Ⅱ.実施協議

実施協議結果

事前評価調査団帰国後、R/D の署名・交換に先立ち JICA カンボジア事務所及び MOWRAM との間で最終協議を行い、プロジェクトの基本計画の内、上位目標、プロジェクト目標、成果について一部修正することで合意した。修正後の基本計画は以下の通り。

○上位目標

育成された MOWRAM 及び PDWRAM の技術者によって実施された灌漑事業地区において、 効率的に水資源が利用されることにより農業生産が安定し、農家の生計が改善される。

○プロジェクト目標

- 1. 水資源気象省(MOWRAM)及び同省地方事務所(PDWRAM)の技術力が向上する。
- 2. パイロットサイトにおける活動に参加した農民が自主的に末端水路の水管理を実施できるようになる。

○成果

成果1:TSC において、

成果1-1:研修システムを確立する。

活動 1-1-1: カリキュラムを作成する。

1-1-2:マテリアルを作成する。

成果1-2:技術マニュアルを整備する。

活動 1-2-1:マニュアルリストを作成する。

活動 1-2-2:マニュアルを編纂する。

活動 1-2-3:マニュアルをクメール語に翻訳する。

成果1-3:技術情報の管理を行う。

活動 1-3-1:技術情報の収集、整理を行なう。

活動 1-3-2:技術情報の提供を行なう。

・成果 2: TSC での研修及びモデルサイトでの OJT を通じて MOWRAM 及び PDWRAM の技 術者の技術力が向上する。

活動 2-1: TSC で MOWRAM と PDWRAM の技術者に対し研修を実施する。

活動 2-2:モデルサイトで MOWRAM と PDWRAM の技術者に対し OJT を実施する。

・成果 3: TSC の技術支援の下、パイロットサイトにおいて、

成果 3-1: PDWARM の技術者により農民が用水にアクセスしやすい末端水路が建設される。

成果 3-2:農民が PDWRAM と協力しながら末端水路の水管理活動を開始する。

活動 3-1:末端水路の建設のための技術支援活動を行う。

活動 3-2:参加型水管理のための技術支援活動を行う。

また、併せて以下の点について双方で確認した。

(1) 協力期間

事前評価調査時には 2006 年 1 月から 3 年 6 カ月としていたが、2006 年 1 月 10 日~2009 年 7 月 9 日までとした。

(2) TSC センター長の位置付け

当初、TSC の組織化後に就任予定の TSC センター長は C/P の一人と位置づけていたが、プロジェクト実施上重要な役割を果たすことから、MOWRAM 灌漑農業局長 (Director of Irrigated Agriculture Department)、技術局副局長 (Deputy Director of Engineering Department) とともに "Project Sub-Manager"と位置付けることとした。

上記協議を経た後、2006年1月4日に双方の間で R/D 及び実施協議議事録(M/M)の署名・交換がなされた(日本国側: JICA カンボジア事務所 カ石所長、カンボジア国側: MOWRAM Veng Sakhon 次官)。なお、実施協議 M/M には PDM 及び暫定実施計画(Tentative Schedule of Implementation: TSI)が添付されている。

付属 資料

- 1. 事前評価調査 M/M (2005 年 11 月 7 日署名・交換)
- 2. R/D (2006年1月4日署名・交換)
- 3. M/M (2006年1月4日署名・交換)

MINUTES OF MEETING

OF

THE PREPARATORY STUDY ON THE JAPANESE TECHNICAL COOPERATION FOR THE TECHNICAL SERVICE CENTER FOR IRRIGATION SYSTEM PROJECT

PHASE-2

IN THE KINGDOM OF CAMBODIA

In response to the request made by the Royal Government of Cambodia (hereinafter referred to as "RGC") for The Technical Service Center For Irrigation System Project Phase-2 (hereinafter referred to as "the Project"), the Japan International Cooperation Agency (hereinafter referred to as "JICA") has sent a preparatory study team (hereinafter referred to as "the Team") headed by Mr. Kunihiro Doi from October 16 to November 8, 2005.

The purposes of the Team's visit were to hold workshops through the method of Project Cycle Management (PCM) and exchange views and determine the tentative framework of the Project such as Project Design Matrix (PDM) and Tentative Schedule of Implementation (TSI), and to conduct meetings in order to identify problems for the implementation of the Project (procedures, budget).

During their stay in the Kingdom of Cambodia, the Team held workshop, site inspection and a series of meetings and exchanged views with the concerned authorities of the RGC (hereinafter referred to as "the Authorities").

As a result of these discussions, the Team and the Authorities agreed to recommend to their respective Governments the tentative framework referred to in the document attached hereto.

工后野弘

Mr. Ku.nihiro DOI

Leader

Japanese Preparatory Study Team

Japan International Cooperation Agency

Japan

E.Misy WG Sakhon

Phnom Penh, November 7, 2005

secretary of State

Ministry of Water Resources and Meteorology

The Kingdom of Cambodia

THE ATTACHED DOCUMENT CONTENTS

- 1. BACKGROUND OF THE PREPARATORY STUDY
- 2. PURPOSES OF THE PREPARATORY STUDY
- 3. SUMMARY OF THE PARTICIPATORY PLANNING WORKSHOP
- 4. TENTATIVE FRAMEWORK OF THE PROJECT
- 5. ADMINISTRATION OF THE PROJECT
- 6. MEASURES TO BE TAKEN BY BOTH SIDES
- 7. MAJOR POINTS DISCUSSED AND AGREED UPON BY BOTH SIDES
- 8. UNDERSTANDING AND RECOMMENDATIONS
- 9. ISSUES TO BE FURTHER DISCUSSED

<ANNEX>

- ANNEX 1: The roles of the sites of the Project
- ANNEX 2: Tentative Project Design Matrix (PDM)
- ANNEX 3: Tentative Schedule of Implementation (TSI)
- **ANNEX 4: Tentative List of Japanese Experts**
- ANNEX 5: Tentative List of Machinery and Equipment
- **ANNEX 6: Tentative List of Counterpart and Related Personnel**
- ANNEX 7: Tentative List of Land, Buildings and Facilities
- ANNEX 8: Organization Structure of MOWRAM related to the Project
- **ANNEX 9: Organization Chart of TSC (Planned)**
- ANNEX 10: List of the Joint Coordination Committee members
- ANNEX 11: Summary of the Workshop



1. BACKGROUND OF THE PREPARATORY STUDY

Agriculture is the prime industry of the Kingdom of Cambodia. Agricultural production contributes to approximately 35% of the country's GDP, and more than 75% of the national population made their living on agriculture in 2004. Despite abundant farmland and water resources, agricultural productivity of the country has been rather low mainly due to deficient irrigation systems, which is one of the critical development issues of the country.

The Royal Government of the Cambodia (RGC) had requested the Government of Japan (GOJ) for technical cooperation that aims at technical transfer on rehabilitation of existing irrigation systems such as survey, planning, design, construction, operation and maintenance. In response to the request, JICA started to support this 5-year project (hereinafter referred as "the Phase-1") after dispatching a series of study missions, and it was evaluated to be completed successfully on January 9, 2006 by the terminal evaluation last July.

Based on the background above, RGC made a new request to GOJ for the next phase of the project that will aim at strengthening of technical capacity of the Ministry of Water Resources and Meteorology (hereinafter referred to as "MOWRAM") through establishing capacity development system in irrigation sector. In response to the request, JICA has sent the Team from October 16 to November 8, 2005.

2. PURPOSES OF THE PREPARATORY STUDY

- (1) To hold a workshop through the method of Project Cycle Management (PCM) with the stakeholders of the Phase-1 (the Cambodian counterpart officers in MOWRAM and the IICA experts), exchange views and determine the tentative framework of the Project such as PDM and TSI.
- (2) To conduct a meeting with the relevant authorities (MOWRAM, the Japanese Embassy and JICA) to clarify the background of the request, and identify problems for the implementation of the Project (e.g., procedures, budget).

3. SUMMARY OF THE PARTICIPATORY PLANNING WORKSHOP

A participatory planning workshop was held in order to formulate the framework the Project. Most of the counterparts including the counterpart staff of the Phase-1, and the relevant Japanese Experts actively participated in this workshop. Problem Analysis, Objective Analysis and SWOT analysis were done at this workshop. Based on these analyses, the participants recognized the facts below.

1) The core problem, i.e., "Unstable yield due to low accessibility to agricultural water"

recognized in the preliminary study of the Phase-1 Project, still remains unresolved.

- 2) The project will focus on the following three technical fields: fair water distribution among farmers, irrigation with proper timing for crops, and improvement of access to the agricultural water.
- 3) It is still urgent to train a sufficient number of engineers and technicians in MOWRAM with technical knowledge and skills in the three fields above. The Technical Service Center (TSC) for Irrigation System Project has been tackling this issue through the training of the counterparts to be core human resources for technical capacity development in MOWRAM.
- 4) In order to address training the engineers, it is necessary to establish the integrated technical capacity development system including lectures, practice and on-the-job training (OJT). The institutional framework is to address the issues of budget, human resource management and short-, mid- and long-term strategy for capacity development.

The results of the workshop were used as a reference in the discussions between the Cambodian side and the Team to reach an agreement on the tentative framework of the Project.

4. TENTATIVE FRAMEWORK OF THE PROJECT

(1) NAME OF THE PROJECT

The Technical Service Center (TSC) for Irrigation System Project Phase-2

(2) CAMBODIAN ORGANIZATIONS OF THE PROJECT

Ministry of Water Resources and Meteorology (MOWRAM)

(3) SITES OF THE PROJECT

The roles of the following sites of the Project are shown in ANNEX 1.

(3-1). Technical Service Center for Irrigation System (TSC)

(3-2). Model Site (MS)

260ha-special field within the Kandal Stung Irrigation Area, Kandal Province

(3-3). Pilot Sites (PS)

Pilot Site A: The Kandal Stung Irrigation Area, Kandal Province (excluding Model Site,



Approximately 1,700ha)

Pilot Site B: Thlea Ma Orm Area, Pursat Province (Approximately 100ha)

Pilot Site C: Thorm Viney Area, Takeo Province (Approximately 300ha)

(4) TERM OF THE COOPERATION

3 years and 6months starting from January 2006

(5) MASTER PLAN OF THE PROJECT

Master plan of the Project is as follows. The details are shown in the attached Project Design Matrix (PDM), ANNEX 2, and the Tentative Schedule of Implementation (TSI), ANNEX 3.

