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
中間レビュー調査報告書

平成 22 年３月
（2010年）

独立行政法人国際協力機構
スリランカ事務所

スリ事
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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。

プロジェクトが中間時点に達したころから、当機構はプロジェクトの目標達成度や成果等を分析するとともに、今後の方向性を協議するため、スリランカ民主社会主義共和国側と合同で2009年11月6日から27日まで中間レビュー調査を実施しました。

本報告書は、同調査によるプロジェクト関係者との協議及びレビュー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いただ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22年3月

独立行政法人国際協力機構
スリランカ事務所長　志村　哲

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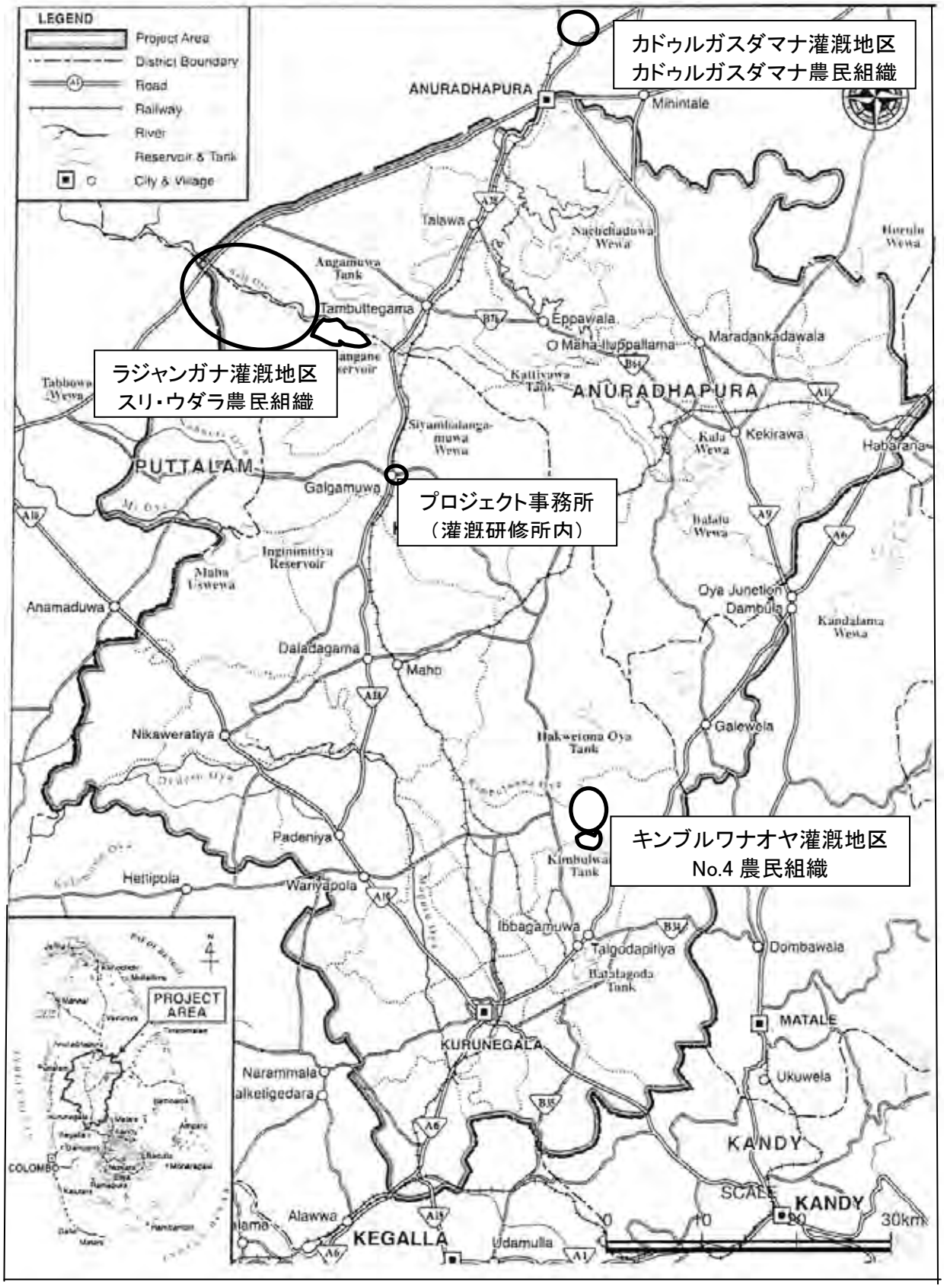
プロジェクト位置図


LEGEND
Project Area
District Boundary
Road
Railway
River
Reservoir & Tank
City & Village
カドゥルガスダマナ灌漑地区
カドゥルガスダマナ農民組織
ラジャンガナ灌漑地区
スリ・ウダラ農民組織
プロジェクト事務所
（灌漑研修所内）
キンブルワナオヤ灌漑地区
No.4 農民組織
ANURADHAPURA
Minintale
Talawa
Nachchaduwa Wewa
Horula Wewa
Angamuwa Tank
Tambuttegama
Eppawala
Maradankadawala
Maha-Iluppallama
Kattiyawa Tank
Tabbowa Wewa
Siyambalanga-muwa Wewa
Kala Wewa
Kekirawa
Habarana
PUTTALAM
Galgamuwa
Inginimitiya Reservoir
Maha Uswewa
Balalu Wewa
Anamaduwa
Oya Junction
Dambula
Kandalama Wewa
Daladagama
Maho
Nikaweratiya
Hakwetiona Oya Tank
Galewela
Padeniya
Kimbulwa Tank
Hettipola
Wariyapola
Ibbagamuwa
Talgodapitiya
Dombawala
Ratatagoda Tank
MATALE
KURUNEGALA
Narammala
Ukuwela
KANDY
COLOMBO
Alawwa
KEGALLA
Udamulla
SCALE
0
10
20
30km
PROJECT AREA

現地調査写真

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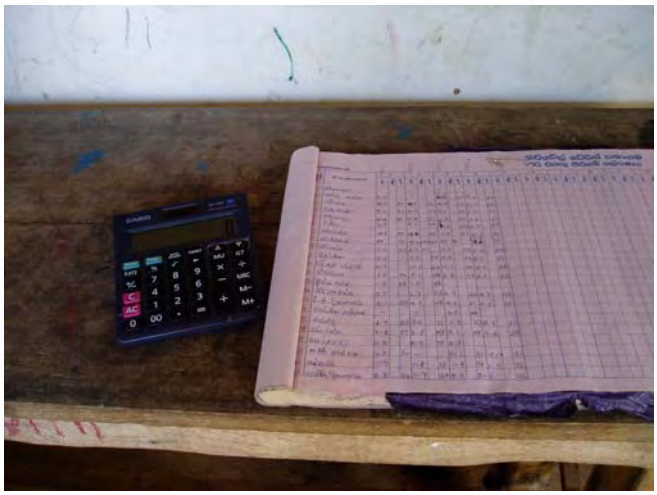
③対象地域の一般的な水路の現状

④畜産活動の様子（建設された畜舎、導入された牛）



⑤牛乳収集の帳簿

⑥現地調査の様子
（パパイヤ生産の視察）

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略　語　表

AI＝Agriculture Instructor
CAP＝Community Action Plan
DOA＝Department of Agriculture
DOAPH＝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＝Department of Irrigation & Water Management
IDO＝Institutional Development Officer
IE＝Irrigation Engineer
IMD＝Irrigation Management Division
JCC＝Joint Coordination Committee
JICA＝Japan International Cooperation Agency
LDI＝Livestock Development Instructor
MADAS＝Ministry of Agricultural Development and Agrarian Services
MIWM＝Ministry of Irrigation and Water Management
MOLD＝Ministry of Livestock Development
OJT＝On-the-job training
PDM＝Project Design Matrix
PD Method＝Process Description Method
PEACE＝Pro-poor Economic Advancement and Community Enhancement Project
PRA＝Participatory Rural Appraisal
RPM＝Resident Project Manager
RRDI＝Rice Research and Development Institute
SouthCAP＝The Project on Rural Livelihood Improvement in Hambantota District
TAC＝Training Advisory Committee
TRINCAP＝The Technical Cooperation Project for Agricultural and Rural Development for Rehabilitation and Reconstruction through Community Approach in Trincomalee
TT＝Trainers' Training
WS＝Work Supervisor（IE Office staff）

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：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	
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（2009.10.31時点）：約1億7,000万円	
	相手国実施機関：灌漑・水管理省（Ministry of Irrigation and Water Management）	
	日本側協力機関：農林水産省	
協力期間	R/D署名日：2007年3月14日	他の連携協力：
	4年間（2007年6月1日～2011年5月31日）	

１－１　協力の背景と概要

スリランカ民主社会主義共和国（以下、「スリランカ」と記す）（人口約2,000万人、面積約6万6,000km^2）では、農村部の貧困率が高く、また特に乾燥地帯の灌漑農業に従事する農家の農業生産性や農業所得が低いことが重要な課題として認識され、灌漑・農業・流通・加工各セクターの総合的管理能力向上の必要性があることから、当プロジェクトは、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した技術協力である。

１－２　協力内容

（1）上位目標

対象地域において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、総合的な研修体制が確立される。

（3）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して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、水管理に関して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して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流通・加工に関して政府職員と農民組織の能力が強化・改善される。

5）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が整備される。

（4）投入（2009年10月初旬時点）

日本側：

・長期専門家派遣　3名　　・機材供与　　約1,952万円（1米ドル＝120円）

・短期専門家派遣　2名　　・ローカルコスト負担　　約4,338万ルピー

・研修員受け入れ　4名
相手国側：
・カウンターパートの配置（合計約80名）
・日本人専門家の執務室、同室の家具・電話、電気水道代
・ローカルコスト負担　　車両購入時の税金など

２．評価調査団員の概要

調査者	総　括	西野　恭子	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
	農業制度、農民組織、灌漑	柏原　学	農林水産省 農村振興局 整備部 設計課 課長補佐
	協力計画	Arinda Elapata	JICA スリランカ事務所 ナショナルスタッフ
	評価分析	田村　智子	株式会社かいはつマネジメント･コンサルティング
	P. U. Wickramaratna		Director（Engineering）, Ministry of Irrigation and Water Management（MIWM）
	G. A. M. S. Emitiyagoda		Deputy Director（Extension）, Head of Secretariat, Department of Agriculture（DOA）, Ministry of Agricultural Development and Agrarian Services（MADAS）
	Pushpa Wijewantha		Director, Livestock Planning and Economics Unit, Department of Animal Production and Health（DOAPH）, Ministry of Livestock Development（MOLD）
	M.M.M. Aheeyar		Division Head, Hector Kobbekaduwa, Agrarian Research and Training Institute, MADAS
	Palitha Wadduwage		Provincial Director, Provincial DoA, North Western Provincial Council
調査期間	2009年11月6日～27日		評価の種類：中間レビュー

３．評価結果の概要

３－１　評価結果の要約

（1）妥当性

当プロジェクトの目標は、スリランカの国家開発政策、日本のODA政策及びJICAの国別援助方針と整合性があり、また、スリランカの農村地域の貧困度の高さや、乾燥地帯における灌漑農業の生産性や収入の低さを考慮すると、当プロジェクトにより同地帯の農家の農業生産性や農業収入を向上させる強い必要性が認められる。よって当プロジェクトの妥当性は高い。

（2）有効性

政府職員及び農民組織を対象とした各種の研修が実施され、農民組織の能力が向上しつつあることなどから、プロジェクト目標はおおむね順調に達成されつつあり、また、協力期間内にプロジェクト目標が達成される見込みがあると考えられる。一方、プロジェクト

目標の「総合的なメカニズム（Integrated mechanism）[1]」という言葉の意味が関係者のなかで明確に共有されていないことは懸念される。したがって当プロジェクトの有効性は中程度である。

（3）効率性

日本側及びスリランカ側の投入は計画どおり実施され、また、期待された成果はほぼ順調に発現しつつある。特に成果1・2・3については確実に達成されつつあり評価に値する。一方、成果を順調に達成するためには本要約表の3.3項に記すとおりいくつかの阻害要因もあることから、当プロジェクトの効率性は中程度である。

（4）インパクト

モデルサイトにおける活動により、稲作の生産性の向上、収入増加のための方法が示されたことは評価に値する。しかし、上位目標の対象地域の人口はモデルサイトの人口と比較すると大変多いことから[2]、当プロジェクトの効果が他の地域へ確実かつ効果的に普及されない限りは、当プロジェクトが上位目標の達成に貢献することは困難である。また、特筆すべき正負のインパクトは現在のところ発現していない。このような理由から、当プロジェクトのインパクトを現時点で判断するのは時期尚早であると思われる。

（5）自立発展性

スリランカ灌漑局の当プロジェクトへの関心が高く、また、モデルサイトの農民組織の活動に対する意欲も高いことは、当プロジェクトの自立発展性を高める貢献要因となるであろう。一方、当プロジェクトの自立発展性を確保するためには、スリランカ政府は今後、いくつかの課題を克服する必要がある。例えば、同国の灌漑・農業関連分野の人的資源や予算、物的資源は限られており、現状のままでは、将来当プロジェクトの効果を他の農民組織や村々へ拡大する際に困難が予想される。限られた人的資源について一例を挙げると、同国における州政府所属の農業普及員の担当地域は広く、1名が数千世帯の農家を受け持っているのが現状である[3]。当プロジェクトにおいても、数人の州政府所属の農業普及員が、プロジェクトの便宜供与の下モデルサイトの農民に対して優先的に訓練や普及活動を実施しているが、プロジェクト終了後、同職員が他の地域の農民にも同様の頻度にて類似の内容の訓練や普及活動を実施することができるかどうかについては疑問である。このような課題があることを鑑み、当プロジェクトの自立発展性は中程度よりやや低いと判断する。

３－２　効果発現に貢献した要因

（1）計画内容に関すること

スリランカには灌漑・農業分野における技能・知識の豊富な蓄積があり、一般的に政府職員の能力は高いといわれることから、当プロジェクトでは日本人長期専門家の投入は3名のみとし、現地のリソースを最大限に活用する計画であった。現在、計画どおり日本人長期専門家は3名であり、加えてローカル・コンサルタント3名がJICA専門家チームのメンバーとして活躍している。また、モデルサイトにおいてはJICA専門家チームと灌漑・農業・畜産分野の政府職員が協力し合って農民への技術指導を行っている。このような現地リソースの活用は、プロジェクトの効率的な運営に貢献するものである。

[1] 事前評価時の判断により、和文 Project Design Matrix（PDM）ではこれを「総合的な研修体制」と訳している。

[2] 上位目標の対象地域であるアヌラーダプラ県とクルネーガラ県における総農家数は約 25 万 5,000 であり、モデルサイトの総農家数は約 530 である。

[3] 当中間レビューにおいてインタビューした州政府所属の農業普及員は 1 名で 6,500 農家を担当していた。

（2）実施プロセスに関すること
現在のところ、実施プロセスに関する効果発現の貢献要因は特にない。

３－３　問題点及び問題を惹起した要因

（1）計画内容に関すること

1）当プロジェクトの3つのモデルサイトは、アヌラーダプラ県とクルネーガラ県にまたがり、相互に26～66キロ離れて位置する。これらのサイトは、将来プロジェクト効果の波及が期待される範囲を考慮してプロジェクト開始前に選定された。JICA専門家チームはこれらサイトを頻繁に訪問する必要があるが、移動に時間が費やされるため実際の活動に費やす時間が相当制限されることがプロジェクトの実施段階になって分かった。また、車両での移動に要する燃料費がかさむこともプロジェクトの効率性にマイナスの影響を及ぼしている。

2）当プロジェクトでは、外国援助機関等の資金援助が投入された場合の開発モデルとして、PEACE[4]事業対象灌漑地区から1カ所モデルサイトを選出するのに加え、通常の政府予算で賄える範囲の資金による開発モデルをつくるために、PEACE対象地区以外から2カ所のモデルサイトを選出した。しかし、実際は後述の2か所のモデルサイトにおいても、大規模な灌漑施設改修の実施及びリボルビング･ファンドの導入による農民組織の活性化の必要性が認められたため、それぞれ約600万ルピーと約150万ルピーの資金[5]が各サイトにJICAより投入された。中間レビュー時にこれらの投入について検証したところ、投入はモデルサイトでの成果発現に貢献しているが、その金額は通常の政府予算で賄える範囲の額ではないことが分かった。このような経緯から、3つのモデルサイトで形成予定の開発モデルはいずれも資金援助が投入されることを前提としたものになる予定である。

（2）実施プロセスに関すること

1）当プロジェクトのPDMの指標や活動の一部は、プロジェクトのめざす方向性や現状にそぐわない点が多くみられたが、中間レビュー時までそれらの見直しが検討されることがなかった。そのため、PDMの指標に沿ったプロジェクトの成果達成状況の把握が適切に行われていなかったようである。

2）中央レベルの（Joint Coordination Committee：JCC）は年4回、県レベルのJCCは年6回の開催が計画されていたが、いずれもこれまで3回しか開催されていない。上述のようにPDM見直しが遅延したのはJCCが計画どおり開催されていなかったことも一因であると思われる。

3）灌漑局の現場の職員は、当プロジェクトのモデルサイトにおける灌漑施設の改修業務に関与するための十分な時間をもっていないようである。また、灌漑施設の改修においては、デザインや見積もりの作成を灌漑局の地域事務所が実施しているが、これらの手続きは大変複雑であり承認までに相当の時間を要する。これらが原因となって、モデルサイトにおける改修工事の開始や実施が遅延し、その結果、工事の実施が耕作期と重なり、工事を実施する農民への負担が増すこととなった。

4）Geographic Information System（GIS）システムの技術研修を受講した灌漑局の現場の職員のほとんどが他の地域に転勤したことは、技術移転の定着度にマイナスの影響を及ぼす結果となった。

[4] ODA ローンで 2006 年より実施されている「農村経済開発復興事業（Pro-poor Economic Advancement and Community Enhancement Project：PEACE）」。北東部州と北西部州を含む乾燥地域に存在する約 180 の農民組織を対象に、灌漑施設の改修・所得向上プログラム・農民組織の強化等を通じ、農村の持続的な農業開発をめざす事業であり、2011 年 5 月まで継続の予定である。

[5] 2009 年 12 月の為替レートでそれぞれ約 500 万円と 125 万円に相当する。

5）当プロジェクトの事前調査においては、当プロジェクトの成果が前述のPEACEに波及することが期待されていたが、中間レビューの時点ではそのような波及効果は発現していない。これは、これまで当プロジェクトはモデルサイトでの活動に集中していたためであると考えられる。

４．結　論

いくつかの阻害要因があったにもかかわらず、モデルサイトにおける活動が順調に進捗していることを高く評価するとともに、今後は、下記の提案事項に十分留意しつつ、モデルサイトでの実績をほかの地区にも普及するためのメカニズムの作成にも積極的に取り組むよう期待する。

また、既存のPDMの指標には非現実的な点や現状にそぐわない点がみられ、また各成果の基に最大10項目の活動が記載されており、複雑な印象を与えた。また成果5を達成するために計画されていた活動はやや目的にそぐわないものであった。そこで当中間レビューでは、指標を改定し、活動の表記を単純化し、成果5を達成するための活動を変更すべくPDMの改訂を提案し、JCCミーティングでの承認を得た。今後は、実施計画表（PO）の改訂を行い、活動の詳細と実施スケジュールについてプロジェクト関係者間で共有する必要がある。

５．提言（当該プロジェクトに関する具体的な措置、提案、助言）

５－１　農民組織管理

（1）コミュニティ・デベロップメント、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を政府職員と農民に施すこと。

（2）農民の潜在的ニーズを明確にするべくCAPワープショップ[6]の結果を再検討し、更なる生産性や収入の向上のために必要に応じて計画を修正すること。

５－２　灌漑施設管理・水管理

（1）モデルサイトにおいてGISシステムを継続的に適用し更新していくために、灌漑技師事務所はGISシステムにより積極的に取り組むこと。具体的には、専門の部署を設けたり、専門の人材を配置したりする必要がある。

（2）農民組織の管理能力の向上のため、専任のプロジェクト・マネジャー[7]をすべての灌漑スキームに配置すること。

（3）スリランカ政府は、現場で働く政府職員が当プロジェクトの活動に滞りなく従事できるよう、車両燃料や日当に関する予算を確保すること。

（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、灌漑局の幹部職員は、現場の職員の指導・モニタリングをより頻繁に行うこと。

５－３　農業生産、流通・加工

（1）稲　作

1）農民組織の小委員会の会員数が多くなりすぎた場合、小委員会のなかに25～30名からなる部会を組織することにより、小委員会の機能性や活動の効率性を高めること。

2）共同出荷、加工、農産物の付加価値の向上に積極的に取り組むこと。

[6] CAP とは“ Community Action Planning ”をさす。CAP ワークショップは参加型手法を用いて農村開発計画を作成するワークショップである。

[7] スリランカでは現在、大規模灌漑スキームにはいずれも、灌漑局の灌漑マネジメント部に所属するプロジェクト・マネジャーが専属で配置されており、農民組織の管理能力の育成などにあたっているが、小・中規模灌漑スキームにはそのようなマネジャーは配置されていない。

（2）家庭菜園
1）共同販売や農産物付加価値の向上に積極的に取り組むこと。
2）小規模の家庭菜園を実施する場合は、純所得や栄養状態の改善を通した生活改善をめざし、一連の営農技術（a package of farming techniques）の導入を図る。

（3）畜　産
1）乳牛・水牛の飼育における生産性の向上のための研修のほか、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を企画・実施すること。
2）現地で入手可能な原材料による混合飼料とコンポストの生産をモデルサイトに導入するよう試みること。

５－４　その他一般

（1）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プロジェクト・チームは明確な定義を提案すること。ナショナルJCCはその提案を検討し、必要に応じて修正のうえ承認すること。
（2）研修の結果について体系だったモニタリングを実施し、その結果を研修プログラムや研修内容に反映させること。
（3）県レベルのJCCミーティングは1年に4回、中央レベルのJCCミーティングは年に2回は開催すること。
（4）政府職員の能力強化を更に推進すること。
（5）マニュアル類については、素案を改訂し最終版を作成のうえ、関連分野の研修所や研修プログラムで活用されるよう取り計らうこと。
（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を提案すること。
（7）農業・畜産関係の研修所の代表者が作業委員会[8]に加わるよう取り計らうこと。
（8）PDMを現実的な観点から改訂すること。

６．教訓（当該プロジェクトから導き出されたほかの類似プロジェクトの発掘・形成、実施、運営管理に参考となる事柄）

６－１　農民組織管理

＜プラスの結果を導いた教訓＞

（1）農民組織のなかに課題別の小委員会を設け、農民組織の強化を促進することが可能である。例えば、小委員会の設置は、農民組織の会員相互の知識や経験の共有を促進するのに有効である。また小委員会は、研修・普及活動のターゲット・グループもしくは受け皿として効果的に機能することが分かった。小委員会があることにより、各分野の政府職員が研修や普及活動を実施する際、農民の参加が促進され、日程の調整や参加者への連絡が容易になる。
（2）農民組織は、灌漑施設の維持管理組織としてだけでなく、農業開発プログラムをより効率良く実施するための責任ある組織としても期待がもてる。
（3）CAPワークショップは、地域開発計画を作成する際に農民の参加と同意を得るための効果的な手段である。

＜マイナスの結果を導いた教訓＞

（1）プロジェクトの活動は地域住民の興味や要望に応じるだけでなく、潜在的可能性やフィ

[8] 作業委員会（working committees）は、当プロジェクトで実施すべき研修のニーズ分析やマニュアル作り、研修の実施などのために分野別に設置された委員会である。

ージビリティーを確認して実施するべきである。例えばモデルサイトの1つであるカドゥルガスダマナにおいて住民からの要望により酪農が導入されたが、村の人口が少ないことや自然資源が限られていることなどを勘案すると、導入による農民の生産性向上や収入増加の可能性は制限的である。他の2つのモデルサイトにおいては酪農の導入は成功しているが、同じ酪農モデルがいずれのサイトにおいても効果を表すとは限らないことにも留意し、カドゥルガスダマナのような場合は生活改善のための営農の一環として採用する等の配慮をすべきであった。活動がいずれのサイトにおいても効果を表すとは限らないことにも留意すべきであった。

６－２　灌漑施設および水管理

＜プラスの結果を導いた教訓＞

（1）毎週ミーティングを開き、灌漑施設改修における課題について段階的に話し合う手法は、政府職員と農民の双方向的なコミュニケーションを高めるのに効果的である。

（2）灌漑施設の改修工事において、政府職員の立ち会いの下関係農家が現場にて工事内容を相互確認し合意形成を図る参加型手法は、農家間の利害関係を効果的に解消するのに有効である。

（3）灌漑施設の改修を通して水管理や維持管理に関する農民の意欲を高めようとする際に、圃場水管理グループを形成すると効果的である。

（4）GISシステムは灌漑分野のみに活用される計画であったが、灌漑セクターのみならず、農業セクターにおいても有効活用できることが分かった。

６－３　農業生産、流通・加工

＜プラスの結果を導いた教訓＞

（1）リボルビング・ファンドの導入は、農民の自立を促し、意思決定能力を高めるのに有効である。

（2）PD法は農民の現場での研修に適用できる。

（3）農民への研修は、目的をはっきりさせ、かつ段階的に実施すると効果的である。

Summary of Mid-term Review

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	
Sector：Agriculture	**Cooperation scheme:** Technical Cooperation Project	
Division in-charge: JICA Sri Lanka Office	Project cost (as of Oct. 31, 2009) 170 million yen	
	Implementing organization in the partner country： Ministry of Irrigation and Water Management	
	Supporting organization in Japan： Ministry of Agriculture, Forestry and Fisheries of Japan	
Period of Cooperation	R/D： March 14, 2007	**Other cooperation**：
	Four years (from June 1st, 2007 to May 31st, 2011)	

1-1. Background and summary of the Project

In Sri Lanka (the population of 20 million and the area extent of 65,607km$^{2)}$, it was identified as an important issue that the poverty ratio was high in the rural area and agriculture productivity and agriculture income of the farm families, who are engaged in irrigated agriculture in dry zone, were low. The Development Study of "A Study for Increasing the Capacity of Integrated Management in Irrigated Agriculture" was conducted to study and analyze the above-mentioned issue. The Study examined main issues in irrigation, agriculture, marketing and processing sectors and identified a need to increase the capacity of integrated management. In order to implement the Study, the Government of Sri Lanka proposed a technical cooperation project to the Government of Japan.

After the Ex-ante Evaluation at the end of 2006, the Project was commenced in June 2007. It will be implemented for the period of four years. The objective of the Project is to establish an integrated training system for enhancing the capacity of the government officers and farmer organizations (FOs) to increase agricultural productivity. The technical cooperation includes the enhancement of the capacities of the government officers and FOs in the areas of (i) management of FOs, (ii) irrigation facility management and water management, (iii) agriculture production and (iv) marketing and processing. It also includes (v) preparation of institutional capacity building for enhancement of the capacity of the other government officers, which will be conducted by the counterpart personnel of the Project.

1-2. Project Overview

(1) Overall Goal

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

(2) Project Purpose

An integrated mechanism is established to improve agricultural productivity

(3) Outputs

i) Capacity of the government officers and FOs is enhanced in the field of management of FOs
ii) Capacity of the government officers and FOs is enhanced in the fields of irrigation facility management and water management
iii) Capacity of the government officers and FOs is enhanced in the field of agricultural production
iv) Capacity of the government officers and FOs is enhanced in the fields of marketing and processing

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

(4) Inputs (as of October 2009)

Japanese side：

- JICA Long-term Experts : 3 members
- JICA Short-term experts: 2 members
- Provision of equipment : Around 19.52 million yen (1USD=¥120)
- Local cost :Around 43.38 million rupees
- Training in Japan: 4 members

Sri Lankan side：

- Appointment of the counterpart personnel (total around 80 members)
- Office space for the JICA Expert Team and furniture, telephone facility and utility payment of the office
- Local cost of the Project: Taxes and duties of the vehicles of the Project.

2. Outline of the Mid-term Review Team

Members

Name	Designation & Organization
Ms. Yasuko Nishino – Team Leader	Senior Representative, JICA Sri Lanka Office
Dr. Hideyuki Kanamori	Senior Advisor, JICA
Mr. Manabu Kashiwabara	Deputy Director, Design Division, Rural Infrastructure Department, Rural Development Bureau, Ministry of Agriculture, Forestry and Fisheries
Mr. Arinda Elapata	Senior Project Specialist, JICA Sri Lanka Office
Ms. Tomoko Tamura	Consultant, Kaihatsu Management Consulting, Inc.
Mr. P. U Wickramaratna – Team Leader	Director (Engineering), Ministry of Irrigation and Water Management
Mr. G. A. M. S. Emitiyagoda	Deputy director (Extension), Head of secretariat, Department of Agriculture, Ministry of Agricultural Development & Agrarian Services,
Dr. (Ms.) Pushpa Wijewantha	Director, Livestock Planning and Economics Unit, Department of Animal Production and Health, Ministry of Livestock Development
Mr. M.M.M. Aheeyar	Division Head, Hector Kobbekaduwa Agrarian Research and Training Institute, Ministry of Agricultural Development & Agrarian Services
Mr. Palitha Wadduwage	Provincial Director, Provincial Department of Agriculture, North Western Provincial Council

Period of the Review	From November 6th, 2009 to November 27th, 2009	**Type of Evaluation**: Mid-term Review

3. Results of the Mid-term Review

3.1. Summary of the Evaluation Results

(1) Relevance

The Project Purpose is consistent with the Sri Lankan development policy and Japanese ODA policy

and Country Strategy of JICA. There is a strong need to increase agricultural productivity and income of the farm families in irrigated area in the Dry Zone. Therefore, relevance of the Project is high.

(2) Effectiveness

The Project Purpose is being achieved almost on schedule as a whole. Trainings to the officers and farmers were conducted and the capacity of FOs was enhanced. There is a prospect that the Project will attain the Project Purpose by the end of the Project period. However, the definition of the words "integrated mechanism" was not clearly shared among the members of the Project Team. The effectiveness of the Project is moderate.

(3) Efficiency

Inputs from Japan and Sri Lanka were made as planned. The planned Outputs were being produced almost as scheduled as a whole. Especially, steady progress was observed for the production of the Outputs 1, 2 and 3, although there were several disturbing factors as mentioned in 3.3 of this report. Therefore, efficiency of the Project is moderate.

(4) Impact

The Project has shown the ways to increase the productivity and income of paddy cultivation in the model sites. However, the target population of the Overall Goal is much larger than that of the model sites. It is difficult to achieve the Overall Goal unless the dissemination mechanism to be proposed by the Project is implemented. There has been no particular positive and negative impact so far. Therefore, it is too early to conclude the level of the impact of the Project at the moment.

