

Appendices

Appendix 1 Member List of the Study Team

Field Survey in the Philippines

1) Mr. Satoru MIMURA	Team Leader	Director, Disaster Management Division II, Global Environment Dept., JICA
2) Mr. Fuyuki SAGARA	Project Coordinator	Senior Project Administration Officer, Project Study Division I, Grant Aid and Loan Support Dept., JICA
3) Mr. Yoshiharu MATSUMOTO	Chief Engineer/ River-Sabo Planner/ Maintenance Engineer	CTI Engineering International Co., Ltd.
4) Mr. Takahiro MISHINA	Deputy Chief Engineer/ Sabo Design Engineer · Construction Planner	CTI Engineering International Co., Ltd.
5) Mr. Ryohei WATANABE	Bridge Design Engineer · Construction Planner	CTI Engineering International Co., Ltd.
6) Mr. Hirofumi TANAKA	Natural Condition Surveyor (Topographical Surveyor · Geologist)	CTI Engineering International Co., Ltd.
7) Mr. Kanehiro MORISHITA	Natural Condition Surveyor (Meteorological Engineer · Hydrologist · Hydraulic Engineer)	CTI Engineering International Co., Ltd.
8) Mr. Daisaku KIYOTA	Socio-Environmentalist	CTI Engineering International Co., Ltd.
9) Mr. Minoru MIURA	Procurement Planner/ Cost Estimator	CTI Engineering International Co., Ltd.

Explanation of Draft Report in the Philippines

1) Mr. Masafumi NAGAISHI	Team Leader	Senior Representative, JICA Philippines Office
2) Mr. Chiaki KOBAYASHI	Project Coordinator	Program Officer, Disaster Management Division I, Water Resources and Disaster Management Group Global Environment Department, JICA
3) Mr. Yoshiharu MATSUMOTO	Chief Engineer/ River-Sabo Planner/ Maintenance Engineer	CTI Engineering International Co., Ltd.
4) Mr. Takahiro MISHINA	Deputy Chief Engineer/ Sabo Design Engineer · Construction Planner	CTI Engineering International Co., Ltd.
5) Mr. Ryohei WATANABE	Bridge Design Engineer · Construction Planner	CTI Engineering International Co., Ltd.

Appendix 2 Study Schedule

Itinerary of Team (1/2)

Appendixes—2

Date		Team Leader	Project Coordinator	Chief Engineer/ River·Sabo Planner/ Maintenance Engineer	Deputy Chief Engineer/ Sabo Design Engineer· Construction Planner	Bridge Design Engineer· Construction Planner	Natural Condition Surveyor (Topographical Surveyor· Geologist)	Natural Condition Surveyor (Meteorological Engineer· Hydrologist·Hydraulic Engineer)	Procurement Planner/ Cost Estimator	Socio-Environmentalist
No.	Date	Mr. Satoru MIMURA	Mr. Fuyuki SAGARA	Mr. Yoshiharu MATSUMOTO	Mr. Takahiro MISHINA	Mr. Ryohei WATANABE	Mr. Hirofumi TANAKA	Mr. Kanehiro MORISHITA	Mr. Minoru MIURA	Mr. Daisaku KIYOTA
		Tokyo→M, Courtesy Call on JICA								
2	8 Fri	Explanation of IC/R and Discussion with DPWH(Rebecca T. Garsuta, Philip F. Meñez, Rogelio O. Ang, Melvin B. Navarro), Discussion with DENR(Cesar S. Siador, Jr., Marivic E. Yao), Meeting with JICA Expert(Harumi KITABAYASHI, Yoko NOMURA, Minoru KAMOTO)								
3	9 Sat	M→CDR→C, Field Reconnaissance								
4	10 Sun	Field Reconnaissance, Internal Meeting								
5	11 Mon	Explanation of IC/R and Discussion with LGU(Leo G. Vasacar, Ronnie L. Almosor), DEO(Benjamin S. Babia, Rolando C. Conzon, Elvis A. Jamero), PENRO(Gaudioso B. Malaton, Roberto S. Rufino, Luisito Salugsugan)								
6	12 Tue	Tokyo (JL741/Dep 9:35)→ M(Arr 13:05), Internal Meeting	Explanation of IC/R and Discussion with NEDA in CDO(Refael G. Evangelista, Jr.), C→CDO→M, Internal Meeting			Field Reconnaissance/Technical Discussion and Confirmation with Implementation Agency		Explanation of IC/R and Discussion with NEDA C→CDO→M, Internal Meeting		
7	13 Wed	Discussion about M/D with DPWH(Rebecca T. Garsuta, Philip F. Meñez, Melvin B. Navarro), Discussion with DOF(Erwin Sta. Ana), NEDA(Kathreen V. Miranes, Ameta B. Benjamina)					ditto		Discussion about M/D with DPWH, Discussion with DOF, NEDA	
8	14 Thu	Discussion about M/D with DPWH(Rebecca T. Garsuta, Philip F. Meñez, Melvin B. Navarro), Meeting with FOSEC(Shinichi Hasebe, Nakamura Shinya, Resito V. David, Dolores M. Hipolito)					ditto		Discussion about M/D with DPWH	
9	15 Fri	Signing of M/D by DPWH(Rebecca T. Garsuta, Philip F. Meñez, Melvin B. Navarro), Report to JICA(Norio MATSUDA, Harumi KITABAYASHI, Yoko NOMURA), EOJ(Hirosato YOSHINO)					ditto		Signing of M/D by DPWH, Report to JICA, EOJ	
10	16 Sat	M(JL742/Dep 14:25)→Tokyo(Arr 19:50)	M→CDR, Discussion with DPWH Regional Office(Bonifacio R. Lora, Celedonia M. Cabrera), →C			ditto		M→CDR, Discussion with DPWH Regional Office, →C		
11	17 Sun	Data Compilation								
12	18 Mon	Field Reconnaissance/Technical Discussion and Confirmation with Implementation Agency							Tokyo→M	
13	19 Tue	ditto, Meeting with Jurdin Jesus M. Romualdo(Provincial Governor)							Discussion with DPWH(Edgar Fabregas)	
14	20 Wed	ditto							M→CDR→C	
15	21 Thu	ditto							Field Reconnaissance	
16	22 Fri	Preparation of Stakeholder Meeting								
17	23 Sat	Stakeholder Meeting								
18	24 Sun	Data Compilation								
19	25 Mon	Field Reconnaissance/Technical Discussion and Confirmation with Implementation Agency					C→CDO→M		Field Reconnaissance/Technical Discussion and Confirmation with Implementation Agency	
20	26 Tue	ditto					M→Tokyo		ditto	
21	27 Wed	ditto					ditto		ditto	
22	28 Thu	C→CDO Investigation of Suppliers at CDO			Field Reconnaissance/Technical Discussion and Confirmation with Implementation Agency		C→CDO Investigation of Suppliers at CDO		Field Reconnaissance/Technical Discussion and Confirmation with Implementation Agency	
23	29 Fri	CDO→M			Investigation of Suppliers at CDO CDO→C		ditto		Investigation of Suppliers at CDO CDO→C	
24	30 Sat	Technical Discussion and Confirmation with Implementation Agency			Field Reconnaissance/Technical Discussion and Confirmation with Implementation Agency				Field Reconnaissance/Technical Discussion and Confirmation with Implementation Agency	
25	31 Sun	Data Compilation			Data Compilation				Data Compilation	

Manila (M)
Camiguin (C)
Trip (Manila⇄Camiguin)
Trip (Tokyo⇄Manila)
Cagayan de Oro (CDO)

JICA: Japan International Cooperation Agency
DPWH: Department of Public Works and Highways
DENR: Department of Environment and Natural Resources
LGU: Local Government Unit (Provincial Government of Camiguin)

DEO: DPWH District Engineering Office
PENRO: Provincial Environment and Natural Resource Office
DOF: Department of Finance
NEDA: National Economic Development Authority

EOJ: Embassy of Japan
FOSEC: Flood Control and Sabo Engineering Center
IC/R: Inception Report
M/D: Minutes of Discussion

* This schedule was made out on the assumption that technical issues were confirmed by the implementation agencies in Camiguin Island.

