

付 属 資 料

1. 討議議事録 (R/D) (2007年3月8日署名)
2. 協議議事録 (ミニッツ) (2007年3月8日署名)
3. 協議議事録 (ミニッツ) (2006年12月13日署名)
4. PDM、PO (和文)
5. プロジェクト運営実施体制図
6. Description of the Ex-ante Evaluation Survey
7. PEACE プロジェクト概要
8. 関係研修・研究機関の詳細
9. FAO・SPFS 事業概要
10. 組織図・各種統計データ

RECORD OF DISCUSSIONS
BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY
AND AUTHORITIES CONCERNED OF
THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
ON JAPANESE TECHNICAL COOPERATION
FOR
THE PROJECT ON INCREASING THE CAPACITY
OF INTEGRATED MANAGEMENT IN IRRIGATED AGRICULTURE
IN DRY ZONE

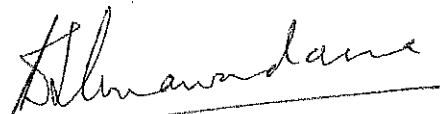
Japan International Cooperation Agency (hereinafter referred to as "JICA") exchanged views and had a series of discussions through JICA Sri Lanka Office with authorities concerned of the Government of Sri Lanka (hereinafter referred to as "GOSL") with respect to the details of technical cooperation project concerning Increasing the Capacity of Integrated Management in Irrigated Agriculture in Dry Zone (hereinafter referred to as "the Project") in Sri Lanka.

As a result of the discussions, JICA and Sri Lankan authorities concerned agreed on the matters referred to in the document attached hereto.

Colombo, 8 March, 2007



Mr. Takumi Ueshima
Resident Representative
JICA Sri Lanka Office
Japan



Mr. A.D.S. Gunawardana
Secretary
Ministry of Irrigation and Water
Management
Sri Lanka



Mr. T. M. Abayawickrama
Secretary
Ministry of Agricultural Development
and Agrarian Services
Sri Lanka



Mr. M.P.D.U.K. Mapa Pathirana
Director (Japan Division)
Department of External Resources
Ministry of Finance and Planning
Sri Lanka

THE ATTACHED DOCUMENT

I. COOPERATION BETWEEN JICA AND GOSL

1. GOSL will implement the Project concerning Increasing the Capacity of Integrated Management in Irrigated Agriculture in Dry Zone (hereinafter referred to as "the Project") in cooperation with JICA.
2. The Project will be implemented in accordance with the Master Plan which is given in Annex I.

II. MEASURES TO BE TAKEN BY JICA

In accordance with the laws and regulations in force in Japan, JICA will take, at its own expense, the following measures according to the normal procedures under the Technical Cooperation Agreement made on 12th of October, 2005 between Government of Japan and GOSL.

1. DISPATCH OF JAPANESE EXPERTS

JICA will provide the services of the Japanese experts as listed in Annex II.

2. PROVISION OF MACHINERY AND EQUIPMENT

JICA will provide such machinery, equipment and other materials (hereinafter referred to as "the Equipment") necessary for implementation of the Project as listed in Annex III. The Equipment will become the property of GOSL upon being delivered C.I.F. (cost, insurance and freight) to the Sri Lankan authorities concerned at the ports and/or airports of disembarkation.

3. TRAINING OF SRI LANKAN PERSONNEL IN JAPAN

JICA will receive the Sri Lankan personnel connected with the Project for technical training in Japan.



III. MEASURES TO BE TAKEN BY GOSL

1. GOSL will take necessary measures to ensure that the self-reliant operation of the Project will be sustained during and after the period of Japanese technical cooperation, through full and active involvement in the Project by all related authorities, beneficiary groups and institutions.
2. GOSL will ensure that the technologies and knowledge acquired by the Sri Lankan nationals as a result of Japanese technical cooperation will contribute to the economic and social development of Sri Lanka.
3. GOSL will grant in Sri Lanka privileges, exemptions and benefits to the Japanese experts referred to in II-1 above and their families, which are no less favourable than those accorded to experts of third countries working in Sri Lanka under the Technical Cooperation Agreement.
4. GOSL will ensure that the Equipment referred to in II-2 above will be utilized effectively for the implementation of the Project in consultation with the Japanese experts referred to in Annex II.
5. GOSL will take necessary measures to ensure that the knowledge and experience acquired by the Sri Lankan personnel from technical training in Japan will be utilized effectively in the implementation of the Project.
6. In accordance with the laws and regulations in force in Sri Lanka, GOSL will take necessary measures to provide at its own expense:
 - (1) Services of the Sri Lankan counterpart personnel and administrative personnel as listed in Annex IV;
 - (2) Land, buildings and facilities as listed in Annex V;
 - (3) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the Equipment provided through JICA under II-2 above; and

7. In accordance with the laws and regulations in force in Sri Lanka, GOSL will take necessary measures to meet:
- (1) Expenses necessary for transportation within Sri Lanka of the Equipment referred to in II-2 above as well as for the installation, operation and maintenance thereof;
 - (2) Customs duties, internal taxes, and any other charges, imposed in Sri Lanka on the Equipment referred to in II-2 above; and
 - (3) Running expenses necessary for the implementation of the Project.

IV. ADMINISTRATION OF THE PROJECT

1. Secretary of Ministry of Irrigation and Water Management will bear overall responsibilities for the administration and implementation of the Project as the Project Chief Coordinating Officer. Project Chief Coordinating Officer will coordinate other relevant Secretaries, Heads and Institutes.
2. Additional Secretary of Ministry of Irrigation and Water Management will bear overall responsibilities for the managerial matters of the Project as the Project Coordinating Officer.
3. The Japanese Chief Advisor will provide necessary recommendations and advice to the Project on any matters pertaining to the implementation of the Project.
4. The Japanese experts will give necessary technical guidance and advice to the Sri Lankan counterpart personnel on technical matters pertaining to the implementation of the Project.
5. For the effective and successful implementation of technical cooperation for the Project, the Joint Coordinating Committee (National and District Level), Training Advisory Committee, Project Management Committee and Farmer Organization-level Implementation Committee will be established whose functions and composition are described in Annex VI.

V. JOINT EVALUATION

Evaluation of the Project will be conducted jointly by JICA and the Sri Lankan authorities concerned, at the middle and during the last six months of the cooperation term in order to examine the level of achievement.

VI. CLAIMS AGAINST JAPANESE EXPERTS

GOSL undertakes to bear claims, if any arises, against the Japanese experts engaged in technical cooperation for the Project resulting from, occurring in the course of, or otherwise connected with the discharge of their official functions in Sri Lanka except for those arising from the wilful misconduct or gross negligence of the Japanese experts.

VII. MUTUAL CONSULTATION

There will be mutual consultation between JICA and GOSL on any major issues arising from, or in connection with this Attached Document.

VIII. MEASURES TO PROMOTE UNDERSTANDING OF AND SUPPORT FOR THE PROJECT

For the purpose of promoting support for the Project among the people of Sri Lanka, GOSL will take appropriate measures to make the Project widely known to the people of Sri Lanka.

IX. TERM OF COOPERATION

The duration of the technical cooperation for the Project under this Attached Document will be four (4) years from the date of arrival of the JICA long term experts.



ANNEX I	MASTER PLAN
ANNEX II	LIST OF JAPANESE EXPERTS
ANNEX III	LIST OF MACHINERY AND EQUIPMENT
ANNEX IV	LIST OF SRI LANKAN COUNTERPART AND ADMINISTRATIVE PERSONNEL
ANNEX V	LIST OF LAND, BUILDINGS AND FACILITIES
ANNEX VI	COMMITTEES FOR THE PROJECT





ANNEX I MASTER PLAN

1. TITLE OF THE PROJECT

“Increasing the Capacity of Integrated Management in Irrigated Agriculture in Dry Zone”

2. SITE OF THE PROJECT

- (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

3. OVERALL GOAL

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

4. PROJECT PURPOSE

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

5. OUTPUT OF THE PROJECT

5.1 Outputs in the model sites

Capacity of the government officers and FOs is enhanced in the fields of:

- (1) Management of FOs
- (2) Irrigation facility management and water management
- (3) Agricultural production
- (4) Marketing and processing

5.2 Outputs in the training institutes

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

ANNEX II LIST OF JAPANESE EXPERTS

A. Long-term Experts

1. Chief Advisor / Farmer Organization
2. Irrigation Facility Management/Water Management
3. Training (cum Coordination)

B. Short-term Experts

Short-term experts will be dispatched as the necessity arises for effective implementation of the Project.

ANNEX III LIST OF MACHINERY AND EQUIPMENT

1. The necessary equipment for the transfer of technology by the Japanese experts will be provided.
2. Other materials and equipment mutually agreed upon as necessary will be provided.



**ANNEX IV LIST OF SRI LANKAN COUNTERPART AND
ADMINISTRATIVE PERSONNEL**

A. Organization Responsible for the Project:

Ministry of Irrigation and Water Management (MI&WM)

B. Personnel

1. Project Chief Coordinating Officer

Secretary, MI&WM

2. Project Coordinating Officer

Additional secretary, MI&WM

3. Counterpart Personnel

Suitably qualified personnel in respective administration levels and in related organizations to the Project are assigned continuously to work with experts dispatched by Japanese side:

(1) National Level

Secretary, MI&WM

Secretary, MAD&AS

Additional Secretary, MI&WM

Additional Secretary, MAD&AS

Director General of Irrigation

Director General, DOA

Commissioner General, DAD

Directors, ID/IMD/DOA

Directors, ITI/IPHT/IFCRD/RRDI

Deputy Directors, ISTI MI/FMTC/AHTC

(2) Provincial Level

Directors, PDOA, North Central Province/North Western Province

Directors, PDOAPH, North Central Province/North Western Province

2

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A

1

3

(3) District Level

RDI

RPM, IMD

PM, ID

IE, ID

EA, ID

ADA, DOA/PDOA

SMS/SMO, DOA/PDOA

AI, DOA/PDOA

DO, DAD

VS, PDOAPH

LDI, PDOAPH

4. Key Counterpart Personnel

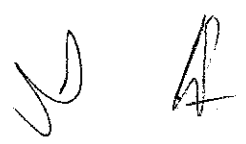
Key Counterpart Personnel is shown in attached Table.

5. Other personnel are mutually agreed upon as necessary.



Table Key Counterpart Personnel

Purpose	Irrigation Sector (ID, IMD)	Agricultural Sector (DOA, PDOA)	Animal Husbandry Sector (DOAPH, PDOAPH)	Institutional Development Sector (ID, IMD)
Manage at model site	<ul style="list-style-type: none"> ✓ IE ✓ EA 	<ul style="list-style-type: none"> ✓ ADA ✓ SMO ✓ AI 	<ul style="list-style-type: none"> ✓ LDI 	<ul style="list-style-type: none"> ✓ RPM ✓ PM
Foster training	<ul style="list-style-type: none"> ✓ Director, ITI ✓ Resource Persons 	<ul style="list-style-type: none"> ✓ Director, Training Institute ✓ Deputy Director, Training Institute ✓ SMS ✓ SMO 	<ul style="list-style-type: none"> ✓ VS ✓ AHTC, Seepukulama 	<ul style="list-style-type: none"> ✓ SRPM ✓ Training Coordinator
Coordinate/Facilitate	<ul style="list-style-type: none"> ✓ CIE (I&WM) ✓ RDI 	<ul style="list-style-type: none"> ✓ Deputy Director (Irrigation) ✓ Provincial Director 	<ul style="list-style-type: none"> ✓ Deputy Director ✓ Provincial Director 	<ul style="list-style-type: none"> ✓ CIE (I&WM) ✓ Deputy Director (Training & Education)
Apply the outputs to policy level	<ul style="list-style-type: none"> ✓ Director (I&WM) ✓ Director (SS&Tr.) 	<ul style="list-style-type: none"> ✓ Director (Ext.&Training) 	<ul style="list-style-type: none"> ✓ Director 	<ul style="list-style-type: none"> ✓ Director (I&WM) ✓ Additional Director (Institutional Development)





ANNEX V. LIST OF LAND, BUILDINGS AND FACILITIES

1. Sufficient facilities for the implementation of the Project
2. Offices and other necessary facilities for Japanese experts
3. Provision of services such as electricity, water supply, telephone and furniture necessary for the Project activities
4. Other facilities mutually agreed upon as necessary

Two handwritten signatures in black ink, one appearing to be 'R' and the other 'A', positioned above the list items.

ANNEX VI COMMITTEES FOR THE PROJECT

I. Joint Coordinating Committee (National Level)

1. Functions

The Joint Coordinating Committee at National Level (hereinafter referred to as "National JCC") will be established for the effective and successful implementation of technical cooperation for the Project. National JCC will meet quarterly each year or whenever necessity arises, in order to fulfil the following functions.

- a. To deliberate and approve the Plan of Operation (PO) and the Annual Plan of Operation (APO) of the Project
- b. To review activities and progress of the technical cooperation program in accordance with the above-mentioned Plans
- c. To review measures taken by the Sri Lankan side and the Japanese side
- d. To exchange views on major issues arising from or in connection with the Project and decide corrective measures to be taken
- e. To coordinate with other relevant agencies for the matters arising in implementation of the Project

2. Composition

(1) Chairperson:

Secretary, Ministry of Irrigation and Water Management (MI&WM)

(2) Members

Sri Lankan Side:

Additional Secretary, MI&WM

Additional Secretary, MAD&AS

Director General of Irrigation

Director General, DOA

Commissioner General, DAD

Directors, ID/IMD/DOA/PDOA

Director, MI&WM

Director, MAD&AS

Deputy Commissioner, DAD

Chief Secretaries, North Central Province/ North Western Province

District Secretaries, Anuradhapura/ Kurunegala Districts
Director, ERD
Project Director of PEACE

Japanese Side:

Chief Advisor

Other experts

Resident Representative of JICA Sri Lanka Office

Chief Representative, Representative Office in Colombo, JBIC

Other personnel concerned to be assigned by JICA, if necessary

(3) National JCC can invite any related person to discuss specific issues.

Note: Representative(s) of the Embassy of Japan in Sri Lanka may attend the Joint Coordinating Committee as observer(s).

II. Joint Coordinating Committee (District Level)

1. Function

One Joint Coordinating Committee for both Districts (hereinafter referred to as "District JCC") will be established for the effective and successful implementation of technical cooperation for the Project. District JCC will meet once in two months or whenever necessity arises, in order to fulfil the following functions.

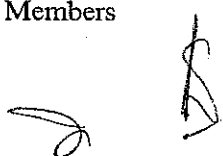
- a. To review activities and progress of the technical cooperation program in accordance with the above-mentioned Plans on each district
- b. To review measures taken by the Sri Lankan side and the Japanese side on each district
- c. To exchange views on major issues arising from or in connection with the Project, decide corrective measures at the level of the Districts, and recommend corrective measures to the National JCC when necessary

2. Composition

(1) Chairperson:

Additional Secretary, MI&WM

(2) Members



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Sri Lankan Side:

RDIs, Anuradhapura/Kurunegala
Directors, ID/IMD/DOA/PDOA/PDOAPH
Deputy Directors, DOA/PDOA/PDOAPH
Deputy Assistant Commissioner, DAD
Directors, ITI/IPHT/IFCRD/RRDI
Deputy Directors, ISTI MI/FMTC/AHTC
IE, ID
RPM, IMD

Japanese Side:

Chief Advisor
Other experts
Other personnel concerned to be assigned by JICA, if necessary

(3) District JCC can invite any related person to discuss specific issues.

III. Training Advisory Committee

1. Function

The Training Advisory Committee (hereinafter referred to as "TAC") will be established for the effective and successful implementation of technical cooperation of the Project among the related training organizations. TAC will meet quarterly each year or whenever necessity arises, in order to fulfil the following functions.

- a. To make advices on all the training matters arising in the process of implementation of the Project
- b. To coordinate training related organizations to operate training courses

2. Composition



- (1) Convener: Director, ITI
- (2) Members

Sri Lankan Side:

Directors, ID/IMD/DOA/PDOA/PDOAPH
Directors, ITI/IPHT/IFCRD/RRDI
Deputy Directors, ISTI MI/FMTC/AHTC

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Japanese Side:

Chief Advisor

Other experts

Other personnel concerned to be assigned by JICA, if necessary

(3) TAC can invite any related person to discuss specific issues

IV. Project Management Committee

1. Function

The Project Management Committee (hereinafter referred to as "PMC") will have the following additional functions in the process of implementation of the Project in addition to the existing functions, for the effective and successful implementation of technical cooperation of the Project at the irrigation scheme level. PMC will meet at least once a month or whenever necessity arises.

- a. To assess and identify training needs preliminary
- b. To monitor the activities
- c. To forward training needs to TAC

2. Composition

(1) Chairperson: RPM, IMD or PM, ID

(2) Members

RPM, IMD or PM, ID

IE, ID

AI, DOA/PDOA

DO, DAD

Other relevant officers

FO chairpersons of the irrigation scheme

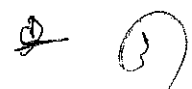
(3) Invitees

Chief Advisor

Other experts

Other personnel concerned to be assigned by JICA, if necessary

(4) PMC can invite any related person to discuss specific issues.



V. Farmer Organization-level Implementation Committee

1. Function

The Farmer Organization-level Implementation Committee (hereinafter referred to as "FOIC") will be established for the effective and successful implementation of technical cooperation of the Project at the model site level. FOIC will meet at least once a month or whenever necessity arises, in order to fulfil the following functions.

- a. To prepare the Community Development Plans and Community Action Plans
- b. To implement the development activities
- c. To identify training needs
- d. To implement the training

2. Composition

(1) Chairperson: FO Chairperson

(2) Members

FO chairperson of the model site
RPM/IDO/DA, IMD or PM, ID
EA/DA, ID
AI, DOA/PDOA
ARPA, DAD
GN
Other relevant officers

(3) Invitees

Chief Advisor

Other experts

Other personnel concerned to be assigned by JICA, if necessary


(4) FOIC can invite any related person to discuss specific issues.



Abbreviations

ADA: Assistant Director of Agriculture
AHTC: Animal Husbandry Training Center, Seepukulama
AI: Agricultural Instructor
ARPA: Agricultural Research and Productivity Assistant
CIE: Chief Irrigation Engineer
DA: Development Assistant
DAD: Department of Agrarian Development
DO: Divisional Officer
DOA: Department of Agriculture
EA: Engineering Assistant
ERD: Department of External Resources
FMTC: Farm Mechanization Training Center
FO: Farmer Organization
GN: Grama Niladhari
ID: Irrigation Department
IDO: Institutional Development Officer
IE: Irrigation Engineer
IFCRD: Institute of Field Crops Research and Development
IMD: Irrigation Management Division
IPHT: Institute of Post-Harvest Technology
ISTI MI: In-Service Training Institute, Maha Illupalama
ITI: Irrigation Training Institute, Galgamuwa
I&WM: Irrigation and Water Management
LDI: Livestock Development Instructor
MAD&AS: Ministry of Agricultural Development & Agrarian Services
MI&WM: Ministry of Irrigation and Water Management
PDOA: Provincial Department of Agriculture
PDOAPH: Provincial Department of Animal Production & Health
PEACE: Pro-poor Economic Advancement and Community Enhancement Project
PM: Project Manager
RDI: Regional Director of Irrigation
RPM: Resident Project Manager
RRDI: Rice Research Development Institute

SMO: Subject Matter Officer
SMS: Subject Matter Specialist
SRPM: Senior Resident Project Manager
SS&Tr.: Special Services & Training
VS: Veterinary Surgeon



MINUTES OF MEETING
BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY AND
THE AUTHORITIES CONCERNED OF
THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
ON JAPANESE TECHNICAL COOPERATION
FOR
THE PROJECT ON INCREASING THE CAPACITY
OF INTEGRATED MANAGEMENT IN IRRIGATED AGRICULTURE
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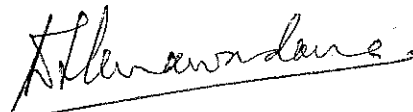
Japan International Cooperation Agency (hereinafter referred to as "JICA") exchanged views and had a series of discussions through JICA Sri Lanka Office with authorities concerned of the Government of Sri Lanka (hereinafter referred to as "GOSL") with respect to desirable measures to be taken by JICA and GOSL for successful implementation of the technical cooperation project concerning "Integrated Management in Irrigated Agriculture in Dry Zone" (hereinafter referred to as "the Project").

As a result of discussions, both sides agreed upon the matters referred to in the document attached hereto. This document is related to the Record of Discussions on the Project, signed on the same date.

Colombo, 8 March, 2007



Mr. Takumi Ueshima
Resident Representative
JICA Sri Lanka Office
Japan



Mr. A. D. S. Gunawardana
Secretary
Ministry of Irrigation and Water
Management
Sri Lanka



Mr. T. M. Abayawickrama
Secretary
Ministry of Agricultural Development
and Agrarian Services
Sri Lanka



Mr. M.P.D.U.K. Mapa Pathirana
Director (Japan Division)
Department of External Resources
Ministry of Finance and Planning
Sri Lanka

ATTACHED DOCUMENT

1. PROJECT DESIGN MATRIX

The Project Design Matrix (hereinafter referred to as "PDM") was elaborate through discussions by JICA and the authorities concerned of GOSL. Both sides agreed to recognize the PDM as an implementation tool for project management, and the basis for monitoring and evaluation of the Project. The PDM will be utilized by both sides throughout the implementation of the Project. It is possible to modify and change the PDM so that it could promote and provide for post harvest technology adaptation in agriculture products for farmer income enhancement, after mutual consultation between both sides. The PDM is shown in Annex I.

2. PLAN OF OPERATION

The tentative plan of operation (hereinafter referred to as "PO") has been formulated according to the Record of Discussions and will be implemented on condition that the necessary budget is allocated for the Project by both sides. The schedule is subject to change within the scope of the Record of Discussions when necessity arises in the course of implementation of the Project. The PO is shown in Annex II.

3. TARGET AREA AND GROUP OF THE PROJECT

Target areas of the Project are Anuradhapura and Kurunegala Districts (Annex III). Target groups of the Project are farm families and relevant government officers in the target areas.

4. SITE OF THE PROJECT

Following Three (3) Farmer Organizations were selected as model sites of the project.

