 2007 – 2010. It is planned by the end of the Project to allocate an additional amount of 4,341,400 Sri Lankan Rupees, thus the total allocation for the local cost bearing would be 74,594,668.64 Sri Lankan Rupees.

Table 3-3: Local Costs born by the Japanese Side (Rs.)

FY ^(*)	2007	2008	2009	2010 ^(**)	2011 ^(**)	Total
Amount provided	14,790,681.76	23,616,013.72	21,676,573.16	26,712,572.99	4,341,400.00	74,594,668.64

(*1) Based on the Japanese Fiscal Year (April – March). (*2) The figure includes the planned amounts.

(*3) The figure indicates the planned amounts.

Source: Documents prepared by the Project

(2) Sri Lankan side

1) Appointment of counterpart personnel

A total of one hundred twenty nine (129) counterpart personnel of relevant fields of the Project have been assigned to the Project from the Irrigation Department (ID) and Irrigation Management Division (IMD) of the MIWRM,

Department of Agriculture (DOA), Department of Agrarian Development (DAD), Department of Animal Production and Health (DOAPH), the Provincial DOA, Provincial DOAPH and District DAD in North Central Province and North Western Province, as well as from the research and training institutions in the relevant fields, such as Rice Research and Development Institute (RRDI), Natural Resources Management Center (NRMC), and so forth. The details of the counterpart personnel are found in ANNEX 7.

2) Provision of facilities

The necessary office spaces with office equipment and two units of air-conditioners, water and electricity facilities have been provided at the Irrigation Training Institute in Galgamuwa. GOSL has also borne the cost to install telephone lines to the Project office, and partially provided allowances to the officers for their field activities and participation in seminars, workshops and meetings held by the Project.

2. Achievements of the Outputs

The Team confirmed that the Project has implemented its activities as per the plan stipulated in the PDM and PO without any notable delays or unprecedented difficulties. The Team also confirmed that the Project have already achieved four out of five of the expected outputs, i.e. outputs 1 to 4. As the remaining output 5 is to be achieved through the activities of the Project planned to be implemented in March 2011, it is generally assumed that the Project would successfully come up with all of its outputs by the end of the Project period. The detailed information on the output indicators and achievements is found in the ANNEX 8.

Output 1: Capacity of the government officers and FOs is enhanced in the field of management of FOs	
Indicators:	
Among the government officers who participated in the trainings conducted by the Project:	
1-1	More than 80% express "the training was satisfactory".
1-2	More than 60% practiced at least two or more trained skills/ methods in the field.
As a result of the facilitation and extension services rendered by the government officers in the 3 model sites;	
1-3	All the FOs formulated and implemented Community Development Plan and CAP.
1-4	At least 95% of the eligible farmers obtains FO membership.
1-5	Number of attendants of the annual general meetings and regular meetings of FOs were increased at least by 50%.
1-6	More than 1 sub-committee was established in each FO.

The Project has conducted the training to government officers on the subjects such as base-line survey methodology, Community Action Plan (CAP) workshop methodology, and financial management. The Project has conducted the questionnaire surveys in 2010 to grasp the feedback on these training activities, to which a total of 31 government officers among all of those who have participated in these training responded. All of these respondents rated the training as satisfactory. As for the level of application of the trained skills and methods in the field, the rates of those who practice range from 94 to 100% among the different training. As to the indicator 1-2, there have been seven (7) officers who have been trained on 2 and more subjects; all (100%) of whom responded that they are utilizing two or more skills/methods learned in their field activities.

Table 3-4: Government officers' satisfaction on training and application of learning

Training	No. of respondents	Respondents who rate the training as satisfactory		Respondents who practice the learnt skills/methods	
		No.	%	No.	%
Base-line survey methodology	9	9	100	9	100
CAP workshop methodology	17	17	100	16	94
Financial management	5	5	100	5	100
Total	31	31	100	30	97

Source: Questionnaire Survey on Training Programmes (May-June, and October-November, 2010)

In the model sites, all the FOs formulated Community Development Plans and CAP, and have duly been implementing those plans. All of these FOs now cover 100% of the eligible farmers in the respective areas. There have been notable improvements in the attendance of the Annual General Meeting (AGM) of the FOs, achieving the target set by the indicator 1-3. Also, there have been four sub-committees, namely, irrigation, paddy, homestead development and livestock, organized as a part of the formal structures in all of the FOs in the model sites. The establishments of these sub-committees are properly stipulated in the constitutions of the FOs, and there are also separate constitutions of these sub-committees to solicit the management and activities of respective sub-committees.

Table 3-5: FO membership and attendance of AGM

Item	Kimbulwanaoaya		Rajangana		Kadurugasdamana	
	Nov. 2007	Nov. 2010	Nov. 2007	Nov. 2010	Nov. 2007	Nov. 2010
No. of eligible members	169	173	300	300	61	54
No. of FO members	127	173	250	300	61	54
% of FO members against the eligible farmers	75%	100%	83%	100%	100%	100%
Attendance of AGM	15	125	25	165	15	25
Attendance ratio	12%	72%	10%	55%	25%	46%

Source: Achievement Grid of Activities and Indicators (Document prepared by the Project)

Output 2: Capacity of the government officers and FOs is enhanced in the fields of irrigation facility management and water management.

Indicators:

Among the government officers who participated in the training conducted by the Project;

- 2-1 More than 80% express "the training was satisfactory".
- 2-2 More than 60% practiced at least one trained skills and methods in the fields.

As a result of the facilitation and extension services rendered by the government officers in the 3 model sites;

- 2-3 All the FOs reconstructed tail-end irrigation facility.
- 2-4 All the FOs became capable of formulating irrigation schedule.
- 2-5 All the FOs conducted appropriate water management based on the irrigation schedule.

In the field of irrigation and water management, the Project has conducted training for the government officers on the relevant subjects, namely, rehabilitation, water management, operation and maintenance, on-farm water management and GIS mapping system. The levels of satisfaction on the training programme and the degree of utilization of learning in the field activities among the respondents of the questionnaire survey are shown in the table 3-6 below.

Table 3-6: Government officers' satisfaction on training and application of learning

Training	No. of respondents	Respondents who rate the training as satisfactory		Respondents who practice the learnt skills/methods	
		No.	%	No.	%
Rehabilitation	12	12	100	12	100
Water management	12	12	100	11	92
Operation and maintenance	12	12	100	10	83
On-farm water management	12	12	100	12	100
GIS mapping system	21	21	100	14	67
Total	69	69	100	59	86

Source: Questionnaire Survey on Training Programmes (May-June, and October-November, 2010)

In the model sites, all of the FOs have reconstructed canals, farm roads, and other tail end irrigation facilities and structures, the detailed information of which are shown in the table 3-7 below. The Team also confirmed that the FOs have formulated irrigation schedules; in Rajangana, three (3) water issue plans were formulated, and one each water issue plan was agreed upon in Kimbulwanaoaya and Kadurugasdamana, in accordance with which regular monitoring on water management is done. In the FOs, the designated personnel are keeping record of the water measurements, and

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the FOs are currently preparing plans for next water issue period i.e. Yala 2011.

Table 3-7: Reconstruction / improvement of tail-end facility by FOs

Facilities	Kimbulwanaoya	Rajangana	Kadurugasdamana
Distributary canal length (m)	2,820	1,100	1,090
Field canal length (m)	-	4,525	1,750
Farm road length (m)	2,820	4,965	1,540

Source: JICA/ICIM rehabilitation list of FO community contract agreement (Document prepared by the Project)

Output 3: Capacity of the government officers and FOs is enhanced in the field of agricultural production

Indicators:

Among the government officers who participated in the training conducted by the Project;

3-1 More than 80% expressed that "the training was satisfactory"

3-2 More than 60% practiced at least one trained skills/ methods in the field.

As a result of the facilitation and extension services rendered by the government officers, more than 25% of the farmers in the 3 model sites;

3-3 Practiced at least one trained skill on paddy, vegetable and fruits cultivation and livestock production.

3-4 Introduce diversification in farm management with vegetable/ fruits cultivation or animal husbandry.

3-5 Implemented collective cultivation based on the cropping plans.

The Project has extensively conducted various training in the field of agricultural production for the government officers. On paddy production, there are training such as "soil analysis and farm management" and "quality seed and paddy field school", while there were also training on homestead development and livestock. The Project also conducted special training for the government officers on the Process Description (PD) method. The levels of satisfaction on the training programme and the degree of utilization of learning in the field activities among the respondents of the questionnaire survey are shown in the table 3-8 below.

Table 3-8: Government officers' satisfaction on training and application of learning

Training	No. of respondents	Respondents who rate the training as satisfactory		Respondents who practice the learnt skills/methods	
		No.	%	No.	%
Paddy: soil analysis and farm management	14	14	100	14	100
Paddy: quality seed and paddy field school	10	10	100	10	100
Homestead development	12	11	92	11	92
Livestock	7	7	100	7	100
PD method	17	17	100	17	100
Total	60	59	98	59	98

Source: Questionnaire Survey on Training Programmes (May-June, and October-November, 2010)

In the model sites, the Project has provided training to the farmers on paddy production, homestead development and livestock. Farmers appreciate their technical learning and the Team confirmed that they utilize their learning in actual production activities. As for the diversification of farm management, the farmers have introduced vegetable production and livestock production through respective sub-committee activities in all of the three model site. It was also reported during the field interviews that some farmers in Kimbulwanaoya and Rajangana have experienced the crop diversification in the paddy field during the dry seasons. As for the collective planning, the farmers in all of three model sites are following the collective cultivation plans to synchronize their production. All of the FOs have introduced the collective purchase of production inputs, which has successfully been implemented.

Table 3-9: Farmers' practice of learnt skills in agricultural production

Item	Kimbulwanaoaya	Rajangana	Kadurugasdamana
No. of FO members	173	300	54
No. of farmers who practice the learnt skills	111	144	34
Rate	64%	48%	63%

Source: Achievement Grid of Activities and Indicators (Document prepared by the Project)

Output 4: Capacity of the government officers and FOs is enhanced in the fields of marketing and processing.

Indicators:

Among the government officers who participated in the training conducted by the Project;

4-1 More than 80% expressed that "the training was satisfactory"

4-2 More than 60% practiced at least one trained skills / methods in the field.

As a result of the facilitation and extension services rendered by the government officers, more than 25% of the farmers in the 3 model sites;

4-3 Implemented at least one improvement measure of processing / marketing.

As for the training in the fields of marketing and processing, the Project has trained the government officers on marketing information and entrepreneurship development. All (100%) of the 36 government officers responded to the questionnaire survey rated the training programme as satisfactory and indicated that they are practicing the learnt skills/methods in the field activities.

In the model sites, the farmers were provided with the training on processing of agricultural products such as cashew, lime and rice, as well as on marketing. The farmers shared with the Team that they appreciate what they learnt and that they put these learning into practice to improve their income.

Table 3-10: Farmers' practice of learnt skills in processing and marketing

Item	Kimbulwanaoaya		Rajangana		Kadurugasdamana	
	No.	%	No.	%	No.	%
No. of FO members	173		300		54	
Farmers who practice the learnt skills in processing	130	75	157	52	25	46
Farmers who practice the learnt skills in marketing	69	40	117	39	14	26

Source: Achievement Grid of Activities and Indicators (Document prepared by the Project)

Output 5: A mechanism is proposed for the government officers and training institutes to disseminate the improved training/facilitation skills developed in the model sites, to other officers and institutes.

Indicators:

At the training institutes;

5-1 At least one integrated training programme is conducted.

5-2 A workshop is held to propose a mechanism to disseminate improved training/facilitation skills developed in the model sites to other officers and institutes.

5-3 At least one seminar, which summarizes the results of monitoring and follow-up trainings, is conducted during the implementation period of the Project.

By the time of this evaluation study, the Project has already initiated preparatory activities to achieve this output, such as monitoring of training activities through questionnaire surveys, although the actual events to be assessed as indicators are yet to be conducted. The Project is planning to organize an integrated training programme, seminar and workshop in March 2011, the detailed proposed contents of these activities are shown in the ANNEX 9. Given that these planned activities would be implemented as scheduled, the Team assumed that the output would be achieved by the end of the Project.

3. Prospects to Achieve the Project Purpose

Project Purpose: An integrated mechanism is established to improve agricultural productivity through capacity building of government officers and FOs (farmer organizations).
Indicators:
1. Degree of satisfaction among the trained officers is at least 50%.
2. Degree of satisfaction among the trained farmers in the model sites with the trainings and extension services is at least 50%
3. Result of the Capacity Assessment of the FOs in the model sites is improved at least by 25%.
4. Training Advisory Committee functions continuously with the assistance of the Working Committees.

As for the trained government officers, the degree on satisfaction on the training among the respondents of the questionnaire survey reaches 99% in aggregation, while 100% of the farmers who responded to the questionnaire survey expressed their satisfaction. The results of the Capacity Assessment of the FOs in the model sites, which assessed the performances and managerial aspects of the FOs, also show a considerable degree of improvement as shown in the Table 3-11 below.

Table 3-11: Capacity Assessment of the FOs

Item	Kimbulwanaoaya	Rajangana	Kadurugasdamana
Total points in Baseline (Nov. 2007)	14.3	15.3	17.3
Total points at latest survey (Nov. 2010)	41.3	41.6	35
Ratio of increased points	189%	172%	102%

Source: Achievement Grid of Activities and Indicators (Document prepared by the Project)

In response to the recommendations made by the Mid-term Review, the Project has held series of discussions with relevant institutions to build consensus on the definition of the integrated mechanism to be established as shown in ANNEX 10, as well as to reinforce the functions of the Training Advisory Committee (TAC) through the NJCC meetings. The Working Groups¹ (WGs) i.e. Financial Management WG, Irrigation WG, Agriculture WG, and Livestock WG have actively been involved in the planning and conduct of training activities as well as in the compilation of the training manuals.

Based on the confirmation on the above, the Team assumed that the Project purpose would likely be achieved by the end of the Project.

4. Prospects to Achieve the Overall Goal

Overall Goal: Agricultural income of the farm families in the target area is increased.
Indicators:
1. A system is established to increase the agricultural income of the farm families in the target area at least by 25%.
2. A system is established to increase the agricultural productivity of the farm families in the target area at least by 25%.

According to the field data analyzed by the Project, the agricultural income of the sample farmers in the model sites have increased by 141% on average as the details shown in the Table 3-12 below.

Table 3-12: Agricultural income in model sites (per farmer)

Item	Kimbulwanaoaya	Rajangana	Kadurugasdamana	Average
Agricultural gross income at baseline (2007)	Rs. 77,464	Rs. 112,747	Rs. 114,717	Rs. 88,154
Agricultural gross income at latest survey (2010)	Rs. 215,718	Rs. 194,331	Rs. 251,237	Rs. 212,615
Ratio of increase	178%	72%	119%	141%

Source: Achievement Grid of Activities and Indicators (Document prepared by the Project)

¹ It was agreed in the NJCC held in July 2010 that the Working Committee as mentioned in the indicator 4 should be renamed as the Working Groups. Thus the latter name is used in this report, while the expression of the indicator remains the same.

There have also been data available from the Project on the productivity of rice and milk in the model sites, though there has not been concrete data on the crops introduced in homestead development components, as they are mainly for self consumption. As shown in the Table 3-13 below, the productivity of rice per unit area among the sample farmers has increased by 81% on average, while the adjusted ratio of increase is 32% on average, considering that the application of technical learning is limited to the part of the command areas in these model sites. The milk production has increased by 624% on average, as the details shown in the Table 3-13 below.

Table 3-13: Agricultural productivity in model sites

Item	Kiribulwanaoaya	Rajangana	Kadunugasdamana	Average
Paddy productivity at baseline (2007) t/ha	3.1	4.3	4.0	3.8
Paddy productivity at latest survey (2010) t/ha	7.25	6.85	6.54	6.88
Ratio of increase	134%	59%	64%	81%
Ratio of the areas where farmers adapt the improved farming practice against the total area of paddy fields	60%	30%	43%	40%
Adjusted ratio of increase ^{*(1)}	80%	18%	27%	32%
Productivity of milk at baseline (2007) l/day/cow	1.1	0.9	0.3	0.76
Productivity of milk at latest survey (2010) l/day/cow	6.5	6.0	4.0	5.5
Ratio of increase	491%	567%	1233%	624%

*(1): The adjusted ratio is calculated based on the weighted average of yield in the total area.

Source: Achievement Grid of Activities and Indicators (Document prepared by the Project)

As far as these data are concerned, the probability of achieving the overall goal seems to be high, under the condition that similar interventions will be extended to other farmers in the target areas through the continuous efforts of the relevant institutions of GOSL after the completion of the Project. The issues and measures related to the sustainability of the future interventions are separately discussed in the following chapter IV.

