

Supporting Report
Appendix K
Study on Social Conditions

PREPARATORY SURVEY
FOR
FLOOD RISK MANAGEMENT PROJECT
FOR
CAGAYAN DE ORO RIVER (FRIMP-CDOR)
IN
THE REPUBLIC OF THE PHILIPPINES

FINAL REPORT

VOLUME IV SUPPORTING REPORT (II)

Appendix K
STUDY ON SOCIAL CONSIDERATIONS

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PART-I RESETTLEMENT ACTION PLAN

CHAPTER 1 DESCRIPTION OF THE PROJECT

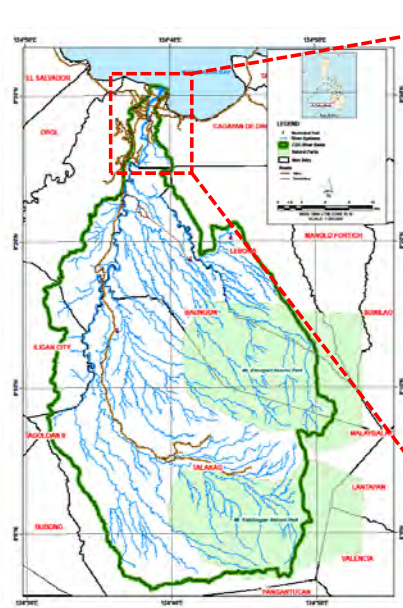
1.1 Background of the Project

The Government of the Philippines has set measures for flood mitigation as one of the important policies in the Philippine Development Plan (2011-2016). The Cagayan de Oro River Basin was selected from 56 priority river basins in “Nationwide Flood Risk Evaluation and Flood Damage Mitigation Plan in Selected River Basin, 2006-2008” by the Department of Public Works and Highways (DPWH) under a technical assistance of the Japan International Cooperation Agency (JICA). Due to urgent need, DPWH conducted a Master Plan (M/P) and a Feasibility Study (F/S) for the Cagayan de Oro River Basin in June 2011.

Tropical Storm (TS) Sendong in December 2011 brought about serious damages in the Northern Mindanao Region. About 1,170 thousand people were affected and about 1,250 persons were lost. One of the seriously damaged cities was the Cagayan de Oro City located at downstream of the Cagayan de Oro River Basin with population of about 600,000. Further, the Cagayan de Oro City was hit again by Typhoon (TY) Pablo in December 2012. Under such circumstances, DPWH and JICA agreed to conduct a technical assistance of JICA on the Preparatory Survey for Flood Risk Management Project for the Cagayan de Oro River (the JICA Survey) to review and update M/P and F/S of DPWH and to formulate a Yen loan project for the Cagayan de Oro River Basin. In the JICA Survey, a revised M/P was formulated, and the priority project (the Project) was selected and recommended to implement.

1.2 Project Location

The Project location is situated in the Cagayan de Oro River Basin in the Northern Mindanao Region located over the Cagayan de Oro City and three municipalities of Talakag, Baungon and Libona in Bukidnon and Iligan City as presented in Figure 1.2.1.



Source: JICA Survey Team

Figure 1.2.1 Cagayan de Oro River Basin



Figure 1.2.2 Project Area Downstream of Cagayan de Oro River

1.3 Project Area

The Project area is located in the most downstream of the Cagayan de Oro River and its stretch from the Macajalar Bay to the Pelaez Bridge located at 12 km upstream from the river mouth as shown in Figure 1.2.2.

1.4 Project Objective

The primary objective of the Project is to mitigate flood risk in the Cagayan de Oro River Basin through construction of flood mitigation measures and also implementation of non-structural measures.

1.5 Project Components

1.5.1 Basic Measures of Flood Risk Management Plan

Among the proposed measures in the M/P for flood risk management formulated in the JICA Survey, the following measures were selected as the priority project which should be implemented in a short-mid-term to effectively mitigate flood risks in the Cagayan de Oro River Basin and are composed of structural and non-structural measures.

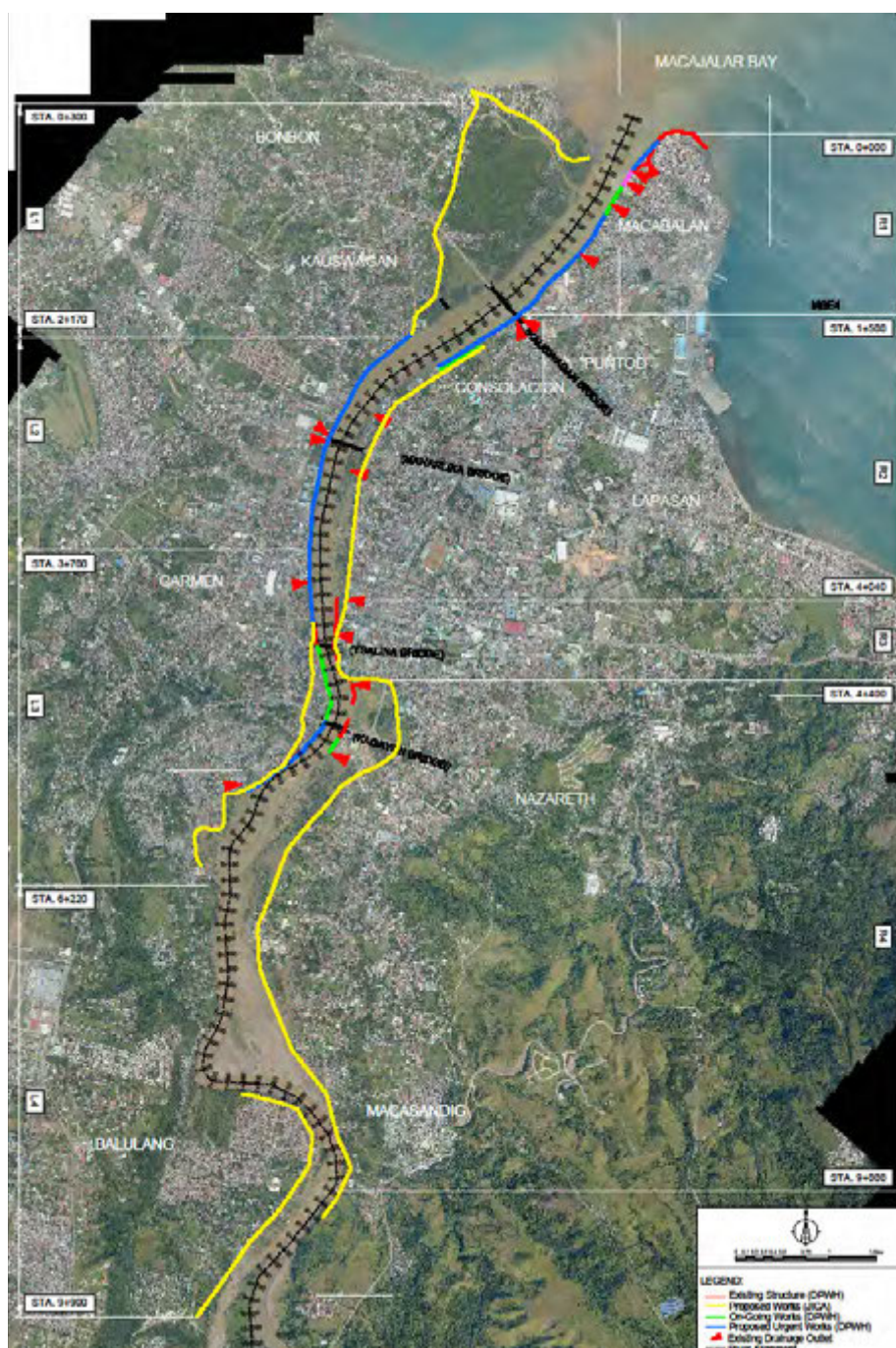
Table 1.5.1 Flood Risk Management Measures of the Project

Measures	Terms	Contents
Structural Measures	Short-Mid Term	River Improvement in downstream (for floods of 25- Year Probability) (1) Construction of New Dike/ Retaining Wall (2) Installation of Gate and Drainage Outlets (3) Construction of New Road/Raising of Existing Road for Evacuation (4) Improvement of Kagayan Bridge (5) Construction of Retarding Basin
	Maintenance Work	(6) Periodical Monitoring of River Cross Section and Regular Maintenance Dredging / Channel Excavation
Non-Structural Measures	Short-Mid Term	(1) Preparation/Update of Flood Hazard Map, Evacuation Planning (2) FFWS (Initial Stage for Full Spec) (3) Community Based Flood Early Warning System (CBFEWS) (4) Information Campaign and Publicity for the Project (Structural Measures) (5) Technical Assistance for Land Use Regulation for Habitual Inundation Area (6) Technical Assistance for Riparian Forest Establishment in the Agricultural Lands (7) Technical Assistance for Mangrove Forest Establishment along the Coastal Areas

Source: JICA Survey Team

1.5.2 Location of Proposed Structural Measures

The locations of proposed structural measures of the Project are indicated by yellow colored lines in Figure 1.5.1. The figure also show the existing structural measures including planned and on-going construction work of DPWH as mitigation measures after TS Sendong.



