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4. モデルインフラ事業に関する要請書
5. IESC計画の協力内容に関する水資源開発総局からの提案書

附属資料 1.

中間及び最終サマリー・レポート

October 1, 1993

Mr. Soeparmono
Director General
Directorate General of
Water Resources Development
Ministry Of Public Works

SUBJECT: FINAL REPORT OF THE JICA LONG-TERM SURVEY
TEAM ON IRRIGATION ENGINEERING SERVICE CENTER
PROJECT

Dear Sir,

The JICA long-term survey team (hereinafter referred to as "the Team") has been dispatched by the JICA to collect information relating to the proposed technical cooperation project and to monitor the progress of its preparation. During our stay in Indonesia from September 7 until today, the Team conducted a series of discussions and field surveys with the authorities concerned.

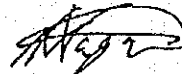
It is our pleasure to submit the Final Report written by the Team on the project type technical cooperation of Irrigation Engineering Service Center in Directorate General of Water Resources Development, Ministry of Public Works. All data and information obtained by the survey team and this Final Report will be reported and recommended to the Government of Japan.

We would like to express our heartfelt thanks for the kind cooperation and arrangement rendered to us during our stay.

Sincerely yours,

原山昭彦

HARAYAMA, Akihiko
Team Member



NAGAYO, Narihide
Team Member

JICA Long-term Survey Team

cc: Secretary of DGWRD, Director of DPP, Director of DOI-I,
Director of DOI-II, Director of DOS, Director of DOR,
Project Manager of CGSC
Head Bureau of Water Resources Development and Irrigation, BAPPENAS
Embassy of Japan
JICA Indonesia Office

FINAL REPORT OF THE JICA LONG-TERM SURVEY
TEAM ON IRRIGATION ENGINEERING SERVICE CENTER
PROJECT

1. Dispatch of the Long-term Survey Team

1.1. Objectives

The summary report on preliminary survey for the IESC project was submitted to DGWRD on October 22, 1992.

JICA then has dispatched the long-term survey team ("the Team") to clarify the following points which had been mentioned in the report.

- 1) Details of the project activities in each field
- 2) Details of draft tentative schedule of implementation
- 3) Details of necessary equipment to be introduced
- 4) Details of Model Satellites
- 5) Confirmation of counterpart in Directorates and Sub-Directorates, in the case of occurring reorganization of DGWRD
- 6) Other items indispensable for starting the project

1.2 Team Members

Mr. TSUJI, Seiichi : Team Leader, Investigation, Planning and Design,
Deputy Director, Construction Department, Kanto
Regional Agricultural Administration Office, Ministry
of Agriculture, Forestry and Fisheries (MAFF)

Mr. HARAYAMA, Akihiko : System Development
Director of Technical Information Division, Land
Improvement Engineering Service Center, Tohoku
Regional Agricultural Administration Office, MAFF

Mr. NAGAYO, Narihide: Operation & Maintenance
Agricultural Development Specialist, Institute for
International Cooperation, JICA

1.3 Schedule

The schedule of the Team's activities from September 7 to October 4, 1993 (28days) is as follows:

- Sep. 7 (Tue.) : Arrival in Jakarta
- Sep. 8 (Wed.): Courtesy call to Embassy of Japan
- Sep. 9 (Thu.) : Plenary Session
Individual meeting on investigation, planning and design
- Sep. 10 (Fri.) : Individual meeting on operation and maintenance
- Sep. 11 (Sat.) : Observation of CGSC, Individual meeting with staff of CGSC
Observation of Jatiluhur Dam
- Sep. 12 (Sun.) : In house meeting
- Sep. 13 (Mon.): Individual meeting on training
Individual meeting on model satellite
- Sep. 14 (Tue.) : Individual meeting on rehabilitation and upgrading
Individual meeting on system development
Site survey to Lampung (Model satellite)
- Sep. 15 (Wed.): Site survey to Lampung (- ditto -)
- Sep. 16 (Thu.) : Return to Jakarta
Preparation for summary report
- Sep. 17 (Fri.) : Submit intermediate summary report , Exchange of opinion
Reporting to BAPPENAS
The Team Leader left Indonesia.
- Sep. 18 (Sat.) : Individual meeting on training
- Sep. 19 (Sun.) : In house meeting
- Sep. 20 (Mon.): Site survey to model satellite in Ujung Pandang
- to Sep.25(Sat.): Observation of JICA Project in Kendari
- Sep. 26 (Sun.) : In house meeting
- Sep. 27 (Mon.): Individual meeting on system development
- Sep. 28 (Tue.) : Observation of Regional training center of MPW
- Sep. 29 (Wed.): Preparation for summary report
- Sep. 30 (Thu.) : Plenary Session
- Oct. 1 (Fri.) : Submit final summary report, Exchange of opinion
Reporting to BAPPENAS
- Oct. 2 (Sat.) : Data collection
- Oct. 3 (Sun.) : - ditto -
- Oct. 4 (Mon.): Reporting to JICA Indonesia Office and Embassy of Japan
Leave for Japan

