

(業務参考資料)

農林水産開発調査における

Scope of Work 集

(S / W&M / M)

(1992年4月~1994年2月)

平成6年3月

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農林水産開発調査における Scope of Work 集

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(業務参考資料)

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1126116 [1]

序 文

この度、執務参考資料として、平成4年度及び平成5年度に署名した農林水産開発調査部担当の開発調査案件の調査実施細則 (Scope of Work)及び議事録 (Minutes of Meeting)を取りまとめ、「農林水産開発調査における Scope of Work集」(S/W & M/M)並びに「農林水産開発調査におけるMinutes of Meeting集」を作成しました。

本資料は、当部の実績の整理並びに今後の農林水産分野の開発調査の実施細則及び議事録の作成の参考とするために取りまとめたものです。部内での活用はもとより、その他関係機関等においても、今後の業務の参考となれば幸いです。

平成6年3月

国際協力事業団

農林水産開発調査部

部長 小笠原 莊一

目 次

農業開発調査課案件 (S/W&M/M)

2-1

NO.	地 域	国 名	案 件 名	署名年月	頁
1	ア ジ ア	カンボディア	ブノンベン周辺地域農村総合開発計画	1993. 1	1
2		中 国	黒龍江省国営農場典型区農業総合開発計画	1992. 9	11
3		”	広東省順徳市斉杏輪中地区農村地域排水計画	1993. 8	38
4		インドネシア	ギリラン灌漑計画	1993. 3	48
5		”	ヌサテンガラ地域小規模溜池農村開発計画	1993.10	59
6		マレーシア	半島マレーシア小規模溜池開発計画	1993. 2	70
7		タ イ	タイ南部農地復旧保全計画	1993. 4	82
8		ネ パ ール	カトマンズ盆地灌漑改善計画	1992.12	93
9		パキスタン	チャシュマ右岸揚水灌漑計画	1992.11	103
10		フィリピン	南部ルソン高地畑地灌漑計画	1993. 2	115
11		”	バラワン南部農地開発計画	1993. 3	125
12		スリ・ランカ	内陸部農村復興計画	1992.11	134
13		ヴェトナム	南バックドゥン地区農村地域排水計画	1993.12	143
14	中近東	エジプト	オモウム地区農村地域排水改良計画	1993. 9	153
15	アフリカ	エチオピア	ベッチョ平原農業開発計画	1993.12	163
16		ザンビア	ザンベジ川流域モング地域農村開発計画	1993. 8	175
17		コートジボアール (象牙海岸)	ヌジ川流域農村総合開発計画	1993. 2	186
18		マ リ	ナラ地域農業開発計画	1993. 3	209
19	中南米	ボリヴィア	サンタクルス市農産物流通システム改善計画	1993. 4	228
20		ドミニカ共和国	リモン・デル・ジュナ地域農業開発計画	1993. 8	246
21	欧 州	ルーマニア	ルーマニア・ブランチア県北東部地域灌漑整備計画	1993.12	269

NO.	地 域	国 名	案 件 名	年 月	頁
1	ア ジ ア	インドネシア	東ヌサテンガラ州半乾燥森林復旧計画	1993. 9	280
2		モンゴル	セレンゲ県森林管理計画	1994. 1	290
3		マレーシア	北部サバ州造林計画	1992.10	300
4	中近東	モロッコ	薪炭林計画	1992. 4	317
5	アフリカ	ザンビア	南西地域チーク林資源調査	1993.10	336
6	中南米	アルゼンティン	チャコ地域森林資源調査	1993. 7	349
7	大洋州	ソロモン諸島国	全国水産物流通網改善計画	1993. 2	379

(凡例) S/W : SCOPE OF WORK M/M : MINUTES OF MEETING

農業開発調査案件

(S/W&M/M)

SCOPE OF WORK
FOR
THE MASTER PLAN STUDY
ON
THE INTEGRATED AGRICULTURAL AND RURAL DEVELOPMENT PROJECT
IN
THE SUBURBS OF PHNOM PENH

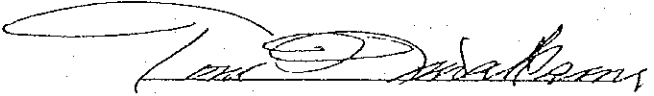
AGREED UPON BETWEEN
MINISTRY OF AGRICULTURE OF CAMBODIA
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

PHNOM PENH, JANUARY 26, 1993

FOR H. E. HOR NAMHONG
MEMBER OF S.N.C.
COORDINATOR FOR ECONOMIC
COOPERATION WITH JAPAN

Souk song

CHHEA SONG
VICE MINISTER
MINISTRY OF AGRICULTURE


TORU KAWAKAMI
LEADER
PREPARTORY STUDY TEAM
JAPAN INTERNATIONAL
COOPERATION AGENCY

I. Introduction

In response to the request of Cambodia, the Government of Japan has decided to conduct the Master Plan Study on the Integrated Agricultural and Rural Development Project in the Suburbs of Phnom Penh (hereinafter referred to as "the Study"), in accordance with the relevant laws and regulations in force in Japan.

Accordingly, Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of technical cooperation programs of the Government of Japan, will undertake the Study in close cooperation with the concerned authorities of Cambodia.

The present document sets forth the scope of work with regard to the Study.

II. Objectives of the Study

The objectives of the Study are:

1. to prepare an overall Master Plan for the Study Area focusing on the water resources, agricultural resources, social and agricultural infrastructures, rural living improvements, etc.;
2. to conduct a Feasibility Study for the selected project area identified through the Master Plan in order to formulate an integrated agricultural and rural development plan;
3. to carry out technology transfer to the Cambodian counterpart personnel during the Study.

III. Study Area

The Study Area covers approximately 6,000 ha in Tonle Bati of Takeo Province and approximately 10,000 ha in Kandal Stung of Kandal Province.

IV. Scope of the Study

In order to achieve the above objectives, the Study will consist of two(2) phases and the following items.

1. Phase I

1.1. Collection and review of existing data and information and field survey on the following items:

- (1) natural condition (topography, meteorology, hydrology, geology, soil, etc.)
- (2) social condition (population, social organization, education, sanitation, employment, socio-economy, land tenure, etc.)
- (3) agriculture and livestock (farming practice, land use, cultivation and yield, extension for improving agriculture and home life, etc.)
- (4) agricultural infrastructures (irrigation and drainage, farm roads, marketing facilities, etc.)
- (5) agro-economy (marketing, investment, productivity, finance, processing, farmers' organizations, etc.)
- (6) social infrastructures (transportation, domestic water, social welfare, etc.)
- (7) environmental aspects

1.2. Evaluation on the available water resources and land resources.

1.3. Review of the existing development plans and projects in the Study Area.

1.4. Formulation of a master plan for the integrated agricultural and rural development for the Study Area which includes the following:

- (1) establishment of basic development plan
- (2) establishment of a water allocation plan
- (3) sector and area-wise identification of the priority project taking into consideration on the following components;
 - restructuring of agricultural infrastructures including water resources, irrigation/drainage and creation of farmland,
 - agricultural development including improvement of farming techniques, agricultural extension and farmers's organization,

- rural development including securing domestic water, transportation and rural living improvements.
- others considered necessary

2. Phase II

- 2.1. Collection of data and information in the selected project area through additional field surveys.
- 2.2. Formulation of the integrated rural development project in the selected project area.
- 2.3. Preparation of a preliminary design of the main facilities.
- 2.4. Preparation of the project implementation plan.
- 2.5. Estimation of the project costs and benefits.
- 2.6. Evaluation of the project.
- 2.7. Recommendation.

V. Study Schedule

The Study will be carried out in accordance with the tentative schedule attached in Annex.

VI. Report

JICA will prepare and submit the following reports in English to Cambodia.

1. Inception Report
Twenty (20) copies at the commencement of the Phase I field work.
2. Progress Report (1)
Twenty (20) copies at the end of the Phase I field work.
3. Interim Report
Twenty (20) copies at the commencement of the Phase II field work.
4. Progress Report (2)
Twenty (20) copies at the end of the Phase II field work.

5. Draft Final Report
Twenty (20) copies at the end of the Phase II home office work. The Cambodian side will provide its comments on the Draft Final Report to JICA within one (1) month after receiving the Draft Final Report.
6. Final Report
Fifty (50) copies within two (2) months after the receipt of comments on the Draft Final Report.

VII. Undertakings of Cambodian Side

1. To facilitate smooth conduct of the Study, the Cambodian side shall take necessary measures:
 - (1) to secure the safety of the Japanese study team;
 - (2) to permit the members of the Japanese study team to enter, leave and sojourn in Cambodia for the duration of their assignment therein, and exempt them from visa fees;
 - (3) to exempt the members of the Japanese study team from taxes, duties, fees and any other charges on equipment, machinery and other materials to be brought into and out of Cambodia for the conduct of the Study;
 - (4) to exempt the members of the Japanese study team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Japanese study team for their services in connection with the implementation of the Study, if necessary;
 - (5) to provide necessary facilities to the Japanese study team for the remittance as well as the utilization of the funds introduced into Cambodia from Japan in connection with the implementation of the Study, if necessary;
 - (6) to secure permission for entry into private properties or restricted areas for the implementation of the Study;
 - (7) to secure permission for the Japanese study team to take all data and documents (including photographs and maps) related to the Study out of Cambodia to Japan by the Japanese study team; and
 - (8) to provide medical services as needed. Its expenses will be chargeable on the members of the Japanese study team.

2. Cambodian side shall bear claims, if any arises, against the members of the Japanese study team resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Japanese study team.
3. Ministry of Agriculture shall act as a counterpart agency to the Team and also as coordinating body in relation with other Cambodian organizations concerned for the smooth implementation of the Study.
4. Ministry of Agriculture shall act as the implementing agency. It shall undertake, at its own expense, to provide the Japanese study team with the following, in cooperation with other organizations concerned:
 - (1) available data and information related to the Study;
 - (2) counterpart personnel;
 - (3) suitable office space with necessary equipment and furniture; and
 - (4) credentials or identification cards.

VIII. Undertakings of Japanese Side

For the implementation of the Study, JICA shall take the following measures:

- (1) to dispatch, at its own expense, the study team to Cambodia,
 - (2) to pursue technology transfer to the Cambodian counterpart personnel in the course of the Study, and
 - (3) to provide necessary equipment for the implementation of the Study, which will remain the property of the Government of Japan unless otherwise agreed upon.
- ✓

IX. Consultation

Japanese side and Cambodian side shall consult with each other in respect of any matter that may arise from or in connection with the Study.

ANNEX

TENTATIVE SCHEDULE

Month																	
Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Work in Cambodia	<input type="checkbox"/>			<input type="checkbox"/>				<input type="checkbox"/>								<input type="checkbox"/>	
Work in Japan	<input type="checkbox"/>					<input type="checkbox"/>					<input type="checkbox"/>						
Submission of Report	*				*		*		*		*			*		*	
	Ic/R				P/R(1)		It/R		P/R(2)					DF/R		F/R	
Phase	Phase I							Phase II									
	←----->							←----->									

(Note) Ic/R : Inception Report
P/R(1) : Progress Report(1)
It/R : Interim Report
P/R(2) : Progress Report(2)
DF/R : Draft Final Report
F/R : Final Report

✓

MINUTES OF MEETING ON
THE SCOPE OF WORK FOR THE MASTER PLAN STUDY ON
THE INTEGRATED AGRICULTURAL AND RURAL DEVELOPMENT PROJECT
IN THE SUBURBS OF PHNOM PENH IN CAMBODIA

The Preparatory Study Team headed by Mr. Toru Kawakami was dispatched by the Government of Japan to Cambodia from 21 January to 27 January 1993 for concluding the Scope of Work for the Master plan Study on the Integrated Agricultural and Rural Development Project in the Suburbs of Phnom Penh in Cambodia with concerned officials of Cambodia.

The Preparatory Study Team and the Cambodian side had a series of meetings and discussions during this period which results are as follows;

1. Both sides confirmed that the studies on development of water resources, agricultural resources, social and agricultural infrastructures, and programs for rural living improvements are important for formulating the Master Plan of the study-area.
2. In order to smoothly carry out the project-study the Preparatory Study Team proposed the formulation of a Steering Committee from the Cambodian side upon the start of the project-study. The Cambodian side agreed with this idea.
3. The Cambodian side agreed to provide counterpart personnel for members of the JICA Study Team upon the start of the project-study.
4. The Preparatory Study Team requested the Cambodian side to offer an office-space and equipment for the JICA Study Team as noted in the Scope of Work for the project-study but the Cambodian side explained the present situation of insufficient office-spaces and equipment in the Cambodian side for responding to this request. The Cambodian side, however, will assist the JICA Study Team for obtaining a proper office-space for the project-study.
5. The Cambodian side requested the Preparatory Study Team to bring into Cambodia the following equipment for carrying out the project-study.

- (1) Copy-machine(s)
 - (2) Land-survey equipment
 - (3) Hydro-meteorological equipment
 - (4) Other necessary equipment for the study
6. The Cambodian side also requested the equipment brought into Cambodia for the project-study to be handed over to the Cambodian side after the study-completion. The Preparatory Study Team promised to convey this request to JICA headquarters.
 7. Regarding the training studies of Cambodian counterparts in Japan as requested by the Cambodian side, the Preparatory Study Team promised to convey this request to JICA headquarters.
 8. Regarding the environmental studies and evaluation for this project, the Cambodian side will assist the JICA Study Team to get necessary data and information for related studies on environmental aspects which final justification will be made by the Cambodian side to submit to the JICA Study Team for notifying in the Final Report.
 9. The coverage of the study-area is notified in the attached location-map.
 10. The study-schedule noted in the Scope of Work is tentative and would be subjected to change(s) upon circumstances.

PHNOM PENH, JANUARY 26, 1993

FOR H. E. HOR NAMHONG
MEMBER OF S.N.C.
COORDINATOR FOR ECONOMIC
COOPERATION WITH JAPAN

Chhea Song

CHHEA SONG
VICE MINISTER
MINISTRY OF AGRICULTURE

Toru Kawakami
TORU KAWAKAMI
LEADER
PREPARATORY STUDY TEAM
JAPAN INTERNATIONAL
COOPERATION AGENCY

LIST OF PARTICIPANTS

CAMBODIAN SIDE

CHHEA SONG	VICE MINISTER MINISTRY OF AGRICULTURE
CHAN TONG YVES	DIRECTOR OF PLANNING DEPARTMENT MINISTRY OF AGRICULTURE
THE LIM THONG	DIRECTOR OF DEPARTMENT OF HYDROLOGY MINISTRY OF AGRICULTURE
IT NODY	DIRECTOR OF AGRONOMY MINISTRY OF AGRICULTURE

JAPANESE SIDE

TORU KAWAKAMI	LEADER PREPARATORY STUDY TEAM
JUNJI TAKAHASHI	RURAL DEVELOPMENT PREPARATORY STUDY TEAM
HIROKO TABE	RURAL LIVING IMPROVEMENT PREPARATORY STUDY TEAM
HIROMI MOTOMURA	COORDINATOR PREPARATORY STUDY TEAM
BOGO ABE	ENVIRONMENT PREPARATORY STUDY TEAM
AKIRA HAYASHI	INTERPRETER PREPARATORY STUDY TEAM
SHUHEI KIKUCHI	EMBASSY OF JAPAN

中華人民共和國黑龍江省
國營農場典型區
農業綜合開發計畫

實 施 細 則

日 本 國 國 際 協 力 事 業 團
中 華 人 民 共 和 國 農 業 部 農 墾 司

この実施細則は、次の二機関により、合意されるものである。

日本国国際協力事業団

中華人民共和国農業部農墾司

この実施細則は、次の三者により、確認されるものである。

1992年 9月18日

日 本 国
国 際 協 力 事 業 団
事 前 調 査 団 長
木 村 勝

木村勝

中 華 人 民 共 和 国
農 業 部
農 墾 司 副 司 長
劉 連 馥

劉連馥

中 華 人 民 共 和 国
黑 龍 江 省
国 營 農 場 總 局 副 局 長
魏 克 佳

魏克佳

日本国政府は、中華人民共和国政府の提案に基づき、黒龍江省国营農場典型区農業総合開発計画調査の実施を決定し、1992年 9月18日黒龍江省国营農場典型区農業総合開発計画調査の実施に関する口上書を中華人民共和国政府と交換した。

日本国政府による技術協力の実施機関である国際協力事業団は、日本国内において施行されている法律及び規則に従い本調査を実施する。

農業部農墾司は中華人民共和国政府の本調査に関する担当機関として、中華人民共和国において施行されている法律及び規則に従い中華人民共和国政府関係機関の調整を行うとともに国際協力事業団が派遣する調査団と協力して本調査の円滑な実施を図る。

1992年 9月18日日本国政府が中華人民共和国政府に発した口上書、及び中華人民共和国政府の口上書による回答に基づき、国際協力事業団と農業部農墾司は協力の内容、範囲及び調査工程、並びに協力を進めるにあたって両国政府が取るべき措置等の詳細について本実施細則を定めた。

1 協力の内容及び範囲

- (1) 日本側は、中国側と協力して、黒龍江省開拓区農業総合開発に資するため、濃江国营農場及び友誼国营農場に農業開発にかかる典型区を選定し、フィージビリティ調査を行う。
- (2) 日本側は、本調査の期間中、調査に参画する中国側専門家に対し、現地調査業務を通じ技術移転を行う。

2 調査対象地域

本調査の調査対象地域は、黒龍江省開拓区内の濃江国营農場及び友誼国营農場（以下「二国营農場」と云う）とする。

3 調査の内容

中国側が策定している黒龍江省開拓区農業総合開発計画に関する開発構想にかかる二国营農場に対して開発基本計画を策定する。この開発基本計画の策定等を通じて、典型区（各国营農場当たり1箇所、計2箇所）を選定し、フィージビリティ調査を実施する。

また、本調査は、三段階に分かれ、それぞれ中国における現地調査と日本における国内作業により構成される。

(1) 第一次調査

1) 第一次現地調査

必要な既存資料の収集・整理及び現地調査を行い、調査地域の現状を把握し、黒龍江省開拓区農業総合開発計画に関する開発構想の検討を行うと共に、二国营農場の開発基本計画の方針を概定する。また、二国营農場の開発基本計画にかかる初期環境調査に必要な現地調査を行う。

