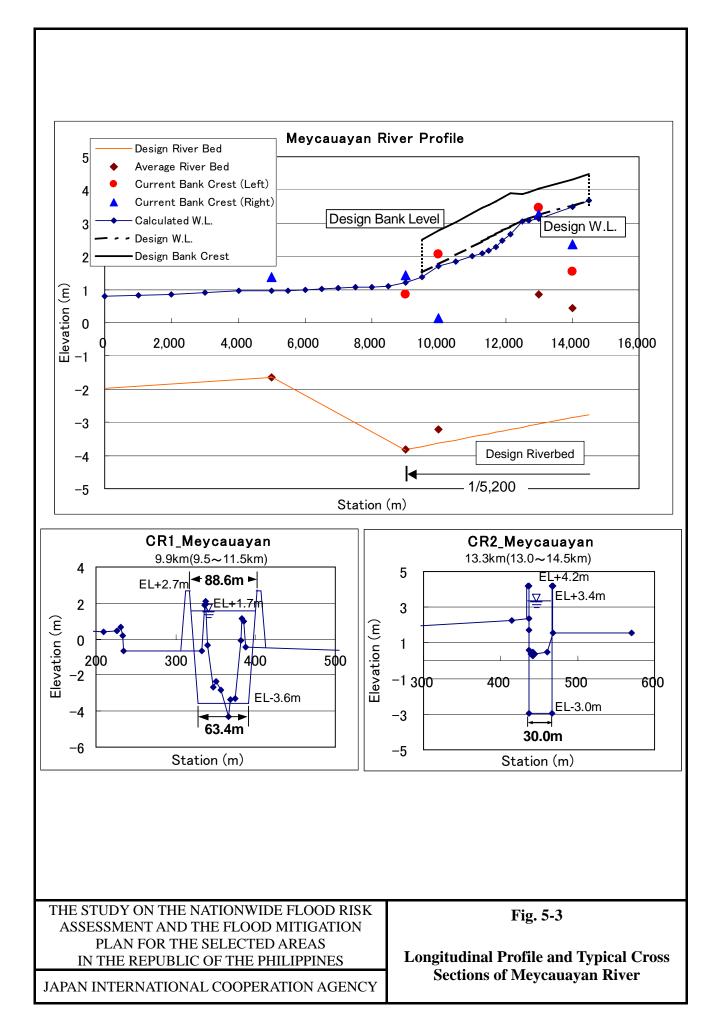
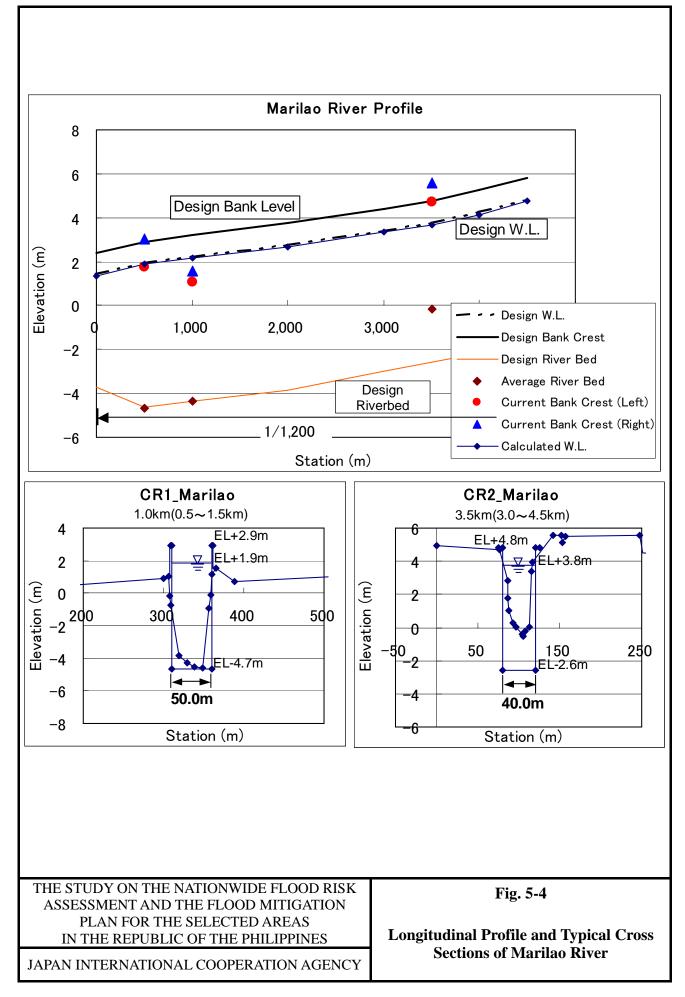