Source: JICA Survey Team

Figure 1.5.1 Locations of Proposed Structural Measures of the Project

CHAPTER 2 OBJECTIVES OF RESETTLEMENT PLAN

2.1 Guidelines, Policies and Objectives of Resettlement Action Plan

2.1.1 JICA Guidelines and Policies

A Resettlement Action Plan (RAP) of the Project is prepared in accordance with the following: (a) the JICA Guideline for Environmental and Social Considerations (April 2010), (b) the World Bank (WB) Safeguard Policy (Operational Policies (OP) 4.12 Annex A), and (c) the Philippine laws, regulations, executive orders, policies and department orders.

The policy of DPWH on resettlement was originally formulated and adopted in 1999 as the Land Acquisition, Resettlement and Rehabilitation Policy (LARR). The LARR was revised twice in 2004 and 2006, and the latest revision was made in 2007 and called the Land Acquisition, Resettlement, Rehabilitation and Indigenous People's Policy (LARRIPP). The LARRIPP includes: (a) the principles and objectives of the resettlement policy, (b) the legal framework, (c) the eligibility, compensation and entitlements, (d) the indigenous people's policy framework, (e) the implementation procedures that ensure complaints are processed, (e) the public support and participation and (f) the provision of internal and external monitoring of the implementation of RAP and safeguard instrument for indigenous people.

2.1.2 Principal Objective

The preventive resettlement is applied to the Project by safeguarding people's lives and assets from flood disaster. Resettlement is, however, a complex and multi-dimensional process with potential negative impacts. The principal objective of RAP of the Project is to ensure that resettlement activities of the Project are properly planned so that resettlement becomes an opportunity for project affected persons (PAPs), in order to re-establish and/or improve living conditions in a safe place and reduce exposure to flood disaster risk.

2.1.3 Specific Objectives

Specific objectives of the Project RAP are as follows.

- To identify necessity of resettlement of the Project. (Chapter 2)
- To identify impacts and scale of resettlement of the Project. (Chapter 3)
- To assess socioeconomic characteristics of PAPs of the Project, including socioeconomic status, magnitude and extent of loss of PAPs (Chapter 4).
- To provide legal framework of the Project, including policies and gap analysis of resettlement and land acquisition of the Project. (Chapter 5)
- To provide policies on eligibility for compensation and entitlements, including definition of PAPs, eligibility for compensation and assistance measures, inventory of loss with valuation method for compensation for loss (Chapters 6 & 7).
- To provide resettlement site plan, including assessment of existing resettlement sites, site selection, and assessment and plan for necessary houses, facilities (Chapter 8).
- To provide grievance redress mechanism of resettlement of the Project (Chapter 9).
- To ensure participation of community (Chapter 10).

- To provide institutional framework of the Project, organizational framework and responsibilities of resettlement implementation of the Project. (Chapter 11)
- To provide implementation schedule of resettlement of the Project (Chapter 12).
- To provide cost and budget of resettlement of the Project (Chapter 13).
- To provide monitoring and evaluation procedures of the Project (Chapter 14).

2.2 Preventive Resettlement

2.2.1 Consideration of Disaster Risk Reduction and Management in the Project

Considering that the Philippines is known as one of the most disaster-prone countries in the world, particularly under prevailing phenomenon of climate change observed over the country in the past years, the Government of the Philippines enacted the Philippine Disaster Risk Reduction and Management Act (Republic Act [RA] 101211) in May 2010, which basically emphasizes preventive measures to reduce people's and infrastructure's exposure to natural hazards and is, therefore, applied to the Project from the viewpoint of flood disasters.

2.2.2 Flood Risk Management of the Project as Preventive Measure

As stated in the Section 2.2.1, the basic concept of flood risk management is applied to the Project as a key preventive measure to reduce exposure to flood disasters, considering that two large-scale floods caused by TS Sendong and TY Pablo hit Cagayan de Oro City in two consecutive years in 2011 and 2012, respectively.

2.2.3 Adaptation of Preventive Resettlement to the Project

In regard with resettlement, the preventive resettlement is applied to the Project, in order to protect human lives and assets of persons at very high flood risk and to provide opportunities for improving or at least restoring their living conditions, unlike planned resettlement often associated with development projects that is usually not necessarily implemented for benefits of the population to be resettled. With adaptation of preventive resettlement, the resettlement of the Project is seen as a positive alternative.

2.3 Necessity of Resettlement under the Project

2.3.1 Relocation of People at Very High Flood Risk to Safe Place

Having adapted preventive resettlement to the Project, the people living in the area where very high flood risk is identified are to be protected and relocated to a safe place where these people are provided with support in rebuilding their livelihoods, which include not only permanent housing at resettlement sites, but also necessary facilities, services, and livelihood improvement measures, in order to restore standard of living and normal development and to ensure sustainability of living at new settlement.

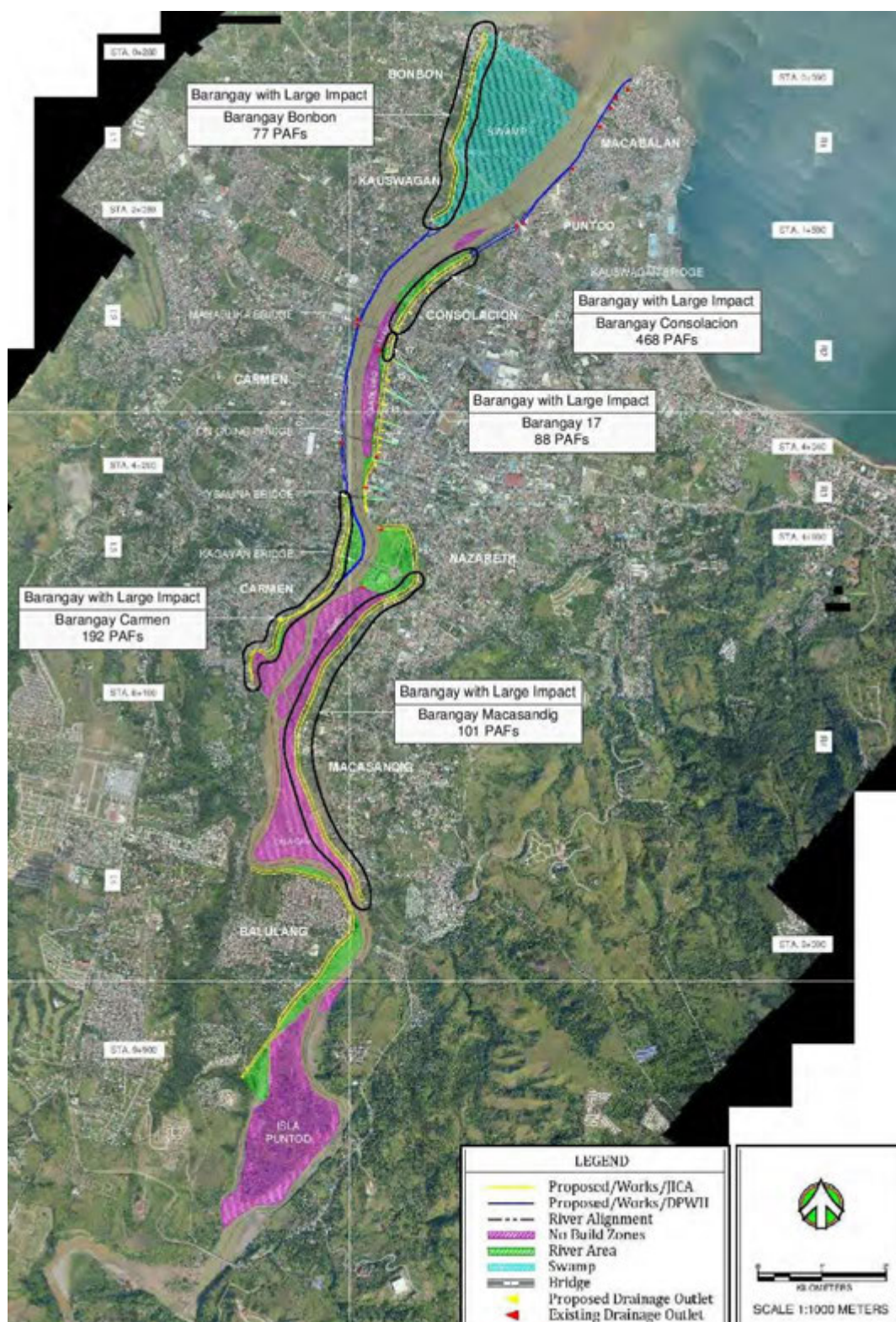
2.3.2 Project Components Inducing Resettlement

The components of the Project to induce resettlement are flood control structures such as dike and floodwall, which are constructed at the river boundary and required a right-of-way acquisition of lands with a certain width. The people living at houses and/or structures located on the lands are necessary to be relocated. Aside from the above, lands which become river areas at very high flood risk after construction of structures of the Project need to be acquired. The people living at houses and/or structures on the lands are,

therefore, required to be relocated, regardless of project components.

2.3.3 Locations of Affected Areas

The map Figure 2.3.1 shows locations of affected areas of the Project, specifically as follows that: (a) the areas required for construction of structures are the right-of-way areas indicated between yellow lines and (b) the areas which become the river area at high flood risk after construction of structures are indicated in a greenish color. The area indicated in a light blue color is a natural swamp area, and the areas indicated in a purple color are the No Build Zone (NBZ) proposed by the Cagayan de Oro City. In terms of impacts by the number of the project affected families (PAFs), the five (5) barangays with a large impact (more than 70 PAFs) such as Barangays Bonbon, Consolacion, 17, Carmen and Macasandig are indicated in Figure 2.3.1.