5. Implementation Processes

(1) Decision making and monitoring mechanism

The NJCC has so far been held five (5) times to review the progress of Project activities, to endorse the plans for the upcoming period, and to make decisions on the issues related to the Project implementation. Aside from the NJCC, the Project has quarterly organized the District Joint Coordinating Committee (DJCC) meetings to ensure the sharing of detailed information on the progress, problems and plans of the Project activities among the various stakeholders at the field level, as well as to discuss measures to be taken for smooth implementation.

During the period of rehabilitation in the model sites, the Irrigation Monitoring Meetings (IMM) have monthly been held under the chair of the Director General of Irrigation, as well as the weekly meeting of the working level stakeholders such as the FO representatives and Work Supervisors (WS).

There are also the TAC and WGs in the organizational structure of the Project that have taken care of the technical issues, such as planning of training activities and drafting and authorization of technical manuals and handbooks, dispatch of resource persons to the training, and so forth. The members of WGs include the relevant personnel from implementing and participating institutions as well as from other research and training institutions. The Project staff has held monthly Project staff meeting where day-to-day issues related to the Project management, training and field activities are discussed for information sharing and problem solving.

This multi-layer mechanism for decision-making and monitoring seems to have considerably contributed to the effective coordination among the relevant stakeholders and thus to the smooth implementation of the Project.

(2) Communication among the Project personnel

As the model sites are scattered in distance and many counterpart personnel and other stakeholders were involved in the Project implementation from 2 districts, the Project had sometime faced the difficulties in ensuring timely and precise communication. As it was difficult to have frequent meetings among the Project personnel who are posted in different places, the Project made efforts for smooth coordination and frequent contacts through mobile phones. Some Project personnel also pointed out that the counterpart personnel were also engaged in various activities other than the Project's, so that there have sometimes been cases of conflicts of schedules related to the activities in the field.

6. Implementation of the Specific Fields

6-1 Irrigation

(1) Activities conducted

- 1) As for the rehabilitation work, the Project has conducted CAP workshop and walk-through survey to grasp the existing conditions and problems of irrigation facilities and structures, as well as of the farm roads. Then, the areas that need improvements and method of improvement have been identified, based on which the rehabilitation plans were formulated. Rehabilitation works were to be done through community contract² with FOs, and the FOs could obtain and/or enhance their capacities to construct canals and farm roads through the On-the-Job-Training (OJT).
- 2) Previously, the repair and maintenance of the canals and farm roads were done by individuals who took care only of the respective parts of these facilities directly affected their own plots. The Project introduced a system to jointly conduct repair and maintenance work where everyone is expected to participate. This collaborative system contributed to enhance the farmers' recognition of the facilities as common properties.
- 3) The training on water distribution was conducted in collaboration with the Regional Engineer (RE) or Irrigation Engineer (IE). The field canal groups (FCGs) were organized under the FOs, and water distribution plans per distributary canals and field canals were formulated. Through the rehabilitation, concrete lining were done where necessary and the gates and water gauges were installed, which help the FOs to implement more precise management of water distribution. The FOs have monitored the water distribution in distributary canals and field canals where the rehabilitation works were completed, based on the results of which they are revising the water distribution plans. With these improvements in water distribution by FCGs in Kimbulwanaoaya, the FOs in the downstream were also benefited with enough amount of water flown into their areas.
- 4) The Project has set demonstration plots to show the effects of on-farm water management in the model sites, where the farmers learnt that they would be able to obtain higher yields while saving water with appropriate water management.
- 5) The Project provided GIS mapping system to the FOs that indicate paddy plots, canals and farm roads, cropping patterns and so forth which were very much appreciated by the FOs as the vital tools to strengthen their understanding on the conditions of their irrigation facilities. In addition, the GIS maps were very useful for facilitating the process in which the FO members made an agreement on water management, rehabilitation, operation and maintenance (O&M).

(2) Achievements

There has been a considerable increase in the collection rates of the O&M fees in the FOs. Compared to the baseline data in 2007, the collection rates in 2010 have increased from 52% to 95% in Kimbulwanaoaya, 70% to 75% in Rajangana, and 44% to 75% in Kadurugasdamana.

² In the community contract, the sub-contract of the work is prohibited.

(3) Issues for further consideration

- 1) The distributary canals in the model sites are currently operated and maintained jointly by the FOs but the field canals are still operated and maintained individually. It would be desirable if the FCGs can also introduce any joint O&M system in the field canals in line with the O&M activities in distributary canals in order to further promote efficiency of water management.
- 2) In case if any construction works of canals and farm roads are undertaken in the areas where farmers follow 2 cropping seasons, it is essential to formulate annual plans of construction based on the precise assessment of the volume of work to be done in the limited time, the FOs capacity to mobilize the labor participation by their members and physical ability of those mobilized labor.
- 3) It is necessary for the FOs to continuously monitor the conditions of water management at the distributary canals and the field canals, and to adequately modify the water distribution plans based on result of the monitoring.

6-2 FO management

(1) Activities conducted

- 1) The Project organized the workshops to formulate the CAP, as well as to introduce the ideas of setting up sub-committees that are specialized in particular activities of the FOs. In three model sites, the sub-committees on irrigation management, paddy production, homestead development and livestock were established under the FOs.
- 2) The office bearers of the FOs were provided with training opportunities on leadership and managerial skills such as bookkeeping and accounting, while the sub-committee members have also gone through various training relevant to the respective activities of the sub-committees. Through these training, the activities of the FOs as well as of the sub-committees have been promoted.
- 3) The relevant government officers have frequently visited and carefully supported the activities of sub-committees. It is reported both by the officers themselves and by the farmers that their communication have improved and mutual trusts were created. These rapports also contributed to the active performances of the FOs.

(2) Achievements

The frequency of the General Meetings (GM) of the FOs in 2010 has increased from the baseline figure in 2007: The FO in Kimbulwanaoya who organized the GM only once a year in 2007 currently organizes 4 GM in 2010. Two meetings were held against one in the past in Rajangana, while four meetings against two were held in Kadurugasdamana. The attendance of the members to the FOs' AGM has also notably been increased. The ratio of attendance of AGM against the total membership was 12% in 2007, which have drastically increased to 72% in Kimbulwanaoya. Similarly, the ratios have increased from 10% to 55%, and 25% to 56% in Rajangana and Kadurugasdamana, respectively.

(3) Issues for further consideration

It is indicated through the experiences of the Project that the introduction of CAP workshop, sub-committee system under the FOs, and joint activities for O&M of the irrigation facilities are effective measures to activate and promote the FOs. In order to introduce these measures, good communication between the government officers and farmers are deemed to be essential. Thus the government institutions need to make further efforts to ensure frequent contacts of respective officers with the FOs, as well as to promote coordination among the different agencies working in the same coverage areas.

6-3 Agricultural production

6-3-1 Paddy

(1) Activities conducted

1) Enhancing capacity of organizations and resource persons

Although there were established FOs in these areas prior to project implementation, they were not active. Project conducted awareness meetings and the FOs were re-organized, sub-committees were established and CAPs were formulated. One of the sub-committees was on paddy. In addition, capacities of resource persons for farmers were enhance. Extension agents are resource persons consisting of Agricultural Instructors (AIs) and Subject Matter Officers (SMOs), and they were trained on the Process description (PD) method by the Project Team. The responsibility of agricultural extension activities of the Rajangana Scheme is with the Central Government as the land area in this scheme is spread over three districts. Extension responsibility of other 2 sites, Kadurugasdamana (Anuradapura district) and Kimbulwanaoya (Kurunegala district) is with the Provincial DOAs of North Central and North Western Provinces, respectively.

The WG on Agriculture holds meeting to identify the training needs and prepare materials for the trainings of technical officers for agricultural production and processing & marketing.

2) Enhancing capacity of farmers' group

- a. Conduct soil analysis and produce fertilizer recommendations for individual farmers: Soil samples were collected as a part of GIS programme by the Land Use Division of the ID and analyzed by the RRDI of DOA. The results were incorporated into the GIS maps by the NRMCM of DOA. The NRMCM made recommendations on fertilizer and drainage classes based on GIS mapping. These GIS maps helped DOA officers and farmers to identify suitable cropping patterns/crop diversification possibilities in rice areas.
- b. Identification of suitable varieties/Introduction of quality seed paddy: The DOA experts identified and introduced suitable rice varieties and quality seeds. The farmers of the sub-committee initially purchased the quality seeds using the revolving fund (RF) and then the group reproduced the seeds.
- c. Introduction of technology package: Extension agents introduced a technology package to farmers through Farmers' Field School (FFS) programme and OJT. Some of the areas covered in these trainings included: good land preparation including deep plowing, fertilizer and weed management, use of leaf color charts, Integrated Pest Management (IPM), etc, through OJT and field demonstrations. The PD method was also applied.

(2) Achievements

The paddy yields among the sample farmers have increased from 3.1 t/ha at the baseline survey to 7.3 t/ha during the 2009/10 Maha season in Kimbulwanaoya, from 4.3 t/ha to 6.9 t/ha in Rajangana and from 4.0 t/ha to 6.5 t/ha in Kadurugasdamana.

(3) Issues for further consideration

1) Opportunities

- a. Disseminating technologies results in big yield increase.
- b. Parachute method becomes popular.
- c. There is a big potential of crop diversification during Yala season.
- d. Farmers have recognized benefits of collective cultivation come from the group approach.

2) Constraints

- a. Farmers' preference of paddy confines crop diversification.
- b. Lack of promotion programme on other field crops is one constraint of crop diversification.

6-3-2 Livestock

(1) Activities conducted

1) Enhancing capacity of organizations and resource persons

As same as Paddy, the FOs were re-organized, CAP was formulated and a sub-committee on livestock was established. Resource persons consisting of Livestock Development Instructors (LDIs) and Veterinary Surgeons (VSs) were enhanced on their capabilities.

2) Enhancing capacity of farmers' group

- a. Awareness Meetings & study tour: The awareness meetings and study tours were conducted for the sub-committee members. In the study tour, field visits to government farms for farmers were organized by the Livestock extension agents, i.e. VSs and LDIs to show them the importance of livestock.
- b. Demonstration farms & training: The study tour was followed by the establishment of 5 demonstration farms in each project site and used them to train other farmers.
- c. Purchase of cows through RF and upgrading of animals: The Project established the RF for farmers to purchase cross-bred cows with high yield potential. The existing cows were up-graded through artificial insemination (AI). Furthermore, building cattle sheds is prompted.
- d. Good management: Extension agents trained farmers on good management practices to produce high yields.
- e. Animal fodder/feed production: A new fodder variety was introduced and farmers produced animal feed by purchasing different materials and mixing them for making a balanced diet.
- f. Collective marketing: With the increase in milk yield, the sub-committee was able to collect enough volume of milk for collective selling. The Project established contacts with a company and the farmers' group made an agreement to sell the milk.

(2) Achievements

The number of cows has increased from 14 at the baseline survey to 25 by May 2010 and the milk yield from 1.1 L/day/cow to 6.5 in Kimbulwanaoya. In other sites, number of cows from 20 to 50, and yield from 0.9 to 6.0 in Rajangana; and number of cows from 6 to 15, and yield from 0.3 to 4.1 in Kadurugasdamana.

(3) Issues for further consideration

1) Opportunities

- a. Increasing milk production invites company for collective selling.
- b. Milk prices are relatively free from market fluctuation because of applying the standard quality pricing chart.

2) Constraints

- a. Developing livestock requires not only technology dissemination but also preparing revolving funds.
- b. Farmers' preference of increasing crop production areas results in reduction of pasture.

6-3-3 Homestead development

(1) Activities

1) Enhancing capacity of organizations and resource persons

Before the Project, no systematic management was done for homestead development. The other conditions were similar to Paddy and the FO was re-organized, CAP was formulated and a sub-committee on homestead development was established.

2) Enhancing capacity of farmers' group

- a. Awareness meetings & study tours: Extension agents (AIs and SMOs) organized study tours to other farmers' fields where there were successful homestead programmes.
- b. Demonstration farms & training: Demonstration farms were established and trainings were conducted. The number of demonstration farms changed according to the number of farmers of the sub-committee. In training, farmers were trained to prepare field layout plans of their individual farms and learn how to prune branches and remove excess vegetation. Importance of soil conservation methods, compost making and good land preparation for the maximum use of land were stressed.
- c. Input purchase from RF: Farmers used the RF to purchase inputs and this enabled farmers to implement the good management practices introduced to them.
- d. Collective marketing: Whenever there was any excess of products at commercial scale, extension agents and the Project helped the farmers to identify the markets for collective selling.
- e. Farmers' application of RF to collective purchasing inputs: Farmers used the RF to purchase inputs. Farmers used the RF to purchase inputs collectively and managed to reduce the cost on inputs.

(2) Achievements

New crops such as banana, papaya and chili were introduced to farmers and the income increased. For instance papaya cultivation in Rajangana, eight farmers performed well and their income increased to Rs. 126,000 per farmer on the average.

(3) Issues for further consideration

1) Opportunities

- a. Disseminating technologies may increase the production without funding support for the smallness of production scale.

2) Constraints

- a. Expanding production and collective marketing are difficult due to the small scale production and home consumption nature of homestead products.
- b. Homestead products' prices tend to fluctuate very much.

6-4 Processing & marketing

(1) Activities

1) Enhancing capacity of organizations and resource persons

As same as agricultural production, the FO was re-organized, CAP was formulated and a sub-committee on livestock was established. For resource persons, the Project trained AIs on baseline survey, CAP planning, PD method, leadership & community development, and entrepreneurship. Industrial Service Bureau of the North-Western Provincial Counsel trained AIs and farmers on entrepreneurship development including market planning, production planning, organization and financial management planning.

2) Enhancing capacity of farmers' group

- a. Awareness meetings & study tours: Awareness meetings and study tours were conducted as a part of other activities on agricultural production.
- b. Provide information catalogs for the business: Counterpart personnel prepared small catalogs to describe the opportunities of marketing such as the time of best prices and other information for planning a business.
- c. Training on marketing: Counterpart personnel trained AIs and farmers using the catalog on marketing and processing. Marketing trainings are done on selling at the time of best prices, collective selling and purchasing, etc.

Processing trainings were done on rice processing, lime drying (Black lime); cashew processing and dairy product processing.

d. Promotion of collective marketing (Milk, Papaya): The Project and AIs promoted collective marketing on milk and papaya.

(2) Achievements

Group purchase for cost reduction and processing activities saved money and reduced the cost of inputs. For instance on the group purchase of seed paddy, the costs were reduced as shown in Table 6.1 for Kadurugasdamana FO (22 farmers).

Table 6-1: Cost reduction data by promoting group purchase

Cost item	Private purchase	Group purchase	Amount of saved cost
Transportation cost of seeds	Rs. 60 ⁽¹⁾ x 140 bu. = Rs. 8,400	Rs. 4,500 (hire lorry)	Rs. 3,900
Price of fertilizer and agro-chemicals	Rs. 153,000 for 70 acres	Rs. 117,260 (23% discount)	Rs. 35,740
Total			Rs. 39,640

* (1): The FO collected Rs. 60 per bushel from an applicant for transportation fee.

Source: ICIM

(3) Issues for further consideration

1) Opportunities

- a. Collective purchasing is relatively easy to be applied for funding and/or fertilizer subsidy by the government
- b. Prolonging repayment period of RF enable farmers to store rice until having the best time of selling to the market.

2) Constraints

- a. Collective marketing of rice is relatively difficult to be applied due to private visiting traders and no such incentives as those for collective purchasing although sharing market information is commonly done.

6-5 Agricultural extension

(1) Activities

1) Enhancing capacity of organizations

Although FOs were not active, the Project through awareness meetings managed to re-organize them and sub-committees were established. Farmers who are interested in the agricultural production (including livestock production) and processing & marketing joined these sub-committees. Baseline surveys and training workshops on CAPs were held to identify the needs of each sub-committee and all the necessary requirements were identified and CAPs were prepared, which include not only extension requirements of knowledge and skills but also requirements of revolving funds (RFs) with the monitoring and evaluation.

2) Enhancing capacity of AIs and LDIs

The AIs and LDIs have the capability to apply the ordinary extension methods, such as farm and home visit, method demonstration, result demonstration, exhibits and contests, posters and chart, meetings, short training courses (extension schools), pamphlet, leaflets, bulletins and circulars, correspondence and circular letters, observation tour and farmers Field School. However, the following methods are somewhat limited:

- a. Audio visual materials (photos, slides and movies) are applied only at the training centers.
- b. Communication facilities are limited and telephone calls are mainly one way from farmers to officers when they need services.
- c. On publicity, news papers and other mass media are not used except in limited scale. Newspapers are used in some cases.

d. SMOs have the capability to use the ordinary technology transfer methods such as Questionnaire survey, Interview, Presentation/lecturing, Consultation, Counseling and Coaching, but not all the AIs and LDIs.