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

ANNEX

- I. Project Design Matrix (PDM)
- II. Tentative Plan of Operation (PO)
- III. Project Area

Annex I. Project Design Matrix (PDM)

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
<p>Overall Goal Agricultural income of the farm families in the target area is increased.</p>	<p>1 Agricultural income of the farm families in the target area is increased at least by 2%.</p> <p>2 Agricultural productivity in the target area is increased at least by 2%.</p>	<p>* Surveys done by Central/Provincial government, Ministry of agriculture/irrigation</p> <p>* Sample household surveys done by Ministry of agriculture/irrigation, JICA</p>	<p>* The planned programme on improvement of agricultural productivity, such as PEACE² of JBIC and others, are implemented as scheduled.</p> <p>* Improvement of basic policies/regulations and environmental protection, which facilitate increment of agricultural income, are continuously implemented</p>
<p>Project Purpose An integrated mechanism is established to improve agricultural productivity through capacity building of government officers and FOs (farmer organizations).</p>	<p>1 At least two series of integrated training programmes are conducted in the target area during the Project implementation period.</p> <p>2 Degree of satisfaction among the farmers in the target area with the trainings and extension services is increased at least by 50%.</p> <p>3 Result of the Capacity Assessment of the FOs in the target area is improved at least by 25%.</p> <p>4 Training Advisory Committee functions continuously.</p>	<p>* Records of training institutes</p> <p>* Sample surveys for farmers and FOs</p> <p>* Capacity assessment survey for FOs in the target area</p>	<p>* Adequate budget and staff to implement necessary trainings and extension services are allocated.</p> <p>* Organizational changes of the government institutions in relation to the Project, is not taken place in a large scale.</p>
<p>Outputs Outputs in the model sites</p> <p>1 Capacity of the government officers and FOs is enhanced in the field of management of FOs</p> <p>2 Capacity of the government officers and FOs is enhanced in the fields of irrigation facility management and water management</p> <p>3 Capacity of the government officers and FOs is enhanced in the field of agricultural production</p> <p>4 Capacity of the government officers and FOs is enhanced in the fields of marketing and processing</p> <p>Outputs in the training institutes</p> <p>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.</p>	<p>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.</p> <p>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 facilities. 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.</p> <p>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.</p> <p>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 collecting market information.</p> <p>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.</p>	<p>* Interviews to the participants of the trainings</p> <p>* Work records of the participants of the</p> <p>* Sample surveys for farmers and FOs</p> <p>* Records on collective cultivation/marketing</p> <p>* Records of the Projects and training institutes</p>	<p>* Price and market of agriculture products do not become extremely unstable.</p> <p>* Climate conditions do not become extremely unstable.</p> <p>* Security situation of the target area does not become extremely unstable.</p>

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Annex I. Project Design Matrix (PDM)

Activities	Inputs		
	Japanese Side	Sri Lankan Side	
<p>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)</p> <p>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 Plans (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 reflect the outcomes of the above-mentioned activities.</p> <p>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 (LD). 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 reflect the outcomes of the above-mentioned activities.</p> <p>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 reflect the outcomes of the above-mentioned activities.</p> <p>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 reflect the outcomes of the above-mentioned activities.</p> <p>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 "4". 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 reflect the outcomes of the above-mentioned activities. 5-8 Conduct seminars, which summarizes the results of the monitoring and follow-up trainings.</p>	<p>1. Dispatch of JICA Experts</p> <p>Long-term Experts : 3 members</p> <p>— Chief advisor/ Farmers organization — Irrigation facility management/ Water management — Training (cum Coordination)</p> <p>Short-term Experts: appropriate numbers</p> <p>2. Counterpart Training in Japan and/or other countries 3. Machinery and Equipment</p> <p>4. A part of local cost</p>	<p>1. Allocation of Counterpart personnel</p> <p>— A Project Chief Coordinating Officers — Project Coordinating Officers — Others</p> <p>2. Office space for Experts</p> <p>3. Necessary tools and materials for trainings</p> <p>4. Local cost</p>	<p>* Inputs of the two countries are provided in appropriate timing and manners.</p> <p>* Large numbers of counterpart personnel, who had received trainings are not transferred to the non-target areas.</p>
			<p>Pre-conditions:</p> <p>* Counterpart personnel are allocated as scheduled and actively engage in the activities of the Project.</p> <p>* 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.</p> <p>* Government of Sri Lanka provides appropriate facility for the counterpart personnel to visit model sites frequently and participate in the field level training.</p>

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) 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.

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Annex II. Tentative Plan of Operation (PO)

Plan of Operation (Tentative plan of implementation of activities) draft 1, as December 11 - Project for Increasing the Capacity of Integrated Management in Irrigated Agriculture in Dry Zone

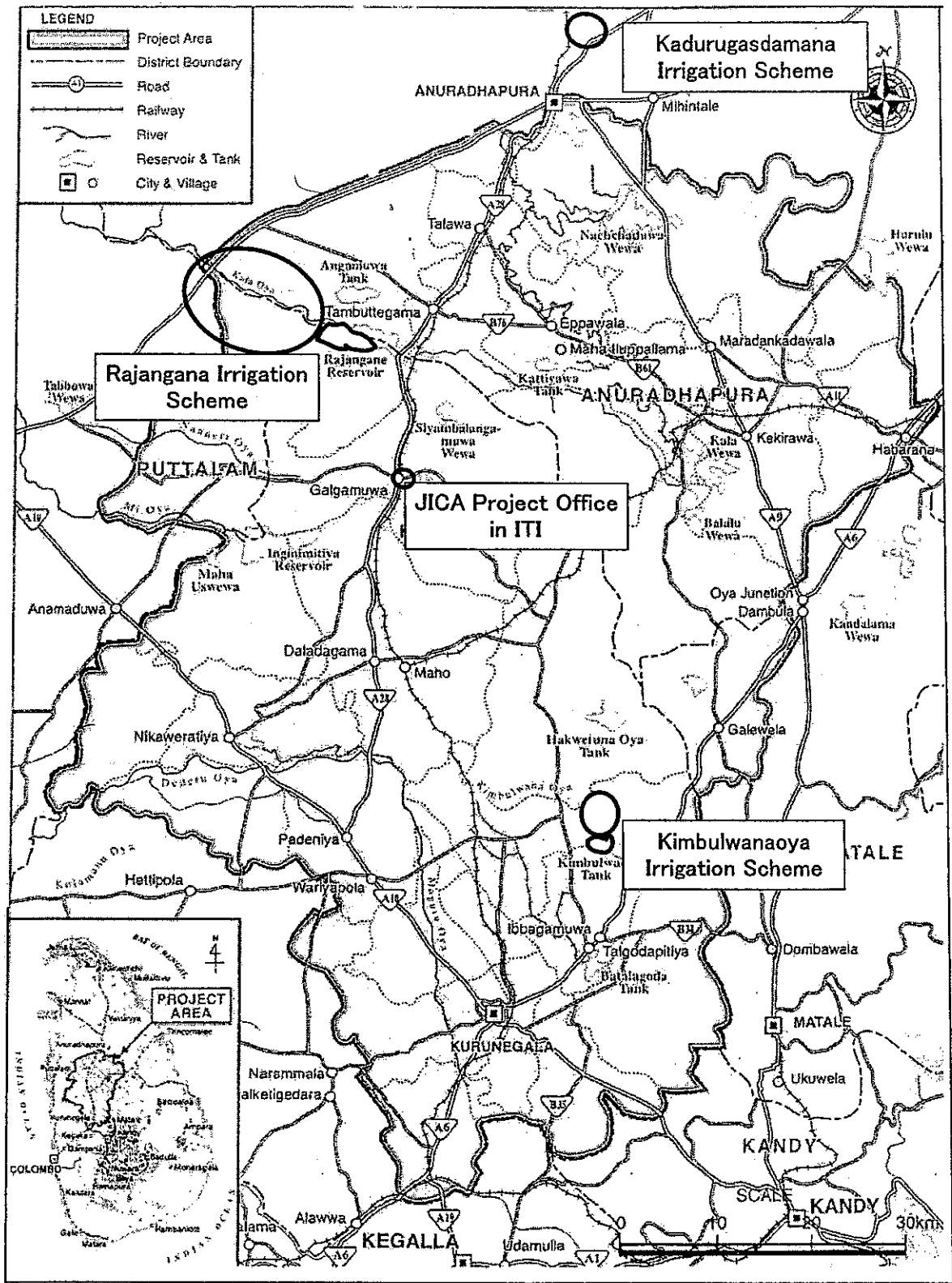
Activities (With regard to the training and OJT, the Project will facilitate/support the government officers to conduct the same to the farmers. Detailed activities will be decided according to the Management of FOs)	Overall responsibility	Implementation responsibility												Implementation responsibility												
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
1 Management of FOs																										
1-1	Conduct base-line survey for the model sites, and capacity assessment survey for the FOs in the target area.	RPM/IE/JICA																								
1-2	Review existing literature and conduct case studies on Management of FOs, propose improvements and draft case-catalogs/ manuals/ guidelines, etc.	RPM/IE/JICA																								
1-3	Conduct trainings on the methods and utilization of the Community Development Plans and Community Action Plans (CAP).	EA/RPM																								
1-4	Develop Community Development Plans and CAP with the initiatives of the community.	FO/EA/RPM																								
1-5	Formulate sub-committees according to the subjects proposed in the CAP.	EA/RPM/FO																								
1-6	Conduct necessary trainings for the sub-committee members to implement the CAP (Ex: leadership, social mobilization, financial management, etc.)	EA/RPM/FO																								
1-7	Revise and finalize case-catalogs/ manuals/ guidelines, etc, to reflect the outcomes of the above-mentioned activities.	IE/RPM/JICA																								
2 Irrigation facility management, system-level water management and on-farm water management																										
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.	IE/JICA																								
2-2	Conduct trainings/OJT on survey, planning and physical works, so that the FO can implement rehabilitation of the tail end irrigation facility, proposed in the CAP.	IE/EA																								
2-3	Conduct rehabilitation of the tail end irrigation facility with the initiatives of the FOs.	FO/EA/IE																								
2-4	Conduct training/OJT for FOs on operation and maintenance (O&M) of tail end irrigation	EA/IE																								
2-5	Conduct training/OJT of planning on water management and cropping, based on GIS irrigation block mapping.	EA/IE																								
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 (LD).	EA/IE																								
2-7	Conduct training and facilitation for FOs and Field Canal Groups (FCGS) to develop and utilize irrigation schedule with their own initiatives.	EA/IE																								
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.	EA/IE																								
2-9	Conduct training/OJT on appropriate on-farm water management.	EA/IE																								
2-10	Revise and finalize case-catalogs/ manuals/ guidelines, etc, to reflect the outcomes of the above-mentioned activities.	IE/JICA																								
3 Agricultural production																										
3-1	Review existing literature and conduct case studies on agricultural production, propose improvements and draft case-catalogs/ manuals/ guidelines, etc.	SMO/JICA																								
3-2	Conduct trainings/OJT on paddy cultivation on the subjects such as production of seeds (mudv), appropriate usage of fertilizers and agro-chemicals, cropping management, post	AI																								
3-3	Conduct extension services on crop diversification and/or animal husbandry to meet the needs of the farmers.	AI/LDI																								
3-4	Provide guidance on introducing collective cultivation based on the cropping schedule.	AI/SMO																								
3-5	Revise and finalize case-catalogs/ manuals/ guidelines, etc, to reflect the outcomes of the above-mentioned activities.	SMO/JICA																								
4 Marketing and processing																										
4-1	Review existing literature and conduct case studies on marketing and processing, propose improvements and draft case-catalogs/ manuals/ guidelines, etc.	SMO/JICA																								
4-2	Create awareness among the farmers on the importance of collective marketing, and provide evidence for the FOs to introduce collective marketing for selected crops.	AI																								
4-3	Conduct trainings/OJT on quality improvement of agricultural products.	AI																								
4-4	Conduct trainings/OJT for the farmers to develop capacity on marketing information collection.	AI																								
4-5	Revise and finalize case-catalogs/ manuals/ guidelines, etc, to reflect the outcomes of the above-mentioned activities.	SMO/JICA																								
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.	Director ID & DOA/JICA																								
5-2	Review existing literature and conduct case studies on training mechanism and methodologies, propose improvements and draft case-catalogs/ manuals/ guidelines, etc.	Head of training institutes/JICA																								
5-3	Conduct Trainers' Training on training mechanism and methodologies.	JICA/Directors ID & DOA																								
5-4	Conduct Trainers' Training with the collaboration of the Experts and C/P in-charge of the activities of "1" to "4"	JICA/Directors ID & DOA																								
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)	JICA/Directors ID & DOA																								
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".	JICA/Directors ID & DOA																								
5-7	Revise and finalize case-catalogs/ manuals/ guidelines, etc, to reflect the outcomes of the above-mentioned activities.	Head of training institutes/JICA																								
5-8	Conduct seminars, which summarizes the results of the monitoring and follow-up trainings.	JICA/Directors ID & DOA																								

B

Q

R A

Annex III. Project Area



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MINUTES OF MEETING
 BETWEEN
 THE JAPANESE EX-ANTE EVALUATION SURVEY TEAM AND
 THE AUTHORITIES CONCERNED OF
 THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
 ON JAPANESE TECHNICAL COOPERATION
 FOR
 THE PROJECT ON INCREASING THE CAPACITY
 OF INTEGRATED MANAGEMENT IN IRRIGATED AGRICULTURE
 IN DRY ZONE

The Japanese Ex-ante Evaluation Survey Team (hereinafter referred to as “the Team”) organized by the Japan International Cooperation Agency (hereinafter referred to as “JICA”) visited the Democratic Socialist Republic of Sri Lanka from 5 to 13 December 2006 for the purpose of preparatory study of the technical cooperation project concerning Increasing the Capacity of Integrated Management in Irrigated Agriculture in Dry Zone (hereinafter referred to as “the Project”).

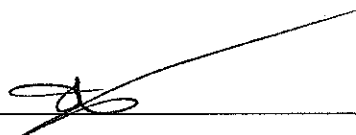
During its stay in the Democratic Socialist Republic of Sri Lanka, the Team exchanged their views and had a series of meetings with Ministry of Agriculture, Irrigation and Mahaweli Development and other authorities concerned.

As a result of meetings, the both sides agreed upon the matters referred to in the document attached hereto. This Minutes reflects discussions and initial agreements made between the authorities concerned of the Government of the Democratic Socialist Republic of Sri Lanka and the Team, which are subject to further consideration and approval of authorities of both parties.

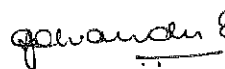
Colombo, 13 December, 2006



Mr. Hideyuki Kanamori
 Team Leader
 The Japanese Ex-ante Evaluation Survey Team
 Japan International Cooperation Agency
 Japan



Mr. T. M. Abayawickrama
 Secretary
 Ministry of Agriculture, Irrigation and
 Mahaweli Development
 Sri Lanka



Ms. G. D. C. Ekanayake
 Additional Director General
 Department of External Resources
 Ministry of Finance and Planning
 Sri Lanka

ATTACHED DOCUMENT

The Sri Lankan side and the Team agreed on the following articles.

I. Tentative Framework of the Project

1. The Title of the Project

“Increasing the Capacity of Integrated Management in Irrigated Agriculture in Dry Zone”

2. Target Area and Group

Target areas of the Project are Anuradhapura and Kurunegala Districts.

Target groups of the Project are farm families and relevant government officers in the target areas.

3. Duration of the Project

The Duration of the Project will be four (4) years. The date of the Project’s commencement is to be stipulated in the Record of Discussions (hereinafter referred to as “R/D”), which is expected to be signed between JICA and the Government of Sri Lanka after further examination by each party.

4. Site of the Project

The Project will be implemented in three (3) model sites. The name of the model sites are following;

- (1) Sri Udara Farmer Organization, Rajangana major irrigation scheme, Anuradhapura District
- (2) One Farmer Organization, Kimbulwanaoya major irrigation scheme, Kurunegala District
- (3) One Farmer Organization from following five (5) candidates of irrigation scheme in Anuradhapura District;

- Mahakanadarawa major irrigation scheme
- Kadurugasdamana medium irrigation scheme
- Kawarakkulama medium irrigation scheme
- Maminiyawa medium irrigation scheme
- Ralapanawa medium irrigation scheme

The name of the model sites of (2) and (3) will be selected before the signing of the R/D.

5. Overall Goal

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

6. Project Purpose

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

7. Expected Outputs

7.1 Outputs in the model sites

Capacity of the government officers and FOs is enhanced in the fields of:

- (1) Management of FOs
- (2) Irrigation facility management and water management
- (3) Agricultural production
- (4) Marketing and processing

7.2 Outputs in the training institutes

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

II. Measures to be taken by each side

1. Japanese side

The Japanese side will take the following measures at its own expenses

(1) Dispatch of Experts:

A. Long-term Experts

- a. Chief Advisor/Farmer Organization
- b. Irrigation Facility Management/Water Management
- c. Training (cum Coordination)

B. Short-term Experts

Short-term experts will be dispatched as the necessity arises for effective implementation of the Project.

(2) Provision of the Machinery and Equipment

The Government of Japan will provide the Project with machinery, equipment and materials necessary for effective implementation of the Project.



(3) Counterpart Training

The Government of Japan will consider the technical training of the Sri Lankan counterpart personnel in Japan and/or other countries.

2. Sri Lankan side

The Sri Lankan side will take the following measures:

(1) Counterpart personnel

For the successful implementation of the Project, the Sri Lankan side will assign Counterpart personnel to work with the Japanese Experts. Positions of the counterpart personnel are tentatively shown in ANNEX I.

(2) Allocation of Budget

- a. Salaries and other allowances for the Sri Lankan counterpart personnel
- b. Means of transport for the Sri Lankan counterpart personnel at the field level
- c. Expenses such as electricity and water for the Project
- d. Operational expenses for customs clearance, local taxes, storage and domestic transportation for the equipment provided by the Japanese side
- e. Regarding vehicles required for the Project, the Sri Lankan side shall consult with authorities concerned

(3) Land, buildings and facilities

Ministry of Agriculture, Irrigation and Mahaweli Development will arrange office space and facilities for the Project in Irrigation Training Institute, Galgamuwa.

III. Administration of the Project

1. Tentative Project Organisation Chart for Training

The tentative project organisation chart for training is given in ANNEX II.

2. Project Chief Coordinating Officer

Secretary of the Ministry of Agriculture, Irrigation and Mahaweli Development will bear overall responsibilities for the administration and implementation of the Project as the Project Chief Coordinating Officer. Project Chief Coordinating Officer will coordinate other relevant Secretaries, Heads and Institutes.



3. Project Coordinating Officer

Additional Secretary of the Ministry of Agriculture, Irrigation and Mahaweli Development will bear overall responsibilities for the managerial matters of the Project as the Project Coordinating Officer.

4. Joint Coordinating Committee (National Level)

(1) Functions

The Joint Coordinating Committee at National Level (hereinafter referred to as "National JCC") will be established for the effective and successful implementation of technical cooperation for the Project. National JCC will meet quarterly each year or whenever necessity arises, in order to fulfil the following functions.

- a. To deliberate and approve the Plan of Operation (PO) and the Annual Plan of Operation (APO) of the Project
- b. To review activities and progress of the technical cooperation program in accordance with the above-mentioned Plans
- c. To review measures taken by the Sri Lankan side and the Japanese side
- d. To exchange views on major issues arising from or in connection with the Project and decide corrective measures to be taken
- e. To coordinate with other relevant agencies for the matters arising in implementation of the Project

(2) Composition

The members of National JCC are given in ANNEX III.

5. Joint Coordinating Committee (District Level)

(1) Functions

One Joint Coordinating Committee for both Districts (hereinafter referred to as "District JCC") will be established for the effective and successful implementation of technical cooperation for the Project. District JCC will meet once in two months or whenever necessity arises, in order to fulfil the following functions.

- a. To review activities and progress of the Project in accordance with the above-mentioned Plans on each district
- b. To review measures taken by the Sri Lankan side and the Japanese side on each district
- c. To exchange views on major issues arising from or in connection with the Project,



decide corrective measures at the level of the Districts, and recommend corrective measures to the National JCC when necessary

(2) Composition

The members of District JCC are given in ANNEX III.

6. Training Advisory Committee

(1) Functions

The Training Advisory Committee (hereinafter referred to as "TAC") will be established for the effective and successful implementation of technical cooperation of the Project among the related training organizations. TAC will meet quarterly each year or whenever necessity arises, in order to fulfil the following functions.

- a. To make advices on all the training matters arising in the process of implementation of the Project
- b. To coordinate training related organizations to operate training courses

(2) Composition

The members of TAC are given in ANNEX III.

7. Project Management Committee (Irrigation Scheme Level)

(1) Functions

The Project Management Committee (hereinafter referred to as "PMC") will have the following additional functions in the process of implementation of the Project in addition to the existing functions, for the effective and successful implementation of technical cooperation of the Project at the irrigation scheme level. PMC will meet at least once a month or whenever necessity arises.

- a. To assess and identify training needs preliminary
- b. To monitor the activities
- c. To forward training needs to TAC

(2) Composition

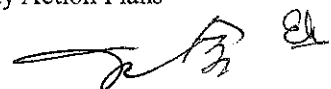
The members of PMC are given in ANNEX III.

8. Farmer Organization-level Implementation Committee (Model Site Level)

(1) Functions

The Farmer Organization-level Implementation Committee (hereinafter referred to as "FOIC") will be established for the effective and successful implementation of technical cooperation of the Project at the model site level. FOIC will meet at least once a month or whenever necessity arises, in order to fulfil the following functions.

- a. To prepare the Community Development Plans and Community Action Plans



- b. To implement the development activities
- c. To identify training needs
- d. To implement the training

(2) Composition

The members of FOIC are given in ANNEX III.

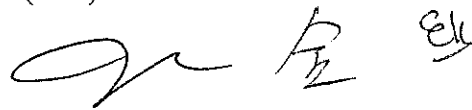
IV. Tentative Schedule for the Project Implementation

- 1. The Sri Lankan side and Japanese side will make further consideration on the matters noted in the Minutes of Meeting, and upon approval of the contents of the cooperation by each authority. Both parties will sign R/D.
- 2. A draft version of R/D is attached in Annex IV, which is to be examined by each authority.
- 3. The Project is expected to commence in May 2007 at the earliest.
- 4. The first National JCC will be held immediately after the commencement of the Project.

ANNEX

- I. Counterpart Personnel
- II. Project Organization Chart for Training
- III. Members of Respective Committees
- IV. Project Design Matrix (PDM)
- V. Tentative Plan of Operation (PO)
- VI. Draft of Record of Discussions (R/D)

Abbreviations

Handwritten signatures and initials in black ink, including a large signature, the letters 'A/E', and the letters 'E/C'.

ANNEX I COUNTERPART PERSONNEL

1. Counterpart Personnel:

Suitably qualified personnel in respective administration levels and in related organizations to the Project are assigned continuously to work with experts dispatched by Japanese side:

- | | |
|----------------------|---|
| (1) National Level | Secretary, MAIMD
Additional Secretary, MAIMD
Director, ID/IMD/DOA
Commissioner General, DAD
Director, ITI/IPHT/IFCRD/RRDI
Deputy Director, ISTI MI/FMTC/AHTC |
| (2) Provincial Level | Director, PDOA, North Central Province/North Western Province
Director, PDOAPH, North Central Province/North Western Province |
| (3) District Level | RDI
RPM, IMD
PM, ID
IE, ID
EA, ID
ADA, DOA/PDOA
SMS/SMO, DOA/PDOA
AI, DOA/PDOA
DO, DAD
VS, PDOAPH
LDI, PDOAPH |

2. Key Counterpart Personnel

Key Counterpart Personnel is shown in attached Table.