Itinerary of Team (2/2)

Date		Team Leader	Project Coordinator	Chief Engineer/ River/Sabo Planner/ Maintenance Engineer	Deputy Chief Engineer/ Sabo Design Engineer/ Construction Planner	Bridge Design Engineer/ Construction Planner	Natural Condition Surveyor (Topographical Surveyor/ Geologist)	Natural Condition Surveyor (Meteorological Engineer/ Hydrologist/Hydraulic Engineer)	Procurement Planner/ Cost Estimator	Socio-Environmentalist
No.	Date	Mr. Satoru MIMURA	Mr. Fuyuki SAGARA	Mr. Yoshiharu MATSUMOTO	Mr. Takahiro MISHINA	Mr. Ryohei WATANABE	Mr. Hirofumi TANAKA	Mr. Kanehiro MORISHITA	Mr. Minoru MIURA	Mr. Daisaku KIYOTA
26	1 Mon			Technical Discussion and Confirmation with Implementation Agency	Field Reconnaissance/Technical Discussion and Confirmation with Implementation Agency				Field Reconnaissance/Technical Discussion and Confirmation with Implementation Agency	C→CDO Technical Discussion and Confirmation with DENR EMB at CDO(Mey D. Jimenes)
27	2 Tue			ditto	ditto				ditto	Technical Discussion and Confirmation with DENR EMB at CDO(Mey D. Jimenes) CDO→C
28	3 Wed			ditto	ditto				Field Reconnaissance/Technical Discussion and Confirmation with Implementation Agency	
29	4 Thu			ditto	C→CDO→M		Field Reconnaissance/Technical Discussion and Confirmation with Implementation Agency		ditto	
30	5 Fri			ditto	Technical Discussion and Confirmation with DPWH(Rebecca T. Garsuta, Philip F. Meñez, Rogelio O. Ang, Melvin B. Navarro)		ditto		ditto	
31	6 Sat			ditto	M→CDR→C		ditto		ditto	
32	7 Sun			Data Compilation	Data Compilation				Data Compilation	
33	8 Mon			Technical Discussion and Confirmation with Implementation Agency	Field Reconnaissance/Technical Discussion and Confirmation with Implementation Agency				Field Reconnaissance/Technical Discussion and Confirmation with Implementation Agency	
34	9 Tue			ditto	ditto				ditto	
35	10 Wed			ditto	C→CDO→M, Technical Discussion and Confirmation with DPWH Regional Office(Dulce C. Adiong), Internal Meeting				C→CDO→M, Internal Meeting	
36	11 Thu			Technical Discussion with DPWH(Rebecca T. Garsuta, Philip F. Meñez, Rogelio O. Ang, Melvin B. Navarro)					Technical Discussion with DPWH	
37	12 Fri			Report to JICA(Harumi KITABAYASHI, Yoko NOMURA), EOJ(Hirosato YOSHINO)					Report to JICA, EOJ	
38	13 Sat			Data Compilation				Data Compilation	M→Tokyo	
39	14 Sun			ditto				ditto		
40	15 Mon			M→Tokyo				ditto		

Appendixes—3

Manila (M)
Camiguin (C)
Trip (Manila⇄Camiguin)
Trip (Tokyo⇄Manila)
Cagayan de Oro (CDO)

JICA: Japan International Cooperation Agency
DPWH: Department of Public Works and Highways
DENR: Department of Environment and Natural Resources
LGU: Local Government Unit (Provincial Government of Camiguin)

DEO: DPWH District Engineering Office
PENRO: Provincial Environment and Natural Resource Office
DOF: Department of Finance
NEDA: National Economic Development Authority

EOJ: Embassy of Japan
FCSEC: Flood Control and Sabo Engineering Center
IC/R: Inception Report
M/D: Minutes of Discussion

* This schedule was made out on the assumption that technical issues were confirmed by the implementation agencies in Camiguin Island.

Explanation of Draft Report in the Philippines

Day	Date		JICA		Mr. MATSUMOTO, Mr. MISHINA, Mr. WATANABE		
			Mr. Masafumi NAGAISHI	Mr. Chiaki KOBAYASHI	Activities	Accommodation	
			Activities	Activities			
1	Feb.	15	SUN			Move (Tokyo→Manila) Internal meeting	Manila
2		16	Mon	DPWH表敬		C/C JICA、DPWH	"
3		17	Tue			AM:Meeting with DPWH, PM:C/C FCSEC	"
4		18	Wed		Move (Tokyo→Manila) PM:Meeting with NEDA	AM:Meeting with DPWH	"
5		19	Thu		Meeting with DPWH		"
6		20	Fri		Internal meeting		"
7		21	Sat		Move (Manila → Cagayan de Oro → Camiguin Island) PM:C/C Camiguin Provincial Office		Camiguin
8		22	Sun		AM:Field Survey、PM:Move (Camiguin Island→Cagayan de Oro)		Cagayan de Oro
9		23	Mon	Mr. NAGAISHI, Mr. KOBAYASHI, Mr. Matsumoto : AM:Move (Cagayan de Oro → Manila), PM:Meeting with NEDA			Manila
				Mr. MISHINA, MR. WATANABE : AM: Meeting with DPWH Region X, PM:Move (Cabayan de Oro → Manila)			
10		24	Tue		AM:Internal meeting, PM:Report to Embassy of Japan		"
11		25	Wed	AM:Signing of M/D	Move (Manila → Tokyo)	AM:Signing of M/D	"
12	26	Thu			Move (Manila → Tokyo)	-	

Appendix 3 List of Parties Concerned in the Recipient Country

Embassy of Japan	
Hirosata YOSHINO	Second Secretary
JICA Philippines Office	
Norio MATSUDA	Resident Representative
Harumi KITABAYASHI	Deputy Resident Representative
Youko NOMURA	Project Formulation Adviser
Minnie Dacanay	Consultant
DENR Environmental Management Bureau-EIAMD	
Cesar S. Siador, Jr.	
Marivic E. Yao	
DENR Region X Office	
Mey D. Jimenes	Chief of Environmental Impact Assessment & Monitoring Division
Department of Finance -IFG	
Erwin Sta. Ana	
DPWH BOD	
Adriano M. Doroy	Engineer V
Perfecto L. Zaplan Jr.	Engineer V
DPWH BOD-Hydraulics	
Leonardo Lingaw	Engineer IV
Marceliano A. Carlota II	Engineer III
DPWH District Engineering Office, Camiguin	
Elvis A. Jamero	Engineer II
Rolando C. Conzon	OIC-PE
Benjamin S. Babia	Chief, PDS
DPWH DPD Planning Service	
Estelita M. Leonado	Eco. II, PS
Aquilina T. Decilos	Engr. III
Melvin B. Navarro	OIC-PS
Rebecca T. Garsuta	Engineer V
DPWH Environment and Social Services Office Planning	
Edgar Fabregas	Economist
Edgar Fabregas	Economist
Ignacia M. Ramos	CE/Environmentalist
DPWH MFCDP II	
Rogelio O. Ang	Project Manager
Roy R. Quilaton	Project Engineer
Ruel R. Caseñas	Engineer II
Rogelio O. Ang	Project Manager