(5) Sustainability

There are several positive features to promote the sustainability of the Project, such as the keen interest of ID and motivation of the FOs. However, to ensure the sustainability, Government of Sri Lanka has to investigate an efficient way to overcome several issues. At the moment, irrigation and agriculture sectors of the country have the limited human, financial and physical resources; therefore, if there will be no changes in such conditions, it would be difficult for the Government of Sri Lanka to expand the effects of the Project to other FOs and villages. For example, currently, the officers in provincial extension services are in-charge of several thousands of farm families. At the moment, several such officers are working for the Project with the facilitation of the Project and providing trainings and extension services to the farmers in the model sites as a priority. However, it is a question whether they will be able to provide the same kind of trainings and extension services to the farmers in other areas after the completion of the Project. The sustainability of the Project is evaluated as "lower moderate" taking the above-mentioned future tasks into consideration.

3.2 Factors contributed to the effects of the Project

(1)Factors concerning project planning

There is a rich accumulation of technologies and knowledge of irrigation and agriculture sectors in Sri Lanka and capacity of the government officers was considered to be high in general. Therefore, the Project was planned to utilize local resources at maximum and to limit the number of JICA Long-term Experts to three. Currently, three JICA Long-term Experts were dispatched as planned and additionally, three Sri Lankan consultants are working as the members of the JICA Expert Team. In the model sites, JICA Expert Team is providing technical support to the farmers in collaboration with the government officers of irrigation, agriculture and livestock sectors. The utilizations of the local resources as mentioned above had been contributed to the efficient implementation of the Project.

(2)Factors concerning project implementation process

There was no particular factor concerning to the project implementation process, which contributed to the effects of the Project.

3.3 Issues and problems of the Project and their background

(1)Issues and problems concerning project planning

(i) The three model sites are 26-66 km far from each other and located in the two districts of Anuradhapura and Kurunegala. These model sites were selected prior to the commencement of the Project considering the area of expansion of the effects of the Project in the future. The

JICA Expert team needs to visit these sites frequently. After the commencement of the Project, it was found that they have to spend much time for travelling, and as a result, the time to spend for actual activities is limited. High cost for fuel for travelling is also a concern for effectiveness.

(ii) One of the model sites of the Project was selected from the target area of the PRACE[1] project so that the Project would propose a development model when an external fund of foreign agencies is available. Other two sites were selected from the areas which are not included in the PEACE project so that the Project would propose a development model which would be realized with the general budget of the Government of Sri Lanka. However, later, it was found that irrigation facilities of the two model sites of the non-PEACE area also needed large scale rehabilitation of the irrigation facility and introduction of a revolving fund scheme. Therefore, around 6 million rupees and 1.5 million rupees were provided to each model site by JICA for the rehabilitation and the revolving fund scheme respectively. The Mid-term Review Team studied the amount and found that they were much larger than the general budget of the government. Accordingly, all the development models to be formulated in the three model sites will be the ones which requite external funding.

(2)Issues and problems concerning project implementation process

(i) Several indicators and activities of the PDM of the Project were not relevant to the direction and reality of the Project. However, the revision of these indicators and activities were not examined until the Mid-term Review. As a result, it seems that the stakeholders of the Project did not study the progress of the Project appropriately according to the indicators of the PDM.

(ii) The Project planned to hold the National JCC meetings quarterly and District JCC meetings once in two months. However, so far, they were held only three times each. The less frequency of the meetings seems to be one of the reasons for the above-mentioned delay of the revision of the PDM.

(iii) The field officers of the Irrigation Department did not have sufficient time to involve in the rehabilitation work in the model sites. The complicated system to approve the designs and estimates of the rehabilitation work by the regional offices of irrigation department was a factor to hinder timely implementation of the rehabilitation work of the irrigation facilities in the model sites. Rehabilitation time was often overlapped with cultivation period due to the delay, which was inconvenient for the farmers to contribute their labors.

(iv) Most of the officers who were participated in the training of the GIS system were transferred to the other areas. The frequent transfer found to be an obstacle to make the effort of the technical transfer a success.

(v) So far, there was no dissemination of the outputs of the Project to the PEACE project, which was expected at the time of the Ex-ante Evaluation of the Project. It may be because the Project has been mainly concentrated on the activities of the model sites.

4. Conclusion

The Mid-term Review Team appreciates the performance of the Project in the model sites despite there were several disturbing factors. The Team encourages the Project Team to duly pay attention to the recommendations mentioned in this report and develop a mechanism to disseminate the effects of the model sites to other areas by the end of the Project period.

The Mid-term Review Team observed that some indicators in the PDM were not realistic and appropriate in a realistic viewpoint. Also, there were maximum ten activities for each output in the PDM, which made the PDM complicated. Therefore, the Team proposed to amend the indicators and simplify the activities and obtained an approval of the National JCC. The detail and schedule of the activities should be shared by the stakeholders of the Project by revising the Plan of Operation.

[1] "Pro-poor Economic Advancement and Community Enhancement (PEACE)" Project is implemented in Sri Lanka with assistance of ODA loan of Japan. The project covers around 180 FOs in the dry zone of the country including North East and North Western provinces. It aims at sustainable development of agriculture in the farm villages by implementing rehabilitation of irrigation facilities, income generation programmes, enhancement of capacity of FOs, etc. It was commenced in 2006 and will be continued until May 2011.

5. Recommendations

5.1. Management of FOs

(1) Training of the government officers and the farmers should be conducted for the subjects of community development, leadership and farm accounting.
(2) In order to clarify potential needs of the farmers, the results of the Community Action Plans should be re-examined and revised if needed for further improvements.

5.2. Irrigation facility and water management

(1) Involvement of the Irrigation Engineer's offices to the GIS mapping system should be increased in order to update and apply the system to the Project sites continuously by establishing special assignment or by establishing a special unit.
(2) In order to improve the FO management system, assignment of a full time project manager should be considered in every scheme.
(3) Government of Sri Lanka should ensure budget allocation for fuel and subsistence for the field officers to facilitate their involvement of the Project.
(4) In order to avoid any delay in preparation of rehabilitation work, senior officers of Irrigation Department should supervise and monitor the field officers more frequently.

5.3. Agricultural production, marketing and processing

(1) Paddy
   i) 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.
   ii) The Project is advised to enhance collective marketing and processing/value addition.

(2) Homestead Development
   (i) Collective marketing and processing/value addition should be enhanced.
   (ii) 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
   (i) Further trainings on the productivity improvement of cattle/buffaloes, record keeping and farm accounting, quality improvement of dairy products, processing, entrepreneurship development should be planned and implemented.
   (ii) The Project could encourage developing village level small-scale compound animal feed production and compost making with the locally available ingredients.

5.4. 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 conducted to obtain a feedback of the training program and/or the contents.
(3) The District JCC meetings should be held quarterly. The National JCC meetings will continue to meet twice a year.
(4) Capacity building of the government officers should be further promoted.
(5) The draft of the training manuals should be finalized and delivered to other relevant institutions to be used in training programmes.
(6) A mechanism should be proposed to disseminate improved training/ facilitation skills developed in the model site to other institutes.
(7) Working Committees should include representatives of training institutes on agriculture and livestock as well.
(8) PDM should be modified from the realistic viewpoints.

6. Lessons Learned

6.1. Management of FOs

Positive

(1) Formation of sector-wise sub-groups within FOs could contribute to strengthening FOs. It also helps sharing of knowledge and experience among the members of the community. Better coordination with field level officers in respective government organizations has become easy due to this group approach.
(2) FOs could be responsible and accountable to make agricultural development programme more efficient.
(3) CAP workshop (Community Action Plan workshop) is an effective tool to obtain participation and consensus of farmers for community development planning.

Negative

(1) Project activities should not be totally based on the interests and request of the community but should be based on potential analysis and feasibility. This was seen at Kadurugasdamana particularly for dairy farming. Same model will not be applicable to all sites/areas.

6.2. Irrigation facility and water management

Positive

(1) Conducting weekly meetings to discuss issues by step-wise approach was effective in strengthening two-way communication between the government officers and the farmers.
(2) Participatory approach by joint-site-visits and inspection by the farmers with assistance of the officers was found to be effective in settling conflicts among the farmers at the time of rehabilitation work.
(3) Formation of field canal groups was effective to motivate water management and O&M activities through rehabilitation.
(4) GIS mapping system was originally planned to be applied only for the irrigation sector and it was proved to be effective. The GIS mapping system was also found to be effective for agriculture sector.

6.3. Agriculture production, marketing and processing

Positive

(1) Revolving fund concept has facilitated farmers to become self-reliant and improve their decision making capabilities.
(2) PD method (Process Description method) could be applied for field level farmer training program.
(3) Objective oriented training with step-by-step approach was more effective for beneficiary farmers.

第１章　調査の概要

１－１　調査実施の経緯と目的

本調査は、スリランカ民主社会主義共和国政府（以下、「スリランカ」と記す）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」の中間時点にあたり、PDM及び活動計画に基づきプロジェクトの投入実績、活動実績、計画達成度を調査・確認したうえで、評価5項目（妥当性、有効性、効率性、インパクト、自立発展性）の観点からレビューを行い、プロジェクトの課題について具体的な改善策の提言を行うことを目的として実施された。

１－２　調査団の構成と調査期間

１－２．１　調査団の構成

＜JICA側調査団＞

1	総　括	西野 恭子	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	農業制度、農民組織、灌漑	柏原　学	農林水産省 農村振興局 整備部設計課 課長補佐
4	協力計画	Arinda Elapata	JICA スリランカ事務所 ナショナルスタッフ
5	評価分析	田村 智子	株式会社かいはつマネジメント・コンサルティング

＜スリランカ政府側調査団＞

1	P.U. Wickramaratna	Director（Engineering）, Ministry of Irrigation and Water Management（MIWM）
2	G.A.M.S. Emitiyagoda	Deputy Director（Extension）, Head of Secretariat, Department of Agriculture（DOA）, Ministry of Agricultural Development & Agrarian Services（MADAS）
3	Pushpa Wijewantha	Director, Livestock Planning and Economic Unit, Department of Animal Production and Health（DOAPH）, Ministry of Livestock Development（MOLD）
4	M.M.M. Aheeyar	Division Head, Hector Kobbekaduwa, Agrarian Research and Training Institute, Ministry of Agricultural Development and Agrarian Services（MADAS）
5	Palitha Wadduwage	Provincial Director, Provincial Department of Agriculture（DOA）, North Western Provincial Council

１－２．２　調査期間

2009年11月6～27日。詳細は付属資料1参照。

調査期間中の主要面談者については、付属資料2参照。

１－３　プロジェクトの概要

スリランカ（人口約2,000万人、面積約6万6,000km^2）では、農村部の貧困率が高く、また特に乾燥地帯の灌漑農業に従事する農家の農業生産性や農業所得が低いことが重要な課題として認識されていた。このような問題について調査・分析すべく、開発調査「灌漑分野に係る総合的管理能力向上計画調査」が実施され、灌漑・農業・流通・加工各セクターの主要問題点が検証され、総合的管理能力向上の必要性が示された。この能力向上計画の実施を目的とし、スリランカ政府はわが国に対して技術協力プロジェクトを要請した。2006年末の事前評価調査を経て、当プロジェクトは2007年6月から4年間の予定で実施されており、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し、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⑤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、にかかわる技術協力を行う計画である。

（1）上位目標

対象地域において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、総合的な研修体制が確立される。

（3）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して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、水管理に関して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、農業生産に関して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、流通・加工に関して政府職員と農民組織の能力が強化・改善される。

5）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が整備される。

第２章　中間レビューの方法

２－１　設問項目・指標

成果達成状況、プロジェクト実施プロセス、評価5項目のそれぞれについて下記の設問項目・指標を設定し必要なデータを収集した。

２－１．１　成果達成状況

PDMの指標を設問項目とし、プロジェクト開始時のベースラインデータと直近のデータを比較検証した。直近のデータがない場合は類似のデータを使用した。研修参加者の研修内容の理解度や活用度については適当なデータが見あたらなかったため、中間レビュー調査の一環として研修参加者へのインタビューによる簡易調査を実施し、評価の参考にした。設問項目の詳細については合同中間レビュー報告書の成果達成状況表（Accomplishment grid）を参照のこと。

２－１．２　プロジェクト実施プロセス

プロジェクトの実施プロセスの検証に関して以下の設問項目を設定した。

（1）チームワーク
（2）コミュニケーション
（3）意思決定
（4）進捗モニタリング
（5）スリランカ側カウンターパートの能力強化
（6）上位機関の支援状況
（7）他のプロジェクトとの協調
（8）JCCの機能
（9）JICAの参加

２－１．３　5項目評価

5項目評価に関する主な設問項目は表2-1のとおりであった。なお、それぞれの設問項目に小項目を設定した。小項目については合同中間レビュー報告書の評価グリッド（Evaluation grid）を参照のこと。

表２－１　5項目評価の設問項目

妥当性	有効性	効率性	インパクト	持続発展性
政策	プロジェクト目標の達成見込み	成果達成状況	上位目標の達成見込み	政策・制度面
ニーズ	プロジェクト目標達成の貢献要因	投入（人材・機材・本邦研修・予算）	インパクトの発現状況	組織面
優先度	プロジェクト目標達成の阻害要因	計画外の投入や成果	上位目標達成の論理性	財政面
手法の適切性	プロジェクト目標達成の論理性	成果達成の論理性		技術面

出所：中間レビュー調査団

２－２　データ収集方法

データ収集は以下の方法により実施した。

（1）関連資料のレビュー

（2）プロジェクトが作成した研修マニュアルなどの検証

（3）プロジェクト・チーム（JICA専門家チーム及びスリランカ側カウンターパート）、関連省庁及び受益農民とのフォーカスグループ・インタビュー

（4）サイト実査

２－３　データ分析方法

上述の方法により収集したデータを成果達成状況表、プロジェクト実施プロセス表、評価グリッドの該当箇所に記入し、記載事項についてレビュー調査団内で検証を行い、達成・進捗状況や事前と現在の差異に関するデータ分析を実施した。協議の過程においては、スリランカ政府側団員が作成したフィールド調査レポート（付属資料4）、農業・加工・流通グループ作成のフィールド調査レポート（付属資料5）及び灌漑・水管理グループの分析メモ（付属資料6）を参考資料とした。また必要に応じ、JICAスリランカ事務所及び関連省庁と協議を行い、分析結果に加筆修正を行った。

２－４　調査の制約・限界

当中間レビュー調査は、限られた予算と調査期間をもって実施されたため、内部収益率など経済効果に係る分析や、費用対効果の観点による他案件との比較を行うことはできなかった。また、モデルサイトで実施したフォーカスグループ・インタビューは、主に農村組織や小委員会の役員及びリボルビング・ファンドの受益者を対象に行い、その他の農民への聞き取りは実施できなかった。なお、プロジェクト目標の「総合的なメカニズム（integrated mechanism）」の定義について関係者間で議論をし、再定義することを試みたが、時間が限られていたため十分な議論をするには及ばず、再定義には至らなかった。

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　日本側の投入

＜JICA専門家の派遣＞

JICA長期専門家は計画どおり以下の3名が派遣された。長期専門家の専門性と豊かな経験は当プロジェクトの効果的な運営に貢献している。

- チーフアドバイザー/農民組織
- 灌漑施設管理/水管理
- 研修/調整員

また、GISシステムの短期専門家が2カ月間、圃場水管理の短期専門家が1カ月間派遣された。なお、圃場水管理の短期専門家の指導によりモデルファームでの実験が成功したことは特筆に値する。

＜カウンターパート研修＞

当プロジェクトの事前評価報告書及び着手報告書によると、スリランカ側主要カウンターパートへの本邦研修もしくはタイでの研修が年間2～3名を対象に実施される予定であった。しかし、プロジェクト開始後約2年間はMIWMよりカウンターパート研修の要請がなかったため、第1回のカウンターパート研修が実施されたのは2009年5月のことであった。同研修には同省のマネジメント・レベルの職員4名が参加した。参加者及びコース名については合同中間レビュー報告書を参照のこと。

＜機材供与＞

当プロジェクトでは、JICA専門家移動用の車両3台、モデルサイトにおける研修資機材、On-the-job training（OJT）用の農業資機材などの購入を予定していた。これらの車両や資機材は予定どおり購入され、加えて灌漑施設改修のための建設機械数台及びGISマップ作製用のコンピュータとソフトウェアなど合計3セットが購入された。これら購入車両・資機材の使用頻度や保守管理状況に関して特に問題はみられない。

３－１．２　スリランカ側の投入

＜カウンターパートの配置＞

80名以上のカウンターパートが当プロジェクトに配置された（すべて兼任）。カウンターパートは、プロジェクトの実施した研修やOJT及び作業委員会[1]への参加を通じて、その技術レベルやノウハウを向上させており、プロジェクトの成果発現へ貢献している。

＜予算措置＞

スリランカ政府は計画どおり、灌漑研修所内にJICA専門家チームの執務室を設置し、同室の事務家具の提供、及び電気・電話代などの支払いを行っている。現在、灌漑局の地方事務

[1] 作業委員会(working committees)は、当プロジェクトで実施すべき研修のニーズ分析やマニュアル作り、研修の実施などのために分野別に設置された委員会である。

所所属の現場職員が、車両の燃料代や出張手当が十分でないため、当プロジェクトのモデルサイトでの業務に集中的に従事することができないことを除けば、スリランカ政府の当プロジェクトへの予算措置に関して特に問題はみられない。

３－２　活動の実績

予定された活動はほぼ計画どおり実施された。また、ニーズ分析の結果、農民組織へのリボルビング・ファンドの導入やGISシステムの広範囲への適用といった活動も追加的に実施された。なお、プロジェクトはこれまで農業生産を主に推進してきたため、流通・加工に関しての取り組みはまだ初歩的なものにとどまっている。水管理に関する活動は開始されたばかりであるが、これは協力期間の1、2年目にまず灌漑施設の改修を行う必要があったためである。このように、流通・加工及び水管理に関する活動はプロジェクトの後半において集中的に実施される計画である。成果5を達成するための活動は、協力期間の最後に実施予定であるためまだ開始されていない。

３－３　成果達成状況

5つの成果の達成状況はそれぞれ以下のとおりである。

成果1：モデルサイトにおいて、農民組織の運営管理に関して政府職員と農民組織の能力が強化・改善される。

成果1の指標の目標値は現時点でほぼ達成されている。これまで、政府職員と農民を対象に農民組織の運営管理に関する研修が実施され、また、小委員会の組織化やリボルビング・ファンドの導入により農民組織の能力が大幅に強化・改善された。プロジェクト・チームは今後、政府職員へのフォローアップ研修の実施や農民組織の更なる強化を促進する予定である。よって、成果1は協力期間終了時に達成される見込みである。

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。

予定していた研修が実施され、第1期の灌漑施設の改修工事が農民組織によって実施されるなど、成果2に関する活動はおおむね計画どおり実施された。また、同工事の実施を通じて、灌漑施設の改修に関する農民組織の能力が向上しつつある。プロジェクト・チームは、今後も引き続き農民組織による灌漑施設の改修工事の実施を促進し、また、政府職員及び農民に対して水管理やその他の研修を実施する予定である。よって、成果2は協力期間終了時に達成される見込みである。

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。

農業生産に関する活動は予定よりも進んでおり、政府職員を対象とした新しい普及活動の方法の導入、農民への新しい生産技術の導入、野菜・果物栽培・畜産の導入などが、モデルサイトの農民の収入増加に効果をもたらした。プロジェクト・チームは今後もこのような活動を更に推進する予定であり、成果3は協力期間終了時に達成される見込みがある。なお、研修結果の体系的なモニタリングがなされていないため、今後導入が必要と思われる。

成果4：モデルサイトにおいて、流通・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。

当プロジェクトではこれまで農業生産に重きを置いていたため、流通・加工への取り組みは最近開始されたばかりである。プロジェクトは今後、適切な計画を立案し、流通・加工への取り組みを加速度的かつ効果的に推進する必要がある。このような取り組みにより成果4が協力期間終了時に達成されるよう期待される。

成果5：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が整備される。

成果5に関する活動は協力期間の最後に実施される予定である。プロジェクト・チームは今後、モデルサイトでの活動によって生み出されたより良い研修やファシリテーションの手法を他の地域にも普及するためのメカニズムを提案し、成果5を協力期間内に達成するよう期待される。

３－４　プロジェクト目標の達成状況

政府職員や農民への研修が実施され、農民組織の能力は高まりつつあることから、プロジェクト目標はほぼ計画通り達成されつつあると考えられ、また、プロジェクト目標は協力期間内に達成される見込みがある。一方、プロジェクト・チームのメンバーが、プロジェクト目標にある「総合的メカニズム（integrated mechanism）」という言葉の定義を明確に共有していないのは懸念事項である。

３－５　特記事項

３－５．１　灌漑施設管理・水管理

灌漑施設管理・水管理分野は、農家組合（Farmers Organization：FO）下の4Sub-committeeの1つに位置づけられているIrrigation（以下、「灌漑部会」と記す）に対する技術移転を行うものである。具体的な活動は、3モデル地区において以下を行うものである。

①　灌漑施設のリハビリ工事の実施
②　農民自身による水管理・維持管理体制の強化
③　GISマッピングシステムを活用した水管理、維持管理及び営農普活動の促進
④　これら①～③に関する研修教材の整備

具体的な技術移転については、3モデル地区を選定し、現地踏査（walk through survey）による灌漑施設現状把握を行い、改修方法、工事に関する契約、水管理、維持管理及び水利費徴収等を目的とし、FOにIrrigation sub-groupを設置し、合意形成を図りつつ進めている。特に、末端水路（F Canal）ごとにFCG（F Canal Group）リーダーを任命し、末端水管理組織の再構築、灌漑施設の改修等の意見集約、同意徴収等を実施している。また、FOと行政が一体となったPMC（Project Management Committee）において、水管理、維持管理計画や罰則に関する規約（constitution）を作成し、水管理組織の改善を進めている。

灌漑施設管理・水管理分野の進捗は、第一段階の灌漑施設の改修が3モデルサイトで実施された段階であり、今後、プロジェクト終了までの2年間において、水管理、維持管理に関する技術をOJTにより移転し、また、組織の改善を進めていく必要がある。

専門家の協力により、モデル地区の概要、灌漑施設の改修事業実施前の課題、事業方針、改修工事の概要、及び成果と今後の課題を付属資料7に、また、モデル地区の灌漑施設改善にかかわる行政組織について付属資料8に取りまとめている。

なお、以下に今回の調査を通じて得られた特筆すべき点を記述する。

（1）モデル地区灌漑施設の改修工事

・専門家、Engineering Assistant（Irrigation Engineer's Office staff）（EA）、Work Supervisor（IE Office staff）（WS）、FOによるWeekly Meetingを開催し、改修工事に関する課題、対処を随時実行しており、農民と行政職員との意見交換協力体制の改善が図られつつある。

・政府職員による測量、設計、積算及び施工管理の各課程における技術力の向上がみられるが、必要十分な技術水準になるまでには、十分な経験が必要であり、今後予定される灌漑施設改修工事によりOJTで技術力の向上を図る必要がある。

・農民は、小規模な改修工事に関するコンクリート打設、盛土及び予算管理等の簡単な施工技術について、農民自身が興味をもって実施できるようになりつつある。

・農民参加（労務無償提供）は、全体工事費の15、18％の実績であり、有償PEACE地区を上回るものから、本改修工事への取り組みが積極的なものであったことが分かる。

・農民間及び灌漑や営農に関する問題点の共有、農民自身による課題の把握と解決策を見いだすことができつつある。

・潅漑施設の改修工事を実施する時期が、作付時期と重なったため、FOにおいて実施時期について調整する必要がある。

・受益農民の労務提供は、限られた農民だけが労務提供を行っているとの話もあり、不参加者へのペナルティ、不在地主に対する対処が今後の課題と思われる。

・施設の改修時に使用される設計基準は、大規模灌漑施設の新設を対象としているものであり、モデル地区のような小規模の水利施設には過大かつ複雑な構造となっている。
特に、水路横断工（床板橋）の厚さは、幅1mの水路で、上載加重がティラー程度であっても、20cm近くもある。また、圃場への分水工も複雑な構造であり、施工、維持管理も複雑になっているものである。今後、設計基準を整備することにより、工事費の節減、施工、維持管理の軽減につながるものと思われる。

（2）水管理・維持管理（O&M）

・D&F水路の改修工事が一部完了した段階であり、O&Mは、計画が策定された段階であり、まだ実際に実施されていないため、今後OJTを通じて重点的に技術移転を行う必要がある。

・維持管理に関するコンクリート工事、盛土及び予算管理などの潅漑施設建設、技術が農民に移転され、できるようになりつつある。

・行政と農民のコミュニケーションが改善されたことにより、農民自身で問題を適切にかつ迅速に解決できるようになりつつある。

・灌漑施設改修工事に係る現地調査から施工管理までをFO主体で行うこととしたことは灌漑施設が農民自らの資産であることを自覚するものとなり、O&M活動の促進につながる動機づけになった。

・維持管理費等の徴集、適切な支出を管理するためにFO内に財務担当者の育成研修を行っ

ており、これにより、適切な会計管理体制が形成されつつある。

（3）圃場水管理

・農民は、短期専門家により実施した作物の生育ステージに合わせた水田の間断潅漑手法が、農業生産性に係る営農改善につながることを実感しており、今後も圃場レベルの水管理手法について、技術移転を促進していくことが有用である。

・農民は、状の畦畔を直線状に修正し、複数枚の田面を1枚にする等の簡易的な圃場整備により、圃場内水路の水路ロスの減少、水管理の容易性の向上をモデル的に実施し、効果があると次第に実感しつつある。今後も圃場レベルの水管理の実証を行い、農民に効果を実感させることが有用である。

（4）灌漑地区計画・管理GISマッピングシステムの導入

・リハビリテーション計画の説明図面の作成や、土地利用計画の作成、土壌成分の分布図を作成し、農民に視覚的に分かりやすく説明することができるなど、GISマッピングシステムは有効に活用されている。

・GISマッピングシステムは、施設の改修事業や営農計画、状況等に関する説明資料（用水系統図、灌漑施設位置図、土壌図等）の作成道具であり、基本となる地図情報データや付帯システムを更新管理する必要がある。

・今後、これらを担当するIE（Irrigation Engineer）事務所担当者の継続的な管理能力の維持向上が必要である。

・現場レベルのカウンターパートはGISについて十分な知識が不足している状況がみられることから、今後、GISマッピングシステムの活用をしつつ知識の習得を促進する必要がある。

・GISマッピングシステムは、それ自身がまだ高価であり、完成度を高めるためには時間が必要と思われる。

・農民は、居住する地域の地図を読めることが必要であり、自分の農地や関係する水路がどこにあるのか把握でき、灌漑水路の上下流、左右岸の高さ関係等が分かることが肝要である。

・特に、現地調査において農民とともに集め、地図に書き込まれたた情報（灌漑施設の老朽化度、土壌状況等）を、現地調査に参加していない農民が把握できることが重要である。

・地図情報、土壌情報等の収集取りまとめにおいてはASCセンターの協力体制の整備が重要である。

（5）研修・マニュアル

・灌漑施設改修工事に実施と平行して、施工、施工管理、維持管理に関するPD法による研修マニュアルの作成と合わせて技術移転の促進を図る必要がある。

（6）その他

1）FOと地方行政について

・これまでの情報伝達が行政から農民への一方向に加え農民から行政への情報伝達シス

テムができたことから、FOとのコミュニケーションが改善されつつある。
・このコミュニケーションの改善は、潅漑施設の改修工事に関する事項だけでなく水管理や施設の維持管理に関するさまざまな活動に役立つものであることが認識されつつある。
・IE技術者は、潅漑施設の改修に関する施工管理、特に品質管理、圃場レベルの水管理に関する改善手法を習得し、実践することができるようになりつつある。
・なお、設計、積算に関する技術移転は複雑な手続きが必要なため、まだ不十分な面もあることから、今後の改修工事において、OJTにより習得向上を促進する必要がある。
・地方の中堅カウンターパートは、ほかの業務が多くIncreasing the Capacity of Integrated management in Irrigated Agriculture in Dry Zone（ICIM）の業務に十分参加できていないこと、また、IE技術者は、しばしば転勤があるため、十分に技術移転がなされない状況がある。地方事務所カウンターパートの十分な配置が必要である。
・各モデル地区で形成されたFOを行政側で総括的に管理する農民組織管理システムの設置が必要である。

2）今後の技術移転の課題
・今後、参加型水管理手法の普及には、意欲的なFOの選定が肝要であり、このためにFO選定の手順のマニュアル化、手挙げ方式の検討等が必要である。
・灌漑地区及びFOの現状に合わせ、実行可能な個別のコンポーネントを的確に選定し、着実に成果を出し、農民便益を実感することが必要である。
・灌漑部会が常日頃から灌漑施設を巡回し、施設に不具合がないか、用水利用に問題はないか、受益農家の不満はないか等改善点を把握し、的確に対処していく地域組織のシステムが機能し、定着することが重要である。
・受益農民は、用水配分不満がある場合などにおいて、個々のグループのみで対処することなく、当該灌漑水路の上流部、下流部の受益農民を含む単位で灌漑部会を中心に解決策を考えていくシステムを理解し、活用していくことが必要である。
・受益農民は、灌漑水路上流部においては、配水管理により作物に必要な用水量を管理することで一定の収穫が得られ、余剰用水を下流部に通水できること、また下流部においては、灌漑施設の維持管理、配水量管理により、自らの農地に用水が到達、供給されることを実感させることが重要であり、水管理、維持管理、圃場レベルの水管理が相互に補完し合い営農改善につながるものであることを理解することが必要である。
・将来的に更なる用水の有効利用を図るため、圃場レベルの水管理、ランドレベリング、圃場区画の整形による効率的な用水利用などの技術を普及していくことが必要になると考えられる。

（参考）効率的な水管理（節水）と水路システムの概念について、付属資料9に添付する。

３－５．２　農業生産・加工・流通

FO（農家組合）下のSub-committee（以下、「生産部会」と記す）に対する技術移転を行うのが農業生産・加工・流通分野の技術協力活動である。具体的には、プロジェクトで研修を受講した農業改良普及員（以下、「普及員」と記す）が生産部会の農家研修を提言し、プロジェクトが費用を拠出して研修が実施される。プロジェクトは研修後のモニタリングも行うが、それは一

定の様式によるシステム化されたものではなかったので、今回の中間レビューでモニタリングのシステム化を提言した。この場合、プロジェクトの実施主体はWorking Committee（WC）である。なお、同分野の実施は主に2名の現地雇用専門家が担当している。以下、それぞれの分野について特筆すべ点を記述する。

（1）農業生産・普及

稲作・果樹園芸・畜産に関して技術を普及している。なお、果樹園芸はプロジェクトの表示ではHome garden（家庭菜園）といわれていたものである。しかし、家庭菜園規模のものもあるが、一方で0.25～0.50エーカー（0.1～0.2ha）規模の商業的生産規模もあったことから、中間レビュー調査団のスリランカ側メンバーの提言でHomestead（農家付帯農場）となった。視察した限り、内容は果樹・野菜生産である。