(5-1). Overall Goal

Livelihood of the farmer's households is improved by stabilizing their agricultural productivity through efficient water resource management in the irrigation areas conducted by the trained engineers and technicians in MOWRAM and PDWRAM.

(5-2). Project Purpose

- 1) The technical capacity of MOWRAM and PDWRAM is improved.
- 2) The farmers who have participated in the Project activities at the Pilot Sites (PS) become possible to practice water management in terminal canals.

(5-3). Outputs and activities of the Project

Output 1 Organizational capacity of the TSC on the related technology is developed.

- 1-1). Establish the training system
- 1-2). Set up the technical manuals
- 1-3). Manage technical information
- Activity 1-1-1 Make the training curricula
 - 1-1-2 Make the systematized training materials
- Activity 1-2-1 Make the technical manual list
 - 1-2-2 Compile the technical manuals
 - 1-2-3 Translate the technical manuals into Khmer
- Activity 1-3-1 Collect and organize technical information in irrigation sector
 - 1-3-2 Provide technical information

Output 2 The technical capacity of the engineers and technicians of MOWRAM and

PDWRAM is well trained through the trainings at TSC and on-the-job-trainings (OJT) at MS.

- Activity 2-1 Conduct the trainings for the engineers and technicians in MOWRAM and PDWRAM at TSC
- Activity 2-2 Conduct OJT for the engineers and technicians in MOWRAM and PDWRAM at MS
- Output 3 With the technical assistance of TSC, the following outputs are expected to be achieved at PS.
 - 3-1). Construct the terminal canals, which make it possible for farmers to easily access irrigation water, by the trained engineers and technicians in PDWRAM.
 - 3-2). Initiate the water management activities by farmers at the terminal canals in cooperation with PDWRAM.
 - Activity 3-1-1 Provide technical assistance on the construction of terminal canals at PS by TSC
 - Activity 3-2-1 Provide technical assistance on farmers' participatory water management at PS by TSC

5. ADMINISTRATION OF THE PROJECT

(1) RESPONSIBLE AGENCY AND PERSONNELS

(1-1) MOWRAM will bear responsibility for the implementation and administration of the Project. Project Director, Project Manager and Project Sub-Manager will be assigned as follows:

Project Director: Secretary of State, MOWRAM

Project Director bear overall responsibility for the implementation and administration of the Project.

Project Manager: Director General of Technical Affairs, MOWRAM

Project Manager will be responsible for the managerial and technical matters of the Project.

Project Sub-Manager:

Director of Irrigated Agriculture Department, MOWRAM Députy Director of Engineering Department, MOWRAM Project Sub-Manager will assist the role of Project Manager.

- (1-2) The Japanese Chief Advisor will provide necessary recommendations and advice to the Project Director, Project Manager and Project Sub-Manager on technical and administrative matters concerning the implementation of the project.
- (1-3) The Japanese Project Coordinator will provide necessary support to the Japanese Chief Advisor and undertake other necessary administrative work.
- (1-4) The Japanese experts will provide necessary guidance and advice to the Cambodian counterpart personnel on technical matters pertaining to the implementation of the Project.

(2) JOINT COORDINATION COMMITTEE (JCC)

For the effective and successful implementation of technical cooperation for the Project, a Joint Coordination Committee (JCC) will be established and should take place at least once a year and whenever necessary.

(2-1) Functions of JCC

- 1) To approve an Annual Plan of Operation under the framework of the Master Plan of the Project.
- 2) To review the overall progress of the technical cooperation program as well as achievement of the Annual Plan of Operation of the Project.
- 3) To review and exchange opinions on important issues originated in, or in relation to the Project; and
- 4) To provide advice to the project team for the better implementation and management of the Project.

(2-2) Composition of JCC

The composition shall be as shown in the organization chart in ANNEX 10.

(3) EXECUTIVE COMMITTEE

An Executive Committee will be organized, when the Project Director judges necessary. According to the issues to be discussed, the members of the Executive Committee will be nominated by the Project Director. The result of the discussion will be reported to JCC.

(3-1) Functions

- 1) To develop and improve detailed plan of the Project activities
- 2) To monitor, coordinate and evaluate the Project activities
- 3) To summarize the proceedings of activities and report it to JCC

6. MEASURES TO BE TAKEN BY BOTH SIDES

(1) CAMBODIAN SIDE

- (1-1) Provision of lands, buildings and facilities necessary for the implementation of the Project in Pursat and Takeo Province, in addition to TSC and the Kandal Stung Irrigation Area.
- (1-2) Assignment of the necessary number of full-time counterparts with relevant background for each field of the activities of the Project (The tentative list of the counterparts is shown in ANNEX 6)
- (1-3) Assignment of necessary administrative and technical staff members to support the activities of the Project
- (1-4) Allocation of budget necessary for the implementation of the Project
- (1-5) Commitment to custom clearance and tax exemption necessary for the smooth implementation of the Project

(2) JAPANESE SIDE

(2-1) Dispatch of Experts

Both long-term and short-term experts will be dispatched to provide technical assistance to Cambodian counterpart personnel in the implementation of the Project as follows:

- 1) Japanese long-term experts: Chief advisor/Irrigation, Project coordinator/Training, Water management
- 2) Japanese short-term experts will be dispatched when necessity arises for the smooth implementation of the Project under the framework of the Master Plan. The tentative technical fields, for which Japanese short-term experts will be dispatched, are listed in ANNEX 4.
- (2-2) Acceptance of Counterpart Training

Annual acceptance of counterpart personnel of Japanese experts for training in Japan and the third countries shall be arranged during the cooperation period.

(2-3) Provision of Machinery and Equipment

Necessary machinery, equipment and other materials for the implementation of the Project shall be provided within the budgetary allocation.

(2-4) Cost for the implementation of the Project activities

Cost of MS construction and project related activities under TSC framework will be financially assisted by Japanese side.

7. UNDERSTANDING AND RECOMMENDATIONS

The following are the outstanding issues that both sides need to follow up on:

(1)Completion of necessary formalities by both sides

It was agreed that the both sides will try the best to complete the formalities necessary for starting the Project on time respectively and sign the Record of Discussions(R/D) by the end of December 2005 between the JICA Cambodia office and MOWRAM. This is also desirable from the viewpoints of allocating the necessary budget and facilitating the considerations on TSC's status in MOWRAM by Cambodian side.

(2) Continuous allocation of necessary staff in TSC

Taking into account of the effective and efficient assistance to the development of irrigation sector in Cambodia, it is suggested that TSC should continue and/or further develop the present activities even during the transition period, namely, from the completion of the Phase-1, January 2006, to the full-scale inauguration of the Project, June, 2006. It is recommended that the Cambodian side would take necessary actions to maintain the TSC staff, who have been trained during the Phase-1 period, in the present services and make them engaged in the preparation activities prior to the full-scale inauguration, such as the making of training curricula, the translation of technical manuals into Khmer and so forth.

(3) Dispatch of a Japanese short-term expert during the transition period

In order to support the efforts by the Cambodian side during the transition period, it is also recommended that the Japanese side would dispatch a short-term expert especially for formulating the detailed Project activities and conducting the field survey at PS, in addition to the technical support for above activities.

(4) Selection of PS

It is recommended that the Cambodian side would take necessary actions, especially for the official approval on the plan of canal constructions, by the inauguration of the Project, January 2006, so that the Project activities can be made progress at PS.

(5) Budget allocation and staff assignment for PS

It is recommended that the Cambodian side would provide the necessary budget for construction and assign capable PDWRAM staff for the activities at PS, especially Pursat and Takeo Province for the smooth implementation of the Project.

(6) Collaboration with other Projects

The following Projects on the constructions/rehabilitations of canals are planned to be conducted at PS in Kandal Province during the Project period.

- A. Main canals: Japanese grant aid project "Rehabilitation of Kandal Stung Irrigation System"
- B. Terminal canals: The project to be conducted by the RGC with counterpart fund of Japanese non-project-type grant aid

The involvement in the actual construction/rehabilitation process by the staff of TSC, MOWRAM and PDWRAM is considered very much beneficial, because not only they can support the activities, but also it is the valuable occasions for them to have more experience and make their own techniques and expertise more practical.

Therefore it is expected that the Project will have close linkage with above related projects and be involved in the construction/rehabilitation activities.

<ANNEX>

ANNEX 1: The roles of the sites of the Project

ANNEX 2: Tentative Project Design Matrix (PDM)

ANNEX 3: Tentative Schedule of Implementation (TSI)

ANNEX 4: Tentative List of Japanese Experts

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ANNEX 8: Organization Structure of MOWRAM related to the Project

ANNEX 9: Organization Chart of TSC (Planned)

ANNEX 10: List of the Joint Coordination Committee members

ANNEX 11: Summary of the Workshop

ANNEX 1: The roles of the sites of the Project

The roles of the respective Project site, in which the activities will be carried out, are as follows:

1. Technical Service Center for Irrigation System (TSC)

TSC will be the site for the technical training courses for the engineers and technicians in MOWRAM and PDWRAM, as well as the establishment of the training system and the technical information system and the completion of technical manuals.

2. Model Site (MS)

Model Site (MS) is a kind of training field aiming at being utilized for OJT on the construction of terminal canals and farmers' participatory water management for engineers and technicians in MOWRAM and PDWRAM. OJT will be conducted by TSC under the assistance of Japanese side.

It is proposed that MS would be the 260ha-special field within the Kandal Stung Irrigation Area, Kandal Province, where the intensive technical support has been carried out through the Phase-1 Project and enormous outcomes have appeared.

Japanese side is expected to financially support the cost for the construction of terminal canals which will be conducted as one of a series of OJT.

3. Pilot Sites (PS)

Pilot Sites (PS) are the areas in which one of the Project Purposes "The farmers who have participated in the Project activities become possible to practice water management in terminal canals." is expected to be achieved. Basically PDWRAM will be responsible for conducting the relevant activities such as the construction of terminal canals and the promotion of farmers' participatory water management with technical support by TSC under the assistance of Japanese side. The cost for these activities, in particular the construction of terminal canals, will be born by the Cambodian Side.