Philip F. Meñez	Project Director
Rogelio O. Ang	Project Manager
Philip F. Meñez	Project Director IV
DPWH PMO-CARBDP, Region X Office	
Roy R. Quilaton	Project Engineer
Ruel R. Caseñas	Engineer II
DPWH Region X Office	
Bonifacio R. Lora	Asst Chief Construction Division
Celedonia M. Cabrera	Chief Planning & Design Division
Tita B. Rato	KSSTT Chief Planning & Design Division
Dulce C. Adiong	Engineer Flood Control Section
Duice C. Adiong	Floof Control Engineer
Flood Control and Sabo Engineering Center	
Minoru KAMOTO	JICA Expert FCSEC
Shinichi Hasebe	JICA Expert FCSEC
Nakamura Shinya	JICA Expert FCSEC
Dolores M. Hipolito	PM II
Resito V. David	Project Director
National Economic Development Authority -Infra	
Pallo Mert S. Bernardo	EDS-II
Kathreen V. Miranes	Sr. EDS
Ameta B. Benjamina	Supervisor EDS
Reno Joseph Cantre	EDS-II
National Economic Development Authority-Region 10	
Refael G. Evangelista, Jr.	
PENRO, Camiguin	
Roberto S. Rufino	OIC-FMS
Gaudioso B. Malaton	OIC-PENRO
Luisito Salugsugan	Sr. Analyst
Province of Camiguin	
Jurdin Jesus M. Romualdo	Governor
Leo G. Vasacar	Vice Governor
Provincial Planning & Development Office, Camiguin	
Felicisimo M. Gomez	Officer
Ronnie L. Almosor	Engineer

Appendix 4 Minutes of Discussions (M/D)

**Minutes of Discussions
on the Basic Design Study
on the Project for Flood Disaster Mitigation in Camiguin Island
in the Republic of the Philippines**

In response to a request from the Government of the Philippines (hereinafter referred to as "GOP"), and referring the results of Preliminary Study conducted in January and February 2008, the Government of Japan (hereinafter referred to as "GOJ") decided to conduct a Basic Design Study on the Project for Flood Disaster Mitigation in Camiguin Island (hereinafter referred to as "the Project") in the Republic of the Philippines (hereinafter referred to as "the Philippines") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

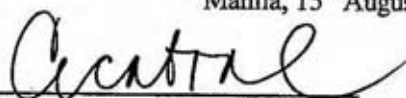
JICA sent to the Philippines the Basic Design Study Team (hereinafter referred to as "the Team"), which is headed by Mr. Satoru MIMURA, Director, Disaster Management Division I, Global Environment Department, JICA and is scheduled to stay in the country from 7th August to 15th September, 2008.

The Team held discussions with the concerned GOP officials and conducted a field survey at the study area. In the course of discussions and field survey, both parties confirmed the main items described in the attached sheets.

Manila, 15th August, 2008



Satoru MIMURA
Leader
Basic Design Study Team
Japan International Cooperation Agency



Maria Catalina E. Cabral, Ph.D.
Assistant Secretary for Planning
Department of Public Works and Highways
Republic of the Philippines

ATTACHMENT

1. Objective of the Project

The objective of the Project is to mitigate the risk of damage from the debris flow to protect lives and properties by constructing sabo dams, and to restore the traffic condition through the reconstruction of Hubangon bridge.

2. Responsible and Implementing Agency

The responsible and implementing organization is the Department of Public Works and Highways (DPWH). The organization chart is shown in **Annex-1**.

3. Project Sites

The project sites are located at the Municipality of Mahinog, Province of Camiguin. The project sites are marked in the map shown in **Annex-2**.

4. Items Requested by the Philippines

In the course of the discussions, the Project components were confirmed as below:

- Construction of two sabo dams across Pontod river,
- Reconstruction of Hubangon Bridge

The Team will carry out further assessment on the requested components of the proposed Project.

5. Japan's Grant Aid Scheme

The Philippines side understood the Japan's Grant Aid scheme and the necessary measures to be taken by the Philippines side in **Annex-3 and 4**.

6. Schedule of the Study

6-1 The Team will proceed for further studies in the Philippines until 15th September, 2008.

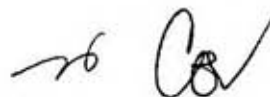
6-2 The Team will prepare the draft report of the Basic Design Study in English. JICA will dispatch a mission to explain its contents around February 2009.

6-3 In case that the contents of the report are accepted in principle by GOP, JICA will finalize the report and submit it to GOP around April 2009.

7. Other Relevant Issues

7-1 Limit of the Capacity of Sabo Dams

- 1) The Team explained that sabo dam mitigates the risk of damage caused by debris flow, but does not mitigate flood itself. The Team also explained that due to such limit of capacity of the structural measures, non-structural measures should be fully implemented even after the completion of the Project in order to minimize the possible damage to lives and properties by natural disaster in the future.
- 2) The Philippines side fully understood the limit of the capacity of sabo dams as explained by the Team and committed to enhance the non-structural measures in close coordination with Camiguin Provincial Disaster Coordinating Council (PDCC).
- 3) The Team will study the current activities of non-structural measures carried out in Camiguin Province and report findings to the Philippines side as well as to GOJ. The Team will also examine this issue and



make recommendations if necessary.

- 4) The Team also explained to the Philippines side that people living in project areas also should understand the limit of the capacity of sabo dams, and such understanding of residents is a precondition to proceed with the Project. The Philippines side committed to conduct information dissemination and awareness campaign to all residents.

7-2 Basic Concept on the Reconstruction of Hubangon Bridge

Both sides confirmed that basic concept of reconstruction of Hubangon Bridge should be based on the present design requirements.

7-3 Culvert on Pontod River

The Philippines side explained that DPWH District Engineering Office (DPWH-DEO) has plan to improve the culvert across Pontod river. Both sides confirmed that the reconstruction of the culvert shall be undertaken by the Philippines side. The Team strongly recommended that the Philippines side accelerates the reconstruction work.

7-4 Operation and Maintenance

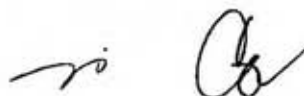
Philippines side agreed to allocate sufficient budget and qualified staff for proper and effective operation and maintenance of the Project.

7-5 Environmental and Social Consideration

- 1) Both sides confirmed that Environmental Compliance Certificate (ECC) shall be secured by DPWH before the Project implementation, when necessary. The Philippines side shall carry out Initial Environmental Examination (IEE) before February 2009.
- 2) The Philippines side explained that DPWH Environmental and Social Services Office (DPWH-ESSO) has the main responsibility to prepare the IEE. Environmental Management Bureau (EMB), Department of Environment and Natural Resources (DENR) has the authority to issue ECC or Certificate of Non-Coverage.
- 3) The Team and DPWH-ESSO will continue the discussion on detailed contents of IEE and the Team will provide ESSO the necessary information on the Project.
- 4) The Team mentioned that there is a possibility of Right of Way (ROW) acquisition and resettlement of Project Affected Persons (PAPs) along access roads going to sabo dam sites. The Team also mentioned that temporary use of land for detour road and the construction yard is possibly necessary.
- 5) The Team reminded to the Philippines side that ROW acquisitions and resettlements shall be carried out in accordance with the existing Philippine laws.
- 6) The Team explained that it is preferable for the Philippines side to confirm if the residents living in project areas have general consent to the Project Implementation, before the arrival of the draft report mission in February 2009.
- 7) Both sides confirmed that DPWH-ESSO, DEO and Camiguin Provincial Government will hold a stakeholders meeting (public hearing) on the Project at the Municipality of Mahinog on 23rd August at Hubangon church. The Philippines side will prepare the report of the meeting.