3. Other personnel are mutually agreed upon as necessary.


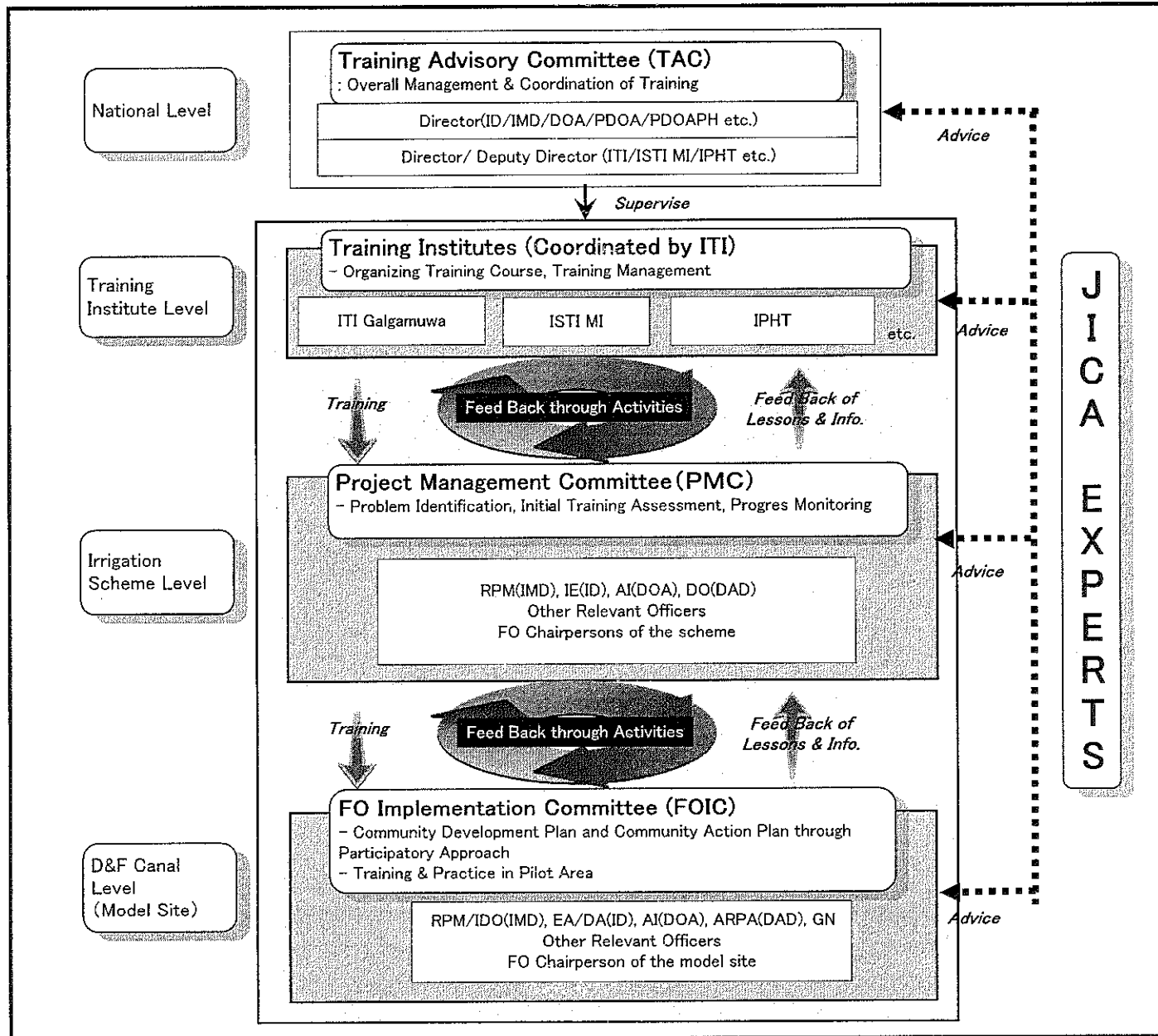


Table Key Counterpart Personnel

Purpose	Irrigation Sector (ID, IMD)	Agricultural Sector (DOA, PDOA)	Animal Husbandry Sector (DOAPH, PDOAPH)	Institutional Development Sector (ID, IMD)
Manage at model site	<ul style="list-style-type: none"> ✓ IE ✓ EA 	<ul style="list-style-type: none"> ✓ ADA ✓ SMO ✓ AI 	<ul style="list-style-type: none"> ✓ LDI 	<ul style="list-style-type: none"> ✓ RPM ✓ PM
Foster training	<ul style="list-style-type: none"> ✓ ITI ✓ Resource Persons 	<ul style="list-style-type: none"> ✓ Director, Training Institute ✓ Deputy Director, Training Institute ✓ SMS ✓ SMO 	<ul style="list-style-type: none"> ✓ VS ✓ AHTC, Seepukulama 	<ul style="list-style-type: none"> ✓ SRPM ✓ Training Coordinator
Coordinate/Facilitate	<ul style="list-style-type: none"> ✓ CIE (I&WM) ✓ RDI 	<ul style="list-style-type: none"> ✓ Deputy Director (Irrigation) ✓ Provincial Director 	<ul style="list-style-type: none"> ✓ Deputy Director ✓ Provincial Director 	<ul style="list-style-type: none"> ✓ CIE (I&WM) ✓ Deputy Director (Training & Education)
Apply the outputs to policy level	<ul style="list-style-type: none"> ✓ Director (I&WM) 	<ul style="list-style-type: none"> ✓ Director (Ext&Training) 	<ul style="list-style-type: none"> ✓ Director 	<ul style="list-style-type: none"> ✓ Director (I&WM) ✓ Additional Director (Institutional Development)

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ANNEX II Project Organization Chart for Training



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ANNEX III MEMBERS OF RESPECTIVE COMMITTEES

1. Joint Coordinating Committee (National Level)

(1) Chairperson: Secretary, Ministry of Agriculture, Irrigation and Mahaweli Development

(2) Members

Sri Lankan Side:

Secretary, Ministry of Agricultural Development

Secretary, Ministry of Irrigation

Secretary, Ministry of Agrarian Services and Development of Farmer Communities

Additional Secretary, Ministry of Agriculture, Irrigation and Mahaweli Development

Director General, ID/DOA

Director, ID/IMD/DOA/PDOA

Director (Water Resource), Ministry of Agriculture, Irrigation and Mahaweli Development

Commissioner General, DAD

Deputy Commissioner, DAD

Chief Secretary, North Central Province/ North Western Province

District Secretaries, Anuradhapura/Kurunegala

Director, ERD

Project Director of PEACE

Japanese Side:

Chief Advisor

Other experts

Resident Representative of JICA Sri Lanka Office

Chief Representative, Representative Office in Colombo, JBIC

Other personnel concerned to be assigned by JICA, if necessary

(3) The Joint Coordinating Committee (National Level) can invite any related person to discuss specific issues.

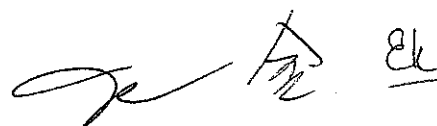
Note: Representative(s) of the Embassy of Japan in Sri Lanka may attend the Joint Coordinating Committee as observer(s).

2. Joint Coordinating Committee (District Level)

(1) Chairperson: Additional Secretary, Ministry of Agriculture, Irrigation and Mahaweli Development

(2) Members

Sri Lankan Side:



RDI
Director, ID/IMD/DOA/PDOA/PDOAPH
Deputy Director, DOA/PDOA/PDOAPH
Deputy Assistant Commissioner, DAD
Director, ITI/IPHT/IFCRD/RRDI
Deputy Director, ISTI MI/FMTC/AHTC
IE, ID
RPM, IMD

Japanese Side:

Chief Advisor
Other experts
Other personnel concerned to be assigned by JICA, if necessary

- (3) The Joint Coordinating Committee (District Level) can invite any related person to discuss specific issues.

3. Training Advisory Committee

(1) Convener: Director, ITI

(2) Members

Sri Lankan Side:

Director, ID/IMD/DOA/PDOA/PDOAPH
Director, ITI/IPHT/IFCRD/RRDI
Deputy Director, ISTI MI/FMTC/AHTC

Japanese Side:

Chief Advisor
Other experts
Other personnel concerned to be assigned by JICA, if necessary

- (3) The Training Advisory Committee can invite any related person to discuss specific issues.

4. Project Management Committee (Irrigation Scheme Level)

(1) Chairperson: RPM, IMD or PM, ID

(2) Members

RPM, IMD or PM, ID
IE, ID
AI, DOA/PDOA
DO, DAD
Other relevant officers



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FO chairpersons of the irrigation scheme

(3) Invitees

Chief Advisor

Other experts

Other personnel concerned to be assigned by JICA, if necessary

(4) The Project Management Committee can invite any related person to discuss specific issues.

5. Farmer Organization-level Implementation Committee (Model Site Level)

(1) Chairperson: FO Chairperson

(2) Members

FO chairperson of the model site

RPM/IDO/DA, IMD or PM, ID

EA/DA, ID

AI, DOA/PDOA

ARPA, DAD

GN

Other relevant officers

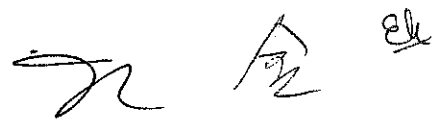
(3) Invitees

Chief Advisor

Other experts

Other personnel concerned to be assigned by JICA, if necessary

(4) The Farmer Organization-level Implementation Committee can invite any related person to discuss specific issues.

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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 by 25% or more. 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	* Adequate budget and staff to implement necessary trainings and extension services are allocated. * Improvement of policies/regulations and environmental protection, which facilitate increment of agriculture 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. 2 Degree of satisfaction among the farmers in the target area with the trainings and extension services is increased at least by 50%. 3 Capacity of the FOs in the target area is improved at least by 25%.	* Records of training institutes * Sample surveys for farmers and FOs * Capacity assessment survey for FOs in the target area	* The planned programme on development of rural economy, such as PEACE of JBIC and others, which contributes to the improvement of agriculture productivity, are implemented as scheduled * Improvements of policies/regulations and environmental protection, which facilitate increment of agriculture income, are implemented continuously.
Outputs Outputs in the model sites Capacity of the government officers and FOs (farmer organizations) is enhanced in the fields of: 1 Management of FOs 2 Irrigation facility management and water management Agricultural production 3 4 Marketing and processing 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 model sites: More than 50% of the participants of the trainings on management of FOs become capable of: 1-1 Training/facilitating FOs to formulate and implement Community Development Plan and CAP. 1-2 Training/facilitating FOs on Institutional and leadership, social mobilization, financial management, etc. More than 50% of the participants of the trainings on irrigation facility management and water management become capable of: 2-1 Training/facilitating FOs to reconstruct tail-end irrigation facility. 2-2 Training/facilitating FOs to formulate and utilize irrigation schedule. 2-3 Training/facilitating FOs on appropriate water management based on the irrigation schedule. More than 50% of the participants of the trainings on paddy cultivation, crop diversification, animal husbandary and production plan become capable of: 3-1 Training/facilitating farmers on production of seeds (paddy), appropriate usage of fertilizers and agro-chemicals, cropping management, post harvest technology, etc. 3-2 Providing extension services to meet the needs of the farmers. 3-3 Providing guidance on developing land use plans for cropping and introducing collective cultivation based on the said plans. More than 50% of the participants of the trainings on marketing and processing become: 4-1 Training/facilitating farmers for introducing collective marketing. 4-2 Providing advices to farmers on quality improvement of agricultural products. 4-3 Training/facilitating farmers on collection of market information. At the training institutes 5-1 At least one Trainers' Training is conducted. 5-2 At least 2 field-level trainings are conducted by each participant of the Trainers' Trainees. 5-3 At least one follow-up training is conducted. 5-4 At least one seminar is conducted.	* Interviews to the participants of the trainees * Work records of the participants of the trainees * Sample surveys for farmers and FOs * Records on collective cultivation/marketing * Records of the Projects and training institutes	* Price and market of the agriculture products do not become extremely unstable. * Climate conditions do not become extremely unstable. * Security situation of the target area does not become extremely unstable.

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Annex IV Project Design Matrix (PDM)

Activities Activities 1~4 : Activities in the model sites (The Project will facilitate/support farmers and government officers to conduct the following activities)	Inputs		
	Japanese Side	Sri Lankan Side	
<p>1 Management of FOs.</p> <p>1-1 Conduct base-line survey for the model sites, and capacity assessment survey for the FOs in the target area.</p> <p>1-2 Review existing literature and conduct case studies on Management of FOs, propose improvements and draft case-catalogs/ manuals/ guidelines, etc.</p> <p>1-3 Conduct trainings on the methods and utilization of the Community Development Plans and Community Action Plans (CAP).</p> <p>1-4 Develop Community Development Plans and CAP.</p> <p>1-5 Formulate sub-committees according to the subjects proposed in the CAP.</p> <p>1-6 Conduct necessary trainings for the sub-committee members to implement the CAP (Ex: leadership, social mobilization, financial management)</p> <p>1-7 Revise and finalize case-catalogs/ manuals/ guidelines, etc, to reflect the outcomes of the above-mentioned activities.</p> <p>2 Irrigation facility management, system water management and on-farm water management (Detailed activities will be decided according to the results of the CAP)</p> <p>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.</p> <p>2-2 Conduct trainings on survey, planning and physical works, so that the FOs can implement rehabilitation of the tail end irrigation facility, proposed in the CAP.</p> <p>2-3 Conduct rehabilitation of the tail end irrigation facility with the initiatives of the FOs.</p> <p>2-4 Conduct training/OJT for FOs on operation and maintenance (O&M) of tail end irrigation facility.</p> <p>2-5 Conduct training and facilitation for FOs and Field Canal Groups (FCGS) to develop and utilize irrigation schedule with their own initiatives.</p> <p>2-6 Conduct training/OJT on appropriate system-level water management based on the irrigation schedule.</p> <p>2-7 Conduct training/OJT on appropriate on-farm water management.</p> <p>2-8 Conduct training/OJT of planning on water management and cropping, based on GIS irrigation block mapping.</p> <p>2-9 Conduct training/OJT of planning on water management and cropping, based on micro-level soil classification maps prepared by the Land Use Division (LD).</p> <p>2-10 Revise and finalize case-catalogs/ manuals/ guidelines, etc, to reflect the outcomes of the above-mentioned activities.</p> <p>3 Agricultural production (Detailed activities will be decided according to the results of the CAP)</p> <p>3-1 Review existing literature and conduct case studies on agricultural production, propose improvements and draft case-catalogs/ manuals/ guidelines, etc.</p> <p>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.</p> <p>3-3 Conduct extension services on crop diversification and/or animal husbandry to meet the needs of the farmers.</p> <p>3-4 Provide guidance on developing land use plans for cropping and introduce collective cultivation based on the said plans.</p> <p>3-5 Revise and finalize case-catalogs/ manuals/ guidelines, etc, to reflect the outcomes of the above-mentioned activities.</p> <p>4 Marketing and processing (Detailed activities will be decided according to the results of the CAP)</p> <p>4-1 Review existing literature and conduct case studies on marketing and processing, propose improvements and draft case-catalogs/ manuals/ guidelines, etc.</p> <p>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.</p> <p>4-3 Conduct trainings/OJT on quality improvement of agricultural products.</p> <p>4-4 Facilitate farmers to be well informed of market information.</p> <p>4-5 Revise and finalize case-catalogs/ manuals/ guidelines, etc, to reflect the outcomes of the above-mentioned activities.</p> <p>5. Institutional capacity building for dissemination of the improved training/facilitation skills developed in the model sites.</p> <p>5-1 Establish Training Advisory Committee. Identify training needs, monitor trainings, conduct follow-ups, etc. periodically.</p> <p>5-2 Review existing literature and conduct case studies on training mechanism and methodologies, propose improvements and draft case-catalogs/ manuals/ guidelines, etc.</p> <p>5-3 Conduct Trainers' Training on training mechanism and methodologies.</p> <p>5-4 Conduct Trainers' Training with the collaboration of the Experts and C/P in-charge of the activities of "1" to "4".</p> <p>5-5 Conduct field-level trainings with the collaboration of the Experts and C/P in-charge of the activities of "1" to "4".</p> <p>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".</p> <p>5-7 Revise and finalize case-catalogs/ manuals/ guidelines, etc, to reflect the outcomes of the above-mentioned activities.</p> <p>5-8 Conduct seminars for the relevant training institutes, so that they will be able to utilize the case-catalogs/ manuals/ guidelines, etc.</p>	<p>1. Dispatch of JICA Experts</p> <p>Long-term Experts : 3 members</p> <p>— Chief advisor/ Farmers organization</p> <p>— Irrigation facility management/ Water management</p> <p>— Training (cum Coordination)</p> <p>Short-term Experts: appropriate numbers</p> <p>2. Counterpart Training in Japan and/or other countries</p> <p>3. Machinery and Equipment</p> <p>4. A part of local cost</p>	<p>1. Allocation of Counterpart personnel</p> <p>-A Project Chief Coordinating Officers</p> <p>-Project Coordinating Officers</p> <p>-Others</p> <p>2. Office space for Experts</p> <p>3. Necessary tools and materials for trainings</p> <p>4. Local cost</p>	<p>* Inputs of the two countries are provided in appropriate timing and manners.</p> <p>* Large numbers of counterpart personnel, who had received trainings are not transferred to the non-target areas.</p> <p>Pre-conditions</p> <p>* Counterpart personnel are allocated as scheduled and actively engage in the activities of the Project.</p> <p>* 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.</p> <p>* Government of Sri Lanka provides appropriate facility for the counterpart personnel to visit model sites frequently and participate in the field level training</p>

*Note: 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.

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Annex V Plan of Operation (Tentative plan of implementation of activities) draft 1, as December 11 - Project for Increasing the Capacity of Integrated Management in Irrigated Agriculture in Dry Zone

Overall responsibility	Implementation responsibility	2007												2008												2009												2010												2011											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1 Management of FOs																																																													
1-1	Conduct base-line survey for the model sites, and capacity assessment survey for the FOs in the target area	RPM/IE/JICA																																																											
1-2	Review existing literature and conduct case studies on Management of FOs, propose improvements and draft case-catalogs/ manuals/ guidelines, etc	RPM/IE/JICA																																																											
1-3	Conduct trainings on the methods and utilization of the Community Development Plans and Community Action Plans (CAP)	EA/RPM																																																											
1-4	Develop Community Development Plans and CAP.	FO/EA/RPM																																																											
1-5	Formulate sub-committees according to the subjects proposed in the CAP.	EA/RPM/FO																																																											
1-6	Conduct necessary trainings for the sub-committee members to implement the CAP (Ex: leadership, social mobilization, financial management, etc.)	EA/RPM/FO																																																											
1-7	Update and finalize case-catalogs/ manuals/ guidelines, etc, to reflect the outcomes of the above-mentioned activities	IE/RPM/JICA																																																											
2 Irrigation facility management, system-level water management and on-farm water management																																																													
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	IE/JICA																																																											
2-2	Conduct trainings on survey, planning and physical works, so that the FO can implement rehabilitation of the tail end irrigation facility, proposed in the CAP.	IE/EA																																																											
2-3	Conduct rehabilitation of the tail end irrigation facility with the initiatives of the FOs.	FO/EA/IE																																																											
2-4	Conduct training/OJT for FOs on operation and maintenance (O&M) of tail end irrigation	AE/IE																																																											
2-5	Conduct training/facilitate FOs and Field Canal Groups (FCGS) to develop and utilize irrigation schedule with their own initiatives	AE/IE																																																											
2-6	Conduct training/OJT on appropriate system-level water management based on the irrigation schedule.	EA/IE																																																											
2-7	Conduct training/OJT on appropriate on-farm water management.	EA/IE																																																											
2-8	Conduct training/OJT of planning on water management and cropping, based on GIS irrigation block mapping.	EA/IE																																																											
2-9	Conduct training/OJT of planning on water management and cropping, based on micro-level soil classification maps prepared by the Land Use Division (ID).	EA/IE																																																											
2-10	Update and finalize case-catalogs/ manuals/ guidelines, etc, to reflect the outcomes of the above-mentioned activities	IE/JICA																																																											
3 Agricultural production																																																													
3-1	Review existing literature and conduct case studies on agricultural production, propose improvements and draft case-catalogs/ manuals/ guidelines, etc	SMO/JICA																																																											
3-2	Conduct trainings/OJT on paddy cultivation on the subjects such as production of seeds (maddy), appropriate usage of fertilizers and agro-chemicals, cropping management, post-harvest extension services on crop diversification and/or animal husbandry to meet the needs of the farmers	AI																																																											
3-3	Provide guidance on developing land use plans for cropping and introduce collective cultivation based on the said plans	AI/LDI																																																											
3-4	Update and finalize case-catalogs/ manuals/ guidelines, etc, to reflect the outcomes of the above-mentioned activities	AI/SMO																																																											
3-5	Update and finalize case-catalogs/ manuals/ guidelines, etc, to reflect the outcomes of the above-mentioned activities	SMO/JICA																																																											
4 Marketing and processing																																																													
4-1	Review existing literature and conduct case studies on marketing and processing, propose improvements and draft case-catalogs/ manuals/ guidelines, etc	SMO/JICA																																																											
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	AI																																																											
4-3	Conduct trainings/OJT on quality improvement of agricultural products.	AI																																																											
4-4	Facilitate farmers to be well informed of market information.	AI																																																											
4-5	Update and finalize case-catalogs/ manuals/ guidelines, etc, to reflect the outcomes of the above-mentioned activities	SMO/JICA																																																											
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	Director ID & DOA/JICA																																																											
5-2	Review existing literature and conduct case studies on training mechanism and methodologies, propose improvements and draft case-catalogs/ manuals/ guidelines, etc	Head of training institutes/JICA																																																											
5-3	Conduct Trainers' Training on training mechanism and methodologies.	JICA/Directors ID & DOA																																																											
5-4	Conduct Trainers' Training with the collaboration of the Experts and C/P in-charge of the activities of "1" to "4"	JICA/Directors ID & DOA																																																											
5-5	Conduct field-level trainings with the collaboration of the Experts and C/P in-charge of the activities of "1" to "4"	JICA/Directors ID & DOA																																																											
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"	JICA/Directors ID & DOA																																																											
5-7	Update and finalize case-catalogs/ manuals/ guidelines, etc, to reflect the outcomes of the above-mentioned activities	Head of training institutes/JICA																																																											
5-8	Conduct seminars for the relevant training institutes, so that they will be able to utilize the case-catalogs/ manuals/ guidelines, etc	JICA/Directors ID & DOA																																																											

RECORD OF DISCUSSIONS
BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY
AND AUTHORITIES CONCERNED OF
THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
ON JAPANESE TECHNICAL COOPERATION
FOR
THE PROJECT ON INCREASING THE CAPACITY
OF INTEGRATED MANAGEMENT IN IRRIGATED AGRICULTURE
IN DRY ZONE

Japan International Cooperation Agency (hereinafter referred to as "JICA") exchanged views and had a series of discussions through JICA Sri Lanka Office with authorities concerned of the Government of Sri Lanka (hereinafter referred to as "GOSL") with respect to the details of technical cooperation project concerning Increasing the Capacity of Integrated Management in Irrigated Agriculture in Dry Zone (hereinafter referred to as "the Project") in Sri Lanka.