Source: JICA Survey Team

Figure 2.3.1 Locations of Affected Areas of the Project

2.3.4 Extent of Project Affected Persons

Based on the affected areas of the Project stated in Section 2.3.3, the extent of PAPs of the Project is defined to include the persons residing in the following areas: (a) the right-of-way area of the Project and (b) the areas which becomes the river area after the

construction of the structures of the Project including some PAPs in the NBZ. However, among persons residing in the above project affected areas, the persons who are awardees of the city resettlement project for TS Sendong-affected persons are excluded from PAPs of the Project.

2.3.5 Relevance with Project Affected Area

■ Status of No Build Zone

As the information relevant to affected areas of the Project, the status of the NBZ is explained in terms of land use and zoning regulations. The Cagayan de Oro City is in the process of preparing the Comprehensive Land Use Plan (CLUP) and the Zoning Ordinance (ZO) in consultation with concerned national government agencies such as the National Economic Development Authority (NEDA) and the Housing and Land Use Regulatory Board (HLURB). The CLUP and the ZO are expected to regulate danger areas such as the NBZ along the Cagayan de Oro River from the viewpoint of the disaster risk reduction and management by not allowing development, particularly intended for residential, commercial, institutional and industrial purposes, and also establishment of permanent structures on floodways.

The NBZ areas are being proposed by the Cagayan de Oro City, but need to be further defined, surveyed and delineated, in order to implement and enforce land use and zoning regulations. The CLUP and the ZO need to be, therefore, completed and approved by the City Council of the Cagayan de Oro City through its City Council Resolution and City Ordinance to be officially implemented and enforced, particularly in danger areas along the Cagayan de Oro River such as the NBZ. According to the City Planning and Development Office (CPDO) of the Cagayan de Oro City, the CLUP and the ZO are targeted to be completed by November 2013 at present. It is noted that the draft of the CLUP and the ZO were presented to the Regional Land Use Committee of the Regional Development Council 10 on October 9, 2013 and the City Development Council of the Cagayan de Oro City on October 14, 2013 for an update of status towards endorsement.

Posterior to the approval of the CLUP and the ZO by the City Council of the Cagayan de Oro City, the public hearings (3 times) and the deliberation in the City Council are required be held. Further, the CLUP and the ZO need to be approved by the Regional Land Use Committee of the Regional Development Council 10 (RDC-10) and the HLURB if land use plan and its standard of the RDC-10 and the HLURB are complied in the CLUP and the ZO.

■ Status of Resettlement Project for TS Sendong-Affected Persons

The City Mayor of the Cagayan de Oro City established the Local Inter-Agency Committee (LIAC) on Permanent Housing in Sustainable Communities for affected persons of TS Sendong including ones in the NBZ in February 2012, in coordination with concerned national and local government agencies and private sectors. The LIAC chaired by the City Mayor is composed of four sub-committees, such as: (a) Social Preparation, (b) Beneficiary Selection, Arbitration and Awards, (c) Resettlement Project Sites and (d) Relocation and Transfer to Permanent Housing. Each sub-committee is chaired by the City Social Welfare Development Office, the City Estate Management Division (CEMD), the National Housing Authority (NHA) and the CPDO with the CEMD, respectively.

The LIAC has provided housing units for affected persons of TS Sendong including ones in NBZ up to now since its establishment and is still in the process of constructing housing units and providing awards for affected persons of TS Sendong. As of August 31,

2013, the LIAC is scheduled to construct total housing units of 9,585 over 21 existing resettlement sites established within the jurisdiction of the Cagayan de Oro City, except two sites located in the Opol Municipality of the Misamis Oriental Province (See Table 8.1.1 Existing Resettlement Sites in Chapter 9 Resettlement Site Plan) and has completed 5,138 units. Out of the completed units, 4,097 units have been occupied. In terms of providing housing units, key agencies in the LIAC are the Cagayan de Oro City, the NHA and the non-governmental organizations, particularly religious groups. It is noted that some of the 21 resettlement sites had been already established even before TS Sendong occurred as the Socialized Housing Program of the Cagayan de Oro City started in 2005.

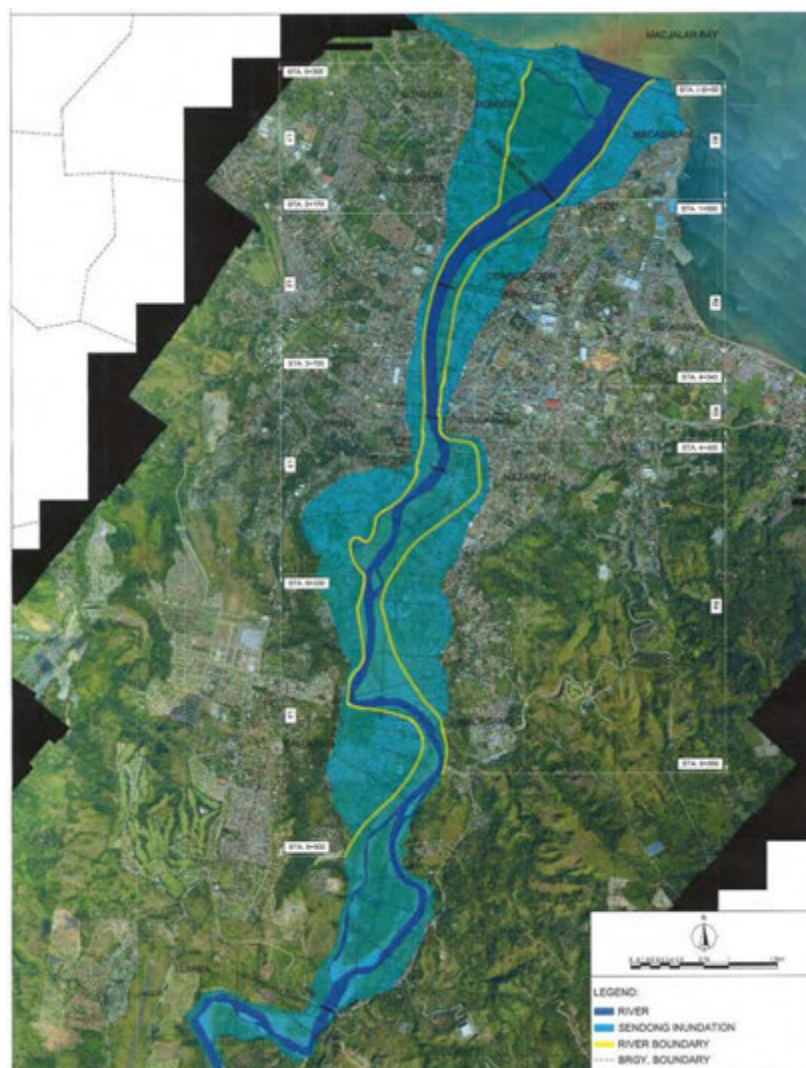
Application, screening and awarding of the resettlement project for affected persons of the TS Sendong are currently still on-going as of November 2013. Accordingly, construction of housing units is also still on-going as well.

CHAPTER 3 IMPACTS OF THE PROJECT

3.1 River Boundary and Flood Risk

3.1.1 Establishment of River Boundary

The river boundary along the Cagayan de Oro River was established, in consideration with existence of wider flood-prone area than the NBZ declared after TS Sending, and based on results of studies for river morphology, inundation analysis and flood risk assessment. The river boundary is shown in Figure 3.1.1 below.



Source: JICA Survey Team

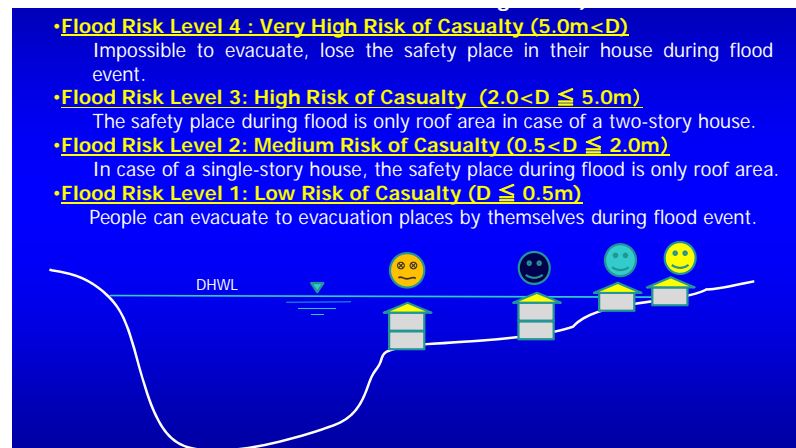
Figure 3.1.1 Base Map for Study of River Boundary in Cagayan de Oro River

3.1.2 Assessment of Flood Risk Level

The flood risk was assessed in reference to the evaluation criteria adapted by the WB Study on the Flood Management Master Plan for Metro Manila and Surrounding Areas (2010). The criteria for assessment of flood risk level is shown in Figure 3.1.2 and classified into 4 levels: Flood Risk Level 4 (Very High Risk of Casualty: $5.0 \text{ m} < D$), Flood Risk Level 3 (High Risk of Casualty: $2.0 \text{ m} < D \leq 5.0 \text{ m}$), Flood Risk Level 2

(Medium Risk of Casualty: $0.5 \text{ m} < D \leq 2.0 \text{ m}$), Flood Risk Level 1 (Low Risk of Casualty ($D \leq 0.5 \text{ m}$)).