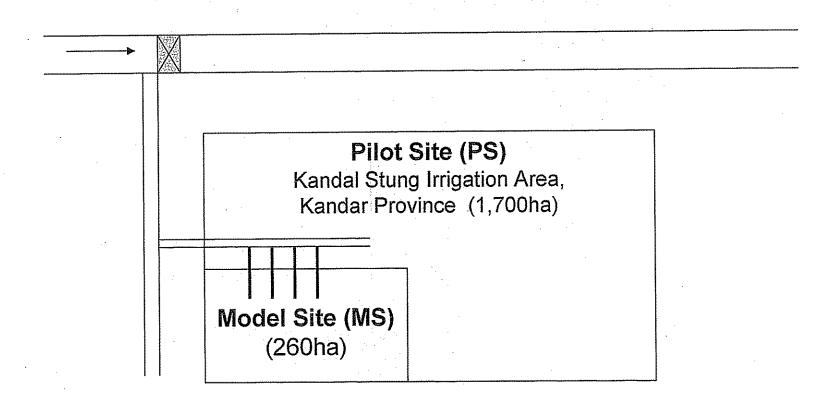
The proposed PS are as follows.

Pilot Site A: The Kandal Stung Irrigation Area, Kandal Province (Approximately 1,700ha)

Pilot Site B: Thlea Ma Orm Area, Pursat Province (Approximately 100ha)

Pilot Site C: Thorm Viney Area, Takeo Province (Approximately 300ha)

Concept of Pilot Site (PS) and Model Site (MS)



Pilot Site (PS)

Thlea Ma Orm Area, Pursat Province (100ha)

Pilot Site

Pilot Site (PS)

Thorm Viney Area, Takeo Province (300ha)

Pilot Site



ANNEX 2 Project Design Matrics (PDM (

Name of the Project: The Technical Service Center for Irrigation System Project Phase-2
Implementing Organization on the Project: Ministry of Water Resources and Meteorology (MOWRAM)
Term of the Cooperation: 3 years and 6months starting from January 2006

Sites of the Project

Technical Service Center for Irrigation System (TSC)

Supporting Organization: Japan International Cooperation Agency (JICA)

Target Group: Full time counterpart in the TSC, the engineers and technicians in MOWRAM and PDWRAM and the farmers at Pilot Sites

Pilot Site (PS): the Kandal Stung Irrigation Area, Kandal Province, Thien Ma Orm Area, Pursat Province, Thor Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
verali Gool			*****
ivelihood of the farmer's households is improved by stabilizing their agricultural productivity through efficient water source management in the irrigation areas conducted by the trained engineers and technicians in MOWRAM and DWRAM.	Irrigated area is increased. Unit yield of rice is improved. Agricultural income in farm households is improved.	Profile data of respective areas in the project proposals. Base-line indicators by the statistic data. Socio-rural study on the Ex-post Evaluation.	
	The state of the Property of the State of th		
oject Purpose	(Until the end of the Project) Engineers and technicians who participated the training and OJT achieve the assigned target in the curricula.	I Documents about the evaluation of respective training courses on the Project.	1 Engineers and technicians who received training remain at MOWRAM and PDWRAM and continu assist the targeted farmers all over the Cambodia.
The technical capacity of MOWRAM and PDWRAM is improved.	 Total length of the terminal canals with efficient water management is extended. 	2 Ex-post investigation by the Project about implementation, operation and	 The circumstances of the agricultural product mark don't get worse.
The farmers who have participated in the Project activities at the Pilot Sites (PS) become possible to practice water anagement in tertiary canals and farm ditches.	The number of farmers who independently practice the water management work learned at the Project is increased.	maintenance of the canals at the Pilot Socio ruml study by the Project at the Pilot Sites.	3 Workers in each farmer's household is secured in t Target Area.
	in the state of th	`	Farmers in the national irrigation project are not against the activities of the water management.
utputs			
1 Organizational capacity of the TSC on the related technology is developed.	(Until the end of the Project) 1 1-1 1-1-1 The TSC staff complete to make the assigned curricula of the training courses.	1 1-1 1-1-1 Document about each number of assigned and implemented curricula for the training courses.	Engineers and technicians who received training remain at MOWRAM and PDWRAM.
	1-1-2 The TSC staff complete to produce the assigned materials for the training courses	training courses.	2 The financial resources for MOWRAM are secure
1-1 Establish the training system	1-1-3 The TSC staff complete to implement the assigned training course. 1-2 1-2-1 The TSC staff complete to make the	1-1-3 Document about each number of assigned and implemented training 1-2 1-2-1 Document about each number of	÷
1-2 Set up the technical manuals	assigned lists of the technical manuals.	assigned and produced lists of technical	
1-3 Manage the technical information	1-2-2 The TSC staff complete to produce the assigned technical manuals. 1-3 1-3-1 A library of the technical information in the TSC is established.	1-2-2 Document about each number of assigned and produced technical 1-3 1-3-1 Established technical library.	
	1-3-2 Lists of the library is completed.	1-3-2 Completed lists of the library.	
The technical capacity of the engineers and technicians in MOWRAM and PDWRAM is well trained through the trainings at TSC and on-the-job-trainings (OJT) at MS.	2 2-1 The terminal canals planned in the Model Sites are completed by the trained engineers and technicians in MOWRAM	2 2-1 Documents about plan and implementation on the construction of the terminal canals on the Project.	
	2-2 The assigned trainees in MOWRAM and PDWRAM complete the training courses in the TSC.	2-2 Document about implementation of the training courses.	
	2-3 The assigned trainees in MOWRAM and PDWRAM complete OJT at the Model	2-3 Document about implementation of OJT,	
With the technical assistance of TSC, the following outputs are expected to be achieved at PS.	3	D. D. Land	
Construct the terminal canals, which make it possible for farmers to easily access irrigation water, by the trained engineers and technicians in PDWRAM.	3-1 Total length of the terminal canals with efficient water distribution capacity constructed by the engineers and technicians in PDWRAM is extended.	3-1 Documents about construction and use of the terminal canals on the Project.	
3-2 Initiate the water management activities by farmers at the terminal canals in cooperation with PDWRAM.	3-2 Activities concerned with the water management e.g. mowing the grass and dredging in canals, discussion and etc. is started with cooperation by PDWRAM.	3-2 Socio rural study by the Project at the Pilot Sites.	

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Activit				Inputs			
1 1-1	1-1-1 Make the training curricula	_		< Japanese Side >		<cambodian side=""></cambodian>	·
	1-i-2 Make the systematized training materials		(1)	Dispatch of experts: Long-term experts: several persons/year such as:	(1)	Assignment of counterpart personnel and other supporting staff members. Project Director	The full-time counterparts continuously work with
1-2	1-2-1 Make the technical manual list 1-2-2 Compile the technical manuals		•	- Chief advisor/ Irrigation - Project coordinator/ Training - Water resource management,	(2) (3) (4)	Project Manager Project Sub-Managers Full-time counterpart personnel in the	the Proiect.
	1-2-3 Translate the technical manuals into Khmer		(2)	Short-term experts will be sent according	1)	fields of: Survey/ Planning Design/ Water Management	
1-3	1-3-1 Collect and organize technical information in irrigation sector 1-3-2 Provide technical information	2		to necessity. Provision of equipment Training of Cambodian counterpart nersonnel in Japan and in the other	3) 4)	Construction Management Short-term experts	
2 2-1 2-2	Conduct the trainings for the engineers and technicians in MOWRAM and PDWRAM at TSC Conduct OJT for the engineers and technicians in MOWRAM and PDWRAM at MS	4		Budjet for local activity	(5) (6) 2	Administrative Staff Technical Staff Provision of land, buildings and facilities related to the project.	
3 3-1 3-2	Provide technical assistance on the construction of tertiary canals and farm ditches at PS by TSC Provide technical assistance on farmers' participatory water management at PS by TSC		*		3 4 (1)	Provision of machinery necessary for the Project. Allocation of budget for: Operation and maintenance of irrigation	Pre-Conditions 1 Adequate number of qualified counterparts are 2 Farmers are not against the Project.
			÷		(2) (3)	systems Personnel expenses of counterparts and other supporting staff Operating expenses necessary for the implementation of the Project.	The Pilot sites has been selected by the Cambodian Government.
Abbreviati MOWRAM PDWRAM TSC: MS: PS:	I: Ministry of Water Resources and Meteorology Provincial Department of Water Resources and Meteorology The Technical Service Center (TSC) for Irrigation System Model Site Pilot Sites	Remarks: Ob	jectively	Verifiable Indicators should be improved mor	re concretel		nual Plan of Operation is established.
OJT:	On-the-job Training						

ANNEX 3: Tentative Schedule of Implementation

Project Activities				,	2007					20	2009			
1 Organizational capacity of the TSC on the related technology is developed.		-											·	
1-1. Establish the training system	-		<u> </u>		·					·	<u> </u>			
1-1-1 Make the training curricula	2 5 5										isana ze		32.24.2.4.7.	
1-1-2 Make the systematized training materials												÷		ensum.
1-2. Set up the technical manuals	ļ	<u> </u>	·		1	<u> </u>		•	1	<u> </u>	<u> </u>			
1-2-1 Make the technical manual list	2 18 15	a e (<u> </u>				
1-2-2 Compile the technical manuals	EEE	# # 11												
1-2-3 Translate the technical manuals into Khmer	3 18 18										<u> </u>	·	************	KS/ONCERN
1-3. Manage the technical information			·		·	·		-						
1-3-1 Collect and organize technical information in irrigation sector	2 E H	m m 1									<u></u>	<u></u>		
1-3-2 Provide technical information		W M										<u></u>		
2 The technical capacity of the engineers and technicians in MOWRAM and PDWRAM is well trained through the trainings at TSC and OJT at MS. 2-1 Conduct the trainings for the engineers and technicians in MOWRAM and PDWRAM at TSC 2-2 Conduct OJT for the engineers and technicians in MOWRAM and PDWRAM at														
MS	<u> </u>													
3 With the technical assistance of TSC, the following outputs are expected to be achieved at PS.								:						
3-1. Construct the terminal canals, which make it possible for farmers to easily access irrigation water, by the trained engineers and technicians in PDWRAM.			<u> </u>			**************************************								**********
3-1-1 Provide technical assistance on the construction of terminal canals at PS by TSC		1												
3-2. Initiate the water management activities by farmers at the terminal canals in cooperation with PDWRAM.		***************************************							•••••••					********
3-2-1 Provide technical assistance on farmers' participatory water management at PS by TSC		1				***************************************								



ANNEX 4: Tentative List of Japanese Experts

1. Long-term Experts

The following long-term experts will be dispatched for the smooth implementation of the Phase-2 Project.

- (1) Chief Advisor / Irrigation
- (2) Project Coordinator / Training
- (3) Water Management

2. Short-term Experts

Short-term expert will be assigned within the framework of the Project. The Terms of Reference of short-term experts will be decided based on the discussions between Japanese experts and MOWRAM/TSC after the inauguration of the Project. At present, the following fields are listed for the dispatch of short-term experts.