既存資料の収集・整理及び現地調査の対象項目は、次のとおり。

① 自然条件

- a. 地形 b. 気象 c. 水文 d. 地下水 e. 水質 f. 地質 g. 土質 h. 土壌 i. 自然環境

② 社会状況

- a. 土地利用 b. 人口 c. 社会構造 d. 地域経済 e. 社会基盤 f. 環境保全 g. 地域開発計画

③ 農業状況

- a. 土地利用 b. 作物体系 c. 農業生産基盤 d. 栽培 e. 農業経営 f. 農業機械
g. 農業組織 h. 普及・支援組織 i. 農産物加工 j. 市場・流通

④ 畜産業状況

- a. 畜産施設 b. 飼育対象種 c. 畜産技術（飼料を含む） d. 生産組織 e. 普及・支援組織 f. 畜産加工 g. 市場・流通
- ⑤水資源及び農業水利
 - a. 排水 b. 灌漑 c. 河川・貯水池及び地下水利用 d. 農業水利施設 e. 水管理体制 f. 洪水被害及び対策
- ⑥水産業状況
 - a. 養殖池施設 b. 養殖対象種 c. 養殖技術 d. 生産組織 e. 普及・支援組織 f. 水産加工 g. 市場・流通

2) 第一次国内作業

第一次現地調査結果を踏まえ、二国営農場の開発基本計画（初期環境評価を含む）の方針を策定する。

(2) 第二次調査

1) 第二次現地調査

二国営農場の開発基本計画の方針に基づき、補足資料収集及び補足現地調査を行い、開発基本計画を擬定すると共に、典型区候補地の選定及び開発方針の検討を行う。

2) 第二次国内作業

第一次調査及び第二次現地調査の結果に基づき、下記項目からなる二国営農場の開発基本計画を作成すると共に、典型区の選定及び開発方針の策定を行う。

- ①土地利用計画
- ②農業開発計画
- ③畜産開発計画
- ④灌漑・排水計画
- ⑤水産開発計画
- ⑥農村計画
- ⑦農業技術普及計画
- ⑧環境保全計画

(2) 第三次調査

1) 第三次現地調査

各典型区農業開発計画策定にかかわる詳細データ収集及び詳細現地調査を行い、典型区農業開発計画にかかる以下の計画を擬定する。

- ①土地利用計画
- ②農業開発計画
- ③畜産開発計画
- ④灌漑・排水計画
- ⑤水利用管理計画

2) 第三次国内作業

第一次・第二次調査及び第三次現地調査の結果に基づき詳細に解析・検討を加え、下記項目からなる各典型区農業開発計画の策定を行う。

- ①土地利用計画
- ②農業経営計画
- ③畜産開発計画
- ④灌漑・排水計画
- ⑤水利用管理計画
- ⑥農村計画
- ⑦農産品加工計画
- ⑧水産開発計画
- ⑨施設概略設計
- ⑩施設維持管理計画
- ⑪農業技術普及計画
- ⑫環境保全計画
- ⑬事業実施計画
- ⑭事業費積算・便益算定
- ⑮事業評価
- ⑯環境評価

4 期間及び工程

調査期間及び工程は、別表一1のとおり概ね20ヶ月間とする。

5 報告書

国際協力事業団は、次の報告書を農業部農墾司に提出する。

- (1) 着手報告書 30部
調査実施計画と実施行程を内容とするもので、調査の開始時に提出する。
- (2) 現地報告書(1) 30部
第一次現地調査結果を内容とするもので、第一次現地調査終了時に提出する。
- (3) 中間報告書(1) 30部
第一次国内作業結果を内容とするもので、第二次現地調査開始時に提出する。
- (4) 現地報告書(2) 30部
第二次現地調査結果を内容とするもので、第二次現地調査終了時に提出する。
- (5) 中間報告書(2) 30部
第二次国内作業結果を内容とするもので、第三次現地調査開始時に提出する。
- (6) 現地報告書(3) 30部
第三次現地調査結果を内容とするもので、第三次現地調査終了時に提出する。
- (7) 最終報告書(案) 30部
第一次、第二次及び第三次調査結果を内容とするもので、第三次国内作業終了後に提出する。農業部農墾司は、本報告書(案)受理後1ヶ月以内にこれに対する意見を国際協力事業団に提出する。
- (6) 最終報告書 50部
最終報告書(案)に対する意見を受けた後1ヶ月以内に提出する。

6 中国側がとるべき措置

現地調査を円滑に実施するため、中国側は中華人民共和国において施行されている法律及び規則に従い以下の措置をとる。

- (1) 中国側専門家、事務職員及び作業員等の提供、及びそれにかかわるすべての経費負担
- (2) 現地調査を実施するに当たって、別表一2の中国側が分担する業務の実施及びそれにかかわる経費負担
- (3) 現地調査に必要な作業所及び机、椅子等備品の無償提供、及び宿舎の斡旋（ただし、調査サイトにおいて通常の方法で借り上げが困難な場合の宿舎の無償提供）
- (4) 現地調査のために必要な通訳の無償提供
- (5) 現地調査のために必要な航空機、鉄道、車両及び船舶等の手配（ただし、通常の方法で借り上げが困難な車両及び船舶については、運転手等を含め無償提供）
- (6) 現地調査のため必要な中国国内電話設備の提供、及びそれにかかわる経費負担
- (7) 現地調査に必要な許認可の手続きの実施
- (8) 現地調査のため必要な資料及び情報の提供
- (9) 現地調査のため必要な資料の中国から日本への移送許可
- (10) 現地調査期間中、調査団員に病気、怪我が発生した場合の病院の手配
- (11) 現地調査期間中、調査団員の安全の確保
- (12) 日本から持ち込む資機材の中国国内輸送費の負担
- (13) 日本から持ち込む資機材の輸入及び再輸出に必要な手続き及び非課税処理の実施
- (14) その他軽微な資機材等の一部経費負担

7 日本側がとるべき措置

日本側は、調査に当たって以下の措置をとる。

- (1) 日本側調査団員の技術費、渡航費、現地調査期間中の食事、旅費、宿泊費及び医療費の経費負担（上記6（3）、（5）の中国側が負担する場合を除く。）
- (2) 現地調査を実施するに当たって別表一2の日本側が分担する業務の実施、及びそれに係る経費負担
- (3) 日本から持ち込む資機材の日本から中国の港又は空港までの往復輸送費の負担
- (4) 上記5の報告書の作成

8 本実施細則に定めていない事項については、本調査期間中両者で協議して定めるものとする。

別表一1 調査日程表 (西定案)

項目	延月	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
国内調査																									
		□																							
現地調査																									
報告書																									
		△																							

別表-2

現地調査に関する業務分担

作 業 項 目		日 本 側	中 国 側
地形図 及び 測量	地形図 1/50,000 地形図 1/25,000 地形図 1/10,000		1) 既存地形図の提供
	路線測量 河川測量 及び 地形測量	1) 測量範囲、縮尺、精度については、中国側との協議により決定する。 2) 必要ヶ所の略測及び検測 3) 中国側との協力による最終成果品の作成及び検査	1) 測量作業の実施 2) 日本側による略測及び検測時の労務提供
地質 土質 及び 土壌	地質、土質及び 土壌調査	1) 踏査の範囲、方法については、中国側との協議により決定する。 2) 踏査の実施 3) 地質、土質及び土壌調査の内容及び方法については中国側との協議により決定する。	1) 地質、土質及び土壌調査の実施
地下水	地下水調査	1) 地下水調査の範囲、内容については、中国側との協議により決定する。 2) 地下水観測計画及び仕様書の作成	1) 観測井戸の設置 2) 地下水観測作業の実施
水質	水質調査	1) 水質調査の範囲、内容については、中国側との協議により決定する。	1) 水質調査の実施
環境	環境影響調査及び 環境保全	1) 環境調査仕様書の作成 2) 中国側調査に対する協力 3) 調査結果に対す解析作業への協力	1) 調査の実施 2) 調査結果の解析作業
その他 調査	社会状況調査 農業状況調査 水産業状況調査 その他	1) 現地調査の実施 2) 資料の解析作業	1) 現地調査実施への協力 2) 資料解析作業への協力

中華人民共和國黑龍江省
國營農場典型區
農業綜合開發計畫調查

協 議 議 事 錄

日 本 國 國 際 協 力 事 業 團
中 華 人 民 共 和 國 農 業 部 農 墾 司

中華人民共和國の招請に応じ、日本国国際協力事業団黒龍江省開拓区農業総合開発計画事前調査団一行6名は、1992年9月3日から9月18日までの間、中華人民共和國を訪問した。日本国調査団は調査実施地区を視察するとともに、中華人民共和國国家科学技術委員会、農業部、黒龍江省国营農場総局等と友好的かつ真摯な協議を行った。協議の中で双方が確認した主要事項は、次のとおりである。

1 中国側実施機関について

農業部農墾司を本調査の実施機関とし、調査作業は下部機関である国营農場総局が担当することを双方確認した。

2 黒龍江省開拓区農業総合開発に資するため、濃江国营農場および友誼国营農場の開発基本計画とともに典型区の農業開発計画を策定する。調査を円滑かつ効率的に実施するため、中国側で既に策定されている黒龍江省開拓区農業総合開発にかかる開発構想について必要な検討を行うこととした。

なお、典型区は、基本的に、濃江国营農場については作業区、友誼国营農場については分場の単位で、選定することとした。

3 本格調査の範囲と内容について

日本側は、上記に基づき、本格調査の内容を取りまとめた実施細則案を説明した。

(1) これに対して、中国側は以下のとおり意見を述べた。

① 本格調査の内容は妥当である。

② 調査は、1994年12月末までに完了するよう希望する。

③ 中国側も実施体制を早急に整備する。

(2) 日本側は、行程について、日本国における予算執行上の処理等の変更要因があり、暫定的なものである旨説明し、中国側はこれを了承した。

なお、日本側は調査完了時期をできるだけ早めるように努力する旨説明し、中国側はこれを了承した。

(3) 日中双方は環境保全の必要性を理解し、これに必要な調査を実施することを確認し、初期環境調査を実施することとした。

初期環境調査の結果を踏まえ、環境影響評価の実施について日中双方で協議することとした。

(4) 中国側は、調査用機材について、中国側の分担業務を果たすため、次の機材を日本側から提供されることを要望した。

- | | |
|---------------|----|
| ① 調査用車両 (4WD) | 4台 |
| ② 小型コンピューター | 1台 |
| ③ コピー機械 | 3台 |

④ 自動レベル	1台
⑤ 気象観測機器	1セット
⑥ 自動製図機	1セット
⑦ 地下水位測定器	1セット
⑧ ガス・クロマトグラフィー	1台
⑨ 土壌分析器	1セット
⑩ 水質分析器	1セット
⑪ 農薬残留測定器	1台
⑫ 測距測角器	2台

日本側は、中国側の上記要望を日本国政府に伝える旨述べた。
 なお、これに関して、中国側は上記機材が日本国から提供された場合、引き取り及び中国国内輸送の円滑な実施について責任を持つ旨確約した。

4 研修員の受け入れについて

中国側は、日本国における関係各分野の先進技術と経験を学び、かつ日本側調査団の円滑な作業に資するため、本調査に関連する研修員を受け入れることを要望した。

日本側は、上記要望を日本政府に伝えるとともに、中国側において所要の手続きにより要請するよう回答した。

この議事録は、次の三者の署名により、確認されたものとする。

1992年 9月18日

日 本 国
 国際協力事業団
 事前調査団長
 木 村 勝

木村 勝

中 華 人 民 共 和 国
 農 業 部
 農 墾 司 副 司 長
 劉 連 諒

劉連諒

中 華 人 民 共 和 国
 黑 龍 江 省
 国 営 農 場 總 局 副 局 長
 魏 克 佳

魏克佳

中华人民共和国黑龙江省
国营农场典型区农业综合开发计划调查

实施细则

中华人民共和国农业部农垦司
日本国际协力事业团

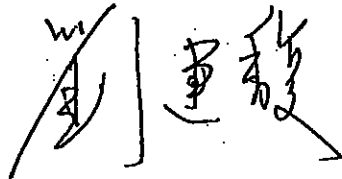
本实施细则由以下双方达成协议：

中华人民共和国农业部农垦司
日本国际协力事业团

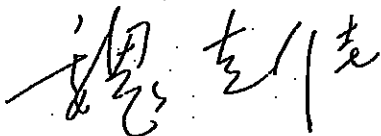
本实施细则由以下双方签字确认：

1992年9月18日

中华人民共和国
农业部
农垦司副司长
刘连波



黑龙江省国营农场总局
副局长
魏克佳



日本国
国际协力事业团
事前调查团长
木村 胜

木村 胜

日本国政府根据中华人民共和国政府的建议，决定对黑龙江省国营农场典型区农业综合开发计划进行调查。并于1992年9月18日就黑龙江省国营农场典型区农业综合开发计划调查的实施与中华人民共和国政府交换了照会。

日本国国际协力事业团为日本国政府进行技术合作的执行机构，将按照日本国现行法律和规章进行该项目调查。

农业部农垦司为中华人民共和国政府进行本调查的执行机构，将按照中华人民共和国的现行法律和规章，负责中华人民共和国有关部门间的协调工作，并与日本国国际协力事业团派遣的调查团进行合作，以便顺利地实施调查。

根据1992年9月18日日本国政府致中华人民共和国政府的照会中第五条，以及中华人民共和国的答复，国际协力事业团和农业部农垦司就有关合作的内容、范围、调查日程以及两国政府为很好进行合作应采取的具体措施等内容，制定了本实施细则。

一、合作的内容及范围：

(1) 日本方面与中国方面合作，为黑龙江省垦区农业综合开发，在嫩江国营农场和友谊国营农场，分别选定有关农业开发的典型区进行可行性研究调查。

(2) 在调查期间，日本方面将通过现场调查向中国方面参加调查的专家进行技术交流。

2、调查区域对象：

本调查的调查区域对象定为在黑龙江省垦区内的浓江国营农场以及友松国营农场（以下称为“两国营农场”）

3、调查内容：

对有关中方已制定的黑龙江省垦区农业综合开发计划的开发设想进行必要的研究，并制定两国营农场的开发基本计划。

通过该开发基本计划的制定等工作，选定典型区（两国营农场分别选定一个典型区，共两个典型区）对此实施可行性研究调查。

本调查分为三个阶段，分别由在中国的现场调查和在日本国内的国内调查所组成。

（1）第一次调查：

1）第一次现场调查

为了进行有关黑龙江省垦区农业综合开发计划的开发设想的研究，收集、整理必要的已有资料，并进行现场调查，掌握调查区域现状。与此同时，概略制定两国营农场的开发基本计划的方针。另外，进行有关两国营农场的开发基本计划的初期环境调查所必要的现场调查。

需要收集、整理的已有资料及现场调查的对象项目如下：

（1）自然条件

- A、地形
- B、气象
- C、水文
- D、地下水
- E、水质
- F、地质
- G、土质
- H、土壤
- I、自然环境

(2) 社会状况

- A、土地利用 B、人口 C、社会结构
D、区域经济 E、基本设施 F、环境保护
G 反城市蔓延计划

- 、土地利用 B、作物体系 C、农业生产基础
D、栽培 E、农业经营 F、农业机械
G、农业生产组织 H、技术推广及体制
I、农产品加工 J、市场流通

(4) 畜牧业状况

- A、畜牧的设施 B、饲养对象的种类
C、畜牧技术(包括饲料) D、生产组织
E、技术推广及支援组织
F、畜产品加工 G、市场流通

(5) 水资源及农田水利

- A、排水 B、灌溉 C、河川、水库及地下水利用
D、农田水利设施及机械 E、水管理体制
F、洪涝灾害及其对策

(6) 水产业状况

- A、养殖池的设施
- B、养殖对象的种类
- C、养殖技术
- D、生产组织
- E、技术推广及体制
- F、水产品加工
- G、市场流通

2) 第一次国内调查

根据第一次现场调查结果制定两国营农场的开发基本计划（包括初期环境评价）的方针。

(2) 第二次调查

1) 第二次现场调查

根据两国营农场的开发基本计划的方针，收集补充资料，进行补充现场调查，概略制定开发基本计划，并预选典型区及选地以及研究开发的方针。

2) 第二次国内调查

根据第一次调查及第二次现场调查的结果，编制以下列项目为内容的两国营农场的开发基本计划，并选定典型区，制定开发方针。

(1) 土地利用计划

(2) 农业开发计划

(3) 畜产开发计划

(4) 灌溉、排水计划

(5) 水产开发计划

- (6) 农村基础设施计划
- (7) 农业技术推广计划
- (8) 环境保护计划

(8) 第三次调查

1) 第三次现场调查

收集有关制定各典型区农业开发计划的详细数据，并进行详细的现场调查，概略制定有关典型区农业开发计划的下列计划：

- (1) 土地利用计划
- (2) 农业开发计划
- (3) 畜产开发计划
- (4) 灌溉、排水计划
- (5) 水利所管理计划

2) 第三次国内调查

根据第一次调查、第二次调查及第三次现场调查的结果进行详细的分析和研究，制定以下列项目为内容的各典型区农业开发计划。

- (1) 土地利用计划
- (2) 农业经营计划
- (3) 畜产开发计划
- (4) 灌溉、排水计划

- (5) 水利利用管理计划
- (6) 农村基础设施计划
- (7) 农产品加工计划
- (8) 水产开发计划
- (9) 设施概要设计
- (10) 设施的维修及管理计划
- (11) 农业技术推广计划
- (12) 环境保护计划
- (13) 项目实施计划
- (14) 项目概算及效益计算
- (15) 项目评价
- (16) 环境评价

4、调查时间及程序

调查时间及程序（如附表1），大约定为20个月。

5、报告书

国际协力事业团向农业部农垦司提出下列报告书：

(1) 开始报告书 30份

报告的内容为调查实施计划及实施日程，于调查开始时提出。

(2) 现场报告书(1) 30份

报告的内容为第一次现场调查结果，于第一次现场调查结束时提出。

(3) 中间报告书(1) 30份

报告的内容为第一次国内调查结果。于第二次现场调查开始时提出。

(4) 现场报告书(2) 30份

报告的内容为第二次现场调查结果。于第二次现场调查结束时提出。

(5) 中间报告书(2) 30份

报告的内容为第二次国内调查结果。于第三次现场调查开始时提出。

(6) 现场报告书(3) 30份

报告的内容为第三次现场调查结果。于第三次现场调查结束时提出。

(7) 最终报告书(草案) 30份

报告的内容为第一次、第二次及第三次调查结果。于第三次国内调查结束后提出。农业部农垦司收到本报告书(草案)后,一个月内向国际协力事业团提出对本报告书(草案)的意见。