For agricultural and livestock extension, the AI and LDI who are in charge of Kimbulwanaoaya will have to serve about 2,000 farm families (FFs) and 256 FFs respectively, according to the Study. The AI and LDI who are in charge of Kadurugasdama will have to serve to 1,500 to 2,500, and 1,300, respectively. The number of AIs and LDIs is not enough although most of them have their own motorbikes; among the interviewed 2 AIs and 2 LDIs, 2 AIs and 1 LDI have motorbikes for extension; one LDI does not have a vehicle and uses another persons' vehicle. In order to improve the situation, the Project applied two measures.

- a. Organizing sub-committee with farmers: The group approach makes AIs and LDIs visit a number of farmers at once instead of visiting individual farmers.
- b. Enhancing extension skills: Training on "Leadership and Community Development" and "PD method" has enhanced the extension capabilities of AIs and LDIs in agricultural production (including livestock production) and processing & marketing. Especially the PD method is so appreciated by AIs and LDIs that they have recognized the method as one of the useful tools of extension according to the Study at Kurunegala and Anuradhapura district sites.

The AIs and LDIs who were trained by the Project have carried out extension activities more efficiently and effectively to disseminate technologies or knowledge on agriculture, livestock and processing & marketing.

Furthermore, integrating the above capacity enhancement with other approaches such as needs/demand based extension programmes and others have further improved their extension efficiency. This integration approach increases extension performance much more than applying supporting approaches of farmers individually although all the applied approaches and methods are existing in Sri Lanka except the PD method. This approach is characterized as follows.

- a. Application of group approach: The AI or LDI conduct technology dissemination not to individual farmer but to a group.
- b. Integration of needs: All requirements for increasing the farm income were identified during the workshops and integrated plans have been prepared and implemented to obtain better performance, for instance, marketing
- c. Concentrated involvement of extension agents: The frequency of visits to the sites by AIs and LDIs have increased by assembling the agents to the Project sites although some outside areas are somewhat affected by less frequent extension services.
- d. RF with soft conditions: Conditions of the Project RFs are softer than the existing loan schemes to realize benefits of applying the disseminated technologies/knowledge. An effective monitoring and evaluation system has been provided.
- e. Enhancement of relationships among stakeholders: The human relationships among all the stakeholders such as officers of different levels and departments and farmers have been enhanced through workshops, trainings and others.

(2) Achievements

Technologies/knowledge on the agricultural production (including livestock production) and processing & marketing were disseminated to about 400 farmers, and the farm family income has increased by 141% on average.

(3) Issues for further consideration

1) Opportunities

- a. The Project has proved that need-based group approach increases extension efficiency and sustainability.
- h. Government distribution system of fertilizer may be used as a tool to motivate farmers for joining the FOs.
- c. Availability of transportation of extension agents is moderate although some agents have to share a limited number of vehicles.

- d. Extension agents have no problem of extension tools, methods and materials.
- e. Contents of the ICIM's training of trainers are effective to enhance extension capabilities, especially the PD method.
- f. Extension agents participated in the Project have built up their capacity.

2) Constraints

- a. The number of front-line extension agents (AI, LDI) is small for the assigned number of farm families.
- b. Concentrated involvement of extension agents in the Project sites may sacrifice extension services in outside areas unless measures of increasing extension efficiency are provided.
- c. Although community mobilization is assigned to the Agricultural Research and Production Assistance (ARPA), their role in group formation is not functional.
- d. Budgets for agricultural extension are limited.
- e. The smallness of funding scale and opportunity of the existing loan scheme limits farmers to apply the disseminated technologies.
- f. Transfer of the trained persons to outside the Project area reduces the training effects.

7. Measures taken for the Recommendations by the Mid-term Review

At the time of the Mid-term Review conducted in November 2009, there were seventeen (17) issues raised as recommendations for the Project to address in order to ensure smooth and effective implementation of the Project activities for the rest of the cooperation period, encompassing from technical to managerial aspects of the Project. The Team confirmed that the Project has made efforts to take various measures to respond to these recommendations, the details of which are shown in the ANNEX 11.

IV. RESULTS OF THE EVALUATION

Through the evaluation study, the Team jointly assessed the Project's relevance, effectiveness, efficiency, impact and sustainability. The results are shown in the following.

1. Relevance

The relevance of the Project is evaluated as high based on the following confirmation:

(1) Relevance to the policies of GOSL

The Project is still consistent with the policies of GOSL, as there has not been any major change in the Mahinda Chintana, the ten years national development plan (2006-2016), which prioritizes the agricultural development for economic improvement and poverty reduction. Current policies and programmes of the participating agencies, especially of the MIWRM including those of ID and IMD, also focus on supporting measures to improve agricultural production of small-scale farmers. Therefore, relevance of the scope of the Project to the policies of GOSL is secured.

(2) Consistency with the ODA policies of the Japanese Government

Poverty reduction and minimization of the poverty gap among the different strata of the society have been put emphasis as priority areas of the Japanese ODA policy as has been stipulated in the country assistance policy for Sri Lanka, and agricultural and rural development is considered as one of the vital cooperation strategies for poverty reduction. Similarly, the Rolling Plan of JICA for Sri Lanka in 2009 emphasizes the importance of agricultural sector as one of the priority areas. The Project is assumed to contribute to the cooperation programme on "Agricultural and Fishery Community and Rural Community Development," the main focus of which is put on eradicating the economic

and social imbalances. Thus the Project is still considered to be quite consistent with the Japanese aid policies.

(3) Relevance of the project design

There is a strong need to increase agricultural productivity and income of the farm families in irrigated areas in the Dry Zone. The Project is aiming to enhance the technical capacity not only of the government officers both in irrigation and agricultural sectors but also of the farmers' organizations. The Project also anticipates that the outcomes of the Project would be replicated to other areas by establishing an integrated mechanism for improvement of their capacities. This approach is thus considered to be a practical and appropriate response to the needs of the capacity improvement to further promote irrigated agriculture.

(4) Relevance to the needs of target beneficiaries

In the target areas, the interviewed farmers pointed out that, prior to the commencement of the Project, there was not much organizational activities and that there had been the problems of water distribution and low productivity, resulting in the low income of farm households. Through the Project activities, however, the water distribution has improved through rehabilitation of irrigation facilities, and with the introduction of organizational activities by respective sub-committees of the FOs, productivity of their farming activities have conspicuously been increased. The leaders of FOs and their sub-committees are also actively engaged in the activities in order to sustain these positive effects. The Project is thus considered to be quite relevant to the needs of the beneficiaries.

2. Effectiveness

The effectiveness of the Project is considered to be high with the reasons described in the following:

(1) Achievement of Project purpose

The government officers and farmers who participated in the training conducted by the Project have highly appreciated the training opportunities provided. Both the degree of satisfaction on the training and the rate of application of the learning are found to be high, implying the usefulness of the capacity building programme rendered by the Project for the participating government officers and FOs. As to the integrated mechanism to improve agricultural production, preliminary discussions have already been held and there have already been agreed definition of the mechanism as well as the consensus on the actions to be taken as shown in the ANNEX 10, based on which it is anticipated that the Project would be able to propose feasible and effective mechanism.

Since the Project will continue further discussions to examine and to realize the mechanism in the rest of the cooperation period, the Team considered that the Project purpose would likely be achieved by the end of Project.

(2) Contribution of outputs to Project purpose achievement

The Project purpose of establishing an integrated mechanism to improve agricultural productivity through capacity building of government officers and FOs is two-fold, namely, the capacity building of government officers and FOs to improve the agricultural productivity, and the establishment of a mechanism. The former is to be achieved through the attainment of outputs 1 to 4 that are focusing on various capacities of government officers and FOs to ensure the proper functioning of irrigation facilities as well as to enhance the farming practices so as to improve agricultural productivity. The latter part of the Project purpose is to be achieved by the output 5, for which the Project has already prepared detailed plan of implementation as described above.

Thus, the logical sequence between the outputs and Project purpose is appropriate and the outputs contribute to the achievement of the Project purpose in a mutually interrelated manner.



(3) Analysis of factors

1) Promoting factors

Both participating farmers and government officers unanimously appreciated the group approach of the Project as one of the keys to effective and successful implementation. The government officers have seen that the approach has made it easier for them to communicate with and serve to their clientele farmers, while the farmers realize that they can achieve and benefit more as a group rather than as individuals.

Another factor to be noted is the mobilization of the local experts. The Project has mobilized and utilized the local experts in carrying out its activities. There have been four (4) local experts hired by and served the Project all through its implementation. The fields of expertise of these local experts include community development, agricultural marketing and processing, irrigation and water management, and information technology. As the number of Japanese experts was limited despite of the wide scope of the Project activities, involvement of these local experts was found to have contributed to a considerable degree to the smooth implementation of the Project.

2) Hampering factors

Accessibility to and the scattered location of the model sites from the Project office were considered as the major factors that created difficulties in the day-to-day operations of the Project. Time and cost required to reach to the model sites were of considerable volume, which affected the frequency and degree of the involvement in the field activities by the Project personnel. Although the Project could manage all of the activities with considerable efforts of the experts and counterpart personnel, this issue may be considered as a potentially hampering factor for the Project implementation.

(4) Important Assumptions

Although they did not create drastic problem in the Project implementation, there were changes in two important assumptions. The price of rice has increased from the end of 2006 to 2008, which have somewhat affected the implementation of crop diversification activities planned in the Project, as the farmers preferred to produce rice rather than to introduce other crops such as maize. Also, the drought in the dry season of 2009 negatively affected the rice production in Kimbulwanaoaya, where more than 30% of the plots planted with rice were totally damaged. This event caused negative influences over the processes of on-the-job training as well as of the data collection on farming activities.

3. Efficiency

The efficiency of the Project is assessed to be moderate, with evaluation of the appropriateness and utilization of the inputs. The inputs by both Japanese and Sri Lankan sides were generally adequate and sufficient in terms of the volume as well as of the quality to produce the intended outputs, while there have been minor problems regarding some inputs as examined in the following:

(1) Japanese and Sri Lankan experts

The timing, quality and quantity of the dispatch of Japanese experts were considered appropriate. There have also been the Sri Lankan experts employed by the Project with fund from JICA. The roles of these experts were clear and adequately integrated in the Project activities; therefore the experts could play their roles with maximum efficiency.

(2) Machinery and equipment

The machinery and equipment required for the Project activities and technical transfer have duly been provided. Counterpart and other relevant personnel have already become capable of handling these equipment and machineries by

their own and most of the equipment provided are properly utilized and kept in good conditions.

(3) Training of counterpart personnel

The duration and subjects of counterpart training in Japan were adequate. Those who have participated in these training unanimously appreciate that their learning and experiences were very inspiring and that their participation to these training is evaluated as helpful in carrying out the activities of the Project. As for the timing of the training, however, some Project personnel regret that it was unfortunate that no counterpart personnel was sent to Japan for training during the first two years, from the viewpoint that these training opportunities could have helped not only to enhance the capacities to be utilized in the Project activities but also to promote the motivation and commitment of the personnel at earlier stage of Project implementation.

(4) Inputs from the Sri Lankan side

Provision of the office space with office equipment, water and electricity facilities, and so forth has also contributed to the smooth implementation of the Project activities.

As for the counterpart personnel, a large number of counterpart personnel from central, provincial and district agencies were assigned to the Project. It was originally assumed that the key counterpart personnel at different offices would be designated to coordinate the respective groups, which, in the actual implementation of the Project, did not function as expected. It was also pointed out that there were delays in the assignment of some counterpart personnel especially at the field level, which affected the processes of the initial activities at the beginning of the Project.

4. Impact

Impact of the Project is considered to be positive based on the following confirmation:

(1) Impact on the overall goal level

There are two aspects to be looked into to assess the Projects' impact on the overall goal, i.e. agricultural productivity and income of the farmers. During the evaluation study, the Team found that, with the improvement of water distribution and introduction of organizational activities by respective sub-committees of the FOs, productivity of their farming activities has increased, which has brought additional income to the farmers. The leaders of FOs and their sub-committees are actively engaged in the activities for water management, operation and maintenance of the irrigation facilities, as well as production related activities in order to sustain these positive effects.

Therefore, positive impacts of the Project are anticipated on the overall goal, yet under the condition that the necessary interventions for dissemination of approaches, methodologies and technologies that the Project has introduced to the other parts of the target areas would continuously be extended through the efforts by GOSL.

(2) Positive Impacts

During the Study, the Team found that there have been positive impacts from the Project on the agricultural production and income of the participating farmer beneficiaries. With introduction of various activities of the sub-committees, farmers have enjoyed better yield and possession of more capitals, leading to the improvement of their household economic conditions.

Aside from those direct benefits, social and behavioral changes were also noted by the beneficiaries such as awareness on the benefit of collective action as a group, better understanding on the personal characteristics of co-farmers, self-confidence gained through the exposure to external institutions, and so forth.

There have also been various ripple effects of the Project to the neighboring areas. As for the irrigation management,

a case was reported that the members of another FO in the downstream areas of Kimbulwanaoya site voluntarily participated in the rehabilitation work in the model site as these farmers are to be benefitted from improved water distribution in Kimbulwanaoya. As for the agricultural production, there have been the cases in which the technologies learnt through the Project's training have voluntarily been disseminated to other farmers in the vicinity.

It should also be noted that the Project has initiated extensive discussions with relevant stakeholders through the DJCC meetings, and the stakeholder institutions such as the Regional office of the Department of Irrigation (RDI), with partial assistance from the Project, have already started trial replication of the Project activities to six (6) selected FOs within their areas of jurisdiction, which are called as dissemination sites.

(3) Negative Impacts

There has not been any negative impact reported or observed at the time of the evaluation study.

5. Sustainability

The sustainability of the Project is assessed as fair enough in some aspects, but there are some remaining concerns in other aspects as described in the following:

(1) Policy and Institutional Sustainability

The necessity of irrigation development for the improvement of agricultural production as well as the importance of the capacity development among government officers and farmers are given high priority in the current policies and programmes of implementing agencies, therefore the policy support from the relevant institutions of GOSL would continuously be secured for the coming years.

As for the institutional sustainability, there would still be some questions on how to further disseminate the activities undertaken in the model sites to the other areas. Although there has already been the agreed definition on the integrated mechanism to be established through the Project for possible dissemination of the Project's approaches, concepts and outputs, further efforts should be made to realize these functions and to identify the entities to take over the roles that the Project has played to integrate various services and efforts rendered by different government agencies.

Therefore, the sustainability in policy aspects is assessed as high, while there should be further efforts to be made to secure institutional sustainability of the Project.

(2) Organizational and Financial Sustainability

The activities of the Project have been carried out in line with the existing organizational structures of the implementing agencies within the scopes of their mandates but in an integrated manner. The participating institutions do have their own programmes with which they can incorporate the experiences and outputs of the Project, but the coordination among their interventions would be a challenge for sustainability in the future. It was also shared to the Team during the Study that their financial resources are limited thus whatever the interventions that they can extend after the cooperation period would inevitably be of much smaller scale than the Project inputs, leading to the scale down of the activities. The insufficient human resource allocation against wide geographical coverage is found to be another constraint to carry out the activities similar to the Project's with participatory approach that require continuous and concentrated involvement of officer in one designated areas for a certain period of time. These factors would cast some questions in the organizational and financial sustainability for the part of the implementing agencies.

On the other hand, the FOs with sub-committees in the model sites have been equipped with the trained office bearers and the accumulated experiences, thus they can properly manage their activities to keep the operations of the FOs functional. They can adequately handle the financial matters of the FOs, and the Team observed that the

management of their revolving funds has been sound enough to anticipate their continuity. With these confirmations, the Team evaluated that the organizational and financial sustainability at the beneficiaries' level would adequately be secured.

(3) Technical Sustainability

The farming techniques introduced through the Project activities are composed of the basic techniques that have been proven to bring positive results in the productivity. It has also been confirmed through this study that the levels of adoption of these techniques among the farmers in the model sites are satisfactorily high. As for the FO operations and irrigation facility and water management, the FOs in the model sites have already been equipped with necessary technical skills and knowledge, let alone the actual experiences, to continue the activities by their own in future. At the levels of the government officers, most of the trained officers found that they are confident to continuously teach farmers the knowledge and technologies relevant to their mandatory services that they have acquired through their participation in the Project activities. Hence the technical sustainability is generally assessed as high.

V. CONCLUSION

The Project has successfully been implemented without any major or critical problem and will mostly achieve its outputs by the end of the technical cooperation period. Prospect of achieving the Project purpose is evaluated high with continuous efforts that are quite likely to be made for the rest of the Project period. Thus, it is to be concluded that the Project will be terminated as stipulated in the R/D.

VI. RECOMMENDATIONS

1. Recommendations for the Remaining Period of the Project

(1) Efforts to be made to ensure attainment of the output 5

As discussed in the previous sections, one of the five outputs of the Project is yet to be implemented at the time of the Study, i.e. the proposal of a mechanism for the government officers and training institutes to disseminate the improved training/facilitation skills developed by the Project. As it was confirmed through the Study that the Project has already planned to organize a workshop and started preparatory activities to formulate a proposal on any feasible and effective mechanism, it is recommended for the Project to further facilitate the extensive discussions and to identify the appropriate government agencies and training institutes to be involved in so as to ensure the attainment of this remaining output.