- (1) Survey /Planning
- (2) Design
- (3) Construction Management
- (4) Participatory Water Management
- (5) Field Survey at PS in Pursat and Takeo Province
- (6) Trainings for trainers
- (7) Other fields, when necessity arises.

ANNEX 5: Tentative List of Machinery and Equipments

- 1. Machinery and equipment necessary for the Project activities at TSC
- 2. Machinery and equipment necessary for the Project activities in MS
- 3. Machinery and equipment necessary for the Project activities in PS
 - 1) The Kandal Stung Irrigation Area, Kandal Province
 - 2) Thlea Ma Orm Area, Pursat Province
 - 3) Thorm Viney Area, Takeo Province

ANNEX 6: Tentative List of Counterpart and Related Personnel

- 1. Project Director: Secretary of State, MOWRAM
- 2. Project Manager: Director General of Technical Affairs, MOWRAM
- 3. Project Sub-Manager:

Director of the Department of Irrigated Agriculture, MOWRAM Deputy Director of the Department of Engineering, MOWRAM

4. Counterpart Personnel of TSC

The Counterpart Personnel(C/P) of the Phase-1 Project will be nominated as C/P of the Project. When TSC is officially established under MOWRAM by RGC, the staff of the following structure will be nominated as C/P.

Director (when TSC is established)

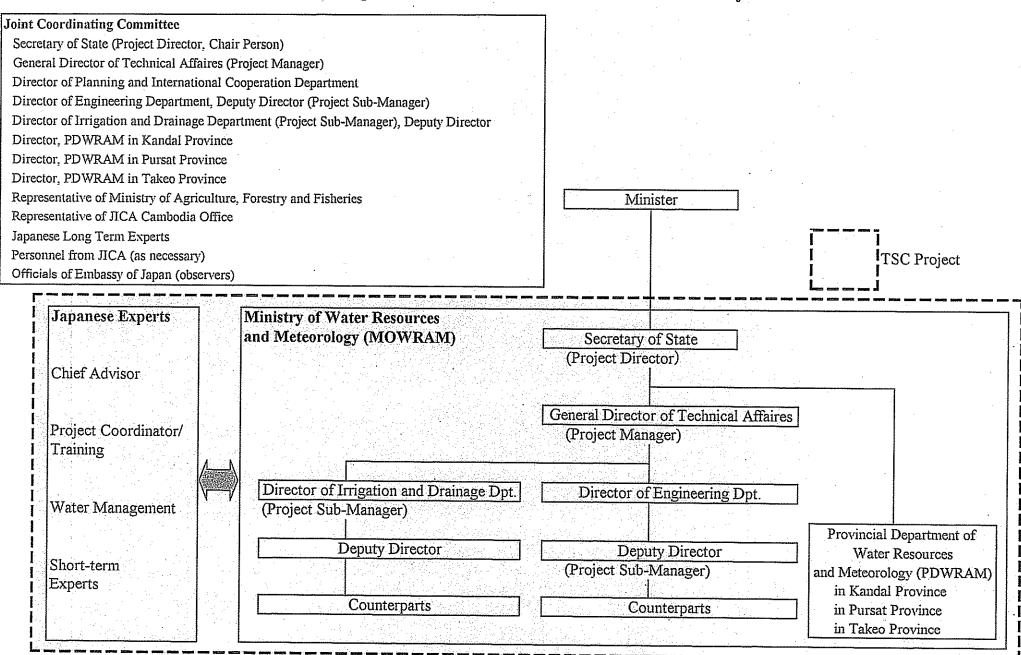
Deputy Director (when TSC is established)

- (1) Engineering Office
 - 1) Survey Section
 - 2) Planning and Design Section
 - 3) Construction Management Section
- (2) Water Management Office
 - 1) Facility Management Section
 - 2) Farmer Water Management Section
 - 3) Watershed Management Section
- (3) Administration and Finance Section
 - 1) Administration Section
 - 2) Planning and Accounting Section
 - 3) Training Management Section
 - 4) Information Management Section
- 5. Related Engineers and Technicians in PDWRAM in Kandal, Pursat and Takeo Province
 - 1) Survey
 - 2) Planning
 - 3) Design
 - 4) Construction Management
 - 5) Participatory Water Management

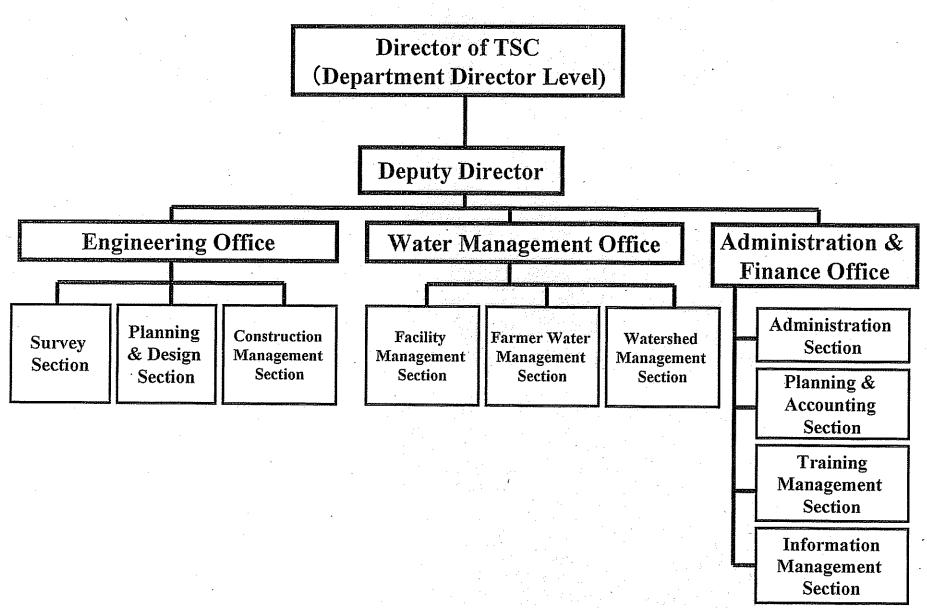
ANNEX 7: Tentative List of Land, Buildings and Facilities

- 1. Technical Support Center for Irrigation System (TSC)
- (1) Office and working rooms for Japanese experts
- (2) Seminar rooms for trainings
- (3) Laboratories for soil test and concrete test
- (4) Storage space for provided machinery, instruments and equipment
- (5) Electricity, water supply and telecommunication facilities
- 2. 260ha-Model Site (MS) within the Kandal Stung Irrigation Area, Kandal Province
- 3. Pilot Sites (PS)
 - 1) The Kandal Stung Irrigation Area, Kandal Province
 - 2) Thlea Ma Orm Area, Pursat Province
 - 3) Thorm Viney Area, Takeo Province
- 4. Office and working rooms for TSC staff and Japanese experts with Electricity, water supply and telecommunication facilities in PDWRAM in Pursat and Takeo Province
- 5. Other land, buildings, facilities and equipment necessary for the implementation of the Project

ANNEX 8 Organizational Structure of MOWRAM related to the Project



ANNEX: 9 Organization Chart of TSC (Planned)



ANNEX 10: List of the Joint Coordination Committee members

The Joint Coordination Committee will be composed of the following members.

- 1. Chairperson of the Committee: Project Director, Secretary of State, MOWRAM
- 2. Members
 - (1) Cambodian Side-

Director General of Technical Affairs, MOWRAM (Project Manager)

Director of Planning and International Cooperation Department, MOWRAM

Director of Engineering Department, MOWRAM

Director of Irrigated Agriculture Department, MOWRAM (Project Sub-Manager)

Director of TSC (when TSC is established)

Deputy Director of Engineering Department, MOWRAM (Project Sub-Manager)

Director, PDWRAM in Kandal Province

Director, PDWRAM in Pursat Province

Director, PDWRAM in Takeo Province

Representative of Ministry of Agriculture, Forestry and Fisheries

(2) Japanese Side

Chief Advisor

Project Coordinator

Experts assigned to the Project

JICA advisor to MOWRAM

Resident Representative of JICA Cambodia Office

Other Japanese Experts and personnel concerned dispatched by JICA, as necessary

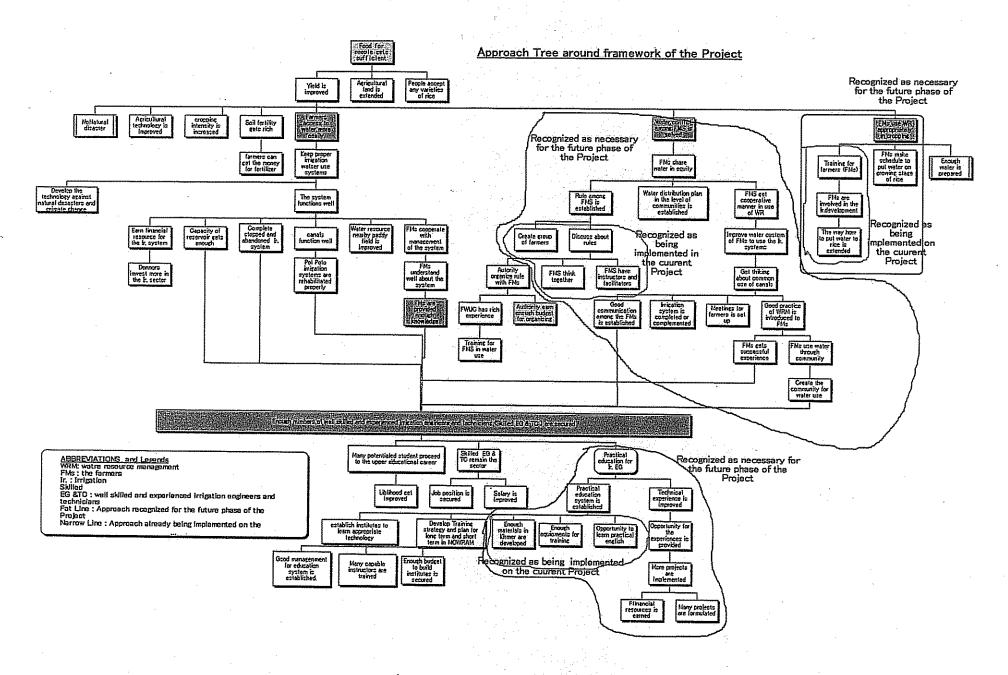
- (3) Other necessary personnel mutually agreed upon as necessary
- (4) Observers:

Officials of the Embassy of Japan in the Kingdom of Cambodia may attend JCC as observers. Persons who are nominated by the Chairperson may also attend JCC.