(8) 最终报告书 30份

在收到对最终报告书(草案)的意见后,一个月以内提出。

6、中方应采取的措施

为使现场调查顺利进行,中方将依据中华人民共和国通行法律、规章采取如下措施:

(1) 配备中方技术人员、事务人员和工人，并承担其全部费用。

(2) 对于现场调查的实施应承担附表-2中所列中方分担的业务及由此而发生的费用。

(3) 无偿提供现场办公室以及桌、椅等物品；安排宿舍（如在调查现场难以用通常方式租用宿舍时中方应负责无偿提供）。

(4) 为现场调查无偿配备必要的翻译人员。

(5) 为现场调查联系飞机、铁路、车辆和船舶等必要的交通工具（但以通常方式租借困难的车辆和船舶，包括驾驶员应由中方无偿提供）。

(6) 为现场调查无偿提供中国国内电话并承担其费用。

(7) 办理现场调查所需的各种签证手续。

(8) 为调查提供必要的资料在情况需要时。

(9) 办理去中国将调查所需资料运往日本的出境手续。

(10) 在现场调查期间为生病和受伤的调查团成员安排医院进行治疗。

(11) 保证现场调查期间调查团成员的安全。

(12) 负担自日本输入的器材设备在中国境内的运费。

(13) 办理自日本输入器材设备的人境和再出境手续。

(14) 部分负担其他少量材料和小型设备的购置使用费用。

7、日方应采取的措施

对调查日方应采取如下措施：

(1) 负担日方调查团成员的技术费、国际旅费、现场调查期间的食宿费、中国国内旅费以及医疗费等各项经费（上述第3条中第(3)、第(5)款所列由中方负担部分除外）。

(2) 对于现场调查应承担附表-2中所列日方分担的业务及由此而发生的费用。

(3) 负担自日本携入器材设备从日本至中国港口的往返运费。

(4) 提供上述第(3)条中所列器材。

8、其他应知事项及规定的事项 在调查期间由双方议定。

附录-1 调查工程进度计划表

项目	持续月	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
室内调查	□																								
现场调查	▬																								
报告书	△																								

有关现场调查的分二

作业项目		日本方面	中国方面
地形图 及 地形图	地形图 1:60 000 地形图 1:25 000 地形图 1:10 000		1) 提供已有地形图
	地形图测量 河流测量 及地形测量	1) 就测量范围、比例尺和精度与中方协商确定。 2) 对重点地区进行详细测量。 3) 与中方合作完成测量，并对此进行总结。	1) 承担测量工作及 2) 为日方测量及复测提供劳务
地质、土壤及土壤调查	地质、土壤及土壤调查	1) 就调查范围及方法与中方协商确定。 2) 实施调查。 3) 就地质、土壤及土壤调查的设备和方法与中方协商确定。	1) 承担地质、土壤及土壤的实际调查。
地下水	地下水调查	1) 就地下水调查的范围及内容与中方协商确定。 2) 制定地下水观测计划及技术要求。	1) 观测井的施工。 2) 地下水观测井的观测作业。
水质	水质调查	1) 就水质调查的范围及内容与中方协商确定。	1) 水质调查的实施
环境	环境影响调查及环境保护	1) 制定环境调查技术要求。 2) 帮助中方调查。	1) 实施调查。 2) 进行调查结果分析。
其他调查	其他环境调查 及工业、农业、林业调查	1) 进行现场调查。 2) 进行现场分析。	1) 提供日方的现场调查。 2) 提供日方资料分析。

中华人民共和国黑龙江省
国营农场典型区
农业综合开发计划调查

会谈纪要

中华人民共和国农业部农垦司
日本国国际协力事业团

应中华人民共和国的邀请，日本国际协力事业团黑龙江省垦区农业综合开发计划事前调查团一行8名，于1992年9月8日至9月18日访问了中华人民共和国。日本调查团考察调查实施区域的同时，还同中华人民共和国国家科学技术委员会、农业部、黑龙江省国营农场总局等进行了友好、诚挚的会谈，经过协商，双方确认的主要事项如下：

1、关于中方实施机关

双方确认，农业部农垦司为本调查的实施部门，由它下属单位的国营农场总局承担实际调查工作。

2、双方确认，为黑龙江省垦区农业综合开发制定嫩江国营农场及友谊国营农场的开发计划和典型区的农业开发计划。为了顺利而有效地实施调查，对有关黑龙江省垦区农业综合开发的开发设想进行必要的探讨。

另外，嫩江国营农场以作业区、友谊国营农场以分场为单位选定典型区。

3、关于正式调查的范围和内容

日方根据以上所述就有关正式调查为内容的实施细则草案做了说明。

对此日方表示将向日本国政府报告。

另外，关于提供器材，中方明确表示将在日方提供上述器材之际负责器材的顺利接收。

4、关于接受研修人员

中方要求日方：为学习日本的先进技术和经验，以及为协助日方调查团的顺利实施调查，希望日方接受与本调查有关的研修人员。

为此，日方表示将向日本国政府报告上述要求的同时要求中方按规定程序提出申请。

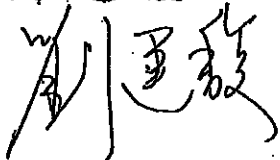
本会谈纪要，由以下三人签名确认

1992年9月16日

中华人民共和国
农业部

农垦司副司长

刘连毅

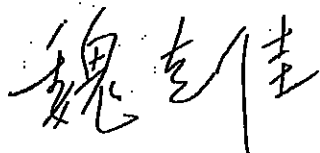


中华人民共和国

黑龙江省国营农场

总局副局长

魏克佳



日本国

国际协力事业团

事前调查团长

木村 胜



中華人民共和國廣東省
順德市齊杏輪中地區
農村排水計畫調查

實 施 細 則

日 本 國 國 際 協 力 事 業 團
中 華 人 民 共 和 國 廣 東 省 水 利 電 力 庁

日本国政府は、中華人民共和国政府の提案に基づき、広東省順徳市斉杏輪中地区農村排水計画調査の実施を決定し、1993年 8月28日広東省順徳市斉杏輪中地区農村排水計画調査の実施に関する口上書を中華人民共和国政府と交換した。

日本国政府による技術協力の実施機関である国際協力事業団は、日本国内において施行されている法律及び規則に従い本調査を実施する。

広東省水利電力庁は中華人民共和国政府の本調査に関する担当機関として、中華人民共和国において施行されている法律及び規則に従い中華人民共和国政府関係機関の調整を行うとともに、国際協力事業団が派遣する調査団と協力して本調査の円滑な実施を図る。

1993年 8月28日日本国政府が中華人民共和国政府に発した口上書5. 及び中華人民共和国政府の口上書による回答に基づき、国際協力事業団と広東省水利電力庁は協力の内容、範囲及び調査工程、並びに協力を進めるにあたって両国政府が取るべき措置等の詳細について本実施細則を定めた。

1 協力の内容及び範囲

- (1) 日本側は、中国側と協力して、広東省順徳市斉杏輪中地区農村排水計画（フィージビリティ調査）を策定する。
- (2) 日本側は、本調査の期間中、調査に参画する中国側専門家に対し、現地調査業務を通じ技術移転を行う。

2 調査対象地域

本調査の調査対象地域は、広東省順徳市内の斉杏輪中地区（約10,000ha）とする。

3 調査の内容

中国側が構想している広東省順徳市斉杏輪中地区農村排水計画に関するフィージビリティ調査を行い、その農村排水計画の策定を行う。

また、本調査は、二段階に分かれ、それぞれ中国における現地調査と日本における国内作業により構成される。

(1) 第一次調査

1) 第一次現地調査

調査に必要な既存資料の収集・整理及び現地調査を行い、調査地域の現状を把握し、広東省順徳市斉杏輪中地区農村排水計画に関する開発構想の検討を行うと共に、農村排水計画の基本方針を概定する。また、農村排水計画に関する初期環境調査に必要な現地調査を行う。

既存資料の収集・整理及び現地調査の対象項目は、次のとおり。

①自然条件

a. 地形 b. 気象 c. 水文 d. 地下水 e. 水質 f. 地質 g. 土質 h. 土壌 i. 自然環境

②社会状況

a. 土地利用 b. 人口 c. 社会構造 d. 地域経済 e. 社会基盤 f. 社会環境 g. 地域開発計画

③農業状況

a. 土地利用 b. 作物体系 c. 農業生産基盤 d. 営農・栽培 e. 農業組織 f. 普及・支援組織 g. 農産物加工 h. 市場・流通

④水資源及び農業水利

a.灌漑・排水 b.河川及び地下水 c.農業水利施設 d.水管理体制 e.洪水被害及び対策

⑤水産業状況

a.養殖施設 b.養殖対象種 c.養殖技術 d.生産組織 e.普及・支援組織 f.水産加工 g.市場・流通

⑥その他

2) 第一次国内作業

第一次現地調査の結果を踏まえ、農村排水計画（環境影響評価の内容・手法を含む）の方針を策定する。

(2) 第二次調査

1) 第二次現地調査

農村排水計画の方針に基づき、補足資料収集及び補足現地調査を行い、農村排水計画を概定する。

2) 第二次国内作業

第一次調査及び第二次現地調査の結果に基づき、下記項目からなる農村排水開発計画を作成する。

- ①土地利用計画
- ②農業改善計画
- ③水産改善計画
- ④農村排水計画
- ⑤農村整備計画
- ⑥技術普及計画
- ⑦施設維持管理計画
- ⑧環境保全計画
- ⑨主要施設概略設計
- ⑩事業実施計画
- ⑪事業費積算・便益算定
- ⑫事業評価
- ⑬環境評価

4 期間及び工程

調査期間及び工程は、別表一1のとおり概ね11ヶ月間とする。

5 報告書

国際協力事業団は、次の報告書を広東省水利電力庁に提出する。

- (1) 着手報告書 30部
調査実施計画と実施工程を内容とするもので、調査の開始時に提出する。
- (2) 現地報告書(1) 30部
第一次現地調査結果を内容とするもので、第一次現地調査終了時に提出する。
- (3) 中間報告書 30部
第一次国内作業結果を内容とするもので、第二次現地調査開始時に提出する。

(4) 現地報告書(2) 30部

第二次現地調査結果を内容とするもので、第二次現地調査終了時に提出する。

(5) 最終報告書(案) 30部

第一次、及び第二次調査結果を内容とするもので、第二次国内作業終了後に提出する。

広東省水利電力庁は、本報告書(案) 受理後1ヶ月以内に、これに対する意見を国際協力事業団に提出する。

(6) 最終報告書 50部

最終報告書(案) に対する意見を受けた後1ヶ月以内に提出する。

6 中国側がとるべき措置

現地調査を円滑に実施するため、中国側は中華人民共和国において施行されている法律及び規則に従い以下の措置をとる。

(1) 中国側専門家、事務職員及び作業員等の提供、及びそれにかかわるすべての経費負担

(2) 現地調査を実施するに当たって、別表一2の中国側が分担する業務の実施及びそれにかかわる経費負担

(3) 現地調査に必要な作業所及び机、椅子等備品の無償提供、及び宿舎の斡旋(ただし、調査サイトにおいて通常の方法で借上げが困難な場合の宿舎の無償提供)

(4) 現地調査のために必要な通訳の無償提供

(5) 現地調査のために必要な航空機、鉄道、車両及び船舶等の手配(ただし、通常の方法で借上げが困難な車両及び船舶については、運転手等を含め無償提供)

(6) 現地調査のため必要な中国国内電話設備の提供、及びそれにかかわる経費負担

(7) 現地調査に必要な許認可の手続きの実施

(8) 現地調査のため必要な資料及び情報の提供

(9) 現地調査のため必要な資料の中国から日本への移送許可

(10) 現地調査期間中、調査団員に病気、怪我が発生した場合の病院の手配

(11) 現地調査期間中、調査団員の安全の確保

(12) 日本から持ち込む資機材の中国国内輸送費の負担

(13) 日本から持ち込む資機材の輸入及び再輸出に必要な手続き及び非課税処理の実施

(14) その他軽微な資機材等の一部経費負担

7 日本側がとるべき措置

日本側は、調査に当たって以下の措置をとる。

(1) 日本側調査団員の技術費、渡航費、現地調査期間中の食事、旅費、宿泊費及び医療費の経費負担(上記6(3)、(5)の中国側が負担する場合を除く。)

(2) 現地調査を実施するに当たって別表一2の日本側が分担する業務の実施、及びそれに係る経費負担

(3) 日本から持ち込む資機材の日本から中国の港又は空港までの往復輸送費の負担

(4) 上記5の報告書の作成

8 本実施細則に定めていない事項については、本調査期間中両者で協議して定めるものとする。

この実施細則は、次の二機関により、合意されるものである。

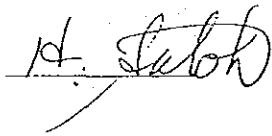
日本国国際協力事業団

中華人民共和国広東省水利電力庁

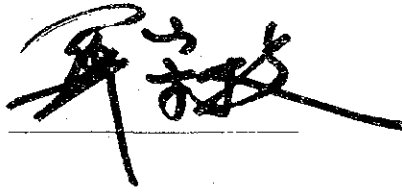
この実施細則は、次の三者により、確認されるものである。

1993年 8月28日

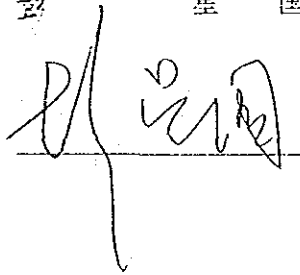
日 本 国
国 際 協 力 事 業 団
事 前 調 査 団 長
佐 藤 準



中 華 人 民 共 和 国
広 東 省
水 利 電 力 庁 庁 長
関 宗 枝



中 華 人 民 共 和 国
広 東 省
科 学 技 術 委 員 会 主 任 代 理
対 外 国 際 科 技 合 作 処 処 長
彭 星 国



列表一-1 調查工程表 (暫定案)

項目	月	1	2	3	4	5	6	7	8	9	10	11	12
現地調查													
團內調查													
報告書													
調查段階													

△	着手報告書												
△	現地報告書 (1)												
△	中間報告書												
△	現地報告書 (2)												
△	最終報告書 (案)												
△	最終報告書												

第一次調査												
第二次調査												

別表-2

現地調査に関する業務分担

作 業 項 目		日 本 側	中 国 側
地形図 及び 測量	地形図 1/25,000 地形図 1/5,000		1) 既存地形図の提供 2) 地形図 (1/ 5,000) の作成
	水路路線測量 河川測量 及び 地形測量	1) 測量範囲、縮尺、精度については、中国側との協議により決定する。 2) 必要ヶ所の略測及び検測 3) 中国側との協力による最終成果品の作成及び検査	1) 測量作業の実施 2) 日本側による略測及び検測時の労務提供
地質 土質 及び 土壌	地質、土質及び 土壌調査	1) 踏査の範囲、方法については、中国側との協議により決定する。 2) 踏査の実施 3) 地質、土質及び土壌調査の内容及び方法については中国側との協議により決定する。	1) 地質、土質及び土壌調査の実施 2) 日本側による調査に必要な労務提供
水 文	水文（地下水を含む）調査	1) 水文調査の範囲、内容については、中国側との協議により決定する。 2) 水文観測計画及び仕様書の作成	1) 水文観測機器及び観測井戸の設置 2) 水文観測作業の実施 3) 日本側による調査に必要な労務提供
水質	水質調査	1) 水質調査の範囲、内容については、中国側との協議により決定する。	1) 水質調査の実施 2) 日本側による調査に必要な労務提供
環境	環境影響調査及び 環境保全	1) 環境調査仕様書の作成 2) 中国側調査に対する協力 3) 調査結果に対す解析作業への協力	1) 調査及び解析作業の実施 2) 環境影響評価の実施 3) 日本側による調査に必要な労務提供
その他 調査	社会状況調査 農業状況調査 水産業状況調査 その他	1) 現地調査仕様書の作成 2) 資料の解析作業	1) 現地調査実施 2) 資料解析作業への協力 3) 日本側による調査に必要な労務提供

中華人民共和國廣東省
順德市齊杏輪中地區
農村排水計畫調查

協 議 議 事 錄

日 本 國 際 協 力 事 業 團
中 華 人 民 共 和 國 廣 東 省 水 利 電 力 庁

中華人民共和国の招請に応じて、日本国国際協力事業団広東省順徳市斉杏輪中地区農地排水計画事前調査団一行7名は、1993年8月18日から8月31日まで（但し、環境団員は1993年8月15日から9月5日（予定）まで）の間、中華人民共和国を訪問した。日本国調査団は調査実施地区を視察するとともに、中華人民共和国国家科学技術委員会及び水利部、広東省科学技術委員会及び水利電力庁等と友好的かつ真摯な協議を行った。

協議の中で双方が確認した主要事項は、次のとおりである。

1 中国側実施機関について

広東省水利電力庁を本調査の実施機関とし、調査作業は、同水利電力庁の責任と指導の下に、下部機関である順徳市水利電力局が担当することを双方確認した。

2 本格調査の範囲と内容について

日本側は、本格調査の内容を取りまとめた実施細則案を説明した。

(1) これに対して、中国側は以下のとおり意見を述べた。

- ① 本格調査の内容は妥当である。
- ② 調査の早期着手・早期完了を強く要望する。
- ③ 中国側も実施体制を早急に整備する。

(2) 日本側は、工程について、日本国における予算執行上の処理等の変更要因があり、暫定的なものである旨説明し、中国側はこれを了承した。

なお、日本側は調査完了時期をできるだけ早めるように努力する旨説明し、中国側はこれを了承した。

(3) 日中双方は環境保全の必要性を理解し、これに必要な調査を実施することを確認し、初期環境調査を実施することとした。

環境影響評価の実施については、初期環境調査の結果を踏まえ、日本側の技術協力の下に、中華人民共和国・環境保護法に基づき、中国側が実施することとした。なお、環境影響評価を実施する中国側機関の費用は、中国側が負担する。