2. Intermedlate Summary of Survey

See the attachment.

3. Final Summary of Survey

3.1. Draft Activities of Technical Cooperation in IESC Project

Through the discussion and field survey about the proposal of activities from DGWRD, the Team understand that the DGWRD requests the following formulation of the IESC Project.

The final formulation of this project will be decided, when the Record of Discussion Mission has been dispatched.

3.1.1. Goal of the Project

Goal and purpose of the project are conceptualized as follows;

1) Super Goal

The super goal of the Project is to enhance irrigation efficiency, to save construction and O&M cost of irrigation projects, to achieve advanced water use, and eventually to contribute to the increase of the farmer's income.

2) Goal

The goal of the project is as follows;

- a) Irrigation projects are to be appropriately implemented.
- b) After completion of irrigation projects, the irrigation facilities are to be appropriately operated and maintained.

3) Project Purpose

To improve the over all irrigation technology to the level of the irrigation projects, the following project purposes are to be established.

- a) To improve and to develop technical criterias, guidelines and manuals in the field of investigation, planning, design, operation & maintenance, and rehabilitation & upgrading.
- b) To train capable irrigation technical staff.
- c) To improve and to develop data base & computer system independently.

3.1.2. Activities in each field

Activities, Purpose and Output of each field are follows;

1) Investigation, Planning and Design

Preparation for Standard in the field of investigation, planning and design

Several standards will be prepared through reviewing domestic and foreign criterias. The purpose of the activity in this field is to standardize criteria for smooth implementation and management not only for the new project but also for O&M and R&U works in the irrigation projects.

Items of the standard that will be prepared under the Project will be selected in the consultation to be held in the future between the long term expert and his working group.

2) Operation and Maintenance

a) Establishment of guidelines or manuals for operation and maintenance of irrigation facilities.

Through reviewing the existing guidelines, manuals and field surveys, guidelines and manuals of O&M will be established as standard documents to manage the irrigation projects.

b) Review and guidance of the water management technology

Through reviewing the existing technology of water management and field surveys in case study irrigation projects (not defined), guidelines will be established to improve water management technology toward better efficiency.

3) Rehabilitation and Upgrading (R&U)

a) Establishment of guidelines for rehabilitation and/or upgrading technology

Through reviewing the existing guidelines and field surveys, guidelines for an efficient and cost-effective rehabilitation and upgrading technology for several works will be established.

b) Improvement of the methods to monitor and assess

Through reviewing the existing monitoring and assessment methods about the irrigation facilities, these methods will be improved through the orientation and the introduction of the data base program on efficiency in management for rehabilitation and upgrading works.

4) System Development

Supporting Activities to the other technical fields

The following activities will be implemented to support activities in the other technical fields.

Namely;

- (a) Development of technical calculation
- (b) Development of data base system

The samples (Tentative) of supporting works are as follows;

- For the field of Investigation, Planning and Design

Simple technical calculation programs will be developed to the level of irrigation project office for the purpose of effectiveness in routine works.

- For the field of Operation and Maintenance

Simple programs about the water distribution planning will be prepared for irrigation project office level.

- Rehabilitation and Upgrading

Data base for monitoring and assessment of irrigation facilities will be improved.