ANNEX-11 Summary of the Workshop (A list of the participants on the Workshop)

19 Oct.2005

	Name	Duration in MOWRAM or the TSC Project	Organization	Department/Position	Position	Charge in the TSC Project
1	Mr. Te Av KIM	37 years	MOWRAM	Irrigated Agriculture Department	Director of the Department	Sub-Project Manager the TSC Project
2	Mr. Uch Hing	10 years	MOWRAM	Engineering Department	Counterpart Officer in the TSC Project	Survey
3	Mr. Mean Seng	5 years	MOWRAM	Engineering Department	Counterpart Officer in the TSC Project	Survey
4	Mr. Meas Savoeun	11 years	MOWRAM	Irrigated Agriculture Department	Counterpart Officer in the TSC Project	Planning
5	Mr. You Sotha	9 years	MOWRAM	Irrigated Agriculture Department	Counterpart Officer in the TSC Project	Planning
6	Mr. Teav Vutha		MOWRAM	Irrigated Agriculture Department	Counterpart Officer in the TSC Project	Design
7	Mr. Hay Bunthoeun		MOWRAM	Engineering Department	Counterpart Officer in the TSC Project	Design
8	Mr. Ung Kotaro	6 years	MOWRAM	Engineering Department	Counterpart Officer in the TSC Project	Construction Management
9	Mr. Noun Vannarith		MOWRAM	Engineering Department	Counterpart Officer in the TSC Project	Construction Management
	Mr. Prum Kanthel	6 years	MOWRAM	Irrigated Agriculture Department	Counterpart Officer in the TSC Project	Water management and Farmer Survey
	Mr. Teng Tong Heng	11 years	MOVVRAM	Irrigated Agriculture Department	Counterpart Officer in the TSC Project	Water management and Farmer Survey
	Mr. Sok Korn	10 years	MOWRAM	Irrigated Agriculture Department	Counterpart Officer in the TSC Project	Water management and Farmer Survey
***************************************	Mr. Akira MIYAZAKI	Since June, 2002	JICA		Expert in the TSC Project	Chief Advisor
14	Mr. Nobuhiro MORIYAMA	Since August, 2005	JICA		Expert in MOWRAM	**
	Mr. Masayuki HORIUCHI	Since April, 2004	JICA		Expert in the TSC Project	Planning
******	Mr. Kenji SEKIJIMA	Since May, 2003	JICA		Expert in the TSC Project	Construction Management
	Mr. Kenji TSUJISHITA	Since May, 2004	JICA		Expert in the TSC Project	Design / Water Management
18	Mr. Koji KANEMARU	Since Dec, 2003	JICA		Expert in the TSC Project	Coordinator



RECORD OF DISCUSSIONS BETWEEN JAPAN INTERNATIONAL COOPERATION AGENCY AND

AUTHORITIES CONCERNED OF THE ROYAL GOVERNMENT OF CAMBODIA ON

JAPANESE TECHNICAL COOPERATION PROJECT FOR

THE TECHNICAL SERVICE CENTER FOR IRRIGATION SYSTEM PROJECT PHASE 2

In response to the request of the Royal Government of Cambodia (hereinafter referred to as "RGC"), the Government of Japan (hereinafter referred to as "GOJ") has decided to conduct the Technical Service Center for Irrigation System Project Phase 2 (hereinafter referred to as "the Project").

Accordingly, Japan International Cooperation Agency (hereinafter referred to as "JICA") exchanged views and had a series of discussions with the Cambodian authorities concerned with respect to the desirable measures to be taken by JICA and RGC for the successful implementation of the above-mentioned project.

As a result of the discussions, and in accordance with the provisions of the Agreement on Technical Cooperation between the GOJ and RGC, signed in Phnom Penh on June 17th 2003 (hereinafter referred to as "the Agreement"), JICA and the Cambodia authorities concerned agreed to recommend to their respective Governments the matters referred to in the document attached hereto.

Phnom Penh, Cambodia, January 4, 2006



Secretary of State
Ministry of Water Resources
and Meteorology
The Kingdom of Cambodia

Mr. JURO CHIKARAISHI Camboo's
Resident Representative

Cambodia Office
Japan International Cooperation Agency
Japan

THE ATTACHED DOCUMENT

I. COOPERATION BETWEEN JICA AND THE ROYAL GOVERNMENT OF CAMBODIA

- 1. RGC will implement the Technical Service Center for Irrigation System Project Phase 2 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

- 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 machinery, equipment and other materials (hereinafter referred to as

 "Equipment") necessary for the implementation of the Project as listed in Annex III.
- 3. TRAINING OF CAMBODIAN PERSONNEL IN JAPAN

 JICA will receive the Cambodian personnel connected with the Project for technical training in Japan.
- 4. TRAINING OF CAMBODIAN PERSONNEL IN CAMBODIA

 JICA will provide necessary technical training for the Cambodian personnel in Cambodia connected with the Project.

III. MEASURES TO BE TAKEN BY THE ROYAL GOVERNMENT OF CAMBODIA

- RGC will take necessary measures to ensure sustainable operation of the Project through full
 and active involvement in the Project by the Ministry of Water Resources and Meteorology
 (hereinafter referred to as "MOWRAM"), Provincial Department of Water Resources and
 Meteorology (hereinafter referred to as "PDWRAM") and other related authorities and
 beneficiaries.
- 2. RGC will take necessary measures to ensure that the knowledge and experience acquired by the Cambodian personnel from technical training in Japan and Cambodia will be utilized

effectively in the implementation of the Project.

- 3. RGC will provide the services of Cambodian counterpart personnel and administrative personnel as listed in Annex IV.
- 4. RGC will provide suitable office and facilities as listed in Annex V.
- 5. In accordance with the laws and regulations in force in Cambodia, RGC will take necessary measures to supply or replace machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project at its own expense other than Equipment provided by JICA under II-2.
- 6. In accordance with the laws and regulations in force in Cambodia, the Royal Government of Cambodia will take necessary measures to meet the running expenses necessary for the implementation of the Project.

IV. ADMINISTRATION OF THE PROJECT

1. MOWRAM will bear responsibility for the implementation and administration of the Project.

Project Director, Project Manager and Project Sub-Manager will be assigned as follows:

Project Director: Secretary of State, MOWRAM

Project Director bear overall responsibility for the implementation and administration of the Project.

Project Manager: Director General of Technical Affairs, MOWRAM

Project Manager will be responsible for the managerial and technical matters of the Project.

Project Sub-Manager:

Director of Irrigated Agriculture Department, MOWRAM
Deputy Director of Engineering Department, MOWRAM
Project Sub-Manager will assist the role of Project Manager.

- 2. The Japanese Chief Advisor will provide necessary recommendations and advice to the Project Director, the Project Manager and the Project Sub-Managers on technical and administrative matters concerning the implementation of the Project.
- 3. The Japanese Project Coordinator will provide necessary support to the Japanese Chief Advisor and undertake other necessary administrative work.

4. The Japanese experts will provide necessary guidance and advice to the Cambodian counterpart personnel on technical matters pertaining to the implementation of the Project.

VI. JOINT EVALUATION

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

VII. MUTUAL CONSULTATION

There will be mutual consultation between JICA and RGC 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 Cambodia, RGC will take appropriate measures to make the Project widely known to the people of Cambodia.

IX. TERM OF COOPERATION

The duration of the technical cooperation for the Project under this Attached Document will be three (3) years and six (6) months from January 10, 2006 to July 9, 2009.

ANNEX I MASTER PLAN

ANNEX II LIST OF JAPANESE EXPERTS

ANNEX III LIST OF MACHINERY AND EQUIPMENT

ANNEX IV LIST OF CAMBODIAN COUNTERPART AND ADMINISTRATIVE

PERSONNEL

ANNEX V LIST OF LAND, BUILDING AND FACILITIES

ANNEX VI JOINT COORDINATION COMMITTEE AND EXECUTIVE COMMITTEE

ANNEX VII AGREEMENT ON TECHNICAL COOPERATION BETWEEN THE GOVERNMENT OF JAPAN AND THE ROYAL GOVERNMENT OF

CAMBODIA

ANNEX I MASTER PLAN

1. Overall Goal

Livelihood of the farmer's households is improved by stabilizing their agricultural productivity through efficient water resource management in the irrigation areas conducted by the trained engineers and technicians in MOWRAM and PDWRAM.

2. Project Purpose

- (1) The technical capacity of MOWRAM and PDWRAM is improved.
- (2) The farmers who have participated in the Project activities at the Pilot Sites (PS) are able to practice water management in tertiary canals and farm ditches.

3. Outputs and Activities

Output 1 The following outputs are expected to be achieved at TSC.

- 1−1 Establish a training system
- 1-2 Set up technical manuals
- 1-3 Manage technical information
 - Activity 1-1-1 Make training curricula
 - 1-1-2 Make systematized training materials
 - Activity 1-2-1 Make a technical manual list
 - 1-2-2 Compile technical manuals
 - 1-2-3 Translate technical manuals into Khmer
 - Activity 1-3-1 Collect and organize technical information in irrigation sector
 - 1-3-2 Provide technical information
- Output 2 The technical capacity of the engineers and technicians in MOWRAM and PDWRAM is well trained through the trainings at TSC and on-the-job-trainings (OJT) at Model Site (MS).
 - Activity 2-1 Conduct the trainings for the engineers and technicians in MOWRAM and PDWRAM at TSC
 - Activity 2-2 Conduct OJT for the engineers and technicians in MOWRAM and PDWRAM at MS
- Output 3 With the technical assistance of TSC, the following outputs are expected to be achieved at PS.
 - 3-1 The trained engineers and technicians in PDWRAM construct the terminal canals, which make it possible for farmers to easily access irrigation water.

3-2 Farmers start to conduct water management activities at the terminal canals in cooperation with PDWRAM.

Activity 3-1-1 Provide technical assistance on the construction of terminal canals at PS

Activity 3-2-1 Provide technical assistance on farmers' participatory water management at PS

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ANNEX II LIST OF JAPANESE EXPERTS

1. Long-term Experts

The following long-term experts will be dispatched for the smooth implementation of the Project.

- (1) Chief Advisor / Irrigation
- (2) Project Coordinator / Training
- (3) Water Management

2. Short-term Experts

Short-term experts will be assigned within the framework of the Project. The following fields are listed for the dispatch of short-term experts.