(4) 中国側は、調査用機材について、中国側の分担業務を果たすため、次の機材を日本側から提供されることを要望した。

- | | |
|--------------|------|
| ① 調査用車両（4WD） | 2台 |
| ② 小型コンピューター | 1セット |
| ③ コピー機械 | 1セット |
| ④ 自動レベル | 1セット |

⑤ 測距測角器	1 セット
⑥ 水質分析器	1 セット
⑦ 自記水位計	1 セット
⑧ 流速計	1 セット
⑨ F A X	1 セット

日本側は、中国側の上記要望を日本国政府に伝える旨述べた。
 なお、これに関して、中国側は上記機材が日本国から提供された場合、引き取り及び中国国内輸送の円滑な実施について責任を持つ旨確約した。

3 研修員の受け入れについて

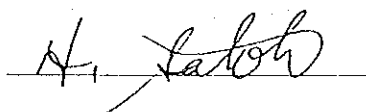
中国側は、日本国における関係各分野の先進技術と経験を学び、かつ日本側調査団の円滑な作業に資するため、本調査に関連する研修員を受け入れることを要望した。

日本側は、上記要望を日本政府に伝えることを約束するとともに、中国側において所要の手続きにより要請するよう回答した。


この議事録は、次の三者の署名により、確認されたものとする。

1993年 8月 28日

日 本 国
 際 協 力 事 業 団
 事 前 調 査 団 長
 佐 藤 準



中 華 人 民 共 和 国
 広 東 省
 水 利 電 力 庁 庁 長
 関 宗 枝



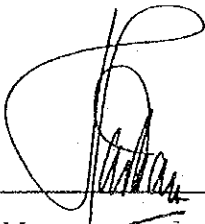
中 華 人 民 共 和 国
 広 東 省
 科 学 技 術 委 員 会 主 任 代 理
 对 外 国 際 科 技 合 作 处 处 长
 彭 星 国



SCOPE OF WORK
FOR
THE FEASIBILITY STUDY
ON
THE GILIRANG IRRIGATION PROJECT
IN
THE REPUBLIC OF INDONESIA

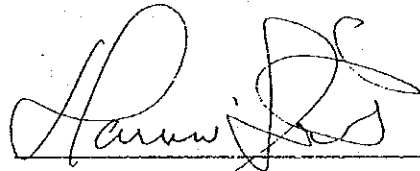
AGREED UPON BETWEEN
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT,
MINISTRY OF PUBLIC WORKS
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

JAKARTA, 16 March, 1993



Ir. Martono

*Director of Irrigation II,
Directorate General of Water Resources Development,
Ministry of Public Works*



Mr. Harumi Saito

*Leader,
Preparatory Study Team,
Japan International Cooperation Agency*

I. INTRODUCTION

In response to the request of the Government of the Republic of Indonesia (hereinafter referred to as "the Government of Indonesia"), the Government of Japan has decided to conduct a Feasibility Study on the Gilirang Irrigation Project (hereinafter referred to as "the Study"), in accordance with the relevant laws and regulations in force in Japan.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programs of the Government of Japan, will undertake the Study in close cooperation with the authorities concerned of the Government of Indonesia.

The present document sets forth the Scope of Work with regard to the Study.

II. OBJECTIVES OF THE STUDY

The objectives of the Study are:

1. To conduct a feasibility study on irrigation development for the Gilirang Irrigation Project (hereinafter referred to as "the Project"), and
2. To carry out technology transfer to the Indonesian counterpart personnel through on-the-job training in the course of the Study.

III. STUDY AREA

The Study covers the area along the Gilirang river in Central South Sulawesi, which is approximately 16,000ha.

IV. SCOPE OF THE STUDY

The Study will consist of two (2) works and will cover the following.:

1. Work I

To prepare topographic map covering the study area.

-conduct topographical surveying necessary for mapping

-preparation of topographic map

2. Work II

2-1. To collect and review existing data and information in the study area :

A. natural condition

a) meteorology

b) hydrology

c) geology

d) soil

e) topography

f) others

B. agriculture

a) land use

b) cropping pattern and yield

c) agro-economy and marketing

d) farmers organization and supporting services

e) others

C. agricultural infrastructure

a) irrigation and drainage facilities

b) farm roads

c) others

D. socio-economic situation

a) population

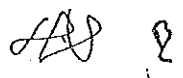
b) employment

c) household and farmers

d) regional socio-economy and household economy

e) social organizations

f) others



E. other information related to the Project

- a) administrative organizations related to the Project
- b) environmental impacts
- c) others

2-2. To carry out field survey on the items mentioned in IV.2-1.

2-3. To carry out household survey

2-4. To review other relevant projects and studies

2-5. Identification of potentials, Problems and constraints against development of the Project area

2-6. Formulation of irrigated agricultural development plan ;

- a. agricultural development plan,
- b. water resources development plan, and
- c. irrigation and drainage development plan

2-7. Preliminary design of major structures

2-8. Preparation of implementation schedule

2-9. Preparation of operation and maintenance plan for major structures

2-10. Preparation of environmental preservation plan

2-11. Estimation of project costs and benefits

1-12. Recommendations

V. STUDY SCHEDULE

The study will be carried out in accordance with the attached tentative schedule.

VI. REPORTS

JICA shall prepare and submit following reports in English to the Government of Indonesia.

1. Inception Report

Twenty (20) copies at the commencement of the Study.

2. Progress Report (1)

Twenty (20) copies at the end of the first period of Work II study in Indonesia.

3. Interim Report

Twenty (20) copies at the end of the second period of Work II study.

4. Progress Report (2)

Twenty (20) copies at the end of the third period of Work II study in Indonesia.

5. Draft Final Report

Twenty (20) copies at the end of Work II study. The Government of Indonesia will provide JICA with its comments on the Draft Final Report within one (1) month after receipt of the Draft Final Report.

6. Final Report

Fifty (50) copies within two (2) months after receiving the Government of Indonesia's comments on the Draft Final Report.

VII. UNDERTAKING OF THE GOVERNMENT OF INDONESIA

1. To facilitate smooth conduct of the study, the Government of Indonesia shall take necessary measures ;
 - 1-1. to secure the safety of the Japanese study team,
 - 1-2. to permit the members of the Japanese study team to enter, leave and sojourn in the Republic of Indonesia for the duration of their assignment therein, and exempt them from foreign registration requirements and consular fees,
 - 1-3. to exempt the members of the Japanese study team from taxes, duties, fees and any other charges on equipment, machinery and other materials brought into the Republic of Indonesia for the conduct of the study,
 - 1-4. to exempt the members of the Japanese study team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Japanese study team for their services in connection with the implementation of the Study,
 - 1-5. to provide necessary facilities to the Japanese study team for the remittance as well as utilization of the funds introduced into the Republic of Indonesia from Japan in connection with the implementation of the Study,
 - 1-6. to secure permission for entry into private properties or restricted areas for the conduct of the Study when it is required,
 - 1-7. to secure permission for the Japanese study team to take all data and documents related to the Study out of the Republic of Indonesia to Japan,
 - 1-8. to provide medical services as needed. Its expense will be chargeable on the members of the Japanese study team.

2. The Government of Indonesia shall bear claims, if any arises, against the members of the Japanese study team, resulting from, occurring in the course of, or otherwise connected with the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Japanese study team.

3. Directorate General of Water Resources Development, Ministry of Public Works (hereinafter referred to as "DGWRD") shall, at own expense, provide the Japanese study team with the followings, in cooperation with the other authorities concerned :

- 3-1. available data and information related to the Study,
- 3-2. counterpart personnel,
- 3-3. suitable office with necessary furniture in Jakarta and project sites,
- 3-4. credentials or identification cards, and
- 3-5. necessary number of vehicles with drivers.

VIII. UNDERTAKING OF JICA

For the conduct of the Study, JICA shall take the following measures ;

1. To dispatch study teams, at its own expense, to the Republic of Indonesia, and
2. To conduct technology transfer to the Indonesian counterpart personnel in the course of the Study.

IX. CONSULTATION

JICA and DGWRD will consult each other in respect of any matter that may arise from or in connection with the Study.

TENTATIVE SCHEDULE

MONTH ITEM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
WORK I																					
WORK II																					
REPORTS	△ IC/R	△ P/R (1)						△ IT/R					△ P/R (2)	△ DF/R							△ F/R

(Remarks) IC/R : Inception Report P/R (1) : Progress Report (1)
 IT/R : Interim Report P/R (2) : Progress Report (2)
 DF/R : Draft Final Report F/R : Final Report

- Work in Indonesia
- Home Office Work in Japan
- ◎
Comments on DF/R by the Indonesian side

MINUTES OF MEETING
ON
SCOPE OF WORK
FOR
THE FEASIBILITY STUDY
ON
THE GILIRANG IRRIGATION PROJECT

The preparatory study team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA"), and headed by Mr. Harumi Saito, visited the Republic of Indonesia from March 7 to 21, 1993 for the purpose of discussing and confirming the Scope of Work for the Feasibility Study on the Gilirang Irrigation Project (hereinafter referred to as "the Study").

The team had a series of discussions with the officials concerned of the Directorate General of Water Resources Development, Ministry of Public Works (hereinafter referred to as "DGWRD") on the Scope of Work for the Study. The list of participants in a series of meetings is attached in the Annex.

As a result of the discussions, DGWRD and the Team agreed on the Scope of Work for the Study.

The following are the main issues discussed and agreed upon by both sides in relation to Scope of Work for the Study.

1. DGWRD shall carry out a household survey in consultation with the Japanese study team.
2. DGWRD shall carry out the Environmental Impact Assessment according to the Indonesian laws and regulations. The Japanese study team shall provide DGWRD with basic data and information on environmental issues in the course of the Study.
3. Article IV-1. mentioned in the Scope of Work, the topographic map shall be prepared in the scale of 1 / 5,000, for the area necessary for the Study.
4. In order to accelerate the electrification of dam and irrigation facilities, DGWRD requested that the possibility on mini-hydroelectricity by using the irrigation water from the Gilirang Dam, shall be examined in the Study.

5. DGWRD shall supply the Japanese study team offices equipped with electricity, water supply, and telephones in Jakarta, Sengkang and Watansoppeng.
6. DGWRD shall provide necessary numbers of counterpart personnel, who are governmental officials, during the whole Study period.
7. The steering committee organized by the Indonesian side shall give its comments on each preceding of the Final Report.
8. DGWRD requested that the following equipments necessary for the Study be procured by JICA and be donated to DGWRD after the termination of the Study.
The Team promised to convey its request to the Government of Japan.
 - survey equipments for water discharge, etc.
9. DGWRD requested the counterpart training in Japan. The Team promised to convey its request to the Government of Japan.

Jakarta, 16 March, 1993



Ir. Martono
*Director of Irrigation II,
Directorate General of Water Resources Development,
Ministry of Public Works*



Mr. Harumi Saito
*Leader,
Preparatory Study Team,
Japan International Cooperation Agency*

LIST OF PARTICIPANTS

Directorate General of Water Resources Development

Mr. R. Zainuddin	Chief of Subdirectorates of Planning & Design
Mr. M. Subianto	Chief of Subdirectorates of O & M, DOI II
Mr. Pudjiono K.	DOI II
Mr. S. Soekirno	DOI II
Mr. Kusumo Respatyo	DOI II
Mr. Bambang Prihono	DOI II
Mr. Agus Jati W.	DOI II
Mr. Tisna S.	DOI II
Mr. Suharto	BPP
Mr. Guridno	BPP

The Team

Mr. Harumi Saito	Leader
Mr. Toshiyasu Yamashita	Member
Mr. Kozo Sato	Member
Mr. Mitsuru Takahashi	Member
Mr. Yutaka Nozaki	Member
Mr. Akira Shimizu	Member

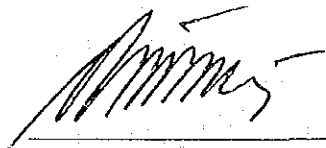
JICA Expert

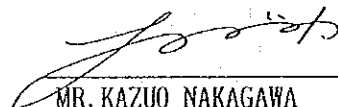
Mr. Unosuke Uematsu	DOI II
Mr. Hiroshi Kudo	DOI II
Mr. Toshiki Saito	BPP

SCOPE OF WORK
FOR
THE STUDY
ON
THE EMBUNG DEVELOPMENT PROJECT
(SMALL SCALE IMPOUNDING POND DEVELOPMENT PROJECT)
IN
EAST NUSA TENGGARA AND WEST NUSA TENGGARA
IN
THE REPUBLIC OF INDONESIA

AGREED UPON BETWEEN
MINISTRY OF PUBLIC WORKS
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

JAKARTA, 15 OCTOBER, 1993


MR. DJOKO S. SARDJONO
DIRECTOR OF PLANNING AND
PROGRAMMING
DIRECTORATE GENERAL OF WATER
RESOURCES DEVELOPMENT
MINISTRY OF PUBLIC WORKS
THE REPUBLIC OF INDONESIA


MR. KAZUO NAKAGAWA
LEADER
PREPARATORY STUDY TEAM
JAPAN INTERNATIONAL
COOPERATION AGENCY

I. Introduction

In response to the request of the Government of the Republic of Indonesia (hereinafter referred to as "the Government of Indonesia"), the Government of Japan has decided to conduct the Study on the Embung Development Project in East Nusa Tenggara and West Nusa Tenggara (hereinafter referred to as "the Study"), in accordance with the relevant laws and regulations in force in Japan.

Accordingly, Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of technical cooperation programs of the Government of Japan, will undertake the Study in close cooperation with the authorities concerned of the Government of Indonesia.

The present document sets forth the scope of work with regard to the Study.

II. Objectives of the Study

The objectives of the Study are:

1. To prepare a Master Plan in order to formulate a development plan on existing and potential Embung Development Projects in the Study Area.
2. To conduct a feasibility study for the priority Embung Development Projects which selected by the Master Plan.
3. To carry out technology transfer to the Indonesian counterpart personnel in the course of the Study.

III. Study Area

The Study Area covers East Nusa Tenggara (NTT) and West Nusa Tenggara (NTB).

A
JS

IV. Scope of the Study

In order to achieve the above objectives, the Study will consist of two (2) phases and the following items.

1. Phase I

- 1.1. To collect and review the relevant existing data and information on the following items:
 - (1) natural condition, (Meteorology, Hydrology, Geology, Topography, Soils, etc.)
 - (2) social and economical condition,
 - (3) land and water resources and usages,
 - (4) irrigation and drainage
 - (5) agriculture, livestock and inland fisheries,
 - (6) agroecconomy and regional economy
 - (7) agricultural infrastructures,
 - (8) farmers' organizations and farmers supporting systems,
 - (9) environmental aspects.
- 1.2. To review the existing development plans and projects in the Study Area.
- 1.3. To make preparatory works for the inventory survey such as establishment of criteria for the selection of priority areas to be covered in the Study, determination of items to be surveyed and investigated, preparation of forms for data collection etc.
- 1.4. To conduct an inventory survey for preparing the inventory list of Embung Development Projects.
- 1.5. To carry out the field survey on the following items;
(Topography, Hydrology, Geology, Soil, Agriculture Agroecconomy, Irrigation and Drainage, Environment, Water demand and usage etc.)
- 1.6. To analyse the result of data collection and investigation.
- 1.7. To prepare appropriate guideline to select the priority among the Embung Development Projects.
- 1.8. To prepare a Master Plan on the Embung Development Projects in the Study area.
- 1.9. To select the priority projects for the feasibility study in Phase II.

1.10. To examine the detailed feasibility on the urgent projects among the selected projects.

2. Phase II

The Phase II study shall be carried out on the priority projects selected in Phase I study for the purpose of making model plans to other Embung Development Projects.

- 2.1. To collect the data and information in the selected project areas through additional field surveys.
- 2.2. To identify the existing problems and constraints against productive agriculture.
- 2.3. To formulate an optimum development plan based on alternative study including:
 - i) Water resources development plan
 - ii) Agricultural and rural development plan
 - iii) Irrigation and drainage plan ,etc.
- 2.4. To prepare an environmental conservation plan.
- 2.5. To prepare a preliminary design of the main facilities.
- 2.6. To prepare an operation and maintenance plan of the facilities.
- 2.7. To prepare a project implementation plan.
- 2.8. To estimate a project costs and benefits.
- 2.9. To evaluate projects.
- 2.10. To make recommendation.

V. Study Schedule

The Study will be carried out in accordance with the tentative schedule attached in Annex.



VI. Report

JICA will prepare and submit the following reports in English to the Government of Indonesia.

1. Inception Report
Twenty (20) copies at the commencement of the Study.
2. Progress Report (1)
Twenty (20) copies at the commencement of Phase I home office work.
3. Interim Report
Twenty (20) copies at the commencement of the Phase II field work.
4. Progress Report (2)
Twenty (20) copies at the end of the Phase II field work.
5. Draft Final Report
Twenty (20) copies at the end of the Phase II home office work. the Government of Indonesia will provide its comments on the Draft Final Report to JICA within one (1) month after receiving the Draft Final Report.
6. Final Report
Fifty (50) copies within two (2) months after the receipt at the comments on the Draft Final Report.

VII. Undertakings of the Government of Indonesia:

1. To facilitate smooth conduct of the Study, the Government shall take necessary measures:
 - (1) to secure the safety of the Japanese study team;
 - (2) to permit the members of the Japanese study team to enter, leave and sojourn in the Republic of Indonesia for the duration of their assignment therein, and exempt them from visa fees;
 - (3) to exempt the members of the Japanese study team from taxes, duties, fees and any other charges on equipment, machinery and other materials to be brought into and out of the Republic of Indonesia for the conduct of the Study;

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[Handwritten initials]

4. DGWRD shall, at its own expense, to provide the Japanese study team with the following, in cooperation with other organizations concerned;

- (1) available data and information related to the Study;
- (2) additional survey related to the study, if necessary,
- (3) counterpart personnel;
- (4) suitable office space with necessary equipment and furniture; and
- (5) credentials or identification cards.