(2) Efforts to be made to ensure attainment of the Project purpose

In order to attain the Project purpose, it is necessary for GOSL to carefully examine and clarify the roles and responsibilities of the officers and the institutions to be included in the integrated mechanism to be proposed by the Project, with proper allocation of resources necessary to operate the mechanism. In this relation, it is requested to the Project personnel to discuss and plan the future utilization of the Project office and equipments.

(3) Additional cautions to be made in implementation of the Project activities

In the process of finalization of the manuals and handbooks compiled through the Project, it is recommended to include in these publications some information such as the contact organization's web-site to enable the future users to obtain further information. It is also recommended to the Project to indicate the reference materials used to compile the

manuals and handbooks in view of protecting the copyrights.

It is noted that the Project has conducted various training on marketing and processing for the farmers in response to the recommendation made by the Mid-term Review. With the learning obtained from these training, the farmers are initiating or planning to practice marketing and processing activities. It is thus recommended for the Project to further encourage the actual implementation of these marketing and processing activities by the FOs and sub-committees so as to ensure the effects of the training.

2. Recommendations for the Future (after the Completion of the Project)

(1) Efforts to be made to ensure the attainment of the overall goal

In order to achieve the overall goal of the Project, it is anticipated that the package of activities introduced by the Project would be disseminated to other government officers and FOs in the target areas. It is thus recommended for GOSL to continuously utilize the outputs of the Project in various dissemination efforts, such as:

- 1) A short-term application: Tangible outputs of the Project such as manuals and handbooks may promptly be utilized in any relevant training to be conducted by the respective institutions.
- 2) A medium-term application: There should be existing programmes and activities of the participating agencies where the Project's outputs can be integrated and utilized with proper alignments.
- 3) A long-term application: All of the components of the Projects would be implemented.

As GOSL has already initiated the dissemination on the pilot basis in six (6) FOs in four (4) irrigation schemes in the target areas, it is recommended to properly implement these initial dissemination as per planned, the experiences of which may also furnish the relevant stakeholders with useful insights for the effective dissemination in the future.

(2) Designation of full-time coordinator with institutional authority in dissemination of Project's outputs

In the process of actual dissemination of the outputs of the Project, it is assumed that the GOSL should ensure the proper institutional arrangement. As the package of outputs to be disseminated is composed of the activities mandated to different line agencies and institutions at different levels which provide services to the farmers, coordination among different interventions is considered to be an essential requirement for effective dissemination. It is thus recommended for the GOSL to assign full-time personnel with institutional authority to coordinate the participating agencies and farmers in the future efforts to be made for dissemination.

(3) Continuous monitoring and evaluation of the Project's outputs

Since the Project has come up with notable achievements in the model sites with increased benefits for the farmers, the good practices and effective operations of activities introduced by the Project should be sustained. In order to ensure the effective operations of activities and to further expand the benefits, continuous monitoring and evaluation should be undertaken by implementing agencies as well as JICA.

VII. LESSONS LEARNT

(1) Fair distribution of benefits among the FO members

It was found out during the Study that the FOs in the model sites of the Project have smoothly and effectively been operated. It should be noted that the feeling of belonging and recognition of benefits among the members are key elements of sustainable operation of FOs. In all of the FOs participated in the Project, the revolving fund schemes have successfully been managed and the funds are increasing in volume, which has made it possible for them to provide revolving fund to a larger number of members. Therefore, the fair distribution of benefits, such as the access to the

revolving fund, can be considered as one of the vital means to foster the cohesiveness and to promote performances of the FO.

(2) Transparency of the Project implementation

It was pointed out with appreciation during the field interviews that the Project has shared information related to its implementation in a transparent manner. For example, the Project has publicly opened up the information on the inputs, such as the cost of rehabilitation by putting the information on the signboards. This kind of transparency of Project implementation processes is considered as one of the attributes not only to mobilize trusts from the target beneficiaries, but also to avoid any conflicts caused by the lack or possible manipulation of activity-related information.

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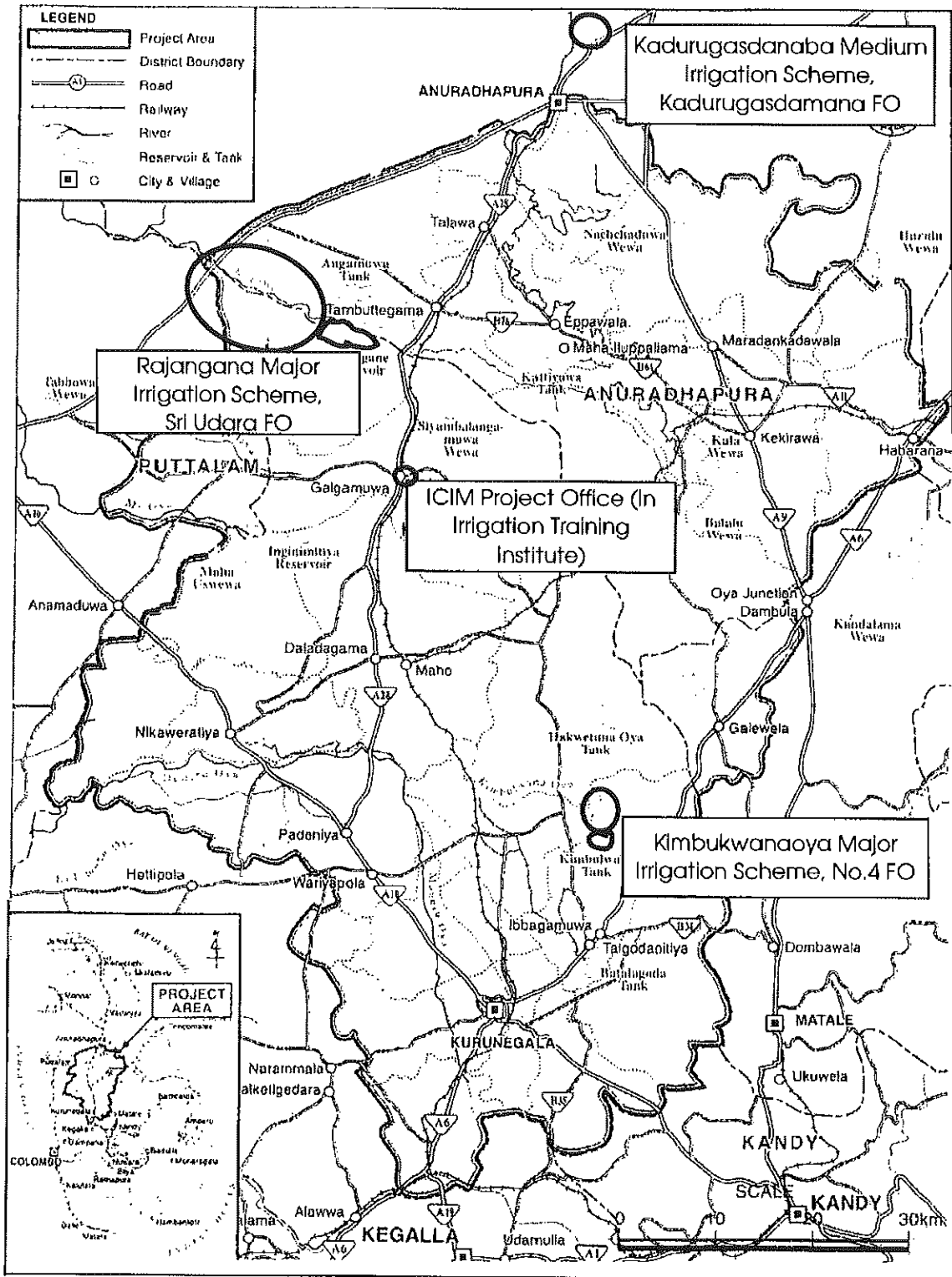
ANNEXES

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ANNEXI: Schedule of the Terminal Evaluation Study on ICIM Project

Date		Contents	Stay
25-Nov -4-Dec		Preliminary Data Collection & Field Interview by the Consultant (Ms. Itagaki)	
5-Dec	Sun	Arrival (Dr. Kanamori & Mr. Nomura) in Colombo	Colombo
6-Dec	Mon	Meeting at JICA SL office	K'gala
		Kick-off Meeting at Uma Oya Project Office, MolWRM	
		Joint Evaluation Team Meeting at Irrigation Dept.	
		Interview & Discussion with Irrigation Dept.	
		Interview & Discussion with Irrigation Management Division.	
		Move from Colombo to Kurunegala	
7-Dec	Tue	Interview with Farmers at Kimbulwanaoya community hall	A'pura
		Field Visit in Kimbulwanaoya Site	
		Lunch in Kurunegala	
		Interview with Officers at RDI office (Kurunegala)	
		Leave from Kurunegala to Anuradhapura	
8-Dec	Wed	Interview with Farmers at Kadurugasdamana school	A'pura
		Field Visit in Kadurugasdamana Site	
		Interview with Officers at RDI office (Anuradhapura)	
		Meeting with PEACE PMU (if possible)	
9-Dec	Thu	Interview with Farmers at Rajangana community hall	Maho
		Field Visit in Rajangana Site	
		Meeting at ICIM Project Office in Galgamuwa	
10-Dec	Fri	Report Preparation	Colombo
		Joint Evaluation Team Meeting at ICIM Project office in Galgamuwa	
		Lunch	
		Discussion/Report Preparation	
		Leave from Maho to Colombo	
11-Dec	Sat	Report preparation	Colombo
12-Dec	Sun	Report preparation	Colombo
13-Dec	Mon	Report preparation	Colombo
		Meeting with JICA SL office	
14-Dec	Tue	Meeting with Ministry of Irrigation & Water Management	Colombo
		Meeting with Ministry of Agriculture	
		Joint Evaluation Team Meeting for finalizing report	
15-Dec	Wed	Joint Coordination Committee (JCC) Meeting	Colombo
		Report to the Embassy of Japan	
16-Dec	Thu	Leave from Colombo	

ANNEX 3: Project Site Location Map



7.21 97

ANNEX 4: Plan of Operations (PO)

Oct. 2016

Plan: Actual

No	Activities (With regard to the training and OJT, the Project will facilitate/support the government officers to conduct the same to the farmers. Detailed activities will be decided according to the results of the CAP)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	Management of FOs										
1.1	Planning of FOs										
1-1-1	Conduct base-line survey for the irrigated sites, and capacity assessment survey for the FOs in the target area.										
1-1-2	Review existing literature and conduct case studies on Management of FOs; propose improvements and draft case-catalogs, manuals, guidelines, etc.										
1-1-3	Produce GIS mapping system for Irrigation facility management, Water management and Agricultural production.										
1-1-4	Conduct trainings on the methods and utilization of the Community Development Plans and Community Action Plan (CAP).										
1-1-5	Develop Community Development Plans and CAP with the initiatives of the community.										
1-1-6	Revise and finalize case-catalogs, manuals, guidelines, etc. to reflect the outcomes of the above-mentioned activities.										
1.2	Management of FOs										
1-2-1	Formulate multifunctional FOs and establish sub-committees according to the subjects proposed in the CAP.										
1-2-2	Conduct necessary community based trainings for FO members to implement the CAP (Ex: leadership, social mobilization, financial management, etc.)										
1-2-3	Improve support for FOs activities through revolving fund										
1-2-4	Revise and finalize case-catalogs, manuals, guidelines, etc. to reflect the outcomes of the above-mentioned activities.										
2	Irrigation facility management, system-level water management and on-farm water management										
2.1	Rehabilitation and Operation and Maintenance(O&M)										
2-1-1	Review existing literature and conduct case studies on irrigation facility management, propose improvements and draft case-catalogs, manuals, guidelines, etc.										
2-1-2	Conduct trainings-OJT on survey, planning and physical works, so that the FO can implement rehabilitation of the tail end irrigation facility; proposed in the CAP.										
2-1-3	Conduct rehabilitation of the tail end irrigation facility with the initiatives of the FOs.										
2-1-4	Conduct training OJT for FOs on operation and maintenance (O&M) of tail end irrigation facility.										
2-1-5	Revise and finalize case-catalogs, manuals, guidelines, etc. to reflect the outcomes of the above-mentioned activities.										
2.2	Water management and on-farm water management										
2-2-1	Review existing literature and conduct case studies on water management, propose improvements and draft case-catalogs, manuals, guidelines, etc.										
2-2-2	Conduct training OJT of planning on Water management and Land use planning based on GIS mapping system										
2-2-3	Conduct training OJT and facilitation for FOs and Field Canal Groups(FCGS) to conduct and adjust water management and irrigation schedule										

3-3	Demonstrate and conduct training OJT on appropriate on-farm water management and field consolidation.	
3-3-5	Revise and finalize case-catalogs manuals, guidelines, etc. to reflect the outcomes of the above-mentioned activities.	
3	Agricultural production	
3-1	Paddy cultivation	
3-1-1	Review existing literature and conduct case studies on paddy cultivation, propose improvements and draft case-catalogs manuals, guidelines, etc.	
3-1-2	Conduct trainings OJT for government officers and farmers on paddy cultivation on the subjects such as production of seeds (paddy), appropriate usage of fertilizers and agro-chemicals, cropping management, post harvest technology, etc.	
3-1-3	Conduct extension services for farmers on diversification of farm management and provide guidance on introducing collective cultivation	
3-1-4	Follow-up FOs activities and revise and finalize case-catalogs manuals, guidelines, etc. to reflect the outcomes of the above-mentioned activities.	
3-2	Vegetable and fruits cultivation (Homestead development)	
3-2-1	Review existing literature and conduct case studies on Homestead development, propose improvements and draft case-catalogs manuals, guidelines, etc.	
3-2-2	Conduct training OJT for Government officers and farmers on vegetable and fruits cultivation to promote homestead development small scale home garden	
3-2-3	Conduct extension services for farmers on vegetable and fruits cultivation to promote homestead development small scale home garden	
3-2-4	Follow-up FOs activities and revise and finalize case-catalogs manuals, guidelines, etc. to reflect the outcomes of the above-mentioned activities.	
3-3	Livestock production	
3-3-1	Review existing literature and conduct case studies on Livestock production, propose improvements and draft case-catalogs manuals, guidelines, etc.	
3-3-2	Conduct training OJT for government officers and farmers on modern technology to promote live stock production.	
3-3-3	Conduct extension services for farmers on modern technology of Livestock production	
3-3-4	Follow-up FOs activities and revise and finalize case-catalogs manuals, guidelines, etc. to reflect the outcomes of the above-mentioned activities.	
4	Marketing and processing	
4-1	Processing	
4-1-1	Review existing literature and conduct case studies on processing, propose improvements and draft case-catalogs manuals, guidelines, etc.	
4-1-2	Conduct training OJT for government officers and farmers on processing value addition	
4-1-3	Follow-up FOs activities and revise and finalize case-catalogs manuals, guidelines, etc. to reflect the outcomes of the above-mentioned activities.	
4-2	Marketing	
4-2-1	Review existing literature and conduct case studies on marketing, propose improvements and draft case-catalogs manuals, guidelines, etc.	

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4-2	Conduct training OJT for government officers and farmers on marketing information for selected crops.	
4-3	Follow-up FOs activities and revise and finalize case-catalogs, manuals, guidelines, etc. to reflect the outcomes of the above-mentioned activities.	
5	Institutional capacity building for dissemination of the improved training/facilitation skills developed in the model sites.	
5-1	Coordination/Management of training	
5-1.1	Establish Training Advisory Committee and working committee composed from related organizations.	
5-2	Identify training needs, monitor trainings, conduct follow-ups, etc. periodically.	
5-2	Integrated training program	
5-2.1	Conduct integrated training program based on the achievement in the model sites	
5-3	Proposal of dissemination mechanism	
5-3.1	Conduct workshop to propose a mechanism to disseminate improved training/facilitation skills developed in the model sites to other officers and institutes.	
5-4	Closing seminar	
5-4.1	Conduct seminars, which summarizes the results of the achievement of the model sites and integrated training program.	