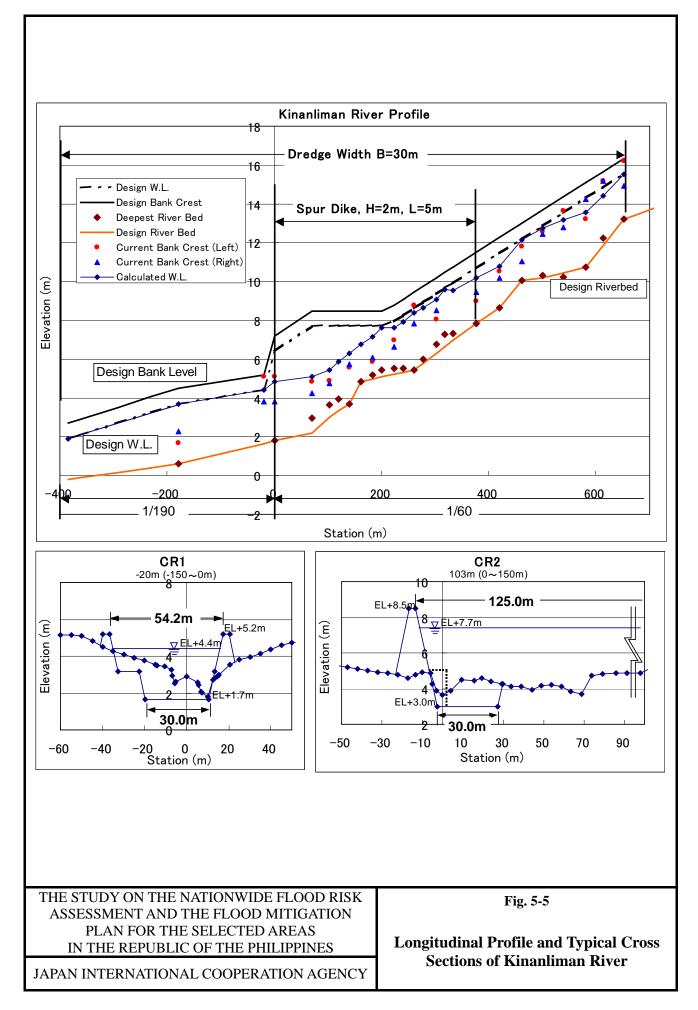
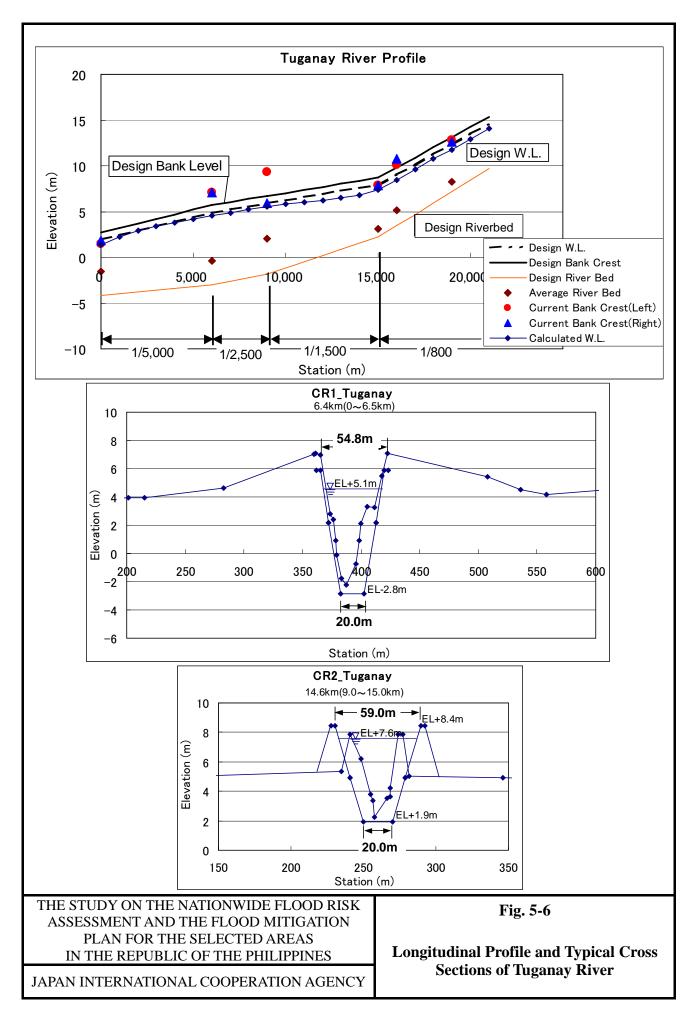