According to the assessment of flood risk level, the river boundary is set along the outer line of the Flood Risk Level 4 where local residents are impossible to evacuate, lose the safety place in their house during flood event. The area of Flood Risk Level 4 was seriously damaged by recent floods repeatedly.



Source: WB Flood Management M/P for Metro Manila & Surrounding Areas (2010)

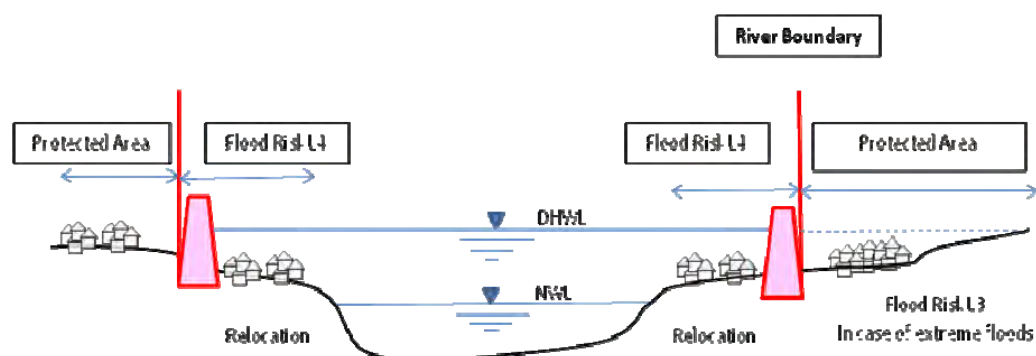
Figure 3.1.2 Criteria for Assessment of Flood Risk Level

3.2 Identification of Impacts by the Project

3.2.1 Basic Concept of Flood Risk Management of the Project

As stated in the above sections, the area of the Flood Risk Level 4 is not the safe place where people can live and, therefore, it is highly recommended for people not to live and put any structure in this area. The basic concept of flood risk management of the Project is, therefore, to relocate people living in the area of the Flood Risk Level 4 to safe place and to protect people in the Flood Risk Levels 1 to 3, as shown in Figure 3.2.1.

In case of breaching of dike by extreme floods like TS Sendong, this basic concept will protect human lives in the Flood Risk Levels 1 to 3 from serious flooding, in combination with flood forecasting and early warning systems and evacuation system.



Source: JICA Survey Team

Figure 3.2.1 Conceptual Illustration of Flood Risk Management of the Project

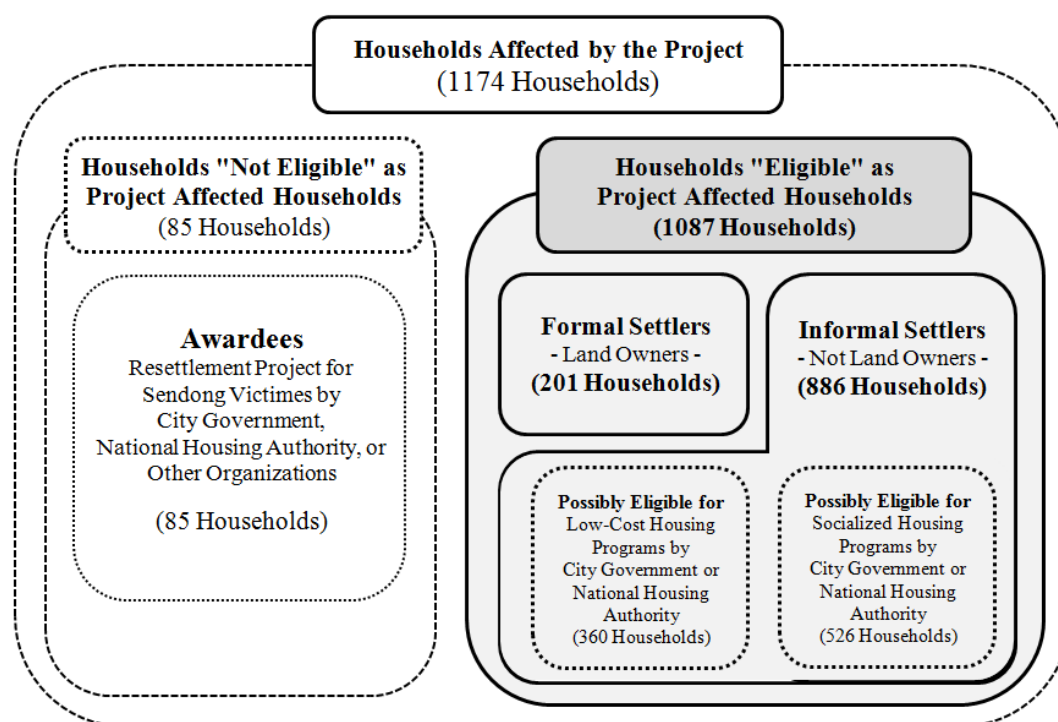
3.2.2 Extent of Impacts by the Project

Based on the basic concept of flood risk management of the Project, extent of major impacts of the Project was identified and is outlined below.

- Impacts on people – There are two kinds of people to be affected by the Project in principle: (a) people who reside in the project affected area and have a title or tax declaration on lands and (b) people who reside in the project affected area and have no title or no tax declaration on lands. The former is termed as formal settlers, and the later is termed as informal settlers.
- Impacts on land – There are two kinds of land to be acquired for the Project in principle: (a) lands required for the right-of-way of construction of structures of the Project such as dike and floodwall and (b) lands which become river area at very high flood risk after structures of the Project are constructed.
- Impacts on structures – There are structures required to be relocated for the Project such as residential, commercial, institutional, and any other kind of structures which are located in the right-of-way area and the river area.
- Impacts on improvements, trees and crops – There are improvements to be affected by the Project such as sheds, toilets, fences, storerooms, other structures and trees.

3.2.3 Coverage of Project Affected Households

The coverage of the project affected households is illustrated based on the scope of resettlement impact described in the following section.



Source: JICA Survey Team

Figure 3.2.2 Coverage of Project Affected Households

The total number of PAPs of the Project is 1087 households shown in Figure 3.2.2. The 1087 households were identified residing in the project area where acquisition of the right-of-way areas and the river areas within the river boundary is necessary by the Project, and are, therefore, necessary to be relocated. Of the 1087 households, 201 households were identified as formal settlers who own lands where they live, and the remaining 886 households were identified as informal settlers who do not own lands where they live.

Of the informal settlers (886 households), 526 households are identified as possibly eligible for housing units in resettlement sites provided under the socialized housing program of the city government and the National Housing Authority, due to the minimum monthly income of beneficiary requirements set by the city government and the national law. The remaining 360 households are not qualified for the above socialized housing program, due to having more monthly income than the requirements. However, the 360 households are possibly eligible for the low-cost housing program of the city government and the National Housing Authority. More details on requirements for the above housing programs and its related concerns are provided in Sections 8.2.1 and 8.2.2.

The 85 households shown in Figure 3.2.2 who are affected by the Project, but not eligible as PAPs of the Project because they will be provided a housing unit and lot in city's resettlement sites under the Comprehensive Socialized Housing Program for the Underprivileged and Homeless Citizens of Cagayan de Oro City. In addition to the housing support, assistance measures for rehabilitation will be provided in the Program, as the same as PAPs of the Project as shown in Section 7.3.1.

3.3 Scope of Resettlement Impact

Based on the extent of major impacts of the Project, scope of resettlement was identified and summarized in Table 3.3.1 below.

Table 3.3.1 Summary of Scope of Resettlement Impact

Affected Units	Type / Use		Sub-Total	Total
Impact on Houses			HH (Population)	HH (Population)
Household (HH)	No. of Household (Population)	Formal Settlers	201 (867)	1087HH* (4743)
		Informal Settlers	886 (3876)	
Impact on Other Entities			Unit (Population)	Unit (Population)
Commercial Business Enterprises (CBEs) and Community Owned Structures (COSs)	No. of CBEs and COSs	Structures on Titled Land	14 (21) **	72 Units (106)
		Structures on Untitled Land	58 (85) *	
Impact on Land				
Land	Right-of-Way / River Areas		-	747,296 (m ²)
Impact on Improvements				
	No. of Sheds		-	84
	No. of Toilets		-	170
	No. of Fences		-	171
	No. of Storerooms		-	34
	No. of Other Structures		-	15

Affected Units	Type / Use	Sub-Total	Total
Impact on Houses		HH (Population)	HH (Population)
Number of Impacted Trees			
	No. of Trees (Fruit Bearing)	-	3572
	No. of Trees (Non-Fruit Bearing)	-	151

* According to the survey conducted by the JICA Study Team, 1087 households live in 949 house structures.

** There are temporary residents in some CBES and COSs. They are categorized as PAPs in terms of impact on structures and income loss (loss of economic opportunities in the Entitlement Matrix presented in Figure 7.3).

Source: JICA Survey Team

3.3.1 Dimension of Project Affected Lands

The area of project affected lands is summarized in Table 3.3.2 below.