VIII. Undertakings of JICA

For the implementation of the Study, JICA shall take the following measures:

- (1) to dispatch, at its own expense, the study team to the Republic of Indonesia,
- (2) to pursue technology transfer to the counterpart personnel of the Government of Indonesia in the course of the Study.

IX. Consultation

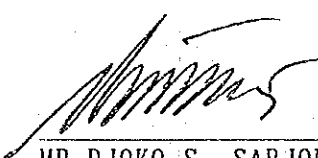
JICA and the Government of Republic of Indonesia shall consult with each other in respect of any matter that may arise from or in connection with the Study.

- (4) to exempt the members of the Japanese study team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Japanese study team for their services in connection with the implementation of the Study, if necessary;
 - (5) to provide necessary facilities to the Japanese study team for the remittance as well as the utilization of the funds introduced into the Republic of Indonesia from Japan in connection with the implementation of the Study, if necessary;
 - (6) to secure permission for entry into private properties or restricted areas for the implementation of the Study;
 - (7) to secure permission for the Japanese study team to take all data and documents related to the Study out of the Republic of Indonesia to Japan by the Japanese study team; and
 - (8) to provide medical services as needed. Its expenses will be chargeable on the members of the Japanese study team.
2. The Government shall bear claims, if any arises, against the members of the Japanese study team resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Japanese study team.
 3. Directorate General of Water Resources Development, Ministry of Public Works (herein after referred to as DGWRD) shall act as a counterpart agency to the Japanese study team and also as coordinating body in relation to other governmental and non-governmental organizations concerned for the smooth implementation of the Study.

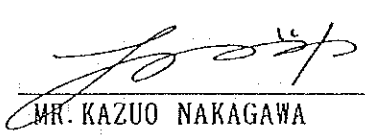
MINUTES OF MEETING
FOR
SCOPE OF WORK
FOR
THE STUDY
ON
THE EMBUNG DEVELOPMENT PROJECT
(SMALL SCALE IMPOUNDING POND DEVELOPMENT PROJECT)
IN
EAST NUSA TENGGARA AND WEST NUSA TENGGARA
IN
THE REPUBLIC OF INDONESIA

AGREED UPON BETWEEN
MINISTRY OF PUBLIC WORKS
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

JAKARTA, 15, OCTOBER, 1993



MR. DJOKO S. SARJONO
DIRECTOR OF PLANNING AND
PROGRAMMING
DIRECTORATE GENERAL OF WATER
RESOURCES DEVELOPMENT
THE REPUBLIC OF INDONESIA



MR. KAZUO NAKAGAWA
LEADER
PREPARATORY STUDY TEAM
JAPAN INTERNATIONAL
COOPERATION AGENCY

In response to the request of the Government of the Republic of Indonesia, the Government of Japan decided to dispatch through Japan International Cooperation Agency (hereinafter referred to as "JICA"), which is responsible for the implementation of technical cooperation programmes of the Government of Japan, the preparatory study team (hereinafter referred to as "the Team"), headed by Mr. Kazuo NAKAGAWA, to the Republic of Indonesia from October 3rd to 16th, 1993 so as to discuss and exchange views on the study with the Directorate General of Water Resources Development, Ministry of Public Works (hereinafter referred to as DGWRD) and officials concerned of the Government of Indonesia for the implementation of the study.

DGWRD and the Team mutually agreed with the Scope of Work on the Study on the Embung Development Project in East Nusa Tenggara and West Nusa Tenggara (herein after referred to as "the Study").

The following minutes were prepared to confirm the main issues discussed and matters agreed upon by both sides in connection.

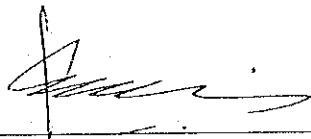
1. DGWRD shall carry out the Environmental Impact Assessment according to the Indonesian laws and regulations. The Japanese study team shall provide DGWRD with basic data and information on environmental issues in the course of the Study.
2. The Team requested DGWRD to assign the qualified and necessary number of counterpart experts for the Study at its own expenses and DGWRD accepted its request.
3. Based on the request made by the Team, DGWRD promised to provide the suitable two offices, each in Mataram and in Kupang, with necessary office equipments such as desks, chairs, telephone, and so on. In Jakarta, meeting room shall be provided if necessary.
4. Concerning with the technology transfer, DGWRD strongly requested JICA to accept counterpart training in Japan.
5. DGWRD requested the following equipments for the implementation of the Study and the Team promised to convey the request to the Government of Japan.
 - (1) Four wheel drive vehicles
 - (2) Survey equipments
 - (3) Computer systems
 - (4) Office equipments such as Fax machine etc.

6. DGWRD strongly requested JICA to make arrangement of transportation for the Study, because of the shortage of vehicles in the Study area. The Team promised to convey the request to the Government of Japan.
7. DGWRD strongly requested to the Team to consider that the detail feasibility study shall be carry out on the urgent projects in NTT as soon as the completion of Phase I field study, because of the urgent requirement of the Basic Human Needs. The Team promised to consider this request.
8. The Team suggested that the Steering Committee for the Project should be organized by the concerned Ministries and Agencies. DGWRD agreed with the idea and promised to organize the Committee.
9. DGWRD and the Team agreed that the water distribution facilities should be included in the main facilities which mentioned in "IV. Scope of Work in S/W, 2.5. "

As
③

SCOPE OF WORK
FOR
THE FEASIBILITY STUDY
ON
SMALL RESERVOIR DEVELOPMENT
IN
PENINSULAR MALAYSIA
AGREED UPON BETWEEN
THE ECONOMIC PLANNING UNIT
OF
THE PRIME MINISTER'S DEPARTMENT
ON BEHALF OF THE GOVERNMENT OF MALAYSIA
AND
THE JAPAN INTERNATIONAL COOPERATION AGENCY

KUALA LUMPUR, 16 FEBRUARY 1993



Kassim bin Sarbani
Director, Agriculture Section
The Economic Planning Unit
The Prime Minister's Department
on behalf of the Government of Malaysia



Terushi Egashira
Leader
Preparatory Study Team
The Japan International
Cooperation Agency

I. INTRODUCTION

In response to the request by the Government of Malaysia, the Government of Japan has decided to conduct the Feasibility Study on Small Reservoir Development in Peninsular Malaysia (hereinafter referred to as the Study) in accordance with the relevant laws and regulations in force in Japan. Accordingly, the Japan International Cooperation Agency (hereinafter referred to as JICA), the official agency responsible for the implementation of technical cooperation programmes of the Government of Japan, will undertake the Study in close cooperation with the authorities concerned of the Government of Malaysia.

The present document sets forth the Scope of Work with regard to the Study.

II. OBJECTIVES OF THE STUDY

The objectives of the Study are as follows:

- A. To identify and evaluate existing and potential small reservoir development in Peninsular Malaysia.
- B. To select pilot small reservoir irrigation projects and undertake feasibility studies.
- C. To establish guidelines for the planning, design, operation and maintenance of small reservoirs for irrigation.

III. OUTLINE OF THE STUDY

A. Study Area

The Study shall cover agricultural areas in Peninsular Malaysia.

B. Scope of the Study

The Study shall comprise the following two phases:

Phase I

1. Review existing development policies, strategies and projects relevant to the Study.
2. Collect and review the existing data and information on small reservoir development practices.

3. Prepare criteria (taking into account factors such as erosion, siltation, hydrology, topography, geology, engineering, socio-economy and environment) for identifying potential sites for small reservoir development.
4. Identify potential sites for small reservoir development in accordance with the above criteria for various purposes in the Study area.
5. Collect and compile data and information on potential service areas of the small reservoirs.
6. Compile and evaluate the results of the above identification and classify the potential small reservoir schemes into several categories.
7. Establish an information system on small reservoirs.
8. Select sites where the pilot small reservoir irrigation projects can be formulated.

Phase II

1. Collect additional data and information relevant to the formulation of the pilot small reservoir irrigation projects.
2. Formulate the pilot small reservoir irrigation projects, including agricultural development, water resources development, irrigation and drainage, and supporting services plans.
3. Design the pilot projects facilities and prepare the operation and maintenance manuals.
4. Analyze the expected results of the pilot projects (financial profitability, economic impact, social changes and environmental effects).
5. Prepare guidelines for the small reservoir irrigation development including planning, design, operation and maintenance.

IV. Study Schedule

The tentative schedule of the Study is as attached (see Annex).

V. REPORTS

JICA shall submit the following reports in English to the Government of Malaysia.

A. Inception Report

Thirty (30) copies at the commencement of the Study.

B. Progress Report I

Thirty (30) copies in the middle of Phase I.

C. Interim Report

Thirty (30) copies at the end of Phase I.

D. Draft Final Report

Thirty (30) copies at the end of Phase II.
The Government of Malaysia shall submit the comments on the Draft Final Report to JICA within one (1) month.

E. Final Report

Hundred (100) copies within two months after the receipt of the comments from the Government of Malaysia on the Draft Final Report.

F. Guidelines for Small Reservoir Irrigation Development

Hundred (100) copies to be submitted at the same time as the Final Report.

VI. UNDERTAKING OF JICA

For the implementation of the Study, JICA shall take the following measures :

1. To dispatch, at its own expense, a Study Team(s) to Malaysia; and
2. To provide technical training of the Malaysian counterpart personnel in the course of the Study.

VII. UNDERTAKING OF THE GOVERNMENT OF MALAYSIA

A. To facilitate smooth conduct of the Study, the Government shall take necessary measures :

1. To inform the members of the Study Team any existing risk in the Study area and to take any measures deemed necessary to secure the safety of the Study Team;

2. To ensure the necessary entry permits for the Study Team to conduct field surveys in Malaysia and exempt them from consular fees;
 3. To exempt the members of the Study Team from taxes and duties, as normally accorded under the provision of Malaysian General Circular No. 1 of 1979, on equipment, machinery and other materials brought into and out of Malaysia for the conduct of the Study;
 4. To exempt the non-Malaysian members of the Study Team from Malaysian income tax on their official emoluments in respects of their period of assignment in Malaysia in connection with the conduct of the Study while retaining the right to take such emoluments into account for the purpose of assessing the amount to be applied to income from other sources;
 5. To provide necessary facilities to the Study Team for the remittance as well as the utilization of funds introduced into Malaysia from Japan in connection with the implementation of the Study;
 6. To secure permission for entry into private properties or restricted areas for the implementation of the Study;
 7. To make arrangements for the Study Team to take back to Japan the data, maps and other materials connected with the Study, subject to the approval of the Government of Malaysia, in order to prepare the reports;
 8. To provide the Study Team with medical services when needed, the expenses of which shall be chargeable to the members of the Study Team; and
 9. To secure clearance for the use of communication facilities including transceivers.
- B. The Government of Malaysia shall indemnify any member of the Study Team in respect of damages arising from any legal action against him in relation of any act performed or omissions made in undertaking the Study except when the both Government agree that such a member is guilty of gross negligence of wilful misconduct.

C. The Department of Irrigation and Drainage (hereinafter referred to as DID) shall act as a counterpart agency of the Study Team and also as a coordinating body in relation with other relevant organizations for the smooth implementation of the Study.

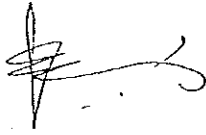
D. DID shall, at its own expense, provide the Study Team with the following in cooperation with other organizations concerned :

1. available data, information and materials including aerial photographs and topographic maps related to the Study,
2. counterpart personnel,
3. suitable office space with clerical services and necessary equipment in DID headquarters and the Study area,
4. vehicles with drivers and other supporting services necessary for the implementation of the Study, and
5. credential or identification cards.

E. DID shall assist in conducting surveys assigned/requested by the Study Team in the course of the Study.

VIII. CONSULTATION

JICA, DID, Ministry of Agriculture and the Economic Planning Unit shall consult with each other in respect of any matter that may arise from or in connection with the Study.



(Annex 1)

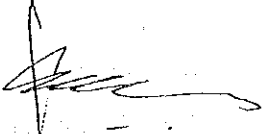
TENTATIVE WORK SCHEDULE

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Work in Malaysia																				
Work in Japan																				
Submission of Reports																				

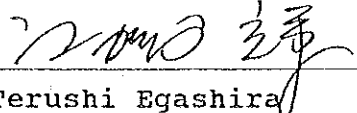
(Note) IC/R : Inception Report. P/R (I) : Progress Report (I)
 IT/R : Interim Report F/R : Final Report
 DF/R : Draft Final Report G : Technical Guidelines

work carried out by the Japanese Study team
 work carried out by Malaysian side

MINUTES OF MEETING
OF
THE STEERING COMMITTEE
FOR
THE FEASIBILITY STUDY
ON
SMALL RESERVOIR DEVELOPMENT
IN
PENINSULAR MALAYSIA
AGREED UPON BETWEEN
THE ECONOMIC PLANNING UNIT
OF
THE PRIME MINISTER'S DEPARTMENT
ON BEHALF OF THE GOVERNMENT OF MALAYSIA
AND
THE JAPAN INTERNATIONAL COOPERATION AGENCY
KUALA LUMPUR, 16 FEBRUARY 1993



Kassim bin Sarbani
Director, Agriculture Section
The Economic Planning Unit
The Prime Minister's Department
on behalf of the Government of Malaysia



Terushi Egashira
Leader
Preparatory Study Team
The Japan International
Cooperation Agency

1. Objective of the Meeting

The meeting was convened to discuss issues and the Scope of Work pertaining to the Feasibility Study on Small Reservoir Development in Peninsular Malaysia.

2. Attendance

The list of attendance is shown in Annex 1.

3. Opening Remarks by Chairman

The Chairman of the Steering Committee welcomed the members of the JICA Preparatory Study Team and the representative of Embassy of Japan and introduced members of the Steering Committee. He then invited Mr. Egashira, the Team Leader, to give his opening remarks.

Mr. Egashira, in his opening remarks, emphasised the importance of this study in promoting agriculture development in line with objective of the National Agricultural Policy to maximise farmers' income by fully utilising existing resources. He also informed the meeting that the team had, through discussion with the DID and the site visits, gained a better understanding of the need to develop small reservoirs.

4. Briefing by Chairman of Technical Committee

Ir. C.C. Chan on behalf of the Chairman of the Technical Committee briefed members of the Steering Committee on the outcome of the meetings held with the JICA Preparatory Study Team in DID on the 9th and 15th February 1993. The team was brought to visit selected sites in Perlis, Kedah and Perak from the 10th to 13th February 1993.

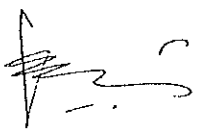
Ir. Chan explained the concept of the study which is basically to identify and evaluate existing and potential small reservoir development in the country and subsequently to propose pilot projects for irrigation purpose.

Ir. Chan then proceeded to brief specific matters pertaining to the Scope of Work discussed as follows :

a) Title of the Study

After some deliberation on which of the following terminology "small impounding ponds" or "small reservoirs" should be adopted for use in the Study, the Technical Committee agreed to the following title:-

"Feasibility Study on Small Reservoir Development in Peninsular Malaysia."



The general meaning of small reservoir refers to natural depressions, ponds and other man-made water impounding structures which are not necessarily subjected to the Guidelines for the operation, maintenance and surveillance of dams (1989) published by the Malaysian Inter-Departmental Committee on Dam Safety.

b) Objectives of the Study

The Technical Committee, after careful deliberation, agreed that the objectives will focus on evaluation of small reservoir development, pilot projects identification and their feasibility studies as well as the establishment of guidelines on small reservoirs design and management for irrigation.

The Technical Committee requested that the feasibility studies for the pilot projects should meet the standard requirement of international funding institutions.

The objective pertaining to resource study on the rainfed paddy areas is deemed too wide to be included in the present Scope of Work. Nevertheless, in the process of evaluating the potential development of the small reservoirs, the rainfed areas which fall within the service area of the reservoir will be studied.

c) Study Area

Whilst the Study shall cover agricultural areas in Peninsular Malaysia, the possibility that some of the small reservoirs could be located in the forest areas should also be considered.

d) Transfer of Technology and Information Dissemination

The Technical Committee requested JICA to organise a workshop for technical personnel on the planning, design, operation and maintenance of small reservoirs at the appropriate time of the Study. The purpose is to develop the capability of the personnel to implement small reservoir development programs.

The Technical Committee also requested JICA to organise a National Seminar on Small Reservoir Development at the end of the Study period to disseminate information to policy makers and managers.

The Technical Committee requested JICA to consider the establishment of a comprehensive information system on small reservoirs using new technology such as Geographical Information System (GIS). JICA recognised the usefulness of establishing database on small reservoirs. However, JICA was of the opinion that GIS might not be necessary for the Study.

e) DID Input

The Technical Committee informed JICA that the DID shall appoint coordinators in each State to assist the JICA study team for identification of small reservoir sites. The DID expressed concern that detailed data collection such as topographical surveys, detail drawings and plans may be difficult due to manpower and budgetary constraints. However, the DID shall undertake to carry out specific surveys wherever possible. For more details, JICA may need to consider funding the cost of carrying out detail surveys including training of coordinators.

f) Equipment

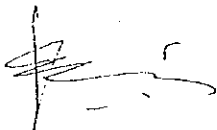
The Technical Committee requested JICA to provide appropriate instruments and equipment which could assist in the execution of the study as well as for management of the database and information for future planning and implementation by DID.

5. Discussions of Meeting

The Steering Committee discussed in detail the contents of the draft Scope of Work. After careful deliberation and taking into account the views of the Technical Committee, the meeting agreed to adopt the final version of the Scope of Work.

The Steering Committee requested JICA to utilise local consultants wherever possible to assist in the Study. The meeting also discussed on the type of information system to be developed in the Study and agreed that the details would be considered at the time of submission of the Inception Report as well as the Interim Report.

6. The meeting was adjourned at 11:00 am. In his closing remarks, the Chairman thanked the Leader and members of the JICA Preparatory Study Team and expressed his hope that the Study will be successful and useful for both Malaysia and Japan.