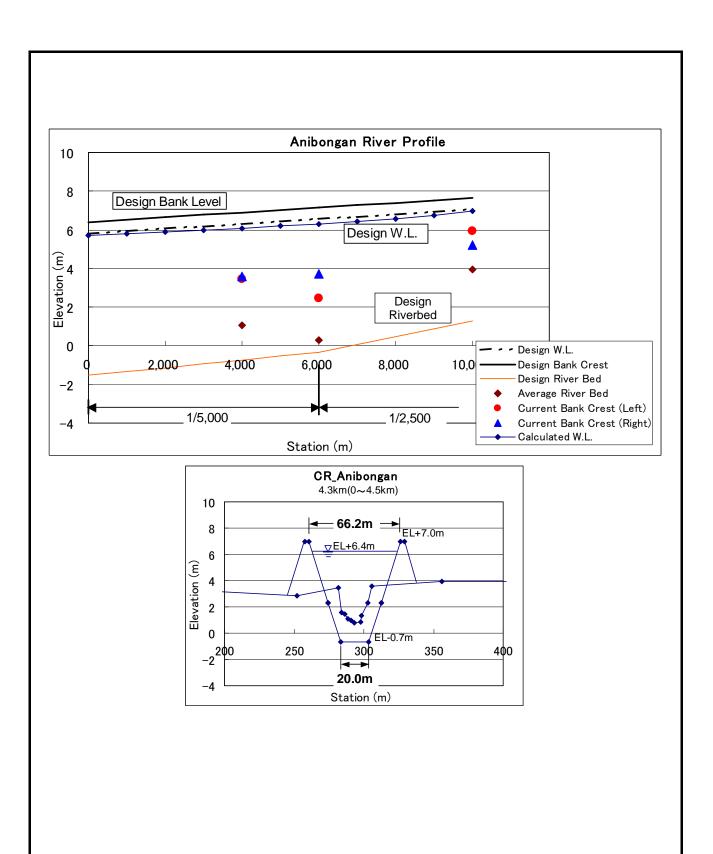
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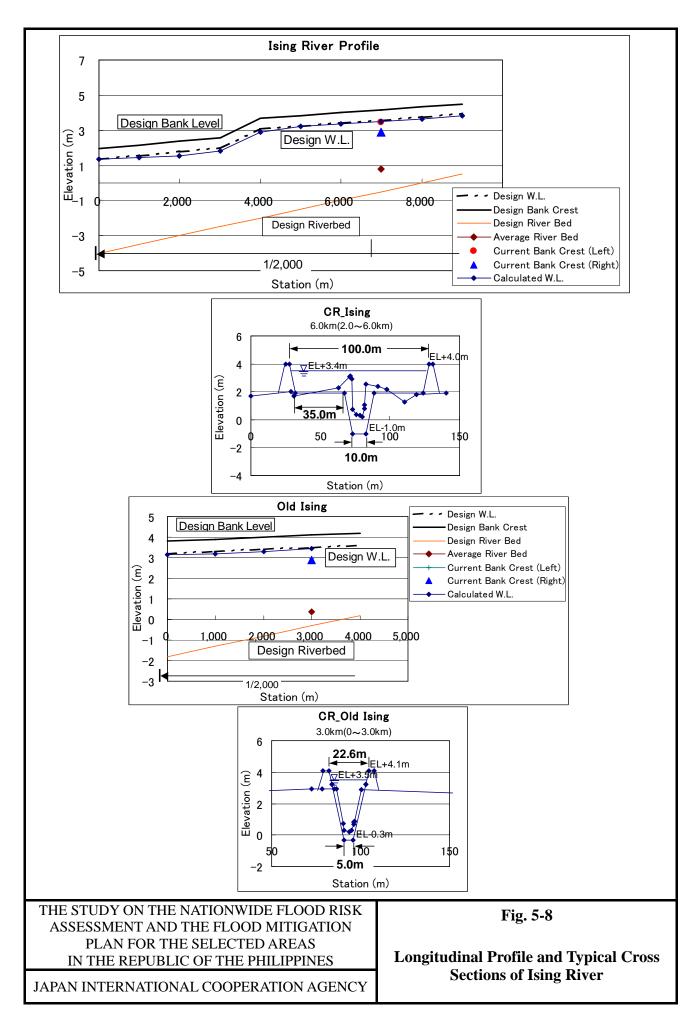