普及方法は、まず視察旅行で農家の意識を喚起し、興味を持った点についてステップごとに研修を行っている。研修受講農家の生産活動実施に必要な資金は、回転資金で拠出されている。これら研修方法と回転試験の組み合わせは有効だと評価されている。事実、前述のように稲作では収量が増加し、農家付帯農場ではパパイアなどの販売で利益を得た農家が現出し、畜産では牛乳の品質向上・協同販売による増益が発現している。また、回転資金の還流率も100％に近く、還流資金で貸付対象が拡大している。

同分野は現地雇用専門家が担当しているので技術として特筆すべきことはないが、マニュアル作成の一部と普及教材作製に日本から技術移転したPD法を使用したことが効果をあげている。PD法は写真を使ってポスター型の紙芝居を普及教材として作製する方法で、従来からAudio visual centerなどが普及教材を作製して普及員に配布しているが、PD法を用いれば普及員が自ら簡単に普及教材を作製できることからプロジェクト受講後も普及員が活用している。更に、研修を受講した普及員から同僚の普及員へ技術移転され、波及効果も発現している。なお、現行のPD法を改良すれば、更に効果が増すと考えて、助言を行った。また、堆肥製造法についても改良を助言した。これらを以下に示す。

1）ポスターに写真を使っているが、線画（イラスト）にした方が印刷/複写コストが軽減され、プロジェクト後の持続性が増す。よって、写真のイラスト化を助言した。この助言を行ったところ、中間レビューのスリランカ側メンバーの進言で、急遽Audio visual centerで講義を依頼され、30分の講義を行った。参加者は約30名であった。

2）作成されたドラフトマニュアルは合計28件で、そのうち17件が農業生産関係であった。それら17件を点検したところ、本来含まれるべき内容が満たされていないマニュアルが一部に見られた。ポスター普及教材は本来マニュアル作成法であるPD法の一部を発展させたものなので、本来の方法を活用すればマニュアルが改善される。よって、本来のPD法を参照することを助言し、帰国後に資料を送付した。

3）家畜糞及び家庭用ゴミを用いた堆肥製造に改良の余地がある。家畜糞を用いた堆肥は2週間ごとに攪拌して3カ月後に完成とのことだが、それだけの頻度で攪拌すればもっと早期に製造できるはずなので、改良の余地がある。現地技術の活用が前提なので強くは勧めないが、日本のボカシ肥（固形及び液体）は他国で導入した実績があるので、より強いインパクトが必要な場合は導入を検討すべきである。また、家庭用ゴミを用いた堆肥製造については実施されていないが、有効と考えて提言した。それには日本にダンボール箱（もしく

は穴あきバケツ）を用いた簡易な方法があるが、JICAスリランカ事務所の現地スタッフによると現地のCentral Environmental Authorityが同様の技術をもっているので、採用を検討すべきであろう。これらの堆肥についても帰国後に資料を送付した。

（2）流通・加工

プロジェクトの計画で、先に生産増加をめざし、その後に加工・流通を行う予定であったことから、同分野の活動は少なく、わずかに表3-1にある実績しかない。また効果も、わずかに先進的な牛乳生産部会で協同販売による増益があるが、全体的には非常に限定的である。

表３－１　流通・加工に係る研修実績

No	分　野	実施年	研修内容	期間	参加者
1	加　工	2009	ヨーグルト・飴・ココア・水牛のヨーグルトの製法	1日	15-F
2		2009	黒ライムの製法	1日	15-F、2-SMO、1-AI、1-ADA
3		2009	石鹸の製法	0, 5日	15-F、1-SMO、1-AI、1-IDO
4		2009	マンゴ漬物の製法	1日	15-F、1-SMO、1-AI、1-IDO
5	流　通	2009	企業化方法・計画策定・評価の研修	5日	17-F、1-SMO、1-LDI、1-IDO

F＝Farmer, SMO＝Subject matter Officer, AI＝Agricultural Instructor, DI＝Livestock development Instructor, IDO＝Institutional development officer, ADA＝Assistant director of agriculture

流通について、専門的には4Pを意識する必要がある。すなわち、Product（商品）・Price（価格）・Place（売り場）・Promotion（販売促進活動）である。これらについて現地調査で8生産部会にインタビュー調査を行った。その結果、いずれの部会も、自らの商品の「売り」について意識しておらず、価格も業者依存で、売り場も認知せず、販売促進活動も実施されていないか、極めて初歩的なものしか実施されてなかった。わずかに実施されている販売促進活動では、インタビューしたなかで最も進んでいる牛乳生産部会でも共同出荷しているだけで、稲作も仲買人の買い付け価格を非組織的に情報共有しているにすぎず、農家付帯農場の果樹・野菜生産では販売促進活動を全く実施していなかった。加工についても、わずかに1つの生産部会が牛乳の加工品販売を計画しているだけであった。すなわち、極めて初歩的なレベルにある。よって、流通・加工分野の研修の実施にあたっては、残る期間に達成可能な目標水準に設定すべきである。

そして、今後に行われる流通・加工分野に係る研修について、以下の助言を行った。

① PEACEで実施している生計向上プログラム研修等を参考にする。
② 流通の基本である4P及びブランド化についての知識を基に研修で達成する目標水準を設定する。これら基本が説明されたタイとウズベキスタンの短期専門家の報告書を提供した。
③ 加工についてはPD法によるマニュアル及び研修教材作製を検討する。

第４章　評　価　結　果

４－１　5項目評価

（1）妥当性

当プロジェクトの目標は、スリランカの国家開発政策、日本のODA政策及びJICAの国別援助方針と整合性があり、また、スリランカの農村地域の貧困度の高さや、乾燥地帯における灌漑農業の生産性や収入の低さを考慮すると、当プロジェクトにより同地帯の農家の農業生産性や農業収入を向上させる強い必要性が認められる。よって当プロジェクトの妥当性は高い。

（2）有効性

政府職員及び農民組織を対象とした各種の研修が実施され、農民組織の能力が向上しつつあることなどから、プロジェクト目標はおおむね順調に達成されつつあり、また、協力期間内にプロジェクト目標が達成される見込みがあると考えられる。一方、プロジェクト目標の「総合的なメカニズム（Integrated mechanism）[2]」という言葉の意味が関係者のなかで明確に共有されていないことは懸念される。したがって当プロジェクトの有効性は中程度である。

（3）効率性

日本側及びスリランカ側の投入は計画どおり実施され、また、期待された成果はほぼ順調に発現しつつある。特に成果1・2・3については確実に達成されつつあり評価に値する。一方、成果を順調に達成するためには4.3項に記すとおりいくつかの阻害要因もあることから、当プロジェクトの効率性は中程度である。

（4）インパクト

モデルサイトにおける活動により、稲作の生産性の向上、収入増加のための方法が示されたことは評価に値する。しかし、上位目標の対象地域の人口はモデルサイトの人口と比較すると大変多いことから[3]、当プロジェクトの効果が他の地域へ確実かつ効果的に普及されない限りは、当プロジェクトが上位目標の達成に貢献することは困難である。また、特筆すべき正負のインパクトは現在のところ発現していない。このような理由から、当プロジェクトのインパクトを現時点で判断するのは時期尚早であると思われる。

（5）自立発展性

スリランカ灌漑局の当プロジェクトへの関心が高く、また、モデルサイトの農民組織の活動に対する意欲も高いことは、当プロジェクトの自立発展性を高める貢献要因となるであろう。一方、当プロジェクトの自立発展性を確保するためには、スリランカ政府は今後、いくつかの課題を克服する必要がある。例えば、同国の灌漑・農業関連分野の人的資源や予算、物的資源は限られており、現状のままでは、将来当プロジェクトの効果を他の農民組織や村々へ拡大する際に困難が予想される。限られた人的資源について一例を挙げると、同国におけ

[2] 事前評価時の判断により、和文 PDM ではこれを「総合的な研修体制」と訳している。

[3] 上位目標の対象地域であるアヌラーダプラ県とクルネーガラ県における総農家数は約 25 万 5,000 であり、モデルサイトの総農家数は約 530 である。

る州政府所属の農業普及員の担当地域は広く、1名が数千世帯の農家を受け持っているのが現状である[4]。当プロジェクトにおいても、数人の州政府所属の農業普及員が、プロジェクトの便宜供与の下モデルサイトの農民に対して優先的に訓練や普及活動を実施しているが、プロジェクト終了後、同職員が他の地域の農民にも同様の頻度にて類似の内容の訓練や普及活動を実施することができるかどうかについては疑問である。このような課題があることをかんがみ、当プロジェクトの自立発展性は中程度よりやや低いと判断する。

４－２　効果発現に貢献した要因

４－２．１　計画内容に関すること

スリランカには灌漑・農業分野における技能・知識の豊富な蓄積があり、一般的に政府職員の能力は高いといわれることから、当プロジェクトでは日本人長期専門家の投入は3名のみとし、現地のリソースを最大限に活用する計画であった。現在、計画どおり日本人長期専門家は3名であり、加えてローカル・コンサルタント3名がJICA専門家チームのメンバーとして活躍している。また、モデルサイトにおいてはJICA専門家チームと灌漑・農業・畜産分野の政府職員が協力し合って農民への技術指導を行っている。このような現地リソースの活用は、プロジェクトの効率的な運営に貢献するものである。

４－２．２　実施プロセスに関すること

現在のところ、実施プロセスに関する効果発現の貢献要因は特にない。

４－３　問題点及び問題を惹起した要因

４－３．１　計画内容に関すること

(1) 当プロジェクトの3つのモデルサイトは、アヌラーダプラ県とクルネーガラ県にまたがり、相互に26～66キロ離れて位置する。これらのサイトは、将来プロジェクト効果の波及が期待される範囲を考慮してプロジェクト開始前に選定された。JICA専門家チームはこれらサイトを頻繁に訪問する必要があるが、移動に時間が費やされるため実際の活動に費やす時間が相当制限されることがプロジェクトの実施段階になって分かった。また、車両での移動に要する燃料費がかさむこともプロジェクトの効率性にマイナスの影響を及ぼしている。

(2) 当プロジェクトでは、外国援助機関等の資金援助が投入された場合の開発モデルとして、PEACE[5]事業対象灌漑地区から1カ所モデルサイトを選出するのに加え、通常の政府予算で賄える範囲の資金による開発モデルをつくるために、PEACE対象地区以外から2カ所のモデルサイトを選出した。しかし、実際は後述の2カ所のモデルサイトにおいても、大規模な灌漑施設改修の実施及びリボルビング・ファンドの導入による農民組織の活性化の必要性が認められたため、それぞれ約600万ルピーと約150万ルピーの資金[6]が各サイトにJICAより投入された。中間レビュー時にこれらの投入について検証したところ、投入はモデルサイトでの成果発現に貢献しているが、その金額は通常の政府予算で賄える範囲の額ではないこ

[4] 当中間レビューにおいてインタビューした州政府所属の農業普及員は 1 名で 6,500 農家を担当していた。

[5] ODA ローンで 2006 年より実施されている PEACE。北東部州と北西部州を含む乾燥地域に存在する約 180 の農民組織を対象に、灌漑施設の改修・所得向上プログラム・農民組織の強化等を通じ、農村の持続的な農業開発をめざす事業であり、2011 年 5 月まで継続の予定である。

[6] 2009 年 12 月の為替レートでそれぞれ約 500 万円と 125 万円に相当する。

とが分かった。このような経緯から、3つのモデルサイトで形成予定の開発モデルはいずれも資金援助が投入されることを前提としたものになる予定である。

４－３．２　実施プロセスに関すること

（1）当プロジェクトのPDMの指標や活動の一部は、プロジェクトのめざす方向性や現状にそぐわない点が多くみられたが、中間レビュー時までそれらの見直しが検討されることがなかった。そのため、PDMの指標に沿ったプロジェクトの成果達成状況の把握が適切に行われていなかったようである。

（2）中央レベルのJCCは年4回、県レベルのJCCは年6回の開催が計画されていたが、いずれもこれまで3回しか開催されていない。上述のようにPDM見直しが遅延したのはJCCが計画どおり開催されていなかったことも一因であると思われる。

（3）灌漑局の現場の職員は、当プロジェクトのモデルサイトにおける灌漑施設の改修業務に関与するための十分な時間をもっていないようである。また、灌漑施設の改修においては、デザインや見積もりの作成を灌漑局の地域事務所が実施しているが、これらの手続きは大変複雑であり承認までに相当の時間を要する。これらが原因となって、モデルサイトにおける改修工事の開始や実施が遅延し、その結果、工事の実施が耕作期と重なり、工事を実施する農民への負担が増すこととなった。

（4）GISシステムの技術研修を受講した灌漑局の現場の職員のほとんどが他の地域に転勤したことは、技術移転の定着度にマイナスの影響を及ぼす結果となった。

（5）当プロジェクトの事前調査においては、当プロジェクトの成果が前述のPEACEに波及することが期待されていたが、中間レビューの時点ではそのような波及効果は発現していない。これは、これまで当プロジェクトはモデルサイトでの活動に集中していたためであると考えられる。

４－４　結　論

いくつかの阻害要因があったにもかかわらず、モデルサイトにおける活動が順調に進捗していることを高く評価するとともに、今後は、下記の提案事項に十分留意しつつ、モデルサイトでの実績をほかの地区にも普及するためのメカニズムの作成にも積極的に取り組むよう期待する。

また、既存のPDMの指標には非現実的な点や現状にそぐわない点がみられ、また各成果の基に最大10項目の活動が記載されており、複雑な印象を与えた。また成果5を達成するために計画されていた活動はやや目的にそぐわないものであった。そこで当中間レビューでは、指標を改定し、活動の表記を単純化し、成果5を達成するための活動を変更すべくPDMの改訂を提案し、JCCミーティングでの承認を得た。今後は、POの改訂を行い、活動の詳細と実施スケジュールについてプロジェクト関係者間で共有する必要がある。

第５章　提言と教訓

５－１　提　言

５－１．１　農民組織管理

（1）コミュニティ・デベロップメント、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を政府職員と農民に施すこと。

（2）農民の潜在的ニーズを明確にするべくCAPワープショップ[7]の結果を再検討し、更なる生産性や収入の向上のために必要に応じて計画を修正すること。

５－１．２　灌漑施設管理・水管理

（1）モデルサイトにおいてGISシステムを継続的に適用し更新していくために、灌漑技師事務所はGISシステムにより積極的に取り組むこと。具体的には、専門の部署を設けたり、専門の人材を配置したりする必要がある。

（2）農民組織の管理能力の向上のため、専任のプロジェクト・マネジャー[8]をすべての灌漑スキームに配置すること。

（3）スリランカ政府は、現場で働く政府職員が当プロジェクトの活動に滞りなく従事できるよう、車両燃料や日当に関する予算を確保すること。

（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、灌漑局の幹部職員は、現場の職員の指導・モニタリングをより頻繁に行うこと。

５－１．３　農業生産、流通・加工

（1）稲　作

1）農民組織の小委員会の会員数が多くなりすぎた場合、小委員会のなかに25～30名からなる部会を組織することにより、小委員会の機能性や活動の効率性を高めること。

2）共同出荷、加工、農産物の付加価値の向上に積極的に取り組むこと。

（2）家庭菜園

1）共同販売や農産物付加価値の向上に積極的に取り組むこと。

2）小規模の家庭菜園を実施する場合は、純所得や栄養状態の改善を通した生活改善をめざし、一連の営農技術（a package of farming techniques）の導入を図る。

（3）畜　産

1）乳牛・水牛の飼育における生産性の向上のための研修のほか、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を企画・実施すること。

2）現地で入手可能な原材料による混合飼料とコンポストの生産をモデルサイトに導入するよう試みること。

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[7] CAPとは“Community Action Planning”をさす。CAPワークショップは参加型手法を用いて農村開発計画を作成するワークショップである。

[8] スリランカでは現在、大規模灌漑スキームにはいずれも、灌漑局の灌漑マネジメント部に所属するプロジェクト・マネジャーが専属で配置されており、農民組織の管理能力の育成などにあたっているが、小・中規模灌漑スキームにはそのようなマネジャーは配置されていない。

５－１．４　その他一般

（1）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プロジェクト･チームは明確な定義を提案すること。ナショナルJCCはその提案を検討し、必要に応じて修正のうえ承認すること。

（2）研修の結果について体系だったモニタリングを実施し、その結果を研修プログラムや研修内容に反映させること。

（3）県レベルのJCCミーティングは1年に4回、中央レベルのJCCミーティングは年に2回は開催すること。

（4）政府職員の能力強化を更に推進すること。

（5）マニュアル類については、素案を改訂し最終版を作成のうえ、関連分野の研修所や研修プログラムで活用されるよう取り計らうこと。

（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を提案すること。

（7）農業・畜産関係の研修所の代表者が作業委員会[9]に加わるよう取り計らうこと。

（8）PDMを現実的な観点から改訂すること。

５－２　教　訓

５－２．１　農民組織管理

＜プラスの結果を導いた教訓＞

（1）農民組織のなかに課題別の小委員会を設け、農民組織の強化を促進することが可能である。例えば、小委員会の設置は、農民組織の会員相互の知識や経験の共有を促進するのに有効である。また小委員会は、研修・普及活動のターゲット・グループもしくは受け皿として効果的に機能することが分かった。小委員会があることにより、各分野の政府職員が研修や普及活動を実施する際、農民の参加が促進されたり、日程の調整や参加者への連絡が容易になる。

（2）農民組織は、灌漑施設の維持管理組織としてだけでなく、農業開発プログラムをより効率良く実施するための責任ある組織としても期待がもてる。

（3）CAPワークショップは、地域開発計画を作成する際に農民の参加と同意を得るための効果的な手段である。

＜マイナスの結果を導いた教訓＞

（1）プロジェクトの活動は地域住民の興味や要望に応じるだけでなく、潜在的可能性やフィージビリティーを確認して実施するべきである。例えばモデルサイトの1つであるカドゥルガスダマナにおいて住民からの要望により酪農が導入されたが、村の人口が少ないことや自然資源が限られていることなどを勘案すると、導入による農民の生産性向上や収入増加の可能性は制限的である。他の2つのモデルサイトにおいては酪農の導入は成功しているが、同じ酪農モデルがいずれのサイトにおいても効果を表すとは限らないことにも留意し、カドゥルガスダマナのような場合は生活改善のための営農の一環として採用する等の配慮をすべきであった。

[9] 作業委員会（working committees）は、当プロジェクトで実施すべき研修のニーズ分析やマニュアル作り、研修の実施などのために分野別に設置された委員会である。

５－２．２　灌漑施設及び水管理

＜プラスの結果を導いた教訓＞

(1) 毎週ミーティングを開き、灌漑施設改修における課題について段階的に話し合う手法は、政府職員と農民の双方向的なコミュニケーションを高めるのに効果的である。

(2) 灌漑施設の改修工事において、政府職員の立ち会いの下関係農家が現場にて工事内容を相互確認し合意形成を図る参加型手法は、農家間の利害関係を効果的に解消するのに有効である。

(3) 灌漑施設の改修を通して水管理や維持管理に関する農民の意欲を高めようとする際に、圃場水管理グループを形成すると効果的である。

(4) GISシステムは灌漑分野のみに活用される計画であったが、灌漑セクターのみならず、農業セクターにおいても有効活用できることが分かった。

５－２．３　農業生産、流通・加工

＜プラスの結果を導いた教訓＞

(1) リボルビング・ファンドの導入は、農民の自立を促し、意思決定能力を高めるのに有効である。

(2) PD法は農民の現場での研修に適用できる。

(3) 農民への研修は、目的をはっきりさせ、かつ段階的に実施すると効果的である。

付　属　資　料

１．調査日程

２．主要面談者

３．ミニッツ　※合同中間レビュー報告書を含む

４．スリランカ政府側団員作成フィールド調査レポート

５．農業・加工・流通グループ作成フィールド調査レポート

６．灌漑・水管理グループ分析メモ

７．モデルサイト概要

８．灌漑施設改修事業にかかわる行政組織図

９．節水灌漑と水路システム

10．調査開始時Explanatory Note（金森団員作成）

11．マニュアル等作成実績

12．研修等実施実績

1．調査日程

調査日程

日付	曜日	日程
11月6日	金	スリランカ政府側調査団員オリエンテーション
		灌漑省担当課長聞き取り調査
		ICIM専門家チーム聞き取り調査
11月7日	土	資料整理
11月8日	日	資料整理
11月9日	月	Kadurugasdamanaサイト視察
11月10日	火	Rajangana サイト視察
		PEACE事業関係者聞き取り調査
11月11日	水	Kimbulwana-oyaサイト視察
11月12日	木	JICA側調査団TV会議
11月13日	金	資料整理
11月14日	土	資料整理
11月15日	日	資料整理
11月16日	月	中間レビュー調査キックオフ会議
		灌漑省協議、聞き取り調査
		ICIM専門家チーム聞き取り調査
		合同中間レビュー調査団打ち合わせ
11月17日	火	Kimbulwana-oyaサイト視察、農家・現場行政官聞き取り調査
11月18日	水	Kadurugasudamanaサイト視察、農家・現場行政官聞き取り調査
		プロジェクト関係機関職員聞き取り調査
11月19日	木	Rajangana サイト視察、農家・現場行政官聞き取り調査
		ICIMプロジェクト事務所視察、プロジェクト作成マニュアル等確認
11月20日	金	プロジェクト関係機関職員聞き取り調査
11月21日	土	資料整理
11月22日	日	JICA側調査団打ち合わせ、報告書作成
11月23日	月	合同中間レビュー調査団打ち合わせ、報告書作成
11月24日	火	灌漑省担当課長打ち合わせ
		合同中間レビュー調査団打ち合わせ、報告書作成
11月25日	水	財務計画省(ERD/NPD)打ち合わせ
		畜産開発省打ち合わせ
		農業開発・農民サービス省打ち合わせ
		合同中間レビュー調査団打ち合わせ、報告書作成
11月26日	木	灌漑省次官打ち合わせ
		合同中間レビュー調査団打ち合わせ、報告書作成
11月27日	金	JCC会議、大使館報告

主要面談者

在スリランカ日本国大使館

樋口　晋　　二等書記官

Ministry of Irrigation and Water Management

Mr. Ivan de Silva, Secretary

Mrs. S. Samarasekara, Additional Secretary

Mr. H. S. P. Somasiri, Director General, Department of Irrigation

Mr. H. M. Jayatillake, Director (Irrigation & Water Management), ID

Mr. Ananda Jayasinghe, Director, Irrigation Management Division)

Ms. Janaki Meegastenna, Deputy Director PDOA, North Western Province

Ministry of Finance and Planning

Ms. C. Hapugoda, Director, Department of External Resources

Mr. Rohitha Wickremaratne, Assistant Director, Department of National Planning

Ms. A. Batagoda, Assistant Director, Department of External Resources

Ministry of Agriculture

Mr. K.E. Karunathilake, Additional Secretary (Technology)

Ministry of Livestock

Dr. A.O. Kodutuwakku, Additional Secretary

Dr. Kumara de Silva, Director (Livestock Development)

Dr. Wasantha Piyadasa, Director (Breeding)

PEACE Project

Mr. Neil Bandara, Project Director

Mr. Igawa, Consultant

Mr. N. P. C. de Silva, Agronomist

Rambawawa Agrarian Service Center (in-charge of Kadurugasdamana)

Dr. S. Atanpala, Veterinary Surgeon, Rambawawa

Mr. Sudath Gamage, LDI, Rambawawa

Ms. S. K. Kusumawathie, AI, Rambawawa Agrarian Service Center

PDOA, North Central Province

Mr. A. Jayatilaka, Deputy Director, PDOA, North Central Province

Mr. M. A. Wijeratna, Assistant Director, PDOA, North Central Province

DOA Inter Provinces (Anuradapura)

Mr. I. W. K. Inbulgoda, Assistant Director, DOA Inter Provinces (Anuradapura)

PDAP&H, North Central Province

Dr. Nihal Wedasinghe, Acting Director, PDAP&H, North Central Province

RDI Office, Anuradhapura
Mr. W. B. Palugaswewa, RDI, ID, Anuradhapura
Mr. H. A. Jayantha de Silve, IE, ID, Anuradhapura
Mr. A. M. J. B. Alahakoon, EA, ID, Anuradhapura
Mr. K. Ariyasiri, I. D. O., ID, Anuradhapura

Resident Engineer's Office, Rajangana
Mr. M. J. Kaleel, Resident Engineer, Rajangana
Mr. K. A. Sampath Samarajeewa, EA, Rajangana

RPM's office, Rajangana, (Irrigation Management Division)
Mr. D. M. K. H,. Dissanayake, RPM, Rajangana
Mr. G. Kalu Arachchi, Development Assistant, Rajangana
Mr. S. D. M. Rajapakshe, Institutional Development Officer, Rajangana
Mr. N. K. Vincent Perera, AI, Agrarian Service Center, Rajangana

PDAP&H, Giribawa (in-charge of Rajangana)

Dr. R. M. Priyadarshani ,Kumari, Veterinary Surgeon, Rajangana

Mr. K. D. P. Sampath, LDI, Rajangana

PDAP&H, Ibbagamuwa Office (in-charge of Kimbulwanaoya)

Dr. Kunari Herath, Veterinary Surgeon, Ibbagamuwa

Mr. Rajapaksha, LDI, Ibbagamuwa

PDOA, Zonal office, Ibbagamuwa

Mr. K. K. Jayasinghe, ADA

Mr. B. M. G. S. Basnayake, SMO

Mr. W. M. Somathilake, AI

RDI's Office, Kurunegala

Mr. Thilakarathne Bandara, RDI, Kurunegala

Ms. Nalika Liyanage, IE, Kurunegala

Mr. K. A. N. Perera, EA, Kurunegala

PDOA, North Western Province

Mr. W. Palitha, Director, PDOA, North Western Province

(From the Zonal Office, Ibbagamuwa)

Mr. K. K. Jayasinghe, Assistant Director, PDOA, North Western Province

Mr. B. M. G. S. Basnayaka, S. M. O. PDOA, North Western Province

Mr. W. M. Somatikaka, AI, PDOA, North Western Province

PDAP&H, North Western Province

Dr. S. D. K. Helath, Director, PDAP&H, North Western Province

Dr. A. D. Kaluarachchi, Deputy Director, PDAP&H, North Western Province

MINUTES OF MEETING
OF
THE NATIONAL LEVEL JOINT COORDINATION COMMITTEE FOR
THR JOINT MID-TERM REVIEW
ON
THE PROJECT FOR INCREASING THE CAPACITY OF
INTEGRATED MANAGEMENT IN
IRRIGATED AGRICULTURE IN DRY ZONE
(ICIM)

Japan International Cooperation Agency (hereinafter referred to as "JICA") and the Government of Democratic Socialist Republic of Sri Lanka (hereinafter referred to as "GOSL") have jointly organized the Mid-term Review Team (hereinafter referred to as "the Team") to conduct the mid-term review on the Project for Increasing the Capacity of Integrated Management in Irrigated Agriculture in Dry Zone (hereinafter referred to as "the Project") in accordance with the Record of Discussions on the Project.

After the intensive study and analysis of the activities and achievements of the Project, the Team prepared the Joint Mid-Term Review Report (hereinafter referred to as "the Report"), and presented it to the National level Joint Coordination Committee (hereinafter referred to as "JCC").

JCC discussed the major issues pointed out in the Report and agreed the matters attached hereto.

Colombo, 27th November, 2009

Ms. Yasuko Nishino
Leader, JICA Review Team
Senior Representative
JICA Sri Lanka Office

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

Mr. Kazuo Shimazaki
Chief Advisor
ICIM

Mr. P.U. Wickramaratna
Leader, Sri Lanka Review Team
Director (Engineering)
Ministry of Irrigation & Water Management

Attachment

1. JCC received the Report presented by the Team and decided to take necessary actions to each recommendation.

2. Chairperson of JCC pointed out the need of dissemination of learning / findings from the Project to other areas as well as the better coordination between the Project and Pro-Poor Economic Advancement and Community Enhancement Project (PEACE). Necessities of systematic monitoring and finalization of manuals were emphasized by the Team.

3. JCC approved the revision of PDM as proposed by the Team. JCC also decided to discuss the revision of Plan of Operation at the next meeting and review PDM if necessary.

4. JCC decided to monitor the actions taken by the Project Experts and Counterparts based on the recommendations done by the Team in their regular meetings and District level JCC meetings.

The Joint Mid-term Review Report
On
The Project for
Increasing the Capacity of Integrated Management in
Irrigated Agriculture in Dry Zone
(ICIM)

Ms. Yasuko Nishino
Leader, JICA Review Team
Senior Representative,
JICA Sri Lanka Office

Mr. P.U. Wickramaratna
Leader, Sri Lanka Review Team
Director (Engineering),
Ministry of Irrigation & Water Management

Colombo
November 27th, 2009

The Joint Mid-term Review Report

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List of Abbreviations and Acronyms

AI=Agriculture Instructor
CAP=Community Action Plan
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=Department of Irrigation & Water Management
IDO=Institutional Development Officer
IMD=Irrigation Management Division
IE=Irrigation Engineer
IMD=Irrigation Management Division
JCC=Joint Coordination Committee
JICA=Japan International Cooperation Agency
LDI=Livestock Development Instructor
MADAS=Ministry of Agricultural Development and Agrarian Services
MIWM=Ministry of Irrigation and Water Management
MOLD=Ministry of Livestock Development
OJT=On-the-job training
PDM=Project Design Matrix
PD Method= Process Description Method
PEACE=Pro-poor Economic Advancement and Community Enhancement Project
PRA=Participatory Rural Appraisal
RPM=Resident Project Manager
RRDI=Rice Research and Development Institute
SouthCAP= The Project on Rural Livelihood Improvement in Hambantota District
TAC=Training Advisory Committee
TRINCAP= The Technical Cooperation Project for Agricultural and Rural Development for Rehabilitation and Reconstruction through Community Approach in Trincomalee
TT=Trainers' Training
WS = Work Supervisor (IE Office staff)

1. Introduction

1.1. Objectives of the Review Study

Objectives of the Mid-term Review Study were as follows:

(1) Confirm the achievement and implementation process of the Project
(2) Evaluate the result with the five evaluation criteria
(3) Discuss the overall direction of the remaining Project period
(4) Recommend necessary measures for the improvement of the Project activities and draw lessons learned

1.2. Members of the Joint Review Team

Members of the Joint Review Team are described in the Table 1 and Table 2.

Table 1 JICA Review Team Members

Name	Designation & Organization
Ms. Yasuko Nishino – Team Leader	Senior Representative, JICA Sri Lanka Office
Dr. Hideyuki Kanamori	Senior Advisor, JICA
Mr. Manabu Kashiwabara	Deputy Director, Design Division, Rural Infrastructure Department, Rural Development Bureau, Ministry of Agriculture, Forestry and Fisheries
Mr. Arinda Elapata	Senior Project Specialist, JICA Sri Lanka Office
Ms. Tomoko Tamura	Consultant, Kaihatsu Management Consulting, Inc.