7-6 Memorandum of Agreement

- 1) The Philippines side explained that the delineation of responsibilities on operation and maintenance of



the facilities shall be confirmed through a Memorandum of Agreement (MOA) among DPWH, Local Government Units (LGUs) and other agencies concerned. DPWH shall coordinate these agencies towards the formulation, signing and approval of the MOA.

- 2) The delineation of responsibilities on ROW acquisition, resettlement and compensation for the Project Implementation shall also be confirmed in the MOA.
- 3) The Team requested the Philippines side to complete the MOA on General Agreement before the arrival of the draft report mission in February 2009. The Philippines side agreed.
- 4) The Team explained that the scope of ROW acquisition and resettlement for the Project will be identified in the study around January 2009. Both sides confirmed that the Philippines side needs to complete inventory of the PAPs and ROW boundaries promptly for smooth ROW and resettlement process.

7-7 Value Added Tax and Custom Duties

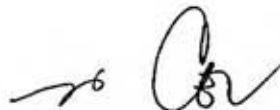
The Philippines side agreed to secure the required budget for Value Added Tax (VAT) and custom duties. DPWH shall shoulder these taxes in accordance with the implementation schedule. The Team explained to the Philippines side that confirmation of the budget allocation for VAT is considered as one of the preconditions for the Project implementation.

Annex 1 : Organization chart of responsible agency and implementing agency

Annex 2 : Project Site

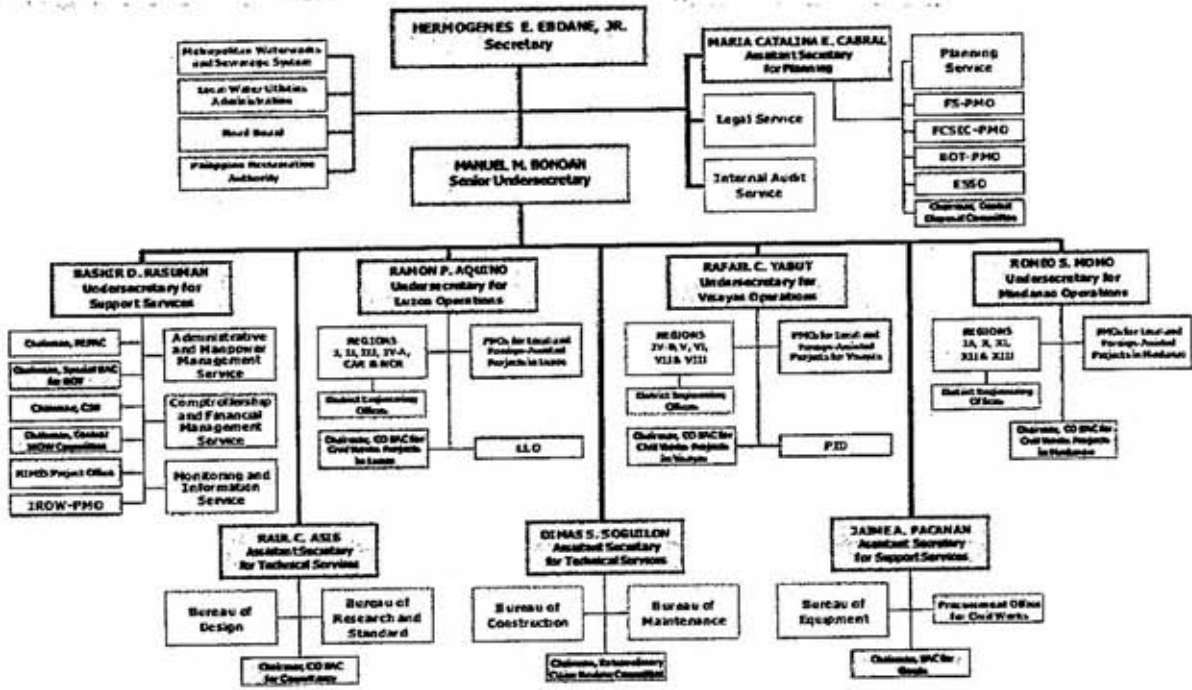
Annex 3 : Japan's Grant Aid

Annex 4 : Major Undertakings to be taken by Each Government

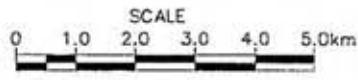
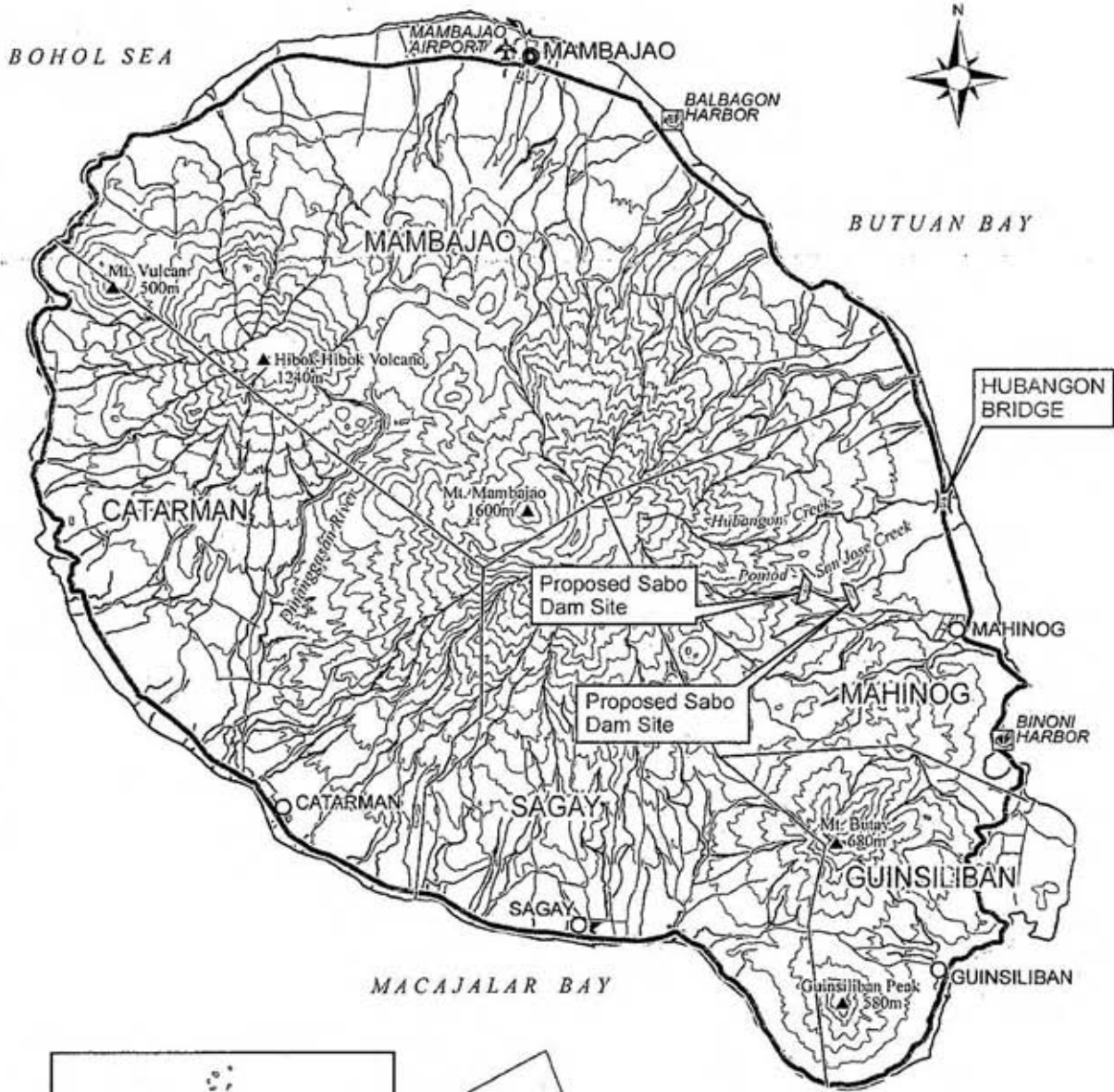




DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
Organizational Chart (as of June 30, 2008)



- | | |
|--|--|
| AMMS - Administrative & Manpower Management Service | FS - Feasibility Studies |
| BAC - Bidding and Awards Committee | IAS - Internal Audit Service |
| BOC - Bureau of Construction | IROW - Infrastructure Right-of-Way |
| BOD - Bureau of Design | LS - Legal Service |
| BOE - Bureau of Equipment | LLO - Legislative Liaison Office |
| BOM - Bureau of Maintenance | MIS - Monitoring and Information Service |
| BOT - Build Operate and Transfer | NCR - National Capital Region |
| BRS - Bureau of Research and Standards | PEPAC - Price Escalation and Price Adjustment Committee |
| CAR - Cordillera Administrative Region | PID - Public Information Division |
| CFMS - Comptrollership & Financial Management Service | PMO - Project Management Office |
| DEOs - District Engineering Office | POCW - Procurement Office for Civil Works |
| ESSO - Environmental and Social Services Office | PS - Planning Service |
| FCSEC - Flood Control and Sabo Engineering Center | RIMSS - Road Information and Management Support System |



LEGEND			
	Project Site		Municipality Boundary
	National Highway		Airport
	Other Road		Harbor
	River		Mauntain
	Major Town		

Location Map

Handwritten signature or initials.

JAPAN'S GRANT AID

The Grant Aid scheme provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. The Grant Aid is not supplied through the donation of materials as such.

1. Grant Aid Procedures

Japan's Grant Aid scheme is executed through the following procedures:

Application	(Request made by the recipient country)
Study	(Basic Design Study conducted by JICA)
Appraisal & Approval	(Appraisal by the Government of Japan and Approval by the Cabinet)
Determination of Implementation	(The Note exchanged between the Governments of Japan and recipient country)

Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA (Japan International Cooperation Agency) to conduct a study on the request.

Secondly, JICA conducts the study (Basic Design Study) using (a) Japanese consulting firm(s).

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Scheme, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes (E/N) signed by the Governments of Japan and the recipient country.

Finally, for the implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

2. Basic Design Study

(1) Contents of the study

The aim of the Basic Design Study (hereafter referred to as "the Study") conducted by JICA on a requested project (hereafter referred to as "the Project") is to provide a basic document necessary for the appraisal of the Project by the Government of Japan. The contents of the Study are as follows:

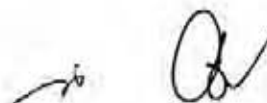
- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, social and economic point of view.
- Confirmation of items agreed on by both parties concerning the basic concept of the Project.
- Preparation of a basic design of the Project.
- Estimation of costs of the Project.

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the Project is confirmed considering the guidelines of the Japan's Grant Aid scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Study, JICA uses (a) registered consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a report, based upon terms of reference set by JICA. The consultant firm(s) used for the Study is (are) recommended by JICA to the recipient country to also work on the Project's implementation after the Exchange of Notes, in order to maintain technical consistency.



3. Japan's Grant Aid Scheme

(1) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

(2) "The period of the Grant Aid" means the one fiscal year, which the Cabinet approves, the Project for. Within the fiscal year, all procedures such as exchanging of the Notes, concluding contracts with (a) consultant firm(s) and (a) contractor(s) and final payment to them must be completed. However, in case of delays in delivery, installation or construction due to unforeseen factors such as national disaster, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

(3) Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country. However, the prime contractors, namely, consulting, constructing and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

(4) Necessity of "Verification"

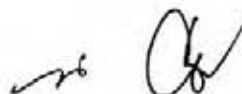
The Government of recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability to Japanese taxpayers.

(5) Major undertakings to be taken by the Government of the Recipient Country

In the implementation of the Grant Aid Project, the recipient country is required to undertake such necessary measures as Annex-5.

(6) "Proper Use"

The recipient country is required to maintain and use the facilities constructed and the equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.



(7) "Re-export"

The products purchased under the Grant Aid should not be re-exported from the recipient country.

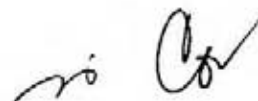
(8) Banking Arrangements (B/A)

- a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.
- b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

(9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions to the Bank.

(End)



Major undertakings to be taken by each Government

No.	Items	To be covered by Grant Aid	To be covered by Recipient Side
1	To secure land		●
2	To clear, level and reclaim the site when needed	●	●
3	To construct gates and fences in and around the site when needed		●
4	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
5	To ensure unloading and customs clearance at the port of disembarkation in recipient country		
	1) Marine (Air) transportation of the products from Japan to the recipient country	●	
	2) Tax exemption and customs clearance of the products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the Project site	●	
6	To accord Japanese nationals whose service may be required in connection with the supply of the products and the services under the verified contract, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.		●
7	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contracts		●
8	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid		●
9	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for construction of the facilities as well as for the transportation and installation of the equipment		●

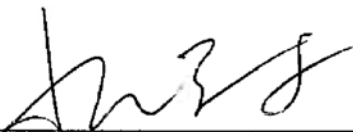
(B/A: Banking Arrangement, A/P: Authorization to pay, N/A: Not Applicable)

**MINUTES OF DISCUSSIONS ON
THE BASIC DESIGN STUDY
ON
“Project for Flood Disaster Mitigation in Camiguin Island
in the Republic of the Philippines”
(EXPLANATION OF DRAFT REPORT)**


From August to September 2008, the Japan International Cooperation Agency (hereinafter referred to as “JICA”) dispatched the Basic Design Study Team on the Project for Flood Disaster Mitigation in Camiguin Island in the Republic of the Philippines (hereinafter referred to as “the Project”) to the Republic of the Philippines (hereinafter referred to as “the Philippines”), and through discussion, field survey, and technical examination of the results in Japan, JICA prepared a draft report of the study.

In order to explain and consult with the concerned officials of the Government of the Philippines (hereinafter referred to as “the GOP”) on the components of the draft report, JICA sent the Draft Report Explanation Team (hereinafter referred to as “the Team”), headed by Mr. Masafumi Nagaishi, Senior Representative, JICA Philippines Office, from 15th February to 26th February 2009. As a result of the discussions, both parties confirmed the main items described on the attached sheets.

Manila, 25th February 2009



Masafumi NAGAISHI
Team Leader
Draft Report Explanation Team
Japan International Cooperation Agency



Maria Catalina E. Cabral, Ph.D.
Assistant Secretary for Planning
Department of Public Works and Highways
Republic of the Philippines

ATTACHMENT

1. Components of the Draft Report

The Philippine side agreed and accepted in principle the components of the Draft Report explained by the Team.

2. Japan's Grant Aid scheme

The Philippine side understands Japan's Grant Aid Scheme and the necessary measures to be taken by the GOP as explained by the Team and described in Annex 3 of the Minutes of Discussions signed by both sides on 15th August, 2008 (hereinafter referred to as "the Previous M/D").

3. Schedule of the Study

JICA will complete the final report in accordance with the confirmed items and send it to the GOP by May 2009.

4. Confidentiality of the Project

4.1 Detailed Specifications

Both sides confirmed all the information related to the Project including detailed specifications of the facilities, equipment and other technical information shall not be released to any other party(ies) before the signing of all the Contract(s) for the Project.