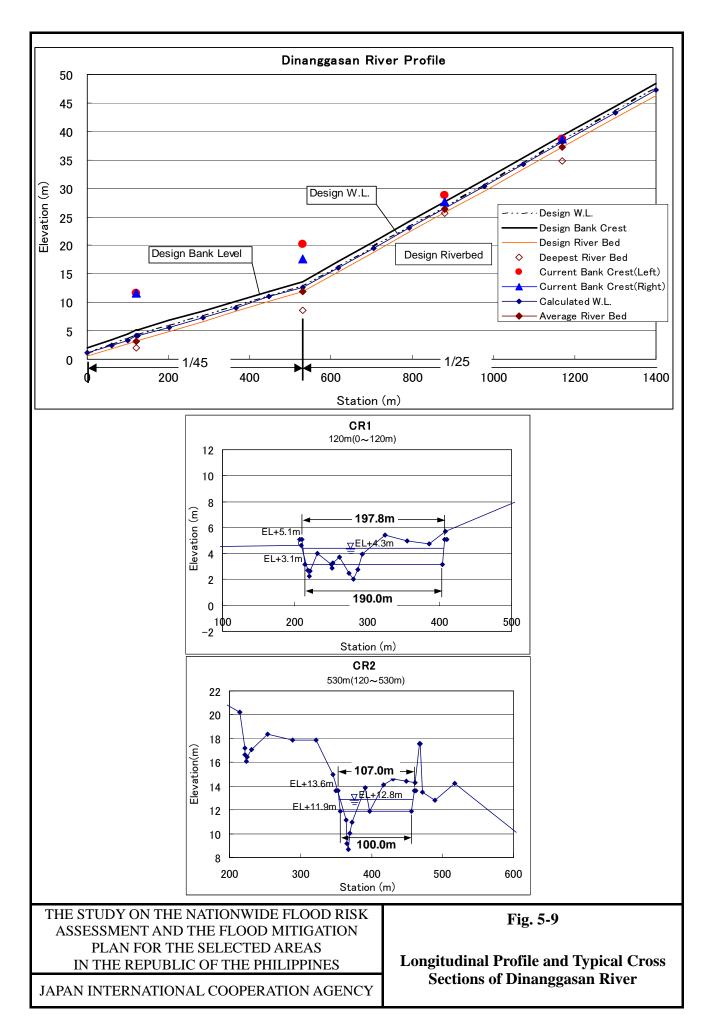
THE STUDY ON THE NATIONWIDE FLOOD RISK ASSESSMENT AND THE FLOOD MITIGATION PLAN FOR THE SELECTED AREAS IN THE REPUBLIC OF THE PHILIPPINES

JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 5-7

Longitudinal Profile and Typical Cross
Section of Anibongan River





Annex 1
Implementing Arrangement

IMPLEMENTING ARRANGEMENT

ON

THE STUDY

ON

THE NATIONWIDE FLOOD RISK ASSESSMENT AND THE FLOOD MITIGATION PLAN FOR THE SELECTED AREAS

IN

THE REPUBLIC OF THE PHILIPPINES

MANILA, June 19, 2006

Mr. Manuel M. Bonoan

Undersecretary

Department of Public Works and

Highways

Mr. Shozo Matsuura Resident Representative 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 Study on the Nationwide Flood Risk Assessment and the Flood Mitigation Plan for the Selected Areas" (herein after referred to as "the Study"), and will exchange the Note Verbales with GOP concerning the implementation of the Study.

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

On the part of GOP, the Department of Public Works and Highways (hereinafter referred to as "DPWH") shall act as the counterpart agency to the JICA Study Team and also as the coordinating body in relation with other relevant governmental and non-governmental organizations concerned for the smooth implementation of the Study.

The present document constitutes the implementing arrangement between JICA and DPWH under the above-mentioned Notes Verbale between the two governments.

II OBJECTIVES OF THE STUDY

The objectives of the Study are:

- 1. to select prioritized areas based on the flood risk assessment and to prepare flood mitigation plans for the selected areas;
- 2. to conduct technical transfer to DPWH counterpart personnel during the course of the Study.

III STUDYAREA

The Study shall cover the 954 flood prone cities/municipalities identified by the National Disaster Coordinating Council.

IV SCOPE OF THE STUDY

In order to achieve the objectives mentioned above, the Study shall cover the following items:

1. General Data Collection

- 1) Legislation and policy issues
- 2) Institutional and organizational facts
- 3) Relevant plans, studies and projects
- 4) Others

2. First Screening of Flood Risk Areas

(1) Data collection

1) Socio-economic data (city/municipality-level statistics of population, population dynamics, social asset as production and infrastructure etc.)

Som

2) Flood history (occurrence, damage etc.)

- 3) Topographical maps
- 4) Others
- (2) First screening
 - 1) Establishment of general criteria for first screening
 - 2) Selection of flood risk areas at city/municipality level in relation with 421 major and principal river basins

3. Second Screening of Flood Risk Areas

- (1) Formulation of methodology to classify flood risk areas
- (2) Additional data collection
 - 1) Community characteristics (demographic indexes, poverty indexes and economic production etc.)
 - 2) Meteorological data
 - 3) Hydrological data
 - 4) Topographical and geographical data
 - 5) Flood history
 - 6) Land use and vegetation cover
 - 7) Facilities of flood control and water utilization
 - 8) Development plans
 - 9) Others
- (3) Site inspection
- (4) Review of the result of first screening
- (5) Creation of database on flood risk areas
- (6) Evaluation of flood risk areas
- (7) Second screening
- (8) Preparation of implementation schedule
 - 1) Rough cost estimation
 - 2) Preparation of implementation schedule for flood risk areas

4. Preparation of Flood Mitigation Plans for Selected Areas

- (1) Selection of model areas for flood mitigation plans based on criteria to be established
- (2) Site survey
 - 1) Survey work
 - 2) Initial Environmental Examination (IEE)

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- (3) Analysis
 - 1) Hydrological analysis
 - 2) Flood and inundation analysis
 - 3) Damage calculation

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- (4) Preparation of flood mitigation plans for model areas
 - 1) Basic layout of major structures
 - 2) Non-structural measures
 - 4) Cost estimation
 - 5) Operation and maintenance plan
 - 6) Project evaluation with IEE

5. Public Participation

(1) Support to stakeholder meetings

V SCHEDULE OF THE STUDY

The Study will be carried out in accordance with the tentative schedule as attached in Annex-1.

VI REPORTS

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

1. Inception Report:

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

2. Progress Report:

Thirty (30) copies, within four (4) months after the commencement of the Study.

3. Interim Report:

Thirty (30) copies, within twelve (12) months after the commencement of the Study.

4. Draft Final Report:

Thirty (30) copies, within seventeen (17) months after the commencement of the Study.