Table 3.3.2 Dimension of Project Affected Lands by Barangay

No.	Location	Type of Land	Area (m ²)
1	Barangay Bon-Bon	Right-of-Way / River Area	28,194
2	Barangay Kauswagan	Right-of-Way / River Area	19,950
3	Barangay Carmen	Right-of-Way / River Area	82,692
4	Barangay Balulang	Right-of-Way / River Area	237,422
5	Barangay Consolacion	Right-of-Way / River Area	74,129
6	Barangay 17	Right-of-Way / River Area	8,815
7	Barangay 15	Right-of-Way / River Area	14,913
8	Barangay 13	Right-of-Way / River Area	8,943
9	Barangay 10	Right-of-Way / River Area	6,383
10	Barangay 7	Right-of-Way / River Area	13,005
11	Barangay 6	Right-of-Way / River Area	4,507
12	Barangay 2	Right-of-Way / River Area	1,500
13	Barangay 1	Right-of-Way / River Area	1,133
14	Barangay Nazareth	Right-of-Way / River Area	100,070
15	Barangay Macasandig	Right-of-Way / River Area	145,639
Total		-	747,296

Source: JICA Survey Team

3.3.2 Number of Project Affected Structures

The total number of project affected structures by barangay is summarized in Table 3.3.3.

Table 3.3.3 Number of Project Affected Structures by Barangay

No.	Location	Use of Building	Type of Building	Sub-Total	Total
1	Barangay Bon-Bon	Residential	Shanty / Hut	0	90
			Wooden / Timber	36	
			Semi-Concrete	26	
			Concrete	12	
			Steel	0	
		Private	RC Mixed Use	1	
			Warehouse	5	
		Public	School	4	
			Covered Court	2	
			Shed	4	
2	Barangay Kauswagan	Residential	Shanty / Hut	0	3
			Wooden / Timber	3	
			Semi-Concrete	0	
			Concrete	0	
			Steel	0	
3	Barangay Carmen	Residential	Shanty / Hut	3	245
			Wooden / Timber	23	
			Semi-Concrete	85	
			Concrete	93	
			Steel	1	
		Private	Commercial	11	
			RC Mixed Use	18	
			Warehouse	4	
		Public	Health	1	
			Covered Court	1	
			Religious	1	
			Shed	4	

No.	Location	Use of Building	Type of Building	Sub-Total	Total
4	Barangay Balulang	Residential	Shanty / Hut	0	42
			Wooden / Timber	8	
			Semi-Concrete	7	
			Concrete	24	
			Steel	0	
		Public	Shed	3	
5	Barangay Consolacion	Residential	Shanty / Hut	0	368
			Wooden / Timber	141	
			Semi-Concrete	82	
			Concrete	99	
			Steel	0	
		Private	Commercial	7	
			RC Mixed Use	26	
			Warehouse	2	
		Public	School	1	
			Health	2	
			Covered Court	4	
			Barangay Facilities	1	
			Religious	1	
			Shed	2	
6	Barangay 17	Residential	Shanty / Hut	0	48
			Wooden / Timber	20	
			Semi-Concrete	19	
			Concrete	5	
			Steel	1	
		Private	RC Mixed Use	3	
7	Barangay 15	Residential	Shanty / Hut	5	70
			Wooden / Timber	16	
			Semi-Concrete	16	
			Concrete	13	
			Steel	0	
		Private	Commercial	3	
			RC Mixed Use	7	
		Public	Health	2	
			Covered Court	3	
			Barangay Facilities	1	
			Religious	1	
8	Barangay 13	Residential	Shanty / Hut	0	43
			Wooden / Timber	8	
			Semi-Concrete	19	
			Concrete	18	
			Steel	0	
		Private	Commercial	2	
9	Barangay 10	Residential	Shanty / Hut	0	24
			Wooden / Timber	3	
			Semi-Concrete	10	
			Concrete	3	
			Steel	0	
		Private	Commercial	1	
			RC Mixed Use	4	
		Public	Covered Court	1	
			Barangay Facilities	1	
			Shed	1	

No.	Location	Use of Building	Type of Building	Sub-Total	Total
10	Barangay 7	Residential	Shanty / Hut	1	51
			Wooden / Timber	6	
			Semi-Concrete	20	
			Concrete	6	
			Steel	0	
		Private	Commercial	3	
			RC Mixed Use	9	
		Public	Health	1	
			Covered Court	1	
			Barangay Facilities	1	
11	Barangay 6	Residential	Shanty / Hut	0	2
			Wooden / Timber	0	
			Semi-Concrete	0	
			Concrete	0	
			Steel	0	
		Private	Commercial	2	
12	Barangay 2	Residential	Shanty / Hut	0	0
			Wooden / Timber	0	
			Semi-Concrete	0	
			Concrete	0	
			Steel	0	
13	Barangay 1	Residential	Shanty / Hut	0	0
			Wooden / Timber	0	
			Semi-Concrete	0	
			Concrete	0	
			Steel	0	
14	Barangay Nazareth	Residential	Shanty / Hut	0	5
			Wooden / Timber	1	
			Semi-Concrete	0	
			Concrete	3	
			Steel	0	
		Public	Shed	1	
15	Barangay Macasandig	Residential	Shanty / Hut	4	133
			Wooden / Timber	34	
			Semi-Concrete	40	
			Concrete	35	
			Steel	0	
		Private	Commercial	5	
			RC Mixed Use	2	
			Warehouse	2	
		Public	Barangay Facilities	1	
			Religious	1	
Shed	9				
Total				1128	

Source: JICA Survey Team

3.3.3 Number of Project Affected Improvements

The total number of project affected improvements and trees by barangay is summarized in Table 3.3.4.

Table 3.3.4 Number of Project Affected Improvements and Trees by Barangay

No.	Location	Type of Improvements	Sub-Total	Total
1	Barangay Bon-Bon	Shed	6	125
		Toilet	14	
		Fence	20	
		Storeroom	3	
		Other Structures	1	
		Trees (Fruit Bearing)	71	
		Trees (Non-Fruit Bearing)	10	
2	Barangay Kauswagan	Shed	2	83
		Toilet	0	
		Fence	0	
		Storeroom	0	
		Other Structures	0	
		Trees (Fruit Bearing)	51	
		Trees (Non-Fruit Bearing)	30	
3	Barangay Carmen	Shed	17	517
		Toilet	38	
		Fence	57	
		Storeroom	16	
		Other Structures	5	
		Trees (Fruit Bearing)	352	
		Trees (Non-Fruit Bearing)	32	
4	Barangay Balulang	Shed	5	42
		Toilet	1	
		Fence	13	
		Storeroom	0	
		Other Structures	1	
		Trees (Fruit Bearing)	19	
		Trees (Non-Fruit Bearing)	3	
5	Barangay Consolacion	Shed	18	392
		Toilet	61	
		Fence	42	
		Storeroom	7	
		Other Structures	2	
		Trees (Fruit Bearing)	227	
		Trees (Non-Fruit Bearing)	35	
6	Barangay 17	Shed	2	188
		Toilet	9	
		Fence	3	
		Storeroom	1	
		Other Structures	0	
		Trees (Fruit Bearing)	159	
		Trees (Non-Fruit Bearing)	14	
7	Barangay 15	Shed	6	85
		Toilet	5	
		Fence	9	
		Storeroom	2	
		Other Structures	1	
		Trees (Fruit Bearing)	62	
		Trees (Non-Fruit Bearing)	0	

No.	Location	Type of Improvements	Sub-Total	Total
8	Barangay 13	Shed	2	59
		Toilet	7	
		Fence	2	
		Storeroom	0	
		Other Structures	1	
		Trees (Fruit Bearing)	44	
		Trees (Non-Fruit Bearing)	3	
9	Barangay 10	Shed	1	29
		Toilet	1	
		Fence	12	
		Storeroom	1	
		Other Structures	3	
		Trees (Fruit Bearing)	10	
		Trees (Non-Fruit Bearing)	1	
10	Barangay 7	Shed	5	72
		Toilet	4	
		Fence	7	
		Storeroom	0	
		Other Structures	0	
		Trees (Fruit Bearing)	52	
		Trees (Non-Fruit Bearing)	4	
11	Barangay 6	Shed	0	0
		Toilet	0	
		Fence	0	
		Storeroom	0	
		Other Structures	0	
		Trees (Fruit Bearing)	0	
		Trees (Non-Fruit Bearing)	0	
12	Barangay 2	Shed	0	0
		Toilet	0	
		Fence	0	
		Storeroom	0	
		Other Structures	0	
		Trees (Fruit Bearing)	0	
		Trees (Non-Fruit Bearing)	0	
13	Barangay 1	Shed	0	0
		Toilet	0	
		Fence	0	
		Storeroom	0	
		Other Structures	0	
		Trees (Fruit Bearing)	0	
		Trees (Non-Fruit Bearing)	0	
14	Barangay Nazareth	Shed	1	22
		Toilet	0	
		Fence	1	
		Storeroom	0	
		Other Structures	0	
		Trees (Fruit Bearing)	20	
		Trees (Non-Fruit Bearing)	0	
15	Barangay Macasandig	Shed	19	2583
		Toilet	30	
		Fence	5	
		Storeroom	4	
		Other Structures	1	
		Trees (Fruit Bearing)	2505	
		Trees (Non-Fruit Bearing)	19	
Total				4197

Source: JICA Survey Team

CHAPTER 4 OUTLINE OF SOCIOECONOMIC SURVEY

4.1 Socioeconomic Survey

In order to assess the socioeconomic characteristics of as well as the extent of loss and displacement of the project affected families (PAFs) and PAPs, the following studies such as: (a) Census; (b) Property and Land; and (c) Household and Living Condition were conducted in July 2013. The cut-off date of the Census was July 18, 2013.