As a result of the discussions, JICA and Sri Lankan authorities concerned agreed on the matters referred to in the document attached hereto.

Colombo, xx February 2007

Mr. Takumi Ueshima
Resident Representative
JICA Sri Lanka Office
Japan

Mr. T. M. Abayawickrama
Secretary
Ministry of Agriculture, Irrigation and
Mahaweli Development
Sri Lanka

Mr. M.P.D.U.K. Mapa Pathirana
Director (Japan Division)
Department of External Resources
Ministry of Finance and Planning
Sri Lanka



THE ATTACHED DOCUMENT

I. COOPERATION BETWEEN JICA AND GOSL

1. GOSL will implement the Project concerning Increasing the Capacity of Integrated Management in Irrigated Agriculture in Dry Zone (hereinafter referred to as "the Project") in cooperation with JICA.
2. The Project will be implemented in accordance with the Master Plan which is given in Annex I.

II. MEASURES TO BE TAKEN BY JICA

In accordance with the laws and regulations in force in Japan, JICA will take, at its own expense, the following measures according to the normal procedures under the Technical Cooperation Agreement made on 12th of October, 2005 between Government of Japan and GOSL.

1. DISPATCH OF JAPANESE EXPERTS

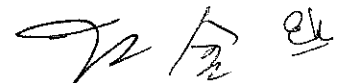
JICA will provide the services of the Japanese experts as listed in Annex II.

2. PROVISION OF MACHINERY AND EQUIPMENT

JICA will provide such machinery, equipment and other materials (hereinafter referred to as "the Equipment") necessary for implementation of the Project as listed in Annex III. The Equipment will become the property of GOSL upon being delivered C.I.F. (cost, insurance and freight) to the Sri Lankan authorities concerned at the ports and/or airports of disembarkation.

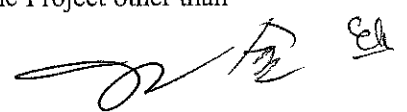
3. TRAINING OF SRI LANKAN PERSONNEL IN JAPAN

JICA will receive the Sri Lankan personnel connected with the Project for technical training in Japan.



III. MEASURES TO BE TAKEN BY GOSL

1. GOSL will take necessary measures to ensure that the self-reliant operation of the Project will be sustained during and after the period of Japanese technical cooperation, through full and active involvement in the Project by all related authorities, beneficiary groups and institutions.
2. GOSL will ensure that the technologies and knowledge acquired by the Sri Lankan nationals as a result of Japanese technical cooperation will contribute to the economic and social development of Sri Lanka.
3. GOSL will grant in Sri Lanka privileges, exemptions and benefits to the Japanese experts referred to in II-1 above and their families, which are no less favourable than those accorded to experts of third countries working in Sri Lanka under the Technical Cooperation Agreement.
4. GOSL will ensure that the Equipment referred to in II-2 above will be utilized effectively for the implementation of the Project in consultation with the Japanese experts referred to in Annex II.
5. GOSL will take necessary measures to ensure that the knowledge and experience acquired by the Sri Lankan personnel from technical training in Japan will be utilized effectively in the implementation of the Project.
6. In accordance with the laws and regulations in force in Sri Lanka, GOSL will take necessary measures to provide at its own expense:
 - (1) Services of the Sri Lankan counterpart personnel and administrative personnel as listed in Annex IV;
 - (2) Land, buildings and facilities as listed in Annex V;
 - (3) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the Equipment provided through JICA under II-2 above; and



7. In accordance with the laws and regulations in force in Sri Lanka, GOSL will take necessary measures to meet:

- (1) Expenses necessary for transportation within Sri Lanka of the Equipment referred to in II-2 above as well as for the installation, operation and maintenance thereof;
- (2) Customs duties, internal taxes, and any other charges, imposed in Sri Lanka on the Equipment referred to in II-2 above; and
- (3) Running expenses necessary for the implementation of the Project.

IV. ADMINISTRATION OF THE PROJECT

1. Secretary of Ministry of Agriculture, Irrigation and Mahaweli Development will bear overall responsibilities for the administration and implementation of the Project as the Project Chief Coordinating Officer. Project Chief Coordinating Officer will coordinate other relevant Secretaries, Heads and Institutes.
2. Additional Secretary of Ministry of Agriculture, Irrigation and Mahaweli Development will bear overall responsibilities for the managerial matters of the Project as the Project Coordinating Officer.
3. The Japanese Chief Advisor will provide necessary recommendations and advice to the Project on any matters pertaining to the implementation of the Project.
4. The Japanese experts will give necessary technical guidance and advice to the Sri Lankan counterpart personnel on technical matters pertaining to the implementation of the Project.
5. For the effective and successful implementation of technical cooperation for the Project, the Joint Coordinating Committee (National and District Level), Training Advisory Committee, Project Management Committee and Farmer Organization-level Implementation Committee will be established whose functions and composition are described in Annex VI.



V. JOINT EVALUATION

Evaluation of the Project will be conducted jointly by JICA and the Sri Lankan authorities concerned, at the middle and during the last six months of the cooperation term in order to examine the level of achievement.

VI. CLAIMS AGAINST JAPANESE EXPERTS

GOSL undertakes to bear claims, if any arises, against the Japanese experts engaged in technical cooperation for the Project resulting from, occurring in the course of, or otherwise connected with the discharge of their official functions in Sri Lanka except for those arising from the wilful misconduct or gross negligence of the Japanese experts.

VII. MUTUAL CONSULTATION

There will be mutual consultation between JICA and GOSL on any major issues arising from, or in connection with this Attached Document.

VIII. MEASURES TO PROMOTE UNDERSTANDING OF AND SUPPORT FOR THE PROJECT

For the purpose of promoting support for the Project among the people of Sri Lanka, GOSL will take appropriate measures to make the Project widely known to the people of Sri Lanka.

IX. TERM OF COOPERATION

The duration of the technical cooperation for the Project under this Attached Document will be four (4) years from the date of arrival of the JICA long term experts.



ANNEX I	MASTER PLAN
ANNEX II	LIST OF JAPANESE EXPERTS
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ANNEX V	LIST OF LAND, BUILDINGS AND FACILITIES
ANNEX VI	COMMITTEES FOR THE PROJECT

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ANNEX I MASTER PLAN

1. TITLE OF THE PROJECT

“Increasing the Capacity of Integrated Management in Irrigated Agriculture in Dry Zone”

2. OVERALL GOAL

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

3. PROJECT PURPOSE

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

4. OUTPUT OF THE PROJECT

4.1 Outputs in the model sites

Capacity of the government officers and FOs is enhanced in the fields of:

- (1) Management of FOs
- (2) Irrigation facility management and water management
- (3) Agricultural production
- (4) Marketing and processing

4.2 Outputs in the training institutes

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

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ANNEX II LIST OF JAPANESE EXPERTS

A. Long-term Experts

1. Chief Advisor / Farmer Organization
2. Irrigation Facility Management/Water Management
3. Training (cum Coordination)

B. Short-term Experts

Short-term experts will be dispatched as the necessity arises for effective implementation of the Project.



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ANNEX III LIST OF MACHINERY AND EQUIPMENT

1. The necessary equipment for the transfer of technology by the Japanese experts will be provided.
2. Other materials and equipment mutually agreed upon as necessary will be provided.

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ANNEX IV LIST OF SRI LANKAN COUNTERPART AND ADMINISTRATIVE PERSONNEL

A. Organization Responsible for the Project:

Ministry of Agriculture, Irrigation and Mahaweli Development (MAIMD)

B. Personnel

1. Project Chief Coordinating Officer

Secretary, MAIMD

2. Project Coordinating Officer

Additional Secretary, MAIMD

3. Counterpart Personnel

Suitably qualified personnel in respective administration levels and in related organizations to the Project are assigned continuously to work with experts dispatched by Japanese side:

- | | |
|----------------------|---|
| (1) National Level | Secretary, MAIMD
Additional Secretary, MAIMD
Director, ID/TMD/DOA
Commissioner General, DAD
Director, ITI/IPHT/IFCRD/RRDI
Deputy Director, ISTI MI/FMTC/AHTC |
| (2) Provincial Level | Director, PDOA, North Central Province/North Western Province
Director, PDOAPH, North Central Province/North Western Province |
| (3) District Level | RDI
RPM, IMD
PM, ID
IE, ID
EA, ID
ADA, DOA/PDOA |



SMS/SMO, DOA/PDOA
AI, DOA/PDOA
DO, DAD
VS, PDOAPH
LDI, PDOAPH

4. Key Counterpart Personnel

Key Counterpart Personnel is shown in attached Table.

5. Other personnel are mutually agreed upon as necessary.

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Table Key Counterpart Personnel

Purpose	Irrigation Sector (ID, IMD)	Agricultural Sector (DOA, PDOA)	Animal Husbandry Sector (DOAPH, PDOAPH)	Institutional Development Sector (ID, IMD)
Manage at model site	<ul style="list-style-type: none"> ✓ IE ✓ EA 	<ul style="list-style-type: none"> ✓ ADA ✓ SMO ✓ AI 	<ul style="list-style-type: none"> ✓ LDI 	<ul style="list-style-type: none"> ✓ RPM ✓ PM
Foster training	<ul style="list-style-type: none"> ✓ ITI ✓ Resource Persons 	<ul style="list-style-type: none"> ✓ Director, Training Institute ✓ Deputy Director, Training Institute ✓ SMS ✓ SMO 	<ul style="list-style-type: none"> ✓ VS ✓ AHTC, Seepukulama 	<ul style="list-style-type: none"> ✓ SRPM ✓ Training Coordinator
Coordinate/Facilitate	<ul style="list-style-type: none"> ✓ CIE (I&WM) ✓ RDI 	<ul style="list-style-type: none"> ✓ Deputy Director (Irrigation) ✓ Provincial Director 	<ul style="list-style-type: none"> ✓ Deputy Director ✓ Provincial Director 	<ul style="list-style-type: none"> ✓ CIE (I&WM) ✓ Deputy Director (Training & Education)
Apply the outputs to policy level	<ul style="list-style-type: none"> ✓ Director (I&WM) 	<ul style="list-style-type: none"> ✓ Director (Ext&Training) 	<ul style="list-style-type: none"> ✓ Director 	<ul style="list-style-type: none"> ✓ Director (I&WM) ✓ Additional Director (Institutional Development)

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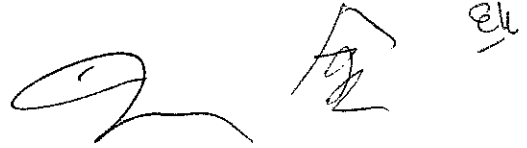
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ANNEX V LIST OF LAND, BUILDINGS AND FACILITIES

1. Sufficient facilities for the implementation of the Project
2. Offices and other necessary facilities for Japanese experts
3. Provision of services such as electricity, water supply, telephone and furniture necessary for the Project activities
4. Other facilities mutually agreed upon as necessary

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ANNEX VI COMMITTEES FOR THE PROJECT

I. Joint Coordinating Committee (National Level)

1. Functions

The Joint Coordinating Committee at National Level (hereinafter referred to as "National JCC") will be established for the effective and successful implementation of technical cooperation for the Project. National JCC will meet quarterly each year or whenever necessity arises, in order to fulfil the following functions.

- a. To deliberate and approve the Plan of Operation (PO) and the Annual Plan of Operation (APO) of the Project
- b. To review activities and progress of the technical cooperation program in accordance with the above-mentioned Plans
- c. To review measures taken by the Sri Lankan side and the Japanese side
- d. To exchange views on major issues arising from or in connection with the Project and decide corrective measures to be taken
- e. To coordinate with other relevant agencies for the matters arising in implementation of the Project

2. Composition

(1) Chairperson: Secretary, Ministry of Agriculture, Irrigation and Mahaweli Development

(2) Members

Sri Lankan Side:

Secretary, Ministry of Agricultural Development

Secretary, Ministry of Irrigation

Secretary, Ministry of Agrarian Services and Development of Farmer Communities

Additional Secretary, Ministry of Agriculture, Irrigation and Mahaweli Development

Director General, ID/DOA

Director, ID/IMD/DOA/PDOA

Director (Water Resource), Ministry of Agriculture, Irrigation and Mahaweli Development

Commissioner General, DAD

Deputy Commissioner, DAD

Chief Secretary, North Central Province/ North Western Province

District Secretaries, Anuradhapura/Kurunegala

Director, ERD



Project Director of PEACE

Japanese Side:

Chief Advisor

Other experts

Resident Representative of JICA Sri Lanka Office

Chief Representative, Representative Office in Colombo, JBIC

Other personnel concerned to be assigned by JICA, if necessary

(3) National JCC can invite any related person to discuss specific issues.

Note: Representative(s) of the Embassy of Japan in Sri Lanka may attend the Joint Coordinating Committee as observer(s).

II. Joint Coordinating Committee (District Level)

1. Function

One Joint Coordinating Committee for both Districts (hereinafter referred to as "District JCC") will be established for the effective and successful implementation of technical cooperation for the Project. District JCC will meet once in two months or whenever necessity arises, in order to fulfil the following functions.

- a. To review activities and progress of the technical cooperation program in accordance with the above-mentioned Plans on each district
- b. To review measures taken by the Sri Lankan side and the Japanese side on each district
- c. To exchange views on major issues arising from or in connection with the Project, decide corrective measures at the level of the Districts, and recommend corrective measures to the National JCC when necessary

2. Composition


(1) Chairperson: Additional Secretary, Ministry of Agriculture, Irrigation and Mahaweli Development

(2) Members

Sri Lankan Side:

RDI

Director, ID/IMD/DOA/PDOA/PDOAPH



Deputy Director, DOA/PDOA/PDOAPH

Deputy Assistant Commissioner, DAD

Director, ITI/IPHT/IFCRD/RRDI

Deputy Director, ISTI MI/FMTC/AHTC

IE, ID

RPM, IMD

Japanese Side:

Chief Advisor

Other experts

Other personnel concerned to be assigned by JICA, if necessary

(3) District JCC can invite any related person to discuss specific issues.

III. Training Advisory Committee

1. Function

The Training Advisory Committee (hereinafter referred to as "TAC") will be established for the effective and successful implementation of technical cooperation of the Project among the related training organizations. TAC will meet quarterly each year or whenever necessity arises, in order to fulfil the following functions.

- a. To make advices on all the training matters arising in the process of implementation of the Project
- b. To coordinate training related organizations to operate training courses

2. Composition

(1) Convener: Director, ITI

(2) Members

Sri Lankan Side:

Director, ID/IMD/DOA/PDOA/PDOAPH

Director, ITI/IPHT/IFCRD/RRDI


Deputy Director, ISTI MI/FMTC/AHTC

Japanese Side:

Chief Advisor

Other experts

Other personnel concerned to be assigned by JICA, if necessary



- (3) TAC can invite any related person to discuss specific issues

IV. Project Management Committee

1. Function

The Project Management Committee (hereinafter referred to as "PMC") will have the following additional functions in the process of implementation of the Project in addition to the existing functions, for the effective and successful implementation of technical cooperation of the Project at the irrigation scheme level. PMC will meet at least once a month or whenever necessity arises.

- a. To assess and identify training needs preliminary
- b. To monitor the activities
- c. To forward training needs to TAC

2. Composition

- (1) Chairperson: RPM, IMD or PM, ID

- (2) Members

RPM, IMD or PM, ID
IE, ID
AI, DOA/PDOA
DO, DAD
Other relevant officers
FO chairpersons of the irrigation scheme

- (3) Invitees

Chief Advisor
Other experts
Other personnel concerned to be assigned by JICA, if necessary

- (4) PMC can invite any related person to discuss specific issues.

V. Farmer Organization-level Implementation Committee

1. Function

The Farmer Organization-level Implementation Committee (hereinafter referred to as "FOIC") will be established for the effective and successful implementation of technical cooperation of the Project at the model site level. FOIC will meet at least

once a month or whenever necessity arises, in order to fulfil the following functions.

- a. To prepare the Community Development Plans and Community Action Plans
- b. To implement the development activities
- c. To identify training needs
- d. To implement the training

2. Composition

(1) Chairperson: FO Chairperson

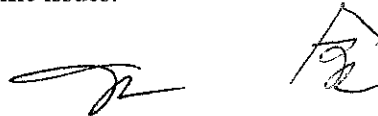
(2) Members

FO chairperson of the model site
RPM/IDO/DA, IMD or PM, ID
EA/DA, ID
AI, DOA/PDOA
ARPA, DAD
GN
Other relevant officers

(3) Invitees

Chief Advisor
Other experts
Other personnel concerned to be assigned by JICA, if necessary

(4) FOIC can invite any related person to discuss specific issues.



Abbreviations

ADA: Assistant Director of Agriculture
AHTC: Animal Husbandry Training Center, Seepukulama
AI: Agricultural Instructor
ARPA: Agricultural Research and Productivity Assistant
CIE: Chief Irrigation Engineer
DA: Development Assistant
DAD: Department of Agrarian Development
DO: Divisional Officer
DOA: Department of Agriculture
EA: Engineering Assistant
ERD: Department of External Resources
FMTC: Farm Mechanization Training Center
FO: Farmer Organization
GN: Grama Niladhari
ID: Irrigation Department
IDO: Institutional Development Officer
IE: Irrigation Engineer
IFCRD: Institute of Field Crops Research and Development
IMD: Irrigation Management Division
IPHT: Institute of Post-Harvest Technology
ISTI MI: In-Service Training Institute, Maha Illupalama
ITI: Irrigation Training Institute, Galgamuwa
I&WM: Irrigation and Water Management
LDI: Livestock Development Instructor
MAIMD: Ministry of Agriculture, Irrigation and Mahaweli Development
PDOA: Provincial Department of Agriculture
PDOAPH: Provincial Department of Animal Production & Health
PEACE: Pro-poor Economic Advancement and Community Enhancement Project
PM: Project Manager
RDI: Regional Director of Irrigation
RPM: Resident Project Manager
RRDI: Rice Research Development Institute
SMO: Subject Matter Officer
SMS: Subject Matter Specialist
SRPM: Senior Resident Project Manager
VS: Veterinary Surgeon

Project Design Matrix (PDM)

案件名:スリランカ乾燥地域の灌漑農業における総合的管理能力向上 (Increasing the Capacity of Integrated Management in Irrigated Agriculture in Dry Zone)

実施期間:4年間(2007年5月1日～2011年4月30日)

対象地域:アヌラダプラ県、クルネガラ県

対象グループ: 対象地域の農家及び関連政府職員

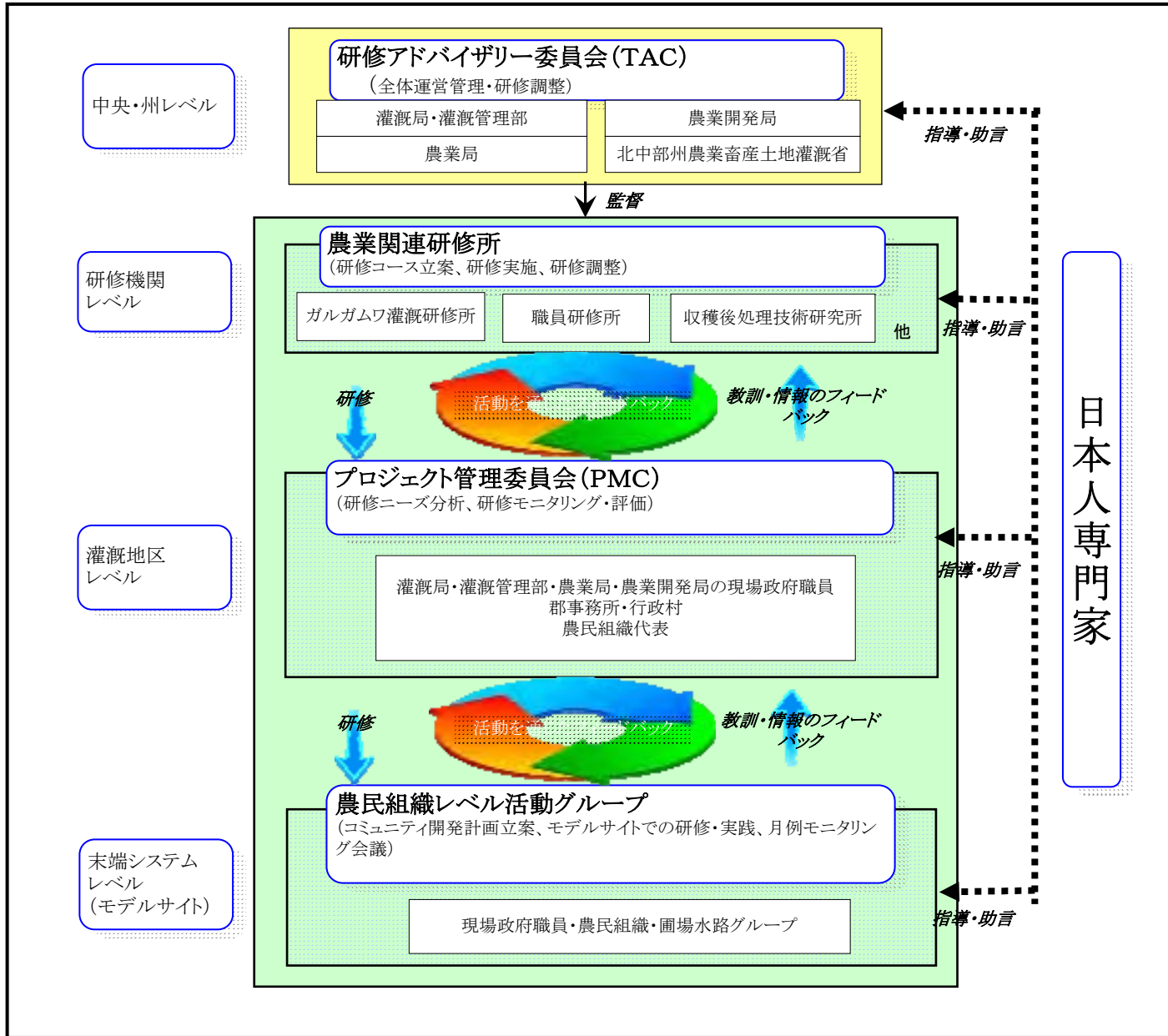
2006年12月13日作成

プロジェクト要約	指標	入手手段	外部条件
<p>上位目標</p> <p>対象地域において農業所得が向上する。</p>	<p>対象地域の農業所得が25%以上増加する。 対象地域の農業生産性が25%以上増加する。</p>	<p>・中央政府・州政府・灌漑・農業省による調査 ・灌漑・農業省、JICAによるサンプル世帯調査</p>	<p>※ 研修、指導・普及に係る政府職員数や予算が確保される。 ※ 農業所得向上に係る制度・政策・環境面での改善が実施・継続される。</p>
<p>プロジェクト目標</p> <p>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。</p>	<p>1. 対象地域において、総合的に計画された一連の研修が最低2回開催される。 2. 対象地域の農民の研修・普及に対する満足度が50%以上増加する。 3. 対象地域の農民組織の能力評価が25%以上増加する。</p>	<p>・研修所記録 ・農家・農民組織サンプル調査 ・農民組織能力評価調査</p>	<p>農村経済開発復興事業 (JBICのPEACEプロジェクト^{*)})をはじめとした農業生産向上に係る各種事業への投入が適時に実施される。 ※ 農業所得向上に係る制度・政策・環境面での改善が実施・継続される。</p>
<p>成果 モデルサイトにおいて 下記項目に関し、現場職員と農民組織の能力が強化・改善される。</p> <p>1 農民組織の運営管理</p> <p>2 灌漑施設管理、水管理</p> <p>3 農業生産</p> <p>4 流通加工</p> <p>研修所等において 5 C/P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</p>	<p>モデルサイトにおいて</p> <p>農民組織の組織運営管理に係る研修参加者の50%以上が</p> <p>1-1 コミュニティ開発計画・コミュニティ行動計画の作成・実施をファシリテートできる様になる。 1-2 リーダーシップ、ソーシャルモビライゼーション、財務管理等の農民組織運営管理に係る指導ができる様になる。</p> <p>灌漑施設管理、水管理に関する研修参加者の50%以上が</p> <p>2-1 農民組織による末端灌漑施設の改修工事を指導できる様になる。 2-2 灌漑スケジュールの作成・利用を指導できる様になる。 2-3 灌漑スケジュールに基づいた適切な水管理を指導できる様になる。</p> <p>稲作営農、作物多様化・畜産、生産計画に関する研修参加者の50%以上が</p> <p>3-1 種子生産、肥料・農薬の適正使用、栽培管理、収穫後処理等の技術に関する指導ができる様になる。 3-2 農民ニーズに応じて作物多様化/畜産に関する普及活動を行える様になる。 3-3 土地利用計画の作成と、同計画に基づく集団作付けの実施を指導できる様になる。</p> <p>流通加工に関する研修参加者の50%以上が</p> <p>4-1 集団販売の実施を指導できる様になる。 4-2 生産物の品質管理能力向上を指導できる様になる。 4-3 市場情報の収集方法を指導できる様になる。</p> <p>研修所等において</p> <p>5-1 指導者研修が最低1回開催される。 5-2 各指導者による現場職員への研修が最低2回開催される。 5-3 成果発表会が最低1回開催される。 5-4 モニタリング・成果発表会の結果を反映したセミナーが最低1回開催される。</p>	<p>研修参加者からの聞き取り</p> <p>研修参加者業務日誌・レポート</p> <p>農家・農民組織サンプル調査</p> <p>集団作付け・販売実施状況報告書</p> <p>プロジェクト・研修所記録</p>	<p>※ 生産物の価格、市場が極端に不安定にならない。</p> <p>※ 気象条件が極端に不安定にならない。</p> <p>※ 対象地域の治安状況が極端に悪化しない。</p>