5. Final Report:

Fifty (50) copies, with digital archive within about two (2) months after JICA's receipt of the written comments on the Draft Final Report from GOP.

VII UNDERTAKINGS OF GOP

- 1. To facilitate the smooth conduct of the Study, GOP shall take the following necessary measures:
 - (1) To permit the members of the JICA Study Team to enter, leave and sojourn in the Philippines for the duration of their assignments therein and exempt them from foreign registration requirements and consular fees;
 - (2) To exempt the members of the JICA Study Team from taxes, duties and any other charges on equipment, machinery and other material brought into the Philippines for the implementation of the Study;

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- (3) To exempt the members of the JICA 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 JICA Study Team for their services in connection with the implementation of the Study; and
- (4) To provide necessary facilities to the JICA Study Team for the remittance as well as utilization of the funds introduced into the Philippines from Japan in connection with the implementation of the Study.
- 2. The GOP shall bear claims, if any arises, against the members of the JICA 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 JICA Study Team.
- 3. DPWH shall, at its own expense, provide the JICA Study Team with the following, in cooperation with other organizations concerned:
 - (1) Security-related information on as well as measures to ensure the safety of the JICA Study Team;
 - (2) Information on as well as support in obtaining medical service;
 - (3) Available data (including maps and photographs) and information related to the Study;
 - (4) Counterpart personnel from concerned authorities;
 - (5) Suitable office space with necessary equipment;
 - (6) Credentials or identification cards;
 - (7) Vehicle with drivers.

VIII. CONSULTATION

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

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Annex-1 Tentative Schedule of the Study

12 13 14 15 16 17 18 19 20 21 22 22 22 22 22 22	12 13 14.	6 7 8 9 10 11	2 3 4 S	Number of Month 1 Work in Philippines Work in Japan
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Legend:
IC/R: I₁
P/R: P₁
IT/R: Int₂
DF/R: Fint₃

Inception Report Progress Report Interim Report Draft Final Report Final Report

Annex 2
Minutes of Meeting

MINUTES OF MEETINGS

ON

THE STUDY

ON

THE NATIONWIDE FLOOD RISK ASSESSMENT AND THE FLOOD MITIGATION PLAN FOR THE SELECTED AREAS IN

THE REPUBLIC OF THE PHILIPPINES

MANILA, MARCH 14, 2006

Mr. Manuel M. Bonoan

Undersecretary

Department of Public Works and

Highways

Mr. Hiroyasu Tonokawa

Leader

Preparatory Study Team

Japan International Cooperation Agenc

In response to the request from the Government of the Republic of the Philippines (hereinafter referred to as "GOP"), the Government of Japan (hereinafter referred to as "GOJ") dispatched the preparatory study team, headed by Mr. Hiroyasu Tonokawa (hereinafter referred to as "the Team"), to the Republic of the Philippines from February 26th, 2006 to March 17th 2006 through the Japan International Cooperation Agency (hereinafter referred to as "JICA") to discuss the Implementing Arrangement on "Study on the Nationwide Flood Risk Assessment and the Flood Mitigation Plan for the Selected Areas in the Republic of the Philippines" (hereinafter referred to as "the Study").

During the stay in the Philippines, the Team held a series of discussions with the Department of Public Works and Highways (hereinafter referred to as "DPWH"). The list of participants is attached in Annex-1.

Through these meetings, both sides have drafted the attached Implementing Arrangement and confirmed the following points, though they remain subject to approval by competent higher authorities on both sides:

1. TITLE OF THE STUDY

Both sides agreed that the title of the Study is "The Study on the Nationwide Flood Risk Assessment and the Flood Mitigation Plan for the Selected Areas in the Republic of the Philippines."