List of Attendance

Malaysian Side

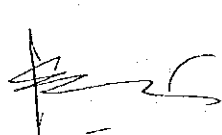
- | | | | |
|----|-------------------------|---|----------|
| 1. | Mr. Kassim bin Sarbani | Director,
Agric. Sect.,
EPU, PM's Dept. | Chairman |
| 2. | Mr. Chan Choong Cheong | Dep. Director,
Irrigation Div., DID | |
| 3. | Ms. Christiana Tharsis | Ministry of Agriculture | |
| 4. | Mr. Abd. Bakir Hj. Zin | EPU | |
| 5. | Mr. Badaruddin Mahyudin | EPU | |
| 6. | Mr. Mohd Adnan Mohd Nor | DID | |
| 7. | Mr. Tsutomu Asada | JICA Expert, DID | |

JICA Preparatory Study Team

- | | | | |
|----|-------------------------|--------------------------------|--|
| 1. | Mr. Terushi Egashira | Team Leader | |
| 2. | Mr. Mutsuhiro Muramatsu | Member (Irrigation & Drainage) | |
| 3. | Mr. Hitoshi Nishikawa | Member (Agriculture) | |
| 4. | Ms. Yoshimi Katsumata | Coordinator | |

Embassy of Japan

- | | | | |
|----|--------------------|------------------|--|
| 1. | Mr. Makio Shichijo | Second Secretary | |
|----|--------------------|------------------|--|



SCOPE OF WORK FOR THE STUDY
ON
THE AGRICULTURAL LAND REHABILITATION AND CONSERVATION PROJECT
IN
SURAT THANI AND NAKHON SI THAMMARAT PROVINCES

AGREED UPON BETWEEN
THE DEPARTMENT OF LAND DEVELOPMENT
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

BANGKOK, APRIL 9, 1993

M. Narong

DR. NARONG MINANANDANA
DIRECTOR GENERAL,
THE DEPARTMENT OF LAND DEVELOPMENT
MINISTRY OF AGRICULTURE AND
COOPERATIVES

Takuji Nakano

TAKUJI NAKANO
LEADER,
PREPARATORY STUDY TEAM,
JAPAN INTERNATIONAL
COOPERATION AGENCY

I. Introduction

In response to the request of the Government of the Kingdom of Thailand, the Government of Japan has decided to conduct the Study on the Agricultural Land Rehabilitation and Conservation Project in Surat Thani and Nakhon Si Thammarat Provinces (hereinafter referred to as "the Study"), within the general framework of technical cooperation between Japan and Thailand, which is set forth in the Agreement on Technical Cooperation between the Government of Japan and the Government of the Kingdom of Thailand signed on November 5, 1981.

Accordingly, Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of technical cooperation programs of the Government of Japan, will undertake the Study, in accordance with the relevant laws and regulations in force in Japan and in close cooperation with the concerned authorities of Thailand.

The Department of Land Development, Ministry of Agriculture and Cooperatives (hereinafter referred to as "DLD") shall act as counterpart agency to the Japanese Study Team (hereinafter referred to as "the Team") and also as coordinating body in relation with other relevant organizations for the smooth implementation of the Study.

The present document sets forth the scope of work for the Study.

II. Objectives of the Study

The objectives of the Study are:

1. to prepare a master plan in order to formulate the concept of rehabilitation and conservation works of agricultural land for the Study area;
2. to conduct a feasibility study in order to formulate implementation plans for the selected project areas through the master plan study; and
3. to carry out technology transfer to the Thai counterpart personnel in the course of the Study.

III. Study Area

The Study Area covers approximately 300 sq.km. at both Surat Thani and Nakhon Si Thammarat provinces.

IV. Scope of the Study

In order to achieve the above objectives, the Study consists of the following two(2) phases.

1. Master Plan Study

1.1. Implementation of general study in order to obtain the outline of Khao Luang mountainous area and agricultural land of approximately 5,170 sq.km. in Surat Thani and Nakhon Si Thammarat Provinces.

(1) natural conditions such as location of land slide areas, distribution of sediment deposit, and etc.

(2) agro-economic conditions

(3) environmental conditions

1.2. Collection of existing information and/or field survey on the following items, and preliminary analysis:

(1) natural conditions (topography, meteorology, hydrology, geology, soil, vegetation, etc.)

(2) social and economic conditions (population, social organization, employment, socio-economy, land tenure, finance, etc.)

(3) agricultural conditions (farming practice, land use, cropping pattern, productivity, extension, marketing, agricultural input, farmers' organizations, water management, etc.)

(4) agricultural infrastructures (irrigation and drainage, farm roads, marketing facilities, etc.)

(5) existing inventory of disaster damage and on-going restoration program of flood affected area

(6) environmental aspects (living environment, sanctuary area, etc.)

1.3. Formulation of the following master plan for agricultural land rehabilitation and conservation for the Study Area:

(1) examination and proposal of methodology of agricultural land rehabilitation and conservation.

(2) drawing of topographic map and preparation of land slide occurrence map.

- (3) formulation of the master plan for agricultural land rehabilitation and conservation.

1.4. Preparation of feasibility study

- (1) selection of the feasibility study areas taking into consideration the financial resource limitation, DLD's project implementing capacity and so on.
- (2) implementation of preliminary topographical survey and investigations required for the feasibility study.

2. Feasibility Study

2.1. Collection and analysis of supplementary information through field surveys.

- (1) topographical survey
- (2) meteorology survey
- (3) hydrological survey
- (4) soil survey
- (5) irrigation and drainage facility survey
- (6) agro-socio-economic survey
- (7) land use and tenure survey

2.2. Formulation of the agricultural land rehabilitation and conservation plans consisting of;

- (1) land use plan
- (2) soil improvement plan
- (3) agricultural land rehabilitation and conservation plan
- (4) irrigation and drainage plan
- (5) design methodology of main facilities
- (6) project implementation schedule
- (7) drawing of maps required for plan formulation

- (8) estimation of the project costs and benefits.
- (9) operation and maintenance plan
- 2.3. Proposal of technical guidance for appropriate agricultural land rehabilitation and conservation works.
- 2.4. Evaluation of the project.
- 2.5. Recommendation.

V. Study Schedule

The Study will be carried out in accordance with the tentative schedule attached in Annex.

VI. Report

JICA will prepare and submit the following reports in English to the government of the Kingdom of Thailand.

1. Inception Report
Twenty (20) copies at the commencement of the Phase I field work.
2. Progress Report (1)
Twenty (20) copies at the end of the Phase I field work.
3. Interim Report
Twenty (20) copies at the commencement of the Phase II field work.
4. Progress Report (2)
Twenty (20) copies at the end of the Phase II field work.
5. Draft Final Report
Twenty (20) copies at the end of the Phase II home office work. The Government of the Kingdom of Thailand will provide its comments on the Draft Final Report to JICA within one (1) month after receiving the Draft Final Report.
6. Final Report
Fifty (50) copies within two (2) months after the receipt of comments of the Government of the Kingdom of Thailand on the Draft Final Report.

VII. Undertakings of the Government of the Kingdom of Thailand

1. In accordance with the Agreement on Technical Cooperation between the Government of Japan and the Government of the Kingdom of Thailand, the Government of the Kingdom of Thailand shall accord benefits to the Team as follows:
 - (1) to permit the members of the Team to enter, leave and sojourn in Thailand for the duration of their assignment therein, and exempt them from foreign regulation requirements and consular fees;
 - (2) to exempt the members of the Team from taxes, duties, fees and any other charges on equipment, machinery and other materials to be brought into Thailand for the conduct of the Study;
 - (3) to exempt the members of the Team from income taxes and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Team for their services in connection with the implementation of the Study; and
 - (4) to bear claim, if any arises against the members of the Team resulting from, occurring in the course of, or otherwise connected with the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Team.
2. To facilitate smooth execution of the Study, DLD shall take necessary measures in cooperation with other relevant organizations:
 - (1) to secure permission for entry into private properties or restricted areas for the conduct of the Study;
 - (2) to secure permission for the Team to take all data and documents related to the Study out of Thailand to Japan;
 - (3) to provide the medical services as needed. Its expenses will be chargeable on the members of the Team; and
 - (4) to ensure the safety of the members of the Team when and as it is required in the course of the Study.
3. DLD shall, at its own expense, provide the Team with the followings in cooperation with other organizations concerned:
 - (1) available data and information related to the Study;
 - (2) counterpart personnel;

(3) suitable office space with necessary equipment and furniture; and

(4) credentials or identification cards.

VIII. Undertakings of JICA

For the implementation of the Study, JICA shall take the following measures:

(1) to dispatch, at its own expense, the Team to Thailand, and

(2) to pursue technology transfer to the Thai counterpart personnel in the course of the Study.

IX. Others

JICA and DLD shall consult with each other in respect of any matter that may arise from or in connection with the Study.

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ANNEX

TENTATIVE SCHEDULE

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
Item																							
In House Work	<input type="checkbox"/>				<input type="checkbox"/>				<input type="checkbox"/>										<input type="checkbox"/>				<input type="checkbox"/>
In Field Work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Submission of									*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Report	Ic/R								P/R(1)		Ic/R			P/R(2)					D/R				F/R
Phase	Master Plan Study											Feasibility Study											

- Ic/R : Inception Report
 - P/R(1) : Progress Report(1)
 - It/R : Interim Report
 - P/R(2) : Progress Report(2)
 - D/R : Draft Final Report
 - F/R : Final Report
- ** : Topo Mapping

T.H.

MINUTES OF MEETING
FOR
THE SCOPE OF WORK FOR THE STUDY
ON
THE AGRICULTURAL LAND REHABILITATION AND CONSERVATION PROJECT
IN
SURAT THANI AND NAKHON SI THAMMARAT PROVINCES

AGREED UPON BETWEEN
THE DEPARTMENT OF LAND DEVELOPMENT
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

BANGKOK, APRIL 9, 1993

M. Narong

DR. NARONG MINANANDANA
DIRECTOR GENERAL,
THE DEPARTMENT OF LAND DEVELOPMENT
MINISTRY OF AGRICULTURE AND
COOPERATIVES

Takuji Nakano

TAKUJI NAKANO
LEADER,
PREPARATORY STUDY TEAM,
JAPAN INTERNATIONAL
COOPERATION AGENCY

The Preparatory Study Team headed by Mr. Takuji Nakano was dispatched by the Government of Japan to the Kingdom of Thailand from 30 March to 10 April, 1993 for concluding the Scope of Work for the Study on Agricultural Land Rehabilitation and Conservation Project in Surat Thani and Nakhon Si Thammarat Provinces with concerned officials of Thailand.

The Preparatory Study Team and the Thai side had a series of meetings and discussions during this period, the results of meeting and discussion mentioned above are as follows;

1. Regarding implementation of the general study

In the case which aerial photo or satellite image cannot be applied for the general study, the general study shall not be included in the Study.

2. Regarding drawing of topographic map and preparation of land slide occurrence map

In the case which aerial photo or satellite image cannot be applied for the master plan study, following study items shall not be included in the master plan study.

- (1) drawing of topographic map
- (2) preparation of land slide occurrence map

3. Regarding examination tests

In order to conduct the Study DLD requested the Preparatory Study Team to carry out the examination tests of proposed rehabilitation and conservation methods for agricultural land in the Study.

The Preparatory Study Team promised to convey this request to the Government of Japan.

4. Regarding undertakings

Office space for the Japanese Study Team will be provided by DLD in DLD's Headquarters in Bangkok and in the Study areas. Japanese side requested DLD to furnish such office space with necessary equipment and furniture including telephone, and DLD agreed to do so.

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5. Regarding equipment

DLD requested the Preparatory Study Team to bring into Thailand the following equipment for carrying out the project-study. Japanese side took note of such request.

- (1) vehicles
- (2) soil survey equipment
- (3) hydrological survey equipment
- (4) topographical survey equipment
- (5) other necessary equipment

6. Regarding the environmental impacts of the Study

In order to carry out the project smoothly, the Preparatory Study team and DLD have discussed the environmental impact of the study through the joint screening on the scope of work. Both sides agree that heavy negative impacts created by the project cannot be found on the view point of environmental aspects.

7. Regarding technical transfer to counterpart personnel

DLD requested that technical training in Japan be given to counterpart personnel of the Study. Japanese side took note of such request.

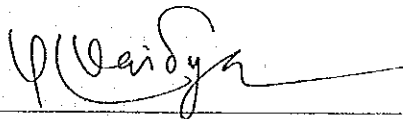
8. Regarding letter of invitation

Japanese side requested DLD to issue letters of invitation to members of the Japanese Study Team in order for them to obtain entry visa to Thailand, and also to give assistance to the Japanese Study Team, when necessary, to facilitate the customs clearance of their study equipment on tax exemption basis. DLD agreed to do so.

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SCOPE OF WORK
FOR
THE MASTER PLAN STUDY
ON
THE REHABILITATION FOR GOVERNMENT DEVELOPED IRRIGATION SCHEMES
IN THE KATHMANDU VALLEY
IN
THE KINGDOM OF NEPAL
AGREED UPON BETWEEN
DEPARTMENT OF IRRIGATION
MINISTRY OF WATER RESOURCES
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

KATHMANDU, DECEMBER 16, 1992



Mr. Y. L. Vaidya
Director General,
Department of Irrigation,
His Majesty's Government
of Nepal



Mr. Norikazu Tsujii
Leader,
Preparatory Study Team,
Japan International
Cooperation Agency

I. INTRODUCTION

In response to the request of His Majesty's Government of Nepal (hereinafter referred to as "HMGN"), the Government of Japan has decided to conduct the Master Plan Study on the Rehabilitation for Government Developed Irrigation Schemes in the Kathmandu Valley (hereinafter referred to as "the Study"), in accordance with the relevant laws and regulations in force in Japan.

Accordingly, Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of technical cooperation programs of the Government of Japan, will undertake the Study in close cooperation with the authorities concerned of HMGN.

The Department of Irrigation, Ministry of Water Resources (hereinafter referred to as "DOI") shall act as the counterpart agency to the Japanese study team and also as the coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.

The present document sets forth the scope of work with regard to the Study.

II. Objectives of the Study

The objectives of the Study are:

1. to formulate a master plan on the rehabilitation for government developed irrigation schemes in the Kathmandu Valley and to conduct a feasibility study in the selected model areas identified in the master plan and
2. to carry out technology transfer to the Nepalese counterpart personnel in the course of the Study.

III. Study Area

The Study covers government developed irrigation schemes of approximately 9,000ha in the three districts (Kathmandu, Bhaktapur and Lalitpur) of the Kathmandu Valley.

IV. Scope of the Study

In order to achieve the above objectives, the Study will consist of two(2) phases and will cover the following items.

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1. Phase I

1.1. Collection and analysis of the following data and information, through the field survey on the following:

- (1) natural condition (topography, meteorology, hydrology, geology, soil, water quality, water resources, and environment);
- (2) social condition (population, regional socio-economy, social infrastructure, education, and regional development plan);
- (3) agriculture (land use, land tenure, cultivation technique, cropping pattern, yield, production, agricultural machinery, and livestock);
- (4) agro-economy (farmers economy, agricultural credit, processing, and marketing system);
- (5) agricultural infrastructure (water source, irrigation and drainage system, farm road, and rural water supply); and
- (6) agricultural supporting system (farmers' organizations, supporting organizations, and extension service organizations).

1.2. Composition of inventory list with investigation of structure scale, superannuation and damage of the irrigation and drainage facilities in the study area.

1.3. Identification of constraints of operation and maintenance of the irrigation and drainage in the study area.

1.4. Formulation of a master plan on the rehabilitation for government developed irrigation schemes in the study area and preparation of operation and maintenance manual for water management and irrigation facilities.

1.5. Selection of the model areas for the feasibility study.

1.6. Preparation of topographic maps at the scale of 1/5,000 for the model areas.

2. Phase II

2.1. Field survey for collection of supplementary data and information of the model areas.

2.2. Formulation of the agricultural development plan of the model areas by considering the following components:

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- (1) Land use;
 - (2) Cropping pattern;
 - (3) Farming system;
 - (4) Irrigation and drainage;
 - (5) Rural infrastructure; and
 - (6) Agricultural supporting system.
- 2.3. Preparation of a preliminary design of the main facilities.
 - 2.4. Formulation of operation and maintenance plan.
 - 2.5. Preparation of the project implementation schedule.
 - 2.6. Estimation of the project costs and benefits.
 - 2.7. Overall evaluation of the project.
 - 2.8. Recommendation.

V. Study Schedule

The Study will be executed in accordance with the tentative schedule shown in the Annex.

VI. Report

JICA will prepare and submit the following reports in English to HMGN.

1. Inception Report

Twenty (20) copies at the commencement of the Phase I field work.

2. Progress Report (1)

Twenty (20) copies at the end of the Phase I field work.

3. Interim Report

Twenty (20) copies at the commencement of the Phase II field work.

4. Progress Report (2)

Twenty (20) copies at the end of the Phase II field work.

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5. Draft Final Report

Twenty (20) copies at the end of the Phase II home office work. HMGN provides JICA with its comments on the Draft Final Report within one (1) month after receipt of the Draft Final Report.

6. Final Report

Fifty (50) copies within one (1) months after receiving HMGN's comments on the Draft Final Report.

VII. Undertaking of HMGN

1. To facilitate smooth conduct of the Study, HMGN shall take necessary measures:

- (1) to secure the safety of the Japanese study team;
 - (2) to permit the members of the Japanese study team to enter, leave and sojourn in the Kingdom of Nepal for the duration of their assignment therein, and exempt them from foreign registration requirements and consular fees;
 - (3) to exempt the members of the Japanese study team from taxes, duties, fees and any other charges on equipment, machinery and other materials brought into the Kingdom of Nepal for the conduct of the Study;
 - (4) to exempt the members of the Japanese study team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Japanese study team for their services in connection with the implementation of the Study;
 - (5) to provide necessary facilities to the Japanese study team for the remittance as well as utilization of the funds introduced into the Kingdom of Nepal from Japan in connection with the implementation of the Study;
 - (6) to secure permission for entry into private properties or restricted areas for the implementation of the Study as and when necessity arises;
 - (7) to secure permission for the Japanese study team to take all data and documents related to the Study including photographs and maps out of the Kingdom of Nepal to Japan; and
 - (8) to provide medical services as needed. Its expenses will be chargeable on the members of the Japanese study team.
2. HMGN shall bear claims, if any arises, against the members

of the Japanese study team resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Japanese study team.

3. DOI shall, at its own expense, provide the Japanese study team with the following, in cooperation with the Department of Agriculture and authorities concerned;

- (1) available data and information related to the Study;
- (2) counterpart personnel;
- (3) suitable office space & facilities in the study area; and
- (4) credentials or identification cards.