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ANNEX 5: Machinery and Equipment provided by JICA

No	Description of Equipment	Price (Yen)	Price (Rupee)	No. of unit	Place of Custody	Conditions of equipment(*)	Frequency of Use(**)	Remarks
1	Copy Machine ir 3530	732,782	667,500	1	ICIM Project	b	A	
2	Fax Machine	192,115	175,000	1	ICIM Project	a	A	
3	Desk top computer	104,291	95,000	2	ICIM Project	u	A	
4	Projector, laser pointer, Screen	409,919	373,400	1	ICIM Project	u	A	
5	Scanner	30,190	27,500	1	ICIM Project	a	B	
6	Video Camera	131,736	120,000	1	ICIM Project	a	B	
7	Digital Camera	38,423	35,000	1	ICIM Project	a	A	
8	Digital theodolite	610,000	555,657	1	ICIM Project	e	C	Used for rehabilitation term
9	Auto level	46,000	41,902	2	ICIM Project	a	C	Ditto
10	Tripod for theodolite	12,000	10,931	1	ICIM Project	a	C	Ditto
11	Tripod for leveling	12,000	10,931	2	ICIM Project	u	C	Ditto
12	Laser distance calculation equipment	60,000	54,655	1	ICIM Project	a	C	Ditto
13	Pinball Prism and tripod for Survey	27,500	25,050	2	ICIM Project	a	C	Ditto
14	Aluminium Staff for Survey	4,100	3,735	2	ICIM Project	a	C	Ditto
15	Aluminium pole for Survey	900	820	4	ICIM Project	a	C	Ditto
16	Tripe mensum for Survey	6,600	6,012	2	ICIM Project	a	C	Ditto
17	Plain table Survey equipment set	14,500	13,208	1	ICIM Project	a	C	Ditto
18	Planimeter	98,000	89,289	1	ICIM Project	u	C	Ditto
19	Current meter	260,000	236,837	1	ICIM Project	a	C	Used for water issue
20	N type water depth measurement equipment	142,000	129,350	1	ICIM Project	a	C	Used for cropping period
21	Flow Gauge	64,000	58,298	2	ICIM Project	a	C	Ditto
22	Windows XP (Japanese Home edition)	21,600	19,675	2	ICIM Project	a	A	
23	Microsoft Office 2003 Professional	49,700	45,272	2	ICIM Project	a	A	
24	Virus Software	5,500	5,010	1	ICIM Project	a	A	
25	Official Car (KF 1927)	8,951,801	8,677,000	1	ICIM Project	a	A	
26	Official Car (KF 1928)			1	ICIM Project	a	A	
27	Official Car (PB 4814)			1	ICIM Project	a	A	
28	PC, LCD monitor, Portable HDD, GIS Software	444,993	451,500	1 set	IE office	a	A	
29	PC, LCD monitor, Portable HDD, GIS Software,	627,327	636,500	1 set	IE office	a	A	
30	PC, LCD monitor, Portable HDD, GIS Software,	627,327	636,500	1 set	IE office	a	A	
31	PC, LCD monitor, Portable HDD, GIS Software,	627,327	636,500	1 set	IE office	a	A	
32	Total Station	408,154	475,000	1	Land Use	a	C	Used for rehabilitation term
33	Prism Set	24,640	25,000	2	Land Use	a	C	Ditto
34	Distance Measuring Wheel	7,805	8,000	4	Land Use	b	C	Ditto
35	GPS Unit	44,844	45,500	3	Land Use	b	C	Used for GIS production
36	Soil Survey Kit	157,694	160,000	2	Land Use	b	C	Used for soil survey
37	Soil Sampler Carrying Case	22,669	23,000	2	Land Use	b	C	Ditto
38	Water Level Gauge	132,825	134,767	1	ICIM (RAD)	b	A	
39	Water Level Gauge	132,825	134,767	1	ICIM (RRDI)	b	A	
40	Water Level Gauge	132,825	134,767	1	ICIM (RRDI)	b	A	
41	Water Level Gauge	132,825	134,767	1	ICIM Project	b	A	
42	Computer, printer, scanner, UPS and virus software	144,980	147,100	1 set	ASC	a	A	
43	Computer, printer, scanner, UPS and virus software	144,980	147,100	1 set	ASC	a	A	
44	Computer, printer, scanner, UPS and virus software	144,900	147,100	1 set	ASC	a	A	
45	Plate Compactor	140,800	160,000	1	IE office	b	C	Used for rehabilitation term
46	Plate Compactor	140,800	160,000	1	IE office	b	C	Used for rehabilitation term
47	Plate Compactor	140,800	160,000	1	IE office	b	C	Used for rehabilitation term
48	Concrete Mixer	280,800	285,000	1	IE office	b	C	Used for rehabilitation term
49	Concrete Mixer	280,800	285,000	1	IE office	b	C	Used for rehabilitation term
50	Concrete Mixer	280,800	285,000	1	IE office	b	C	Used for rehabilitation term
51	Printer for A3 size paper	25,520	29,000	1	IE office	a	A	
52	Printer for A3 size paper	25,520	29,000	1	IE office	a	A	
53	Printer for A3 size paper	25,520	29,000	1	IE office	a	A	
54	Vibrating Roller	840,000	1,050,000	1	IE office	b	C	Used for rehabilitation term
55	Vibrating Roller	840,000	1,050,000	1	IE office	c	C	Used for rehabilitation term
56	Vibrating Roller	840,000	1,050,000	1	IE office	c	C	Used for rehabilitation term
57	Rammer	212,000	265,000	1	IE office	a	C	Used for rehabilitation term
58	Rammer	212,000	265,000	1	IE office	a	C	Used for rehabilitation term
59	Rammer	212,000	265,000	1	IE office	a	C	Used for rehabilitation term
60	B0 size Printer/Plotter	596,000	745,000	1	ITI	u	B	
TOTAL		21,048,114	21,655,882					

Note: Prices are indicated based on the exchange rate at the time of procurement.

Note * Condition of equipment: a=Good condition, b=In moderate condition, c=need repair, d=unable to use

Note ** Classification of the frequency of use of the equipment: A=used frequently (almost daily), B=used well (1-3 times per week), C=used in specific season(s) only, D=not so much used (3-11 times per year), E=not used by specific reason

ANNEX 7: List of Counterpart Personnel

No	Name of counterpart staff	Position/ Organization	Field of Expertise	Duration of assignment		Remarks
				from	to	
Ministry of Irrigation & Water Management/Irrigation Department						
1	Mr. A. D. S. Gunawardana	Secretary	MI & WM	Administration	2007. 6	2008
2	Mr. K.W. Ivan de Silva	Secretary	MI & WM	Administration	2008	To date
3	Mr. Samarassekera	DGI	MI & WM	Irrigation Engineering	2007. 6	2009
4	Mr. H.P.S. Somasiri	DGI	MI & WM	Irrigation Engineering	2009. 2	2010
5	Dr. G.G.A. Godaliyadda	DGI	MI & WM	Irrigation Engineering	2010. 9	To date
5	Mr. H.P.S. Somasiri	Ad.Secretary	MI & WM	Irrigation Engineering	2007. 6	2009
6	Ms.S. Samarassekera	Ad.Secretary	MI & WM	Irrigation Engineering	2009. 2	2010. 5
7	Mr. P.U. Wickramarathna	Director	MI & WM	Irrigation Engineering	2007. 6	To date
8	Mr. W. Gamago	Director	MI & WM	Irrigation Engineering	2007. 6	To date
9	Mr. H.M. Jayathilake	Director	ID(WM)	Irrigation Engineering	2007. 6	To date
10	Ms. Janaki Meegastenna	Deputy Director	ID(WM)	Irrigation Engineering	2007. 6	To date
11	Dr. T.S.B. Weerasekera	Remote sensing specialist	ID (LUDD)	Soil science, GIS	2007. 6	To date
12	Mr. B.A.K. Anithi Chandratilaka	Deputy Director	ID (PI)	Irrigation Engineering	2007. 6	To date
13	Mr. L. S. Fernando	IE	ID	Irrigation Engineering	2007. 6	To date
14	Mr. R.M.W. Rathnayaka	RDI (A/Pura)	ID	Irrigation Engineering	2007. 6	To date
15	Mr. T.P. Alwis	RDI (A/Pura)	ID	Irrigation Engineering	2008. 12	2009. 2
16	Mr. W.B. Palugasewna	RDI (A/Pura)	ID	Irrigation Engineering	2009. 2	To date
17	Mr. K. Ariyasiri	IDO (A/Pura)	ID	Institutional Development	2007. 6	To date
18	Mr. P. Hilarathana	IE (A/Pura)	ID	Irrigation Engineering	2007. 6	2008. 11
19	Mr. Jayanatha Silva	IE (A/Pura)	ID	Irrigation Engineering	2008. 12	To date
20	Ms. W.S.M. Perera	EA (A/Pura)	ID	Technical (Civil)	2007. 6 2010. 4	2009. 9 To date
21	Mr. A. M. I. B. Abulakoon	EA (A/Pura)	ID	Technical (Civil)	2009. 9	2010. 4
22	Mr. G. Gunaratna	WS (A/Pura)	ID	Technical (Civil)	2007. 6	2010. 8
23	Mr. P. H. A. Kalin Polgoda	WS (A/Pura)	ID	Technical (Civil)	2010. 8	To date
24	Mr. Luxman de Silva	RI (Rajangana)	ID	Irrigation Engineering	2007. 6	2007. 12
25	Mr. M.L.M. Kallel	RI (Rajangana)	ID	Irrigation Engineering	2008. 1	To date
26	Ms. G.K.U. Dilhani	EA (Rajangana)	ID	Technical (Civil)	2007. 6	2008. 5
27	Mr. K.A. Sampath Samarasekera	EA (Rajangana)	ID	Technical (Civil)	2008. 4	To date
28	Mr. Gunini Chandrapala	Ws (Rajangana)	ID	Technical (Civil)	2007. 6	To date
29	Mr. K.W. M. D. Kulathunga	Ws (Rajangana)	ID	Technical (Civil)	2009. 4	2010. 5
30	Mr. B. A. Kulathunga	Ws (Rajangana)	ID	Technical (Civil)	2010. 6	To date
31	Mr. D.M. Aberathana	RDI (Kgala)	ID	Irrigation Engineering	2007. 6	2008. 1
32	Mr. W.M.L. Thilakarathna Bandara	RDI (Kgala)	ID	Irrigation Engineering	2008. 1	To date
33	Mr. A. M. S. B. Algama	IE (Kgala)	ID	Irrigation Engineering	2007. 6	To date
34	Ms. J. Dayawathi	IDO (Kgala)	ID	Institutional Development	2007. 6	To date

No	Name of counterpart staff	Position/ Organization		Field of Expertise	Duration of assignment		Remarks
					from	to	
35	Mr. W. G. J. Jayadewa	IE (Hiriyala)	ID	Irrigation Engineering	2007. 6	2008. 1	
36	Mr. K. B. V. Indrapala	IE (Hiriyala)	ID	Irrigation Engineering	2008. 1	2008. 6	
37	Ms. R. N. Liyanage	IE (Hiriyala)	ID	Irrigation Engineering	2008. 6	To date	
38	Ms. B. H. P. D. Gunaratna	EA (Hiriyala)	ID	Technical (Civil)	2007. 6	2009	
39	Mr. K. A. N. Perera	EA (Hiriyala)	ID	Technical (Civil)	2009. 7	To date	
40	Mr. R. M. Senanayaka	WS (Hiriyala)	ID	Technical (Civil)	2007. 6	2010. 4	
41	Mr. P. H. Piyadasa	WS (Hiriyala)	ID	Technical (Civil)	2010. 5	To date	
42	Mr. K. U. D. J. Weeratunga	DA (Hiriyala)	ID	Institutional Development	2007. 6	To date	
43	Mr. S. Mohanarajah	Director (FTI)	ID	Irrigation Engineering	2007. 6	2009. 1	
44	Mr. T. P. Alwis	Director (FTI)	ID	Irrigation Engineering	2009. 2	2010. 10	
45	Mr. I. P. Ajith Gunasekara	Director (FTI)	ID	Irrigation Engineering	2010. 11	To date	
46	Mr. N. C. Samarakody	IE (FTI)	ID	Irrigation Engineering	2009. 1	To date	
47	Mr. S. M. D. I. K. De Alwis	RE (Nachchaduwa)	ID	Irrigation Engineering	2009. 1	To date	
Irrigation Management Division (IMD)							
1	Mr. A. P. R. Jayasinghe	Director	IMD	Water Management	2007. 6	To date	
2	Mr. W. I. W. Premadasa	RPM (HQ)	IMD	Project Management	2007. 6	To date	
3	Mr. D. M. K. H. Dissanayaka	RPM (Rajangana)	IMD	Project Management	2007. 6	To date	
4	Mr. S. D. M. Rajapakse	DDO (Rajangana)	IMD	Project Management	2007. 6	To date	
5	Mr. K. A. Gunasna	DA (Rajangana)	IMD	Project Management	2007. 6	To date	
6	Mr. P. Ariyasinghe	RPM (Dewabuwana)	IMD	Project Management	2007. 6	To date	
7	Mr. S. P. R. S. Rupasinghe	RPM Parakramanandura	IMD	Project Management	2007. 6	To date	
Department of Agriculture (Central Government) - DOA							
1	Dr. Ms. Jindari de Zoysa	IG	DOA	Pathology/ Administration	2007. 6	2010	Retired
2	Mr. Kamal Mankotte	IG	DOA	Agriculture/ Administration	2010. 9	To date	
3	Mr. L. G. Thilakarathne	Director (FMTC)	DOA	Agri. Machinery	2007. 6	2008. 1	
4	Mr. B. M. Thilakarathne	Director (FMTC)	DOA	Agri. Machinery	2008. 1	2010. 1	
5	D. A. W. Weerakoon	Director (FMTC)	DOA	Agri. Machinery	2010. 2	To date	
6	Dr. I. Amarasinghe	Director (FCRDD)	DOA	Agriculture	2007. 6	To date	
7	Dr. P. M. Wijerathna	Director (FCRDD)	FCRDD	Agriculture	2010. 6	To date	
8	Dr. Nimal Dissanayake	Director (RRDI)	DOA	Agriculture	2007. 6	To date	
9	Dr. W. M. J. Bandara	Research officer (RRDI)	DOA	Agriculture	2008. 3	To date	
10	Dr. W. M. Weerakoon	Senior Agronomist (RRDI)	DOA	Agriculture	2007. 6	To date	
11	G. A. M. S. Emeethiyagoda	DD/Extension	DOA	Agri. Extension	2008. 1	2010. 5	Transferred to Ministry
12	Dr. H. Atapattu	Assistant Director	DOA	Agri. Extension	2010. 9	To date	
13	Dr. Rohan Wijesoon	Assistant Director (Audio visual)	DOA	Communication	2008/5/26	2008/5/27	
14	Mr. R. D. Siripala	SMS (Audio visual)	DOA	Communication	ditto	ditto	
15	Dr. W. U. E. D. R. Wickramasinghe	Deputy Director (SRMC)	DOA	Agriculture	2008. 3	To date	
16	Mr. K. M. A. Kendaragama	Soil scientist (SRMC)	DOA	Agriculture	2008. 3	To date	

No	Name of counterpart staff	Position/ Organization		Field of Expertise	Duration of assignment		Remarks
					from	to	
17	Mr. Ajith	GIS specialist (NRMC)	DOA	Agriculture, GIS	2008. 3	To date	
18	Mr. A. K. Heti Arachchi	PA	NRMC	Agriculture	2008. 9	To date	
19	Mr. M. A. K. Munasinghe	RO	NRMC	Agriculture	2008. 9	To date	
Department of Agriculture (Inter Province - Anuradhapura)							
1	Mr. K.A.P Athula Kittisiri	DD (IP)	DOA	Agriculture/ Administration	2007. 6	To date	
2	I.W.K Imbulgoda	ADA (IP)	DOA	Agriculture	2007. 6	To date	
3	Mr. P. Sisira Kumara	ADA (IP)	DOA	Agriculture	2007. 6	2008. 12	
4	Mr. T. M. Gunathilaka	SMO (IP)	DOA	Agriculture	2007. 6	To date	
5	Mr. H.M Herath	SMO (IP)	DOA	Agriculture	2007. 6	To date	
6	Mr. MK Vincent Perera	AI (Rajangana)	DOA	Agriculture	2007. 6	2010. 6	Transferred to IP office
7	Mr. R.P.C.B Ramanyaka	Ad(Rajangana)	DOA	Agriculture	2008. 4	2009. 7	Transferred to Rajangana right bank
8	Mr. U.D. Rathnayake	AI(Rajangana)	DOA	Agriculture	2010. 1	2010. 6	
9	Mr. P.A.R.R.K. Adhikaram	AI(Rajangana)	DOA	Agriculture	2010. 1	To date	
10	Ms. Priyadushani Adhukarala	AI(Rajangana)	DOA	Agriculture	2010. 1	To date	
Provincial Department of Agriculture (North Western Province)							
1	Mr. W. Paluha	PD (NWP)	PDOA	Agriculture/ Administration	2007. 6	2010. 6	
2	Mr. W.W. Wijerathna	PD(NWP)	PDOA	Agriculture/ Administration	2010. 6	To date	
3	Mr. O.P Kittisiri	DPD (NWP)	PDOA	Agriculture	2010.11	To date	
4	Mr. O.P Kittisiri	DD (NWP)	PDOA	Agriculture	2007. 6	To date	
5	Mr. K. Jayasinha	ADA (Ibbaganuwa)	PDOA	Agriculture	2007. 6	To date	
6	Mr. BMGS Hasnayaka	SMO (Ibbaganuwa)	PDOA	Agriculture	2007. 6	To date	
7	Mr. WM Somathilaka	AI (Melsiripura)	PDOA	Agriculture	2007. 6	To date	
Provincial Department of Agriculture (North Central Province)							
1	Dr. J. Jayasena	PD (NCP)	PDOA	Agriculture/ Administration	2007. 6	2008. 1	
2	Mr. R.P. Mahindapala	PD (NCP)	PDOA	Agriculture/ Administration	2008. 1	2010. 4	Transferred to Western Province
3	Mr. P.J.L. Lakshmi Premnath	PD(NCP)	PDOA	Agriculture	2010. 5	To date	
4	Mr. A. Jayathilaka	DD(NCP)	PDOA	Agriculture	2007. 6	To date	
5	Mr. M.A. Wijerathna	SMO(NCP)	PDOA	Agriculture	2007. 6	To date	
6	Ms. S.K. Kusumawathi	AI(Rambewa)	PDOA	Agriculture	2007. 6	To date	
7	Ms L. K. Galappathi	AI (Rambawaw)	PDOA	Agriculture	2010. 8	To date	
8	Mr. Himani Gamaipala /	Director (IS/1 MI)	PDOA	Agriculture	2007. 6	2008. 1	
9	Mr. A.M. Dharmasena	Director (IS/1 MI)	PDOA	Agriculture	2008. 1	To date	
Provincial Department of Animal Production & Health (North Western Province)							
1	Dr.S. D. K. Herath	PD (NWP)	PDOAP&H	Veterinary	2007. 6	To date	
2	Dr. A.D. Kalurehchi	DD (NWP)	PDOAP&H	Veterinary	2007. 6	To date	
3	Dr.H.M.C.K. Radnayaka	VS(NWP)	PDOAP&H	Veterinary	2007. 6	To date	
4	Dr.H.M.C.K Herath	VS (Ibbaganuwa)	PDOAP&H	Veterinary	2007. 6	To date	
5	Mr. R.P Rajapaksha	LDI (Ibbaganuwa)	PDOAP&H	Livestock	2007. 6	To date	