The survey were conducted in 15 barangays along the affected areas in the river identified as left bank barangays (Barangays Bonbon, Kauswagan, Carmen, Balulang), the right bank barangays (Barangays Consolacion, Nazareth, Macasandig) and also the right bank poblacion barangays (Barangays 1, 2, 6, 7, 10, 13, 15, 17). It is noted that no households and no structures were identified in Barangays 1 and 2, while land acquisition in Barangays 1 and 2 is required by the Project. Table 4.1.1 shows PAUs composed of: (a) affected households (1087 families) and affected business and community establishments (72 units).

Table 4.1.1 Project Affected Units under Census

Barangay	Household		Business & Community Establishments		Total
	Household Only	Business at Residence	Business	Community	
Bonbon	71	3	1	2	77
Kauswagan	2	1	0	0	3
Carmen	159	24	7	2	192
Balulang	39	4	0	0	43
Consolacion	398	49	12	9	468
Brgy 17	61	244	3	0	88
Brgy 15	41	8	6	7	62
Brgy 13	32	6	4	2	44
Brgy 10	14	6	3	1	24
Brgy 7	37	8	4	4	53
Brgy 6	0	0	1	0	1
Brgy 2	0	0	0	0	0
Brgy 1	0	0	0	0	0
Nazareth	2	1	0	0	3
Macasandig	91	6	4	0	101
Sub-Total	947	140	45	27	1159
Total	1087		72		

Source: JICA Survey Team

4.2 Key Results of Survey

4.2.1 Outline of Key Results

The outline of results of the socioeconomic survey is summarized in Table 4.2.1 below. The survey questionnaires are provided in Annex 1.

Table 4.2.1 Summary of Results of Socioeconomic Survey

Key Contents / Information	Outline of Key Contents / Information
Household Heads	<ul style="list-style-type: none"> - Place of origin: almost half of household heads are from their respective barangays, while others came from other barangays in Cagayan de Oro, other areas in Misamis Oriental Province or other areas in Mindanao. - Gender: Female heads (80.4%) and male heads (19.6%) of 1,087 household heads - Age: relatively young between 21 and 40 (39.2%) - Educational attainment: high school graduate (24.8%) - Primary occupation: self-employed (14.8%), service workers (18.0%), laborers (13.4%), construction workers (8.2%) at generally not permanent and hired as contractual or seasonal. - Employment status: unemployed (8.9%). - Fund membership: no membership (51.0%), Social Security System (SSS) membership (30.3%), both SSS and Pag-Ibig Fund (10.4%). (*) - Land tenurial status: land owner (18.5%) , non-land owner (81.5%)
Household & Members	<ul style="list-style-type: none"> - Number of households living in a structure: only one household (62.6%) - Number of household members: 3,976 (male: 1,520 or 41.6% and female: 2,332 or 58.4%) - Age of household members: 20 years old and below (55.4%), between 21 – 40 years old (29.4%) - Educational attainments of members: elementary undergraduate (21.3%), college undergraduate (15.7%), high school undergraduate (15.3%), high school graduate (13.6%), college graduate (10.8%). - Primary occupation of members: mostly engaged in unskilled and short-time occupations. - Employment status: unemployed (73.7%). - Schooling status: 76.8% of schooling age of 6-21 years old (1,539) are enrolled
Household and Living Conditions	<ul style="list-style-type: none"> - Length of residency: living in the area more than 25 years (35.4%) - Total monthly income: P10000 or below (about 56.1%) - Available utilities: power (94.1%), and water supply for drinking (54.4%) and domestic water (92.4%) from piped lines.
Awareness of the Project	<ul style="list-style-type: none"> - Awareness: many (48.8%) indicated that they are aware of the Project to put up flood mitigation measures, while the remaining (51.2%) responded that they do not know about the Project. - Opinion on relocation and resettlement: the majority (85.9%) addressed that they would be willing to relocate and resettle.
Relocation and Livelihood	<ul style="list-style-type: none"> - Preferred relocation option: relocation within the city (56.3%), relocation within the same barangay (28.8%) and relocation nearby barangay (8.5%). - Preferred relocation type: self-relocation with Project's assistance (51.5%), group relocation with Project's assistance (28.2%). - Preferred livelihood assistance: cash assistance (88.6%). - Desired facilities: on-site government hospital (35.7%), market (15.4%), elementary school (15.0%), health center (13.7%), barangay center (6.0%), high school (3.7%), livelihood center (3.6%). - Use of compensation: construction of new house (38.4%), purchase of land (33.0%), intention to invest in business (21.7%).
Vulnerability of Households	<ul style="list-style-type: none"> - Vulnerable households: landless households (68.8%), elderly headed households (8.6%), female headed households (3.2%), disabled headed households (2.0%), solo parent headed household heads (0.9%).
Skills and Business	<ul style="list-style-type: none"> - Existing skills: existing prevailing skills of employable household

Key Contents / Information	Outline of Key Contents / Information
	<p>members (15 years old and above) are not highly specialized in nature such as for construction workers and service workers.</p> <ul style="list-style-type: none"> - Skill training preference: desired skills are almost the same as those of existing ones, probably due to its familiarity and/or wish to upgrade skills. - Business training preference: preferred businesses are those that require minimal start-up capita and management skills such as sari-sari store, commercial cooking, tailoring.

Note (*): Social Security System and Pag-Ibig-Fund are both part of the national social security system of the Philippines, whose members are availed of financial services such as general loan services and special loan services for calamity and housing, for example. If PAPs are members of these national social security systems, the said financial services are availed of at the time of or after relocation.

Source: JICA Survey Team

4.2.2 Results Related to Entitlements

Of the results of the socioeconomic survey presented in Table 4.2.1, the results related to entitlements are summarized in Table 4.2.2 below.

Table 4.2.2 Results of Socioeconomic Survey Related to Entitlements

Key Contents	Results Related to Entitlements
Household Heads	<ul style="list-style-type: none"> - Employment status: unemployed (8.9%). - Land tenurial status: land owner (18.5%), non-land owner (81.5%)
Household & Members	<ul style="list-style-type: none"> - Employment status: unemployed (73.7%).
Household and Living Conditions	<ul style="list-style-type: none"> - Total monthly income: P10000 or below (about 56.1%)
Vulnerability of Households	<ul style="list-style-type: none"> - Vulnerable households: landless households (68.8%), elderly headed households (8.6%), female headed households (3.2%), disabled headed households (2.0%), solo parent headed household heads (0.9%).

Source: JICA Survey Team

4.3 Key Profile of Project Affected Households

4.3.1 Profile of the Household Heads

■ Place of Origin

Out of the total of the 1,087 household heads, almost half of the household heads (49.1%) are original settlers of their respective barangays while others came from other barangays of CDO, Misamis Oriental and other parts of Mindanao. A few hailed from Visayas and Luzon.

Table 4.3.1 Place of Origin of Household Heads (N=1087)

Within Barangay	Other Barangay Within CDO	Within Province (Except CDO)	Mindanao (Except Misamis Oriental)	Visayas	Luzon	Total
534	127	135	189	86	16	1087
49.1%	11.7%	12.4%	17.4%	7.9%	1.5%	100.0%

Source: JICA Survey Team

■ Gender

Of all the household heads, 874 are men and 213 are women. Most of the female headed households (145) are located in the right-of-way areas of the Project.

Table 4.3.2 Gender of Household Heads (N=1087)

Gender	Men	Women	Total
Number	874	213	1087
%	80.4%	19.6%	100.0%

Source: JICA Survey Team

■ Age

Many of the household heads (39.2%) are relatively young, belonging to the 21-40 years old age bracket. About 38.0% are in the age range of 51 years and above.

Table 4.3.3 Age of Household Heads (N=1087)

Gender	Age Range						Total
	20 & Below	21 - 30	31 - 40	41 - 50	51 - 60	61 & Above	
Male	11	150	230	187	169	127	874
Female	3	18	28	47	47	70	213
Total	14	168	258	234	216	197	1087
%	1.3%	15.5%	23.7%	21.5%	19.9%	18.1%	100.0%

Source: JICA Survey Team

■ Educational Attainment

Many of the household heads are high school graduate (24.8%); followed by college undergraduate (20.2%) and college graduate at 18.4%.

Table 4.3.4 Educational Attainment of Household Heads (N=1087)

Educational Attainment	Male	Female	Total	%
No Formal Education	1	1	2	0.2%
Not in School Age	0	0	0	0.0%
Pre-School	0	0	0	0.0%
Elementary Undergraduate	70	6	76	7.0%
Elementary Graduate	81	20	101	9.3%
High School Undergraduate	134	23	157	14.4%
High School Graduate	218	52	270	24.8%
Vocational / Technical School	51	3	54	4.9%
Certificate Course	2	1	3	0.3%
College Undergraduate	172	48	220	20.2%
College Graduate	142	58	200	18.4%
Post Graduate	3	1	4	0.5%
Total	874	213	1087	100%

Source: JICA Survey Team

■ Primary Occupation/Income Source and Location

Many of the household heads (14.8%) are self-employed while others mainly work as service workers (18.0%), laborer (13.4%) and construction workers (8.2%). Hence, they are mostly working at CDO in their own barangays or other barangays within CDO. There are some household heads that receive remittance (5.6%) and for those who had retired, their monthly pension. Nine (8.9%) are not employed.