VIII. UNDERTAKING OF JICA

For the implementation of the Study, JICA shall take the following measures:

1. to dispatch study teams, at its own expense, to the Kingdom of Nepal; and
2. to pursue technology transfer to the Nepalese counterpart personnel in the course of the Study.

IX. OTHERS

JICA and DOI shall consult with each other in respect of any matter that is not agreed upon in this document and may arise from or in connection with the Study.

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Annex

TENTATIVE SCHEDULE

Month																			
Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
Work in Nepal	[]														[]		[]		
Work in Japan	[]					[]												[]	
Topographic Mapping	in Nepal [] in Japan []																		
Submission of Report	*				*							*		*			*	*	
	Ic/R				P/R(1)							It/R		P/R(2)			DF/R	F/R	
Phase	← Phase I →										← Phase II →								

(Note) Ic/R : Inception Report
 P/R(1) : Progress Report(1)
 It/R : Interim Report
 P/R(2) : Progress Report(2)
 DF/R : Draft Final Report
 F/R : Final Report

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MINUTES OF MEETING
ON
SCOPE OF WORK
FOR
THE MASTER PLAN STUDY
ON
THE REHABILITATION FOR GOVERNMENT DEVELOPED IRRIGATION SCHEMES
IN
THE KATHMANDU VALLEY IN THE KINGDOM OF NEPAL

The preparatory study team (hereinafter referred to as "the Team") organized by Japan International Cooperation Agency (hereinafter referred to as "JICA"), and headed by Mr. Norikazu Tsujii, visited the Kingdom of Nepal from December 2 to December 18, 1992 for the purpose of discussing and confirming the Scope of Work for the master plan study on the rehabilitation for government developed irrigation schemes in the Kathmandu valley in the Kingdom of Nepal (hereinafter referred to as "the Study").

The Team had a series of discussions with the officials concerned of the Department of Irrigation, Ministry of Water Resources of His Majesty's Government of Nepal (hereinafter referred to as "DOI") on the Scope of Work for the Study. The list of participants in a series of meetings is shown in the attached paper.

As a result of the discussions, the Team and the DOI agreed on the Scope of Work for the Study.

The following are the main issues discussed and agreed upon by both sides in relation to the Scope of Work for the Study.

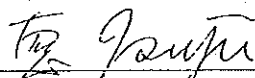
1. The Team suggested approximately 3,000ha of the model areas to be studied at the level of feasibility study, but the DOI requested 5,000ha. As a result of examination, both sides agreed that the model areas is to be finalized depending upon outcome of master plan study.

2. The office for the Japanese study team should be equipped with electricity, city water and telephone.
3. The DOI shall get a permission for using the aero-photograph covering the Study area and taking it out of the Kingdom of Nepal from the Survey Department and related authorities.
4. The DOI shall establish a coordinating committee which consists of representatives from the DOI and the Ministry of Agriculture for the Study before the beginning of the Study.
5. The DOI requested that the following equipment necessary for the Study be procured by JICA and be donated to the DOI after the termination of the Study. The Team promised to convey its request to the Government of Japan.
 - a. personal computer,
 - b. photocopy machine,
 - c. meteorology equipment,
 - d. hydrology equipment, and
 - e. water quality equipment.
6. The DOI requested the training of counterpart in Japan. The team promised to convey its request to the Government of Japan.

Kathmandu, December 16, 1992



Mr. Y. L. Vaidya
Director General,
Department of Irrigation,
His Majesty's Government
of Nepal



Mr. Norikazu Tsujii
Leader,
Preparatory Study Team,
Japan International
Cooperation Agency

LIST OF PARTICIPANTS

1. Nepalese Side

Department of Irrigation

Mr. Y. L. Vaidya	Director General
Mr. C. P. Rauniyar	Superintending Engineer, Planning & Design Division
Mr. K. Sharma	Acting Director, Central Regional Irrigation Directorate
Mr. M. S. Paudel	Senior Divisional Engineer, Planing Section
Mr. I. S. Thapa	Divisional Engineer, Central Regional Irrigation Directorate
Mr. B. Karki	Section Officer, Foreign Aid Division, Ministry of Finance

2. Japanese Side

Mr. Norikazu Tsujii	Leader of Preparatory Study Team, JICA
Mr. Yukihiro Ogawa	Member of Preparatory Study Team, JICA
Mr. Takuji Tanaka	Member of Preparatory Study Team, JICA
Mr. Yutaka Nozaki	Member of Preparatory Study Team, JICA
Mr. Tadao Ito	Member of Preparatory Study Team, JICA
Mr. Norio Naito	Staff of JICA Nepal Office

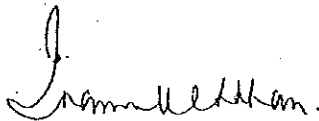
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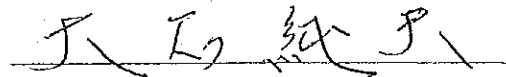
SCOPE OF WORK
FOR
THE FEASIBILITY STUDY
ON
CHASHMA RIGHT BANK 1ST LIFT IRRIGATION PROJECT

AGREED UPON BETWEEN
THE GOVERNMENT OF NORTH WEST FRONTIER PROVINCE,
THE ISLAMIC REPUBLIC OF PAKISTAN
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

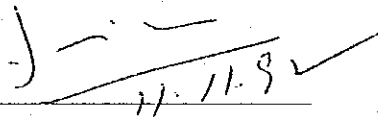
PESHAWAR, 11TH NOVEMBER, 1992



Mr. Inamullah Khan
Additional Secretary II,
Planning and Development Department,
The Government of
North West Frontier Province



Mr. Sumio Oishi
Leader,
Preparatory Study Team,
Japan International
Cooperation Agency.



Mr. Faqir Ahmad Paracha
Secretary,
Irrigation and Public Health Department,
The Government of
North West Frontier Province

Countersigned



FARHAT HUSSAIN
Joint Secretary
Economic Affairs Division
Government of Pakistan
ISLAMABAD

I. INTRODUCTION

In response to the request of the Government of the Islamic Republic of Pakistan (hereinafter referred to as 'GOP'), the Government of Japan (hereinafter referred to as 'GOJ') has decided to undertake the Feasibility Study on Chashma Right Bank 1st Lift Irrigation Project (hereinafter referred to as 'the Study'), in accordance with the relevant laws and regulations in force in Japan.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as 'JICA'), the official agency responsible for the implementation of the technical cooperation programmes of GOJ, will undertake the Study, in close cooperation with the authorities concerned of the Islamic Republic of Pakistan (hereinafter referred to as 'Pakistan').

And as for the organizations concerned of Pakistan, the Irrigation & Public Health Engineering Department, the Government of North West Frontier Province (hereinafter referred to as 'IPHED'), will act as the counterpart agency to the Japanese study team as well as coordinating body in relation with other governmental and non-governmental organizations concerned for smooth implementation of the Study.

The present document sets forth the Scope of Work with regard to the Study.

II. OBJECTIVES OF THE STUDY

The objectives of the Study are:

1. To conduct the feasibility study on agricultural development for the Chashma Right Bank 1st Lift Irrigation Project (hereinafter referred to as 'the Project').
2. To carry out technology transfer to the Pakistani counterpart personnel through on-job training in the course of the Study.

III. STUDY AREA

The Study covers the Chashma Right Bank 1st Lift Irrigation Project area, which is approximately 110,000ha (see attached map).

IV. SCOPE OF THE STUDY

The Study will consist of two (2) phases and will cover the following:

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1. Phase I

1-1 To collect and review existing data and information and to carry out field survey and investigation in the study area:

- natural condition
 - a. meteorology
 - b. hydrology
 - c. geology
 - d. soil
 - e. topography
 - f. others
- agriculture
 - a. land use and tenure
 - b. cropping pattern and yield
 - c. agro-economy and institution
 - d. others
- agricultural infrastructure
 - a. irrigation and drainage facilities
 - b. farm roads
 - c. others
- socio-economic situation
 - a. population
 - b. household and farmers
 - c. regional socio-economy and household economy
 - d. social and farmers organizations
 - e. historical right/costums regarding irrigational water usage
 - f. others
- other information related to the Project
 - a. administrative organizations related to the Project
 - b. environmental impacts
 - c. others

1-2 To carry out household survey

1-3 To review other projects related to the Project

1-4 To review topographic map covering the study area, which has already been made in Pakistan (scale: 4 inch = 1 mile).

2. Phase II

2-1 Based on the results of the Phase I study, Phase II study covers the following items:

- additional field survey, data collection and analysis including:
 - a. hydrology and meteorology
 - b. geology and soil classification
 - c. land use and tenure
 - d. cropping pattern, and yeild
 - e. irrigation and drainage
 - f. hill torrent study for cross drainage, erosion and flood damages
 - g. regional socio-economy and farm household economy
 - h. social and farmers organizations
 - i. environment
 - j. others

2-2 To formulate an irrigation and agricultural development programme for the Project

2-3 Preliminary design of the major structures of the Project

2-4 Preparation of the implementation schedule

2-5 Preparation of the operation and maintenance plan for major structures

2-6 Preparation of the environmental preservation plan

2-7 Estimate of the project costs and benefits

2-8 Recommendation

V. STUDY SCHEDULE

The study will be carried out in accordance with the attached tentative schedule.

M. REPORTS

JICA shall prepare and submit following reports in English to GOP.

(1) Inception Report

Twenty (20) copies at the commencement of the Study.

(2) Progress Report (I)

Twenty (20) copies at the end of the Phase I Study in Pakistan.

(3) Interim Report

Twenty (20) copies at the end of the Phase I study.

- (4) Progress Report (2)
Twenty (20) copies at the end of the Phase II Study in Pakistan.
- (5) Draft Final Report
Twenty (20) copies at the end of the Phase II study.
GOP provides JICA with its comments on the Draft Final Report within one (1) month after receipt of the Draft Final Report.
- (6) Final Report
Fifty (50) copies within two (2) months after receiving GOP's comments on the Draft Final Report.

VI. UNDERTAKING OF THE GOVERNMENT OF PAKISTAN

1. To facilitate smooth conduct of the study, GOP shall take necessary measures:
 - 1-1 to secure the safety of the Japanese study team,
 - 1-2 to permit the members of the Japanese study team to enter, leave and sojourn in Pakistan for the duration of their assignment therein, and exempt them from foreign registration requirements and consular fees,
 - 1-3 to exempt the members of the Japanese study team from taxes, duties, fees and any other charges on equipment, machinery and other materials brought into of Pakistan for the conduct of the study,
 - 1-4 to exempt the members of the Japanese study team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Japanese study team for their services in connection with the implementation of the Study,
 - 1-5 to provide necessary facilities to the Japanese study team for the remittance as well as utilization of the funds introduced into Pakistan from Japan in connection with the implementation of the Study,
 - 1-6 to secure permission for entry into private properties and other areas for the conduct of the Study as and when necessity arises,
 - 1-7 to secure permission for the Japanese study team to take all data and documents related to the Study including photographs and maps, also including aerial photographs necessary for the Study (excluding restricted areas), out of Pakistan to Japan, on case to case bases,
 - 1-8 to provide medical services as needed. Its expense will be chargeable on the members of the Japanese study team.
2. GOP shall bear claims, if any arises, against the members of the Japanese study team, resulting from, occurring in the course of, or otherwise connected with the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or wilful misconduct on the part of the members of the Japanese study team.

3. IPHED shall, at own expense, provide the Japanese study team with the followings, in cooperation with the other authorities concerned:
 - 1) available data and information related to the Study.
 - 2) counterpart personnel.
 - 3) suitable office with necessary furniture in Peshawar and project sites.
 - 4) credentials or identification cards, and
 - 5) necessary number of vehicles with drivers.

Ⅷ. UNDERTAKING OF JICA

For the conduct of the Study, JICA shall take the following measures:

1. To dispatch study teams, at its own expense, to Pakistan, and
2. To conduct technology transfer to the Pakistani counterpart personnel in the course of the Study.

Ⅸ. CONSULTATION

JICA and IPHED will consult each other in respect of any matter that may arise from or in connection with the Study.

TENTATIVE SCHEDULE

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
Item																												
Phase I																												
Phase II																												
Reports	△ IC/R						△ P/R(1)	△ IT/R											△ P/R(2)	△ DF/R	△ F/R							

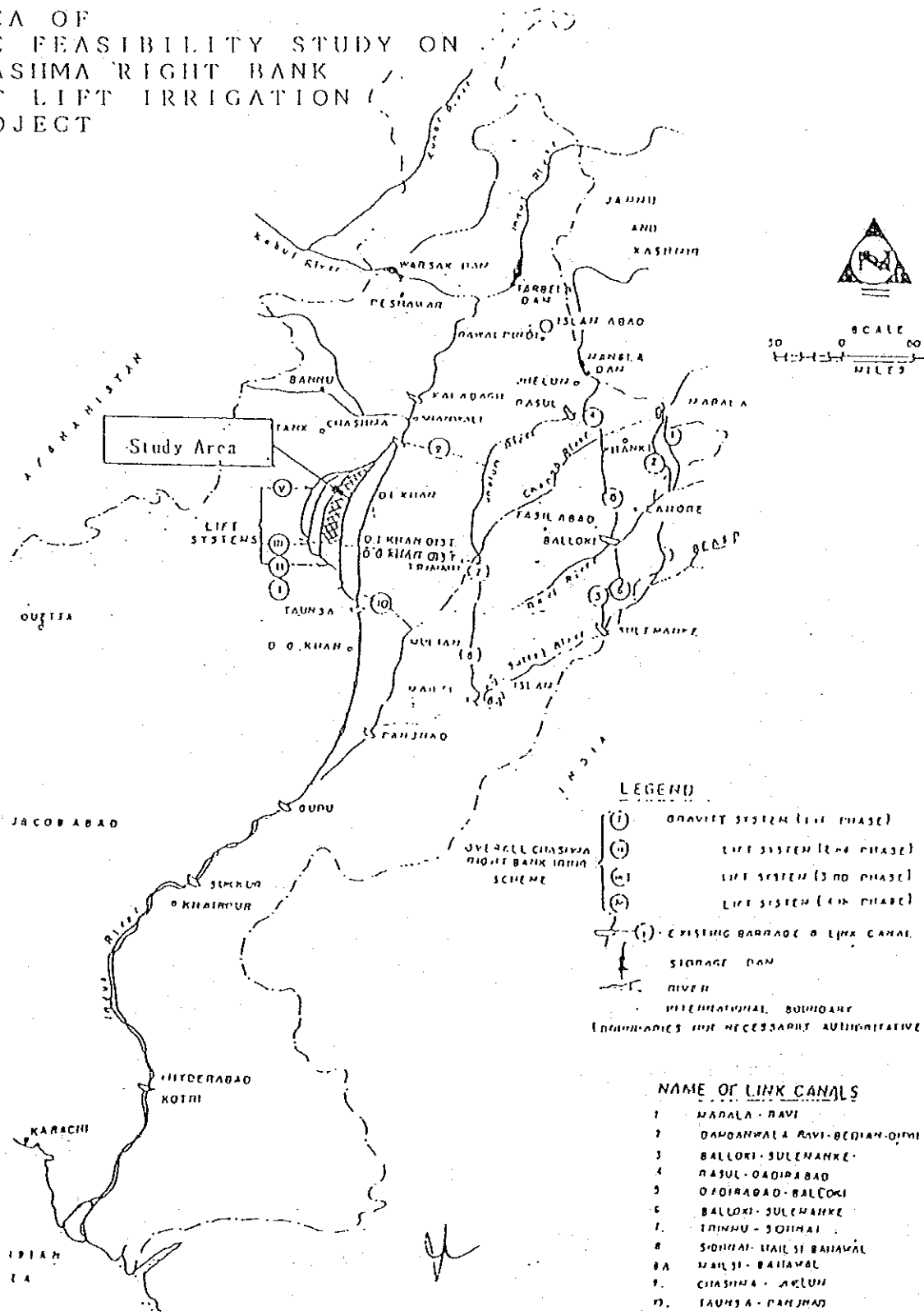
(Remarks) IC/R : Inception Report P/R(1) : Progress Report (1)
 IT/R : Interim Report P/R(2) : Progress Report (2)
 DF/R : Draft Final Report F/R : Final Report

— : Work in Pakistan
 == : Home Office Work in Japan
 © : Comments on DF/R by Pakistan side

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AREA OF
THE FEASIBILITY STUDY ON
CHASHMA RIGHT BANK
1ST LIFT IRRIGATION
PROJECT



MINUTES OF MEETING
ON
SCOPE OF WORK
FOR
THE FEASIBILITY STUDY
ON
CHASHMA RIGHT BANK 1ST LIFT IRRIGATION PROJECT

The preparatory study team (hereinafter referred to as 'the Team') organized by the Japan International Cooperation Agency (hereinafter referred to as 'JICA'), and headed by Mr. Sumio Oishi, visited the Islamic Republic of Pakistan from October 26 to November 13, 1992 for the purpose of discussing and confirming the Scope of Work for the Feasibility Study on the Chashma Right Bank 1st Lift Irrigation Project (hereinafter referred to as 'the Study').

The team had a series of discussions with the officials concerned of the Irrigation and Public Health Engineering Department, the Government of North West Frontier Province (hereinafter referred to as 'IPHED') on the Scope of Work for the Study. The list of participants in a series of meetings is attached in the Annex.

The following are the main issues discussed and agreed by IPHED and the Team.

1. IPHED and the Team both agreed on the issues mentioned in the Scope of Work.
2. IPHED shall provide the Japanese study team a set of topographic map (scale, 4 inch = 1 mile, contour, 5 feet) which covers the whole Study area before the commencement of the Study, and also will provide the one in scale, 1:5,000, contour, 0.25 metre, until 1(one) year after the commencement of the Study.
3. The Team has decided to conduct the Study according to the confirmation given by IPHED that there are sufficient amount of water and electricity available regarding the implementation of the Chashma Right Bank 1st Lift Irrigation Project.
4. IPHED shall provide the Japanese study team with offices which are equipped with electricity, city water, and telephones in Peshawar and the Study area.
5. IPHED requested that local consultants be associated with the Study to the extent possible. The Team noted this request, but observed that this would be determined by the Japanese study team.