5) Training

Training of irrigation technical staff in various stages from investigation to O&M and R&U

Training will be implemented for the purpose of diffusing the result of the IESC project to create skilled technical staff.

3.2. Considerable Items

3.2.1. Activities System and Organization

- (1) The Team reconfirms to DGWRD that all activities under this Project will mainly be carried out by counterparts. It means that the major function of Japanese experts is to advice and to introduce Japanese technology concerning each field. Therefore DGWRD should prepare enough capable counterparts and implement structure such as ad hoc committee for a smooth implementation of the project.
- (2) The Team requests that DGWRD take necessary measurement for IESC Project to maintain the same level of organization structure for the implementation of this Project, in case reorganization of the DGWRD occur.

3.2.2 Plan of Input from Japanese side (Tentative)

3.2.2.1. Dispatch of experts

1) Long term experts

- 1) Team leader
- 2) Expert in Investigation, Planning and Design
- 3) Expert in Operation and Maintenance
- 4) Expert in Rehabilitation and Upgrading
- 5) Expert in System Development
- 6) Coordinator (training)

2) Short term experts

For a smooth implementation of the project, short term experts for each field will be dispatched. (a few per year)

3.2.2.2. Provision of Equipment

The provision of equipment under this Project are to be used strictly for the project activities.

Therefore, the Team asks DGWRD to reconsider the plan of the provision of equipment.

3.2.2.3. Counterpart Training in Japan

Several persons related to the Project will be trained in Japan each year.

3.2.2.4. Others

- (1) The Team will inform the Government of Japan that the DGWRD requests to start the implementation of the intermediate-level trainees training program in the second year of this project. The DGWRD understands that the execution of intermediate-level trainees training program will be carried out under the budget sharing system by both parties, namely the Government of Indonesia and that of Japan. Therefore DGWRD will secure its own necessary budget for this training program.
- (2) The Team will also inform the Government of Japan that the DGWRD requests to execute the Model Infrastructure Project in the field of rehabilitation & upgrading, and operation & maintenance.
- (3) The DGWRD requests to Government of Japan to introduce criterias about the upland field irrigation. In this connection, the DGWRD intends to apply the technology in the field level by own budget.

3.2.3. Model Satellites

(1)The DGWRD plans the following activities in Model Satellites under the Project. (Provincial irrigation office in Lampung and South Sulawesi)

a. Improvement in technical calculation, data collection and processing regarding the irrigation matter in provincial irrigation and branch office level.

b.Training Activities

A training program will be carried out in model satellites to diffuse the result of the project. The target of training in model satellite is for technical staff of Provincial irrigation office and Branch office , field staff(water master and gate keeper) and the representatives of water user's associations.

c. Case study (Field survey)

The case study is necessary for the effective establishment of the standards, guidelines and manuals.

The tentative case study areas are Way Jepara irrigation project in Lampung province and Bantimurung irrigation project in South Sulawesi province.

More consideration will be needed for both the selection of the case study areas and the decision of activities in case study areas.

d. Introduction of field testing equipment

The DGWRD finally requests the introduction of simple field testing equipment such as soil, concrete, water quality, hydrology and survey.

3.2.4. Input from the Indonesian side

The DGWRD understands that the following input will be necessary as the prerequisites of the project.

(1)Building and facilities necessary for the implementation of the project in DGWRD headquarters, IESC Centers and Model satellite site.

(2)Running expenses necessary for the implementation of the project including salary, transportation, accommodation expenses of counterparts, utility and maintenance cost of introduced equipment such as computer etc.

September 17, 1993

Mr. Soeparmono
Director General
Directorate General of
Water Resources Development
Ministry Of Public Works

SUBJECT: INTERMEDIATE REPORT OF THE JICA LONG-TERM SURVEY
TEAM FOR IRRIGATION ENGINEERING SERVICE CENTER
PROJECT

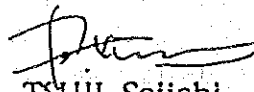
Dear Sir,

The JICA long-term survey team (hereinafter referred to as "the Team") has been dispatched by the JICA with regard to collect information relating with the proposed technical cooperation project and to monitor the progress of its preparation. During our stay in the Republic of Indonesia from September 7 until today, the Team had a series of discussions and field surveys with the authorities concerned.