2. OUTPUT OF THE STUDY

Considering the GOP's limited budget for flood mitigation, it is required to prioritize flood mitigation programs/projects based not only on the size of river basins but also on the flood risk which should be evaluated by socio-economic data and flood damages etc. In this context both sides agreed on the outputs of the Study as follows:

- (1) The implementation schedule which prioritizes flood risk areas for the implementation of flood mitigation programs/projects and describes the implementation order of those programs/projects in short-term, medium-term and long-term basis:
- (2) The typical flood mitigation plan for selected areas among the flood risk areas: Each flood risk area will be classified by several flood mitigation measures based on river, flood and social characteristics etc. At least one flood mitigation plan is expected to be prepared for each flood mitigation measure of flood risk area

3. SITES TO BE COVERED BY SITE SURVEY OF THE STUDY

Both sides agreed on the following points regarding the sites to be covered by the site survey of the Study:

- (1) JICA will decide the actual number of the sites to be covered by the site survey of the JICA Study Team including survey work by taking into account the necessity and cost.
- (2) The site survey of the JICA Study Team cannot cover some areas in the Philippines because of the security measures adopted by JICA.
- (3) DPWH will gather relevant data and information not collected by the JICA Study Team if required.

4. REPORT

Both sides agreed that the Final Report should be made available to the Public.

5. STEERING COMMITTEE

For the effective conduct of the Study the Steering Committee which will be chaired by the representative of DPWH and composed of concerned governmental agencies and organizations will be set up before the commencement of the Study. All the reports will be presented and discussed at the Steering Committee meetings at each stage of the Study. The members of the Steering Committee will be notified to JICA by DPWH before the signing of the Implementing Arrangement.

6. TECHNICAL WORKING GROUP

Both sides agreed that the Technical Working Group would be set up to make the Study more efficient under the initiative of DPWH. The members of the Technical Working Group will be notified to JICA by DPWH before the signing of the Implementing Arrangement.

7. COUNTERPART PERSONNEL

Counterpart personnel from DPWH would be assigned to the JICA Study Team before the commencement of the Study. Both sides agreed that the list of counterpart personnel would be prepared by DPWH and provided to JICA by DPWH before the signing of the Implementing Arrangement.

8. COUNTERPART TRAINING

DPWH requested the Team to conduct technical counterpart training in Japan, in addition to on-the-job-training, for the purpose of the smooth transfer of technology during the Study.

9. SEMINAR/WORKSHOP

DPWH requested the Team to hold seminars/workshops during the course of the Study. DPWH also requested the Team to include not only the result of the Study but also the methodology adopted by the Study in seminars/workshops in order that participants in seminars/workshops could utilize the result and methodology of the Study and disseminate to other DPWH staff.

10. ENVIRONMENTAL AND SOCIAL CONSIDERATIONS

The Team explained the JICA environmental and social consideration guidelines, and that it would be applied to the Study. GOP side understood the policy of JICA guidelines, and agreed in principle to the following responsibilities and requirements.

- (1) Based on the guidelines, DPWH shall be responsible for conducting Initial Environmental Examination (IEE) in collaboration with the JICA Study Team. The JICA Study Team shall provide DPWH with technical support in order to conduct IEE.
- (2) The information disclosure such as study reports shall be made in order to ensure the participation of and dialogues with various stakeholders, and to achieve appropriate understanding on environmental and social considerations.
- (3) In the course of implementation of the Study, public consultation with the communities and stakeholders shall be conducted if necessary.

11. UNDERTAKINGS OF GOP

DPWH agreed that office space with office furniture, air-conditioning, telephone lines, internet connections and electricity would be provided in DPWH office in Manila for the use by the JICA Study Team.

DPWH also agreed to bear the cost of data gathering undertaken by DPWH.

12. VEHICLE

The Team requested DPWH to provide vehicles with drivers for the JICA Study Team. However, DPWH explained the difficulty to provide them because of its limited budget.

13. QUESTIONNAIRE

The Team requested DPWH to distribute and collect the questionnaire which would be utilized for the first screening of "Scope of the Study" before the commencement of the Study.

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13. Endorsement by NEDA

DPWH will coordinate with the National Economic and Development Authority and get their endorsement on the scope of the Study before the signing of the Implementing Arrangement.