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6. IPHED requested that the following equipments necessary for the Study be procured by JICA and be donated to IPHED after the termination of the Study. The Team promised to convey its request to the Government of Japan.
 - vehicles
 - computers
 - copymachines
 - faxmachines
 - survey equipments

7. IPHED requested the counterpart training in Japan. The Team promised to convey its request to the Government of Japan.

8. The Government of North West Frontier Province noted that items mentioned in the Scope of Work, sub-paragraph 1-2 to 1-5, and 1-7 of paragraph VIII, would require clearance by the Federal Government.

Inamullah Khan

Mr. Inamullah Khan
 Additional Secretary II,
 Planning and Development Department
 The Government of
 North West Frontier Province

Sumio Oishi

Mr. Sumio Oishi
 Leader,
 Preparatory Study Team,
 Japan International
 Cooperation Agency

11-11-82

Mr. Faqir Ahmad Paracha
 Secretary,
 Irrigation and Public Health Engineering Department,
 The Government of
 North West Frontier Province

Countersigned

Farhat Hussain

FARHAT HUSSAIN
 Joint Secretary
 Economic Cooperation Division
 Government of Pakistan
 ISLAMABAD

LIST OF PARTICIPANTS

ANNEX

PAKISTAN SIDE

1. Mr. Mohammad Saleem Khan	Secretary	Planning and Development Department, The Government of NWFP
2. Mr. Inamullah Khan	Additional Secretary II	Planning and Development Department, The Government of NWFP
3. Mr. Faqir Ahmad Paracha	Secretary	Irrigation and Public Health Engineering Department, The Government of NWFP
4. Mr. Muhammad Munir	Chief Engineer (P&I)	WAPDA, Lahore
5. Mr. M. Ishhaq Shinwari	Project Director (P&I) North	WAPDA, Lahore
6. Mr. Nawab Khan Masood	Chief Engineer Water Sector Investment Planning	Planning and Development Department, The Government of NWFP
7. Mr. Akhtar Ali Ismaili	Chief Engineer (Development)	Irrigation and Public Health Engineering Department, The Government of NWFP
8. Mr. Jan Sardar Gul	General Manager	WAPDA, North
9. Mr. Mohammad Zaman Khan	Director (P&I)	WAPDA, Peshawar
10. Mr. Habibullah Khan	Project Director, D. I. Khan	Irrigation and Public Health Engineering Department, The Government of NWFP
11. Mr. Abdul Wasai	Director	WAPDA, Peshawar
12. Dr. Abdul Waheed	Chief Planning Officer	Food, Agriculture and Cooperative Department, The Government of NWFP
13. Mr. Mohammad Yousef	Director, Water Management	Agriculture Department, The Government of NWFP
14. Mr. Attaullah Khan	Director, Planning	Agriculture Extension Department, The Government of NWFP
15. Mr. Amjad Shahid Afridi	Chief (Water & Power) <i>h</i>	Planning and Development Department, The Government of NWFP

- | | | |
|---------------------------|--|--|
| 16. Mr. Ahmad Samad | Project through
Secretary of
Agriculture | Agriculture Extension
Department,
The Government of NWFP |
| 17. Mr. Muhammad Zulfiqar | Planning Officer | Agriculture Extension
Department,
The Government of NWFP |
| 18. Mr. Khan Said | Director,
Technical | Area Electricity Board,
WAPDA, Peshawar |

THE TEAM

- | | |
|---------------------------|----------------------|
| 1. Mr. Sumio Oishi | Leader |
| 2. Mr. Takanobu Kobayashi | Irrigation Engineer |
| 3. Mr. Akihiko Azumi | Agronomist |
| 4. Dr. Katsumi Chida | Environmental Expert |
| 5. Mr. Akira Shimizu | Coordinator |

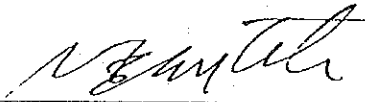


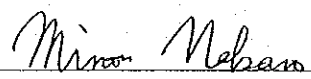


IMPLEMENTING ARRANGEMENT
ON
THE TECHNICAL COOPERATION
FOR
THE FEASIBILITY STUDY
ON
THE UPLAND IRRIGATION AND RURAL DEVELOPMENT PROJECT
IN
SOUTHERN LUZON
IN
REPUBLIC OF THE PHILIPPINES

AGREED UPON BETWEEN
NATIONAL IRRIGATION ADMINISTRATION
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

METRO MANILA, 3 FEBRUARY, 1993


Mr. APOLONIO V. BAUTISTA
Administrator,
National Irrigation
Administration


Mr. MINORU NAKANO
Leader,
Preparatory Study Team,
Japan International
Cooperation Agency

I. INTRODUCTION

In response to the request of the Government of the Republic of the Philippines (hereinafter referred to as "GOP"), the Government of Japan (hereinafter referred to as "GOJ") has decided to conduct the Feasibility Study on the Upland Irrigation and Rural Development Project in Southern Luzon in the Republic of the Philippines (hereinafter referred to as "the Study"), and exchanged the Note Verbal with GOP concerning the implementation of the Study.

Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programs of GOJ, will undertake the Study in accordance with the relevant laws and regulations enforced in Japan.

On the part of GOP, National Irrigation Administration (hereinafter referred to as "NIA") shall act as the counterpart agency to the Japanese study team and also as coordinating body in relation with the Department of Agriculture and other governmental and non-governmental organizations concerned for the smooth implementation of the Study.

The present document constitutes the implementing arrangement between JICA and NIA under the above mentioned Note Verbal exchanged between two governments.

II. OBJECTIVES OF THE STUDY

The objectives of the Study are:

1. to conduct a feasibility study on the upland irrigation and rural development project in the area along the foot of Mt. Banahaw, the Province of Laguna, and
2. to pursue transfer of technology to the Philippine counterpart personnel in the course of the Study.

III. OUTLINE OF THE STUDY

1. Study Area

The Study covers an area of about 3,000ha along the foot of Mt. Banahaw, the Province of Laguna and related areas (See location map attached as Appendix II).

2. Scope of the Study

The Study will cover the following items:

(1) Work I

- 1) Preparation of a topographic map covering the Study area at the scale of 1/4,000.

(2) Work II

- 1) Collection, review and analysis of relevant existing data and information, and field survey, in terms of:
 - a. natural conditions (topography, vegetation, meteorology, hydrology, geology, groundwater, soil, etc.),

- b. social and economic conditions (population, household, employment, regional economy, farmers' economy, land tenure, etc.),
 - c. agricultural conditions (land use, cropping pattern, agricultural yield/production, irrigation system, water management, agricultural facility, farming practices, processing, marketing, farmers' organizations, agricultural supporting services including extension and agricultural credit, etc.),
 - d. rural and social infrastructural conditions (road, water supply, electricity, etc.),
 - e. environmental conditions (natural condition, social condition, etc.), and
 - f. others.
- 2) Execution of following surveys:
- a. hydrological survey
 - b. soil survey
 - c. farmers' household survey
 - d. topographical survey
 - e. others
- 3) Preparation of upland irrigation and rural development of the Study area, including:
- a. land use and cropping pattern plan
 - b. farming practices development plan
 - c. water resource development plan
 - d. irrigation and drainage development plan
 - e. rural and social infrastructure development plan
 - f. post harvest and marketing system development plan
 - g. farmers' organization and supporting service development plan
 - h. preliminary design of main facilities
 - i. project implementation schedule and organization
 - j. operation and maintenance plan
 - k. environmental conservation plan
- 5) Estimation of project cost and benefit
- 6) Project evaluation
- 7) Recommendations

IV. STUDY SCHEDULE

The Study will be carried out in accordance with the attached tentative work schedule (Appendix I).

V. REPORTS

JICA shall prepare and submit following reports in English to GOP.

- (1) Inception Report
Fifteen (15) copies at the commencement of the Study.
- (2) Interim Report
Fifteen (15) copies at the end of first part of the home office work.

- (3) Progress Report
Fifteen (15) copies at the end of the second part of the field work.
- (4) Draft Final Report
Fifteen (15) copies within one (1) month following the end of the home office work of the Study. GOP shall provide JICA with its comments within one (1) month after receipt of the Draft Final Report.
- (5) Final Report
Fifty (50) copies within two (2) months after receiving the GOP's comments on the Draft Final Report.

VI. UNDERTAKING OF GOP

In accordance with the Note Verbal exchanged between GOJ and GOP, GOP shall accord privileges, immunities and other assistance to the Japanese study team and, through the authorities concerned, take necessary measures to facilitate the smooth conduct of the Study.

1. GOP shall be responsible for dealing with claims which may be brought by third parties against the members of the Japanese study team and shall hold them harmless in receipt of claims and liabilities arising in the course of, or otherwise connected with the discharge of their duties in the implementation of the Study, except when such claims or liabilities arise from gross negligence or willful misconduct of the above mentioned members.
2. NIA shall, at its own expense, provide the Japanese study team with the following, if necessary, in cooperation with other agencies concerned;
 - (1) available data and information related to the Study,
 - (2) counterpart personnel,
 - (3) suitable office space with necessary equipment near the Study area and in Metro Manila, and
 - (4) credentials or identification cards to the members of the Japanese study team.
3. NIA shall make necessary arrangements with other governmental and non-governmental organizations concerned for the following;
 - (1) to secure the safety of the Japanese study team,
 - (2) to permit the members of the Japanese study team to enter, leave and sojourn in the Philippines for the duration of their assignment therein,
 - (3) to exempt the members of the Japanese study team from taxes, duties, fees and other charges on equipment, machinery and other materials brought into the Philippines for the conduct of the Study,
 - (4) to exempt the members of the Japanese study team from income tax and charges of any kind imposed on or in connection with any emolument or allowance paid to the members of the Japanese study team for their services in connection with the implementation of the Study,

- (5) to provide necessary facilities to the Japanese study team for remittance as well as utilization of the funds introduced into the Philippines from Japan in connection with the implementation of the Study,
- (6) to secure permission for entry into private properties or restricted areas for the conduct of the Study,
- (7) to secure permission to take all data and documents (including photographs) related to the Study out of the Philippines to Japan by the Japanese study team, and
- (8) to provide medical services as needed and its expenses will be chargeable on members of the Japanese study team.

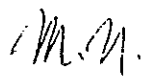

VII. UNDERTAKING OF GOJ

In accordance with the Note Verbal exchanged between GOJ and GOP, GOJ, through JICA, shall take the following measures for the implementation of the Study;

1. to dispatch, at its own expense, study teams to the Philippines, and
2. to pursue technology transfer to the Philippine counterpart personnel in the course of the Study.

VIII. CONSULTATION

JICA and NIA shall consult with each other in respect to any matter that may arise from or in connection with the Study.



TENTATIVE SCHEDULE

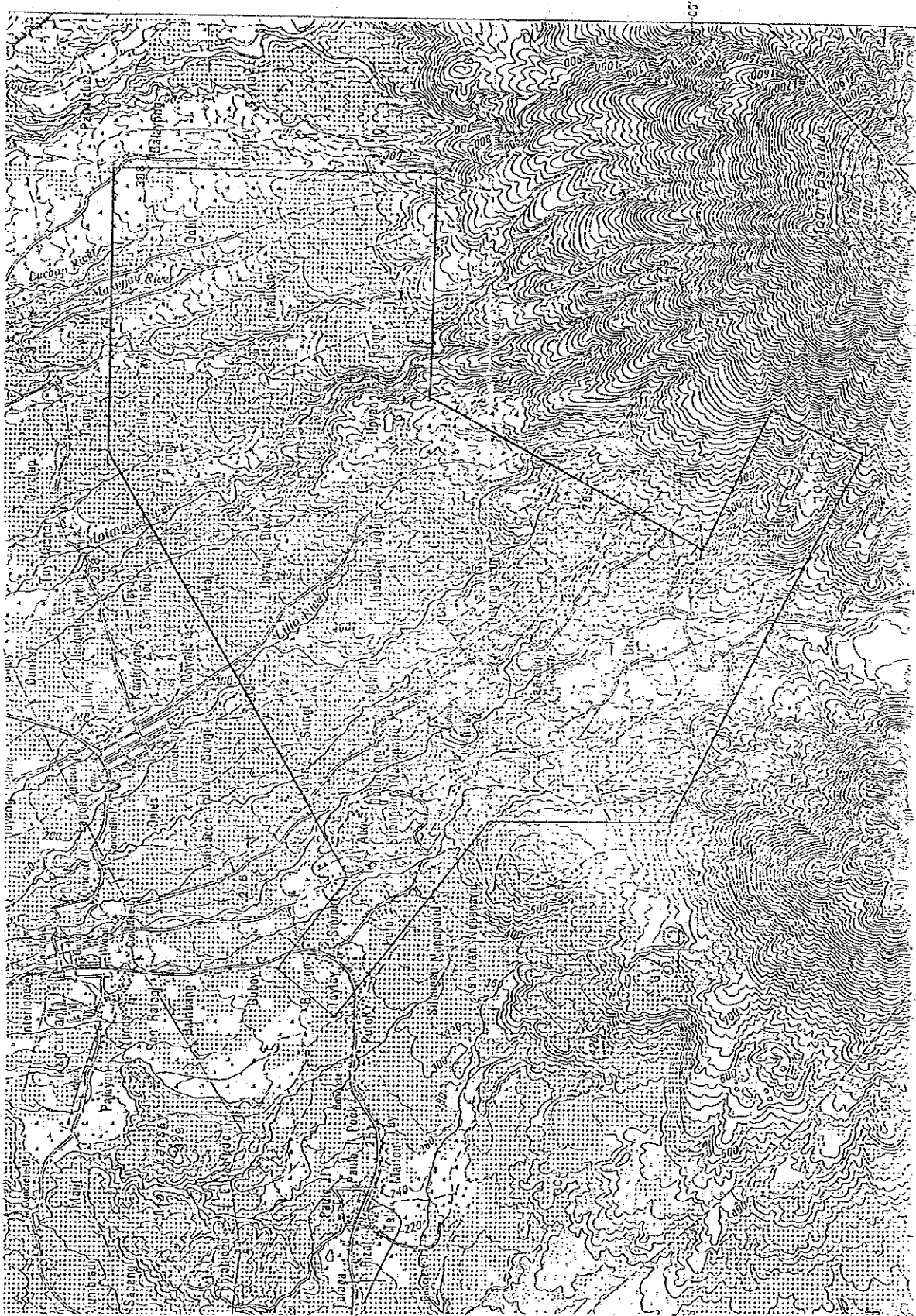
MONTH ITEM	MONTH IN ORDER															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
WORK I			<u> </u>													
WORK II		<u> </u>		<u> </u>			<u> </u>				<u> </u>				<u> </u>	
REPORTS	△ IC/R				△ IT/R			△ P/R				△ DF/R			△ F/R	

Remarks : Field Work in Philippines
 : Home Office Work in Japan

IC/R : Inception Report P/R : Progress Report
 IT/R : Interim Report DF/R: Draft Final Report
 F/R : Final Report

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Scale 1:50,000

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MINUTES OF MEETING
ON
IMPLEMENTING ARRANGEMENT
FOR
THE FEASIBILITY STUDY
ON
THE UPLAND IRRIGATION AND RURAL DEVELOPMENT PROJECT
IN
SOUTHERN LUZON
IN
THE REPUBLIC OF THE PHILIPPINES

The preparatory study team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA"), and headed by Mr. Minoru Nakano, visited the Philippines from January 20 to February 5, 1993 for the purpose of discussing and confirming the Implementing Arrangement for the Feasibility Study on the Upland Irrigation and Rural Development Project in Southern Luzon in the Republic of the Philippines (hereinafter referred to as "the Study").

The Team had a series of discussions with the officials concerned of National Irrigation Administration (hereinafter referred to as "NIA") and other organizations on the Implementing Arrangement for the Study. The list of participants of the first and final meeting is attached in the ANNEX.

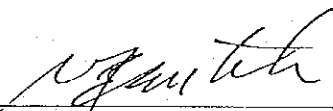
As a result of the discussions, the Team and NIA agreed on the Implementing Arrangement for the Study.

The following are the main issues discussed and agreed upon by both sides in relation to the Implementing Arrangement for the Study.

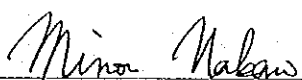
1. NIA shall investigate water discharge at the proposed spring, Liliw river and Maimpis river twice a month and summarize the data for the following period:
 - from February 1993 to the commencement of the Study
 - from the end of the first field survey to the commencement of the second field survey.
2. NIA shall make necessary arrangement/procedures to concerned government agencies and organizations for the preparation of a topographic map of the Study area on a request of the Japanese study team.
3. NIA shall prepare, at its own expense, the Environmental Impact Statements according to the Philippine laws and regulations. Japanese study team shall provide NIA with basic data and information on environmental issues in the course of the Study.

4. NIA shall make necessary arrangement for conducting farmers' household survey in consultation with the Japanese study team.
5. NIA requested that the following equipments necessary for the Study be procured by JICA and be donated to the NIA after the termination of the Study. The Team promised to convey its request to the Government of Japan.
 - vehicles
 - survey equipments for water discharge, sedimentation and water quality
6. NIA requested the counterpart training in Japan. The team promised to convey its request to the Government of Japan.

METRO MANILA, 3 FEBRUARY, 1993



Mr. APOLONIO V. BAUTISTA
Administrator,
National Irrigation
Administration



Mr. MINORU NAKANO
Leader,
Preparatory Study Team,
Japan International
Cooperation Agency

LIST OF PARTICIPANTS

1. Philippine Side

National Irrigation Administration

Mr. EDILBERTO B. PUNZAL	Officer in Charge, Project Development Department
Mr. ABELARDO Y. ARMENTIA	Officer in Charge, Plan Formulation Division, Project Development Department
Mr. REYNALDO R. SANTOS	Supervising Engineer
Mr. FRANCISCO T. ORENSE	Senior Agronomist A
Mr. CONRADO M. CARLOS	Engineer A

2. Japanese Side

Preparatory Study Team

Mr. MINORU NAKANO	Leader
Mr. YOSHIO KANAYA	Member
Mr. SHINJI KAWABE	Member
Mr. NAOFUMI HASHIMOTO	Member
Mr. YUTAKA NOZAKI	Member
Mr. HIDEHIKO HIOKI	Member