Table 4.3.5 Primary Occupation and Source of Income of Household Heads (N=1087)

Type of Occupation	Male	Female	Total	%
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Type of Occupation	Male	Female	Total	%
Officials of Government Agencies	16	0	16	1.5%
Professionals	26	6	32	2.9%
Technicians	15	2	17	1.6%
Employees & Staff of Government Agencies	11	2	13	1.2%
LGU Officials & Workers	12	5	17	1.6%
Clarks	15	4	19	1.7%
Service Workers	185	10	195	18.0%
Shop & Market Sales Workers	29	5	34	3.1%
Construction Workers	88	1	89	8.2%
Traders and Related Workers	70	5	75	6.9%
Farm and Factory Workers & Fishermen	12	0	12	1.1%
Laborers & Unskilled Workers	128	18	146	13.4%
Entertainment & Recreation Workers	7	2	9	0.8%
Special Occupation	9	1	10	0.9%
Business / Self-Employed	105	56	161	14.8%
Remittance	27	34	61	5.6%
Pensions / 4Ps	49	29	78	7.2%
Rental	4	2	6	0.6%
None	66	31	97	8.9%
Total	874	213	1087	100.0%

Source: JICA Survey Team

■ Employment Status

The table below shows that jobs of household heads, generally, are not permanent and at times, intermittent and seasonal. They are usually hired as contractual or casual workers.

Table 4.3.6 Employment Status of Household Heads (N=1087)

Permanent / Regular	Casual / Temporary	Contractual	Seasonal / Intermittent	Self- Employed	Others	Not Applicable	Total
260	115	120	93	272	4	223	1087
23.9%	10.6%	11.0%	8.6%	25.0%	0.4%	20.5%	100.0%

Source: JICA Survey Team

■ Fund Membership

Fifty one (51%) percent of the household heads are not members of any funding institution. 30.3% are SSS members while 10.4% are members of both SSS and PAGIBIG. A few (1.7%) are members of GSIS. The members of these institutions would have at least access to credit that might come handy at times of financial crisis.

Table 4.3.7 Fund Membership of Household Heads (N=1087)

GSIS	SSS	PAGIBIG	GSIS and SSS	GSIS and PAGIBIG	SSS and PAGIBIG	GSIS, SSS and PAGIBIG	None	Total
19	329	6	15	19	113	32	554	1087
1.7%	30.3%	0.6%	1.4%	1.7%	10.4%	2.9%	51.0%	100.0%

Source: JICA Survey Team

■ Land Tenurial Status on Land

Out of the total of the 1,087 household heads, 201 household heads are land owners and

the remaining of 886 household heads are non-land owners.

Table 4.3.8 Land Tenurial Status of Household Heads

Owner		Non-Owner					
Owner	Co-Owner	Occupants with Permission	Occupants without Permission	Renter	Sharer	Caretaker	Total
156	45	366	336	154	14	16	1087
14.4%	4.1%	33.7%	30.9%	14.2%	1.3%	1.5%	100.0%

Source: JICA Survey Team

4.3.2 Profile of the Households

■ Number of Households Currently Living in the Structure

Generally only one household lives in a structure (62.6%). However, there are also cases of two households occupying a structure (20.5%) and in few instances 3 households (9.1%), 4 households (3.1%) and 5 households (2.7%) in one structure as well. An extreme case was noted in Barangay Consolacion where 7 households are apparently living in one structure.

Table 4.3.9 Number of Households per Structure (N=1087)

One	Two	Three	Four	Five	Six	Seven	Total
681	223	99	34	29	14	7	1087
62.6%	20.5%	9.1%	3.1%	2.7%	1.3%	0.7%	100.0%

Source: JICA Survey Team

■ Number of Household Members

There are 3,656 household members (excluding household heads of 1087 from the total household members of 4743), of which 1,520 are male (41.6%) and 2,136 are female (58.4%) as indicated in Table 4.3.10.

Table 4.3.10 Number and Gender of Household Members (N=3656)

Gender	Male	Female	Total
Number	1520	2136	3656
%	41.6%	58.4%	100.0%

Source: JICA Survey Team

■ Age of Household Members

The household members are also relatively young with 55.4% of them being 20 years and below and about 29.4% belonging to the 21-40 age range.

Table 4.3.11 Age of Household Members (N=3656)

Gender	Age Range						Total
	20 & Below	21 - 30	31 - 40	41 - 50	51 - 60	61 & Above	
Male	1032	292	109	43	26	18	1520
Female	995	403	271	207	159	101	2136
Total	2027	695	380	250	185	119	3656
%	55.4%	19.0%	10.4%	6.8%	5.1%	3.3%	100.0%

Source: JICA Survey Team

■ Educational Attainment of Household Members

Of the 3,656 household members, 21.3% are elementary undergraduate, 15.7% are college undergraduate, 15.3% are high school undergraduate, 13.6% are high school

graduate and 10.8% are college graduate indicating the importance being placed on education by the households. Since there are more female than male household members, the women have outnumbered the male in almost all educational levels.

Table 4.3.12 Educational Attainment of Household Members (N=3656)

Educational Attainment	Male	Female	Total	%
No Formal Education	18	17	35	1.0%
Not in School Age	228	206	434	12.0%
Pre-School	83	82	165	4.5%
Elementary Undergraduate	369	411	780	21.3%
Elementary Graduate	49	91	140	3.8%
High School Undergraduate	246	314	560	15.3%
High School Graduate	151	348	499	13.6%
Vocational / Technical School	29	33	62	1.7%
Certificate Course	3	4	7	0.2%
College Undergraduate	223	350	573	15.7%
College Graduate	121	275	396	10.8%
Post Graduate	0	5	5	0.1%
Total	1520	2136	3656	100.0%

Source: JICA Survey Team

■ **Primary Occupation and Income Source of Household Members Engaged in Occupations**

Out of 3656 household members, 939 members are engaged in occupations. These members are basically engaged in occupations that do not require much skill and are most likely to be short-term in duration such as laborer (20.7%) and shop and market sales related (12.0%), service (10.0%) and construction work related (3.6%). 19.3% are self-employed and have small business on their own.

Table 4.3.13 Primary Occupation and Source of Income of Household Members Engaged in Occupations (N=939)

Type of Occupation	Male	Female	Total	%
Officials of Government Agencies	3	6	9	1.0%
Professionals	16	58	74	7.9%
Technicians	15	9	24	2.6%
Employees & Staff of Government Agencies	5	8	13	1.4%
LGU Officials & Workers	8	8	16	1.7%
Clarks	13	34	47	5.0%
Service Workers	54	40	94	10.0%
Shop & Market Sales Workers	33	80	113	12.0%
Construction Workers	33	1	34	3.6%
Traders and Related Workers	34	26	60	6.4%
Farm and Factory Workers & Fishermen	4	3	7	0.7%
Laborers & Unskilled Workers	98	96	194	20.7%
Entertainment & Recreation Workers	6	3	9	1.0%
Special Occupation	4	2	6	0.6%
Business / Self-Employed	26	155	181	19.3%
Remittance	5	14	19	2.0%
Pensions / 4Ps	5	32	37	3.9%
Rental	0	2	2	0.2%
Total	362	577	939	100.0%

Source: JICA Survey Team

■ **Employment Status**

Table below shows that jobs of household members are also not permanent and at times, intermittent and seasonal, as same as those of household heads. They are usually hired as

contractual or casual workers.

Table 4.3.14 Employment Status of Household Members (N=939)

Permanent / Regular	Casual / Temporary	Contractual	Seasonal / Intermittent	Self- Employed	Others	Not Applicable	Total
306	125	172	59	181	3	93	939
32.6%	13.3%	18.3%	6.3%	19.3%	0.3%	9.9%	100.0%

Source: JICA Survey Team

■ Schooling Status of Household Members

The member of the household members who are of schooling age (6-21 years old) is 1,539, of which 76.8% are currently enrolled; comprising of 50.8% men and 49.2% women, a reflection again of the high value given to education by the households. The opportunity to go to school is given to both male and female household members.

Table 4.3.15 Schooling Status of Household Members (N=1539)

Gender	Enrolled	Not Enrolled	Total
Male	606	177	783
Female	576	180	756
Total	1182	357	1539
%	76.8%	23.2%	100.0%

Source: JICA Survey Team

4.3.3 Household and Living Condition of the Households

■ Length of Stay in Current Residence

Many (35.4%) of the households have been residents of the area for more than 25 years. This has made it difficult for them to leave the place despite recurring floods. It is interesting to note, however, that there are respondents who have been there only for less than a year in spite of the experiences during the recent typhoons.

Table 4.3.16 Length of Stay of Households (Years) (N=1087)

1 or less	2 - 5	6 - 10	11 - 15	16 - 20	21 - 24	25 or more	Total
123	147	143	135	105	49	385	1087
11.3%	13.5%	13.2%	12.4%	9.7%	4.5%	35.4%	100.0%

Source: JICA Survey Team

■ Total Monthly Income

Majority (56.1%) of the households have a monthly income of P10000 and below indicating that most of them are below the poverty threshold of the City. The table below indicates the income of the households based on tenurial status with most of the landless earning P10000 or less per month.