活動	投入		
<p>活動1～4 モデルサイトにおける活動 各項目とも農民や現場政府職員が実施するのをプロジェクトがファシリテート・サポートする</p> <p>1 農民組織の組織運営管理</p> <p>1-1 モデルサイトのベースライン調査及び対象地域の農民組織の能力評価調査を実施する。 農民組織の組織運営管理に関して現状及び既存の資料をレビューし、改善を検討の上、事例集/マニュアル/ガイドライン等のドラフトを作成する。</p> <p>1-2 コミュニティ開発計画・コミュニティ行動計画の作成・活用方法について研修を実施する。</p> <p>1-4 コミュニティ開発計画・コミュニティ行動計画を作成する。</p> <p>1-5 農民組織の中に各課題に応じた部会を設置する。</p> <p>1-6 コミュニティ行動計画実施のための各種研修(例:リーダーシップ、ソーシャルモビライゼーション、財務管理等)を実施する。</p> <p>1-7 上記実践の結果を基に事例集/マニュアル/ガイドライン等の内容を精査し、第一版を完成させる。</p> <p>2 灌漑施設・システムレベル水管理・圃場水管理(詳細はコミュニティ行動計画の結果を反映させる)</p> <p>2-1 灌漑施設・水管理に関して現状及び既存の資料をレビューし、改善を検討の上、事例集/マニュアル/ガイドライン等のドラフトを作成する。 コミュニティ行動計画で計画された末端灌漑施設の改修を農民組織が実施できる様に、サーベイ、設計、研修等を実施する。</p> <p>2-2 農民組織による末端灌漑施設の改修工事を実施する。</p> <p>2-4 農民組織が末端灌漑施設の操作維持管理ができる様に研修・OJTを実施する。</p> <p>2-5 農民組織・圃場水管理グループが主体となって灌漑スケジュールが作成できる様に指導する。</p> <p>2-6 灌漑スケジュールに基づいた適切なシステムレベル水管理についての研修・OJTを実施する。</p> <p>2-7 適切な圃場水管理についての研修・OJTを実施する。</p> <p>2-8 GIS灌漑ブロック図に基づいた水管理・栽培計画についての研修・OJTを実施する。</p> <p>2-9 灌漑局土地利用課によって作成された詳細土壌分類地図に基づいた水管理・栽培計画についての研修・OJTを実施する。</p> <p>2-10 上記実践の結果を基に事例集/マニュアル/ガイドライン等の内容を精査し、第一版を完成させる。</p>	<p>日本国側</p> <p>1. 専門家派遣</p> <p>長期専門家:3名</p> <p>－チーフアドバイザー／農民組織</p> <p>－水管理／灌漑施設管理</p> <p>－研修(業務調整を兼務)</p> <p>短期専門家:必要に応じて</p> <p>2. C/P研修(本邦及び/又は第3国)</p> <p>3. 機材</p> <p>4. ローカルコスト(一部)</p>	<p>スリランカ国側</p> <p>1. C/P配置</p> <p>-プロジェクト・チーフ・コーディネーティングオフィサー</p> <p>-プロジェクト・コーディネーティングオフィサー</p> <p>－その他</p> <p>2. 専門家の執務室</p> <p>3. 研修に必要な資材</p> <p>4. ローカルコスト</p> <p>※ 両国が適切な時期に適切に投入を実施する。</p> <p>※ 研修を受講した政府職員が大幅に異動しない。</p>	
<p>3 農業生産(詳細はコミュニティ行動計画の結果を反映させる)</p> <p>3-1 農業生産に関して現状及び既存の資料をレビューし、改善を検討の上、事例集/マニュアル/ガイドライン等のドラフトを作成する。</p> <p>3-2 稲作営農技術向上に関して研修・OJTを行う(種子生産、肥料・農薬の適正使用、栽培管理、収穫後処理等)。</p> <p>3-3 作物多様化/畜産の導入に関し普及活動を行う。</p> <p>3-4 土地利用計画の作成と、同計画に基づく集団作付けの実施を指導する。</p> <p>3-5 上記実践の結果を基に事例集/マニュアル/ガイドライン等の内容を精査し、第一版を完成させる。</p> <p>4 流通加工(詳細はコミュニティ行動計画の結果を反映させる)</p> <p>4-1 流通加工に関して現状及び既存の資料をレビューし、改善を検討の上、事例集/マニュアル/ガイドライン等を作成する。</p> <p>4-2 特定の作物に対し、集団販売の重要性に係る意識化を行い、農民組織による集団販売の実施を指導する。</p> <p>4-3 農産物の品質管理能力向上のための研修・OJTを実施する。</p> <p>4-4 市場情報の収集能力向上のための研修・OJTを実施する。</p> <p>4-5 上記実践の結果を基に事例集/マニュアル/ガイドライン等の内容を精査し、第一版を完成させる。</p> <p>5 C/P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</p> <p>5-1 研修アドバイザー委員会(TAC)を設置し、定期的に研修ニーズの確認、研修のモニタリング、フォローアップ等を実施する。</p> <p>5-2 研修体制・手法に関して現状及び既存の資料をレビューし、改善を検討の上、事例集/マニュアル/ガイドライン等のドラフトを作成する。</p> <p>5-3 研修体制・手法に関して指導者研修を実施する。</p> <p>5-4 上記1-4に係る専門家・C/Pと協力して指導者研修を実施する。</p> <p>5-5 上記1-4に係る専門家・C/Pと協力して現場職員への研修を実施する。</p> <p>5-6 上記1-4に係る専門家・C/Pと協力して現場での成果をモニターするとともに、成果発表会を開催し成果や問題点を確認する。</p> <p>5-7 上記実践の結果を基に事例集/マニュアル/ガイドライン等の内容を精査し、第一版を完成させる。</p> <p>5-8 モニタリング・成果発表会の結果を普及するためのセミナーを開催する。</p>	<p>スリランカ国側</p> <p>1. C/P配置</p> <p>-プロジェクト・チーフ・コーディネーティングオフィサー</p> <p>-プロジェクト・コーディネーティングオフィサー</p> <p>－その他</p> <p>2. 専門家の執務室</p> <p>3. 研修に必要な資材</p> <p>4. ローカルコスト</p>	<p>前提条件</p> <p>※ 必要なC/Pが配置され、プロジェクト運営に積極的に参加する。</p> <p>※ C/Pの頻繁なモデルサイト訪問、現場研修参加等のための交通費・手当てをはじめとしたC/Pの活動予算がスリランカ国側にて確保される。</p> <p>※ 頻繁なモデルサイト訪問、現場研修参加等のための適切な移動手段がC/Pに供与される。</p>	

*注: PEACE(Pro-poor Economic Advanement and Community Enhancement Project: 農村経済復興開発事業)

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て農村の貧困削減、農民生産性向上、持続的な農業開発を目指す事業。



December 12, 2006

Description of the Terms of References, Project Strategy and Project Framework
of the Ex-ante Evaluation Survey
on the Project for
Increasing the Capacity of Integrated Management in Irrigated Agriculture in Dry Zone of Sri Lanka
by
the Team Leader of the Ex-ante Evaluation Survey Team
Japan International Cooperation Agency (JICA)

1. Background

Sri Lanka has total population of 19 million, and land extent of 66,000 km². 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. Among the 10 groups divided according to the monthly income, 90% of the lowest income group lives in the rural area. The major reasons for the rural area having more member of poor households are that ①unstable income due to poor performance of the agriculture and ②undeveloped regional and local industries.

In agriculture sector, paddy is a main contributor for the GDP by about 20% in 2004. Lowland paddy is the main product of the small scale sector, and most of the farm families are engaged in paddy cultivation. However, most of the small and medium scale farm families, who are mainly engaged in paddy cultivation, are not able to obtain sufficient income due to deterioration of the real income amount, caused by the fragmentation of the ownership of agricultural lands due to the population growth and increase of the production cost.

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 Provinces have in particular very limited employment and income opportunities except for those from agricultural sector. The rural areas of these provinces 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, shipment, 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 Irrigation Management Division, (IMD), Department of Irrigation (ID) and other relevant government institutes engaged in irrigation sector.

The Government of Sri Lanka requested a development study called the Study on Increasing the Capacity of Integrated Management in Irrigation Sector (hereinafter referred to as “the Study”), and it was carried out by the Japan International Cooperation Agency (JICA) from October 2005 to July 2006. The target areas were three irrigation schemes in Anuradhapura District, which is a representative district in the North Central Provinces of the dry zone; the target farm families were small and medium scale ones. The Study defined the major problems and the solution directions of sectors on irrigation, agronomy and marketing & 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 called the Project for Increasing the Capacity of Integrated Management in Irrigation Agriculture in Dry Zone (hereinafter referred to as “the Project”), on July 19, 2005. The JICA was entrusted to realize the Project, and decided to send the Ex-ante Evaluation Survey Team (hereinafter referred to as “the Team”).

2. Outline of the Request from the Government of Sri Lanka

Major contents of the Project request submitted on July 19, 2005 are as follows.

(1) Overall goal

The overall goal is contributing towards increasing the productivity of irrigated farms and thereby the income of farmers.

(2) Project purpose

- ① Implement an appropriate joint management of irrigation system by the government and farmers.
- ② Implement an efficient farming through effective use of resources such as water, land, fertilizer, farm machinery, labor and technology.
- ③ Improve the value of agriculture products.

(3) Outputs

- ① Increase the capacity of government officers regarding integrated resources management in irrigated agriculture.

- ② Increase the capacity of farmers organizing regarding integrated resources management in irrigated agriculture.

(4) Activities

- ① Farmer training leads to efficient use of resources, better on-farm water management, improved agriculture technologies, value addition to products, off-farm & agriculture-related employment, crop management, use of agricultural machinery skills in small-scale maintenance work management etc.
- ② Officer training leads to improved water management strategies, irrigation scheduling, crop management and better use of farm and irrigation machinery.

3. Purpose, Terms of References, Members, and Period of the Ex-ante Evaluation Survey

3.1 Purpose and Terms of References (TOR)

In order to realize the Project, the request contents have to be re-arranged to make the suited Project design for the nature of technical cooperation and the JICA implementation system of technical cooperation projects (ex. PCM), by discussion with the Government officers concerned. In addition, other basic requirements such as implementation structure, model sites and input scale have to be determined for the Project commencement. The Ex-ante evaluation survey, therefore, aims at formulating the Project design on the technical cooperation contents, scope, input scale and others through discussions with the Government officers concerned, and signing the Minutes of Meetings (M/M) that compiles the design and agreements in the discussions.

The Terms of References are as follows.

- ① Discuss and agree the Project basic design.
- ② Define the Project implementation structure.
- ③ Decide the Steering committee members.
- ④ Determine the model irrigation schemes.
- ⑤ Discuss the Project term and commencement date.
- ⑥ Compile the above contents as a M/M and sign it.

3.2 Team members and survey schedule

The survey period is from December 5, 2006 to December 13. Table 1 shows the Team members.

Table 1 Team members

	Name	In charge	Position and Organization
1	Hideyuki KANAMORI	Leader	Regional project formulation advisor, Regional support office for Asia, JICA
2	Kazuyuki IKEDA	Water management/Management of Irrigation Facilities	Director of Planning, Chugoku-Shikoku Land Improvement Planning and Management Office, Chugoku-Shikoku Regional Agricultural Administration Office, Ministry of Agriculture, Forestry and Fisheries
3	Tomoko TAMURA	Ex-ante evaluation and analysis	Consultant
4	Tomohiro AZEGAMI	Cooperation planning	JICA Sri Lanka Office

4. Two Findings during the Field Survey

4.1 Necessity of intensification of existing technology and methodology

From the overview, the general government officers have sufficient knowledge and technologies to conduct agricultural development and improvement on irrigated agriculture. These knowledge and technologies are mainly, however, not farmer-oriented but specialist-oriented. The farmer-oriented technology and methodology are defined as those which can be applied by farmers by themselves. Increasing and disseminating the farmer-oriented technologies and methodologies provide the base of increasing participation of farmers and decreasing the government inputs.

(1) Technology

Since the Project purpose is training the government officers to have the facilitating capacity of farmers, we studied the existing text books at training institutes and the applied production technologies and extension methods at fields. The following facts were found to indicate the necessity.

① We studied three text books applied in the Irrigation Training Institute (ITI), and found necessity of the following improvements.

- A course called “Institutional development for farmers” was conducted up to 1990s for selected farmers. The text book includes the contents of Participatory Rural Appraisal (PRA), Rapid Rural Appraisal (RRA), Leadership, and Logical framework approach. The text book is, however, not directly applicable for Engineering Assistants (EAs) to guide farmers. It is too theoretical for farmers. If the text book applies more understandable manner of description for farmers, it will improve the facilitating capability of EAs.
- A course called “Water management (WM)” is conducted. The WM contents are soil,

soil-water-plant relationship, irrigation requirement and irrigation scheduling. There are only theoretical descriptions but practical descriptions. Examples of the practical contents are how to improve soil water effect and how to evaluate the present water management.

- The text book of “Training on Quality Control” describes construction methods. But the contents are not concrete enough for farmers to apply. For instance, significance and hours of curing are described, but curing materials that are locally available are not shown.

The farmers’ leader of Kadhathawewa minor irrigation scheme (SPFS site) reported that ten members had attended the WM course at an ASC, but they had not satisfied the contents. This fact indicates that the WM course contents should be improved for farmers.

② Simple civil works for farmers have not been broadly applied. If civil works can be simplified so that farmers can apply without assistance from Engineering Assistants (EAs), it will enlarge the possibility of farmers’ participation and possibility of transferring the O&M and repair to farmers. When surveying Kimbulwanaoya Irrigation scheme, we visited one drop structure to be repaired. Although the structure was originally made by wet masonry with concrete, we observed that dry masonry work is applicable to repair the structure. In fact, the government applied Rubble Patching for bank protection of drop structures in Magallawewa irrigation scheme. However, this Rubble Patching was not so effective for farmers to appreciate the applicability. Improvement of such a technology is necessary.

③ Although practical technologies are available for farmers to increase the production or decrease the cost, these are not applied. For instance, farmers reproduce rice seeds for two seasons, but any simple selection methods of qualified seeds are not applied in Magallawewa irrigation scheme and Nachchaduwa Irrigation Scheme. For another instance, although farmers apply organic manure, the materials such as animal stools are directly applied to fields without advanced desolation in Magallawewa irrigation scheme. Introduction of applicable improvement measures is thus necessary for farmers.

④ Efficient land leveling method is not applied for on-farm water management. Although rough land leveling causes un-even growth of rice according to a farmer in Nachaduwa Irrigation Scheme, efficient leveling measures have not been developed. Such a technology will be necessary.

(2) Agricultural extension

Availability of Agricultural Instructors (AIs)

Sri Lanka applies Training & Visit (T&V) system for agricultural extension. The efficiency and effectiveness of T&V system depend on the availability of Agricultural Instructors (AIs) for farmers. It is reported that the suitable applicability rate is at 500 farm households (FHH) per AI. The existing number of AIs is however small.

We visited an Agrarian Service Center in Anuradhapura, and heard that one AI was in charge of 1500 FHH in real. Since one HH is separated, total 3000 members per IA was the real situation. The AIs cannot visit the farmers frequently with this available rate. In fact, farmers said no regular visit by AIs in Rajangana Irrigation Scheme and Kimbulwanaoya Irrigation scheme and visit at only once per month in Nachchaduwa Irrigation Scheme and Magallawewa irrigation scheme.

In this availability of AIs, the extension efficiency is needed to be intensified.

Extension method

In order to intensify the extension efficiency, enforcement of an AI's capacity is necessary. However, training opportunity is only at once per two years and no technical guidebooks are available for AIs in case of an Agrarian Service Center in Anuradhapura. Another increasing measure of the efficiency is applying low-input extension methodology. Many extension techniques are available, and these are trained for AIs at the In-service training center of Gannoruwa. However, the low-input measures are not effectively applied. For instance, leaflets are provided at only one hundred copies per delivery in case of the Agrarian Service Center in Anuradhapura; the number is not enough considering the 1,500 FHH for one AI. The extension technique with low-input is thus necessary to be enhanced.

4.2 Similarity and superiority of the Project contents to PEACE

There is a JBIC loan project called Pro-poor Economic Advancement and Community Enhancement Project (PEACE) started in 2006 for four years in the Project area. We visited the office and clarified their planned activities. Focusing on training the government officers, Table 2 summarizes the contents of the both projects. It is indicated that the contents of the both projects are similar.

Table 2 Comparison of activities by PEASE and the Project

Organization	PEACE	JICA
Capacity building subjects	①Management of water and irrigation facility, ②management of Farmers' Organizations (FOs), ③agriculture production and livestock production, ④marketing, ⑤improvement of training/facilitation and ⑥inland fishery ⑦participatory development*	①Management of water and irrigation facility, ②management of Farmers' Organizations (FOs), ③agriculture production and livestock production, ④marketing and processing, ⑤improvement of training/facilitation skills
Trainers	Senior government officers	Government officers (key counterparts)
Way of capacity building at model site activity	The model site activities are done by the local consultant with the government officer. Through this, the officer's capacity is built and the project sustainability is ensured.	The model site activities are done by the government officer with supports from the local consultant and/or JICA expert. Through this, the officer's capacity is built and the project sustainability is ensured.

Note: Underline shows the different parts between two projects.

* shows the training course whose lecturer is not the government officer.

However, focusing on efficiency and effectiveness of capacity building, we can say the following superiority of the Project to PEACE although PEACE has superiority on the quantity of the target area.

- ① The input intensity of fostering the government officers in the JICA Project is much more than in the PEACE for capacity building of the government officers. For instance, a trainer (counterpart) is fostered by applying the improvement measures as the implementer in the JICA Project whereas a trainer is fostered by observing the local consultant's activities in the PEACE. Thus effectiveness of capacity building of the trainers in the Project is superior.
- ② Whereas additional new technologies/methodologies to the existing ones are planned to be introduced in the JICA project whereas only existing ones will be introduced in the PEACE. This renewal of the existing technologies/methodologies will bring superior efficiency to PEACE on disseminating the Project outputs to farmers.

Despite the similarity, input and technical intensity in the JICA Project ensure to foster the core resource persons for establishing the training system, and it will also contribute to the sustainability of PEACE.

5. Project Strategy

5.1 Main strategy and principles

The main strategy to satisfy the request submitted by the Government of Sri Lanka is carrying out capacity building of the Government officers for increasing the productivity of dry zone irrigated agriculture according to the requested outputs. In order to efficiently implement the strategy, we made the following Project implementation principles.

- ① The integrated and intensified capacity building with advanced technology, which is cost effective and easy applicable technology for farmers, is carried out for the Government officers and farmer group leaders at the model sites, and then the outputs are disseminated by training and extension.
- ② By joint implementation with the JBIC project called "PEACE," efficient Project implementation is desired. Specifically, the Project hardware costs (civil work costs) will be supported by the loan although the rehabilitation of irrigation facilities will be supervised by the Government officers, and the Project will concentrate on software activities of capacity building.
- ③ In order to enforce the applicability of the Project outcomes, non-PEACE based model will be provided. The non-PEACE model defined to be that of not applying any external funds such as PEACE for the rehabilitation.
- ④ Applying competent local resource persons including the former participants of training in Japan and local consultants, the JICA input is economized. JICA long-term experts are sent only to major sectors such as irrigation, farmer organization and training, and the other sectors are supported by short-term experts.

- ⑤ The JICA long-term experts work mainly as facilitators. For the Project sustainability, the experts facilitate the Government officers to strengthen their respective capability by themselves in carrying out their routine works. All the counterparts are thus part-time assignments.