It is my pleasure to submit herewith the Intermediate Report of the Team on the project type technical cooperation of Irrigation Engineering Service Center in Directorate General of Water Resources Development, Ministry of Public Works. I will report and recommend all data and information, which have been obtained by the survey, to the Government of Japan.

I would like to express my heartfelt thanks for you and your staff members for the kind cooperation and arrangement rendered us during our stay. Finally I would like to ask your kind cooperation for two team members who will stay until October 4 to implement the detailed survey.

Sincerely yours,



TSUJI, Seichi
Team Leader
JICA Long-term Surveyors Team

cc: Secretary of DGWRD, Director of DPP, Director of DOI-I,
Director of DOI-II, Director of DOS, Director of DOR,
Project Manager of CGSC
Head Bureau of Water Resources Development and Irrigation, BAPPENAS
Embassy of Japan
JICA Indonesia Office

INTERMEDIATE REPORT OF THE JICA LONG-TERM SURVEY
TEAM FOR IRRIGATION ENGINEERING SERVICE CENTER
PROJECT

1. Dispatch of Long-term Survey Team

1.1. Objectives

The Long-term Survey Team ("the Team") has been dispatched by Japan International Cooperation Agency (JICA) for the purposes of collecting information relating with the proposed Irrigation Engineering Service Center Project and monitoring the progress of its preparation after submitting the SUMMARY REPORT ON PRELIMINARY SURVEY for the said Project on October 22, 1992.

Objectives of the Team mentioned in the SUMMARY REPORT ON PRELIMINARY SURVEY are to clarify the following contents of the Project:

- 1) Details of the project activities in each field
- 2) Details of draft tentative schedule of implementation
- 3) Details of necessary equipment to be introduced
- 4) Details of Model Satellites
- 5) Confirmation of counterpart in Directorates and Sub-Directorates, in the case of occurring reorganization of DGWRD
- 6) Other items indispensable for starting the project

1.2 Team Members

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Deputy Director, Construction Department, Kanto
Regional Agricultural Administration Office, Ministry
of Agriculture, Forestry and Fisheries (MAFF)

Mr. HARAYAMA, Akihiko : System Development
Director of Technical Information Division, Land
Improvement Engineering Service Center, Tohoku
Regional Agricultural Administration Office, MAFF

Mr. NAGAYO, Narihide: Operation & Maintenance
Agricultural Development Specialist, Institute for
International Cooperation, JICA

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Individual meeting on system development
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- Sep. 15 (Wed.): Site survey to Lampung (- ditto -)
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The Team Leader will leave Indonesia.
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- Sep. 20 (Mon.): Site survey to model satellite and JICA Project
to Sep.25(Sat.): - ditto -
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2. Preconditions Mentioned by Preliminary Survey Team

The SUMMARY REPORT ON PRELIMINARY SURVEY mentioned six preconditions which must be satisfied before starting the Project. They are:

- 1) Steering Committee and Working Groups are established;
- 2) Organization, personnel, and function of IESC and Model Satellites are clearly defined;
- 3) Necessary number of counterpart personnel with qualification are assigned;
- 4) Necessary budget for IESC and Model Satellites is allocated and secured;
- 5) In the case of occurring reorganization of DGWRD, all the necessary arrangement will be settled and counterpart in Directorates and Sub-Directorates for the Project will be properly appointed;
- 6) The sufficient office space for all the Japanese experts shall be secured within both IESC and DGWRD Headquarters.