Table 2 Sri Lanka Review Team Members

Name	Designation & Organization
Mr. P. U Wickramaratna – Team Leader	Director (Engineering), Ministry of Irrigation and Water Management
Mr. G. A. M. S. Emitiyagoda	Deputy director (Extension), Head of secretariat (DOA), Ministry of Agriculture Development & Agrarian Services, Department of Agriculture
Dr. (Mrs.) Pushpa Wijewantha	Director, Livestock Planning and Economics Unit, Department of Animal Production and Health
Mr. M.M.M. Aheeyar	Division Head, Hector Kobbekaduwa Agrarian Research and Training Institute
Mr. Palitha Wadduwage	Provincial Director, Provincial Department of Agriculture, North Western Provincial Council

1.3. Schedule of the Mid-term Review

The schedule of the Mid-term Review is attached as ANNEX-1

2. Outline of the Project

2.1. Background of the Project

Sri Lanka has total population of 19 million, and land extent of 66,000 km^2. About 80% of the total population lives in the rural area, agriculture sector contributes about 20% of the GDP, and 34% of the employees are engaged in agriculture. Around 50% of the total population belongs to the lowest level of the income group, who consists of poor households and those who have risks to fall into poor households due to external factors. The major reasons for the rural poverty are: i) unstable income due to poor performance of the agriculture and ii) undeveloped regional and local industries.

In the dry zone that covers about 70% of the total land and produces about 80% of the total rice, many small and medium scale farm families remain low in their income level. The North Central Province and the dryer area in North Western Province in the dry zone have in particular very limited employment and income opportunities except for those from agricultural sector. These people are mainly engaged in paddy rice cultivation by the small and medium scale farm families, largely relying on irrigation. The following problems appear in these areas.

(1) Paddy rice productivity is low and the farm family is not able to obtain sufficient income.
(2) The terminal irrigation facilities are not operated and maintained appropriately.
(3) The efficient irrigation and water management are not conducted despite decreasing trend of rainfalls due to global warming.

In order to solve these problems, the small and medium scale farms require an integrated improvement approach combining measures of reducing the production costs, increasing land productivity by improving water application efficiency and other efficiencies, crop diversification by introducing non-rice crops, and increasing crop productivity by organization of farmers, land use and improved transport facilities etc. Especially, in irrigated agriculture, it is mandatory to increase the agricultural production and income by enlarging irrigation area through effective and fair application of water resources and increase of producing non-rice crops. The Government of Sri Lanka, thus, requires integrated capacity building of government officers of the Ministry of Irrigation and Water Management.

The Government of Sri Lanka requested a development study called the Study on Increasing the Capacity of Integrated Management in Irrigation Sector and it was carried out by JICA from October 2005 to July 2006. The Study defined the major problems and the solution directions of sectors on

irrigation, agronomy and marketing and processing, and then formulated a plan to increase the capacity of integrated management of the government officers.

In order to put the plan into practice, the Government of Sri Lanka requested to the Government of Japan to implement a technical cooperation project. on July 19, 2005. JICA was entrusted to realize the Project, and dispatched the Preliminary Survey Team from December 4, to December 15, 2006. The Minutes of Meeting was signed on December 13, 2006 during the Preliminary Survey. The Record of Discussions was signed on March 14th, 2007. The Project has then commenced on June 1st, 2007 for four years.

2.2. Summary of the Project

Project Title

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

Responsible Organization

Ministry of Irrigation and Water Management

Project Duration

1st June 2007 – 31st May 2011 (4 years)

Target Area

Anuradhapura and Kurunegala Districts

Target Group

Farm families and relevant government officers in the target area

Model Sites

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

Overall Goal

The Overall Goal of the Project is "Agricultural income of the farm families in the target area is increased".

Project Purpose

The Purpose of the Project is "An integrated mechanism is established to improve agricultural productivity".

Outputs

There are five Outputs expected to be produced by the Project as follows:

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

3. Methodology of the Review

The review was conducted jointly by JICA and Sri Lankan members of the Review Team by collecting data and information through the followings:

(1) Reviewing relevant reports and documents prepared by the Project team
(2) Studying the materials produced by the Project, such as training manuals, materials and so on.
(3) Conducting focus group discussions to the Project Team members, ministry officials involved in the Project and beneficiary farmers,
(4) Ste visit to the model sites of the Project,

4. Project Performance and Implementation Process

4.1. Inputs

4.1.1. Japanese side

Human resources

The Long-term JICA Experts were assigned for the following subjects as planned:

- Chief advisor/ FO
- Irrigation facility management / water management
- Training/ coordinator

Two short-term JICA Experts were dispatched on the subjects of GIS and on-farm water management for the period of two and one month respectively. Experience and expertise of the long term JICA Experts contributed to the effective implementation of the activities. The Sshort-term JICA Expert assigned for on-farm water management contributed much.

Training in Japan

According to the report of Ex-ante Evaluation and Inception Report, Counterpart Training in Japan and Thailand were planned to be conducted for 2-3 key counterpart personnel annually for the subjects such as land improvement enterprise, farmer organizations, GIS, etc. However, during the first two years of the Project, the proposal of counterpart training was not made by the MIWM. The first training was conducted in May 2009. Four senior officers of MIWM participated in the training.

Equipment

The Project planned to purchase three vehicles, training equipment and materials and agricultural inputs for OJT at the model sites, etc. The vehicles and equipment were purchased as planned. In addition to the planned equipment, several construction machineries and three sets of facilities for GIS mapping system were purchased. There were no particular issues for the usage of the vehicles and the equipment.

4.1.2. Sri Lankan side

Human resources:

More than 80 numbers of counterpart personnel are assigned part-time bases for each Project work. Their levels of technology and know-how have been enhanced by participating in the training/OJT and Working Committee meetings of the Project. They were positive factors to contribute production of the Outputs.

Financial resources

GoSL provided an office space for JICA Expert Team in Irrigation Training Institute with basic furniture, facilities and cost of utility. There were no particular problems with the financial contribution of the GoSL to the Project, except that the fuel allowance and subsistence for the field officers in ID were not sufficient for them to engage in the field work intensively.

4.2. Activities implemented

Almost all the planned activities were implemented as scheduled. Additional activities, such as introduction of the revolving fund schemes to the FOs and wider application of GIS mapping system were conducted. Activities on promotion of marketing and processing were still in a preliminary stage as the Project had concentrated on production so far. Planning and implementation of water management were just started, as the irrigation facilities firstly had to be rehabilitated. These activities are planned to be implemented in the second half of the Project period intensively. The activities for the Output 5 were not commenced yet.

4.3. Achievement of the Outputs

The levels of achievement of the Outputs were as follows:

Output 1: Capacity of the government officers and FOs is enhanced in the field of management of FOs

The Project almost achieved all the targets of the indicators. The trainings on management of FOs were conducted to the officers and farmers and the capacity of the FOs on management has been enhanced to a great extent by formation of the sub-committees and introduction of the revolving fund. The Project plans to conduct follow-up trainings to the officers and further facilitate enhancement of FOs in the second half of the Project period. Therefore, there is a prospect that the Output 1 will be produced by the end of the Project period.

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

Most of the planned activities were conducted as scheduled. Trainings were conducted as planned and rehabilitation of the irrigation facilities was being conducted by the FOs. The capacity of the FOs on rehabilitation of irrigation facility has been enhanced by the experience of the construction. The Project plans to conduct activities on rehabilitation, water management and some more training to the officers in the second half of the Project period. Therefore, there is a prospect that the Output 2 will be produced by the end of the Project period.

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

The planned activities for agricultural production were introduced ahead of the schedule. The activities, such as introduction of a new method for extension service (PD method) for the officers, new technologies for the farmers, vegetable and fruits cultivation and animal husbandry are showing effects to increase the income of the farm families in the model sites. The Project plans to further facilitate these activities. Therefore, there is a prospect that the Output 3 will be produced by the end of the Project period. Introduction of a systematic monitoring of the result of the training is needed

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

The Project concentrated mainly on activities of the "Output 3" in the first half of the Project period. Therefore, activities of marketing and processing have just started. The Project needs to accelerate and implement the activities on marketing and processing efficiently by making a proper plan of implementation. It is expected that the Project will produce the Output 4 by the end of the Project period

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

The activities for the Output 5 are planned to be conducted at the final stage of the Project period. It is expected that the Project will produce the Output 5 by the end of the Project period by proposing a dissemination mechanism for the improved training/facilitation skills.

4.4. Achievement of the Project Purpose

The Project Purpose is being achieved almost on schedule as a whole. Trainings to the officers and farmers were conducted and the capacity of FOs was enhanced. There is a prospect that the Project will attain the Project Purpose by the end of the Project period. However, the definition of the words "integrated mechanism" was not clearly shared among the members of the Project Team

4.5. Implementation Process

The Mid-term Review Team studied the implementation process of the Project in accordance with the criteria such as team work, communication, decision making process, progress of monitoring, etc. The Team found that the implementation process of the Project was satisfactory in general, except for the followings:

(1) National and District JCC meetings were held not as frequent as expected.
(2) Involvement and attention of the directors and other senior officers in the provincial level to the Project were not adequate so far.
(3) So far, there was no dissemination of the outputs of the ICIM to the PEACE project, which was expected at the time of the Project planning.

5. Evaluation Results

5.1. Relevance

The Project Purpose is consistent with the Sri Lankan development policy and Japanese ODA policy and Country Strategy of JICA. There is a strong need to increase agricultural productivity and income of the farm families in irrigated area in the Dry Zone. Therefore, relevance of the Project is high

5.2. Effectiveness

The Project Purpose is being achieved almost on schedule as a whole. Trainings to the officers and farmers were conducted and the capacity of FOs was enhanced. There is a prospect that the Project will attain the Project Purpose by the end of the Project period. However, the definition of the words "integrated mechanism" was not clearly shared among the members of the Project Team. The effectiveness of the Project is moderate.

5.3. Efficiency

Inputs from Japan and Sri Lanka were made as planned. The planned Outputs were being produced almost as scheduled as a whole. Especially, steady progress was observed for the production of the Outputs 1, 2 and 3, although there were several disturbing factors. Therefore, efficiency of the Project is moderate.

5.4. Impact

The Project has shown the ways to increase the productivity and income of paddy cultivation in the model sites. However, the target population of the Overall Goal is much larger than that of the model sites. It is difficult to achieve the Overall Goal unless the dissemination mechanism to be proposed by the Project is implemented. Therefore, the impact of the Project is still unknown.

5.5. Sustainability

There are several positive features to promote the sustainability of the Project, such as the keen interest of ID and motivation of the FOs. However, to ensure the sustainability, GoSL has to investigate an efficient way to overcome several issues, such as the limited human, financial and physical resources. For example, the officers in provincial extension services are in-charge of several thousands of farm families. Therefore, sustainability of the Project is lower moderate

6. Conclusion

From the results of the measurement of Project performance, examination of implementation process and value judgment based on Five Evaluation Criteria, the Mid-term Review Team studied that the Project has high relevancy to the policy and needs.

Also, the Project has produced certain expected results at the model sites and there is a prospect to achieve all indicators of the Project Purpose by the end of the Project period. However, the definition of the words "integrated mechanism" in the Project Purpose was not clearly shared among the members of the Project Team. This matter should be addressed as soon as possible.

For the Outputs level, the steady progress is observed in Output 1, 2 and 3 although there are several disturbing factors. Output 4 and 5 are expected to be produced by the end of the Project.

The Overall Goal of the Project is "Agricultural income of the farm families in the target area (Anuradhapura and Kurunegala districts) is increased". As the total number of direct beneficiary farm families of the Project is around 530, it seems difficult to achieve the Overall Goal unless the proper mechanism to disseminate improved training/ facilitation skills is implemented.

With regard to the sustainability, there are both positive and uncertain aspects.

(1) It is a positive feature for the sustainability that MIWM is showing a keen interest to maintain and

expand the effects of the Project.

(2) Functions of the FOs in model sites are being empowered to continue their activities.

(3) For the technology aspect, the Project utilized some local technologies which would be sustainable, though further training is needed for the officers to sustain the new technologies introduced by the JICA Expert Team, such as GIS mapping system, PD method and on-farm water management.

(4) The limited government budget and human resources could be obstacles and measures to secure the sustainability should be carefully considered.

Overall, the Mid-term Review Team appreciates the performance of the Project in model sites despite the several difficulties and encourages the Project Team to consolidate those produced effects and develop a mechanism of dissemination in the remaining period

In addition to the above, the Mid-term Review Team observed that some indicators in the PDM are not realistic and do not fit to the real implementation. Also, there are 5 to 10 activities in each output in PDM and it makes PDM very complicated. Therefore, the Team proposes to amend the indicators and simplify the activities as shown in ANNEX-11. The detail contents and schedule of activities should be shared in the Project by revising the Plan of Operation.

For further improvement of the Project, the Team presents several recommendations as written in the next chapter.

7. Recommendations and Lessons Learned

7.1. Recommendations

The Mid-term Review Team recommends the Project the followings:

Management of FOs

(1) Training of officers and farmers should be done for community development, leadership and farm accounting.

(2) In order to clarify potential needs of farmers, CAP should be re-examined and revised if needed for further improvements.

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.

(2) In order to improve FO management system, assignment of full time project manager should be considered in every scheme.

(3) GOSL should ensure budget allocation for fuel and subsistence for the field officers to facilitate

their involvement of the ICIM.

(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.

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.

(b) The Project is advised to enhance collective marketing and processing/value addition.

(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.

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.

(5) The draft of the manuals should be finalized and delivered to other relevant institutions to be used in training programmes.

(6) A mechanism should be proposed to disseminate improved training/ facilitation skills developed in the model site to other institutes

(7) Working Committees should include representatives of training institutes on agriculture and livestock as well.

(8) PDM should be modified from the realistic viewpoints as shown in ANNEX-11

7.2. Lessons Learned

7.2.1. Management of FOs

Positive

(1) Formation of sector-wise sub-groups within FOs could contribute to strengthening FOs. It also helps sharing of knowledge and experience among the members of the community. Better coordination with field level officers in respective government organizations has become easy due to this group approach.

(2) FOs could be responsible and accountable to make agricultural development programme more efficient.

(3) CAP workshop is an effective tool to obtain participation and consensus of farmers for community development planning.

Negative

(1)Project activities should not be totally based on the interests and request of the community but should be based on potential analysis and feasibility. This was seen at Kadurugasdamana particularly for dairy farming. Same model will not be applicable to all sites/areas.

7.2.2.Irrigation facility and water management

Positive

(1)Conducting weekly meetings to discuss issues by step-wise approach was effective in strengthening two-way communication between the government officers and the farmers.

(2)Participatory approach by joint site visit and inspection by the farmers with assistance of the officers was found to be effective in settling conflicts among the farmers at the time of rehabilitation work

(3)Formation of field canal groups was effective to motivate water management and O&M activities through rehabilitation.

(4)GIS was originally planned to be applied only for irrigation sector and it was proved to be effective. It was also found that GIS was effective for agriculture sector.

7.2.3. Agriculture production, marketing and processing

Positive

(1) Revolving Fund concept has facilitated farmers to become self-reliant and improve their decision making capabilities.

(2) PD method could be applied for field level farmer training program.

(3) Objective oriented training with step-by-step approach was more effective for beneficiary farmers.

ANNEX-1: Schedule of the Mid-Term Review Study

Date	Day	Activities
6-Nov	Fri	Orientation for GOSL Nominated Members
		Meeting with ID- Mr. Jayathileka
		Meeting with ICIM Expert Team
7-Nov	Sat	Dcumentation
8-Nov	Sun	Documentation
9-Nov	Mon	Anuradhapura - Kadurugasdamana Area
10-Nov	Tue	Anuradhapura - Rajangana Area
		Meeting with PEACE Project Staff
11-Nov	Wed	Kurunegala -Kimbulwana-oya Area
12-Nov	Thu	Documentation
13-Nov	Fri	Documentation
14-Nov	Sat	Documentation
15-Nov	Sun	Documentation
16-Nov	Mon	Kick-off Meeting at MIWM
		Discussion/ Meeting - IMD / ID / MIWM
		Meeting with ICIM Expert Team
		Meeting within Review Team Members
17-Nov	Tue	Kimbulwana-oya rehabilitation site visit (EA/WS)
		Field visit (Livestock)
		Meeting with Representatives of Farmer Organization & sub-committees and Government Field Officers
		Field visit (Parachute, seeder machine etc.)
18-Nov	Wed	Kadurugasudamana rehabilitation site visit (EA/WS)
		Field visit (Livestock)
		Meeting with Representativse of Farmer Organization & sub-committees and Government Field Officers
		Meeting with senior government Provincial Officers (RDI/PDOA (PD, DD)/PDOAPH(PD, DD)/DD/IPDD/RPM) at RDI office
19-Nov	Thu	Rajangana Field visit (home garden (Papaya))
		Field visit (Livestock)
		Rehabilitation site 1 visit (EA)
		Rehabilitation site 2 visit (EA)
		Meeting with Representatives of Farmer Organization & sub-committees and Government Field Officers
		Meeting at JICA ICIM Project office in Galgamuwa/ Inspect Manuals
20-Nov	Fri	Meeting with senior government Provincial officers (RDI/PDOA (PD, DD)/PDOAPH(PD, DD)) at RDI office in Kurunegala
		Meeting with Natural Resource Management Centre (NRMC)optional schedule)
21-Nov	Sat	Documentation
22-Nov	Sun	Discussion / Report Preparation
23-Nov	Mon	Discussion / Report Preparation
24-Nov	Tue	Meeting with IMD/ ID
		Discussion / Report Preparation
25-Nov	Wed	Meeting with ERD / NPD
		Meeting with Ministry of Livestock Development
		Meeting with Ministry of Agriculture Dgricultural Development andAgrarian Services
		Discussion / Report Preparation
26-Nov	Thu	Meeting with Secretary, Ministry of Irrigation & Water Management
		Discussion / Report Preparation
27-Nov	Fri	National JCC Meeting in Colombo

ANNEX-2: Placement Records of JICA Experts

No	Names	Field of Expertise	Duration of Assignme	2007 4	5	6	7	8	9	10	11	12	1	2	3	2008 4	5	6	7	8	9	10	11	12	1	2	3	2009 4	5	6	7	Remarks
1	Tomoki Sato	Chief Advisor/Farmer Organization	2007/6-2009/5			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			Long term expert
2	Kazuo Shimazaki	Chief Advisor/Farmer Organization	2009/6-																											■	■	Long term expert
3	Kenji Yasuda	Irrigation Facility Management/Water Management	2007/6-			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	Long term expert
4	Tetsuta Okada	Training (cum Coordination)	2007/6-			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	Long term expert
5	Kazuhiro Ishizuka	GIS	2008/1--3										■	■	■																	Short term expert
6	Toshiaki Namba	On farm water management	2008/11--11																				■									Short term expert

ANNEX-3 Placement Records of Sri Lankan Counterparts

No	Name of counterpart staff	Position/ Organization		Field of Experties	Duration of assignment		FYJ2007									FYJ2008												FYJ2009				Remarks
					from	to	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	
Ministry of Irrigation & Water Management/Irrigaton Department																																
1	Mr. A. D. S. Gunawardana	Secretary	MI & WM	Administration			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•						MI&WM=Ministry of Irrigation & Water management
2	Mr.K.W.Ivan de Silva	Secretary	MI & WM	Administration	2007	2009																				•	•	•	•	•	•	•	
3	Mr. Samarasekera	DGI	MI & WM	Irrigation Engineering	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•						
4	Mr. H.P.S. Somasiri	DGI	MI & WM	Irrigation Engineering	2007	2009																					•	•	•	•	•	•	
5	Mr. H.P.S. Somasiri	Ad.Secretary	MI & WM	Irrigation Engineering	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•						
6	Ms.S. Samarasekera	Ad.Secretary	MI & WM	Irrigation Engineering	2007	2009																					•	•	•	•	•	•	MI&WM=Ministry of Irrigation & Water management
7	Mr. P.U. Wickramarathna	Director	MI & WM	Irrigation Engineering	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
8	Mr. W. Gamage	Director	MI & WM	Irrigation Engineering	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
9	Mr. H.M.Jayathilake	Director	ID(WM)	Irrigation Engineering	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
10	Ms.Janaki Meegastenna	Deputy Director	ID(WM)	Irrigation Engineering	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
11	Dr.T.S.B.Weeresekara	Remote sensing specialist	ID (LUD)	Soil science, GIS	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
12	Ms.B.A.K.anthi Chandralatha	Deputy Director	ID (FI)	Irrigation Engineering	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	ID=Irrigation Department
13	Mr.L.S.Fernando	IE	ID	Irrigation Engineering	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
14	Mr.R.M.W.Rathnayaka/	RDI (A/Pura)	ID	Irrigation Engineering	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•								
15	Mr.T.P.Alwis/	RDI (A/Pura)	ID	Irrigation Engineering	2007	2009																				•	•	•					
16	Mr. W.D. Palugaswewa	RDI (A/Pura)	ID	Irrigation Engineering	2007	2009																					•	•	•	•	•	•	Apura=Anuradhapura
17	Mr. K.Ariyasiri	IDO (A/Pura)	ID	Institutional Development	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	IDO=Institutional Development officer
18	Mr.P.Thilakarathna/	IE (A/Pura)	ID	Irrigation Engineering	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•								
19	Mr. Jayanatha Silva	IE (A/Pura)	ID	Irrigation Engineering	2007	2009																				•	•	•	•	•	•	•	IE=Irrigation Engineer
20	Ms. W.S.M.Perera	EA (A/Pura)	ID	Technical (Civil)	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	EA=Engineering Assistant

ANNEX-3 Placement Records of Sri Lankan Counterparts (Cont.)

No	Name of counterpart staff	Position/ Organization		Field of Expertiea	Duration of assignment		FYJ2007									FYJ2008												FYJ2009				Remarks
					from	to	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	6	8	7	
Ministry of Irrigation & Water Management/Irrigaton Department																																
21	Mr. A. M. J. B. Alahakoon	EA (A/Pura)	ID	Technical (Civil)	2008	2009																						•	•	•	•	
22	Mr. G.Gunarathna	WS (A/Pura)	ID	Technical (Civil)	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	WS=Work Supervisor
23	Mr.Luxman de Silva/	RE(Rajangana)	ID	Irrigation Engineering	2007	2008	•	•	•	•	•	•	•																			
24	Mr. M.J.M.Kaleel	RE(Rajangana)	ID	Irrigation Engineering	2008	2009								•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	RE=Resident Irrigation Engineer
25	Ms.G.K.U.Dilhani	EA (Rajangana)	ID	Technical (Civil)	2007	2008	•	•	•	•	•	•	•	•	•	•	•	•														
26	Mr. K.A.Sampath Samarajeewa	EA (Rajangana)	ID	Technical (Civil)	2008	2009											•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
27	Mr. Gamini Chandrapala	Ws (Rajangana)	ID	Technical (Civil)	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
28	Mr.D.M.Aberathana/	RDI (Kgala)	ID	Irrigation Engineering	2007	2008	•	•	•	•	•	•	•	•																		
29	Mr. W.M.L.Thilakarathna Bandara	RDI (Kgala)	ID	Irrigation Engineering	2008	2009								•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Kgala=Kurunegala
30	Mr. A. M. S B. Algama	IE (Kgala)	ID	Irrigation Engineering	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
31	Ms. J.Dayawathi	IDO (Kgala)	ID	Institutional Development	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
32	Mr.W.G.J.Jayadewa	IE (Hiriyala)	ID	Irrigation Engineering	2007	2008	•	•	•	•	•	•	•	•																		
33	Mr.K.B.V.Indrapala	IE (Hiriyala)	ID	Irrigation Engineering	2008	2008								•	•	•	•	•	•													
34	Ms. R.N.Liyanage	IE (Hiriyala)	ID	Irrigation Engineering	2008	2009												•	•	•	•	•	•	•	•	•	•	•	•	•	•	
35	Ms. B.H.P.D.Gunarathna	EA (Hiriyala)	ID	Technical (Civil)	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
36	Mr.K.A.N.Perera	EA (Hiriyala)	ID	Technical (Civil)	2009	2009																									•	
37	Mr. R.M.Senanayaka	WS (Hiriyala)	ID	Technical (Civil)	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
38	Mr. K.U.D.L.Weeratunga	DA (Hiriyala)	ID	Institutional Development	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	DA=Development Assistant
39	Mr. S.Mohanarajah	Director (IT)	ID	Irrigation Engineering	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•						
40	/Mr.T.P. Alwis	Director (IT)	ID	Irrigation Engineering	2009	2009																				•	•	•	•	•	•	

ANNEX-3 Placement Records of Sri Lankan Counterparts (Cont.)

No	Name of counterpart staff	Position/ Organization		Field of Experties	Duration of assignment		FYJ2007										FYJ2008												FYJ2009				Remarks
					from	to	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	
Ministry of Irrigation & Water Management/Irrigation Department																																	
41	Mr. N.C.Samarakkody	IE (IT)	ID	Irrigation Engineering	2008	2009																				•	•	•	•	•	•	•	
42	Mr. S.M.D.L.K.De.Alwis	RE (Nachchaduwa)	ID	Irrigation Engineering	2008	2009																				•	•	•	•	•	•	•	
Irrigation Management Division (IMD)																																	
1	Mr. A.P.R. Jayasinghe	Director	IMD	Water Management	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	IMD=Irrigation Management Division
2	Mr. W.L.W.Premadasa	RPM(HQ)	IMD	Project Management	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	RPM=Resident Project Manager
3	Mr. D.M.K.H.Dissanayaka	RPM (Rajangana)	IMD	Project Management	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
4	Mr. S.D.M.Rajapaksha	IDO (Rajangana)	IMD	Project Management	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
5	Mr. K.A.Gunasna	DA (Rajangana)	IMD	Project Management	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
6	Mr. P.Ariyasena	RPM (Dewahuwa)	IMD	Project Management	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
7	Mr. S.P.R. S. Rupasinha	RPM Parakramasamudra	IMD	Project Management	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	

ANNEX-3 Placement Records of Sri Lankan Counterparts (Cont.)

No	Name of counterpart staff	Position/ Organization		Field of Experties	Duration of assignment		FYJ2007									FYJ2008												FYJ2009				Remarks
					from	to	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	
Department of Agriculture (Central Government) - DOA																																
1	Dr. Ms. Jinadari de Zoysa	DG	DOA	Pathology/ Administration	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
2	Mr. I.G. Thilakarathne	Director (FMTC)	DOA	Agri. Machinery	2007	2008	*	*	*	*	*	*	*	*																		
3	Mr. B. M. Thilakarathne	Director (FMTC)	DOA	Agri. Machinery	2008	2009								*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
4	Dr. L. Amarasinghe	Director (FCRDI)	DOA	Agriculture.	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
5	Dr. Nimal Dissanayake	Director (RRDI)	DOA	Agriculture	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
6	Dr.W.M.J.Bandara	Research officer (RRDI)	DOA	Agriculture												*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
7	Dr. W.M. Weerakoon	Senior Agronomist (RRDI)	DOA	Agriculture	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
8	G.A.M.S Emithiyagoda	DD/Extension	DOA	Agric. Extension	2008	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Improve presentation skill
9	Dr. Rohan Wijekoon	Assistant Director (Audio visual)	DOA	Communication	2008/5/26	2008/5/27											*																
10	Mr. R.D Siripala	SMS (Audio visual)	DOA	Communication	ditto	ditto											*																
11	Dr.Wekramashinghe	Duputy Director (NRMC)	DOA	Agriculture	2007	2009										*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
12	Mr.Kendaragama	Soil scientist (NRMC)	DOA	Agriculture	2007	2009										*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
13	Mr.Ajith	GIS specialist (NRMC)	DOA	Agriculture,GIS	2007	2009										*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Department of Agriculture (Inter Province - Anuradhapura)																																
1	Mr. K.A.P Athula Kithsiri	DD (IP)	DOA	Agriculture/ Administration	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
2	I.W.K Imbulgoda	ADA (IP)	DOA	Agriculture	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
3	Mr. P. Sisira Kumara	ADA (IP)	DOA	Agriculture	2007	2008	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*								
4	Mr. T. M. Gunathilaka	SMO (IP)	DOA	Agriculture	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
5	Mr. H.M Herath	SMO (IP)	DOA	Agriculture	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
6	Mr. MK Vincent perera	AI (Rajangana)	DOA	Agriculture	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
7	Mr. R.P.C.B Ramanayaka	AI(Rajangana)	DOA	Agriculture	2008	2009											*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	

ANNEX-3 Placement Records of Sri Lankan Counterparts (Cont.)

No	Name of counterpart staff	Position/ Organization		Field of Experties	Duration of assignment		FYJ2007									FYJ2008												FYJ2009				Remarks	
					from	to	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7		
Provincial Department of Agriculture (North Westrern Province)																																
1	Mr W. Palitha	PD (NWP)	PDOA	Agriculture/ Administration	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
2	Mr. O.P Kithsiri	DD (NWP)	PDOA	Agriculture	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
3	Mr. K Jayasinha	ADA (Ibbagamuwa)	PDOA	Agriculture	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
4	Mr. BMGS Basnayaka	SMO (Ibbagamuwa)	PDOA	Agriculture	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
5	Mr. WM Somathilaka	AI (Melsiripura)	PDOA	Agriculture	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
Provincial Department of Agriculture (North Central Province)																																
1	Dr. J. Jayasena	PD (NCP)	PDOA	Agriculture/ Administration	2007	2008	*	*	*	*	*	*	*	*																				
2	Mr. R.P Mahindapala	PD (NCP)	PDOA	Agriculture/ Administration	2008	2009								*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
3	Mr. A. Jayathilaka	DD(NCP)	PDOA	Agriculture	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
4	Mr. M.A Wijerathna	SMO(NCP)	PDOA	Agriculture	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
5	Ms. S.K Kusumawathi	AI(Rambewa)	PDOA	Agriculture	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
6	Mr. Himani Gamanpila /	Director (ISTI MI)	PDOA	Agriculture	2007	2008	*	*	*	*	*	*	*	*																				
7	Mr. A.M. Dharmasena	Director (ISTI MI)	PDOA	Agriculture	2008	2009								*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		

ANNEX-3 Placement Records of Sri Lankan Counterparts (Cont.)