- (1) Survey /Planning
- (2) Design
- (3) Construction Management
- (4) Participatory Water Management
- (5) Field Survey at PS in Pursat and Takeo Provinces
- (6) Trainings for trainers
- (7) Other fields, when necessity arises.

The Terms of Reference of short-term experts will be decided based on the discussions between Japanese experts and MOWRAM/TSC after the inauguration of the Project.

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ANNEX III LIST OF MACHINERY AND EQUIPMENT

- 1. Machinery and equipment necessary for the Project activities at TSC
- 2. Machinery and equipment necessary for the Project activities in Model Site
- (1) The Kandal Stung Irrigation Area, Kandal Province: Approximately 260 ha
- 3. Machinery and equipment necessary for the Project activities in PS
- (1) The Kandal Stung Irrigation Area, Kandal Province (excluding Model Site)
 : Approximately 1,700 ha
- (2) Thlea Ma Orm Area, Pursat Province: Approximately 100 ha
- (3) Thorm Viney Area, Takeo Province: Approximately 300 ha

Notes:

Contents, specifications and quantity of the above-mentioned equipment will be decided through mutual consultations within the allocated budget of the Japanese fiscal years.

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ANNEX IV LIST OF CAMBODIAN COUNTERPART AND ADMINISTRATIVE PERSONNEL

- 1. Project Director: Secretary of State, MOWRAM
- 2. Project Manager: Director General of Technical Affairs, MOWRAM
- 3. Project Sub-Manager:

Director of the Department of Irrigated Agriculture, MOWRAM Deputy Director of the Department of Engineering, MOWRAM

4. Counterpart Personnel of TSC

The Counterpart Personnel(C/P) of the Phase-1 Project will be nominated as C/P of the Project. When TSC is officially established under MOWRAM by RGC, the staff of the following structure will be nominated as C/P.

Director (when TSC is established, automatically to be Project Sub-Manager)

Deputy Director (when TSC is established)

- (1) Engineering Office
 - 1) Survey Section
 - 2) Planning and Design Section
 - 3) Construction Management Section
- (2) Water Management Office
 - 1) Facility Management Section
 - 2) Farmer Water Management Section
 - 3) Watershed Management Section
- (3) Administration and Finance Section
 - 1) Administration Section
 - 2) Planning and Accounting Section
 - 3) Training Management Section
 - 4) Information Management Section
- 5. Related Engineers and Technicians in PDWRAM in Kandal, Pursat and Takeo Province
 - 1) Survey
 - 2) Planning
 - 3) Design
 - 4) Construction Management
 - 5) Participatory Water Management

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ANNEX V LIST OF OFFICE SPACE AND FACILITIES

The following will be prepared by RGC for the Project implementation.

Office space, facilities, equipment and materials:

- 1. Technical Service Center for Irrigation System (TSC)
- (1) Office and working rooms for Japanese experts
- (2) Seminar rooms for trainings
- (3) Laboratory for soil test and concrete test
- (4) Storage space for provided machinery, instruments and equipment
- (5) Electricity, water supply and telecommunication facilities
- 2. 260ha-Model Site (MS) within the Kandal Stung Irrigation Area, Kandal Province
- 3. Pilot Sites (PS)
 - (1) The Kandal Stung Irrigation Area, Kandal Province
 - (2) Thlea Ma Orm Area, Pursat Province
 - (3) Thorm Viney Area, Takeo Province
- 4. Office and working rooms for TSC staff and Japanese experts with electricity, water supply and telecommunication facilities in PDWRAM in Pursat and Takeo Province
- 5. Other land, buildings, facilities and equipment necessary for the implementation of the Project

ANNEX VI JOINT COORDINATION COMMITTEE AND EXECUTIVE COMMITTEE

1. Joint Coordination Committee

(1) Function

For the effective and successful implementation of technical cooperation for the Project, a Joint Coordination Committee (JCC) will be established and should take place at least once a year and whenever any necessity arises.

The functions of JCC are as follows:

- To approve an Annual Plan of Operation under the framework of the Master Plan of the Project.
- 2) To review the overall progress of the technical cooperation program as well as achievement of the Annual Plan of Operation of the Project.
- 3) To review and exchange opinions on important issues originated in, or in relation to the Project; and
- 4) To provide advice for the better implementation and management of the Project.

(2) Members of JCC

Chairperson

Project Director, Secretary of State, MOWRAM

Member

1) Cambodian Side

Director General of Technical Affairs, MOWRAM (Project Manager)

Director of Planning and International Cooperation Department, MOWRAM

Director of Engineering Department, MOWRAM

Director of Irrigated Agriculture Department, MOWRAM (Project Sub-Manager)

Director of TSC (when TSC is established)

Deputy Director of Engineering Department, MOWRAM (Project Sub-Manager)

Director, PDWRAM in Kandal Province

Director, PDWRAM in Pursat Province

Director, PDWRAM in Takeo Province

Representative of Ministry of Agriculture, Forestry and Fisheries

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2) Japanese Side

Chief Advisor

Project Coordinator

Experts assigned to the Project

JICA advisor to MOWRAM

Resident Representative of JICA Cambodia Office

Other Japanese Experts and personnel concerned dispatched by JICA, if necessary

- 3) Other personnel who both sides agree to invite to the meeting of JCC
- 4) Observers:

Officials of the Embassy of Japan in the Kingdom of Cambodia may attend JCC as observers. Persons who are nominated by the Chairperson may also attend JCC.

2. Executive Committee

(1) Function

An Executive Committee will be organized, when the Project Director judges it necessary. According to the issues to be discussed, the members of the Executive Committee will be nominated by the Project Director. The result of the discussion will be reported to JCC.

The functions of JCC are as follows:

- 1) To develop and improve detailed plan of the Project activities
- 2) To monitor, coordinate and evaluate the Project activities
- 3) To summarize the proceedings of activities and report it to JCC

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AGREEMENT ON TECHNICAL COOPERATION BETWEEN THE ROYAL GOVERNMENT OF CAMBODIA AND THE GOVERNMENT OF JAPAN

The Royal Government of Cambodia and the Government of Japan,

Desiring to strengthen further the friendly relations existing between the two countries by the promotion of technical cooperation, and

Considering mutual benefits derived from promoting the economic and social development of their respective countries,

Have agreed as follows:

ARTICLE I

The two Governments shall endeavor to promote technical cooperation between the two countries.

ARTICLE II

Separate arrangements which govern specific technical cooperation programs carried out under this Agreement shall be agreed upon between the authorities concerned of the two Governments. The authority concerned of the Royal Government of Cambodia is the Ministry of Foreign Affairs and International Cooperation and the authority concerned of the Government of Japan is the Ministry of Foreign Affairs.

ARTICLE III

The following forms of technical cooperation will be carried out by the Japan International Cooperation Agency (hereinafter referred to as "JICA") at its own expense in accordance with the laws and regulations in force in Japan as well as with the arrangements referred to in Article II:

- (a) providing technical training to Cambodian nationals;
- (b) dispatching experts (hereinafter referred to as the "Experts") to the Kingdom of Cambodia;

- (c) dispatching Japanese volunteers with a wide range of technical skills and abundant experience (hereinafter referred to as the "Senior Volunteers") to the Kingdom of Cambodia;
- (d) dispatching Japanese missions (hereinafter referred to as the "Missions") to the Kingdom of Cambodia to conduct surveys of economic and social development projects of the Kingdom of Cambodia;
- (e) providing the Royal Government of Cambodia with equipment, machinery and materials; and
- (f) providing the Royal Government of Cambodia with other forms of technical cooperation as may be decided upon by mutual consent between the two Governments.

ARTICLE IV

The Royal Government of Cambodia shall ensure that the techniques and knowledge acquired by Cambodian nationals as well as the equipment, machinery and materials provided as a result of the Japanese technical cooperation as set forth in Article III contribute to the economic and social development of the Kingdom of Cambodia, and are not utilized for military purposes.

ARTICLE V

In case JICA dispatches the Experts, the Senior Volunteers and the Missions, the Royal Government of Cambodia shall:

- 1. (1) (a) exempt the Experts, the Senior Volunteers and members of the Missions from taxes including income tax, and fiscal charges imposed on or in connection with salaries and any allowances remitted to them from overseas;
 - (b) exempt the Experts, the Senior Volunteers, members of the Missions and their families from consular fees, taxes including customs duties and fiscal charges, as well as from the requirements of obtaining import license and certificate of foreign exchange coverage, in respect of the importation of:

- (i) luggage;
- (ii) personal effects, household effects and consumer goods; and
- (iii) one motor vehicle per Expert, per family of the Expert, per Senior Volunteer and per family of the Senior Volunteer assigned to stay in the Kingdom of Cambodia;
- (c) exempt the Experts, the Senior Volunteers and their families who do not import any motor vehicle into the Kingdom of Cambodia from taxes including value added tax and fiscal charges in respect of the local purchase of one motor vehicle per Expert, per family of the Expert, per Senior Volunteer and per family of the Senior Volunteer; and
- (d) exempt the Experts, the Senior Volunteers and their families from the registration fee of the motor vehicles mentioned in (b) (iii) and (c);
- (2) (a) provide at its own expense suitable office and other facilities including telephone and facsimile services necessary for the performance of the duties of the Experts, the Senior Volunteers and the Missions as well as to bear the expenses for their operation and maintenance;
- (b) provide at its own expense the local staff (including adequate interpreters, if necessary) as well as Cambodian counterparts to the Experts, the Senior Volunteers and the Missions necessary for the performance of their duties;
- (c) bear expenses of the Experts and the Senior Volunteers whenever local conditions and financial possibilities of authorities concerned of the Royal Government of Cambodia permit for:
 - (i) daily transportation to and from their place of work;
 - (ii) their official travels within the Kingdom of Cambodia; and
 - (iii) their official correspondence;

- (d) provide the convenience for acquisition of appropriate housing accommodation for the Experts, the Senior Volunteers and their families; and
- (e) provide the convenience for receiving medical care and facilities for the Experts, the Senior Volunteers, members of the Missions and their families;
- (3) (a) permit the Experts, the Senior Volunteers, members of the Missions and their families to enter, leave and sojourn in the Kingdom of Cambodia for the duration of their assignment therein, offer them the convenience for procedures of alien registration requirements, and exempt them from consular fees;
 - (b) issue identification cards to the Experts, the Senior Volunteers and members of the Missions to secure the cooperation of all governmental organizations necessary for the performance of their duties;
 - (c) offer the Experts, the Senior Volunteers and their families the convenience for acquisition of car driving license; and
 - (d) carry out other measures necessary for the performance of the duties of the Experts, the Senior Volunteers and the Missions.
- 2. The motor vehicles mentioned in paragraph 1 shall be subject to payment of taxes including customs duties if they are subsequently sold or transferred within the Kingdom of Cambodia to individuals or organizations not entitled to exemption from such taxes or similar privileges.
- 3. The Royal Government of Cambodia shall accord the Experts, the Senior Volunteers, members of the Missions and their families such privileges, exemptions and benefits as are no less favorable than those accorded to experts, senior volunteers, members of missions and their families of any third country or of any international organization performing a similar mission in the Kingdom of Cambodia.