3. Intermediate Summary of Survey

The comments and request of the team to the DGWRD are follows;

- 1) For the smooth implementation of the IESC project, it should be required the crossed activities and coordination of the all Directorate of DGWRD. Therefore The team recommends that IESC project should have equal status to the level of the Directorate.
- 2) It is necessary to clarify the members of the Steering Committee. The team recommends following members for the Steering Committee.
 - Director General (Chairman)
 - Assistant DG (CO- Chairman)
 - Directors
 - DOI-I
 - DOI-II
 - DOR
 - DOS
 - DPP
 - Research Institute of Water Resource Development
 - Center of Data and Mapping of Publics Works
 - JICA Team Leader
 - JICA Individual Experts for DGWRD (a few)
 - BAPPENAS

- Department of Finance and invited members

3) The team proposes that the counterparts should be assigned as follows:

- a) Counterpart of Team Leader ----Director of DOI - I(Administrative)
Project Manager of IESC(Full time)
- b) Counterpart of experts -----Chairmen of each working group
(Administrative)
IESC Staffs(Full time)

4) It is necessary that DGWRD will effort to secure the necessary budget for IESC project.

5) The team judged that the activities of each field which was proposed by DGWRD is basically appropriate as the items of technical cooperation project.

6) As basic idea, the Team recommends to allocate three experts at CGSC and three experts at DGWRD headquarters for the smooth implementation of the project. The Team proposes to DGWRD to assign two capable secretaries for each office respectively.

It is necessary that DGWRD will prepare the office spaces for Japanese experts as follows;

- Three offices at CGSC for following experts

- a) Team leader
- b) Expert for system development
- c) Coordinator (Training)

Also it is necessary to prepare one enough space for internal meeting of experts.

- One office at DGWRD Headquarters for following three field's experts

- a) Expert for Investigation, Planning and Design
- b) Expert for Operation and Maintenance
- c) Expert for Rehabilitation and Upgrading

The office should be have enough space for three experts, two secretaries and equipment which will be introduced.

7) For the coordination and communication among working groups, it should be held the Regular Meeting and it is necessary to held the

Meeting at least once per each two or three months. The director of DOI-I will be responsible to held the Regular Meeting with following members.

- a) Director of DOI-I ----- Chairmen
- b) Project Manager of IESC
- c) Chairmen of working group
- e) Japanese experts

The contains of the meeting should be follows;

- a) Reporting the progress of each working group
 - b) The coordination and communication for working groups
 - c) Solving the problem
 - d) Others
- 8) The team judges the plan of Model Infrastructure project for rehabilitation & upgrading and operation & maintenance, which was proposed at the stage of field survey, should be taken more consideration.
- 9) Two team members will continue the survey especially about the model satellites and provision of equipment. The members will comment about the mentioned items at the end of survey's period.

附属資料 2. ワーキンググループ・メンバー表 (英語訳)

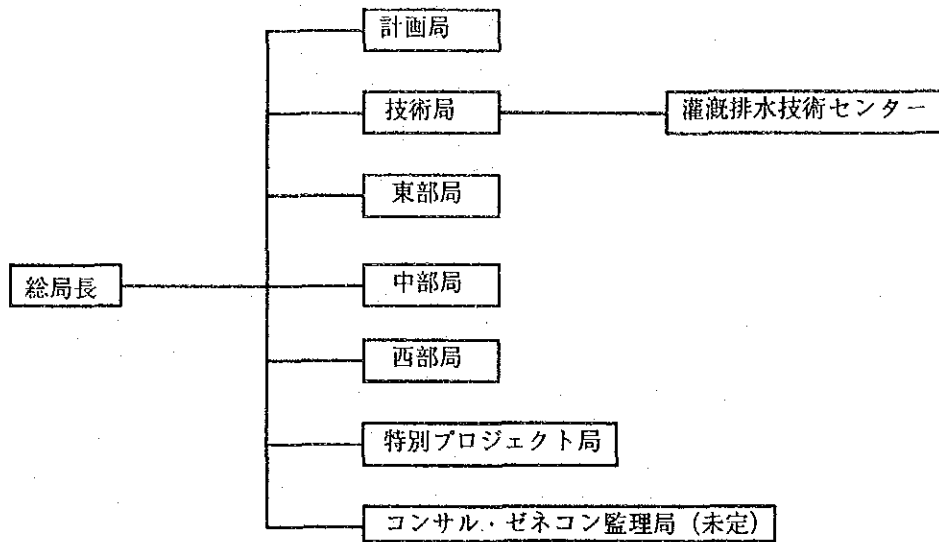
Director General of Water Resources Development's Degree Working Group Committee for IESC Project