No	Name of counterpart staff	Position/ Organization		Field of Expertise	Duration of assignment		FYJ2007									FYJ2008												FYJ2009				Remarks
					from	to	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	
Provincial Department of Animal Production & Health (North Western Province)																																
1	Dr.S. K Herath	PD (NWP)	PDOAP&H	Veterinary	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
2	Dr A.D. Kaluarachchi.	DD (NWP)	PDOAP&H	Veterinary	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
3	Dr.H.M.T.K Herath	VS(NWP)	PDOAP&H	Veterinary	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
4	Dr.H.M.C.K Herath	VS (Ibbagamuwa)	PDOAP&H	Veterinary	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
5	Mr. R.P Rajapaksha	LDI ((Ibbagamuwa)	PDOAP&H	Livestock	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
6	Dr. R.M Piyadarsani Kumari	VS (Giribawa)	PDOAP&H	Veterinary	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
7	Mr. K.P.D. Sampath	LDI (Giribawa)	PDOAP&H	Livestock	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
8	Dr. A..G Liyanagamage	VS (HQ)	DOAP&H	Veterinary	ditto	ditto										*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Provincial Department of Animal Production & Health (North Central Province)																																
1	Dr.D.R.T Rathnayaka	PD (NCP)	PDOAP&H	Veterinary		2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
2	Dr. Nihal wedisinha	DD (NCP)	PDOAP&H	Veterinary	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
3	Dr. S Attampola	VS (Rambewa)	PDOAP&H	Veterinary	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
4	Mr. Sudath Gamagha	LDI (Rambewa)	PDOAP&H	Livestock	2007	2009	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
5	Dr. Liyanagamage	Principal (AHTC)	PDOAP&H (NCP)	Veterinary	2007	2007	*	*	*	*	*	*	*																				
6	Dr. Hegodarachi	Principal (AHTC)	PDOAP&H (NCP)	Veterinary	2007	2007								*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	

ANNEX-3 Placement Records of Sri Lankan Counterparts (Cont.)

No	Name of counterpart staff	Position/ Organization		Field of Experties	Duration of assignment		FYJ2007										FYJ2008												FYJ2009				Remarks
					from	to	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	
Ministry of Agricultural Development and Agrarian Services																																	
1	Mr. T.M. Abeywickrama	Secretary	M/AD&AS	Administration	2007	2008	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•							
2	Mr. S. Amerasekera	Secretary	M/AD&AS	Administration	2009	2009																						•	•	•	•	•	
3	Ms. G.K.D.S. Gunesekera	Assis. Secretary	M/AD&AS	Administration	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
4	Mr. Dulasiri Fernando	Director (IPHT)	M/AD&AS	Processing	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
5	Mr. Ravinda Hewawitharana	Comm. General	DAD	Agrarian Development/ Administration	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Department of Agrarian Development (North Western Province)																																	
1	Mr. M.A.B.C Alokabandara	AC (NWP)	DAD	Administration	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
2	R.A.C Prasad Ranathunga	DO (Melsiripura)	DAD	Agrarian Development	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
3	Mr.J.M.P Chaminda	ARPA (Melsiripura)	DAD	Agrarian Development	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
4	Mr.M.K Bandara	DO (Rajangana)	DAD	Agrarian Development	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
5	Mr. P.U premajayantha	ARPA(Rajangana)	DAD	Agrarian Development	2007		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Department of Agrarian Development (North Central Province)																																	
1	Mr. A.M.W.M Amunugama	AC (NCP)	DAD	Administration	2007	2008	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
2	Mr. S.A.W Samarasekera	AC (NCP)	DAD	Administration	2007	2008	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
3	Ms R.M Padmawathi	DO (Rambewa)	DAD	Agrarian Development	2007	2008	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
4	Ms. B.R Manel perera	DO (Rambewa)	DAD	Agrarian Development	2008	2009														•	•	•	•	•	•	•	•	•	•	•	•	•	
5	Mr. Samaraweera	ARPA (Rambewa)	DAD	Agrarian Development	2008	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Provicial Councils																																	
1	Mr. J.M.G.B. Jayasundara	Chief Secretary	Provincial Council	Administration	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
2	Mr. A. Thalakotunage	Chief Secretary	Provincial Council	Administration	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
3	W.M.B. Weerasekara	Director	WTI	Training	2007	2009	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	

ANNEX-4: Equipment provided by JICA

Series. No.	Description of Equipment	Price (USD)	Price (Japanese Yen) (1$=120 Yen)	Price (Rupee)	No. of Equipment	Place of Custody	Conditions of equipment (*)	Frequency of Use(**)	remark
1	Copy Machine ir 3530		732,782	667,500.0	1	IGMProject Office	a	A	
2	Fax Machine		192,115	175,000.0	1	IGMProject Office	a	A	
3	Desk top computer		104,291	95,000.0	2	IGMProject Office	a	A	
4	Projector, laser pointer, Screen		409,919	373,400.0	1	IGMProject Office	a	A	
5	Scanner		29,199	27,500.0	1	IGMProject Office	a	B	
6	Video Camera		127,415	120,000.0	1	IGMProject Office	a	B	
7	Digital Camera		37,163	35,000.0	1	IGMProject Office	a	A	
8	Digital theodolite		610000		1	IGMProject Office	a	C	Used for rehabilitation
9	Auto Level		46000		2	IGMProject Office	a	C	Ditto
10	Tripod for theodolite		12000		1	IGMProject Office	a	C	Ditto
11	Tripod for leveling		12000		2	IGMProject Office	a	C	Ditto
12	Laser distance calculation equipment		60000		1	IGMProject Office	a	C	Ditto
13	Prism and tripod for Survey		27500		2	IGMProject Office	a	C	Ditto
14	Aluminum Stuff for Survey		4100		2	IGMProject Office	a	C	Ditto
15	Aluminum pole for Survey		900		4	IGMProject Office	a	C	Ditto
16	Tape measure for Survey		6600		2	IGMProject Office	a	C	Ditto
17	Plain table Survey equipment set		14500		1	IGMProject Office	a	C	Ditto
18	Planimeter		98000		1	IGMProject Office	a	C	Ditto
19	Current meter		260000		1	IGMProject Office	a	C	Used for water issue
20	N type water depth measurement equipment		142000		1	IGMProject Office	a	C	Used for cropping period
21	Hook Gauge		64000		2	IGMProject Office	a	C	Ditto
22	Windows XP (Japanese Home edition)		21600		2	IGMProject Office	a	A	
23	Microsoft Office 2003 Professional		49700		2	IGMProject Office	a	A	
24	Virus Software		5500		1	IGMProject Office	a	A	
25	Official Car (KF 1927)		8951801	8,677,000	1	IGMProject Office	a	A	
26	Official Car (KF 1928)				1	IGMProject Office	a	A	
27	Official Car (PB 4814)				1	IGMProject Office	a	A	
28	PC, LCD monitor, Portable HDD, GIS Software		444993	451,500	1 set	ID office	a	A	
29	PC, LCD monitor, Portable HDD, GIS Software, Scanner		627327	636,500	1 set	IE office (Hriyala)	a	A	
30	PC, LCD monitor, Portable HDD, GIS Software, Scanner		627327	636,500	1 set	IE office (Rajangana)	a	A	

ANNEX-4: Equipment provided by JICA (Cont.)

Series. No.	Description of Equipment	Price (USD)	Price (Japanese Yen) (1Sr=120 Yen)	Price (Rupee)	No. of Equipment	Place of Custody	Conditions of equipment (*)	Frequency of Use(**)	remark
31	PC, LCD monitor, Portable HDD, GIS Software, Scanner		627327	636, 500	1 set	IE office (Anuradhapura)	a	A	
32	Total Station		468154	475, 000	1	Land Use Division (LUD)	a	C	Used for rehabilitation term
33	Prism Set		24640	25, 000	2	Land Use Division (LUD)	a	C	Ditto
34	Distance Measuring Wheel		7885	8, 000	4	Land Use Division (LUD)	b	C	Ditto
35	GPS Unit		44844	45, 500	3	Land Use Division (LUD)	b	C	Used for GIS production
36	Soil Survey Kit		157694	160, 000	2	Land Use Division (LUD)	b	C	Used for soil survey
37	Soil Sampler Carrying Case		22669	23, 000	2	Land Use Division (LUD)	b	C	Ditto
38	Water Level Gauge		132825		1	IOM(KAD)	b	A	
39	Water Level Gauge		132825		1	IOM(RRD)	b	A	
40	Water Level Gauge		132825		1	IOM(RRD)	b	A	
41	Water Level Gauge		132825		1	IOM Project Office	b	A	
42	Computer, printer, scanner, UPS and virus software		147100	147, 100	1 set	ASC Ibbagamuwa	a	A	
43	Computer, printer, scanner, UPS and virus software		147100	147, 100	1 set	ASC Ranbewa	a	A	
44	Computer, printer, scanner, UPS and virus software		147100	147, 100	1 set	ASC Rajangana	a	A	
45	Plate Compactor		157694	160, 000	1	IE office (Hriyala)	b	C	Used for rehabilitation term
46	Plate Compactor		157694	160, 000	1	IE office (Rajangana)	b	C	Used for rehabilitation term
47	Plate Compactor		157694	160, 000	1	IE office (Anuradhapura)	b	C	Used for rehabilitation term
48	Concrete Mixer		280893	285, 000	1	IE office (Hriyala)	b	C	Used for rehabilitation term
49	Concrete Mixer		280893	285, 000	1	IE office (Rajangana)	b	C	Used for rehabilitation term
50	Concrete Mixer		280893	285, 000	1	IE office (Anuradhapura)	b	C	Used for rehabilitation term
51	Printer for A3 size paper		28582	29, 000	1	IE office (Hriyala)	a	A	
52	Printer for A4 size paper		28582	29, 000	1	IE office (Rajangana)	a	A	
53	Printer for A5 size paper		28582	29, 000	1	IE office	a	A	
54	Vibrating Roller		1034867	1, 050, 000	1	IE office (Rajangana)	b	C	Used for rehabilitation term
55	Vibrating Roller		1034867	1, 050, 000	1	IE office (Hriyala)	b	C	Used for rehabilitation term

Note: The listed equipment should be the unit price of 20, 000yen or more and be usable for one year or more, according to manual for JICA coordinator.

ANNEX-4: Equipment provided by JICA (Cont.)

* Condition of equipment

Rank	Status
a	Good condition
b	In moderate condition
c	For Repair
d	Unable to use

**** Classification of the frequency of use of the equipment**
(by the manual for JICA coordinators)

Rank	Status	frequency	others
A	used frequently	almost daily	
B	used well	1-3 times per week	
C	used in specific season(s) only		needs reasons
D	not so much used	3-11 times per	needs reasons
E	not used by specific reason		needs reasons

ANNEX-5: List of Participants to the Training in Japan

Period	Course Title	Name of the participants
From 31 Aug. 2009 to Sep 12, 2009	Sustainable Irrigation Development System	Ms. S. Samarasekara, Additional Secretary, MIWM
		Mr. P. U. Wickramarathna, Director (Engineering), MIWM
		Mr. H. M. Jayathilake, Director (ID), MIWM
		Mr. A. P. R. Jayasinghe, Director (IMD), MIWM

ANNEX-6: Accomplishment Grid

<table>
<tr><th>Narrative Summary</th><th>Verifiable Indicators</th><th>Progress as of end Oct 2009</th><th>Prospects for accomplishment</th></tr>
<tr>
<td rowspan="2">Overall Goal
Agricultural income of the farm families in the target area is increased.</td>
<td>(1) Agricultural income* of the farm families in the target area is increased at least by 25%.
(proposal)
A system is established to increase the agricultural income of the farm families in the target area at least by 25%</td>
<td>The following table shows the net profit of paddy cultivation in the three model sites before and after the Project.
Table1: Comparison of the net profit of paddy cultivation
<table>
<tr><th></th><th>Baseline data of average in 2007 (by interview survey)</th><th>During Maha 08/09 (crop cut survey)</th></tr>
<tr><td>Kim</td><td>3.1t x Rs.19,600 – Rs. 63,600 = △Rs. 2,840</td><td>6.49t x Rs. 35,000 – Rs. 63,600 = Rs. 163,550</td></tr>
<tr><td>Raj</td><td>4.4t x Rs.16,500 – Rs. 63,600 = Rs. 9,000</td><td>5.57t x Rs. 35,000 – Rs. 63,600 = Rs.131,350</td></tr>
<tr><td>Kad</td><td>4.0t x Rs.15,400 – Rs. 63,600 = △Rs.2,000</td><td>6.89t x Rs. 35,000 – Rs. 63,600 = Rs.177,550</td></tr>
<tr><td>not e</td><td>63,600 : average cost of production (Rs/ha)
Average paddy price: Rs. 15.4 – 19.6</td><td>63,600 : average cost of production (Rs/ha)*
Average paddy price: Rs. 35</td></tr>
</table>
+Note: The Project assumed there was no change in the cost of production
(Source: Project team)
Both the yield and price of rice were increased drastically. Especially, drastic increase of the price of the rice has given a positive influence to the net profit. The price of rice was increased due to the world market trend</td>
<td rowspan="2">The Project has shown the ways to increase the productivity and income of paddy cultivation in the model sites. However, the target population of the Overall Goal is much larger than that of the model sites. Therefore, it is difficult to achieve the Overall Goal unless the mechanism to be proposed by the Project is implemented.

The indicators for the Overall Goal were proposed to be modified to make them more realistic. (see the column of "verifiable indicators")</td>
</tr>
<tr>
<td>(2) Agricultural productivity† in the target area is increased at least by 25%
(proposal)
A system is established to increase the agricultural productivity of the farm families in the target area at least by 25%</td>
<td>As the following table shows, paddy yield was increased in the three model sites as a result of introduction of superior varieties, IPM , organic fertilizers and machineries, etc.
Table 2: comparison of the paddy yield (unit: ton/ha/season)
<table>
<tr><th></th><th colspan="2">Baseline data of average in 2007</th><th colspan="2">During Maha 08/09</th><th>% of increase of the model site</th><th>% of increase of the district</th></tr>
<tr><th></th><th>Model site*</th><th>Ave. of the district</th><th>Model site*</th><th>Ave. of the district</th><th></th><th></th></tr>
<tr><td>Kim</td><td>3.1</td><td>3.8</td><td>6.49</td><td>4.6</td><td>+109%</td><td>+21%</td></tr>
<tr><td>Raj</td><td>4.4</td><td>3.8</td><td>5.57</td><td>4.6</td><td>+27%</td><td>+21%</td></tr>
<tr><td>Kad</td><td>4.0</td><td>4.3</td><td>6.89</td><td>5.1</td><td>+72%</td><td>+19%</td></tr>
</table>
(source: Project team)
*Note: The data in the model sites are the yield not the average of the model sits but the average of the beneficiaries of the revolving fund.
The productivity of the farm families in the model sites is expected to be stabilized as the Project is on the way to rehabilitate irrigation facility and improve water management.
● The indicator should be amended as the "target area" is too large.</td>
</tr>
</table>

* Agricultural Income – Average household agricultural income from paddy, home gardens, Livestock, value addition and other agricultural related income generating activities

† Agricultural Productivity - Productivity increase reflects improved yield per unit area, increased cropping intensity, etc.

ANNEX-6: Accomplishment Grid

<table>
<tr><th>Narrative Summary</th><th>Verifiable Indicators</th><th>Progress as of end Oct 2009</th><th>Prospects for accomplishment</th></tr>
<tr><td rowspan="2"><u>Project Purpose</u>
An integrated mechanism is established to improve agricultural productivity through capacity building of government officers and FOs (farmer organizations).</td><td>(1) At least two series of integrated training programmes are conducted in the target area during the Project implementation period..
(proposal)
Degree of satisfaction among the trained officers is at least 50%.</td><td>● Definition of the words "integrated mechanism" was discussed; however it was not finalized yet.

(a) Substantial number of training programs has been conducted for different components; however they need to be integrated into one program.
(b) The Project is going to conduct a trainers' training on the "integrated development model" at the final stage of the Project.

● The original indicator is proposed to be used for an indicator of the Output 5. Therefore, a revised indicator is proposed.</td><td rowspan="2">The Project Purpose is being achieved almost on schedule as a whole. Trainings to the officers and farmers were conducted and the capacity of FOs was enhanced. There is a prospect that the Project will attain the Project Purpose by the end of the Project period.
However, the definition of the words "integrated mechanism" was not clearly shared among the members of the Project Team
Indicators of (1) and (2) were proposed to be modified to make them more appropriate.</td></tr>
<tr><td>(2) Degree of satisfaction among the farmers in the target area with the trainings and extension services is increased at least by 50%
(proposal)
Degree of satisfaction among the trained farmers in the model sites with the trainings and extension services is at least 50%</td><td>(a) According to the base-line survey in Nov. 2007, the degree of satisfaction among the farmers of the model sites to the training conducted by the Project were as follows:
Table 3: Degree of satisfaction among the famers to the training conducted in the past
<table>
<tr><th></th><th>Kim</th><th>Raj</th><th>Kad</th></tr>
<tr><td>Supporting system</td><td>40%</td><td>46%</td><td>45%</td></tr>
<tr><td>Training on agricultural production</td><td>30%</td><td>38%</td><td>37%</td></tr>
<tr><td>Training on irrigation</td><td>n/a</td><td>n/a</td><td>n/a</td></tr>
<tr><td>Training on FO management</td><td>20%</td><td>29%</td><td>25%</td></tr>
</table>
(Source: Base-line report)
(b) According to the interview survey conducted by the Project in Aug. 2009 to the office bearers and its members of the sub committees of the three FOs, the degree of satisfaction among them was over 80% for all the training courses on the following four subjects.
Table4: Satisfaction of the members of the sub-committees and office bearers of the FOs with the training courses
<table>
<tr><th>Training</th><th>Good</th><th>Fair</th><th>Bad</th><th>NA</th></tr>
<tr><td>Irrigation</td><td>88%</td><td>3%</td><td>0%</td><td>9%</td></tr>
<tr><td>Paddy</td><td>97%</td><td>3%</td><td>0%</td><td>0%</td></tr>
<tr><td>Home garden</td><td>83%</td><td>11%</td><td>3%</td><td>3%</td></tr>
<tr><td>Livestock</td><td>84%</td><td>10%</td><td>6%</td><td>0%</td></tr>
</table>
(source: Project Team)
(c) The same kind of survey should be conducted again at the end of the Project, not only for the members of the sub-committees, but to the trained farmers of the model sites (or random samples)
● The words in the indicator "in the target area", Kurunegala and Anuradhapura districts should be a mistake, since the Project site is only the three model sites as mentioned in the Record of Discussion of the Project.
● Some of the training had not been conducted before the Project. The number of participants to the training</td></tr>
</table>

ANNEX-6: Accomplishment Grid

<table>
<tr><th>Narrative Summary</th><th>Verifiable Indicators</th><th>Progress as of end Oct. 2009</th><th>Prospects for accomplishment</th></tr>
<tr><td></td><td></td><td>was also very limited before the Project. In this way, as the conditions before and after the Project are very much different, the degree of satisfaction cannot be compared.
● Therefore, amendment of indicator was proposed. (see the column of "verifiable indicators")</td><td></td></tr>
<tr><td></td><td>(3) Result of the Capacity Assessment of the FOs in the target area is improved at least by 25%

(proposal)
Capacity Assessment of the FOs in the model sites is improved at least by 25%</td><td>(a) The results of the capacity assessment conducted in the baseline survey in Nov. 2007 were as follows: Kimbulwana Oya: 14.3, Rajangana: 15.3, Kadurugasdamana: 17.3
(b) Membership, attendance rates to the general meetings, number of sub-committees, collection rates of O&M fees and salaries, which were the indicators of the above mentioned capacity assessment, were improved as shown in the Table 8. Therefore, it is understood that the capacity of the FOs has been improved.
Table 8: Status of FOs in Nov. 2007 vs. Nov. 2009
<table>
<tr><th rowspan="2">Item</th><th colspan="2">Kimbulwana Oya</th><th colspan="2">Rajangana</th><th colspan="2">Kadurugasdamana</th></tr>
<tr><th>Nov. 2007</th><th>Nov. 2009</th><th>Nov. 2007</th><th>Nov. 2009</th><th>Nov. 2007</th><th>Nov. 2009</th></tr>
<tr><td>1) Nos. of FO membership out of Nos. of eligible farmers</td><td>75%</td><td>100%</td><td>83%</td><td>95%</td><td>100%</td><td>100%</td></tr>
<tr><td>2) No. of FO membership</td><td>127</td><td>169 (+30%)</td><td>249</td><td>285 (+13%)</td><td>61</td><td>61 (+0%)</td></tr>
<tr><td>3) Attendance rate of the last general meeting</td><td>9%</td><td>40%</td><td>8%</td><td>30%</td><td>25%</td><td>40%</td></tr>
<tr><td>4) Sub committees</td><td>No</td><td>4</td><td>No</td><td>4</td><td>No</td><td>4</td></tr>
<tr><td>5) Collection rate of O&M fee</td><td>0%</td><td>88%</td><td>70%</td><td>90%</td><td>0%</td><td>58%</td></tr>
<tr><td>6) Collection rate of salaris</td><td>52%</td><td>96%</td><td>n/a</td><td>n/a</td><td>0%</td><td>58%</td></tr>
</table>
(Source: base-line survey report & reports on FO condition)
*Note: The FO of Rajangana does not have a custom of collect salaries as it is usually so in traditional irrigation schemes.
(source: Project team)

(c) The progress of the capacity assessment is planned to be conducted at the end of the Project to ensure the above mentioned improvement.
● Amendment of the indicator was proposed, as the Project works not for the FOs in the "target area" but the FOs in the model sites.</td><td></td></tr>
<tr><td></td><td>(4) Training Advisory Committee functions continuously</td><td>After TAC was formed, committees, composed of directors of Provincial headquarters, their deputies and other technical officers on the subjects on Irrigation, agriculture, GIS, livestock, etc. were formed under the TAC in order to implement the training programme efficiently. The TAC is functioning continuously with the assistance of the working committees.</td><td></td></tr>
</table>

ANNEX-6: Accomplishment Grid

<table>
<tr><th>Narrative Summary</th><th>Verifiable Indicators</th><th>Progress as of end Oct. 2009</th><th>Prospects for accomplishment</th></tr>
<tr><td rowspan="3">Outputs
Capacity of the government officers and FOs (farmer organizations) is enhanced in the fields of:
1. Management of FOs</td><td>Among the government officers who participated in the trainings conducted by the Project
1.1) More than 80% gained good understanding of the trained contents.
(proposal)
More than 80% express "the training was satisfactory".</td><td>(a) The Project conducted the training to the government officers on the subject of "Base-line survey methodology" and "CAP workshop methodology".
(b) As a result of the Mid-term Review, it was found that all the officers participated in the training mentioned that they acknowledged the importance and effect of the survey and the workshop. Therefore, it can be assumed that more than 80% of the trained officers gained good understanding of the trained subjects.
(c) The Project Team plans to conduct some more training to the officers on the subject such as community development, leadership development facilitation skills, etc.
● The meaning of the word "good understanding" is vague and difficult to define. Therefore, amendment of the indicator was proposed (see the column of "verifiable indicators")</td><td rowspan="3">The Project almost achieved all the target of the indicators. The trainings on management of FOs were conducted to the officers and farmers and the capacity of the FOs on management has been enhanced to a great extent by formation of the sub-committees and introduction of the revolving fund. The Project plans to conduct follow-up trainings to the officers and further facilitate enhancement of FOs in the second half of the project period. Therefore, there is a prospect that the Output 1 will be produced by the end of the project period.
Indicators of 1.1), 1.2) and 1.4) were proposed to be modified to make them more appropriate.</td></tr>
<tr><td>1.2) More than 60% practiced the trained skills and methods in the fields
(proposal)
More than 60% practiced at least two or more trained skills/ methods in the field.</td><td>(a) The officers participated in the above-mentioned TOT and those who participated in the implementation of the survey and the workshops in the model sites are as follows:
Table 5: No. of trained and implemented : base-line survey and CAP workshop
<table>
<tr><th></th><th>Participated in TOT</th><th>Participated in the implementation in the model sites</th></tr>
<tr><td>Baseline survey</td><td>20</td><td>16 (80%) They conducted the survey as enumerators</td></tr>
<tr><td>CAP workshop</td><td>24</td><td>20 (83%) They participated in the workshop as resource persons</td></tr>
</table>
(source: Project team)
(b) The Project Team plans to conduct several follow-up training on the subjects so that the officers further develop their capacity on participatory community development.
● As all the participants of the training may not be able to obtain opportunities to practice the trained skill, the indicator was proposed to be amended. (see the column of "verifiable indicators")</td></tr>
<tr><td>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</td><td>All the FOs (in the 3 model sites) formulated CAP and are implementing it. Government officers had facilitated CAP workshops.</td></tr>
</table>

ANNEX-6: Accomplishment Grid

<table>
<tr><th>Narrative Summary</th><th>Verifiable Indicators</th><th>Progress as of end Oct 2009</th><th>Prospects for accomplishment</th></tr>
<tr><td></td><td>1.4)FOs increased the membership by at least by 20%
(proposal)
At least 95%of the eligible farmers obtains FO membership.</td><td>The increase of the membership of the FOs in the model sites was as follows. In Kimbulwana Oya and Rajangana, the membership was increased. In Kadurugasdamana, it reached to 100% already in early stage of the Project period.
Table 6: FO membership
<table>
<tr><th rowspan="2">Item</th><th colspan="2">Kimbulwana Oya</th><th colspan="2">Rajangana</th><th colspan="2">Kadurugasdamana</th></tr>
<tr><th>Nov. 2007</th><th>Nov. 2009</th><th>Nov. 2007</th><th>Nov. 2009</th><th>Nov. 2007</th><th>Nov. 2009</th></tr>
<tr><td>Nos. of FO membership out of Nos. of eligible farmers</td><td>75%</td><td>100%</td><td>83%</td><td>95%</td><td>100%</td><td>100%</td></tr>
<tr><td>No. of FO membership</td><td>127</td><td>169 (+30%)</td><td>249</td><td>285 (+13%)</td><td>61</td><td>61 (+0%)</td></tr>
</table>
● However, the Project is not in a position to achieve the target, as the membership is already around 100% in the 3 model sites and will not be able to be increased further. . Therefore indicator was proposed to be amended (see the column of "verifiable Indicators")</td><td></td></tr>
<tr><td></td><td>1.5)Number of attendants of the annual general meetings and regular meetings of FOs were increased at least by 50%</td><td>The Project is has achieved the target indicator of "1.5 as shown in the following table.
Table 7: Attendance of the general meetings
<table>
<tr><th colspan="2">Kimbulwana Oya</th><th colspan="2">Rajangana</th><th colspan="2">Kadurugasdamana</th></tr>
<tr><td>Nov. 2007</td><td>Nov. 2008</td><td>Nov. 2007</td><td>Nov. 2008</td><td>Nov. 2007</td><td>Nov. 2008</td></tr>
<tr><td>12</td><td>68 (+467%)</td><td>20</td><td>85 (+325%)</td><td>15</td><td>24 (+60%)</td></tr>
</table></td><td></td></tr>
<tr><td></td><td>1.6) More than 1 sub-committee was established in each FO.</td><td>Four sub-committees, namely, irrigation, paddy, home garden and livestock, were formed in all the model sites. Revolving fund scheme was introduced to the FOs. Members of the sub-committees are effectively utilizing the scheme. They are maintaining book keeping properly and the repayment rate of the scheme is satisfactory.</td><td></td></tr>
<tr><td>2. Irrigation facility management and water management</td><td>Among the government officers who participated in the training conducted by the Project
2.1) More than 80% gained good understanding of the trained contents
(proposal)</td><td>(a) The Project provided the training to the government officers on the subject of "GIS mapping system
(b) As a result of the Mid-term Review , it was found that some officers in Irrigation Dept. and Agriculture Dept. who participated in the workshop of GIS acknowledged that the GIS is an effective tool for land use planning, rehabilitation, water management, extension services and training to farmers.
(c) The Project Team plans to conduct more training on GIS mapping system.
● The meaning of the word "good understanding" is vague and difficult to define. Therefore, amendment of the indicator was proposed (see the column of "verifiable Indicators")</td><td>Most of the planned activities were conducted as scheduled. Trainings were conducted as planned and rehabilitation of the irrigation facilities was being conducted by the FOs. The capacity of the FOs on rehabilitation of irrigation facility has been enhanced by the</td></tr>
</table>

ANNEX-6: Accomplishment Grid

<table>
<tr><th>Narrative Summary</th><th>Verifiable Indicators</th><th>Progress as of end Oct 2009</th><th>Prospects for accomplishment</th></tr>
<tr><td></td><td>More than 80% express "the training was satisfactory".</td><td></td><td rowspan="3">experience of the construction. The Project plans to conduct activities on rehabilitation, water management and some more training to the officers in the second half of the project period. Therefore, there is a prospect that the Output 2 will be produced by the end of the project period.
Indicators of 2.1), 2.2) and 2.4) were proposed to be modified to make them more appropriate.</td></tr>
<tr><td></td><td>2.2) More than 60% practiced the trained skills and methods in the fields

(proposal)
More than 60% practiced at least one trained skills and methods in the field</td><td>(a) The officers participated in the above-mentioned TOT , which consist of production of GIS map and its application to the sites are as follows. Therefore, the Project achieved in utilization/ application of the GIS maps, however still did not achieve the target in production of the maps.

Table 9: No. of trained and implemented : GIS Mapping
<table><tr><td></td><td>Participated in TOT</td><td>Implemented application to the sites</td><td>Produced GIS maps</td></tr><tr><td>GIS mapping</td><td>10</td><td>9 (90%)</td><td>0 (0%)</td></tr></table>(source: Project team)

(b) As a result of the Mid-term Review, it was found that there is no officers in ID offices who can produce maps by using GIS mapping system. Three Engineering assistants who participated in TOT were transferred to other area. The software provided by the Project is not utilized continuously.
● As all the participants of the training may not be able to obtain opportunities to practice the trained skill, the indicator was proposed to be amended. (see the column of "verifiable indicators")</td></tr>
<tr><td></td><td>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</td><td>(a) Two FOs completed their contract in 2008 and the other FO is also nearly completed it. The work has been done with remarkable contribution of the farmers. (see the following table) The value of labor contribution was more than 20% in some cases while the rate of contribution in other rehabilitation Projects is around 10%.
(b) As a result of the interview survey conducted by the Project in Aug. 2009, farmers evaluation for rehabilitation work is good (75%) and fair (22%).
(c) The Mid-term Review found that farmers gained experience and knowledge on labor management, book keeping, basic skills of construction, etc. They also gained confidence to work as a contractor.
(d) All the three FOs mentioned that government officers helped them during the construction by giving them training and supervision. Some officers in Irrigation Department seem to be not totally positive for the concept of community contract.
(e) However, it was found in the field survey that in Kadurugasdamana and Kimbulwana Oya, farmers had a difficulty to work during the cultivation season. The FO in Kadurugasdamana is showing reluctance in implementation of the new contract of 2009 saying that they cannot attend construction during water issue period. Some farmers mentioned that it is difficult for them to provide more free labor as they lose daily wages by doing so, although they are willing to contribute to some extent.</td></tr>
</table>

ANNEX-6: Accomplishment Grid

Narrative Summary	Verifiable Indicators	Progress as of end Oct 2009	Prospects for accomplishment

Model site	Contents	FO contribution	Total civil cost *	Contract Period
Kadurugasda mana -2008 (completed)	Road rehabilitation(420m) Concrete canal (180m) Tractor crossing 4Nos Head wall3, FTO9, Gate4	360,500 Rs (15.3% of the total civil cost)	2,358,664 Rs	22nd.Dec.08–5th.Mar.09
Kadurugasda mana-2009 (on going)	Concrete U flume (199m) Retaining wall (93m) FTO (2Nos.) Over crossing (1 No) Farm road rehabilitation	600,954Rs. (24.2%)	2,485,041Rs.	6th Oct. 09 - 5th Jan 10
Kimbulwana Oya -2008 (completed)	Road rehabilitation(420m) Concrete canal(144m) Off take(1nos) culvert(1nos)	308,078 Rs (26.8%)	1,156,092 Rs	9th.Jan.09 15th.Mar.09
Kimbulwana Oya – 2009 (completed)	Concrete canal Road rehabilitation	308,507 Rs (21.4%)	1,442,693Rs.	21st .May.09-21st.Sep.09
Rajangana -2009 (on going)	Canal earth work Rectangle canal lining Half round pipe lining FTO, Drop structure	407,157Rs (10.3%)	3,936,657Rs	17th .Mar.09-16th .Oct.16

Table 10: Summary of achievement for the rehabilitation of irrigation facilities by FOs
(source: Project Team)

2.4) All the FOs became capable of formulating and utilizing irrigation schedule *(proposal)* *All the FOs became capable of formulating irrigation schedule*	The activities on formulation of irrigation schedule have just started. The Project plans to facilitate the activities intensively from Maha season 2009 onwards. ●The amendment of the indicator was proposed as the word "utilization" gives the same meaning with the word "conduct" in the following indicator 2.5.