4.2 Project Cost Estimate

The Team explained to the Philippine side the estimated project cost to be borne by the Government of Japan (hereinafter referred to as "the GOJ") as attached in Annex -1. Both sides agreed that the Project Cost Estimate should never be duplicated in any form nor disclosed to any other party(ies) before the signing of all the Contract(s) for the Project. This confidentiality of the estimated project cost is necessary to ensure fairness of the tender procedure.

5. Other relevant issues

5.1 Components of the Project

The Philippine side agreed that the components of the Project will be determined by the GOJ based on the result of the study.

5.2 Approval of the Investment Coordination Committee (ICC)

The Department of Public Works and Highways shall obtain ICC approval for the implementation of the Project. The GOP is fully aware that the approval of ICC is a precondition before the signing of Exchange of Notes between GOJ and GOP.



5.3 Operation and Maintenance Arrangement

The Team explained the estimated cost for management, operation and maintenance of the facilities as described in Annex -2. The Philippine side is requested to allocate sufficient budget and qualified staff for proper and effective operation and maintenance of the equipment procured under the Project.

5.4 Memorandum of Agreement (MOA)

The Team requested the Philippines side to execute and sign the MOA between Department of Public Works & Highways and the Provincial Government of Camiguin for the maintenance works and, delineation of responsibilities on Right of way (ROW) acquisition, resettlement and compensation of people affected by the project. MOA should be signed by Mar.15th 2009. The Philippines side agreed.

5.5 Undertakings of the Philippines side

Both sides confirmed that the GOP will carry out the following in accordance with the implementation schedule of the Project:

- Secure the required budget for Value Added Tax (VAT) and Customs duties
- Provision of adequate security for the equipment at the proposed project sites

Annex -1 Tentative Implementation Schedule

Annex -2 Estimate of Project Cost and Capital Cost



Tentative Implementation Schedule

	1	2	3	4	5	6	7	8	9	10	11	12	13	
Detail Design Stage	ASW (Site Survey)		Analysis in Japan				Tendering Service						(Total 6.5 months)	

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Implementation Stage	Bridge Works	Preparation works		PC girder production		Girder erection		Temporary works		Sub structure works		Crossing girder/Slab works		Approach road/Revetment works		Site clearing						
		Subo Dam Works	Upper Side	Preparation works		Approach road works		Structural excavation		Structure works		Paving works of Approach road		Site clearing								
				Preparation works		Approach road works		Structural excavation		Structure works		Paving works of Approach road		Site clearing								
	Lower Side	Preparation works		Approach road works		Structural excavation		Structure works		Paving works of Approach road		Site clearing										
		Preparation works		Approach road works		Structural excavation		Structure works		Paving works of Approach road		Site clearing										
			(Subo Dam Works Total 19.0 months)																			

TECHNICAL NOTE

In the technical meetings held on 11th September attended by the Department of Public Works and Highways (DPWH) Central Office and the Basic Design Study Team (the Team), the basic conditions for the design of Sabo Dam and bridge (Hubangon Bridge) were discussed. A list of attendance is shown in Attachment 1. The following design conditions set based on the meetings were reconfirmed between DPWH Central Office and the Team.

The Team stated that the agreed design conditions are tentative and that the final decision shall be made after further analysis in Japan and consultation with JICA and concerned parties in Japan, and DPWH Central Office understood it.

DESIGN CONDITIONS AGREED BETWEEN DPWH AND THE TEAM

1. Reconstruction of Hubangon Bridge

1-1 Location of Bridge, Bridge Length and Numbers of Spans

The new bridge will be constructed at the same location of existing Hubangon Bridge. The new bridge length shall be equal or more than existing bridge length. One span shall be applied in new bridge.

1-2 Basic Design Conditions

1) Codes, Standards, Guidelines and Manuals

The following codes, standards, guidelines and manuals are principally used in establishing design conditions of structures:

- National Structural Code of the Philippines, Volume II (NSCP, Vol. II) for Bridges
- Guidelines, Criteria and Standards for Department of Public Works and Highways, Volume I and II
- American Association of State Highway Officials (AASHTO) Standard Specifications for Highway Bridges, 17th Edition, 2002
- Specifications of Highway Bridges, Japan Road Association, 2002
- DPWH standard specifications for Highways, Bridges and Airports, Volume II, 2004 Edition.

2) Number of the lanes

Two lanes (One lane in each direction)

3) Width

Roadway : 3.66m (Half Clear Roadway) x 2, Walkway 0.76 m x 2, Railing 0.30m x 2 (Based on Bridge Standard Clear Roadway of DPWH and same Clear Roadway width of the existing Hubangon Bridge width)

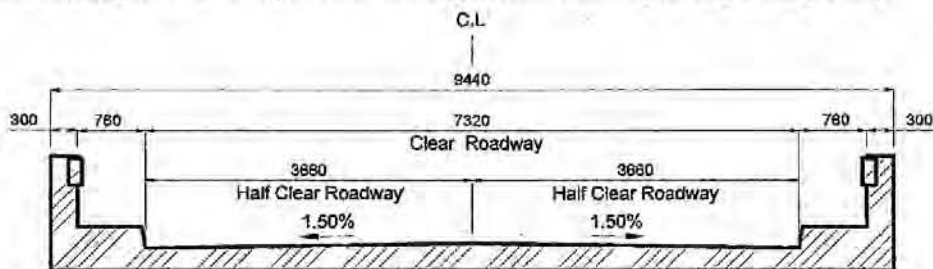


Figure 1 Typical Cross Section of Bridge

Approach Road : Carriageway 3.05 m x 2, Shoulder 1.50 m x 2

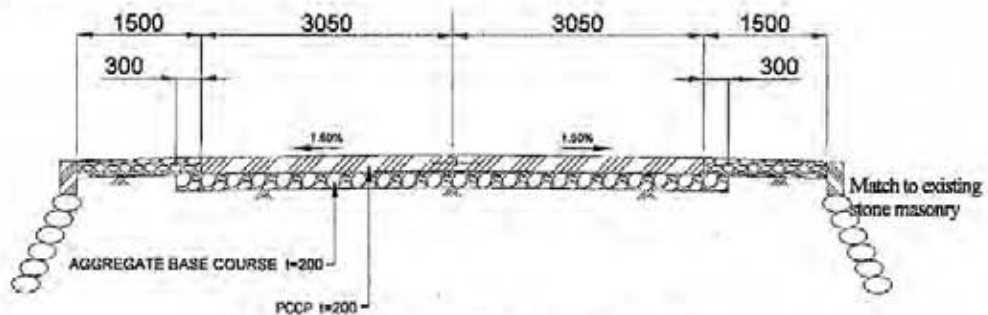


Figure 2 Typical Cross Section of Approach Road

- 4) Design loads
 - Live Load : AASHTO HS 20-44
 - Seismic Load : NSCP Acceleration Coefficient=0.4
 - Temperature Change : 20°C to 40°C for concrete
- 5) Freeboard
 - 1.5 m (Minimum)

1-3 Type of Girder

Prestressed Concrete Girder or Steel Plate Girder will be applied. Philippine side requested the adoption of Prestressed Concrete Girder to the Team due to the reduction of import tax which Philippine side will bear.

1-4 Revetment for Riverbank Protection

Stone masonry/Grouted Riprap whichever is applicable.

1-5 Pavement Structure of Approach Road

PCCP : t=20 cm (Refer to Figure 2)

Base course : t=20 cm (Refer to Figure 2)

1-6 Structure of Slope Protection of Approach Roads

Stone masonry/Grouted Riprap whichever is applicable.