No	Name	Present Position	Position on the Project	Remarks
1	Ir. M. Napitupulu, Dipl. HE	Chief, Sub Div. of Technical Planning	Chairman	Sub Group : S I D
		Directorate of Irrigation I		
2	Sabirin Chaniago, ME	Project Division, Construction	Secretary	
		Guidance Service Center	Member	
3	Ir. Soekirno S	Dit. of Irrigation II		
4	Ir. I. M. P. Nahumury, CES	Dit. of Rivers	Member	
5	Ir. Ilham Abia, MSc	Dit. of Swamp	Member	
6	Ir. Suseno	Chief, Sub Division of Exploration & Management, Dit. of Irrigation	Chairman	Sub Group : O & M
		Project Division, Construction		
7	Ir. P. Chr. Sitohang	Guidance Service Center	Secretary	
		Dit. of Irrigation II	Member	
8	Ir. Syamsudin	Dit. of Rivers	Member	
9	Ir. Imam Anshori	Dit. of Swamp	Member	
10	Deddy Kusnadi, MSc	Chif, Sub Dit. of Operation & Maintenance	Chairman	Sub Group : R & U
11	Ir. Bambang Waluyono, Dipl. HE	Project Division, Construction	Secretary	
12	Pantas Hutagalung, ME	Guidance Service Center		
		Dit. of Irrigation II	Member	
13	Sudarmo, MSc	Dit. of Rivers	Member	
14	Ir. Mardikayanto	Dit. of Swamp	Member	
15	Ir. Eddy Sulaiman, Dipl. HE	Chief, Sub-Division of Information and Regulation	Chairman	Sub Group : SYSTEM DEVELOPMENT
16	Djumadi, ME	Project Division, Construction	Secretary	
		Guidance Service Center		
17	Ir. Sugardi, Dipl. HE	Division of Information and Regulation	Member	
		Dit. of Irrigation II	Member	
18	Ir. Suprpto. M. Eng	Dit. of Rivers	Member	
19	Drs. Pardjio	Dit. of Swamp	Member	
20	Ir. Yusufiyandi	Center For Mapping and Data Processing	Member	
21	Ir. Abdul Madjid Sobar	Chief of Water Resources Dev. Training	Chairman	Sub Group : TRAINING
22	Ir. Setianingsih	Division, Center for Training and Education		
23	Ir. Habibuddin S. Dipl. HE	Project Manager of CGSC	Secretary	
		Project Division of CGSC	Member	
24	Ir. Kaman Moch. Ma mun	Project Manager of Water Usage and Audio Visual	Member	
25	Drs. Kamran Erang	Water Resources Development Training	Member	
26	Darismanto, ME	Division, Center for Training and Education		
27	Ir. Zainal, ME			