ANNEX-6: Accomplishment Grid

Narrative Summary	Verifiable Indicators	Progress as of end Oct 2009	Prospects for accomplishment
	2.5) All the FOs conducted appropriate water management based on the irrigation schedule	The activities on utilization of irrigation schedule will be started. The Project plans to facilitate the activities intensively from Maha season 2009 onwards.	
3. Agricultural production	Among the government officers who participated in the training conducted by the Project 3.1) More than 80% gained good understanding of the trained contents *(proposal)* *More than 80% expressed that "the training was satisfactory"*	(a) The Project identified a need to develop skills of the extension officers and conducted training on "PD method. (b) The Mid-term Review Team found that all the officers who participated in the training acknowledged that the training was effective. ● The meaning of the word "good understanding" is vague and difficult to define. Therefore, amendment of the indicator was proposed (see the column of "verifiable indicators")	The planned activities for agricultural production were introduced ahead of the schedule. The activities, such as introduction of a new method for extension service (PD method) for the officers, new technologies for the farmers, vegetable and fruits cultivation and animal husbandry are showing effects to increase the income of the farm families in the model sites. The Project plans to further facilitate these activities. Therefore, there is a prospect that the Output 3 will be produced by the end of the project period. Introduction of a systematic monitoring of the result of the training is needed. Indicators of 3.1), 3.2), 3.3) and 3.4) were proposed to be modified to make them more appropriate.
	3.2) More than 60% practiced the trained skills and methods in the fields *(proposal)* *More than 60% practiced at least one trained skills/ methods in the field*	(a)According to the knowledge of the JICA Expert Team, 9 out of 16 participants of the training on PD method (56%) were practicing the method in their daily work. However, systematic monitoring of the result of the training has not been done. (b)The Mid-term Review Team found that all the officers participated in the training of PD method are utilizing the method in their daily work. Most of the officers produced some more materials by themselves after the training and are using them not only for the model sites but also in other villages. Colleagues of the trained officers are also learnt about the material in some case. (c) Therefore, it can be considered that more than 60% of the trained officers are practicing it. (d) The Project plans to conduct some more training on the PD method to the officers in all the levels. ● As all the participants of the training may not be able to obtain opportunities to practice the trained skill, the indicator was proposed to be amended. (see the column of "verifiable indicators")	
	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 trained skills	(a) Skills and technologies such as seed paddy production, appropriate use of agro-chemicals, integrated pest management (IPM), best agronomic practices such as good land preparation, field establishment and post harvest technology were introduced by the officers to the farmers. (b) As a result of the interview survey conducted by the Project in Aug. 2009, it was found that 84-100% of the farmers who attended the training courses on agriculture production (paddy, home garden and livestock) have applied the trained skill. Table 11: Trained skill application to each activity by farmers (Aug.09)	

Narrative Summary	Verifiable Indicators	Progress as of end Oct 2009	Prospects for accomplishment
	on such as production of seeds (paddy), appropriate usage of fertilizers and agro-chemicals, cropping management, post harvest technology *(proposal)* *Practiced at least one trained skill on paddy, vegetable and fruist cultivation and livestock production.*	(c) According to the knowledge of the Project Team, as shown in the Table 12, there are varieties in the percentage of the farmers who are actually practicing the improved technologies Table 12: Number and % of the farmers practicing the improved technologies Trained skills / Kimbulwana Oya / Rajangana / Kadurugasdamana / Total Production of seed paddy / 3 (1.8%) / 5 (1.7%) / 6 (8.2%) / 13 (2.5%) Integrated pest Mgmt. (IPM) / 20 (11.8%) / 15 (5%) / 15 (24.6%) / 50 (9.4%) Use recommended fertilizers / 39 (23.1%) / 40 (13.3%) / 22 (36.1%) / 101 (19.1%) Parachute method / n/a / 7 (2.3%) / n/a / 7 (1.3%) Seeder machine / 1 (0.6%) / 2 (0.7%) / 1 (1.6%) / 4 (0.8%) Livestock / 14 (8.2%) / 17(6.0%) / 6(9.8%) / 37(7.2%) Home gardening / 8(4.7%) / 21(7.4%) / 2(3.3%) / 31(6.0%) (Source: Project team) Note: Percentages in the above table is the farmers who are practicing the technologies out of the total FO membership. ● It is impossible for the farmers to apply all the technologies. And livestock production should be included. Therefore, the amendment of the indicator was proposed. (see the column of "verifiable indicators")	
	3.4) Introduced crop diversification and/or animal husbandry (proposal) *Introduce diversification in farm management with vegetable/ fruist cultivation or animal husbandry.*	(a) 10 farmers in Kimbulwana Oya, that is 5.9% of the FO members on paddy introduced crop diversification. The promotion of crop diversification is found to be difficult due tothe following factors: • Current market price of paddy (very high) • The price of rice is more stable than the prices of vegetable and OFCs. • Paddy cultivation is less capital incentive • Paddy cultivation has less risk of crop damage due to weather condition. • Most of the land in the model sites are poor in water drainage and is not suitable for the diversification (b) The following numbers of farmers practices animal husbandry (dairy farming). Percentages in the table 13 are the farmers who introduced animal husbandry out of the total FO membership. Table 13: No. and % of the farmers introduced animal husbandry Kimbulwana Oya / Rajangana / Kadurugasdamana / Total 14 (8.2%) / 17(6.0%) / 6(9.8%) / 37(7.2%)	

	very much	some extent	Nothing	NA
Paddy	76%	24%	0%	0%
HG	50%	39%	6%	5%
LS	74%	10%	6%	10%

<table>
<tr><th>Narrative Summary</th><th>Verifiable Indicators</th><th>Progress as of end Oct 2009</th><th>Prospects for accomplishment</th></tr>
<tr><td></td><td></td><td>● Although the farmers in the model sites have an limited opportunities for crop diversification, they can apply diversification by introduction of vegetables/ fruits cultivation or animal husbandry in order to increase the agriculture income. Considering the fact that the ultimate objective of crop diversification is stabilizing and increasing income, the amendment of the indicator was proposed by replacing the word "crop diversification" by "farm management diversification" (see the column of "verifiable indicators")</td><td></td></tr>
<tr><td></td><td>3.5) Implemented collective cultivation based on the cropping plans</td><td>The Project defined "collective cultivation" when farmers implement farming with consideration of "timing of planting", "a few variety with same age" and "collective purchasing of input". At the moment, the following numbers of farmers are conducting collective cultivation:
Table 14: No. of farmers practicing collective cultivation
<table>
<tr><th></th><th>Kimbulwana Oya</th><th>Rajangana</th><th>Kadurugasdamana</th><th>Total</th></tr>
<tr><td>Paddy</td><td>39 (23.1%)</td><td>40 (13.3%)</td><td>22 (36.1%)</td><td>101 (19.1%)</td></tr>
<tr><td>Fruits</td><td>0</td><td>8</td><td>0</td><td>8</td></tr>
<tr><td>Total</td><td>39 (23.1%)</td><td>48 (16.8%)</td><td>22 (36.1%)</td><td>109 (21.2%)</td></tr>
</table>
(source: Project Team)
The Project plans to facilitate collective cultivation more in the second half of the Project period.</td><td></td></tr>
<tr><td>4. Marketing and processing</td><td>Among the government officers who participated in the training conducted by the Project
4.1) More than 80% gained good understanding of the trained contents

(proposal)
More than 80% expressed that "the training was satisfactory"</td><td>(a) Entrepreneurship training was conducted and four officers were participated. According to the evaluation conducted at the end of the training, all of them expressed satisfaction to the training contents, methodology, materials and management.
(b) The Project plans to conduct training on marketing and processing to the officers in the second half of the Project period.

● The meaning of the word "good understanding" is vague and difficult to define. Therefore, amendment of the indicator was proposed (see the column of "verifiable indicators")</td><td rowspan="2">The Project concentrated mainly on activities of the "Output 3" in the first half of the project period. Therefore, activities of marketing and processing have just started. The Project needs to accelerate and implement the activities on marketing and processing efficiently by making a proper plan of implementation. It is expected that the Project will produce the Output 4 by the end of the project period
Indicators of 4.1) and 4.2) were proposed to be modified and indicators 4.3), 4.4) and 4.5) were proposed to be combined to make them more appropriate.</td></tr>
<tr><td></td><td>4.2) More than 60% practiced the trained skills and methods in the fields

(proposal)
More than 60% practiced</td><td>The Project concentrated on production and plans to promote marketing and processing in the second half of the Project period.

● As all the participants of the training may not be able to obtain opportunities to practice the trained skill, the indicator was proposed to be amended. (see the column of "verifiable indicators")</td></tr>
</table>

ANNEX-6: Accomplishment Grid

Narrative Summary	Verifiable Indicators	Progress as of end Oct 2009	Prospects for accomplishment
	at least one trained skills/ methods in the fields		
	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 collective marketing	11 farmers in Kimbulwana Oya and 14 farmers in Rajangana are conducting collective marketing for dairy production. They are 56% and 38.6% of the total number of the sub-committee members of livestock in Kimbulwana Oya and Rajangana respectively. ● Considering the level of the farmers on marketing and processing, the Project Team proposed to integrate 4.3), 4.4) and 4.5) into one. (see the column of "verifiable indicators")	
	4.4) Increased capacity on quality control of their products	Quality improvement of agriculture products is promoted under the activities of "3. Agriculture Production" ● Considering the level of the farmers on marketing and processing, the Project Team proposed to integrate 4.3), 4.4) and 4.5) into one. (see the column of "verifiable indicators")	
	4.5) Understood the methods of collecting market information	Training/ OJT on collection and utilization of market information has not been conducted as proper system is not established in Sri Lanka. ● Considering the level of the farmers on marketing and processing, the Project Team proposed to integrate 4.3), 4.4) and 4.5) into one. (see the column of "verifiable indicators")	
	(proposal: instead of 4.3), 4.4) and 4.5)) Implemented at least one improvement measure of processing/ marketing.		
Outputs in the training institutes 5. A mechanism is introduced for the government officers and training institutes to	5.1) At least one Trainers' Training is conducted during the implementation period of the Project at the training institutes	● To specify the difference of the training to the officers mentioned in the indicators of the Output 1 to 4, the amendment of the indicator 5.1 was proposed. (see the column of "verifiable indicators") The Project plans to conduct integrated training programme, which contains overviews of the sub-sectors which were implemented in the Project and method for coordination of these sub-sectors.	The activities for the Output 5 are planned to be conducted at the final stage of the Project period. It is expected that the Project will produce the Output 5 by the end of the project period

ANNEX-6: Accomplishment Grid

Narrative Summary	Verifiable Indicators	Progress as of end Oct 2009	Prospects for accomplishment
disseminate the improved training/facilitation skills developed in the model sites, to other officers and institutes. *(proposal)* *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.* **The description of narrative summary was proposed to be amended as "introduction" of a mechanism is too difficult to do within the limited time of the Project.*	*(proposal)* *At least one integrated training programme is conducted.*		by proposing a dissemination mechanism.
	5.2)The participants of the Trainers' Trainings conducted training for the field staff of the target area, at least 2 times during the implementation period of the Project	• The indicator is proposed to be deleted as it is not realistic for the participants of the training mentioned in 5.1 to train other field staff considering the limited time left for the Project.	
	Additional indicator *(proposal) A workshop is held to propose a mechanism to disseminate improved training/facilitation skills developed in the model sites to other officers and institutes.*	• (Workshop will be held at the end of the Project Period.)	
	5.3) More than 80% of the participants of the above training practiced the trained contents in the fields *(proposal) delete the indicator as it is not realistic*	• The indicator is proposed to be deleted with the same reason as mentioned above.	
	5.4) At least one follow-up training is conducted during the implementation period of the Project *(proposal) delete the indicator as it is not realistic*	• The indicator is proposed to be deleted with the same reason as mentioned above.	
	5.5) At least one seminar, which summarizes the results of monitoring and follow-up trainings, is	Seminar will be conducted by the end of the Project period.	

ANNEX-6: Accomplishment Grid

Narrative Summary	Verifiable Indicators	Progress as of end Oct 2009	Prospects for accomplishment
	conducted during the implementation period of the Project		

ANNEX-7: Implementation Process

Item	Evaluation questions	Status as of end Oct. 2009
1. Team work	Do the project team members share their roles and responsibility appropriately?	(a) There was no particular problem in team work of the Project Team. Frequent discussions have been held among the JICA Expert Team, MIWM, ID, IMD and DOA at the national level. Field officers in the model sites worked intimately. (b) The working committees were effective tool to improve team work of the Project.
2. Communication	Communication among the team members or between the Japanese experts and Sri Lankan Counterparts adequate?	(a) There was no particular problem for the Project Team with regard to the communication. Sri Lankan experts in the JICA Expert team are helpful to have a good rapport with the government officers. (b) However, the provincial and district level senior management officers, such as provincial directors were not involved in the Project sufficiently, so far, as the activities of the Project were implemented mainly in the three model sites, which is a small area compared with the whole area they are in-charge. (c) Some officers identified that, in addition to JCC, operational level meetings to discuss the progress of the Project is necessary. The meetings could be informal or occasional dialogue. (d) Some officers suggested the necessity to have meetings to review the draft of manuals produced by the working committees.
3. Decision making	Does decision making process in the project team efficient, transparent and participatory?	(a) There was no particular problem for decision making. The National JCC made main decisions. The decisions were informed to the members of the District JCC. (b) In the model sites, decisions were made by participatory and transparent manners through the CAP workshops and discussions among the farmers, field officers and other project members.
4. Progress monitoring	Did the project team monitor progress of the project appropriately?	(a) The Progress of the Project activities were reported to National JCC and District JCC. (b) The Working Committees had regular meetings for progress monitoring. (c) The irrigation sub-committees in the model sites conducted weekly meetings during the rehabilitation of the irrigation facility and monitored the progress. (d) Other sub-committees in the model sites conducted regular meetings in order to monitor the progress.
5. Capacity building of Sri Lankan C/P	(a) Training in Japan • Was the selection of participants to the counterpart training in Japan appropriate? • Did the training in Japan implemented effectively? • Was the experience and knowledge gained by the participants in Japan were utilized in daily work after they came back to Sri Lanka? (b) Method and contribution of the JICA Experts for capacity building of Sri Lankan C/P	(a) Training in Japan • The senior management level counterpart personnel of MIWM were selected as the first delegation for the counterpart training in Japan. There was no problem for the selection • Yes. The participants learned the Japanese policies on agriculture, irrigation, land improvement, coordination process among the different agencies, method of technical transfer, function of the Japan Agricultural Cooperatives, etc. The information and experience were useful for the participants to further understand the importance of multifunctional FOs. It was unfortunate that the training of senior officers in Japan was not conducted at the initial stage of the Project. • The participants appreciate the training as the experience gained in the training is useful for medium or long term planning and development of strategies. Some of them utilized the knowledge they learned in Japan in trainers' training conducted for the staff of the department. (b) Method and contribution of the JICA Experts for capacity building of Sri Lankan C/P • CAP workshop and the PD method were effective for field level officers. Workshops on utilization of GIS maps and training on presentation skills were also useful for the officers in all levels. • Some Sri Lankan counterparts in management level mentioned that so far there was no remarkable capacity building of the government officers in the fields of agriculture and livestock. They suggested the importance to have an opportunity to discuss the training needs of the officers. • Most of the draft manuals were development by the counterparts, and some have been applied to the training courses by the counterparts. These drafts of manuals, however, should be reviewed by senior level counterparts, including national and provincial directors and others, for necessary improvement.

ANNEX-7: Implementation Process

6. Participation of superior authority	Were level of participation, contribution and commitment of MIWM, MADAS and MOLD to the project satisfactory?	There was no particular problem with the participation and cooperation of the officers in MIWM, MADAS and MOLD.
7. Cooperation with other projects	Was there any cooperation with other related projects in the same area?	(a) JICA Expert team of the Project and project teams of other JICA projects, such as PEACE, TRINCAP and SouthCAP had mutual communication and had exchanged their ideas and experience. They had discussions on technical standards and implementation process. They also visited the project sites each other. Training manuals of those projects on rehabilitation of irrigation facilities and CAP workshop were referred by the ICIM Team. ICIM team participated in seminars of TRINCAP. SouthCAP team visited a workshop conducted by ICIM. (b) However, so far, there was no dissemination of the outputs of the ICIM to the PEACE project which was expected at the time of project planning. (c) ID considers that there is no problem to have the two similar projects at the same time. The ID believes that the experience of the Project, such as GIS mapping system and formation of sub committees can be utilized in PEACE as well as in other future projects
8. Function of JCC	Were JCC functioned as expected? (frequency of the meetings, participation of the members, decision making and follow-ups	<u>JCC</u> (a) The National JCC meetings were held in July 2007, Feb. 2008 and Feb. 2009 and District JCC meetings were held in Oct. 2007, June 2008 and May 2009. (b) Participation of the above mentioned meetings was satisfactory. Discussions were conducted on plan, progress and monitoring of the Project. (c) Having two kinds of JCC was useful to ensure communication between the national level and districts. (d) There were differences in the plan described in the PDM and real implementation. However, the differences were not discussed in JCC. (e) Senior officers of ID expressed that National and District JCC meetings should be held at least once in 6 months in the future. <u>TAC and other committees</u> (a) After TAC was formed, committees, composed of directors of Provincial headquarters, their deputies and other technical officers on the subjects on Irrigation, agriculture, GIS, livestock, etc. were formed under the TAC in order to implement the training programme efficiently. The TAC is functioning continuously with the assistance of the working committees. (b) The working committees functioned as Project Management Committee and Farmer Organization Implementation committee. (c) Joint working committee was formed and the first meeting was held in May 2009. The committee is expected to undertake roles of the Project.
9. Participation of JICA	Were level of supervision and support made by JICA Sri Lanka Office and JICA Headquarters appropriate?	Information sharing between the Project Team and JICA Sri Lanka Office has been kept well. Though JICA Sri Lanka Office had recognized inadequacy of the PDM, revision was carried over until the Mid-Term Review based on the mutual agreement between the Project Team and JICA Sri Lanka Office. JICA Sri Lanka could have advised more explicitly the Project Team to discuss and revise the PDM in early stage of the Project.

ANNEX-8: Evaluation Grid

Evaluation Items		Information as of End-Oct. 2009	Evaluation results
Main Items	**Sub-Items**		
Relevance			
Policy	Is the Project purpose consistent with development policy of Sri Lanka?	The Project purpose is consistent with the national development policy and sector policies of irrigation and agriculture. In the current national development policy of Sri Lanka, 'Mahinda Chintanaya', and agriculture sector is the most prioritized area for development. It is mentioned that the economic prosperity and poverty eradication should be achieved by the development of agriculture. Especially, improvement of irrigated agriculture by increasing the efficiency of productivity, irrigation facility management and water management, marketing, promotion of crop diversification, community participation, etc. are identified as some of the most important issues for development.	The Project Purpose is consistent with the Sri Lankan development policy and Japanese ODA policy and Country Strategy of JICA. There is a strong need to increase agricultural productivity and income of the farm families in irrigated area in the Dry Zone. Therefore, relevance of the Project is high.
	Is the Project purpose consistent with ODA policy of Japan and Country Strategy of JICA?	The Project purpose is consistent with the ODA policy of Japan and country strategy of JICA. (1) The Japan's Country Assistance Programme for Sri Lanka, points out the necessity to assist the sector of agriculture and fishery and participatory development, with the emphasis of poverty eradication. (2) The Country Strategy of JICA also points out that the major issues of rural development programme are to improve agriculture productivity, farm-management skills of farm families, crop diversification and participatory development. The Strategy says that especially in irrigated agriculture, an efficient mechanism should be introduced to irrigation facility management and water management, with close collaborations of government agencies and FOs.	
Needs	Are there strong needs of cooperation?	(1) In the Dry Zone, agricultural activities traditionally depended on irrigation systems and has problems such as; i) low income of the farm families due to the low profitability of paddy cultivation, ii) inappropriate operation and maintenance of irrigation facilities, iii) inappropriate irrigation water management and iv) Lack of active participation of farmers on management aspect of irrigation and agriculture development. (2) A technical cooperation Project was proposed by GoSL to solve these problems, by introducing an integrated approach, which contains solutions for various issues, especially for irrigated agriculture by utilizing experience and skills of Japan.	
	Was the selection of the target area and groups relevant with the needs?	(1) The North Central Province and dryer area in North Western Province are very limited employment opportunities. Agricultural sector provided major income opportunities. (2) The model sites of the Project belong to the above mentioned areas, and high ratio of poor households, most of which consists of middle and small sized farmers, who are mainly engaged in paddy cultivation. Therefore, the model sites are relevant to be the models of improving agricultural income.	
Priority	Does the Project address priority and urgent issues in	(1) In agricultural sector, paddy is a main contributor for the GDP by about 20% in 2004. Paddy is the main product of the small scale sector, and most of the farm families are engaged in paddy cultivation.	

ANNEX-8: Evaluation Grid

Evaluation Items		Information as of End-Oct. 2009	Evaluation results
Main Items	Sub-Items		
	irrigation and agriculture sectors?	(2) Dry Zone of Sri Lanka consists of 70% of the total land extent and provides of Sri Lanka, where 80% of the total production of the paddy. (3) Therefore, in the agriculture sector, paddy cultivation in the Dry Zone is the most prioritized area of which farmers urgently need income and production increase.	
Suitability as a means	Does Japan have technological advantages? Can Japan's experience be utilized?	(1) JICA has implemented similar Projects in many developing countries and has accumulated those experiences and know how. Sri Lanka locates in the monsoon region and the irrigation system such as cascade tank system is similar to Japan. (2) Land Improvement Districts and Agricultural Cooperatives in Japan can be useful for structural improvement of FOs in irrigation and water management. Hence, ICIM Project has the advantage of applying those Japanese technologies and experiencec to the development of Agricultural sector in Sri Lanka with necessary modifications.	
Effectiveness			
Achievement forecast of the Project Purpose	Will the Project Purpose likely to be achieved by the end of the period of cooperation?	The Project Purpose is being achieved almost on schedule as a whole. Trainings of the officers and farmers were conducted and the capacity of FOs are being enhanced. There is a prospect that the Project will attain the Project Purpose by the end of the Project period. However, the definition of the term "integrated mechanism" was not clearly shared among the members of the Project Team.	The Project Purpose is being achieved almost on schedule as a whole. Trainings to the officers and farmers were conducted and the capacity of FOs was enhanced. There is a prospect that the Project will attain the Project Purpose by the end of the Project period. However, the definition of the words "integrated mechanism" was not clearly shared among the members of the Project Team. The effectiveness of the Project is moderate.
Contribution factors	Were there any contributing factors to accelerate the achievement of the Project purpose?	There was no particular factor contributed to the achievement of Project Purpose.	
Inhibition factors	Were there any factors to inhibit the achievement of the Project purpose?	(1) Communication and interactions among the officers in the different counterpart agencies were not always sufficient..	
Logic to attain Project purpose	Will the Project Purpose be attained if all the planned outputs were created?	(1) Yes, as agricultural income will be increased through increasing agricultural productivity. (2) Agricultural productivity will be increased through introduction of new technology such as use of quality seed paddy, recommended fertilizer, good land preparation, integrated pest management, and on-farm water management and new activities such as homestead development, livestock and collective marketing of dairy products. (3) Agricultural productivity will be stabilized through improvement of irrigation facility and water management.	
	Are the important	(1) The assumption one "Adequate budget and staff to implement necessary trainings and	

ANNEX-8: Evaluation Grid

Evaluation Items		Information as of End-Oct. 2009	Evaluation results
Main Items	Sub-Items		
	assumptions to attain the Project Purpose still appropriate and realistic?	extension services are allocated" was not appropriate as there was only limited allocation of GoSL for the implementation of training of the Project. (2) The assumption two "Organizational changes of the government institutions in relation to the Project are not taken place in a large scale" was not a serious problem so far. The irrigation and agriculture were in one ministry at the time of Project planning but they were separated into two different ministries at the time of implementation. However, there was no specific issue in this regard as the Project operated in two sites out of three with provincial departments of agriculture and livestock.	
Efficiency			
Level of production of Outputs	Were the Outputs produced as planned?	(1) Output 1: The Project almost achieved all the target of the indicators. The trainings on management of FOs were conducted to the officers and farmers and a capacity of the FOs on management has been enhanced to a great extent by formation of the sub-committees and introduction of the revolving fund. The Project plans to conduct follow-up trainings to the officers and further facilitates enhancement of FOs in the second half of the Project period. Therefore, there is a prospect that the Output 1 will be produced by the end of the Project period. (2) Output 2: Most of the planned activities were conducted as scheduled. Trainings were conducted as planned and rehabilitation of the irrigation facilities are being conducted by the FOs. The capacity of the FOs on rehabilitation of irrigation facility has been enhanced by the experience of the construction. The Project plans to conduct activities on rehabilitation, water management and other training to the officers in the second half of the Project period. Therefore, there is a prospect that the Output 2 will be produced by the end of the Project period. (3) Output 3: The planned activities for agricultural production were introduced ahead of the schedule. The activities, such as introduction of a new method of preparation of extension materials (PD method) for the officers, new technologies for the farmers, vegetable and fruits cultivation and animal husbandry are showing effects to increased income of the farm families in the model sites. The Project plans to further facilitate these activities. Therefore, there is a prospect that the Output 3 will be produced by the end of the Project period. Introduction of a systematic monitoring of the result of the training is needed. (4) Output 4: The Project concentrated mainly on activities of the "Output 3" in the first half of the Project period. Therefore, activities of marketing and processing have just started. The Project need to accelerate and implement the activities on marketing and processing efficiently by making a proper plan of implementation. It is expected that the Project will produce the Output 4 by the end of the Project period.	Inputs from Japan and Sri Lanka were made as planned. The Planned Outputs were being produced almost as scheduled as a whole. Especially, steady progress was observed for the production of the Outputs 1, 2 and 3, although there were several disturbing factors. Therefore, efficiency of the Project is moderate.

ANNEX-8: Evaluation Grid

Evaluation Items		Information as of End-Oct. 2009	Evaluation results
Main Items	Sub-Items		
		Output 5: The activities for the Output 5 are planned to be conducted at the final stage of the Project period. It is expected that the Project will produce the Output 5 by the end of the Project period by proposing a dissemination mechanism for the improved training/facilitation skills.	
	Were there any disturbing factors for creation of the planned outputs or implementation of the planned activities?	(1) The field officers of ID did not have sufficient time to involve in the rehabilitation work in the model sites. (2) Frequent transfer of the officers was found to be an obstacle to conduct technical transfer of GIS in particular. (3) The complicated system to approve the designs and estimates by the regional offices of irrigation department was a factor to hinder timely implementation of the rehabilitation work of the irrigation facilities in the model sites. Rehabilitation time was often overlapped with cultivation period due to the delay. (4) The JICA Expert team needs to spend much time for travelling, as the three model sites, which are as far as 26-66 km each other. Therefore the time to spend for actual activities was limited. High cost for fuel for travelling is also a concern for effectiveness.	
Input (human resources	Are counterpart personnel assigned as planned and contributing to produce the Outputs?	(1) More than 80 numbers of counterpart personnel are assigned part-time bases for each Project work. (2) Their levels of technology and know-how have been enhanced by participating in the training/OJT and Work Committee meetings of the Project. They were positive factors to contribute production of the Outputs.	
	Were JICA Experts assigned as planned and contributing to create the outputs?	(1) The Long term JICA experts were assigned for the following subjects as planned: • Chief advisor/ FO • Irrigation facility management / water management • Training/ coordinator (2) Two short-term JICA Experts were dispatched on the subjects of GIS and on-farm water management for the period of two and one month respectively. (3) Experience and expertise of the long term JICA Experts contributed to the effective implementation of the activities. The short term Expert assigned for on-farm water management contributed much.	
Input (Equipment)	Were the equipment purchased as planned?	(1) The Project planned to purchase three vehicles, training equipment and materials and agricultural inputs for OJT at the model sites, etc. The vehicles and equipment were purchased as planned. (2) In addition to the planned equipment, several construction machineries and three sets of	

ANNEX-8: Evaluation Grid

Evaluation Items		Information as of End-Oct. 2009	Evaluation results
Main Items	Sub-Items		
		facilities for GIS mapping system were purchased.	
	Were quality and quantity of the equipment satisfactory?	(1) There were no particular issue for the vehicles and equipment purchased. (2) GIS software provided by the Project to IE offices were not utilized continuously, as most of the trained officers were transferred. (3) Construction machineries provided to the FOs were utilized well during the rehabilitation of the irrigation facility.	
Input (training in Japan)	Was the counterpart training in Japan conducted as planned?	(1) According to the report of Ex-ante evaluation and inception report, Counterpart Training in Japan and Thailand were planned to be conducted for 2-3 key counterpart personnel annually for the subjects such as land improvement enterprise, farmer organizations, GIS, etc. (2) However, during the first two years of the Project, the proposal of counterpart training was not made by the MIWM. (3) The first training was conducted in May 2009. Four senior officers of MIWM participated in the training.	
Input (Budget)	Was the Project budget of GoSL an appropriate amount?	(1) GoSL provided an office space for JICA Expert team in ITI with basic furniture, facilities and cost of utility. (2) Fuel allowance and subsistence for the field officers in ID were not sufficient for them to engage in the work intensively.	
	Was the timing of disbursement of the Project budget of GoSL appropriate?	There was no particular issue with regard to the timing of disbursement of the budget of GoSL.	
Unexpected inputs and outputs	Were there any unexpected or extra inputs or outputs so far made?	Seed money for the revolving fund in the 3 model sites (around 1.5 million rupees per site) was provided by JICA. This is an additional input as a result of the need assessment by the CAP workshops.	
Logic to attain Outputs	Will the Outputs be attained if all the planned activities were conducted?	Yes. There was no particular issue in this regard.	
	Are the important assumptions to create Outputs still appropriate and realistic?	(1) Assumption one "price and market of agriculture production do not become extremely unstable" was partly unrealistic and price of rice became more than twice as higher than that of the time of Project planning. Price hike was favorable for rice cultivation as it became profitable in most of the area. As a result, currently, the farmers have less incentive towards crop diversification. However, it did not create serious problem for the Project to create the Outputs.	