1-7 Temporary Works

1) Detour

Detour road shall be constructed at the upstream side with 6m width (2 lanes) of gravel surface pavement. The one lane (4m width) temporary bridge or culvert pipe will be installed at the location of river or irrigation channel. The land affected by the Project shall be undertaken by Philippine side. The detour road will be restored to its original condition by Japan side after completion of the Project.

2) Construction yard

Philippine side will assist in securing the land at the left riverbank of upstream side as construction yard.

2. Construction of Sabo Dams

2-1 Location of Sabo Dam

Two sabo dams will be constructed on Pontod River. Locations of two dams are shown in Figure 3.

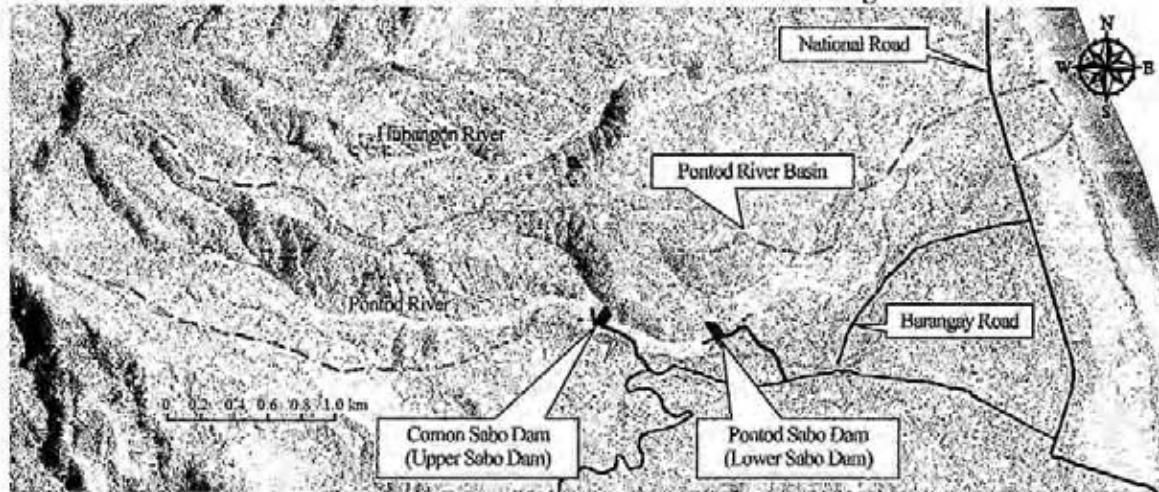


Figure 3 Location of Sabo Dam

2-2 Codes, Standards, Guidelines and Manuals

The following codes, standards, guidelines and manuals are principally used in establishing design conditions of structures:

- Technical Standards and Guidelines for planning and Design, Volume III: Sabo (Erosion and Sediment Movement Control) Works, March 2002, DPWH, JICA
- Technical Standards and Guidelines for planning and Design, Volume IV: Natural Slope Failure Countermeasures, March 2002, DPWH, JICA
- Technical Standards for River and Sabo Works, River Association of Japan
- Manual of Technical Standards for Establishing Sabo Master Plan for Debris Flow and Driftwood, March 2007, Erosion and Sediment Control Division, Research Center for Disaster Risk Management
- Manual of Technical Standards for Designing Sabo Facilities against Debris Flow and Driftwood, March 2007, Erosion and Sediment Control Division, Research Center for Disaster Risk Management
- American Association of State Highways Officials (AASHTO) Standard Specifications for Highway Bridges, 17th Edition, 2002

2-3 Preliminary Design Features of Sabo Dam

The preliminary design features of two sabo dams are given as follows:

Table 1 Preliminary Design Features of Sabo Dams

Item	Comon Sabo Dam (Upper Sabo Dam)	Pontod Sabo Dam (Lower Sabo Dam)
Dam Type	Concrete Gravity (without Slit)	Concrete Gravity (without Slit)
Height of Dam	10 m	10 m
Length of Dam	115 m	60 m
Crest Width	4.0 m	4.5 m
Over Flow Width	18.0 m	12.0 m
Over Flow Depth	2.0 m	3.0 m
Freeboard	1.0 m	1.5 m

* These features will be reviewed based on the results of hydrological, hydraulic analysis, survey works and geological investigations.

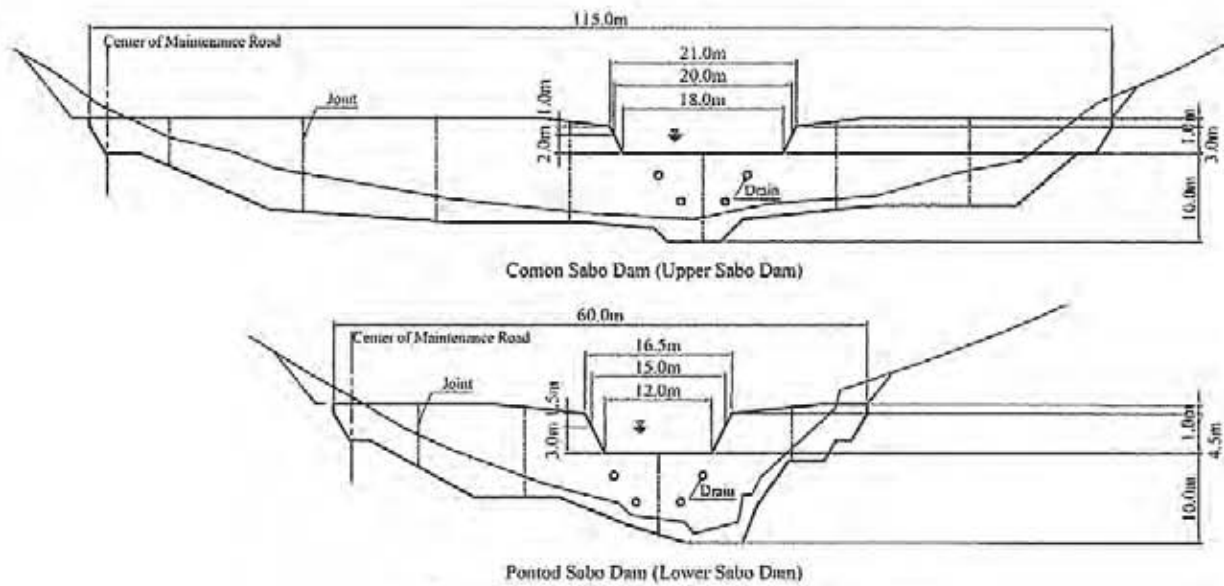


Figure 4 Downstream View of Sabo Dam

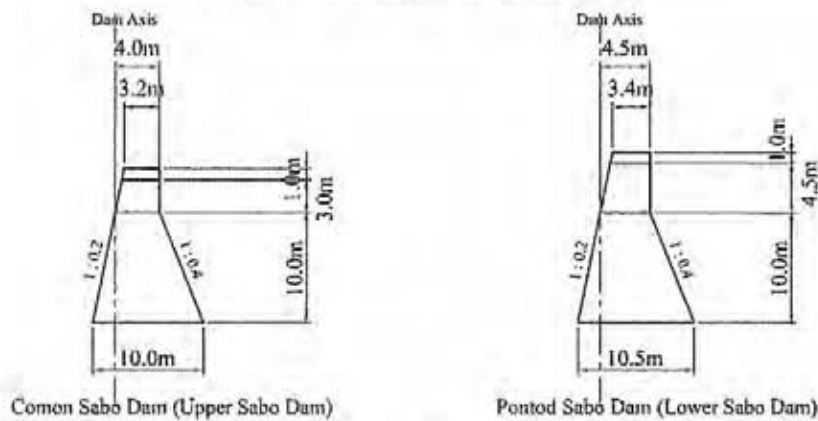


Figure 5 Typical Cross Section of Sabo Dam

2-4 Concrete Aggregates

About 10,000 m³ of concrete aggregates for sabo dam can be used from crushing plant in Camiguin Island.