ARTICLE VI

The Royal Government of Cambodia shall bear claims, if any arises, against the Experts, the Senior Volunteers and members of the Missions resulting from, occurring in the course of, or otherwise connected with, the performance of their duties, except when the two Governments agree that such claims arise from gross negligence or willful misconduct on the part of the Experts, the Senior Volunteers or members of the Missions.

ARTICLE VII

- 1. (1) In case JICA provides the Royal Government of Cambodia with equipment, machinery and materials, the Royal Government of Cambodia shall exempt such equipment, machinery and materials from consular fees, taxes including customs duties and fiscal charges, as well as from the requirements of obtaining import license and certificate of foreign exchange coverage, in respect of the importation. The equipment, machinery and materials mentioned above shall become the property of the Royal Government of Cambodia upon being delivered c.i.f. at the port of the disembarkation to authorities concerned of the Royal Government of Cambodia.
- (2) In case JICA provides the Royal Government of Cambodia with equipment, machinery and materials, the Royal Government of Cambodia shall exempt such equipment, machinery and materials from taxes including value added tax and fiscal charges in respect of the local purchase.
- (3) The equipment, machinery and materials mentioned in sub-paragraph (1) and (2) shall be utilized for the purpose specified in the arrangements referred to in Article II of this Agreement unless otherwise agreed upon between the authorities concerned of the two Governments.
- (4) The expenses for the transportation within the Kingdom of Cambodia of the equipment, machinery and materials mentioned in sub-paragraph (1) and (2) and the expenses for their replacement, maintenance and repair shall be borne by the Royal Government of Cambodia.
- 2. (1) The equipment, machinery and materials, prepared by the Government of Japan, necessary for the performance of the duties of the Experts, the Senior Volunteers and members of the Missions shall remain the property of the Government of Japan unless otherwise agreed upon between the authorities concerned of the two Governments.

- (2) The Royal Government of Cambodia shall exempt the Experts, the Senior Volunteers and members of the Missions from consular fees, taxes including customs duties and fiscal charges, as well as from the requirements of obtaining import license and certificate of foreign exchange coverage, in respect of the importation of the equipment, machinery and materials mentioned in subparagraph (1).
- (3) The Royal Government of Cambodia shall exempt the Experts, the Senior Volunteers and members of the Missions from taxes including value added tax and fiscal charges in respect of the local purchase of the equipment, machinery and materials mentioned in sub-paragraph (1).

ARTICLE VIII

The Royal Government of Cambodia shall maintain close contact, through organizations designated by it, with the Experts, the Senior Volunteers and members of the Missions.

ARTICLE IX

- 1. The Royal Government of Cambodia shall admit JICA to maintain an overseas office of JICA in the Kingdom of Cambodia (hereinafter referred to as the "Office") and shall accept a resident representative and his/her staff to be dispatched from Japan (hereinafter referred to as the "Representative" and the "Staff" respectively) who perform the duties to be assigned to them by JICA relative to the technical cooperation programs under this Agreement in the Kingdom of Cambodia.
- 2. The Royal Government of Cambodia shall:
 - (1) (a) exempt the Representative, the Staff and their families from taxes including income tax and fiscal charges imposed on or in connection with salaries and any allowances remitted to them from overseas;
 - (b) exempt the Representative, the Staff and their families from consular fees, taxes including customs duties and fiscal charges, as well as from the requirement of obtaining import license and certificate of foreign exchange coverage, in respect of the importation of:

- (i) luggage;
- (ii) personal effects, household effects and consumer goods; and
- (iii) one motor vehicle per Representative, per Staff, per family of the Representative and per that of the Staff assigned to stay in the Kingdom of Cambodia;
- (c) exempt the Representative, the Staff and their families who do not import any motor vehicle into the Kingdom of Cambodia from taxes including value added tax and fiscal charges in respect of the local purchase of one motor vehicle per Representative, per Staff, per family of the Representative and per that of the Staff;
- (d) exempt the Representative, the Staff and their families from the registration fee of the motor vehicles mentioned in (b)(iii) and (c);
- (e) permit the Representative, the Staff and their families to enter, leave and sojourn in the Kingdom of Cambodia for the duration of their assignment therein, offer them the convenience for procedures of alien registration requirements, and exempt them from consular fees;
- (f) issue identification cards and special passes to the Representative and the Staff to enter airport/seaport beyond passport control point to receive and send off the Experts, the Senior Volunteers and members of the Missions;
- (g) offer the Representative, the Staff and their families the convenience for acquisition of car driving license; and
- (h) carry out other measures necessary for the performance of the duties of the Representative and the Staff;
- (2) (a) exempt the Office from consular fees, taxes including customs duties and fiscal charges, as well as from the requirements of obtaining import license and certificate of foreign exchange coverage, in respect of the importation of the equipment, machinery, motor vehicles and materials necessary for activities of the Office;

- (b) exempt the Office from taxes including value added tax and fiscal charges in respect of the local purchase of the equipment, machinery, motor vehicles and materials necessary for the functions of the Office; and
- (c) exempt the Office from taxes including income tax and fiscal charges imposed on or in connection with office expenses remitted from overseas.
- 3. The motor vehicles mentioned in paragraph 2 shall be subject to payment of taxes including customs duties if they are subsequently sold or transferred within the Kingdom of Cambodia to individuals or organizations not entitled to exemption from such taxes or similar privileges.
- 4. The Royal Government of Cambodia shall accord the Representative, the Staff and their families as well as the Office such privileges, exemptions and benefits as are no less favorable than those accorded to representatives, staff and their families as well as offices of any third country or of any international organization performing a similar mission in the Kingdom of Cambodia.

ARTICLE X

The Royal Government of Cambodia shall take necessary measures to ensure security of the Experts, the Senior Volunteers, members of the Missions, the Representative, the Staff and their families staying in the Kingdom of Cambodia.

ARTICLE XI

The Royal Government of Cambodia and the Government of Japan shall consult with each other in respect of any matter that may arise from or in connection with this Agreement.

ARTICLE XII

1. The provisions of this Agreement shall also apply, after the entering into force of this Agreement, to the specific technical cooperation programs which have commenced prior to the entering into force of this Agreement, and to the Experts, the Senior Volunteers, members of the Missions, the Representative, the Staff and their families staying in the Kingdom of Cambodia as well as to the equipment, machinery and materials related to the said programs.

2. The termination of this Agreement shall neither affect the specific technical cooperation programs being carried out until the date of the completion of the said programs, unless otherwise decided upon by mutual consent between the two Governments, nor affect the privileges, exemptions and benefits accorded to the Experts, the Senior Volunteers, members of the Missions, the Representative, the Staff and their families staying in the Kingdom of Cambodia for the performance of their duties in connection with the said programs.

ARTICLE XIII

- 1. This Agreement shall enter into force on the date of the signature thereof.
- 2. This Agreement shall remain in force for a period of one year, and shall be automatically renewed every year for another period of one year each, unless either Government has given to the other Government at least six months' written advance notice of its intention to terminate the Agreement.

IN WITNESS WHEREOF the undersigned, duly authorized thereto, have signed this Agreement.

DONE in duplicate in English at Phnom Penh on June 17, 2003.

For the Royal Government of Cambodia:

For the Government of Japan:

川口順子

MINUTES OF MEETING BETWEEN JAPAN INTERNATIONAL COOPERATION AGENCY AND

MINISTRY OF WATER RESOURCES AND METEOROLOGY OF THE ROYAL GOVERNMENT OF CAMBODIA

ON

THE JAPANESE TECHNICAL COOPERATION FOR THE TECHNICAL SERVICE CENTER FOR IRRIGATION SYSTEM PROJECT PHASE 2 IN THE KINGDOM OF CAMBODIA

Resident Representative of the Japan International Cooperation Agency (hereinafter referred to as "JICA") Cambodia Office and Ministry of Water Resources and Meteorology (hereinafter referred to as "MOWRAM") had a series of meetings for the purpose of working out the details of the technical cooperation programme concerning the Technical Service Center for Irrigation System Project Phase 2 (hereinafter referred to as "the Project").

As a result of the discussions, JICA and MOWRAM agreed to recommend to their respective Governments the matter referred to in the Record of Discussions (hereinafter referred to as "R/D") signed on January 4, 2006.

Both JICA and MOWRAM also agreed to make this Minutes of Meeting in order to confirm the mutual understanding reached through the discussions as attached hereto.

Phnom Penh, Cambodia, January 4, 2006

HE VENG SAKHON

Secretary of State
Ministry of Water Resources
and Meteorology
The Kingdom of Cambodia

Mr. JURO CHIKARAISHI

Cambodia

Cambodia

Resident Representative
Cambodia Office
Japan International Cooperation Agency
Japan

THE ATTACHED DOCUMENT

PROJECT DESIGN MATRIX

As a result of the discussions, both sides agreed to adopt the Project Design Matrix (hereinafter referred to as "PDM") shown in the ANNEX 1. PDM specifies the objectives, outputs and activities of the Technical Service Center for Irrigation System Project Phase 2 (hereinafter referred to as "the Project") and it is used for monitoring and evaluation of the Project activities and achievements. PDM may be modified upon the approval of the Joint Coordination Committee (hereinafter referred to as "JCC") within the framework of R/D when necessity arises in accordance with the progress of the Project.

TENTATIVE FRAMEWORK OF THE PROJECT

JICA and MOWRAM have jointly formulated the Tentative Schedule of Implementation (hereinafter referred to as "TSI") shown in ANNEX II. TSI has been formulated in connection with R/D signed by JICA and MOWRAM.

TSI may be modified upon the approval of JCC within the framework of R/D when necessity arises in accordance with the progress of the Project.