ANNEX-8: Evaluation Grid

Evaluation Items		Information as of End-Oct. 2009	Evaluation results
Main Items	Sub-Items		
		(2) Assumption two "Climate condition does not become extremely unstable" is still appropriate. (3) Assumption three "Security situation of the target area does not become extremely unstable" is still appropriate.	
Impact			
Achievement forecast for the overall goal	Looking at the level of achievement of the Project Purpose so far, are there prospects that the overall goal will be attained as an effect of the Project?	(1) The Project has successfully shown the ways to increase the productivity and income of paddy cultivation of the farm families in the three model sites. The increased productivity of the farm families in the model sites is planned to be stabilized by the rehabilitation of the irrigation facility and improvement of water management. (2) However, the degree of the impact to be created by the Project would be too small to give a significant impact to the target population defined in the Overall Goal. The total number of farm families in the three model sites which will be directly benefited by the Project is around 530[1] in maximum, while the number of farm families in the target area, of which income is expected to be increased in the overall goal is around 255,000[2]. Therefore, it is very difficult for the Project to contribute to realize the Overall Goal, unless the dissemination mechanism to be proposed by the Project is implemented.	The Project has shown the ways to increase the productivity and income of paddy cultivation in the model sites. However, the target population of the Overall Goal is much larger than that of the model sites. It is difficult to achieve the Overall Goal unless the dissemination mechanism to be proposed by the Project is implemented. Therefore, the impact of the Project is still unknown.
	Were there any disturbing factors to attain the overall goal?	(1) The target population in the model sites is too small compared with the population in the target area as mentioned above. (2) The human and financial and physical resources of the government agencies are too scarce to extend the effects of the Project to all the FOs in the target area.	
Impacts occurred as ripple effects	• policy, • technical aspect, • environment, • socio-economy, • organization, finance	(1) GIS was originally planned to be applied only for irrigation sector and it was proved to be effective. It was also found that GIS was effective for agriculture sector as well (2) After the training of the PD method, not only the participants of the training, but some of their colleagues also learned and are utilizing the materials the participants produced.	
Logic to attain the Overall Goal	Is the Overall Goal realistic and directly related to the Project Purpose?	The target area of overall goal, Anuradhapura and Kurunegala districts is too large. Therefore, it is very difficult for the Project to contribute to realize the Overall Goal, unless the dissemination mechanism to be proposed by the Project is implemented.	

[1] The total number of membership of the FOs, i.e. 530, is considered as the total number of the beneficiaries in the model sites, although several indicators of the PDM expect changes only among more than 25% of the membership.

[2] Total number of farm families in the target two districts was around 255,000 according to the Ex-ante evaluation report of the Project produced in March 2007.

ANNEX-8: Evaluation Grid

Evaluation Items		Information as of End-Oct. 2009	Evaluation results
Main Items	**Sub-Items**		
	Is the important assumption to attain the Overall Goal still appropriate and realistic?	(1) The assumption one "the planned programme on improvement of agriculture productivity, such as PEACE of JICA and others, are implemented as schedule" was appropriate. (2) The assumption two "improvement of basic policies/ regulations and environmental protection, which facilitate increment of agriculture income are continuously implemented" was appropriate	
Sustainability			
Policy and institutional aspect	Does GOSL have a policy and institutional support to maintain the effects of the Project?	(1) Overall development policy supports the objective of the Project. (2) It is a positive feature that MIWM is showing a keen interest to maintain and expand the effects of the Project. MIWM and other related agencies may have to introduce policy decision and new regulations in order to maintain the effects of the Project, at the time they would introduce multi-functional FOs.	There are several positive features to promote the sustainability of the Project, such as the keen interest of ID and motivation of the FOs. However, to ensure the sustainability, GoSL has to investigate an efficient way to overcome several issues, such as the limited human, financial and physical resources. For example, the officers in provincial extension services are in-charge of several thousands of farm families. Therefore, sustainability of the Project is lower moderate
Organization	Do the implementing agency and other related agencies have organizational capacity to maintain the effects of the Project?	(1) As for the government agencies, the limited human resources could be an obstacle at the time of dissemination of the effects of the Project. (2) The Joint-working committee was proposed to play an important role for sustainability of the Project effect. It is a positive factor that the strategy for dissemination is under discussion. (3) As for the FOs, It is a positive feature that the members are motivated and gaining confidence to continue their activities. Implementation of the planned activities by the Project Team will be needed to further develop and make sure unity, self-reliance, skills and knowledge of the members.	
financial aspects	Do the implementing agency and other related agencies have financial capacity to maintain the effects of the Project?	(1) As for the government agencies, the limited financial resources could be an obstacle at the time of dissemination of the effects of the Project as a full package, as the amounts of the financial input made by the Project for irrigation facility rehabilitation (around 6 million rupees for a FO) and revolving fund (around 1.5 million rupees for a FO) are large compared with general allocations for major repair of facilities (around several hundred thousand rupees) and amount of fund usually the government agencies provide to a FO or societies in a village (less than hundred thousand rupees). However, GoSL can selectively disseminate the effects of the Project. (2) External fund will be needed in case of GoSL would implement the series of the activities of the Project in full package.	
Technology Are the methods of technology transfer used	Do the implementing agency and other related agencies have technical capacity to maintain the effects of	(1) As the Project utilized local technologies and implementation was conducted jointly by the government officers and the JICA Expert Team, it is positive that the technical level of the officers involved in the Project would be sufficient to continue most of the activities. (2) As for the new technologies introduced by the JICA Expert Team, such as GIS mapping system, PD method and on-farm water management, further training must be needed for	

ANNEX-8: Evaluation Grid

Evaluation Items		Information as of End-Oct. 2009	Evaluation results
Main Items	Sub-Items		
in the Project being accepted?	the Project?	the officers to master the technologies. (3) It may be needed for the Project Team to identify the strategies to modify the technology to fit the local context. For example, the Project may identify particular functions of GIS mapping system which have cost effectiveness for extension services. The Project may identify how to train AIs, so that they can introduce a simplified on-farm water management to farmers.	
	Will the farmers continue their effort to apply the techniques they learned?	(1) It is a positive feature that most of the farmers participated in the training on improved methods or technologies practice what they learned. It is also positive that other farmers are also learning and some are practicing by observing the practice of their neighbors or demonstration in the model farms. (2) It is also an advantage that most of the technologies introduced are local technologies, so that the field officers will be able to train and provide extension services to the farmers continuously. (3) The supply driven service providing approach was changed to demand driven/ objective oriented approach. Therefore, the farmers will obtain better services from the field officers of the GOSL.	
	Will the transferred technology spread to other neighboring areas?	(1) First of all the planned activities of the Project should be implemented to make sure the steady technical transfer in the model sites. (2) It is also a contributing factor that the officers who are involved in the Project at the model sites could be resource persons in the dissemination process of the effects of the Project in the future. (3) It is also a positive feature that the transferred technologies to the farmers in the sub-committees were spreading among the others in the model sites. (4) The draft manuals developed by the Project would be a useful tool to ensure the effects of the Project to spread to other areas. It should be make sure that these manuals should be revised, authorized and utilized in the training courses of the implementation agencies and training institutes and be accessible for other interested parties in web-site or libraries. (5) It is planned that mechanism for dissemination of the experience of the Project to the other areas will be studied jointly by the Project and GOSL staff.	
	Will the equipment be appropriately maintained & operated?	(1) All the equipment, except GIS software, is not a new to Sri Lanka. They do not require special technologies or investment for operation and maintenance. Therefore, there will be no particular problem for the related parties to conduct proper maintenance and operation. (2) As for GIS software, further training is planned to be conducted to make sure the utilization.	

ANNEX-9: List of the Trainings and Workshops Conducted

Category	Model site	Type	Total number of attendants	
			Officers	Farmers
EX FO	Kimbulwanaoya	Work Shop (WS)	23	120
Farmers Organization (FO) and FO/Financial Management (FM)	Kimbulwanaoya	Work Shop (WS)	22	159
		Work Meeting (WM)	10	126
		On The Job Training (OJT)	23	62
		WM&OJT		
		Study tour		
		Seminar		
		Training		
		Trainers Training (TT)		
		Work Committee Meeting (WCM)		
		Others		
	Kadurugasdamana	Work Shop (WS)	12	83
		Work Meeting (WM)	13	105
		On The Job Training (OJT)	23	50
		WM&OJT		
		Study tour		
		Seminar		
		Training		
		Trainers Training (TT)		
		Work Committee Meeting (WCM)		
		Others		
	Rajangana	Work Shop (WS)	13	106
		Work Meeting (WM)	21	223
		On The Job Training (OJT)	25	59
		WM&OJT		
		Study tour		
		Seminar		
		Training		
		Trainers Training (TT)		
		Work Committee Meeting (WCM)		
		Others		
	Kimbulwanaoya, Kadurugasdamana & Rajangana	Training	6	36
		Work Shop (WS)		31
		Trainers Training (TT)		
		Work Committee Meeting (WCM)		
	Only Government Officers Participate	Training		
		Work Shop (WS)	120	
		Trainers Training (TT)	13	
		Work Committee Meeting (WCM)	30	
	Total		331	1040

ANNEX-9: List of the Trainings and Workshops Conducted (Cont.)

Category	Model site	Type	Total number of attendants	
			Officers	Farmers
Irrigation	Kimbulwanaoya	Work Shop (WS)	13	44
		Work Meeting (WM)	45	218
		On The Job Training (OJT)	9	58
		WM&OJT		
		Study tour		
		Seminar		
		Training		
		Trainers Training (TT)		
		Work Committee Meeting (WCM)		
		Others		
	Kadurugasdamana	Work Shop (WS)	13	30
		Work Meeting (WM)	32	200
		On The Job Training (OJT)	9	60
		WM&OJT		
		Study tour		
		Seminar		
		Training		
		Trainers Training (TT)		
		Work Committee Meeting (WCM)		
		Others		
	Rajangana	Work Shop (WS)	10	35
		Work Meeting (WM)	31	178
		On The Job Training (OJT)	9	53
		WM&OJT		
		Study tour		
		Seminar		
		Training		
		Trainers Training (TT)		
		Work Committee Meeting (WCM)		
		Others		
	Only Government Officers' Participate	Seminar	140	
		Trainers Training (TT)	35	
		Work Committee Meeting (WCM)	130	
	Total		476	876

ANNEX-9: List of the Trainings and Workshops Conducted (Cont.)

Category	Model site	Type	Total number of attendants	
			Officers	Farmers
Paddy	Kimbulwanaoya	Work Shop (WS)		
		Work Meeting (WM)	5	135
		On The Job Training (OJT)	106	490
		WM&OJT		
		Study tour	1	22
		Seminar		
		Training	9	73
		Trainers Training (TT)		
		Work Committee Meeting (WCM)		
		Others		
	Kadurugasdamana	Work Shop (WS)		
		Work Meeting (WM)	2	32
		On The Job Training (OJT)	67	583
		WM&OJT		
		Study tour		
		Seminar		
		Training		
		Trainers Training (TT)		
		Work Committee Meeting (WCM)		
		Others		
	Rajangana	Work Shop (WS)		
		Work Meeting (WM)	15	125
		On The Job Training (OJT)	43	1950
		WM&OJT	1	34
		Study tour		
		Seminar		
		Training		
		Trainers Training (TT)		
		Work Committee Meeting (WCM)		
		Others		
	Only Government Officers Participate	Work Meeting (WM)	12	
		Work Committee Meeting (WCM)	33	
	Total		294	3444

ANNEX-9: List of the Trainings and Workshops Conducted (Cont.)

Category	Model site	Type	Total number of attendants	
			Officers	Farmers
Home Garden (HG)	Kimbulwanaoya	Work Shop (WS)		
		Work Meeting (WM)	4	43
		On The Job Training (OJT)	29	206
		WM&OJT	11	17
		Study tour	5	70
		Seminar		
		Training		
		Trainers Training (TT)		
		Work Committee Meeting (WCM)		
		Others		
	Kadurugasdamana	Work Shop (WS)		
		Work Meeting (WM)	1	16
		On The Job Training (OJT)	8	90
		WM&OJT		
		Study tour	1	17
		Seminar		
		Training		
		Trainers Training (TT)		
		Work Committee Meeting (WCM)		
		Others		
	Rajangana	Work Shop (WS)		
		Work Meeting (WM)	7	26
		On The Job Training (OJT)	22	184
		WM&OJT		
		Study tour		
		Seminar		
		Training		
		Trainers Training (TT)		
		Work Committee Meeting (WCM)		
		Others		
	Only Government Officers Participate	Work Committee Meeting (WCM)	15	
	Total		103	669

ANNEX-9: List of the Trainings and Workshops Conducted (Cont.)

Category	Model site	Type	Total number of attendants	
			Officers	Farmers
Livestock (LS)	Kimbulwanaoya	Work Shop (WS)		
		Work Meeting (WM)	10	108
		On The Job Training (OJT)	3	15
		WM&OJT	2	20
		Study tour	2	19
		Seminar		
		Training	4	25
		Trainers Training (TT)		
		Work Committee Meeting (WCM)		
		Others		
	Kadurugasdamana	Work Shop (WS)		
		Work Meeting (WM)	2	10
		On The Job Training (OJT)	7	35
		WM&OJT		
		Study tour	2	13
		Seminar		
		Training		
		Trainers Training (TT)		
		Work Committee Meeting (WCM)		
		Others		
	Rajangana	Work Shop (WS)		
		Work Meeting (WM)	19	139
		On The Job Training (OJT)	2	8
		WM&OJT		
		Study tour		
		Seminar		
		Training	7	35
		Trainers Training (TT)		
		Work Committee Meeting (WCM)		
		Others		
	PDOAP&H, Kurunegala	Work Committee Meeting (WCM)	4	
	PDOAP&H, Anuradhapura	Work Committee Meeting (WCM)	4	
	Only Government Officers Participate	Work Committee Meeting (WCM)	13	
	Total		81	427

ANNEX-9: List of the Trainings and Workshops Conducted (Cont.)

Category	Model site	Type	Total number of attendants	
			Officers	Farmers
Women Group	Kimbulwanaoya	Work Shop (WS)	5	28
		On The Job Training (OJT)	5	45
		Study tour	4	24
	Total		14	97
Paddy/OFC	Kimbulwanaoya	On The Job Training (OJT)	3	6
	Rajangana	On The Job Training (OJT)	14	70
		Training	4	13
	Others	Work Committee Meeting (WCM)		
	Total		21	89
Paddy, HG	Kadurugasdamana	On The Job Training (OJT)	2	19
		Work Meeting (WM)	1	24
		WM&OJT	1	14
	Rajangana	WM&OJT	1	64
		Work Meeting (WM)	2	107
		On The Job Training (OJT)	10	98
	Others	Work Meeting (WM)		
	only Government Officers Participate	Work Committee Meeting (WCM)	15	
	Total		32	326
Paddy, HG, LS	Kimbulwanaoya	Work Meeting (WM)	7	31
	Kadurugasdamana	Work Meeting (WM)	4	18
	Rajangana	WM&OJT		
	Others	Work Committee Meeting (WCM)		
	Total		11	49
Paddy, HG, Irrigation	Rajangana	Work Meeting (WM)	4	34
	Total		4	34
Paddy, LS	Kimbulwanaoya	Work Meeting (WM)	2	20
	only Government Officers Participate	Work Committee Meeting (WCM)	17	
	Total		19	20
HG, LS	Rajangana	Work Meeting (WM)	1	20
	Total		1	20
OFC	Rajangana	On The Job Training (OJT)	3	15
	Total		3	15
Others		Work Committee Meeting (WCM)	28	
		TT	30	3
		JCC	179	
		Mission		
	Total		237	3
General total			1627	7109

Note-1: Ex* means example of showing data: input and numbers are not true ones.

Note-2: No** means the first column number of the attache file of "New(2)SeminarEtc."

Name of the Project: Project for Increasing the Capacity of Integrated Management in Irrigated Agriculture in Dry Zone
Duration of the Project: Four years (01. 05. 2007～30. 04. 2011)
Target area: Anuradhapura and Kurunegala Districts
Target groups: Farm families and relevant government officers in the target area

Prepared on 18 January 2007

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Overall Goal Agricultural income of the farm families in the target area is increased.	1 Agricultural income of the farm families in the target area is increased at least by 25%. 2 Agricultural productivity in the target area is increased at least by 25%.	* Surveys done by Central/Provincial government, Ministry of agriculture/irrigation * Sample household surveys done by Ministry of agriculture/irrigation, JICA	* The planned programme on improvement of agricultural productivity, such as PEACE*2 of JBIC and others, are implemented as scheduled. * Improvement of basic policies/regulations and environmental protection, which facilitate increment of agricultural income, are continuously implemented.
Project Purpose An integrated mechanism is established to improve agricultural productivity through capacity building of government officers and FOs (farmer organizations).	1 At least two series of integrated training programme are conducted in the target area during the Project implementation period. 2 Degree of satisfaction among the farmers in the target area with the trainings and extension services is increased at least by 50%. 3 Result of the Capacity Assessment of the FOs in the target area is improved at least by 25%. 4 Training Advisory Committee functions continuously.	* Records of training institutes * Sample surveys for farmers and FOs * Capacity assessment survey for FOs in the target area	* Adequate budget and staff to implement necessary trainings and extension services are allocated. * Organizational changes of the government institutions in relation to the Project, is not taken place in a large scale.
Outputs **Outputs in the model sites** 1 Capacity of the government officers and FOs is enhanced in the field of management of FOs	**At the model sites:** Among the government officers who participated in the trainings conducted by the Project; 1-1 More than 80% gained good understanding of the trained contents. 1-2 More than 60% practiced the 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; 1-3 All the FOs formulated and implemented Community Development Plan and CAP. 1-4 FOs increased the membership by at least 50%. 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.	* Interviews to the participants of the trainings * Work records of the participants of the	* Price and market of agriculture products do not become extremely unstable.
2 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% gained good understanding of the trained contents. 2-2 More than 60% practiced the 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 and utilizing irrigation schedule. 2-5 All the FOs conducted appropriate water management based on the irrigation schedule.	* Sample surveys for farmers and FOs	* Climate conditions do not become extremely unstable.
3 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% gained good understanding of the trained contents. 3-2 More than 60% practiced the trained skills and methods in the fields. 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 trained skills on such as production of seeds (paddy), appropriate usage of fertilizers and agro-chemicals, cropping management, post harvest technology. 3-4 Introduced crop diversification and/or animal husbandry. 3-5 Implemented collective cultivation based on the cropping plans.	* Records on collective cultivation/ marketing	* Security situation of the target area does not become extremely unstable.
4 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% gained good understanding of the trained contents. 4-2 More than 60% practiced the trained skills and methods in the fields. 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 collective marketing. 4-4 Increased capacity on quality control of their products. 4-5 Understood the methods of colleting market information.		
Outputs in the training institutes 5 A mechanism is introduced for the government officers and training institutes to disseminate the improved training/facilitation skills developed in the model sites, to other officers and institutes.	**At the training institutes** 5-1 At least one Trainers' Training is conducted during the implementation period of the Project. 5-2 The participants of the Trainers' Trainings conducted training for the field staff of the target area, at least 2 times during the implementation period of the Project. 5-3 More than 80% of the participants of the above training practiced the trained contents in the fields. 5-4 At least one follow-up training is conducted during the implementation period of the Project. 5-5 At least one seminar, which summarizes the results of monitoring and follow-up trainings, is conducted during the implementation period of the Project.	* Records of the Projects and training institutes	

Activities	Inputs		
	Japanese Side	Sri Lankan Side	
Activities 1~4 : Activities in the model sites (With regard to the training and OJT, the Project will facilitate/support the government officers to conduct the same to the farmers) 1 **Management of FOs.** 1-1 Conduct base-line survey for the model sites, and capacity assessment survey for the FOs in the target area. 1-2 Review existing literature and conduct case studies on Management of FOs, propose improvements and draft case-catalogs/ manuals/ guidelines, etc. 1-3. Conduct trainings on the methods and utilization of the Community Development Plans and Community Action Planes (CAP)[1]. 1-4 Develop Community Development Plans and CAP with the initiatives of the community. 1-5 Formulate sub-committees according to the subjects proposed in the CAP. 1-6 Conduct necessary trainings for the sub-committee members to implement the CAP (Ex: leadership, social mobilization, financial management) 1-7 Revise and finalize case-catalogs/ manuals/ guidelines, etc, to reflects the outcomes of the above-mentioned activities. 2 **Irrigation facility management, system water management and on-farm water management (Detailed activities will be decided according to the results of the CAP)** 2-1 Review existing literature and conduct case studies on irrigation facility management and water management, propose improvements and draft case-catalogs/ manuals/ guidelines, etc. 2-2 Conduct training/OJT on survey, planning and physical works, so that the FOs can implement rehabilitation of the tail end irrigation facility, proposed in the CAP. 2-3 Conduct rehabilitation of the tail end irrigation facility with the initiatives of the FOs. 2-4 Conduct training/OJT for FOs on operation and maintenance (O&M) of tail end irrigation facility. 2-5 Conduct training/OJT of planning on water management and cropping, based on GIS irrigation block mapping. 2-6 Conduct training/OJT of planning on water management and cropping, based on micro-level soil classification maps prepared by the Land Use Division (ID). 2-7 Conduct training and facilitation for FOs and Field Canal Groups (FCGS) to develop and utilize irrigation schedule with their own initiatives. 2-8 Conduct training/OJT on ways to adjust irrigation schedule, with taking into consideration the current situation of the irrigation scheme, to which the model sites belong. 2-9 Conduct training/OJT on appropriate on-farm water management. 2-10 Revise and finalize case-catalogs/ manuals/ guidelines, etc, to reflects the outcomes of the above-mentioned activities.. 3 **Agricultural production (Detailed activities will be decided according to the results of the CAP)** 3-1 Review existing literature and conduct case studies on agricultural production, propose improvements and draft case-catalogs/ manuals/ guidelines, etc. 3-2 Conduct trainings/OJT 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. 3-3 Conduct extension services on crop diversification and/or animal husbandry to meet the needs of the farmers. 3-4 Provide guidance on introducing collective cultivation based on the cropping schedule. 3-5 Revise and finalize case-catalogs/ manuals/ guidelines, etc, to reflects the outcomes of the above-mentioned activities. 4 **Marketing and processing (Detailed activities will be decided according to the results of the CAP)** 4-1 Review existing literature and conduct case studies on marketing and processing, propose improvements and draft case-catalogs/ manuals/ guidelines, etc. 4-2 Create awareness among the farmers on the importance of collective marketing, and provide guidance for the FOs to introduce collective marketing for selected crops. 4-3 Conduct trainings/OJT on quality improvement of agricultural products. 4-4 Conduct trainings/OJT for the farmers to develop capacity on marketing information collection. 4-5 Revise and finalize case-catalogs/ manuals/ guidelines, etc, to reflects 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 Establish Training Advisory Committee. Identify training needs, monitor trainings, conduct follow-ups, etc. periodically. 5-2 Review existing literature and conduct case studies on training mechanism and methodologies, propose improvements and draft case-catalogs/ manuals/ guidelines, etc. 5-3 Conduct Trainers' Training on training mechanism and methodologies. 5-4 Conduct Trainers' Training with the collaboration of the Experts and C/P in-charge of the activities of "1" to 5-5 Conduct trainings for the field staff in the target area with the collaboration of the Experts and C/P in-charge of the activities of "1" to "4".(Thereafter, the field staff facilitate the farmers in his/her assigned area to adopt the trained skills and methods) 5-6 Monitor outcomes created at the field level, conduct follow-up trainings to identify outcomes and issues with the collaboration of the Experts and C/P in-charge of the activities of "1" to "4". 5-7 Revise and finalize case-catalogs/ manuals/ guidelines, etc, to reflects the outcomes of the above-mentioned activities. 5-8 Conduct seminars, which summarizes the results of the monitoring and follow-up trainings.	1. Dispatch of JICA Experts Long-term Experts : 3 members —Chief advisor/ Farmers organization —Irrigation facility management/ Water management —Training (cum Coordination) Short-term Experts: appropriate numbers 2. Counterpart Training in Japan and/or other countries 3. Machinery and Equipment 4. A part of local cost	1. Allocation of Counterpart personnel -A Project Chief Coordinating Officers -Project Coordinating Officers -Others 2. Office space for Experts 3. Necessary tools and materials for trainings 4. Local cost	* Inputs of the two countries are provided in appropriate timing and manners. * Large numbers of counterpart personnel, who had received trainings are not transferred to the non-target areas.

Pre-conditions

* Counterpart personnel are allocated as scheduled and actively engage in the activities of the Project.
* Government of Sri Lanka allocates appropriate budgets for the counterpart personnel for traveling and other allowances to visit model sites frequently and participate in the field level training,
* Government of Sri Lanka provides appropriate facility for the counterpart personnel to visit model sites frequently and participate in the field level training.

Note:

1 "Community Development Plan": A plan developed by the community, taking the needs of the villages into consideration. "Community Action Plan": An action plan developed based on the Community Development Plan, taking into consideration the persons-in-charge of implementation, available resources, etc.

2 PEACE (Pro-poor Economic Advancement and Community Enhancement Project) :A Project funded by JBIC aims at poverty reduction, improvement of agriculture productivity and sustainable agricultural development. It contains programme such as rehabilitation of irrigation facility, income generation, capacity building of FOs, etc.

Project Design Matrix (Proposed to be revised)

Name of the Project: Project for Increasing the Capacity of Integrated Management in Irrigated Agriculture in Dry Zone
Duration of the Project: Four years (01. 06. 2007~31. 05. 2011)
Target area: Anuradhapura and Kurunegala Districts
Target groups: Farm families and relevant government officers in the target area

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
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% 2 A system is established to increase the agricultural productivity of the farm families in the target area at least by 25%	* Surveys done by Central/Provincial government, Ministry of agriculture/irrigation * Sample household surveys done by Ministry of agriculture/irrigation, JICA	* The planned programme on improvement of agricultural productivity, such as PEACE*3 of JICA and others, are * Improvement of basic policies/regulations and environmental protection, which facilitate increment of agricultural income, are continuously implemented.
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%. 2 Degree of satisfaction among the trained farmers in the model sites with the trainings and extension services is at least 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	* Records of training institutes * Sample surveys for farmers and FOs * Capacity assessment survey for FOs in the target	* Adequate budget and staff to implement necessary trainings and extension services are allocated. * Organizational changes of the government institutions in relation to the Project, is not taken place in a large scale.
Outputs **Outputs in the model sites**	At the model sites: Among the government officers who participated in the trainings conducted by the Project;		
1 Capacity of the government officers and FOs is enhanced in the field of management of FOs	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.	* Interviews to the participants of the trainings * Work records of the participants of the trainings	* Price and market of agriculture products do not become extremely unstable.
2 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. 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.	* Sample surveys for farmers and FOs	* Climate conditions do not become extremely unstable.
3 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 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.	* Records on collective cultivation/ marketing	* Security situation of the target area does not become extremely unstable.
4 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. As a result of the facilitation and extension services rendered by the government officers, more than 25% of the farmers in the 3 4-3 Implemented at least one improvement measure of processing/ marketing.		
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.	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.	* Records of the Projects and training institutes	

Activities

Activities 1~4 : Activities in the model sites
(With regard to the training and OJT, the Project will facilitate/support the government officers to conduct the training and OJT to the farmers)

1 **Management of FOs.**
1-1 Train officers and farmers on planning of Fos through implementation of CAP*1 workshop, community action plans and follow-ups.
1-2 Train officers and farmers on management of Fos by formation of sub-committees and introduction of revolving fund scheme.
2 **Irrigation facility management, system water management and on-farm water management**
2-1 Train officers and farmers on rehabilitation of irrigation facilities and O&M
2-2 Train officers and farmers on water management.
3 **Agricultural production**
3-1 Train farmers on paddy cultivation by introducing improved technologies and methods while strengthning facilitation skills of the officers.
3-2 Train farmers on vegetable and fruits cultivation by promoting homestead development*2 and farm management diversification while strengthning facilitation skills of the officers.
3-3 Train farmers on livestock production by promoting modern technologies while strengthning facilitation skills of the officers.
4 **Marketing and processing**
4-1 Train farmers and officers on processing by promoting income generation projects.
4-2 Train farmers and officers on marketing by promoting collective marketing.
5. **Institutional capacity building for dissemination of the improved training/facilitation skills developed in the model sites.**
5-1 Establish Training Advisory Committee to identify training needs, monitor trainings, conduct follow-ups, etc. periodically.
5-2 Conduct integrated training programe based on the achievement in the model sites.
5-3 Conduct workshop to propose a mechanism to dissaminate improved training/facilitation sills developed in the model sites to other officers and institutes.
5-4 Conduct seminars, which summarizes the results of the achievement of the model sites and integrated trainining programme.

Inputs

Japanese Side

1. Dispatch of JICA Experts
Long-term Experts : 3 members
—Chief advisor/ Farmers organization
—Irrigation facility management/ Water management
—Training (cum Coordination)
Short-term Experts: appropriate numbers
2. Counterpart Training in Japan and/or other countries
3. Machinery and Equipment
4. A part of local cost

Sri Lankan Side

1. Allocation of Counterpart personnel
-A Project Chief Coordinating Officers
-Project Coordinating Officers
-Others
2. Office space for Experts
3. Necessary tools and materials for trainings
4. Local cost

Pre-conditions

* Counterpart personnel are allocated as scheduled and actively engage in the activities of the Project.
* Government of Sri Lanka allocates appropriate budgets for the counterpart personnel for traveling and other allowances to visit model sites frequently and participate in the field level training.
* Government of Sri Lanka provides appropriate facility for the counterpart personnel to visit model sites frequently and participate in the field level training.

Note:
1 "Community Development Plan": A plan developed by the community, taking the needs of the villages into consideration. "Community Action Plan": An action plan developed based on the Community Development Plan, taking into consideration the persons-in-charge of implementation, available resources, etc.
2 The word "home gardening" was replaced by "homestead development" in PDM-2
3 PEACE (Pro-poor Economic Advancement and Community Enhancement Project) :A Project funded by JICA aims at poverty reduction, improvement of agriculture productivity and sustainable agricultural development. It contains programme such as rehabilitation of irrigation facility, income generation, capacity building of FOs, etc.

almost 4 million rupees the FO has to provide more efforts to implement the balance work early. We observed certain institutional problems within the FO, that has to be addressed quickly. It is required the project team to intervene to solve the problems facing FO at the moment and find ways to implement the rehabilitation works smoothly. According to EA of the site, purchasing construction materials is getting unnecessarily delayed. The treasurer of the FO explained that the farmers are very vigilant in the contract work hence she has to follow the finical process strictly to maintain the transparency at all levels and hence the material purchasing get delayed.