No	Name of counterpart staff	Position/ Organization		Field of Expertise	Duration of assignment		Remarks
					from	to	
6	Dr. R.M Piyadasani Kumari	VS (Giribawa)	PDOAP&H	Veterinary	2007. 6	To date	
7	Mr. K.P.D. Sampath	L.DI (Giribawa)	PDOAP&H	Livestock	2007. 6	To date	
8	Dr. A.G Liyanagamage	VS (HQ)	DOAP&H	Veterinary	2008. 3	To date	
Provincial Department of Animal Production & Health (North Central Province)							
1	Dr.D.R.T Ratnayaka	PD (NCP)	PDOAP&H	Veterinary	2007. 6	2009	
2	Dr. Nihal wedisinha	DD (NCP)	PDOAP&H	Veterinary	2007. 6	2009	
3	Dr. Nihal wedisinha	PD(NCP)	PDOAP&H	Veterinary	2010. 1	To date	
4	Dr. S Attampola	VS (Rambewa)	PDOAP&H	Veterinary	2007. 6	To date	
5	Mr. Sudath Gamaghe	L.DI (Rambewa)	PDOAP&H	Livestock	2007. 6	To date	
6	Dr. Liyanagamage	Principal (AITTC)	PDOAP&H (NCP)	Veterinary	2007. 6	2008. 1	
7	Dr. Hagotharachi	Principal (AITTC)	PDOAP&H (NCP)	Veterinary	2008. 1	To date	
Ministry of Agricultural Development and Agrarian Services							
1	Mr. T.M. Abaywickrama	Secretary	M/AD&AS	Administration	2007. 6	2009. 2	
2	Mr. S. Amarasckera	Secretary	M/AD&AS	Administration	2009. 3	To date	
3	Ms. G.K.D.S. Gunasekera	Assis. Secretary	M/AD&AS	Administration	2007. 6	To date	
4	Mr. Dulasiri Fernando	Director (IPIT)	M/AD&AS	Processing	2007. 6	2009. 11	
8	Mr.P. H. Abekoon	Director (IPIT)	IPIT	Agriculture	2009. 1	2010. 1	
9	Dr. Swanushika Thilakathilaka	Director (IPIT)	IPIT	Agriculture	2010. 2	To date	
5	Mr. Ravinda Dewawitharana	Contm. General	DAD	Agrarian Development	2007. 6	To date	
Department of Agrarian Development (North Western Province)							
1	Mr. M.A.B.C. Alokabandara	AC (NWP)	DAD	Administration	2007. 6	To date	
2	R.A.C. Prasad Ranathunga	DC (Melsiripura)	DAD	Agrarian Development	2007. 6	To date	
3	Mr.J.M.P. Charuinda	ARPA (Melsiripura)	DAD	Agrarian Development	2007. 6	To date	
4	Mr.M.K. Bandara	DO (Rajangama)	DAD	Agrarian Development	2007. 6	To date	
5	Mr. P.U. pranajayantha	ARPA(Rajangama)	DAD	Agrarian Development	2007. 6	To date	
Department of Agrarian Development (North Central Province)							
1	Mr. A.M.W.M. Amunugama	AC (NCP)	DAD	Administration	2007. 6	To date	
2	Mr. S.A.W. Samarasinghe	AC (NCP)	DAD	Administration	2007. 6	To date	
3	Mr. Ruwan Rathnayaka	AC(NCP)	DAD	Administration	2009. 7	To date	
4	Ms R.M. Pichanawathi	DO (Rambewa)	DAD	Agrarian Development	2007. 6	To date	
5	Ms. B.R. Manel perera	DO (Rambewa)	DAD	Agrarian Development	2008. 8	To date	
6	Mr. Samaraweera	ARPA (Rambewa)	DAD	Agrarian Development	2007. 6	To date	
Provincial Councils							
1	Mr. J.M.G.B. Jayasundara	Chief Secretary(NWP)	Provincial Council	Administration	2007. 6	2009. 3	
2	Mr. T.G.U.B. Thabugala	Chief Secretary(NWP)	Provincial Council	Administration	2009. 4	To date	
3	Mr. A. Thilakotumage	Chief Secretary(NCP)	Provincial Council	Administration	2007. 6	To date	
4	W.M.B. Weerasekera	Director	WTI	Training	2007. 6	To date	

ANNEX 8: Accomplishment Grid of Activities and Indicators

November 2010

Classification Outputs	Indicators	Item	Activities of Item	Progress as of end Nov. 2010	Remaining activity	Result of Indicators
Overall Goal						
Agricultural income of the farm families in the target area is increased.	1. A system is established to increase the agricultural income of the farm families in the target area at least by 25%.	---	---	---	---	ANNEX 8-1
	2. A system is established to increase the agricultural productivity of the farm families in the target area at least by 25%.	---	---	---	---	ANNEX 8-2
Project Purpose						
An integrated mechanism is established to improve agricultural productivity through capacity building of government officers and FOs (farmer organizations).	1. Degree of satisfaction among the trained officers is at least 50%.					ANNEX 8-3
	2. Degree of satisfaction among the trained farmers in the model sites with the trainings and extension services is at least 50%.					ANNEX 8-4
	3. Result of the Capacity Assessment of the FOs in the model sites is improved at least by 25%.					ANNEX 8-5
	4. Training Advisory Committee functions continuously with the assistance of the Working Committees.		4. Establish TAC and Working Committees as permanent committee	4. Discussed at 5th NJCC (July 2010)	4. Will propose the draft paper of revised TAC functions at next NJCC (Dec. 2010 up to Mar. 2011)	1. See attached paper 2. See attached paper 3. See attached paper
I. Management of FOs						
Capacity of the government officers and FOs is enhanced in the field of management of FOCs	Among the government officers who participated in the trainings conducted by the Project: 1-1 More than 80% express "the training was satisfactory". 1-2 More than 60% practiced at least two or more trained skills/methods in the field.	Baseline Survey	1. Trainers training on baseline survey 2. Conduct baseline survey and analyze data (include capacity assessment of FOs) 3. Finalize manual	All activities implemented	(Completed)	Satisfaction (9/9; 100%) Practice (9/9; 100%) Questionnaire survey (May-June 2010)
		GIS Mapping system	1. Set up GIS system and data component 2. Produce a series of GIS maps 3. Produce manual 4. Hold seminar and training OIT 5. Establish GIS management unit 6. Finalize manual	All activities implemented	Follow up for GIS management unit	Satisfaction (21/21; 100%) Practice (14/21; 67%) Questionnaire survey (May-June 2010)
		CAP Workshop	1. Training of trainers workshop on CAPs 2. Awareness workshop for CAPs 3. CAP workshop 4. Feedback CAP Workshops 5. Follow-up CAP workshop 6. Finalize manual 7. Prepare manual in Simbra	1 to 4 and 6, 7 implemented 5. Completed at Rajangama	5. Will conducted in Dec. 2010 or Jan. 2011 at Kinbul and Kadummodel sites	1-1 Satisfaction (52/52; 100%) 1-2 Practice (12/14; 86%)

Classification Outputs	Indicators	Item	Activities of Item	Progress as of end Nov. 2010	Remaining activity	Result of Indicators	
Capacity of the government officers and FOs is enhanced in the field of management of FOs (cont. ...)	1-2 More than 60% practiced at least two or more trained skills/methods in the field. (Cont.)	Leadership	1. Conduct training on leadership (to Farmers) 2. Reconduct Training (include Community development training) 3. Finalize manual	1 and 3 implemented (Conducted Nov. 1 to 2 for counterpart officers.)	(Completed)	(This training conducted to FO directly)	
		Financial management	1. Conduct training of Financial Management (to Farmers) 2. Conduct OJT (sustainability) 3. Pass book 4. Conduct ToT	All activities implemented	(Completed)	Satisfaction (5/5; 100%) Practice (5/5; 100%) Questionnaire survey (May-June 2010)	
	As a result of the facilitation and extension services rendered by government officers in the 3 model sites; 1-3 All the FOs formulated and implemented Community Development Plan and CAP	(Revolving fund)	1. Conduct awareness program 2. Establish rules and regulations 3. Monitor the progress of RF 4. Finalize guideline	All activities implemented	Continue to monitor the progress if necessary	-	-
				All the FOs formulated and implemented CAPs.	(Completed)	All the FOs formulated and implemented CAPs.	
	1-4 At least 95% of the eligible farmers obtains FO membership.						Latest data is confirmed now. (Mid-term review data: Kum 75%→100%, Raj 83%→95%, Kad 100%→100%)
	1-5 Number of attendants of the annual general meetings and regular meetings of FOs were increased at least by 50%.						Latest data is confirmed now.
1-6 More than 1 sub-committee was established in each FO.			Formulate multifunctional FOs and established sub-committees	Sub-committees were established in each FO Irrigation, Paddy, Livestock, Homestead development	(Completed)	Sub-committees were established in each FO Irrigation, Paddy, Livestock, Homestead development	

T. 2011 21

Classification Outputs	Indicators	Item	Activities of Item	Progress as of end Nov. 2010	Remaining activity	Result of Indicators
2 Irrigation Capacity of the government officers and FOs is enhanced in the fields of irrigation facility management and water management	Among the government officers who participated in the training conducted by the Project: 2-1 More than 80% express "the training was satisfactory". 2-2 More than 60% practiced at least one trained skills and methods in the fields.	Rehabilitation and O&M	[Rehabilitation] 1. Prepare necessary provisions for rehabilitation work (MOU, Engineering, Farmer's agreement, Contract document) 2. Prepare manual and handbook for rehabilitation 3. Conduct Training/OJT for rehabilitation	1 to 3: implemented	Follow up and improve manual & hand book	satisfaction of training (officers and farmers) officer (at Nov training) farmer (Kim 116/116(100%), Raj 72/74(97%), Kad 30/30(100%) officer (at Nov training) farmer (Kim 121/129(94%), Raj 102/114(89%), Kad 46/57(81%)
			[O&M] 1. Prepare manual handbook for O&M 2. Conduct training/OJT for O&M	All activities implemented	Follow up and improve manual & hand book	satisfaction of training (officers and farmers) practice (officers and farmers)
	As a result of the facilitation and extension services rendered by government officers in the 3 model sites: 2-3 All the FOs reconstructed tail-end irrigation facility. 2-4 All the FOs became capacity of formulating irrigation schedule.	Water management and on-farm water management	[Water management] 1. Analyze present condition of water management 2. Prepare manual and hand book 3. Conduct training/OJT	All activities implemented	Follow up and improve manual & hand book	satisfaction of training (officers and farmers) practice (officers and farmers)
			[On-farm water management] 1. Set up demo farm 2. Prepare manual and hand book 3. Conduct demonstration and training/OJT	All activities implemented	Continue demonstration to Maba 2010/2011	satisfaction of training (officers and farmers) practice (officers and farmers)
	2-5 All FOs conducted appropriate water management based on the irrigation schedule.	Conduct rehabilitation work	1. Prepare sub-group constitution, collect all farmers agreement 2. Conclude Agreement 3. Conduct rehabilitation 4. Conduct and monitor O&M	1,2: implemented 3: Completing final rehabilitation 4: Continue monitoring to Maba 2010/2011	3: Complete final rehabilitation 4: Conclude monitoring and improve O&M	All the FOs reconstructed tail-end irrigation facility. (Kim: 6 agreements, Raj: 7 agreements, Kad: 4 agreements) Farmers' satisfaction for rehabilitation (at 2nd Q)
			1. Formulate irrigation schedule (water issue rule) on D and F canal 2. Adjust irrigation schedule due to conditions	All activities implemented	Conclude monitoring and improve water management	Output of irrigation plan Monitoring record of water management Farmers' satisfaction for water management (at 2nd Q)
		Plan water management	Monitor and record water management activity	Continue monitoring to Maba 2010/2011		

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Classification Outputs	Indicators	Item	Activities of Item	Progress as of end Nov. 2010	Remaining activity	Result of Indicators	
3 Agricultural production Capacity of the government officers and FOs is enhanced in the field of agricultural production.	Among the government officers who participated in the training conducted by the Project: 3-1 More than 80% expressed that "the training was satisfactory". 3-2 More than 60% practiced at least one trained skill/methods in the field.	Paddy					
		Soil analysis based on GIS mapping system	1. Soil sampling and soil classification 2. Prepare manual for soil sampling and classification 3. Training on soil analysis and classification	All activities implemented	(Completed)	Satisfaction (14/14: 100%) Practice (14/14: 100%) Questionnaire survey (May-June 2010)	
		Soil analysis and farm management	1. Produce Fertilizer recommendation paper based on soil fertility map 2. OJT training for soil analysis and classification 3. OJT training for leaf color chart	All activities implemented			
		Quality seed	1. Importance of quality seed paddy 2. Purchasing of Quality seed paddy 3. Finalize manual	All activities implemented		Satisfaction (24/24: 100%) Practice (24/24: 100%) Questionnaire survey (May-June 2010)	
		Paddy field school	[Paddy Farming - Set program] 1. Conduct training ① Training on fertilizer, pest control, cropping management and post harvest ② IPM training ③ Land preparation (Deep plough) ④ Sowing and transplanting (seeder machine, parachute method) ⑤ Fertilizer application ⑥ On-farm water management ⑦ Pest and weed management ⑧ Post harvest technology	All activities implemented	(Completed)	Satisfaction (10/10: 100%) Practice (10/10: 100%) Questionnaire survey (May-June 2010)	
		PD method	[New technology] 1. PD method training 2. Finalize manual (PD) 1. Seeder machine 2. Parachute method 3. Charcoal husk	All activities implemented	(Completed)	Satisfaction (17/17: 100%) Practice (17/17: 100%) Questionnaire survey (May-June 2010)	
		Homestead Development					
		Small scale homesteads	2. Homegarden plan 3. Training on improving HG productivity 4. Finalize manual	All activities implemented			
		Commercial level homesteads	1. Awareness programmes 2. Training programmes on production technology 3. Issue of revolving fund and collective purchase of inputs 4. Finalize report (PD) 1. Big onion nursery preparation	All activities implemented	(Completed)	Satisfaction (11/12: 92%) Practice (11/12: 92%) Questionnaire survey (May-June 2010)	

Classification Outputs	Indicators	Item	Activities of Item	Progress as of end Nov. 2010	Remaining activity	Result of Indicators
		Livestock				
		Animal feed production	1. Training on small scale animal feed production 2. Finalize manual (PD) • Animal feed production	All activities implemented		
		Livestock training	[Livestock - Set program] 1. livestock training (include PD method) ① develop systematic cattle shed ② introduce improved pasture ③ upgrade of local cattle breed through artificial insemination ④ pregnancy diagnosis ⑤ productivity improvement (clean milk production) ⑥ compost making 2. Finalize manual (PD) 1. Cattle shed construction 2. Clean milk production	All activities implemented	(Completed)	Satisfaction (7/7: 100%) Practice (7/7: 100%) Questionnaire survey (May-June 2010)
		Good Management	[Others] 1. Farm record keeping/Farm accounting 2. Finalize manual	All activities implemented		
	As a result of the facilitation and extension services rendered by government officers, more than 25% of the farmers in the 3 model sites: 3-3 Practiced at least one trained skill on paddy, vegetable and fruits cultivation and livestock production.					More than 48% of the farmers in the 3 model sites practiced at least one trained skill • At least one practiced (Kim: 11/169(66%), Raj: 144/300(48%), Kad: 34/61(56%) • Partially practiced 254 farmers (48%) (Kim: 11/169(66%), Raj: 110/300(37%), Kad: 33/61(54%) • Homestead development 107 farmers (20%) (Kim: 45, Raj: 41, Kad: 21) • Livestock 53 farmers (10%) (Kim: 13, Raj: 31, Kad: 9) Questionnaire survey (May-June 2010)
	3-4 introduce diversification in farm management with vegetable/fruits cultivation or animal husbandry.	Diversification	1. Training on diversification of suitable homesteads with vegetables, fruits and livestock 2. Make report	1. Implemented 2. Prepare draft	To make report	Diversification in farm management was introduced at Kim and Raj.
	3-5 implemented collective cultivation based on the cropping plans.		1. Training on collective cultivation 2. Collective purchase of planting material and fertilizer from the Revolving Fund	Implemented all activities	(Completed)	Collective cultivation programmes played and collective purchasing of inputs was implemented at each site.