5.2 Description of two main principles

(1) Integrated and intensified capacity building

Since we found necessity of intensifying production technologies and extension methodologies, we will propose “integrated and intensified capacity building.” In this word, “intensified” means inclusion of modification activities of the existing technology and methodology to be more practical. The Sri Lanka side suggested adding words to specify the meaning of applying the modified technology and methodology. We discussed and agreed to add words of “with advanced technology which is cost effective and easy applicable technology for farmers.”

JICA conducted many technical cooperation projects in other countries, and the outputs from these projects can be applied for this modification. Annex-1 shows some examples.

(2) Provision of Non-PEACE based model

The PEACE based model is a loan based model, which mobilizes Farmers’ Organizations (FOs) by providing external funds and implementing rehabilitation with community contract. There are, on the other side, schemes that do not need rehabilitation because it has been done recently, at about 10 years ago or less. For these schemes, improvements of software are only requirements. As one of these schemes, Kimbulwanaoya Irrigation scheme (Kurunegala) was nominated by the Sri Lanka side and we surveyed. Although some civil works are necessary, we thought that the Project could improve the condition by capacity development without external financial inputs if applying the above intensified technologies on civil works. Considering these survey results, we discussed with the Sri Lanka side and have agreed to provide another model for these schemes that do not require rehabilitation but need development. This model is called “Non-PEACE based model.”

There is a scheme called Kadhathawewa minor irrigation scheme, to which no rehabilitation assistance was applied. The scheme members are now discussing to pay fees for the O&M. Intending the fee payment has been arrived at after successful implementation of income generation. This case indicates that the Project can mobilize FOs by income generation without rehabilitation. The measures of income generation in the Project will be agro-based community development with local resources. Table 3 summarizes characteristics of these two models.

Table 3 Summary of characteristics of two models

Model	Condition	Main methodology applied	Output	Purpose of the model
PEACE based model	External fund	Community contract	Participatory rehabilitation	Mobilization of Farmers' Organizations
Non-PEASE based model	Normal budget allocation	Agro-based community development with local resources	Income generation	

5.3 Conceptual diagram

Fig. 1 shows schematic description of the Project concept.

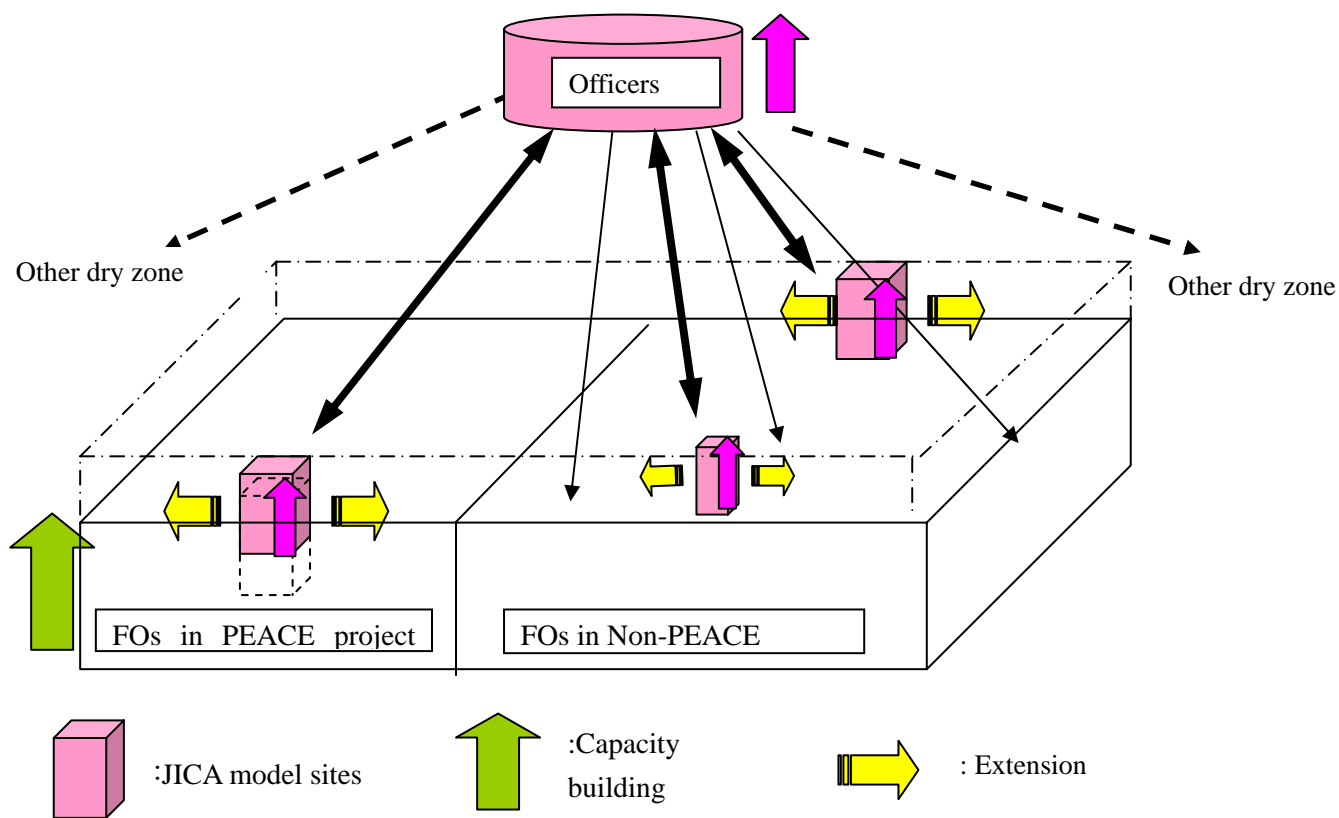


Fig.1 Schematic description of the modified Project concept

6. Project framework

According to the PCM theory, a project can be designed from the objective tree as shown in Fig.2.

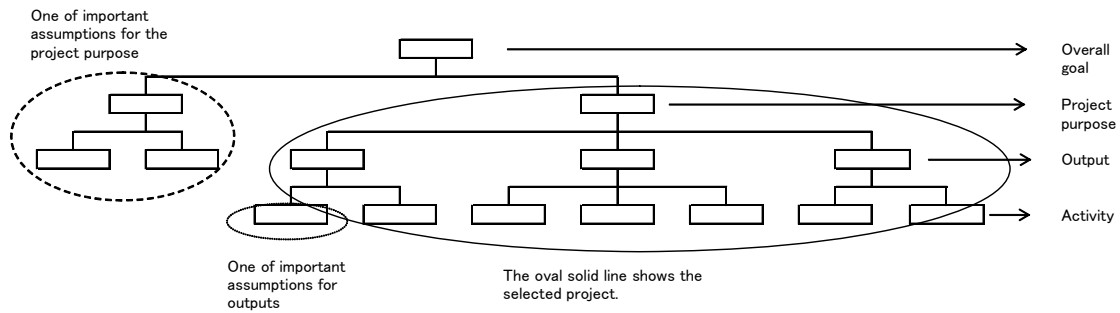
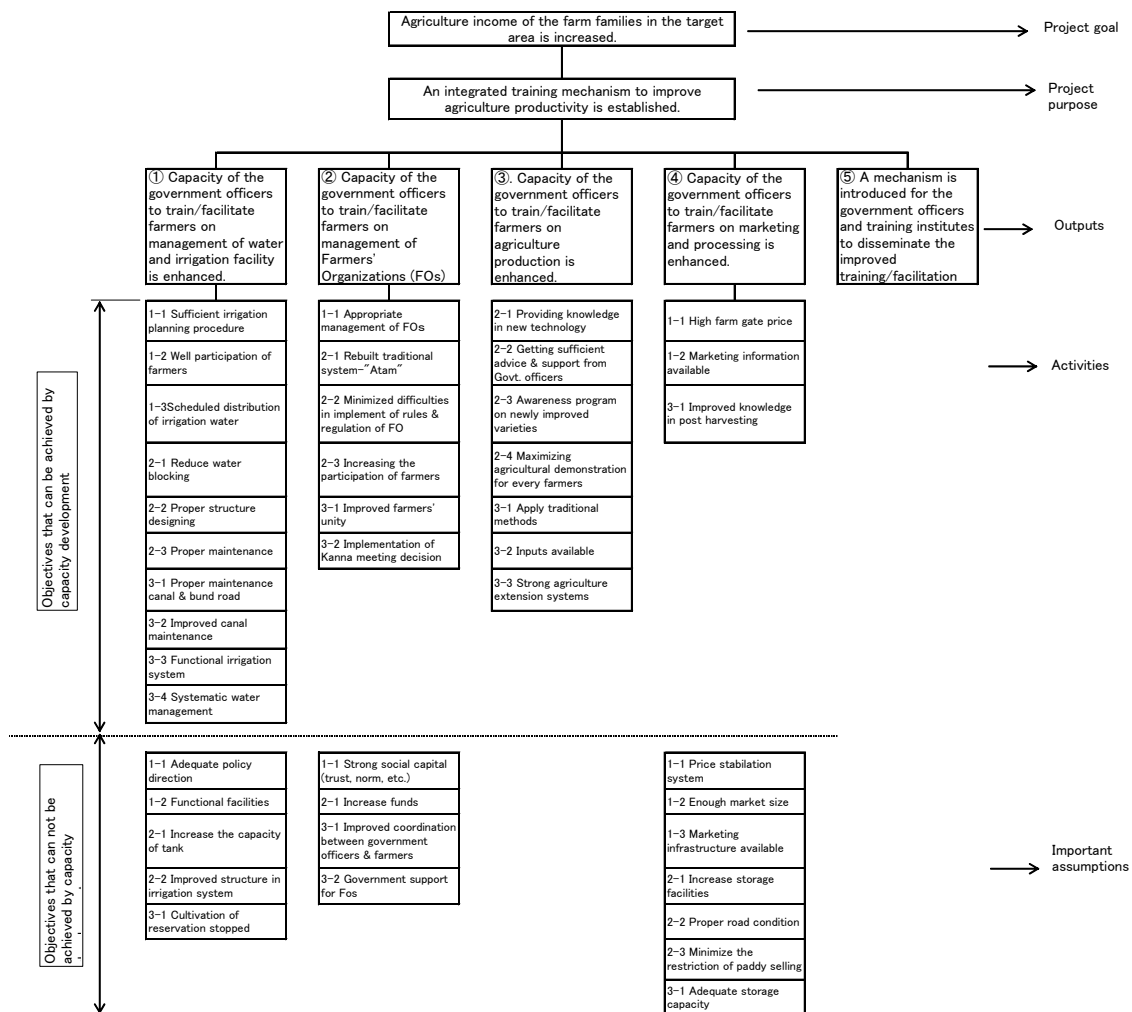


Fig.2 Description of general project formulation procedure by PCM

In the Study, three workshops were held with the counterparts & steering committee members on Jan. 30 and 31, 2006, with farmer organizations at Nachchaduwa scheme & Thuruwila scheme on Feb. 7 and 8, 2006 and with a farmer organization at Rajangana scheme on Feb. 2 and 3, 2006, respectively. We re-arranged the results of these three workshops to form an overall objective tree for the Project considering the above strategy. Fig. 3 shows the summarized objective tree.



Note: The objective of "5. A mechanism is introduced..." is added at forming the objective tree as a necessary measure to achieve the purpose.

Fig. 3 Objective tree of the Project

Applying the theory shown in Fig.2 to Fig.3, we suggested the Project framework shown in the narrative summary of the PDM.

Annex-1 Examples of intensified technology and methodology

1. Simplified canal-level alignment method

Canal construction requires excavation and alignment. Since farmers are familiar with excavation from cultivation works, the alignment was the issue for canal installation. Valuable survey instruments with sophisticated technology are usually required. The consultants modified the existing method of identifying level positions for soil conservation, and developed a simple alternative alignment technology. It uses a Line Level that can be hung on a string to check the horizontal. The cost of Line Level is about US\$3.00. A NGO delivered this level and all the extension office has at least one level.

The way of applying the line level is as follows. For aligning canal, two poles are put being tied with a string of 5m long (see Fig. 1). One side of the tied points should be 0.5cm/1.0cm lower than the other. The pole with lower tied point should always be placed backsight. By fixing the backsight-pole stand point and changing the stand point of the foresight-pole to have the horizontal of the string with the Level, 0.5cm/1.0cm difference in 5m can be obtained between the two points. Repeating this action from upstream to downstream, 1:1000/1:500 gradient alignments can be realized without surveying instruments.

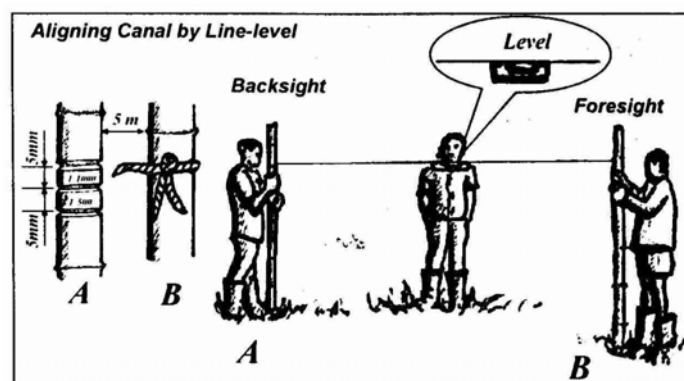


Fig. 1. Description of how to align canal

This technique is so simple that farmers can be familiar with this survey method after one-hour of training. Canal construction is also quick; ten farmers can dig 50 to 100 m in length a day depending on the depth of 0.3m to 1.0m.

2. Quick compost manure production method called "Bokashi"

Whereas the conventional compost takes two to three months for maturing, Bokashi compost takes only two to three weeks. Two main works were done for the alternative operations. One is taking Yeast rich materials from the Malawi popular materials; the consultant applied local alcohol

production residues or banana skin. Another work is way of keeping the temperature below 50 degree centigrade; the consultants applied a local big knife to check it (see Fig. 2).



Fig.2 Checking the temperature with a local knife for Bokashi compost

3. Sustainable training method of extension officers (AIs) applying PD method

(1) Significance

This is cited from Thailand training course for extension officers from other countries. Although very useful Thailand technologies are transferred to the participants, with only attending lectures, exercises and study visits, their understandings will not be confirmed and they cannot disseminate the technologies quickly. In order to improve these drawbacks JICA proposed this course, which includes leaning technologies, making extension posters for extension materials and exercising presentation to farmers.

(2) Equipment and materials

Equipment: Digital camera (if not available, ordinary camera), Scanner, Computer, Printer, Copy machine

Tools: Successor, Black pencil, Color pencil set, Rubber eraser, Cutting board, Cutter, Glue, Ruler, Scotch tape

Materials: A4 size papers, Tracing papers, Hard papers, Envelop for A4 size papers, CD

(3) Procedure

Step-1: Start for a field with a camera and writing sets.

Step-2: Learn the technique from teachers (outstanding farmers) and make questions in a house.

Step-3: Learn the operation of each step at the site.

Step-4: Practice the technique and take photos of each step.

Step-5: Select one photo of each scene from different angles and distances of photos in computer.

Step-6: Print out the selected photos at one photo per scene.

Step-7: Select photo (s) of each step. One photo per step is ideal. The maximum is two photos per

step. Total eight steps should be prepared for a poster (see Fig. 3).

Step-8: Paste the selected photos to the PD form and write step no, activity, description and remarks (Process Description)

Step-9: Check and edit the written Process Description on the PD form. (If making it in Local language, translate the process description.)

Step-10: Trace each photo by tracing as described with Fig. 4 above.

Step-11: Scan the portrayed drawings.

Step-12: Paste the step no, activity, and description on the scanned drawings in PD poster form (see Fig. 5), and then print out.

Step-13: Prepare one copy of each poster form for further duplication.

Step-14: Color the drawings with color pencils.

Step-15: Cut out the drawing.

Step-16: Prepare poster base papers: Cut the paper to be A2 size, and mark the drawings' positions.

Step-17: Put the drawings on the base paper with glue.

Step-18: Write and print out headings, organization, etc., and then cut out & put them on the base paper with glue.

Step-19: Prepare colorless poster for duplication.

Step-2: Replace photos with the drawings and print out all the PD forms.

Step-21: Make a set of PD forms & posters and CD of all the files.

Step-22: Each participant conducts presentation of explaining the technology to other participants who are regarded as farmers, and the trainer makes comments to improve the participant's presentation skill.



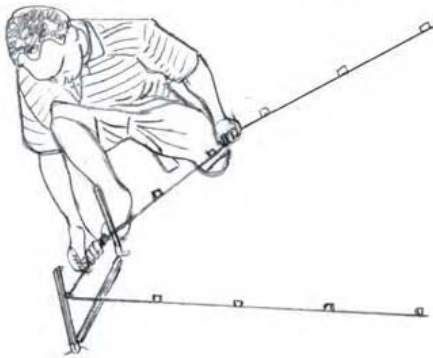
How to install dial-gauge type tensiometers			No.6
Photograph	Activity	Description	Remark
	Installation-7: Insert the meter into the hole	Carefully insert the tensiometer into the drill hole. With the use of a spare clothe, press down the tensiometer tube until the tensiometer gauge touches the soil.	Prevent foreign matter to drop into the tensiometer tube. This might affect water property.
	Installation-8: Supply boiled water into the tensiometer	With the use of a washing bottle, pour the boiled water into the tensiometer tube.	

Fig. 3 An example of typed description in the PD form



a. Drawing



b. Original photo

Fig. 4 Examples of the original photo and drawing

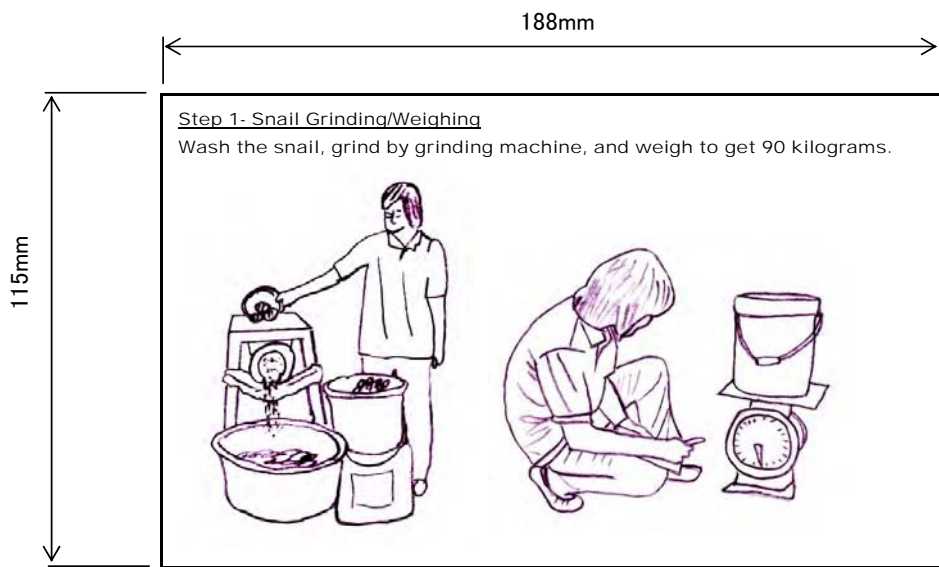


Fig. 5 PD poster form and an example of a pasted drawing and descriptions

Fig. 6 shows an example of poster without color although the real one has color.

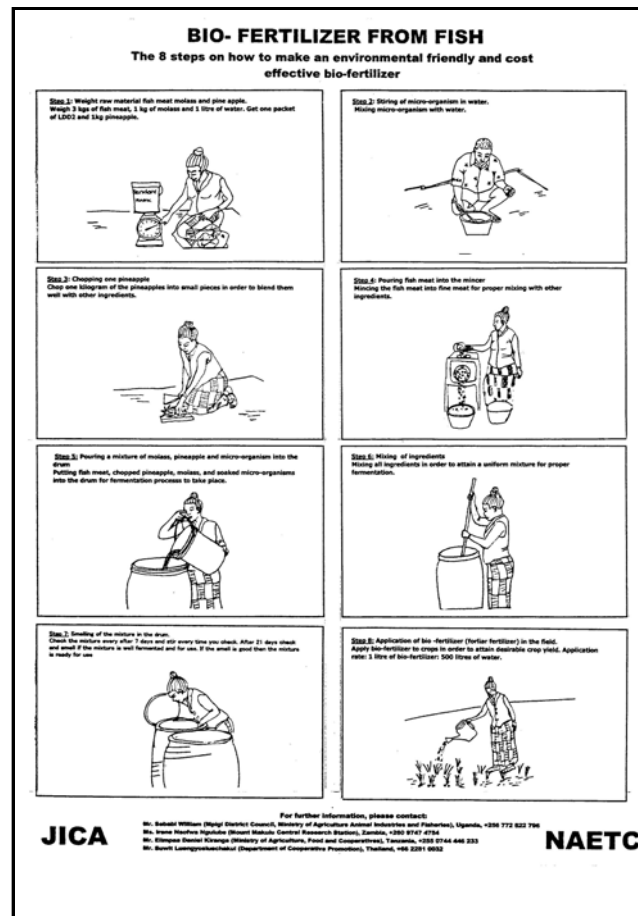


Fig. 6 An example of extension poster

(5) Advantage and disadvantage

Advantage:

- ① Participants obtain the explained technique through making PD forms and poster and conducting presentation.
- ② Participants obtain the technique of how to make poster extension materials and improve their presentation skill.
- ③ Participants can disseminate the technique to farmers immediately after arriving at their mother country with the poster.

Disadvantage: Takes time. Total three days were spent for 6 groups at two participants per group with one trainer.