2-5 Design Conditions of Access/Maintenance Road

The design conditions of access/maintenance road are given as follows:

Table 2 Design Features of Access/Maintenance Road

Item	Comon Sabo Dam (Upper Sabo Dam)	Pontod Sabo Dam (Lower Sabo Dam)
Number of Lanes	One Lane	
Width	Roadway: 4.0 m, Shoulder: 1.0 m x 2 = 2.0 m	
Maximum Longitudinal Gradient	12 % ~ 14 %	
Minimum Radius of Curvature	20.0 m	
Pavement	Gravel (Crusher Run) Pavement: t = 150 mm (Longitudinal Gradient less than 7%, Materials from Camiguin Island) Cement Concrete Pavement: t = 150 mm (Longitudinal Gradient 7% or more, Materials from Camiguin Island)	
Base Course	Aggregate Base Course: t = 150 mm (Materials from Camiguin Island)	
Length	Approx. 600 m	Approx. 750 m

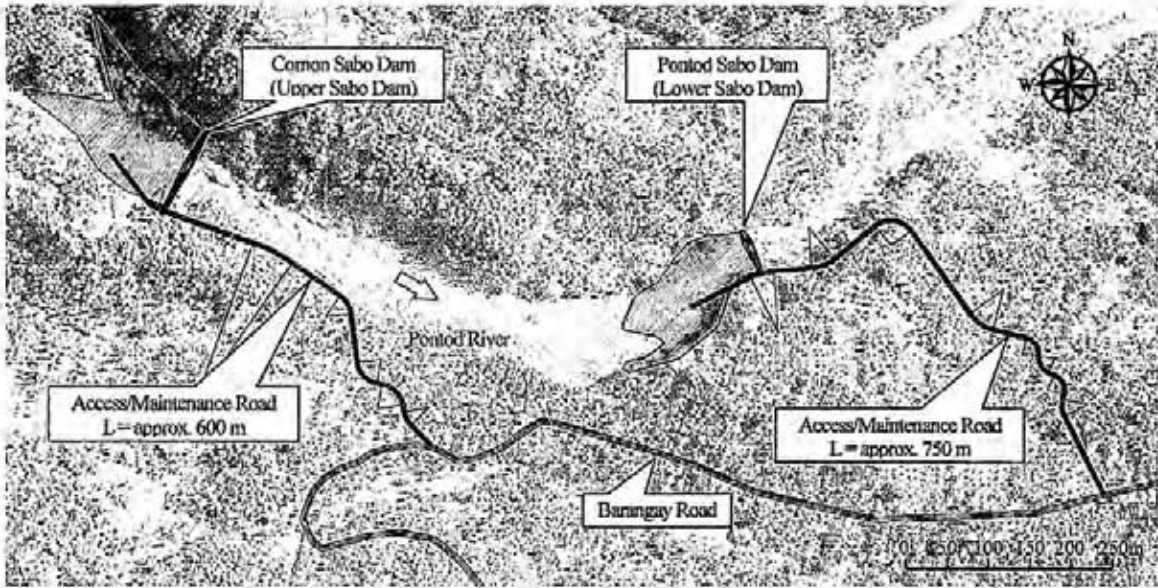


Figure 6 Layout Plan of Access/Maintenance Road

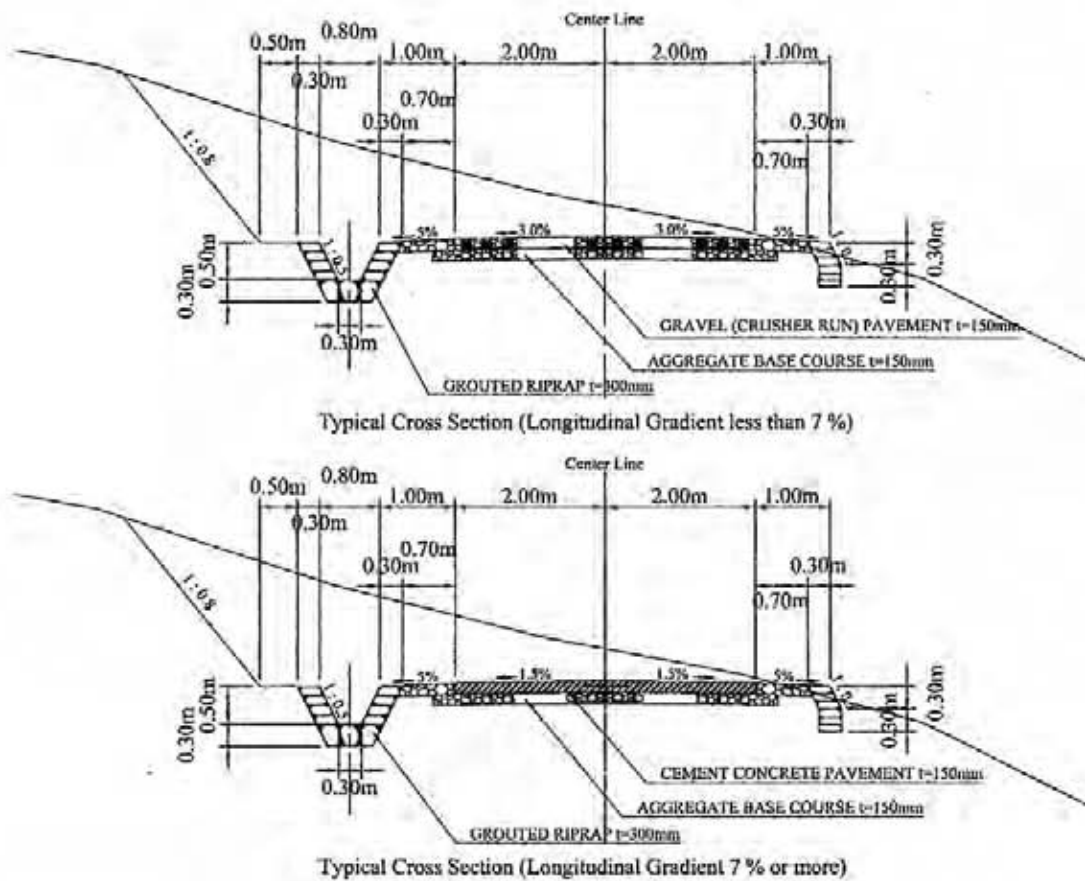


Figure 7 Typical Cross Section of Access/Maintenance Road

2-6 Temporary Works

As a construction yard, Philippine side will assist in securing the land at the riverbank of each damsite.

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3. Others

1) Temporary office yard

Philippine side will assist in securing permit to use the vacant lot with an area of about 550m² located at left riverbank of upstream side as a site for Temporary Office for construction works and accommodation for the parties concerned during project implementation.

2) Disposal site

The waste materials such as excavated surplus soil, concrete debris etc. shall be dumped at designated disposal site near Benoni Port as suggested by DPWH District Engineering Office (DPWH-DEO). The demolished steel girders of existing bridge will be transported to material stockyard of concerned DPWH-DEO.

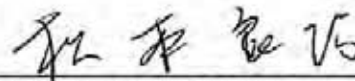
3) Embankment material

DPWH-DEO informed and advised the Team that the embankment material can be secured through the authorized quarry site in Camiguin Island due to the environmental restriction.

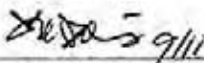
Manila, 11 September 2008



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