Classification Outputs	Indicators	Item	Activities of Item	Progress as of end Nov. 2010	Remaining activity	Result of Indicators
4 Marketing and Processing						
Capacity of the government officers and FOs is enhanced in the fields of marketing and processing	Among the government officers who participated in the training conducted by the Project; 4-1 More than 80% expressed that "the training was satisfactory". 4-2 More than 60% practiced at least one trained skills/methods in the field.	Marketing	<ol style="list-style-type: none"> 1. Training on collection of marketing information. 2. Training on Entrepreneurship development 3. Collective marketing 4. Finalize case-catalog 	1 to 3 implemented	4. Finalize case-catalog until Nov.	Make 2nd Questionnaire in Oct. to Nov.
			<ol style="list-style-type: none"> 1. Visit sites 2. Training on Entrepreneurship 3. Processing <ul style="list-style-type: none"> -Rice processing (parboiling rice) -Lime drying -cashew processing -card & milk lumpy -rice flour 4. Finalize manual and handbook (PD) <ul style="list-style-type: none"> -Mango chutney -Soap -Curd -Milk toffee -Mushroom production 	1 to 3 implemented	4. Finalize case-catalog until Nov.	Make 2nd Questionnaire in Oct. to Nov.
		Processing		Some part are implemented	Finalize manual until Jan. 2011	
5 Instructional capacity building for dissemination of the improved training/facilitation skills developed in the model sites.						
	5-1 At least one integrated training programme is conducted. 5-2 A workshop is held to propose a mechanism to disseminate improved training/facilitation skills developed in the model sites to other officers, and institutes. 5-3 At least one seminar, which summarizes the results of monitoring and follow-up trainings, is conducted during the implementation period of the Project.		<ol style="list-style-type: none"> 1. Integrated training programme 	(Some parts was implemented for dissemination)	Implement in March 2011	ANNEX 9
			<ol style="list-style-type: none"> 1. A workshop for proposal of dissemination mechanism 	(Some parts was implemented for dissemination)	Implement in March 2011	ANNEX 9
			<ol style="list-style-type: none"> 1. A seminar to summarize the results of training and follow-up training. 	(Some parts was implemented for dissemination)	Implement in March 2011	ANNEX 9

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Agricultural Income (2009 Yala ~2010 Maha)

ANNEX 8-1

		Model sites					
		Kim	Raj	Kad	Average		
Number of farmer		169	300	61	—		
Paddy	Area(ac)	232	508	188	—		
	Area(ha)	93.9	205.5	76.1	—		
	Av./farmer (ha)	0.56	0.69	1.25	0.71		
	(ac)		1.37	1.69	3.08	1.75	
	2009 Yala	District Avg. Yield (t/ha)	4.45	4.45	4.35	4.43	
		Operated Area (%)	100%	100%	54%	—	
		Avg. Yield tech. adopted area (t/ha)	5.03	5.81	5.96	—	
		Tech. adopted area (%)	34.4%	16.0%	33.3%	—	
	2009/10 Maha	District Avg. Yield (t/ha)	4.2	4.2	4.2	4.20	
		Operated Area (%)	100%	100%	100%	—	
		Avg. Yield tech. adopted area (t/ha)	7.25	6.85	6.54	—	
		Tech. adopted area (%)	60.8%	30.7%	38.1%	—	
	Total Av. Yield (year) t/ha		10.7	9.7	7.7	9.54	
	Selling Price		32	25	25	—	
	Paddy income Rs/ha		342,525	242,029	193,251	—	
farmer income (Rs/farmer) (include cost)		190,248	165,819	240,977	187,152		
Cost of production (Rs/farmer) (Rs63,600/ha/season)		70,650	87,148	122,133	90,111		
Homestead development (Papaya)	Papaya	Cultivated Farmers (Papaya: 0.5ac)	—	8	—	—	
		Avg. income (include cost)(Rs/0.5ac)	—	211,400	—	—	
		Avg. expenditure (Rs/0.5ac)	—	84,725	—	—	
		Avg. Profit (Rs)	—	126,675	—	—	
		Income/farmer(include cost) (Rs)	—	5,637	—	—	
		Profit/farmer (Rs)	—	3,378	—	—	
	Other	Income/farmer(include cost) (Rs)	15,951	12,974	1,407	12,592	
Total		15,951	18,611	1,407	15,804		
Livestock	May, 2010	Total cows	25	50	15	—	
		Avg. Production (l/day)	6.5	6.0	4.0	—	
	Avg. production per day in site (l/day)		162.5	300	60	—	
	Total production per year in site (l)		48,750	90,000	18,000	—	
	Selling Price (Rs/l)		33	33	30	—	
	Total income by cows in site (Rs)		1,608,750	2,970,000	540,000	—	
	Income/farmer (Rs) (include cost)		9,519	9,900	8,852	9,658	
Agricultural Income	2009 yala ~ 2009/10 Maha	Paddy (Rs)	190,248	165,819	240,977	187,152	
		Homestead development (Rs)	15,951	18,611	1,407	15,804	
		Livestock (Rs)	9,519	9,900	8,852	9,658	
		Total		215,718	194,331	251,237	212,615
		Ratio of Paddy (%)		88%	85%	96%	88%
		Ratio of HD (%)		7%	10%	1%	7%
		Ratio of Livestock (%)		4%	5%	4%	5%
	Total		100%	100%	100%	100%	
	Increased ratio (%)	Paddy	212%	67%	113%	134%	
		Homestead development	—	—	—	—	
		Livestock	1634%	3279%	4239%	1200%	
		Total		178%	72%	119%	141%
	Baseline survey Data	Paddy (Rs)	60,964	99,480	113,107	80,088	
Homestead development (Rs)		15,951	12,974	1,406	7,323		
Livestock (Rs)		549	293	204	743		
Total		77,464	112,747	114,717	88,154		

Note: Operated area (Yala and Maha) is data as average by interview survey to FO.

Farmers income (Baseline survey)

		Model sites				District		
		Kim	Raj	Kad	Average	Kurunegala	Anuradhapura	
Number of farmer		169	300	61	—	153,858	101,444	
Paddy	Area(ac)	232	508	188	—	154,422	189,829	
	Area(ha)	93.9	205.5	76.1	—	62,479	76,805	
	Av./farmer (ha)	0.56	0.69	1.25	0.71	0.41	0.76	
	(ac)	1.37	1.69	3.08	1.75	1.00	1.87	
	Av. Yield(Yala) t/ha	2.5	4.5	3.5	3.80	3.76	4.80	
	Operated Area (Yala)	100%	100%	54%	—	36%	15%	
	Av. Yield(Maha) t/ha	3.1	4.3	4	3.94	3.84	4.31	
	Operated Area (Maha)	100%	100%	100%	—	100%	100%	
	Total Av. Yield (year) t/ha	5.6	8.8	5.9	7.41	5.2	5.0	
	Selling Price	19.6	16.5	15.4	—	18.2	17.6	
	Paddy income (year) (Rs/ha)	109,760	145,200	90,706	—	94,838	88,790	
	farmer income Rs (include cost)	80,964	99,480	113,107	88,767	38,512	67,224	
	Cost of production (Rs/farmer) (Rs63,600/ha/season)	70,650	87,148	122,133	90,111	-	-	
Homestead development	HD Area(ac)	95	152	72	-	108,322	98,742	
	HD Area(ha)	38.4	61.5	29.1	—	43,827	39,951	
	Av. Upland/farmer (ha)	0.23	0.20	0.48	0.24	0.28	0.39	
	(ac)	0.56	0.51	1.18	0.60	0.70	0.97	
		Main crops are Coconut, Banana, Mango, Orange Jack Fruit and Anoda.				—	-	-
	Av. Annual productivity(Rs/ac)	28,376	25,606	1,191	20,920	-	-	
	Av. Annual income (Rs/farmer) (include cost)	15,951	12,974	1,406	12,592	-	-	
Livestock	Number of cow	14	20	6	—	27,102	12,834	
	Av. Production (l/cow/10 months cycle)	323	266	101	—	1200	1200	
	Selling Price (Rs/l)	20.5	16.5	20.5	—	20.0	20.0	
	Income in site (Rs)	92,701	87,780	12,423	—	24,000	24,000	
	Income/farmer (Rs) (include cost)	549	293	204	364	4,228	3,036	
Total Household Income	Paddy (Rs)	80,964	99,480	113,107	88,767	38,512	67,224	
	Home garden (Rs)	15,951	12,974	1,406	12,592	-	-	
	Livestock (Rs)	549	293	204	364	4,228	3,036	
	Non-agriculture (Rs)	64,000	71,000	204,000	84,075			
	Total	141,463	183,748	318,717	185,798	42,740	70,261	
	Paddy (%)	43.1%	54.1%	35.5%	47.8%	-	-	
	Home garden (%)	11.3%	7.1%	0.4%	6.8%	-	-	
	Livestock (%)	0.4%	0.2%	0.1%	0.2%	-	-	
	Non-agriculture (%)	45.2%	38.6%	64.0%	45.3%	-	-	
	Total	100.0%	100.0%	100.0%	100.0%	-	-	
Ratio of Agricultural Income (%)	Paddy (%)	79%	88%	99%	87%	90%	96%	
	Home garden (%)	21%	12%	1%	12%	0%	0%	
	Livestock (%)	1%	0%	0%	0%	10%	4%	
	Total	100%	100%	100%	100%	100%	100%	

Agricultural Productivity (Indicator: Overall Goal 2)

ANNEX 8-2

1. Target crop of increasing agricultural productivity

- Paddy: Only Paddy productivity in Maha season. Because Yala season production were disturbed by heavy drought and canal construction, and paddy production is mainly in Maha.
- Homestead development: There are no target. Because ratio of farmers income is very low and farmers cultivate many kind of fruits. And farmers selected new fruit; Papaya mainly to promote in ICIM project. Therefore we cannot compare with baseline data.
- Livestock: Milk productivity. There were few farmers to produce but farmers selected milk production to promote.

2. Comparison of Agricultural Productivity

(1) Paddy Productivity

		Kim	Raj	Kad	Remarks
Baseline data (Maha)	Yield (t/ha)	3.1	4.3	4.0	
	District Avg. (t/ha)	3.84	3.84	4.31	
2009/2010 Maha	Yield (cut survey)(t/ha)	7.25	6.85	6.54	
	Ratio of increased Yield (%) (Baseline Surv	134%	59%	64%	
	Ratio of increased Yield (%) (District Avg	89%	78%	52%	
	Total Area (ac)	232	508	188	928
	Adopted Area (ac)	138	150	80	368
	Ratio (%)	59.5%	29.5%	42.6%	40%
	Ratio of increased productivity in site (%) (to Baseline Data)	79.6%	17.5%	27.0%	31.7%
Ratio of increased productivity in site(%) (to District Avg.)	52.8%	23.1%	22.0%	Indicator >25%	
After 5 years of ICIM project (expectation)	Yield (cut survey)(t/ha)	7.5	7.5	7.0	
	Total Area (ac)	232	508	188	
	Adopted Area (ac)	180	240	120	
	Ratio (%)	77.6%	47.2%	63.8%	
	Ratio of increased productivity in site (%)(to Baseline Data)	110.1%	35.2%	47.9%	Indicator >25%
	Ratio of increased productivity in site (%)(to District Avg.)	73.9%	45.0%	39.8%	Indicator >25%

(2) Milk Productivity

		Kim	Raj	Kad	Remarks
Baseline data	Production (l/day/cow) [l/10 months cycle]	1.1 [323]	0.9 [266]	0.3 [101]	
	Total cow	14	20	6	
	Total Milk production (l/day)	15.4	18.0	1.8	
	Production (l/day/cow)	6.5	6.0	4.0	
May 2010	Total cow	25	50	15	
	Number of calves	14	26	4	
	Total Milk production (l/day)	162.5	300.0	60.0	
	Ratio of increased productivity (%) (to Baseline Data)	490.9%	566.7%	1233.3%	Indicator >25%
	Ratio of increased total production (%) (to Baseline Data)	955.2%	1566.7%	3233.3%	

**Result of questionnaire to Government Officers
(Project Purpose Indicator 1)**

ANNEX 8-3

I. Management of Fos

		Participation program	Satisfaction					Practice
			High	Average	To some	Satisfaction Total	No	
1. Baseline Survey	Number	9	4	5	0	9	0	9
	Rate	-	44%	56%	0%	100%	0%	100%
2. CAP Workshop	Number	17	9	7	1	17	0	16
	Rate	-	53%	41%	6%	100%	0%	94%
3. Financial Management	Number	5	2	2	1	5	0	5
	Rate	-	40%	40%	20%	100%	0%	100%
Total	Number	31	15	14	2	31	0	30
	Rate	-	48%	45%	6%	100%	0%	97%

II. Irrigation

		Participation program	Satisfaction					Practice
			High	Average	To some	Satisfaction Total	No	
1. Rehabilitation	Number	12	6	6	0	12	0	12
	Rate	-	50%	50%	0%	100%	0%	100%
2. Operation and maintenance	Number	12	5	6	0	11	1	10
	Rate	-	42%	50%	0%	92%	8%	83%
3. Water management	Number	12	5	6	1	12	0	11
	Rate	-	42%	50%	8%	100%	0%	92%
4. On-farm water management	Number	12	3	7	2	12	0	12
	Rate	-	25%	58%	17%	100%	0%	100%
5. GIS Mapping System	Number	21	12	8	1	21	0	14
	Rate	-	57%	38%	5%	100%	0%	67%
Total	Number	69	31	33	4	66	1	59
	Rate	-	45%	48%	6%	99%	1%	86%

III. Agricultural Production

		Participation program	Satisfaction					Practice
			High	Average	To some	Satisfaction Total	No	
1. Paddy (Soil analysis and farm management)	Number	14	10	3	1	14	0	14
	Rate	-	71%	21%	7%	100%	0%	100%
2. Paddy (Quality seed, Paddy field school)	Number	10	8	2	0	10	0	10
	Rate	-	80%	20%	0%	100%	0%	100%
3. Homestead development (Small scale homegardens, Commercial level homesteads)	Number	12	6	5	0	11	0	11
	Rate	-	50%	42%	0%	92%	0%	92%
4. Livestock (Animal feed production, livestock training)	Number	7	4	3	0	7	0	7
	Rate	-	57%	43%	0%	100%	0%	100%
5. PD method	Number	17	10	7	0	17	0	17
	Rate	-	59%	41%	0%	100%	0%	100%
Total	Number	60	38	20	1	59	0	59
	Rate	-	63%	33%	2%	98%	0%	98%

note: 1 person not answer at Homestead development

IV. Marketing and Processing

		Participation program	Satisfaction					Practice
			High	Average	To some	Satisfaction Total	No	
1. Marketing	Number	18	2	15	1	18	0	18
	Rate	-	11%	83%	6%	100%	0%	100%
2. Processing	Number	18	1	15	2	18	0	18
	Rate	-	6%	83%	11%	100%	0%	100%
Total	Number	36	3	30	3	36	0	36
	Rate	-	8%	83%	8%	100%	0%	100%

		Participation program	Satisfaction					Practice
			High	Average	To some	Satisfaction Total	No	
Total	Number	196	87	97	10	194	1	184
	Rate	-	44%	49%	5%	99%	1%	94%

Total result of questionnaire to Office bearers and Farmers (3 model sites) ANNEX 8-4 (Project Purpose Indicator 2)