PEACE プロジェクト概要

「農村経済開発復興事業」(Pro-poor Economic Advancement and Community Enhancement Project : 通称 PEACE プロジェクト) は、JBIC の円借款による事業として 2006 年に開始された。北東部州を含む乾燥地域に存在する 109 カ所の灌漑地区において、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て、対象地域の農業が持続的に発展することを目指している。プロジェクトは 2010 年までの予定である。

1. 目的

対象地域の農業の持続的な発展

- ① 農村の世帯収入の増加
- ② 社会経済的地位の向上

2. アプローチ

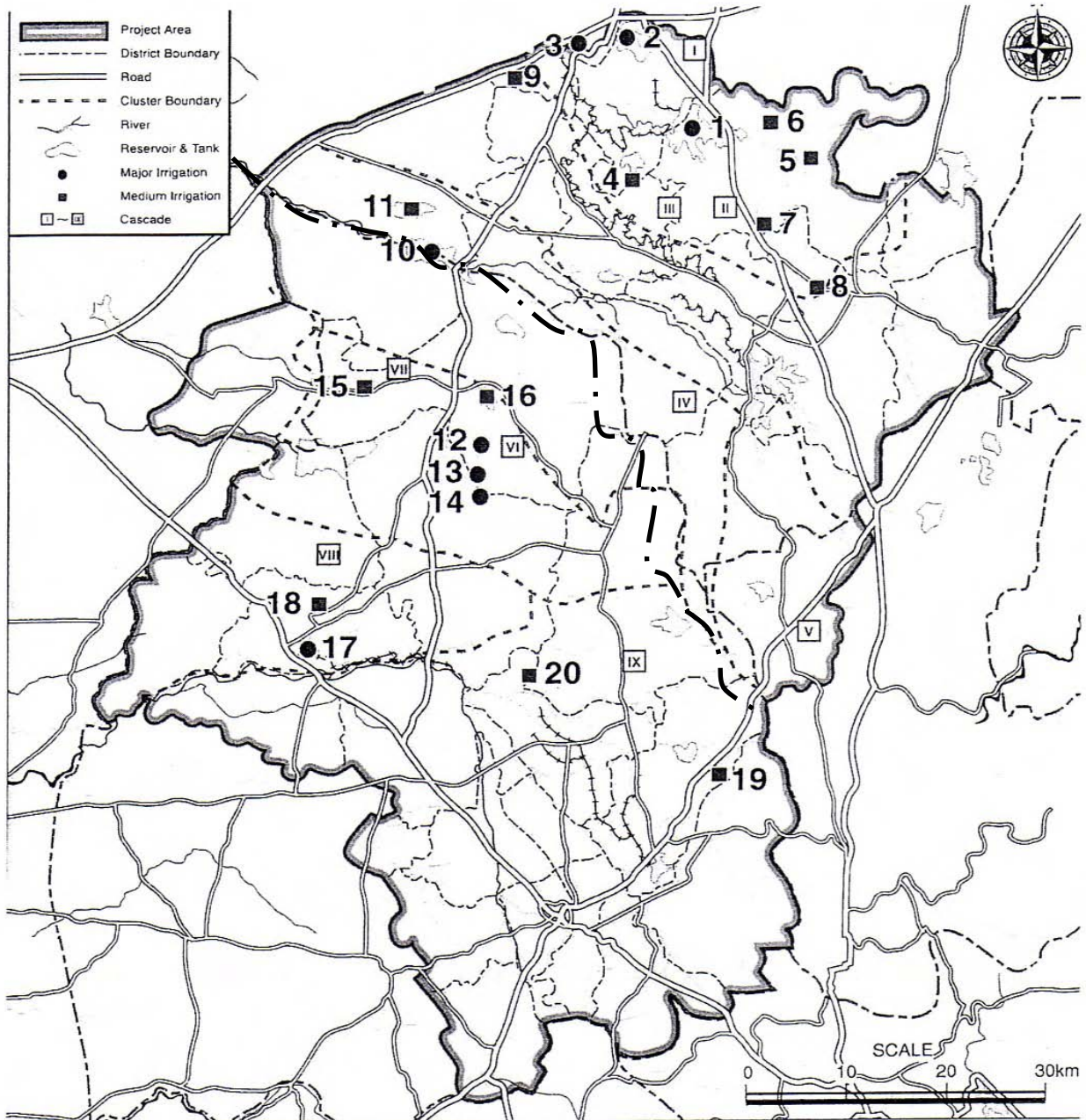
当事業で採用されている主要なアプローチは、(a) 農民の発意による総合的な収入向上活動、(b) プロジェクトサイクルの中での学びを通じた農民や地域住民のエンパワメント、の 2 つである。(a) においては、プロジェクトのファシリテーションによりコミュニティ行動計画 (コミュニティ・アクション・プラン : CAP) を策定し、その中で提案された収入増加のための活動を支援していく。活動は灌漑施設の改修、家畜飼育、淡水魚養殖、農業技術の向上、マーケティング、ローンの導入等を想定している。(b) は、(a) で提案された活動の内、中心的な活動となる灌漑施設の改修を、住民請負方式 (コミュニティ・コントラクト方式) で実施することにより、農民組織が啓蒙・強化され、改修終了後の維持管理が自主的にできる様な体制を構築する、という方法を採用している。

3. 対象地域

- ①クルネガラ及びアヌラダプラ県 : 大規模灌漑地区 8 カ所、中規模灌漑地区 12 カ所、小規模灌漑地区 80 カ所 (カスケードシステムの貯水池 9 カ所を含む)、合計 100 カ所
- ②北東部州 : 9 カ所

現在、クルネガラ県及びアヌラダプラ県において 12 の FO をパイロット FO として選定し、啓蒙活動、CAP ワークショップ、灌漑施設改修のための調査等を実施している。

PEACE事業地区位置図



○大規模灌漑地区(計20地区=大8地区+中12地区)

- | | | | |
|--------------------|------------------------|-------------------------|-------------------------|
| 1. Nachcaduwa (大) | 6. Uttimaduwa wewa (中) | 11. Angamuwawewa (中) | 16. Mahagalgamuwa (中) |
| 2. Nuwara wewa (大) | 7. Periyakulama (中) | 12. Palukadawela (大) | 17. Magallewewa (大) |
| 3. Tissa wewa (大) | 8. Maminiya Wewa (中) | 13. Attaragoda Wewa (大) | 18. Hulugalla wewa (中) |
| 4. Thuruwila (中) | 9. Mahabulankulama (中) | 14. Abakola Wewa (大) | 19. Meddeketyawewa (中) |
| 5. Eru wewa (中) | 10. Rajangana (大) | 15. Mahananiya wewa (中) | 20. Moragoda Anicut (中) |

○小規模灌漑地区(カスケード・グループ)(計80地区)

- I. 8地区、II. 8地区、III. 10地区、IV. 9地区、V. 10地区、VI. 11地区、VII. 10地区、VIII. 9地区、IX. 4地区.

関連研修・研究機関の詳細

ガルガムワ灌漑研修所 (ITI) 詳細

1. 研修担当職員数現状

表 1. 灌漑研修所の研修担当職員数現状

	定員数	在職者数	過不足
所長	01	01	0
副所長	01	01	0
チーフ灌漑エンジニア	02	01	-1
灌漑エンジニア	07	01	-6
地区アシスタント	01	01	0
合計	12	05	-7

(出所：ITI 提供資料)

2. 2006 年度研修計画・実績概要

(1) 灌漑局職員を対象とする研修

表 2. 灌漑研修所 2006 年研修実績 (灌漑局職員を対象とする研修)

対象者/ カテゴリー	コース名	日数	参加者数	実施状況*
エンジニア	会計・経営管理・監査に関する在職訓練	3	21 名× 2 コース	○
	Math CAD 応用	4	20	○
	Math CAD 応用上級	4	20	×
	リハビリテーション・デザイン	4	25	×
	ジュニアエンジニア対象マイナー・タンク、 頭首工デザインコース	4	25	×
エンジニアリング ・アシスタント	コンピューター・アプリケーション	5	20	○
	マイナー・タンク及び頭首工デザイン、 プレシヤライズト・システム	5	25	△
	土木工事における品質管理	4	25	○
	GIS 上級	4	25	×
	ジュニア専門実技試験	7	-	○
	シニア専門実技試験	7	-	×
	シニア専門実技試験	7	-	○
ダム安全	ポロンナルワ、アヌラダプラ、キャンディ、 クルネガラ、プッタラム地域対象ダム安全	3	30	○
	ゴール、ハンバントタ、モネラガラ、 アンパラ地域対象ダム安全	3	30	○
ドラフトマン	ドローイング・オフィス・マネージメント	3	25	○

	コンピューター・アプリケーションソフト	3	25	○
	コンピューター・アプリケーションソフト	5	25	○
ワーク・スーパーバイザー	土木工事における品質管理	3	25	○
	灌漑セクターの水管理	3	26	○
HFA&HA	GPS	3	30	○
訴状検査士	導入研修	3	30	△
マネジメント・アシスタント	倉庫管理	3	25	○
	事務所管理	5	25	○
	コンピューター・アプリケーションソフト	5	25	○
下級職員	在職訓練	3	30	×
運転手	車両保守管理・交通規則	3	20	○
デベロップメント・アシスタント	導入研修	5	25	○

(出所：ITI 提供資料)

*注：○：実施済み、△：実施予定、×：実施できず

(2) 灌漑局以外の組織を対象とする研修（実施例）

灌漑局以外の組織を対象とする研修として、以下の様なものが実施された。

表 3. 灌漑研修所 2006 年研修実施例（灌漑局以外の組織を対象とする研修）

対象者	コース名	日数
ペラデニヤ大学	サーベイ・キャンプ	12
北西部州エンジニアリング局	導入研修	5
JICA	問題分析ワークショップ	2
JICA	問題分析ワークショップ	2
マハヴェリ開発局	水管理	5

(出所：ITI 提供資料)

3. 灌漑研修所の教室、研修機材、宿泊・スポーツ施設等

灌漑研修所の教室、研修機材、宿泊・スポーツ施設等は以下の通りである。

(1) 教室

表 4. 灌漑研修所保有教室

設備	概要	数
講義室	エアコン付き、収容人数 35 名	1
	エアコン無し、収容人数 60 名	2
コンピュータ・センター	収容人数 50 名	2
地質検査室	収容人数 30 名	1
製図室	収容人数 50 名	1

(出所：ITI 提供資料)

(2) 研修機材

表 5. 灌漑研修所保有機材

機材名	台数
デスクトップ・コンピューター	15
ラップトップ・コンピューター	2
マルチメディア・プロジェクター	2
OHP	2
ホワイトボード	4
デジタルカメラ	2
ビデオカメラ	1
コピー機	2
スキャナー	1
プリンター	5
プロッター	1

(出所：ITI 提供資料)

(3) 宿泊・スポーツ施設等

宿泊・スポーツ施設等は以下の通りである。

表 6. 灌漑研修所宿泊・スポーツ施設等

個室 (2名用)	収容人数 51名
ドミトリー	収容人数 25名
女性用ホステル	収容人数 35名
屋内施設	バドミントン、卓球
野外施設	クリケット、サッカー、バレーボール用運動場
食堂 1	収容人数 40名
食堂 2	収容人数 60名

(出所：ITI 提供資料)

収穫後処理技術研究所（IPHT）詳細

1. 職員詳細

2005 年度在籍した職員数は以下の通りである。

表 7. 収穫後処理技術研究所 2005 年度職員

	職位	人数
1	所長	1
2	副所長	1
3	シニア研究員	3
4	総務部長	1
5	財務課長	1
6	内部監査課長	1
7	研究員	9
8	機械技師	5
9	普及員	2
10	総務部員	1
11	実験室テクニシャン	2
12	テクニカルオフィサー	2
13	テクニカル・アシスタント、フィールドオフィサー	10
14	タイピスト・事務	12
15	下級スタッフ（運転手、オペレーター、守衛等）	43
	合計	94

（出所：“Institute of Post Harvest Technology, Annual report 2005”, IPHT）

2. 研修実績

2005 年度の研修実績は以下の通りである。

表 8. 収穫後処理技術研究所 2005 年度研修実績

	コース名	対象	参加者数
1	ポストハーベスト技術、パーボイルド・ライス製法、果物の加工と加工品	農民、農家の女性、FO リーダー	531
2	パーボイルド・ライス製法、米・その他穀物加工、果物の加工と加工品、乾燥野菜製法	プロジェクト受益者、小規模企業家	137
3	米・その他穀物加工	中小穀物加工業者	27
4	ポストハーベスト技術、乾燥果物・野菜製法、米・その他穀物加工、離乳食製法	生協・NGO 等の職員	156
5	穀類・果物・野菜のポストハーベスト技術、米・その他穀物加工	農業関係の大学、技術短大、専門学校の生徒	232
6	稲の品質管理と貯蔵技術、政府によるバッファーストックの維持	州政府職員、農業サービス局郡職員、生協関係者	729
	合計		1,812

（出所：“Institute of Post Harvest Technology, Annual report 2005”, IPHT）

上記の研修に加え、宿泊を伴わない訓練、フィールドデモンストレーション、展示会等を実施した（テーマは上表の研修コース名とほぼ同様）。

マハイルパッラマ在職職員研修所 (ISTI-MI) 詳細

1. 職員数詳細

2006年12月現在の職員の詳細は以下の通りである。

表 9. マハイルパッラマ在職職員研修所職員

	職位	勤務状況
1	アシスタント・ディレクター (所長)	休職中。IFAD のプロジェクトに従事
2	アシスタント・ディレクター代理 兼 専技 (SMS: Subject Matter Specialist)	在職
3	農業モニタリング・オフィサー 1	在職
4	農業モニタリング・オフィサー 2	休職中、JBIC の PEACE プロジェクトに従事。
5	プログラム・アシスタント 1	在職
6	プログラム・アシスタント 2	在職

2. 研修実績

研修実績の例として 2006 年第 3 期の実績を下表に挙げる。

表 10. マハイルパッラマ在職職員研修所 2006 年第 2 期 (2006 年 4 月から 6 月) の研修実施状況

	コース名	対象	回数	日数	参加者数	延べ人数
1	フィールド・スタディツアー	トレーニング・オフィサー (在職職員研修所)	1	2	11	22
2	フィールド・トレーニング (タマネギ)	農民エージェント (ウエーウェルデニヤ、アンティヤガラ、イパローガマ)	3	1	81	81
3	畑作物、野菜の種栽培	デベロップメントアシスタント	1	2	29	58
4	フィールド・トレーニング (果物と野菜)	農民エージェント (ノツヤカマ)	1	1	38	38
5	地質悪化についての研修	デベロップメントアシスタント	1	2	33	66
6	きのこ栽培	農民エージェント (アヌターダプテ)	1	2	43	43
7	養蜂	農民エージェント (カレンヤ)	1	1	41	41
8	学生のための農業プログラム	学生	2	1	107	107
9	挿し木と苗床経営	農民エージェント (マウエリ H)	1	1	14	14
10	フィールド・トレーニング (野菜栽培と農業用井戸)	農民エージェント (マハワナワラ)	1	1	46	46
11	指導者養成講座	農民エージェント (NGO)	1	3	35	115
12	フィールド・トレーニング (農業用井戸を使った栽培パターン)	農民エージェント (ムリヤカワラ)	1	1	23	23
13	フィールド・トレーニング (畑作)	農民エージェント (ワハトウエリ)	1	1	26	26
14	水管理	農民エージェント (FAO ホーテウエリ)	1	2	21	42
15	水管理	西部州灌漑局職員	1	4	20	80
16	水草の生物学的除去	職員 (FCRDI)	1	1	70	70
17	保護農園の設立	デベロップメントアシスタント	1	1	51	51

18	フィールドトレーニング（その他作物）	農民エージェント（ケキラー）	1	1	22	22
19	果物の苗の認定	苗認定担当職員	1	2	38	76
20	土地と水の保護と保護農園の設立	デベロップメントアシスタント	1	5	58	290
21	農業研修	農民リーダー（NGO）	1	5	15	75
22	その他作物の新技術	デベロップメントアシスタント	1	5	23	115
	合計		25	45	845	1501

（出所：マハイルパッラマ在職職員研修所提供資料）

農業機械化研修所（FMTC）詳細

研修実績（2006年度）

1. 対象者別研修実績（2006年度）

2006年度の対象者別、コース別の研修実績は以下の通りである。

表 11. 農業機械化研修所 2006年度研修実績 対象者別

対象	研修コース数		Man days	
	計画	実施	計画	実施
農業局、州農業局職員	10	24	720	615
その他職員	4	6	200	256
農民	23	53	2,000	2,622
学生	26	29	1,525	3,782
ワークショップ	5	3	350	169
フィールド訪問	1	1	25	10
合計	69	116	4,820	7,454

（出所：農業機械化研修所提供資料）

2. コース別研修数（2006年度）

表 12. 農業機械化研修所 2006年研修実績 コース別

	保守管理									灌漑		合計
	農業機械	農業器具	2輪トラクター	2/4輪トラクター	4輪トラクター	水ポンプ	スプレー	スプレーと水ポンプ	コンバインハーベスタ	太陽熱ドリップ灌漑	マイクロ灌漑	
第1期	2	1	8	2	1	9	3	0	4	1	9	40
第2期	2	0	3	0	5	7	5	0	1	0	7	30
第3期	4	0	4	2	7	2	4	1	0	0	2	26
第4期	4	0	2	0	3	0	1	1	0	0	2	13
合計	12	1	17	4	16	18	13	2	5	1	20	109

（出所：農業機械化研修所提供資料）

FAO-SPFS 事業概要

1. 経緯

スリランカ国における SPFS フェーズ I は、北西部州クルネガラ県において 1999 年から 2000 年の間に実施されたパイロット事業で得られた経験を踏まえて形成された。事業実施にかかるスリランカ国政府との間の協定は 2001 年 10 月 31 日に締結された。本事業の資金は、日本国から 1.59 百万 US\$ が拠出されるとともに、スリランカ国政府から 0.85 百万 US\$ の C/P ファンドが充てられる。本事業は、2002 年 3 月に公式的に開始された。

事業は、北東部紛争地域を除く 17 県における 17 カ所のプロジェクト・サイトで実施されている。

本事業の主要な成果は以下の通り。

- (1) 活力のある、自立した農民組織の形成
- (2) 村落レベルの農業開発における中央政府と地方政府の農業支援の一体化
- (3) 新しい技術及び改良技術の採用を促進するためのクレジット・メカニズムの導入
- (4) 村落共同体の栄養改善及び所得の安定化を図るため、作物生産の強化、多様化、畜産及び水産業の促進を通じた生産性向上、所得向上

今後の課題は以下の通り。

これまでのところ、村落レベルにおいて事業は良い成果を収めているが、今後、事業成果を他地区に拡大していくためには、スリランカ国政府による本事業のオーナーシップを更に強めてもらう必要がある。

2. 事業コンセプト

本事業は、スリランカ国農村部における食料安全保障に係る一連の課題を克服するために計画された。農村部における一連の課題とは、耕種作物、畜産、水産における生産性が低いこと、タンパク質を多く含んだ食料の供給が不十分なこと、農業開発プログラムへの農民参加が無いこと、収穫後ロスが大きいこと、作物出荷の季節的な集中によって農家受け取り価格が低いことである。

本事業は、これらの課題に対して、水資源のより効率的な使用、作物の多様化、農民組織の強化、収穫後技術の改善等によって、克服を図る。そのため、地方州及び関係機関の現場職員との幅広い連携作業による農民支援を行うものであり、スリランカ国政府の政策にも合致している。

問題の特定及び解決という一連の過程において農民参加を改善することは、本事業の成功にとって最も重要な要素である。スリランカ国には、農民組織は存在してきたが、農民組織の食料安全保障への貢献は限られてきた。本事業は、参加型手法により、農民組織の活動の低さの背景にある基本的課題を特定する。「参加型の地域評価」(Participatory Rural

Appraisal : PRA) と課題分析の結果に基づいて、以下の要素に対応するための「共同体行動計画」(Community Action Plan : CAP) が作成される。

- (1) 農民組織の強化のための組織面及び技術面での共同体能力・機能の改善
- (2) 生産性向上及び所得向上のための水田及び畑地における作物栽培の強化及び多様化
- (3) 安定的な所得の確保及び栄養改善のための畜産の導入
- (4) 地域の栄養状態の改善、特に農地を所有しない労働者に対する所得・労働機会確保のための内水面漁業の導入
- (5) 所得向上のための市場志向の生産プログラムの促進

3. 事業の実施状況

3-1 意識醸成及び問題分析

共同体及びステークホルダーの中での意識を醸成するため、各プロジェクト・サイトで、事業開始ワークショップ及び意識化会合が実施された。

現在の物理面、社会面、経済面、組織面における状況を把握するため、各現場で、参加型地域分析 (PRA) が実施された。

これらの調査は、各プロジェクト・サイトにおける主要な問題点、可能性、事業により介入すべき重点分野を理解する上で役立った。

社会面の要因の内、意思決定において共同体 (メンバー) の参加が低いことが、全ての農業システムの低迷の主要要因の1つであることが特定された。

水不足、資本不足、高い生産コスト、低い普及サービス、農産物価格の低下、貧しい販売方法、品質の悪い種子・投入財・品種、が問題点として特定された。

3-2 農民組織の強化

農民組織は強化され、村落共同体及び現場職員のリーダー・シップ、計画作成、財務管理、意思決定に関する能力は改善された。また、共同体メンバー及び現場職員の能力を向上させるための活動が実施され、問題点の分析、計画作成、運営、現実的な解決策の開発における自立性が高められた。

農民組織のメンバー数は事業活動を通じて増加した。メンバーのうち24%が女性である。

農民組織の中に、作物生産、畜産、内水面漁業、その他関係分野の活動を促進するためのサブ・グループができてきた。これらのサブ・グループは、草の根レベルでの自己誘発型参加グループとしての機能を発揮し、貧困家計が経済基盤を強化する上で役立つと期待される。

各プロジェクト・サイトでは、農民リーダー達と現場職員からなる現場実施チーム (Field Implementing Team : FIT) が設置され、毎月、事業の進捗状況を確認し、次回までの活動計画を話し合っている。PMU はオブザーバーとして参加し、アドバイスしている。

各プロジェクト・サイトでは、共同体開発オフィサーにより、質問表形式で、毎月の活

動状況がモニターされている。

事業全体で、2005年までに、1,701人（女性611人、男性996人）に対して、共同体強化、農業、畜産、内水面漁業、付加価値に関する研修が行われた。

2カ所のサイトで女性銀行が設立され、女性中心の小規模農家グループが設立され、グループ貯金プログラムが始まった。

プロジェクト・サイト間で農家訪問による情報交換が行われた。

4カ所のサイトでは、近隣の村に活動が広がった。

投入材の入手、灌漑ポンプ、薬剤噴霧器、マイクロ灌漑に必要なマイクロ・クレジットが行われ、返済は概ね順調である。

3-3 リボルビング・ファンドの運用

各農民組織により、リボルビング・ファンドが創設され、農民に対して、作付け資材、マイクロ灌漑システム、小規模畜産ユニット、倉庫を購入するため、短期・長期の資金支援が提供された。2005年10月までに、事業からリボルビング・ファンドへの資金提供額は14百万Rs.（1カ所当たり平均80万Rs.）に達した。

このファンドは、コスト・リカバリー・ベースで提供される様に指導され、ある農業者に貸した場合に、その農業者からの返済が行われた場合に、次の農業者に資金提供する様にしたり、資金提供額を増加させたりした。

3-4 作物多様化及び水管理

共同体は、プログラムの計画について一層組織的になり、現場職員と一緒に、詳細な期別の計画を準備するようになった。

水田における、適切な時期での作付け、改良品種（3.5カ月種）の導入、品質の良い種子の使用、代掻き方法の改善、マイクロ・クレジット器具の使用、農薬を削減するための病害虫管理、適切な肥料、除草、水管理等の適切な技術の導入によって、生産性が向上した。

作物刈り取り調査によって、いくつかのサイトで、コメの単収が増加した。中には、1ha当たり130~150ブッシェル（2.6~3.0t）の収穫を上げる農家もいる。Thammennawaサイトでは、新しい技術の導入によって1ha当たり8~9tの単収を上げる農家もいる。