- Estimate of facility rehabilitation excludes the supervision cost, hence ID officers has to use resources provided by other projects (PEACE) resources and their own, hence more priority is given to other works than ICIM. This may be the cause of undue delay in preparation and approving estimates for rehabilitation works by ID. This may be the reason for over designed structures?, that we observed during our inspection at the sites. Perhaps ID staff has given less priority for checking designs of structures, especially by senior officers who are finally approving?.
- It is required to prepare O&M plan simultaneously with rehabilitation. But we have not seen such a plan for O&M, even FO has not adhered the decision taken at Kanna meetings regarding the maintenance. Sustainability of the rehabilitated facilities depends on implementing good O&M plan.

Inroduction of ICIM/GIS mapping system is an innovative approach which was not attempted in the projects implemented early. GIS mapping systems is a very versatile tool that can be applied in farm management, land use planning and water management. Furthermore this can be used more precisely in long term and short term rehabilitation planning in future projects. Technology transfer into wide range of officers is required in order to disseminate GIS into other projects in the target area.

1.3 Sector wise activities

Irrigation

The project has provided the TOT for GIS mapping system and PD method to the officers who are directly involved in the project activities. Accomplish grid shows based on data provided by project team GIS mapping is very successful (90%). But the officers are not using in the ICIM in their other activities due to various reasons. The officers who are now involveed in the field in ICIM do not know about the GIS and the officers who got the training are not in the project . Success of technology transfer is rather un-satisfactory if this is replicated into other sites in the target area.

Irrigation sub groups FCGs have already acquired some knowledge in Water Management within the sub system which they are operating. with However, this has to be synchronized with the main system in line with the fixed irrigation schedule for the season. The project team has to do more interventions if proper WM program is implemented. The project team has installed automatic measuring devises to assess the actual water issues at the head gate and is collecting data. With these information and

5 Evaluation of the project by 5 criteria

It is very difficult to evaluate the project fully at this juncture with available information.

Relevance-HIGH

Expected effect meets with the needs of target beneficiaries- ***yes, in the immediate beneficiaries of model sites but what about in the target area?***

Project intervention is appropriate as a solution for problem concerned-*Yes*

Content of the project consistence with national and sector policies-**Yes**

Project strategies and approaches are relevant-*Yes*

Efficiency-MODERATE

Effectiveness- HIGH, project purpose will be attained within the project period

Impact- too early to evaluate long term effects in the target area

Sustainability- produce effects will be continued after the termination of assistance?- MODERATE

6 Recommendations

- There is a need to strengthening the capacity of FO at Rajangana site in order to implement facility rehabilitation works smoothly
- To allow some supervision cost to ID since the project has not provided any assistance to cover the expenses like transport cost.
- Coordination between the project team with divisional and district level officers is to be improved, it is recommended to have frequent meeting at the district level to monitor the progress and to discuss the matters regarding facility rehabilitations.
- Prepare O&M plan simultaneously with rehabilitation plan and implement it

Report Format for the Sri Lankan Team members of the Mid-term Review of ICIM (draft)

November 2009
JICA Sri Lanka Office

Please submit your **comments, opinions and suggestions** according to the following items after the field visit:

1. Achievement at the model sites (level of outputs vs. inputs)
How were the level of achievements at the model sites and model farms? Were the technology and methods introduced innovative, technically competitive and sustainable?

1.1. Enhancement of FO. The enhancement of activities of FO seems to be effective through establishment of subcommittee for different disciplines. FOO in all three sites have become more responsible towards member farmers. Rice crop is common to all farmers in all three sites & productivity improvement was reported in all sites. (Kib from 4-5 t/ha to 6-7 t/ha, Kadu from 4-5t/ha to 6-8 t/ha, and Raj from 5-6 t/ha to 6-6.5t/ha) In general the technologies introduced to the subcommittee were relevant, innovative, effectives and sustainable except there is much room for further improvement such as value addition & processing and a few shortcoming in some site.

1.2. Rehabilitation of the irrigation facility
I did not have many interactions to comment about the irrigation facility. But we did not get complaints on irrigation facility from farmers & field officers which is common in normal irrigated agricultural schemes

1.3. Sector-wise activities
(1) Irrigation. There were some activities on on-farm irrigation activities. Some demonstration was conducted in farmers field. Some agronomic practices such as addition of organic manure & demonstration of seedling broadcasting method may also contributed for on farm water management. On farm land consolidation (Straitening of bunds of plots) were also reported

(2) Paddy – Paddy sector all three site showed some progress (Kib from 4-5 t/ha to 6-7 t/ha, Kadu from 4-5t/ha to 6-8 t/ha, and Raj from 5-6 t/ha to 6-6.5t/ha). Farmers have convinced the value of improved varieties, package of practices particularly soil fertility improvement using O/M & recommended amount of fertilizer and IPM. However size of paddy sub committees in Kud site was about 30 farmers and 96 & 71 in other two sites. Except Kud, other two sites a few number of farmers of the subcommittee were involved and benefited from the technologies though all were benefited from the credit facility through RF. It is recommended that sub groups having 25-30 farmers per group of within and under the control of the subcommittee may be formed when subcommittee size is larger than 30 for better integration of activities. This is good for farmers to work as group and to get their involvement and to improve their Leader ship abilities. Data on GIS base soil information was useful and officers were able recommend suitable crops. This information base should be further strengthening to get the full benefit of the same to individual farmers such as precision farming techniques.

(3) Home garden- The term home garden is used for farming on relatively in small land area around the house for home consumption for better nutrition with full integration with house which has little or no economic benefit to the farmers. Project involvement in such activities is questionable where substantial economic benefit cannot be obtained. However many places commercial level cultivations were established under the home

gardens. It is recommended that name of the Home garden components in the project may be changed to Homestead development & commercial level cultivation or business farming to reap the economic, home consumption & nutritional benefits.

(4) Livestock

Livestock sector in two sites (Kibulwana & Rajangane working properly with some room for improvement such as marketing, value addition. Much progress was shown in Rajangana site specially may be due to youth & female involvement in managing subcommittee activities, But in Kadurugasdaman farmers were not interested on livestock's rearing. Therefore without going from all sites same alternatives, Site specific subcommittee may be formed

1.4. Marketing and processing

Team observed little or none done for marketing and processing. Therefore during the next period activities for marketing and processing & value addition should be paid high priority.

1.5. Training manuals, materials, guidelines, etc.

Training Manuals, Material & guide line were prepared adequately. New method of preparing Training material known as PD method is popular among field staff which is introduced by the project.

2. Capacity building of the government officers

Was technical transfer made by JICA Experts to the Sri Lankan counterparts? Were the counterparts utilized them for their daily work?

There were instances technical transfer made by the JICA experts such as PD method for preparation of training materials. It was also observed that the JICA experts facilitated the process.

In the original project there was a proposal to get FMTC & ISTI/MI , RRDI get fully involved in the project training activities. There was one training conducted at FMTC, Anuradhapura, Other than that there were not any training conducted in the above training institutes for the project activities. It is recommended in the future such training institutes get involved in the training programs.

3. Dissemination of the achievement of the model sites

Are the Project Team and related government authorities ready to disseminate/ apply the achievements at the model sites (technology and methods) to other area in the Districts?

Govt staff at higher and policy level is ready to disseminate. But at the implementation level and district level officers questioned that same level of intensive interventions could be done for all the areas. In the provincial areas (Kud) one AI has to cover as much as 6500 farm families. AI is able to attend to one FO areas, But when there is more FOO in the same AI range, similar involvement in all FOO is impossible. To get the further experiences it is recommended that Project may disseminate it to a few sites with duplicable interventions such as two or more FOO in one site and recommend the government to consider the island vide implementation.

4. Implementation process of the Project

Did you found any issues in planning, teamwork, communication, decision making process, progress monitoring, support of superior agencies for the Project?

It was observed that Rajangana site District agriculture staff is unaware what is happening in the project site. Therefore 2 of counterpart progress review meeting per season and more JCC meetings may be held to get involved of all counterpart officers
In Kadurugasdamana site, livestock intervention is questionable. Therefore site specific recommendation for formation of subcommittee based on thorough participatory approach is recommended instead of going for similar interventions in all sites.

5. Your evaluation of the Project by 5 criteria

	Very high	High	Mode rate	Low	Very low	Justification
(1) Relevance		√				Good relevance was observed in all interventions
(2) Efficiency			√			Full efficiency may be achieved at the end of project
(3) Effectiveness			√			Partly effective & introduce recommendations
(4) Impact			√			Sample size is too small to achieve significant impact
(5) Sustainability		√				Sustainable because of RF, FO & Sub Committees

Extra explanation for the above if needed:

6. Lessons learnt from the Project
What are the positive and negative experiences of the Project should be noted when Government of Sri Lanka or Government of Japan will conduct a project in the similar sector in the future?

FO could be made efficient, accountable & responsible for agricultural development
Decide the major interventions based on the resources & potential of the villages using farmer participatory approaches.
Implement activities that can be duplicated to all other places

7. Recommendations
Please suggest several the recommendations the Review Team is going to provide to the Project Team (both JICA Experts and Sri Lankan Counterparts) to further improve the Project implementation in the future.

In addition to continuation of on going activities
Make farm women more and more involved in the project activities
Marketing aspect should be strengthen
Value addition and processing of all agricultural and livestock produces should be given highest priority.

8. Other comments, if any

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November 2009
JICA Sri Lanka Office

Please submit your **comments, opinions and suggestions** according to the following items after the field visit:

1. Achievement at the model sites (level of outputs vs. inputs)

How were the level of achievements at the model sites and model farms? Were the technology and methods introduced innovative, technically competitive and sustainable?

1.1. Enhancement of FO

FOs in 3 sites appeared to be functioning well. However the level of achievement vary among sub committees of each site. Sub committee activities in KAD and RAJ indicated good progress particularly in the livestock group.

1.2. Rehabilitation of the irrigation facility

n.a

1.3. Sector-wise activities

(1) Irrigation
(2) Paddy -
(3) Home garden -

(4) Livestock

KIM – Shows good progress and it seems that activities are being implemented smoothly. The project has created interest among villagers and people who have had no past experience in dairy faring have ventured into dairying. Members shows enthusiasm and very keen interest on their farming activities. Unity among farmers shows as a strong factor due to organization of FO's and sub committees. They have gained scientific knowledge on dairy farming in a systematic way and technological applications are being practiced in their farms successfully. Improved upgrading methods such as Artificial Insemination (AI) are being adopted for upgrading their stocks. There is a good interaction and support from the Veterinary Surgeon and the respective LDI. Revolving fund concept could pave way for sustainability of this project.

RAJ – Similar progress is shown. Members are very keen and cooperative. Farmers have gained knowledge and experience through training. Good cooperation among dairy farmers due to group formation is clearly seen. Milk collection has been organized and members are getting a decent income from dairying. Samples are taking at regular intervals and farmers are being paid according to FAT and SNF levels. Farmers are getting an average daily milk production of around 5 to 6 litres. AI is being used to upgrade animals. Revolving Fund system has worked well benefiting farmers. There is a very good cooperation with the Veterinary Surgeon and the LDI and farmers are getting prompt services. Lead farmers have been evolved through this project interventions. Revolving fund and proper monitoring of its disbursements would lead to sustainability of this project.

KAD- This site is a remote village with limited infrastructure facilities. Number of farm families is less (around 37) and most of the able work force have left the village. Villagers had been traditionally keeping large herds of cattle and buffaloes in the past and most of them have either given up dairying or decreased their herd sizes due to increasing pressure on

grazing lands. There is not much progress in this model site as far as livestock activities are concerned. Number of farmers engaged in dairying is not adequate enough to organize proper milk collection. As a result farmers who are involved in dairying are not getting the real price for their milk; a flat rate of Rs 25.00 per litre is paid to them and samples are not collected regularly. Farmer enthusiasm is not shown much when compared to other two sites.

1.4. Marketing and processing

Livestock farmers in KIM and RAJ have been benefitted by organized milk collection in that area. One farmer (woman) in RAJ has already entered into milk processing and shown good results. However this has not happened in KAD due to inadequate farmer participation/involvement. Some famers keeping buffaloes in KAD and are engaged in curd making.

Home Gardens-RAJ - Individual marketing is being done at present. There is an opportunity for them to get a better price for their produce , if members are directed towards collective marketing and price determination at farm –gate.

1.5. Training manuals, materials, guidelines, etc.

A good set of training manuals and guidelines have been compiled in simplified language.

2. Capacity building of the government officers

Was technical transfer made by JICA Experts to the Sri Lankan counterparts? Were the counterparts utilized them for their daily work?

Unable to comment on this as this has not been properly evaluated by us.

3. Dissemination of the achievement of the model sites

Are the Project Team and related government authorities ready to disseminate/ apply the achievements at the model sites (technology and methods) to other area in the Districts?

FO's , Sub committees and RF's are working well in two model sites at Kim and RAJ. However plans to disseminate its achievements into other areas were not clearly seen.

4. Implementation process of the Project

Did you find any issues in planning, teamwork, communication, decision making process, progress monitoring, support of superior agencies for the Project?

Planned activities are done smoothly at the village (site) level and a good coordination exists with government field staff servicing in those area. More coordination or understanding is required with respective higher officers at Provincial/National level.

5. Your evaluation of the Project by 5 criteria – for Livestock component.

√

	Very high	High	Mode rate	Low	Very low	Justification
(1) Relevance		√				*Except in KAD site
(2) Efficiency		√				
(3) Effectiveness			√			Further room for improvement
(4) Impact			√			Too early to comment on this
(5) Sustainability			√			Too early to comment on this

*Relevancy of dairying for KAD site need to be reviewed.

6. Lessons learnt from the Project
What are the positive and negative experiences of the Project should be noted when Government of Sri Lanka or Government of Japan will conduct a project in the similar sector in the future?

Positive : Organization of FO's and formation of sector-wise sub groups make particular sector activities to become more successful. It also helps sharing of knowledge and experience at community level. Better coordination with field level officers in respective government organizations has become easy due to this group approach.

Revolving Fund concept has helped farmers to become self reliant and improve their decision making capabilities. Unlike in most other development programmes this approach would lead to sustainability of these projects.

CAP workshops and application of PD method for farmer training

Systematic step-by step training approach for beneficiary farmers

Negative: Improper selection of sites/type of activity. This was seen at KAD site particularly for dairy farming. Same model will not be applicable to all sites/areas

7. Recommendations –(with particular reference to Livestock)
Please suggest several recommendations the Review Team is going to provide to the Project Team (both JICA Experts and Sri Lankan Counterparts) to further improve the Project implementation in the future.

a. Further trainings on productivity improvement of cattle/buffaloes, record keeping and farm accounting , quality improvement of products (milk) , further processing, entrepreneurship development should be planned and implemented as the next step for successful farmers.

b. Some other inputs such as aluminium pails/cans for milk collection, grass chopping machines could be introduced to farmers through the revolving fund.

c. The project could further support strengthening of collective marketing of produce .

d. The project could encourage to develop village level entrepreneurs on processing (milk, rice) and small scale compound animal feed mixers with locally available ingredients.

e. Updating (technical) of extension staff in respective government agencies (field level) is also necessary for successful implementation of the project and for its continuity. This could be done through training and exposing them for technological advancements through study tours etc.

f. Understanding with/among participating government agencies (ie; Irrigation, Agriculture and livestock) at Provincial/National level should be further strengthened.

g. Programme in KAD, the livestock component in particular , should be reviewed again through a rapid appraisal.

8. **Other comments, if any**

a. At present the project is being limited to three (03) sites and the impact of this innovation for national outputs would be minimal. Therefore the project could plan to disseminate its concepts, lessons learned etc to other areas as well.

b. The project has developed a good set of training manuals, guidelines etc. It is suggested to give publicity among government training Institutes of participating agencies (Irrigation, Agriculture and Livestock) on the availability of these materials. It would be beneficial if the project could make provisions to multiply these and make available to interested organizations at a very nominal fee.

c. It seems that in model sites/farms where women participation is high shows much progress. Women empowerment could also be promoted through this project in the future, taking lessons from this on going project activities.

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Report Format for the Sri Lankan Team members of the Mid-term Review of ICIM

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Please submit your **comments, opinions and suggestions** according to the following items at the end of the field visit:

1. Achievement at the model sites (level of outputs vs. inputs)

How were the level of achievements at the model sites and model farms? Were the technology and methods introduced innovative, technically competitive and sustainable?

1.1. Capacity enhancement of FOs and government officers on management of FOs

The majority of the officers who have participated TOT in CAP and Baseline survey methodologies are confident of conducting similar works in future and also have involved in conducting the same thing in the pilot sites. However they are yet to receive an opportunity to practice learned subjects themselves is a negative aspects in achieving the long term objectives of the project. Otherwise it is natural to forget the imparted new knowledge under the traditional nature of works.

CAP workshops facilitated by the government officers at the FO level has been successful in obtaining farmer participation from the early stage of planning and designing of irrigation rehabilitation and incorporating local knowledge and wisdom in the development activities. The approach also has helped to create sense of ownership on irrigation infrastructure and social cohesion among beneficiaries. Significant increase in FO membership, increase in collection of O&M fee and 'salaaries' and labour contribution for rehabilitation activities and increase famer participation for general farmer meetings, seasonal cultivation meetings and FO committee meetings are good evidences to capacity enhancement of FOs. Introduction or amendment of FO constitution, incorporation of new rules and regulations for violators of FO decisions and formation of sub committees are timely interventions under taken by the project to institutionalize the FO in the pilot sites. Formation of sub committees is an innovative approach under taken by the project, but it is not clear how these institutions will be linked up horizontally and vertically during the later stage of expected expansion or dissemination of the project at scheme level.

It should be mentioned that although capacity of FOs have increased in general in all pilot areas, the level of FO strength in Rajangana is comparatively lower and need to be addressed.

1.2. Capacity enhancement of FOs and government officers on irrigation facility management and water management

TOT on GIS and PD methods are appreciated by the most of the participated officers, but they are not certain about their capability of producing GIS maps on themselves in future unless the new skills are applied in the near future. PD method is a good method of transferring new knowledge for farming community under adults training programmes. The produced GIS and soil maps are valuable resource for future planning and development in the area as perceived by both the officers and farmers. One of the important points expressed by the farmers on the usefulness of GIS maps produced is that it will be easier for them to forward their irrigation system problems to relevant officers utilizing the map.

The training given for FO leaders and other selected people on undertaking irrigation rehabilitation construction works have been properly utilized by the beneficiaries and the participants are satisfied with the new knowledge and skills imparted to them. Some of the selected areas have enhanced their local capacity in water related masonry works which is expected to be use full for the pilot area as well as for surroundings in performing future development works. Quality of construction works are at satisfactory level and the

beneficiaries at Rajangana expressed that the quality of construction works conducted by ICIM are much superior compared to PEACE construction works, though ICIM works gets delayed. Bottom –up approach adopted by the project, sharing information about the project activities with the beneficiaries, prioritization of rehabilitation needs considering farmers ideas and wishes and mobilization of community labours for rehabilitation works have indeed empower the community and enhance the sense of ownership of the system which is vital for future sustainable O&M.

FOs have increase their abilities in formulating the irrigation schedule through the experience they gained working with the field staff in planning the water issues. They are confident of doing a better job in coming seasons in allocating water with in the FO command area. Irrigation committee formed by the project and the awareness building programme conducted on water management has helped them in this regard.

Collection of O&M fee and 'Salaaries' have increased tremendously and some FOs have increased the O&M fee from Rs 50/ac/season to Rs 100/ac/season. Systematic procedures have been established to utilize the collected O&M fee to improve the canal condition which is a good sign for better management.

Although farmer participation has increased in system O&M in all locations, it is not at satisfactory level at the time of evaluation. Canal system was not fully cleaned and de silted though they had already reached the deadline for such works as decided at the seasonal meeting which raises he question of efficient water management and the sustainability of rehabilitated canal system. This situation indicates the some kind of problem in FO strength and the community mobilization aspects. When the ability of the FO in undertaking sufficient O&M after completion of the rehabilitation works was inquired in Rajangana, it was said that they do not have any idea on this matter. This is again validating the above observation of the problem in sustainable maintenance.

1.3. Capacity enhancement of FOs and government officers on agricultural production

Not relevant

1.4. Capacity enhancement of FOs and government officers on marketing and processing

Not relevant

2. Institutional capacity building for dissemination of the achievement in the model sites

Are the Project Team and related government authorities ready to disseminate/ apply the achievements at the model sites (technology and methods) to other area in the Districts?

An institutional capacity has been enhanced due to the project interventions through the TOT programmes, training manuals produced, and the GIS maps and PD documents formulated. It was described during the discussions held with the government officials that the insufficient human resources and physical resources are major hindrance for them to disseminate and replicate the experiences gained in the pilot sites though some of them expressed their willingness to expand the project in few locations with the available resources. However this is depend on how the central government respond to their requests in prioritizing and approving their plan and supporting them within the restricted resources. The production of GIS and soil maps required fairly large amount of resources from government allocations and the abilities of application of skills imparted to government officials on GIS is yet to be assessed properly.

Dissemination of technologies such as on-farm water management, parachute method of paddy cultivation and use of seeder machinery needs considerable amount of investments and efforts at farmers' level which ultimately determine the application of officers' efforts in

disseminating technologies.

3. Capacity building of the government officers
Was technical transfer made by JICA Expert Team to the Sri Lankan counterparts? Were the counterparts utilized them for their daily work?

It was difficult to assess the level of utilization of the transferred technology by the counterparts in the realistic ways at the field level and institutional level. The major problems I see in this process is lack of budgetary allocation, absence of established plan or mechanism to utilize the technologies transferred and manuals prepared and absence of feasibility in the different context on technical as well as social and economic feasibilities of the transferred technologies. For instance a management package of rice cultivation called as System of Rice Intensification (SRI or Madagascar method of rice cultivation) introduced by various NGOs and projects which is also similar to on-farm water management technology introduced by ICIM was not gained much popularity due to social and economic reasons though it provided much higher yield. Similarly, if the project or government counterparts failed to formulate a methodology to utilize the project manuals and guide books prepared by the ICIM, the materials will be kept in shelf without much use.

4. Implementation process of the Project
Did you found any issues in planning, teamwork, communication, decision making process, progress monitoring, support of superior agencies for the Project?

1. Rehabilitation activities coincide with seasonal cultivation cycle causing difficulties for both field level officials and farmers in implementing the works leading to unexpected delays.
2. Lack of cooperation between EAs and WS were observed which should be sorted out immediately or some other alternative arrangements should be made to avoid delays and increase the efficiency.
3. The long process adopted in approving the rehabilitation plans and estimates is one of the major issue observed in the process of project implementation (from EA to Draughtsmen to IE to RDI etc). This can be minimized by vesting the power of providing final approval to IE upto 2 million as in other development projects DS has similar power and authority.
4. The success of participatory development process is basically depended on willingness of sharing the power, authority and responsibilities traditionally enjoyed by the government officials with the beneficiary people. The reluctance of this aspect though various negative aspects has the ability of discouraging the beneficiary involvement and contribution.

5. Your evaluation of the Project by 5 criteria

	Very high	High	Mode rate	Low	Very low	Justification
(1) Relevance	X					Irrigation based agricultural development is the main strategy in Sri Lanka from time immemorial. Participatory irrigation management is the national policy of irrigation management since 1980s. Holistic approach adopted by the ICIM project is a positive aspect to reach the development potential than the piece meal interventions without sectoral coordination
(2) Efficiency			X			Coordinated and collaborative nature of the project staff and the line agencies leads the efficiency, but failure or reluctance of one party in meeting the timeline of the project trigger the reduce efficiency
(3) Effectiveness		X				Systematic and interrelated project activities with the GOSL support indeed increase the effectiveness of the project.
(4) Impact			X			Too early to comment about impacts as current exercises are mainly limited to limited number of demonstrations sites and the officials of counter parts are yet to practice most of the inbuilt capacities.
(5) Sustainability			X			The performance of the project components after the withdrawal of the project interventions determine the sustainability which is determine by the institutional

						arrangements made after the project, sufficient financial allocation from the central government and the strength of the FOs. These issues are not adequately addressed.

6. Lessons learnt from the Project

(1) Pilot project sites are fairly dispersed locations demanding more resources for logistics and efficient coordination of project activities. If the sites are little closer, the experiments and capacity building and close monitoring will be much easier with the limited resources and the output will be higher.

(2) The selected sites are representing different context, though the project tried to implement more or less similar model. Kimbulwana oya scheme has benefitted in the past from pilot water management experiments conducted in the scheme and the farmers have good understanding about the concept of participatory development, people mobilization and efficient management of water resources, but Kaduru gasgammana people are by and large unexposed and the concepts are relatively new for them. Nevertheless both schmes have the homogeneous people in terms of caste, ethnicity and origin and also mostly have kinship relations. However, Rajangana is a settlement scheme consisting of heterogeneous people. There may be further cleavages based on region, caste, party policies and ethnic grounds. Therefore, we are no longer dealing with socially cohesive farming communities in Rajangana which subscribe to the socially and morally ordained ethics of irrigation maintenance as was the case in other two schemes.

(3) Sub committees established are working very well and have given added strength to the FOs. Devolution of FO activities to subcommittees has ease the voluntary works done by few FO office bearers and helped to develop new leaders within the FO. The main issue is coordination among the sub committees are not properly institutionalized which is leading to lack of sufficient understanding about the activities undertaken among the members of the committees. As the main activities of all the sub committees are primarily based on use of RF, all the members have the right to know about the problems, prospects and performance of the use of RF.

(4) According to literature about the past failures occurred in the FO performance, one of basic reasons for the collapse of FOs is misuse of FO fund by FO office bearers, corruption and mal practices. Therefore systematic financial management and transparency at FO level and subcommittee level is vital. The project has provided sufficient training on financial management aspects and helped to prepare necessary financial accounting system at FO level. However, financial transparency at subcommittee level and some time FO level is not properly regularised which is important to avoid unwanted financial management problems and development of mistrust among members.

(5) On-farm water management is a good experiment undertaken by the project which is not only increase the yield but also has reduced the water duty. It provides some lessons for field preparation and infrastructure requirement for future new land 'asweddumization'. The major lesson of the exercise is reluctance of farmer "Suduhamy" to expand the experiment for his 10ac land due to the extra labour requirement for on–farm water management which is supposed to hamper his seasonal other activities. Another factor which should be taken into consideration is that the farmers like Suduhamy are innovative and entrepreneurial farmers who like to do experiments and willing to take risk. Therefore the project should get ready to prepare appropriate model for dissemination of these types of technologies among general farmers.

(6) Although the FOs has used the privilege of approving fertilizer subsidy for obedient farmers (those who paid O&M fee, mobilized necessary labour for rehabilitation activities and maintenance of canals etc), this is not being successful every time. For example, in Rajangana pilot area, around 98% of farmers have paid their O&M fee to FOs, and non paid 2% are banana cultivation farmers who are not eligible to receive the fertilizer subsidy. FO has not taken any action against these farmers. Similarly, in Kadurugasgammana, the rule breakers have mange to get their fertilizer quota through the DO without FO approval and FO is in a difficult situation of managing other farmers

with this experience. Therefore the lesson here is need of appropriate and feasible sanction mechanism for FO to undertake the activities smoothly.

(7) Lack of resource allocation and incentive mechanisms for the participating government staff and their institutions has been a drawback in implementing the pilot project works rigorously and efficiently. In the absence of physical resources such as vehicles and the financial resources for the GOSL staff, the government should prepare necessary budget for the activities.

7. Recommendations

Please suggest several the recommendations the Review Team is going to provide to the Project Team (both JICA Experts and Sri Lankan Counterparts) to further improve the Project implementation in the future.

(1) As groundwater potential is higher in irrigated command areas, it is useful to know the groundwater availability. This can be easily done by the GIS mapping (Groundwater endowment map) and will be useful to plan the conjunctive use of water for agricultural development and also increase the institutional capacity.

(2) The current methodology adopted in preparation of GIS map is seem to be expensive and time consuming. Therefore it is advisable to stud y the feasibility of using rasdom sampling method in the dat generation for GIS mapping

(3) The project should develop appropriate model for on-farm water management considering the household labour availability and utilization in order to disseminate the technology to a larger use group.

(4) The GoSL should consider the experiences gained in the pilot areas in the on-farm water management in their future land development projects under on-going new irrigation schemes such as Moragahakanda and Duduru-oya to practice on-farm water management (straight ridges, specific shape of the ridges, drainage requirement and development of farm ditches)

(5) It is recommended to practice on-farm water management in a cluster of fields through developing farm ditches and drainage canals.

(6) It is recommended to conduct experiment under with combination of on- farm water management with seeder machine planting and parachute method of cultivation to demonstrate the yield differences.

(7) The process of people mobilization, strengthening of FOs and institutionalization of participatory irrigation management needs some extra efforts to create viable FOs especially in the systems like Rajangana irrigation scheme, where a mix of heterogeneous population is settled.

(8) The package of interventions should not be a blue print model and need to consider the context as well. For example the feasibility of livestock enterprise at Kadurugasgammana is hard to understand considering the past livestock experience of the people in the area, land scarcity and problems and uncertainty prevailing in the marketing of milk due to difficulties in accessibility are need to be considered.

(9) The ICIM project should introduce and practice the sanction and punishment mechanism for rule breakers rather than solely depending on fertilizer subsidy for linking the violators. Unless alternative legal arrangements effectively implemented, this might be a problem in managing the proper discipline among the FO members in case of abolishing of fertilizer subsidy.

(10) It is essential to introduce the regular system and procedures to present the FO and subcommittee financial handlings after systematic auditing to build the trust among members and eliminate the challenges of rural elites as experienced in Rajangana.

(11) More efforts are needed to motivate farmers towards crop diversification specially during water scarce yala seasons in the locations of Kimbulwana oya and Kadurugasgammana as there is no guarantee of current trend of high return from paddy cultivation in future. The profit margin will further reduce if fertilizer subsidy is abolished.

(12) Capacity building programmes of FOs should focus more on training the FO leaders on organizational management, people mobilization and communication skills especially with external organizations

(13) The private sector participation and linkages with the FO activities will be useful for the future activities and the capacity enhancement of the FOs. Forward contract agreements with private

sector was a proven strategy in Mahaweli system H in increasing farmers' income under the crop diversification programme.

(14) It is recommended to allocate some funds or incentive mechanism for participating government officers/and or institutions which will reduce the present gap and less motivation existing between project staff and the government officials including field staff.

8. Other comments, if any

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Date: 22.11.2009