I. Management of FOs (To Office bearers (Total 56: Kim 13, Raj 30, Kad 13))

	Participation program	Satisfaction					
		High	Average	To some	Satisfaction Total	No	
1. Leadership (Office Bearers)	Number	40	23	17	0	40	0
	Rate	-	58%	43%	0%	100%	0%
2. Financial Management (Office Bearers)	Number	36	27	8	0	35	0
	Rate	-	75%	22%	0%	97%	0%
Total	Number	76	50	25	0	75	0
	Rate	-	66%	33%	0%	99%	0%

II. Irrigation (To Farmers (Total 472 (1st Questionnaire) ~ 473 (2nd Questionnaire) farmers))

	Participation training	Satisfaction					
		High	Average	To some	Satisfaction Total	No	
1. Rehabilitation	Number	220	165	40	13	218	0
	Rate	-	75%	18%	6%	99%	0%
2. Operation & Maintenance	Number	384	305	70	9	384	0
	Rate	-	79%	18%	2%	100%	0%
3. Water management	Number	46	26	16	4	46	0
	Rate	-	57%	35%	9%	100%	0%
4. On-farm water management	Number	6	3	2	1	6	0
	Rate	-	50%	33%	17%	100%	0%
Total	Number	656	499	128	27	654	0
	Rate	-	76%	20%	4%	100%	0%

III. Agricultural Production (To Farmers (Total 472 farmers))

	Participation training	Satisfaction					
		High	Average	To some	Satisfaction Total	No	
1. Paddy	Number	259	178	64	19	259	0
	Rate	-	68%	25%	7%	100%	0%
2. Homestead development	Number	109	80	21	7	108	1
	Rate	-	73%	19%	6%	99%	1%
3. Livestock	Number	59	45	12	2	59	0
	Rate	-	76%	20%	3%	100%	0%
Total	Number	427	301	97	28	426	1
	Rate	-	70%	23%	7%	100%	0%

IV. Marketing and Processing (To Office bearers (Total 56: Kim 13, Raj 30, Kad 13))

	Participation program	Satisfaction					
		High	Average	To some	Satisfaction Total	No	
1. Marketing (Collective marketing)(Office Bearers)	Number	45	28	17	0	45	0
	Rate	-	62%	38%	0%	100%	0%

	Participation training	Satisfaction					
		High	Average	To some	Total	No	
2. Processing (Farmers)	Number	329	239	82	8	329	0
	Rate	-	73%	25%	2%	100%	0%
Total	Number	374	267	99	8	374	0
	Rate	-	71%	26%	2%	100%	0%

	Participation training	Satisfaction					
		High	Average	To some	Satisfaction Total	No	
Total	Number	1,533	1,117	349	63	1,529	1
	Rate	-	73%	23%	4%	100%	0%

(Reference)

		GIS map				Total
		Very useful	Useful	To some	No	
GIS mapping	Number	220	92	42	48	402
	Rate	55%	23%	10%	12%	100%

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Capacity Assessment of the FOs (Indicator: Project Purpose 3)

ANNEX 8-5

Indicator	Evaluation Points					Baseline Data (2007)			Questionnaire to FOs (2010)		
	1	2	3	4	5	Kim Points (1-5)	Raj Points (1-5)	Kad Points (1-5)	Kim Points (1-5)	Raj Points (1-5)	Kad Points (1-5)
(1) Number of general meetings per year	1	2	3	4	5	1 (1time)	1 (1time)	2 (2time)	4 (4time)	2 (2time)	4 (4time)
(2) Attendance ratio of General meeting	0%-20%	21%-40%	41%-60%	61%-80%	81%-100%	1 (9%)	1 (8%)	2 (25%)	4 (72%)	3 (65%)	3 (56%)
(3) Number of Sub committee	0	1	2	3	more than 4	1 (0 sub)	1 (0 sub)	1 (0 sub)	5 (4 sub)	5 (4 sub)	5 (4sub)
(4) Coordination of training per year	0/year	3/year	5/year	10/year	more than 10/year	1	2	2	5 (25time)	5 (20time)	5 (15time)
(5) O & M fee/salalis collection ratio	0%-20%	21%-40%	41%-60%	61%-80%	81%-100%	3 (52%)	4 (70%)	3 (44%)	5 (95%)	4 (75%)	4 (75%)
(6) Community contract for rehabilitation work	nothing				experience	1 (nothing)	1 (nothing)	1 (nothing)	5 (experience)	5 (experience)	5 (experience)
(7) Support for collective cultivation (group purchase/share agr-machine)					more than 51% all sub com member						
Paddy	nothing	0~10%	11~30%	31~50%	more than 51% all sub com member	1 (nothing)	1 (nothing)	1 (nothing)	4 (37%)	3 (25%)	3 (26%)
Homesstead development	nothing		experience		all sub com member	1 (nothing)	1 (nothing)	1 (nothing)	3 (experience)	5 (all)	1 (nothing)
Livestock	nothing		experience			1 (nothing)	1 (nothing)	1 (nothing)	3 (experience)	5 (all)	1 (nothing)
Average						1	1	1	3.3	4.3	1.3
(8) Support for collective marketing					more than 51% all sub com member						
Paddy	nothing	0~10%	11~30%	31~50%	more than 51% all sub com member	2 (1%)	2 (4%)	2 (3%)	4 (50%)	3 (25%)	1 (0%)
Homesstead development	nothing		experience		all sub com member	1 (nothing)	1 (nothing)	1 (nothing)	3 (experience)	5 (all)	1 (nothing)
Livestock	nothing		experience			1 (nothing)	1 (nothing)	1 (nothing)	5 (all)	5 (all)	3 (experience)
Average						1.3	1.3	1.3	4	4.3	1.7
(9) Book keeping (cash book, receipt, voucher, ledger, pass book)	no book	prepare cash book but incomplete	complete cash book	prepare all book but some book incomplete	complete all book						
(10) Management and tranparency of accountant (how many times do you present financial summary)	nothing	once in year but incomplete	once in year complete	all GM but incomplete	all GM with complete	2	1	2	4	4	3
Total						14.3 points	15.3 points	17.3 points	41.3 points	41.6 points	35 points

Note:-Total Maximum points=50 (10 Indicators x 5 points = 50 points)

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ANNEX 9: Contents of Integrated Training Programme, Workshop & Seminar

I. Integrated training programme (PDM Indicator 5-1)

1. Component of ICIM Project
2. Summary of Activity and Training by ICIM Project
3. Summary of training contents and Manuals at each part
 - (1) Management of FOs
 - (2) Irrigation (Rehabilitation and O & M, Water management and on-farm water management)
 - (3) Agricultural Production (Paddy, Homestead development, Livestock)
 - (4) Marketing and Processing

II. Seminar to summarize the results of monitoring and training (PDM Indicator 5-3)

1. Result of ICIM Project by ICIM team
2. Result of ICIM Project by C/P (Agricultural part, Irrigation part, Livestock part)
3. Result of ICIM Project by FO (3 model sites)

III. Workshop for proposal of dissemination mechanism (PDM Indicator 5-2)

1. Present activity for dissemination in ICIM project
 - (1) GIS mapping system
 - (2) Dissemination model sites in PEACE Project
2. Proposal of dissemination mechanism
 - (1) Training system
 - (2) Support to FO
 - (3) Keep coordinator etc.

IV. Schedule

Above three events will be held simultaneously at same place in March 2011.

V. Others

Some parts of above contents have been conducted to promote dissemination at DJCC, Coordination Meeting and study tour etc.

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ANNEX 10: JICA/ICIM Project Definition of ‘Integrated Mechanism’

At the last DJCC, held on 11th January 2010, a committee composed of 12 members representing different stakeholders was organized in order to discuss and finalize the definition of “Integrated Mechanism” for Project Purpose of JICA/ICIM Project.

The committee held a meeting on 12th March 2010 and decided the definition of “Integrated Mechanism” in ICIM Project Purpose, which is revised and proposed as follows

“Integrated Mechanism” means “A participatory process through which the officers and the institutes trained by the project shall disseminate training/facilitation skills to the other officers and institutes” for capacity building of Farmers Organizations in order to achieve the overall project purpose.

In order to initiate and implement this capacity building process, the following action has been proposed:

1. Since the “integrated mechanism” is defined as a “participatory process”, it shall be managed through a joint effort by a number of stakeholder officers and institutes in various sectors (irrigation, agriculture, livestock, etc.)
2. The “training/facilitation skills” are improved or developed through the project activities at the model sites, and expected to be disseminated through the integrated mechanism after the project period. These skills shall include improvements of present technologies and introduction of new technologies (GIS mapping systems, PD method, seeder machines, parachute method, IPM and on-farm water management, etc.).
3. “Training Advisory Committee (TAC)” shall be reorganized and function as a permanent committee, which has the responsibility for the implementation of training programmes.
4. ICIM Manuals shall be authorized and distributed to relevant institutes/organizations and they should be used as “Trainer’s Manuals”.
5. The capacity of training institutes are strengthened by training those officers on the above described skills.

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ANNEX 11: Measures Taken to Respond to the Recommendations by the Mid-term Review

November 2010

Recommendations	Measures taken / scheduled to be taken
1.1. Management of FOs	
(1) Training of officers and farmers should be done for community development, leadership and farm accounting.	<ul style="list-style-type: none"> • Community development training will be conducted until November. • Leadership training/community development to officers will be conducted in November, 2010 • Farm record keeping training was conducted on 24th and 30th December, 9th and 10th, 16th, 17th and 26th February, 17th and 18th March, 16th and 18th June and 22nd July 2010. Farm record keeping training will be continued according to the request from FOs.
(2) In order to clarify potential needs of farmers, CAP should be re-examined and revised if needed for further improvements.	<ul style="list-style-type: none"> • Follow-up CAP workshops will be conducted in October or November, 2010. • Follow-up CAP workshop conducted at Rajangan on 14 Oct. 2010.
1.2. Irrigation facility and water management	
(1) Involvement of the IE offices to the GIS system should be increased to update and apply GIS system to the Project sites continuously by establishing special assignment or by establishing a special unit.	<ol style="list-style-type: none"> 1. GIS 1 day training (Feb.12), GIS 3 days training (Mar.15~17) Training on soil based farm management (Jul.5(Kur), Jul.6(Anu)) 2. GIS management unit set up meeting (Oct.15) 3. GIS specialist appointment on set up meeting
(2) In order to improve FO management system, assignment of full time project manager should be considered in every scheme.	Confirm ID by letter (sent letter on 8th Oct.), however, the ID, due to the shortage of the staff, cannot assign the project managers on the full-time basis.
(3) GOSL should ensure budget allocation for fuel and subsistence for the field officers to facilitate their involvement of the ICIM.	ID shares payment for field work subsistence allowance and fuel cost.
(4) In order to avoid any delay in preparation of rehabilitation work, senior officers of ID should supervise and monitor the field officers more frequently.	<ol style="list-style-type: none"> 1. Hold Irrigation monitoring meeting (IMM) with local officers and monitor and advice on the progress : 1st IMM (Jun.7) 2nd IMM (Jun.21) 3rd IMM (Sep.7) and 4th IMM (Nov.12) 2. Continue weekly meeting with IE, EA, WS, FO and ICIM. Implement regular weekly meeting at 3 model sites with officers
1.3. Agricultural production, marketing and processing	
(1) Paddy	
(a) When membership of the sub-groups becomes too large, it is recommended to form smaller groups of 25 to 30 farmers within the sub-groups to ensure smooth functioning of activities and improve efficiency.	<p>Small groups were formed within the Paddy sub-committees for easy implementation of project activities.</p> <ul style="list-style-type: none"> • Kimbulvana - 4 small groups • Rajangan - 15 Small groups • Kadurugasdamara - 2 small groups
(b) The Project is advised to enhance collective marketing and processing/value addition	Training/OJT for government officers and farmers of collective marketing and processing were conducted based on request of FOs:

	<ul style="list-style-type: none"> • Processing of rice (Jun. 7~12) • Processing of cashew (Jul. 1) • Drying of lime (2009 Jul. 9) • Entrepreneurship for small scale farmers (Raj: Jun. 21~28, Kim: 2009 Aug. 17~21) • Preparation of curd and milk toffees (2009 Nov. 12) • Marketing Information (October, 2010)
	Same as for Paddy
	Considered about small scale home garden manual as a package. (Make questionnaires related small scale home gardening to improve quality of life.)
	Following training/OJT were conducted:
	<ul style="list-style-type: none"> • Record keeping and farm accounting (Kim: Aug. 10, Raj: Sep. 17, Kad: Sep. 14) • Quality improvement of dairy products (Kim: Jan. 5) • Entrepreneurship for small scale farmers (Kim: 2009 Aug. 17~21, Raj: Jun. 21~28) • Preparation of curd and milk toffees (Kim: 2009 Nov. 12)
	Training/OJT on the following conducted:
	<ul style="list-style-type: none"> • Small scale compound animal feed production (Kim: Aug. 10, Raj: Sep. 17, Kad: Sep. 14) • Compost making (Kim: Aug. 27, Raj: May 15, Kad: Mar. 27)
	1. DJCC appointed a committee composed of 12 members representing different stakeholders. The committee discussed and proposed the definition of "Integrated Mechanism" to DJCC. DJCC recommended it to NJCC.
	2. NJCC held on 19th July 2010 approved the definition proposed by DJCC.
	1. Prepared "Progress Activities and Systematic Monitoring" paper and discussed it at the DJCC.
	2. Conducted Questionnaire survey to government officers, FO office bearers and farmers for systematic monitoring of training results in May 2010, and discussed the results at DJCC and NJCC in July 2010. The 2nd Questionnaire survey was conducted in Mid-October to November 2010 for other training programmes
	1. DJCC was held in January, May, July and November 2010 after Mid-term review.
	2. NJCC was held in July 2010 after the Mid-term review.
	Following trainings were conducted for government officers:
	• Counterpart training in Japan - 4 C/Ps (Sep. 6~17), 4 C/Ps (Sep. 27~9)
(2) Homestead Development	
(a) Collective marketing and processing/value addition should be enhanced.	
(b) It is recommended to promote a package of farming techniques in small scale home gardening to improve quality of life through increasing net income and improving nutrition condition.	
(3) Livestock	
(a) Further trainings on productivity improvement of cattle/buffaloes, record keeping and farm accounting, quality improvement of dairy products, processing, entrepreneurship development should be planned and implemented.	
(b) The Project could encourage developing village level small-scale compound animal feed production and compost making with locally available ingredients.	
1.4. General	
(1) The Project Team should propose a clear definition of the words "integrated mechanism" in the Project Purpose. National JCC should examine the proposal, revise if necessary and approve it.	
(2) Systematic monitoring of training results should be done to obtain a feedback of the training program and/or the contents.	
(3) The District JCC meetings should be held quarterly. National JCC meetings will continue to meet twice per year.	
(4) Capacity building of the government officers should be further promoted.	

<p>(5) The draft of the manuals should be finalized and delivered to other relevant institutions to be used in training programmes.</p> <p>(6) A mechanism should be proposed to disseminate improved training/ facilitation skills developed in the model site to other institutes.</p>	<ul style="list-style-type: none"> • Group training in Japan - I C/P (Jun -Aug.) • Entrepreneurship for small scale businesses (Kini: 2009 Aug. 17~21, Raj: Jun. 21~28, government officers also participated) • Leadership/Community development training - (Nov. 1~2) • GFS training (Feb. 2010, Mar. 2010) etc. <p>All manuals were (will be) authorized at DJCC and printed and delivered to relevant organizations and institutions. (See the List of case-catalogue, Manual (Hand book) in ICLM project)</p> <p>A workshop will be held to propose a mechanism to disseminate improved training/facilitation skills at March 2011.</p> <ul style="list-style-type: none"> • A committee appointed and held some meetings to discuss and propose a mechanism for dissemination. • 6 new sites have been identified as potential dissemination sites by ID • Basic information collected on the present status of these sites
<p>(7) Working Committees should include representatives of training institutes on agriculture and livestock as well.</p>	<p>Confirm the appointment</p> <p>1. In the next Working Committee, following institutes to be included:</p> <p>① Agricultural Working Group (Working Committee): Field Crops Research and Training Institute, Institute of Post Harvest Technology, Farm Machinery Research Center and Farm Machinery Training Center</p> <p>② Livestock Working Group (Working Committee): Animal Husbandry Training School, Integrated Farm Development Center</p> <p>③ Financial Management Working Group (Working Committee): Irrigation Training Institute</p> <p>The following training institutes/research institutes are included in the IAC: (as authorized in Nov. 2010)</p> <ul style="list-style-type: none"> • Irrigation Training Institute (Galgannwa) • Rice Research and Development Institute (Bahalagoda) • Field Crops Research and Training Institute (Maha Iluppallama) • In-Service Training Institute (Maha Iluppallama) • Animal Husbandry Training School, (Soeppukulama) • Institute of Post Harvest Technology, (Anuradapura) • Farm Machinery Training Center (Anuradhapura), (New) • Integrated Farm Development Center (New) • Farm Machinery Research Center (New) (Livestock Department)
<p>(8) PDM should be modified from the realistic viewpoints.</p>	<p>Modified PDM was approved by the NJCC at December 2009.</p>