ほとんど全てのサイトで、稲の種子生産プログラムが導入され、サイト内の種子の必要量はこれらのプログラムによる生産で賄われた。種子の生産農家は、稲の種子を1kg当たり25~28Rs.で販売した。これは消費のコメを12~15Rs.で販売するのに比べ高い額であった。

灌漑施設のリハビリに対しても事業資金が提供された。農民組織は、灌漑局及び農業開発局の監督の下、改修工事に直接参加した。

土壌保全・水分保持手法の採用、マイクロ灌漑システムの導入、灌漑用水ロスの削減、地下水を利用した畑地での果物・野菜栽培等が、各サイトで実施された。

いくつかのサイトで、農業用井戸の建設や揚水ポンプ施設等に対して資金が提供された。水不足が深刻な地域では、ヤラ期に水田で畑作物の栽培が実施された。水田における作物多様化をした農家は、稲作に比べ、1ha 当たり 7,500～25,000Rs.の利益増加を得た。

3-5 畜産の改善

事業実施前には、全てのサイトで、畜産業は農家の主要な構成要素では無かった。畜産からの収入は小さく、牛乳の生産・販売は集荷・販売施設の欠如により実施されていなかった。

畜産に関心のある共同体は、サブ・グループを設立し、定期的な普及サービスを受けている。集荷・販売システムが、畜産グループによって組織され、農民の間で畜産への関心が高まった。あるサイトでは、月当たりの牛乳生産による収益が 100,000Rs.を超えた。

高収穫の新しい牧草 (CO3) が導入され、農民の間に普及した。

人口受精により、子牛が生まれた農家もある。多数の酪農、山羊、養鶏ユニットが形成された。畜産研修も 4 サイトで実施された。

リボルビング・ファンドを活用して購入した牛及び山羊の頭数は、それぞれ、134 頭、133 頭となった。

3-6 内水面漁業の開発 (省略)

3-7 収穫後技術、加工、販売

Kadahathawewa 地区では、米加工施設の改善が実施された。この施設改善により、農民組織は、砂・石その他の不純物が無い良質の精米を生産するようになった。約 20 戸の農家が共同精米に参加した。農民組織は、農家から 800,000Rs.の玄米を購入した。購入資金は政府から提供された。

全てのサイトで、農民達は農産物を共同出荷するようになり、販売交渉力を高めた。

牛乳生産グループは、共同で牛乳を集荷し、加工業者の集荷センターに共同販売した。また、共同体内での牛乳消費も増加した。

付加価値、収穫後ロスの減少に関する多数の農家研修が実施された。

小規模なコメ加工ユニットが幾つかのサイトで開始され、女性の所得向上につながった。

4. 実施体制

(1) 中央政府レベル

国家レベルでは、農業・畜産省が事業調整を担当し、州レベルでは、州政府が事業の実施活動を担当する。

ナショナル・スティアリング・コミッティ (NSC) は、農業・畜産省次官により主催され、事業に対する指導を行う。同次官は、事業コーディネーターを任命する。

事業コーディネーターは、チーム・リーダー（兼農業）、水管理、畜産、内水面漁業の専門家からなるプロジェクト・マネジメント・ユニット（PMU）を形成し、専門的アドバイス、研修、技術支援、事業評価を行う。

(2) 現場レベル

各プロジェクト・サイトでは、現場実施チーム（Field Implementation Team : FIT）が設置される。構成メンバーは、農民組織代表達（4～5人）、GN、Divisional Officer (DAD)、AI (DOA)、ARPA (DAD) の約10人。

FITは、毎月会合を開き、事業計画のモニター（前月の活動報告、今月の活動予定の決定）、資金調整等を行っている。

事業コーディネーターは、FITを巡回指導している。

5. Kadhathawewa 地区の事例

5-1 地区概要

当地区は、クルネガラ県内にあり、Kadhathawewa という小規模タンクを主要水源とする3集落からなる地区である。各集落は、更にそれぞれ小規模タンクを持っている。

農民組織は、1992年に17戸の農家が参加して設立された。当時は組織の活動は不活発だった。1995年に灌漑施設のリハビリ事業があり、メンバーが増加したが、2000年頃には再び不活発になった。

農民組織の加入者数は、SPFS事業が始まった2003年3月時点で78人だったが、2006年4月時点で160人に増加している。また、メンバーの内39人（約25%）が女性。

主な作物は、コメと畑作であったが、畜産も導入された。水田面積は、マハ期で150エーカー、ヤラ期で125エーカー。

5-2 活動状況

この地区では、農民リーダー達が若い（30歳台）ことが特徴的といえる。彼らは専業または兼業農家である。また、各分野のサブ・グループ・コミッティが設置されている点も特徴的である。サブ・グループ・コミッティは9つあり、稲作、IPM、畑作・農業井戸、畜産、内水面漁業、普及・研修、コメ加工、投入材、栄養からなる。

農家は、サブ・グループ・コミッティに参加するために、コミッティに対してシェア（株式の様なもの）を拠出する。例えば、コメ加工・コミッティの場合、138戸の農家がシェア（1株当たり500Rs.）を拠出した。そして、コミッティ毎に利益があれば、利益は参加農家に配当される。

本地区におけるリボルビング・ファンドの運用額は2百万Rs.にも達している。農民組織の活動が不活発な集落（アヌラダプラ）での農民組織のファンド額が10万Rs.であるのと比べると、当地区のファンド規模は相当大きい。この様な大規模なファンド運用は、リー

リーダー達の管理能力、相互の信頼関係、村民意識の高さが無いとできない。

教育・研修コミッティは、研修プログラムの編成、地域内・農民組織内にいるリソース・パーソン、または外部の講師による研修を実施している。リソース・パーソンが農民組織内部にいること自体に、当地区の農民資質の高さが伺える。しかし、事業実施前には、組織内での人材活用などは無かったのであり、こうした人材発掘・活用も共同体育成事業の成果といえよう。

この様に農民組織活動が活性化された理由を聞いたところ、農民リーダー達は、共同体育成に関する各種研修及びその実践を挙げた。まず、農民の共同体への参加事業のコンセプト、共同体アクション・プラン作成、リーダー・シップ、帳簿管理等、意識化研修、共同体運営・管理研修が基本的に重要であるとの認識である。

関係機関の現場職員によれば、DO、AI等が、研修の一部を行っており、自分達で研修指導できない部分は、遠方の研修機関に農民達を行かせて研修を受けさせている。

最も、基本的な農家研修として、家計簿をつけることを指導した。

ここでは、農民達は、毎朝、5分間（幹部達は10分間）、自分達が農民組織にいかに関与できるのか考える様になっている。この様な意識面の持続行動が、組織の活性化・一体化を支えている。

本地区は、わずか3年間に、農民組織開発、農民への資金提供、畜産の新規導入、コメ加工の面で目覚ましい進展を遂げた。その成功の要因は何であろうか。どうして、農民組織内に強力な信頼関係ができてきているのか。事業実施チーム（PIT）の様子をみると、農家リーダー達と現場職員達との間のチームワークが、初期の意識化プログラムと並び、共同体育成を支えている重要な要因ではないかと考えられる。

○子牛購入に対する資金提供

本地区では、23戸の耕種農家が、新たに乳牛の飼育を始めた。乳牛の導入は、農家の栄養改善、所得向上、耕種への有機堆肥の投入による生産投入コスト削減という3つの効果が期待できる。

例えば、ジャージー種の子牛購入価格は、1頭当たり35,000Rs.。1エーカーの水田に対する肥料を牛の糞を利用した有機堆肥で賄うためには、牛2頭で十分である。購入資金は、農民組織からのリボルビング・ファンドである（水牛の購入価格は1頭当たり7,000Rs.と高価であるため、ジャージー系を導入した模様である）。

農民組織は、共同で牛乳の集荷を行う様になり、現在、月80万Rs.の売り上げがある。業者が村まで買い取りに来ている。農家は、リボルビング・ファンドの返済を順調に行っている。

牛の健康管理に関しては、畜産指導員の巡回指導を受けている。人口受精により子牛も産まれている。

○内水面漁業

内水面漁業については、小規模タンクの中で試みたが、収穫物の配分で、農民組織メンバーとタンクの周辺住民との間で、収穫物に関する権利及び配分等で調整がつかないなど、うまくいっていない。

5-3 毎月の事業モニターリング・レポート

(1) FO

- ・組合員数、打ち合わせ日程

(2) リボルビング・ファンド（単位：Rs.）

- ・農業、畜産、内水面漁業、農業井戸、コメ加工の 5 つの分野について、資金拠出額（SPFS からの拠出、FO からの拠出）
 - ・農業 172,000
 - ・畜産 1,163,000
 - ・内水面 101,169
 - ・農業井戸 135,759 +617
 - ・コメ加工 600,000 +3,606
 - ・Total 2,171,928

(3) 作物生産・家庭菜園開発

- ・作物、面積、農家戸数、新技術導入割合、単収（最大、最小、平均）、平均所得

(4) 水管理

(5) 畜産

(6) 内水面漁業

(7) グループ貯蓄

(8) マイクロ・クレジット、リボルビング・ファンド

- ・氏名、ローン額、（農家当たりローン額は、月額：100～5,000Rs.程度）

(9) その他事項

- ・コメ加工ユニットへの参加農家

○作物生産状況 (Paddy)

	Ext. Ac	No. Adopt of new tech.					Yield(kg/ac)			Income Rs.
		farm			%	Max.	Min.	Ave.		
2004/5 Maha	125	75	45	60	02	20	2,850	1,845	1,948	30,186
2005 Yala	150	90	75	75	03	23	2,583	1,640	1,743	27,008
2005/6 Maha	150	90	90	75	02	15	2,665	1,640	2,358	38,898
2006 Yala	125	90								

Table. Farm Holding by Crop and Extent : Yala 2006

Crop	Rajanagana (Sri Udara)				Nachchaduwa (Isuru)				Thuruwila (Mahanama)			
	No. of Operators	Extent (ha)	(%)	Average Holdind (ha)	No. of Operators	Extent (ha)	(%)	Average Holdind (ha)	No. of Operators	Extent (ha)	(%)	Average Holdind (ha)
Paddy	352	160.2	88.9	0.45	105	87.25	72.8	0.83	403	126.93	92.1	0.31
Perennial Crops	26	7.9	4.4	0.3	5	1.9	1.6	0.38	4	0.85	0.6	0.21
Coconut	4	1	0.5	0.25	1	0.4	0.3	0.4	1	0.6	0.4	0.6
Banana	24	6.2	3.4	0.26	4	1.5	1.3	0.38	3	0.25	0.2	0.08
Papaya	2	0.7	0.4	0.35	0	0	0	0	0	0	0	0
Vegetable/OFC	54	9.98	5.5	0.18	31	19.5	16.3	0.63	41	7.23	5.2	0.18
Vegetable	17	3.25	1.8	0.19	28	15	12.5	0.53	7	0.85	0.6	0.12
OFC	30	3.48	1.9	0.12	5	4.5	3.8	0.9	31	5.58	4	0.18
Mixed Crops	13	3.25	1.8	0.25	0	0	0	0	7	0.8	0.6	0.11
Uncultivated (Not Avairable)		3.92	2.1			7.3	6.1			2.75	2	
Total	380	182	100	0.48	124	119.9	100	0.97	448	137.76	100	0.31

Source : Land Tenure and Crop Census

Basic data for 5 candidates

Scheme Name	Kimbulwanaoya	Mahakanadarawa	Kadurugasdamana	Kawarakkulama	Ralapanawa
District	Kurunegala	Anuradhapura	Anuradhapura	Anuradhapura	Anuradhapura
DS Division	Ibbagamuwa	Rambewa, Mihintale	Rambewa	Nuwargumdalatha East	Nochchiyagama
GN Division, No. Name	17	16	116Kadurugasdamana	275 Kawarakkulama	338 Ralapanawa
ASC	Melsiripura/Ibbagamuwa /Kumbukgete	Rambewa, Mihintale	Rambewa/Mihintale	Anuradhapura	Nochchiyagama
Distance from Anuradhapura		20km	20km	8km	20km
Background of Settlement	Tank restored in 1957. Settled from Kurunegara District.	Restored 1957,settled from 1960, combination of settlements and traditinal tanks.	Traditional,Sttked in 1850',System restored in 1979	Traditional, 1940 became a colony.	Traditional,
Total extent (ha) (Actual)	Irrigable:809ha	Irrigable:6,300ac (Crown:5,160ac,Private: 1,069ac) and upland:3,364ac	Irrigable:264 (actual:180) ac, Upland:60ac	Irrigable:210ac / Upland : 500ac	Irrigable:250ac/Upland:50ac
Number of families	725	2,223	80	135	160
Number of FO members			44	97	
Number of Fos	15	16	1	1	
Cropping Intensity (2001-2006)	1.85	0.74	1	1.43	0.6
Cropping Pattern(Maha/Yala)	Paddy/Paddy	Paddy/Paddy (Partly)	Paddy/Paddy (Partly)	Paddy/Paddy	Partly irrigated every season
Extent of OFC/Vegetables	Little, 5% in Yala	5% in Yala	little	Little	little
Schem Plan	Avairable	Avairable	Sketch avairable	Sketch avairable	Sketch avairable
Issue Tree	Avairable	Avairable	No	Yes	No
Blocking Out Plan	Avairable	Avairable	No	No	No
Water Distribution Plan	Avairable	Avairable	No		
Fee Collection					
Membership Fee	Rs.100/family		Yes		
Annual Membership Fee					Rs.100/family
Fee for Water Master	0.5b/ac/season		No	No	No
Fee for O&M of D&F canals	No		No	No	No
Fee Collection Rate	80% or more				

Situation of FO	Active	Avarage	Avarage	Avarage	Avarage
Scheme Name	Kimbulwanaoya	Mahakanadarawa	Kadurugasdamana	Kawarakulama	Ralapanawa
Rehabilitation needs					
Main system	Few	Many	Tank Band, Spill Discharge-c	No	Tank band, Spill
D&F canals	Few	Many	80m (LL), 30m (HL)	Farm intakes (23 Nos.)	Farm intakes(10 Nos)
Rehabilitation Project,/Year	ADB, Late1980'	1980,MIRP	1979	ISRP,2002	1978
PMC					
How often	Monthly	Monthly	By-monthly	By-monthly	By-monthly
INMAS/Wapphula	Wapphula	INMAS	Wapphula	Wapphula	Wapphula
Water Management					
Involvement of FO	Good		Chairman (=WM)	Chairman (=WM)	Chairman(=WM)
Sub-Committee	Water management				
Customes					
Bethoma	No	Yes (upper tracts)	No	No	No
Shuramadana	Yes	Yes	Yes	Yes	Yes
Panga	Yes	Yes	Yes	Yes	Yes
Big Land Owners (5ac more)	Few	Few	Few	1 big owner (40ac)	Few
Agricultural Income from					
Paddy	Main	Main	Maha	Main	Main
OFC/Vegetables	Little	Yala	Apr.-Jun.	maha/yala	maha/yala
Livestock	Some farmers have cattles	Some farmers have cattles.	6 families:50 buffalows	Many farmers have cattles	Many farmers have 1-2 cattles
Off-farm income from					
Labors of Non agriculture		carpenter	carpenter, repair	Town labor, army	Garment factory, army
Living Condition (Electric/water)	average	avarage	No electricity	average	avarage
			Water quality no good		

Administration Section

Scheme	DS Division	GN Divison	FO	ASC
Nachchaduwa	Nachchadoowa	Shrawasthipura Kuda Nelubewa Amane Maha Nelubewa Divulwewa Hidogama Pawakkulama Kaluvila North Madawalagama Nachchadoowa Nachchadoowa New Town Palayakulama Suhadagama Kaluarachchiyagama Pahalawewa	Shrawasthipura-Ruwanweli Kuda Helawewa Ketasamagi Parakkrama Ranketa Hidogama-Mahasen Ranamaura Isuru FO Madawalagama-Unaited D Cannel Ruwanweli Al-Asaya Wijaya Tissa Gamunu	Sharwasthipura
		Thuruvila	Thuruvila Mahasen	
Rajangana	Rajanganaya	Track 13,18 Track 16,17 Veheragala yaya 12 Track 09, 10 Track 11 Track 15 Gamunupura Track 07 Thumbullegama Track 3 Track 4 Tissapura Sirimapura Angamuwa Panthiyah	Ekamutu (Track 13) Sri Vijaya (Track 18) Tharuna Govi (Track 16) Saraketha (Track 17) Saliya Raja Mahasen Kethsri Ranketha Jayamaga Ruhuna Jaya Sri Eksath Gamunu Parakum Saliyagama Tissapura Prdeepaloka Arunalu Vijaya	Right Bank
	Giribawa	Jayanthipura Bambare Sandagama Perakumpura Solepura Halmillagala Thimbiripokuna Serasumgala Orugala Weerapokuna Hasthirajapura Thammitigama Damsopura Solewewa Pathane wewa Abhayapura Sangabopura Gurulupitigama Warawewa Pothana Pahala Giribawa Ihala Giribawa Weragala	Samagi D. S Senanayaka Gamunu Eksath Perakum Nava Jeewana Suwarana Bumi Jayanthipura Sri Udara Sandagala Suhada Veerapura Saliyawewa Ranketha	Left Bank
	Karuwalagaswewa	Yaya 6 Yaya 7		Left Bank Puliyamkulama

Administration Section

Scheme	DS Division	GN Division	FO	ASC	
Magallawewa(R.B.E)	Nikaweratiya	Budumuttawa Diyagama Hathigammana Hewenpelessa	Budumuttawa	Nikaweratiya	
		Katagamuwa Kumbukwewa Elawaka	Katagamuwa		
		Danduwwa Pahala Galapitiyaga	Danduwwa		
		Nikaweratiya-South	Medela		
		Viharagama	Balagollagama		
		Magallegama	Magallegama		
		Millagoda	Ibbawala		
		Tharanagolla	Tharanagolla		
		Heelogama	Heelogama		
		Kebellewa	Kebellewa		
		Othota Divullegoda Divullegoda	Konettegama-Gemunu (Un Re)		
		Halmillewa	Halmillewa (Un Re)		
		Kirindigalla	Kirindigalla-Parakum (Un Re)		Diullagoda
		Rassnayakapura	Divullewa		Divullewa
	Kimbulwana-Oya	Ibbagamuwa	Thihawa	Marasnawa	Ibbagamuwa
Boraluwa			D2		
Thihawa			Mailamada		
Thihawa			Lewgolla Ekamutu		
Thihawa			Thihawa		
Thihawa			Dhasen D1		
Malsiripura		Ibbagamuwa	Unit-03	No.1	
			Unit-03	No.2	
			Unit-03,Katupotha	No.3-Eksath	
			Nelliya	No.4-Nelliya	
			Katupotha,Nelliya	No.5	
			Welgala	No.6	
			Welgala,Walipitiya	Rathmale	
			Welgala	N0.7	
Welgala	No.8-Parakum				

Scheme : Kimbulwanaoaya

Bank No.	Name of FO	GN Division	ASC	No. of D Canal	No. of Off Take	No. of F Canal	No. of FO committee member	No. of FO members	No. of Farm families	Ext. of Paddy(Ac)	Ext. of Upland(Ac)	Total Ext.(Ac)	Reference
LB	Marasnawa	435, Lenawa	Ibbagamuwa/Malsiripura	-	8	8	7	53	30	102	22	124	
	D2	431,433	Kubukgate	-			4	150	143	160		160	JIID Study
	Mailamada	435	Ibbagamuwa	-			7	80		106		106	
	Lewgolla Ekamutu	435	Ibbagamuwa	-		3	9	36	25	53		53	
	Thihawa	435	Ibbagamuwa	-								0	
	Dhasen D1	435	Ibbagamuwa	-	8	8						0	
												0	
RB	No.1	425	Malsiripura			3	9	56	200	140	90	130	
	No.2	425	Malsiripura	1	9	8	9	142	142	110	55	165	JIID Study
	No.3-Eksath	425,426	Malsiripura	1	10	9	13	105	150	160	22	182	
	No.4-Nelliya	427	Malsiripura	1	3	2		80	160	240	50	290	
	No.5	426,427	Malsiripura	-	2	2	12	65		120	120	240	
	No.6	424	Malsiripura	-	6	6	9	122	81	45		45	
	Rathmale	402,424	Malsiripura	1			9	59	59	63		63	
	No.7	424	Malsiripura	1	7	6	10	72	200	135	65	200	
	No.8-Parakum	424	Malsiripura	-	6	6	9	60	110	108	54	162	
Total		15		5	59	61	107	1080	1300	1542	478	1920	

Note: GN Division : 402:Walipitiya, 423:Aluthkolaniya, 424:Welgala, 425:Unit03, 426:Katupotha, 427:Nelliya, 435:Thihawa, 431:Boraluwa, 433: Nithhawela.

Evaluation Kimbulwana Scheme

Name of FO	Membership		Leadership Selection		Fund raising				Meetings				OFC		Remarks	
	Total	Active	Young	Old	Membership along	Contracts	Bank balance	Financial Management	Use of funds	Frequency of Farmer meetings	Farmer participation	Participation of line agencies	AGM	Yala Ac		Maha Ac
No 1	56	100%	Young		Rs 10.00 all pay	small scale Con maintena cont		P/S/T	cont/main	every month poyaday	75%	Ku/GN/EA/WS	2006 100%	10		C/O/B/T/L
NO 2	142	100%		Old	Rs 10.00 all pay	small scale Con maintena cont	36000	P/S/T	cont/main	every month poyaday	60%	Ku/GN/EA/WS	2006 100%	8	5	C/O/B/T/L
No 3	105	50%		Old	RS 10.00 Less pay	No	30000	P/S/T	Fencing	Every 3 months	50%	EA/Ku/GN	2006	4		C/Ca/M/
No 4	80	100%		Old	Rs 10.00 all pay	maintena cont	31108	P/S/T	mainten Labour Rs 4000.00 per year	Every 3 months	100%	DO/Ku/GN	2006	16	13	W/Ca/On/ 6 acs Banana
No 5	65	60%		Old	Rs 30.00 Less pay	small scale	54500	P/S/T		Every other month no active participat	bad		No meetings last two years	5		C/O
No 7	72	100%		Old	Rs 100.00 New members No other collection	No	19000	Committee		2 meetings per year	bad		every other year	2		C
Milamada	80	30%		Old	Rs 20.00 No other collection	small scale Con maintena cont	100000	P/S/T	Tsunami Defence F	2 meetings per year Every month committee meeting	100%	AI/Ku/DO/EA/GN/WS	2006	10		C/O/W/WH

P:President
S: Secretary
T: Treasurer

Ku: Kupanisa
GN: Grama Niladarie
EA: Engineering Asst
WS: Worksupervisor
DO: DAD Divisional Officer
AI: DOA Agriculture Insp

C: Chillies
O: Onion
B: Beat
L: Ladies fingers
Ca: Capsicum
M: Mekaral
W: Wattakka
WH: Bada Irigu

Organization Chart of JICA Project

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