3. PLAN OF OPERATION

Within one year from the start of the Project, the Plan of Operations will be completed on the occasion of the Project Consultation Study and authorized by both sides at JCC.

4. UTILIZATION OF THE OUTPUT OF THE PREVIOUS PROJECT

Both sides agreed that the Project should be conducted with utilizing the inputs and outputs of the previous project, such as the equipment, materials and counterpart personnel.

ESTABLISHMENT OF TSC AS AN OFFICIAL ORGANIZATION

MOWRAM would make necessary arrangements and take action for establishing TSC as an official organization. Progress of the establishment will be informed to JICA.

6. LOCAL COST

MOWRAM agreed to bear the 30% of local cost for the Project and to take necessary arrangement with the relevant organizations.

7. STARTING ACTIVITIES ON MAKING TECHNICAL MANUALS BEFORE ARRIVAL OF LONG-TERM EXPERTS

Before arrival of Long-term experts, the counterpart personnel of TSC will start activities on making technical manuals according to TSI.

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ANNEXI Project Design Matrix (PDM

Name of the Project: The Technical Service Center for Irrigation System Project Phase-2

Implementing Organization on the Project: Ministry of Water Resources and Meteorology (MOWRAM)

Term of the Cooperation: 3 years and 6months starting from January 2006

Supporting Organization: Japan International Cooperation Agency (JICA)

Target Group: Full time counterpart in the TSC, the engineers and technicians in MOWRAM and PDWRAM and the farmers at Pilot Sites

Technical Service Center for Irrigation System (TSC)
Model Site (PS): 260ha-special field within the Kandal Stung Irrigation Area, Kandal Province

	te (PS) : the Kandal Stung Irrigation Area. Kandal Province. Thlea Ma Orm Area. Pursat Province Narrative Summary		Objectively Verifiable Indicators		Means of Verification	Important Assumptions
erali G	pal					
Livelihood of the farmer's households is improved by stabilizing their agricultural productivity through efficient vater resource management in the irrigation areas conducted by the trained engineers and technicians in MOWRAM and PDWRAM.		1 2 3	Irrigated area is increased. Unit yield of rice is improved. Agricultural income in farm households is improved.		Profile data of respective areas in the project proposals. Base-line indicators by the statistic data. Social research on the Ex-post Evaluation.	
oject Pu	rpose		(Until the end of the Project)			
			Engineers and technicians who participated the training and OJT achieve the assigned target in the curricula.	•	Documents about the evaluation of respective training courses on the Project.	Engineers and technicians who participated in the trainings remain at MOWRAM and PDWRAM and continue to assist farmers in Cambodia.
The technical capacity of MOWRAM and PDWRAM is improved. The farmers who have participated in the Project activities at the Pilot Sites (PS) are able to practice water management in terminal canals.		2	Total length of the terminal canals with efficient water management is extended.	2	Ex-post investigation by the Project about implementation, operation and maintenance of terminal canals at the Pilot Sites	 The circumstances of the agricultural product mark don't get worse.
nagome			The number of farmers who practice the water management work learned at the Project is increased.		Social research conducted by the Project at the Pilot Sites.	Workers in each farmer's household is secured in th Target Area.
itputs						Farmers in the national irrigation project are not against the activities of the water management.
ithurs	`	(Until the	end of the Project)			
	The following outputs are expected to be achieved at TSC.		The TSC staff complete to make planned curricula of the training courses.	1 1-1 1-1-1	The numbers of planned and implemented curricula for the training courses.	1 Engineers and technicians who participated in the trainings remain at MOWRAM and PDWRAM.
	·	1-1-2	The TSC staff complete to produce planned materials for the training courses.	1-1-2	The numbers of planned and produced materials for the training courses.	2 The financial resources for MOWRAM are secured
1-I	Establish the training system					
1-2	Set up the technical manuals	1-2 1-2-1	The TSC staff complete to make a list of planned technical manuals.	1-2 1-2-1	The list of planned technical manuals.	
1-3	Manage the technical information	1-2-2 1-3 1-3-1			The numbers of planned and produced technical manuals. Established technical library.	
		1-3-2	is established. A list of materials in the library is	1-3-2	Completed list of materials in the	
	The technical capacity of the engineers and technicians in MOWRAM and PDWRAM is well trained through the trainings at TSC and on-the-job-trainings (OIT) at MS.	2 2-1	Sites are completed by the trained engineers and technicians in MOWRAM	22-1	Documents about plan and implementation on the construction of the terminal canals on the Project.	
		2-2	and PDWRAM. The assigned trainers in MOWRAM and PDWRAM complete the training courses in the TSC.	2-2	Document about implementation of the training courses.	
		2-3	The assigned trainees in MOWRAM and PDWRAM complete OJT at the Model Sites.	2-3	Document about implementation of OJT.	
With the	teclinical assistance of TSC, the following outputs are expected to be achieved at PS.	3		·		
3-1	The trained engineers and technicians in PDWRAM construct the terminal canals, which make it possible for farmers to easily access irrigation water.	3-1	Total length of the terminal canals with efficient water distribution capacity constructed by the engineers and technicians in PDWRAM is extended.	3-1	Documents about construction and use of the terminal canals on the Project.	
3-2	Farmers start to conduct water management activities at the terminal canals in cooperation with PDWRAM.	3-2	Activities concerned with the water management, such as mowing the grass, dredging in canals and discussion, started with cooperation by PDWRAM.	3-2	Social research conducted by the Project at the Pilot Sites.	. 7

Activity		Inputs			
		<.Japanese Side>		<cambodian side=""></cambodian>	
1 1-1 1-1-1 Make training curricula	1	Dispatch of experts:	1	Assignment of counterpart personnel	
-				and other supporting staff members.	
1-1-2 Make systematized training materials	(1)	Long-term experts: several persons/year	(1)	Project Director	The full-time counterparts continuously work with
	1	such as:			the Proiect.
	l	- Chief Advisor/ Irrigation	(2)	Project Manager	
1-2 1-2-1 Make a technical manual list	.]	- Project coordinator/ Training	(3)	Project Sub-Managers	
1-2-2 Compile technical manuals		- Water management	(4)	Full-time counterpart personnel:	
1-2-3 Translate teclinical manuals into Khmer			1)	Director (when TSC is established,	
	/ / / /	C1		automatically to be Project Sub-	
·	(2)	Short-term experts are sent according to	2)	Deputy Director (when TSC is established)	
1-3 1-3-1 Collect and organize technical information in irrigation sector	,	necessity. Provision of equipment	3}	Engineering Office	
1-5 1-5-1 Concet and organize technical information in Higgston Sector	ا ا	r tovision of equipment	3)	Survey Section	•
	į	m.		Planning and Design Section	
				Construction Section	
1-3-2. Provide technical information	١,	Training of Cambodian counterpart	4)	Water Management Office	
1-3-2 Frovine technical information	ľ	personnel in Japan and in other countries.	4)	Facility Management Section	
		personnes in Japan and in other countries.		Farmer Water Management Section	
				Watershed Management Section	
				Administration and Finance Office	
	[*		5)	Administration and Finance Office Administration Section	
		Budget for local activity			
		Budget for focal activity		Planning and Accounting Section	
				Training Management Section Information Management Section	
2 2-1 Conduct the trainings for the engineers and technicians in MOWRAM and PDWRAM at TSC				information Management Section	
2-2 Conduct OJT for the engineers and technicians in MOWRAM and PDWRAM at MS			2	Provision of land, buildings and	
		•	_	facilities related to the project.	
			3	Provision of machinery necessary for	
		•		the Project.	Pre-Conditions
3 3-1 Provide technical assistance on the construction of terminal canals at PS			4	Allocation of budget for:	Adequate number of qualified counterparts are
3-2 Provide technical assistance on farmers' participatory water management at PS			(1)	Operation and maintenance of irrigation	2 Farmers are not against the Project.
•		+		svstems	
			(2)	Personnel expenses of counterparts and	
			(4)	other supporting staff	Government.
		*.	(3)	Operating expenses necessary for the	
		' i	·	implementation of the Project.	
	•				l l

Abbreviations:
MOWRAM: Ministry of Water Resources and Meteorology
PDWRAM: Provincial Department of Water Resources and Meteorology
TSC: The Technical Service Center (TSC) for Irrigation System

Model Site
Pilot Sites
On-the-job Training MS: PS: OJT:

Remarks: Objectively Verifiable Indicators should be improved more concretely with numerical target value when the Annual Plan of Operation is established.



ANNEX II Tentative Schedule of Implementation

Project Activities 1 Organizational capacity of the TSC on the related technology is developed.		2006				2	007		2008				2009	
			:					:		± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ±	; ; ; ;			
1-1. Establish a training system		!	-}		1					(
1-1-1 Make training curricula					1		1				:	:		
1-1-2 Make systematized training materials							;	:		3~'~ ~ ~ · · ·		-		1
1-2. Set up technical manuals			:		1		-			f= = = = = . : : : :	 ! ! !			!
1-2-1 Make a technical manual list			:	:		 -	!			! !	: !			<u> </u>
1-2-2 Compile technical manuals			:				:				•			:
1-2-3 Translate technical manuals into Khmer					+						} !			
1-3. Manage technical information					†	<u> </u>	<u> </u>							
1-3-1 Collect and organize technical information in irrigation sector			·								;			
1-3-2 Provide technical information			·		+									
2 The technical capacity of the engineers and technicians in MOWRAM and PDWRAM is well trained through the trainings at TSC and OJT at MS. 2-1 Conduct the trainings for the engineers and technicians in MOWRAM and PDWRAM at TSC 2-2 Conduct OJT for the engineers and technicians in MOWRAM and PDWRAM at MS		1												
3 With the technical assistance of TSC, the following outputs are expected to be achieved at PS.		t t t	: : : : : :			\$ \$ \$ \$ \$	1 1 1 1 1 1 1	# # # # # # # # # # # # # # # # # # #		1 F .	t : : : t	1 1 1 1 1	1 1	; ; ; ;
3-1. The trained engineers and technicians in PDWRAM construct the terminal canals, which make it possible for farmers to easily access irrigation water.		1	; ; ; ;			· · · · · · · · · · · · · · · · · · ·	; ; ; ;			t	7	:		:
3-1-1 Provide technical assistance on the construction of terminal canals at PS						1.	1	:						
3-2. Farmers start to conduct water management activities by farmers at the terminal canals in cooperation with PDWRAM.							1					:		
Provide technical assistance on farmers' participatory water management at PS		-	ļ.			;				: :	T			