Annex-1: List of Participants

Annex-2: Draft of Contents of Implementing Arrangement

5



List of Participants

Philippine Side

(Department of Public Works an	d Highways)
Ms. Maria Catalina E. Cabral	Project Manager IV, OIC-Director, Planning Service (PS)
Ms. Rebecca T. Garsuta	Engineer V, Division Chief, Development Planning Division,
	PS
Mr. Napoleon S. Famadico	Engineer IV, IPRSD, PS
Ms. Aquilina T. Decilos	Engineer III, Development Planning Division, PS
Mr. Marcelino G. Tolentino Jr.	Engineer III, Development Planning Division, PS
Mr. Orlando M. Casio	Engineer III, Development Planning Division, PS
Mr. Elmo F. Atillano	Engineer III, Development Planning Division, PS
Mr. Resito V. David	Project Director, Project Management Office - Flood Control
	and Sabo Engineering Center (PMO-FCSEC)
Ms. Dolores M. Hipolito	Project Manager II, PMO-FCSEC
Mr. Michael T. Alpasan	Engineer IV, PMO-FCSEC
Ms. Leonila R. Mercado	Engineer IV, PMO-MFCP, Cluster I
Mr. Laurence Alaurin	Engineer II, PMO-MFCDP, Cluster II
Mr. Alvin Y. Diaz	Engineer II, PMO-MFCDP, Cluster II
Mr. Yoshio Tokunaga	JICA Expert
Mr. Shunta Dozono	JICA Expert

Japanese Side

(Preparatory Study Team)	
Mr. Hiroyasu Tonokawa	Leader
Mr. Junichi Yoshitani	River Management
Mr. Toshiro Iwahashi	Hydrology & Hydraulics
Mr. Tsuyoshi Sasaka	Flood Control Planning / Environment and Social
	Consideration
(JICA Philippines Office)	
Ms. Harumi Kitabayashi	Deputy Resident Representative
Ms. Andrey Manalo	Program Assisstant





Draft of Contents of Implementing Arrangement

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 Study on the Nationwide Flood Risk Assessment and the Flood Mitigation Plan for the Selected Areas" (herein after referred to as "the Study"), and will exchange the Note Verbales with GOP concerning the implementation of the Study.

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- to conduct technical transfer to DPWH counterpart personnel during the course of the Study

III STUDY AREA

The Study shall cover the 954 flood prone cities/municipalities identified by the National Disaster Coordinating Council.

IV SCOPE OF THE STUDY

In order to achieve the objectives mentioned above, the Study shall cover the following items:

1. General Data Collection

- 1) Legislation and policy issues
- 2) Institutional and organizational facts
- 3) Relevant plans, studies and projects



4) Others

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- (1) Data collection
 - 1) Socio-economic data (city/municipality-level statistics of population, population dynamics, social asset as production and infrastructure etc.)
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 - 4) Others
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 - 1) Establishment of general criteria for first screening
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- (2) Additional data collection
 - 1) Community characteristics (demographic indexes, poverty indexes and economic production etc.)
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(1) Support to stakeholder meetings

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Thirty (30) copies, within nine (9) months after the commencement of the Study.

3. Interim Report:

Thirty (30) copies, within eleven (11) months after the commencement of the Study.

4. Draft Final Report:

Thirty (30) copies, within sixteen (16) months after the commencement of the Study.

5. Final Report:

Fifty (50) copies, with digital archive within about two (2) months after JICA's receipt of the written comments on the Draft Final Report from GOP.

VII UNDERTAKINGS OF GOP

1. To facilitate the smooth conduct of the Study, GOP shall take necessary measures as

following;

- (1) To permit the members of the JICA Study Team to enter, leave and sojourn in the Philippines for the duration of their assignments therein and exempt them from foreign registration requirements and consular fees;
- (2) To exempt the members of the JICA Study Team from taxes, duties and any other charges on equipment, machinery and other material brought into the Philippines for the implementation of the Study;
- (3) To exempt the members of the JICA 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 JICA Study Team for their services in connection with the implementation of the Study; and
- (4) To provide necessary facilities to the JICA Study Team for the remittance as well as utilization of the funds introduced into the Philippines from Japan in connection with the implementation of the Study.
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 - (1) Security-related information on as well as measures to ensure the safety of the JICA Study Team
 - (2) Information on as well as support in obtaining medical service
 - (3) Available data (including maps and photographs) and information related to the Study
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 - (6) Credentials or identification cards
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VIII. CONSULTATION

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