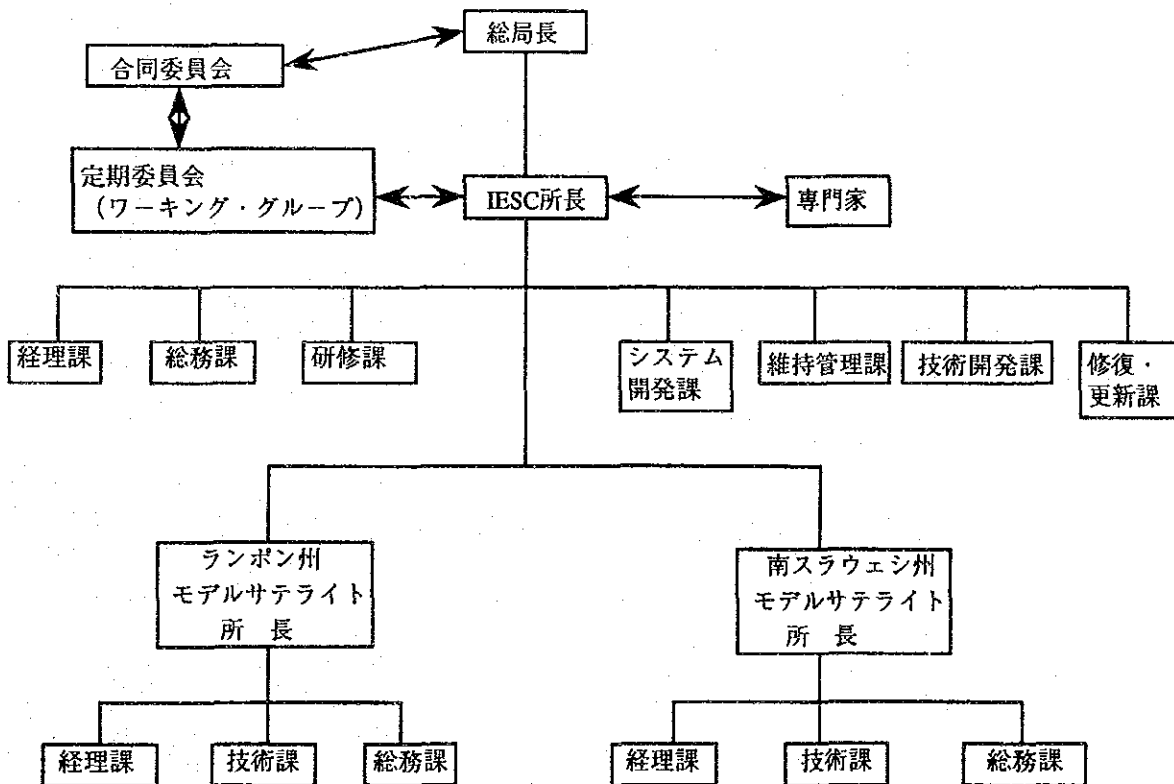
Director, General of Water Resources Development

附属資料3. 実施機関組織図

公共事業省水資源開発総局組織図（再編後の組織図 -1994年4月再編予定-）



灌漑排水技術センター (IESC) 組織図



附属資料 4.

モデルインフラ事業に関する要請書



DEPARTEMEN PEKERJAAN UMUM
DIREKTORAT JENDERAL PENGAIRAN
DIREKTORAT IRIGASI I

Jl. Pattimura No. 20/Perc.7 Kebayoran Baru Kotak Pos 4216/Jktm Telp. 714260, 7208803, 7398604
JAKARTA KODE POS 12042
TELEX : 47430 IRGASI IA

Jakarta, September, 25, 1993.

Mr. Tsuji, Seichi
Team Leader,
"JICA Long Term Survey Team"
for Irrigation Engineering
Service Center (IESC) Project.

Subject : Request of Model Infrastructure Project for Rehabilitation/Upgrading (R/U) during IESC Project Implementation Activities.

Dear Sir,

After having some discussions related to IESC Project activities in DOI-I Head quaters, CGSC and during survey to Model Satellite location in Lampung and South Sulawesi provinces, we think that --for the smoothness of IESC activities implementation--, it's very helpfull to have "Model Infrastructure Project" for Rehabilitation and Upgrading of irrigation system, used as a Model or Training Ground to practice and refine those Criteria/Standard/Guideline/Manual established during the cooperation.

Therefore, with refrence to the above captioned subject, we proposed to the Team's to consider the possibility of this matter. Attached herewith are the Term of Reference and proposed location map of Pilot Project for your reference.

It would be highly appriciated if you could realized this additional proposal for the succesfull of IESC Project.

Thank you very much for your kind assistance and cooperation.

Sincerely yours,



(Ir. Soenarno, MSc.)

Director of DOI-I, DGWRD.

TERM OF REFERENCE

- Project Title : Model Infrastructure Project for Rehabilitation & Upgrading related to Irrigation Engineering Service Center (IESC) Project.
- Location : Lampung & South Sulawesi Provinces.
- Objectives : As a model project to compile the data needs for the establishment of Standard/Criteria for Rehabilitation & Upgrading programs.
- Project Description :
 - Physically Construct a model in the field ± (200 Ha - 500 Ha) which choose from Irrigation Scheme that need to be Rehabilitated/Upgrading.
 - To provide technical guidance and procurement of special equipment and facilities if needed.
- Budget :
 - Plan & design
 - Construction
 - Facilities
 - Monitoring and Others } Total necessary budget For two location (Lampung and South Sulawesi) ¥ 50 Millions.