Table 4.3.17 Monthly Income of Households (N=1087)

Income Range	Owners	Non-Owners (Landless)	Total	%
10,000 or less	84	526	610	56.1%
10,001-15,000	30	148	178	16.4%
15,001- 20,000	20	85	105	9.7%
20,001-25,000	14	41	55	5.1%
25,001-30,000	10	34	44	4.0%
30,001-35,000	9	12	21	1.9%
35,001-40,000	8	13	21	1.9%
40,001-45,000	8	6	14	1.3%
45,001-50,000	5	9	14	1.3%
50,001 or more	13	12	25	2.3%
Total	201	886	1,087	100.0%

Source: JICA Survey Team

■ Access to Utilities

As shown in the table below, most of the households (94.1%) is using power grid as source of energy, their water supply for drinking water (54.4%) and domestic water (92.4%) from piped lines. A great number of the households also used water sealed latrine (90.2%) for toilet facility. The main source of getting information and news is television (74.7%).

Table 4.3.18 Access to Utilities of Households (N=1087)

Energy (Power Grid)	Drinking Water (Piped Water)	Domestic Water (Piped Water)	Toilet Facility (Water Sealed Latrine)	Source of Information (TV)
1023	591	1004	981	812
94.1%	54.4%	92.4%	90.2%	74.7%

Source: JICA Survey Team

4.3.4 Awareness of the Households on the Project

■ Awareness of the Project

While more than half of the respondents (51.2%) indicated that they are not aware of the Project to put up flood mitigation measures along the affected areas in Cagayan de Oro River, the remaining respondents (48.8%) also responded that they know about the Project.

Table 4.3.19 Awareness of the Project (N=1087)

	Yes	No	Total
Number	530	557	1087
%	48.8%	51.2%	100.0%

Source: JICA Survey Team

■ Source of Information on Project

The respondents who are not aware of the Project (51.2%) came to know about the Project as respondents of the survey. Those who confirmed their knowledge were able to get the information from their neighbors (65.7%) and from LGU officials who had conducted public meetings on this regard (17.7%) as indicated in the table below.

Table 4.3.20 Source of Information on the Project (N=530)

Public Meeting with LGU	Neighbors	Friends / Relatives	Others	Total
94	348	44	44	530
17.7%	65.7%	8.3%	8.3%	100.0%

Source: JICA Survey Team

■ Positive Perception of the Project

The importance of the Project was appreciated given the aftermath of Typhoons Sendong and Pablo.

Table 4.3.21 Positive Reasons for Perception of the Project (N=1001)

Reason	Number	%
Loss of lives & damages to properties caused by recurring floods will be prevented	278	27.8%
Residents will no longer feel threatened or scared during heavy rains	162	16.2%
Investors will be more encouraged to put up businesses in CDO	15	1.5%
Lessen incidences of flooding	188	18.8%
For the benefit of the community	298	29.8%
Will have the opportunity to own house and lot in a safe place	39	3.9%
No other option because land is government owned and it is a government project	21	2.0%
Total	1001	100.0%

Source: JICA Survey Team

■ Negative Perception of the Project

On the other hand, the negative reasons of the Project were given as well.

Table 4.3.22 Negative Reasons for Perception of the Project (N=60)

Reason	Number	%
Ancestral properties will be affected	30	50.0%
Residents will be dislocated and will have to resettle or relocate	19	31.7%
Disruption of livelihood	6	10.0%
Government projects take too long to finish, and funds are misused	5	8.3%
Total	60	100.0%

Source: JICA Survey Team

■ Willingness of Relocation

Should the Project necessitate their relocation/resettlement, majority (85.9%) said that they would be willing to do so because they would have the opportunity to own a housing unit located in a safe place while they do not have any option but to relocate since they do not own the land where they are presently residing.

Table 4.3.23 Number of Households Willing to be Resettled (N=1087)

	Willing	Not Willing	Total
Number	934	153	1087
%	85.9%	14.1%	100.0%

Source: JICA Survey Team

■ Reasons of Unwilling to Relocate

On the other hand as noted in the table below, those who are not willing to relocate (14.1%) cited the following reasons for this decision: (a) they do not want to leave their properties behind (43.1%), (b) resettlement sites are located far from facilities (21.0%);

and (c) the government could not guarantee or offer a satisfactory (fair) price for their house and lot (12.4%).

Table 4.3.24 Reasons for Not Wanting to be Resettled (N=153)

Reason	Number	%
Do not want to leave ancestral land or properties	66	43.1%
Resettlement sites are far	32	21.0%
Government will not guarantee a satisfactory price for house and lot	19	12.4%
Loss of house, land or livelihood	17	11.1%
Resettlement sites have poor or limited basic facilities	12	7.8%
Resettlement will not push through	3	2.0%
High cost of transportation	2	1.3%
Unwilling to live in community of migrants	2	1.3%
Total	153	100.0%

Source: JICA Survey Team

4.3.5 Relocation and Income Restoration Option of the Households

■ Preferred Relocation Option

Most of the respondents (56.3%) prefer to be relocated within the city while others (28.8%) even specify the same barangay or nearby barangay (8.5%) as the place that they would rather be relocated signifying their need to be transferred in a place or environment that is familiar to them to minimize the effects of displacement.

Table 4.3.25 Preferred Relocation Option (N=1087)

Same Barangay	Nearby Barangay	Within the City	Nearby Towns	On Own Land	Push Back in the Same Land	No Answer	Total
313	92	612	26	21	18	5	1087
28.8%	8.5%	56.3%	2.4%	1.9%	1.7%	0.4%	100.0%

Source: JICA Survey Team

■ Preferred Relocation Type

Although resettlement in government sites have been mentioned (19.0%); the majority has the preference for self-relocation with project assistance (51.5%) or group relocation with project assistance (28.2%) giving an indication of their preference to be more involved in the decision of selecting the place where they would relocate.

Table 4.3.26 Preferred Relocation Type (N=1087)

Self Relocation	Group Relocation	Resettlement in Government Sites	Others	No Answer	Total
560	307	206	5	9	1087
51.5%	28.2%	19.0%	0.5%	0.8%	100.0%

Source: JICA Survey Team

■ Preferred Assistance for Livelihood and Income Restoration

A good number of respondents (88.6%) opted for cash assistance to buy replacement land and reconstruction of house structure. This is followed by replacement land, although a far second at 5.7%. Given the opportunity, they would rather resettle in a place of their own choice.

Table 4.3.27 Preferred Assistance for Livelihood and Income Restoration (N=1087)

Cash Assistance	Replacement Land	Transportation Assistance & Transition Allowance	Access to Loan	Skills Development	Others	No Answer	Total
963	62	28	8	8	12	6	1087
88.6%	5.7%	2.6%	0.7%	0.7%	1.1%	0.6%	100.0%

Source: JICA Survey Team

■ Most Desired Basic Services and Facilities in Relocation Site

Majority would like to have an on-site government hospital (35.7%) as implied in the table below. Others prefer market (15.4%), elementary school (15.0%), health center (13.7%), barangay center (6.0%), high school (3.7%), livelihood center (3.6%), police outpost (1.8%), and private clinic (1.2%).

Table 4.3.28 Most Desired Basic Services and Facilities in Relocation Site (N=1087)

Basic Services and Facilities	Number	%
Government Hospitals	388	35.7%
Market	167	15.4%
Elementary School	163	15.0%
Health Center	149	13.7%
Barangay Center	65	6.0%
High School	40	3.7%
Livelihood Center	39	3.6%
Police Outpost	20	1.8%
Private Clinic	13	1.2%
Others	38	3.4%
No Answer	5	0.5%
Total	1087	100.0%

Source: JICA Survey Team

■ Use of Compensation in Cash

The said compensation would be mainly utilized for the construction of new house (38.7%) and the purchase of land (33.0%). Many (21.7%) indicated an intention to invest the money in business.

Table 4.3.29 Use of Compensation (N=1087)

Purchase Land	Construction of New House	Repair of House	Invest in Business	Others	No Answer	Total
359	421	14	236	54	3	1087
33.0%	38.7%	1.3%	21.7%	5.0%	0.3%	100.0%

Source: JICA Survey Team

4.3.6 Vulnerability of the Households

Most of the respondents are landless (68.8%) a situation that maybe responded to if they qualify for a housing unit in government resettlement sites. However, it is important to note that during the planning and implementation of the activities related to resettlement due attention should be given to community residents who may have special needs such as the elderly household head (8.6%) and members as well, female headed household

(3.2%), disabled household head (2.0%) and members for that matter and solo parent household head (0.9%) to adequately meet their requirements.

Table 4.3.30 Vulnerability of Households (N=1087)

Type of Vulnerability	Number	%
Landless	748	68.8%
Elderly-Headed Households	94	8.6%
Female-Headed Households	35	3.2%
Disabled-Headed Households	22	2.0%
Solo-Parent Headed Households	10	0.9%
Child-Headed Households	2	0.2%
Indigenous People	1	0.1%
None	172	15.9%
No Answer	3	0.3%
Total	1087	100.0%

Source: JICA Survey Team

4.3.7 Skills, Business Interest and Preference of Employable Household Members

■ Existing Skills

In general, the prevailing skills of the employable household members (15 years old and above) are not highly specialized in nature except for some information technology related ones (e.g. computer programming, layout design and animation). The available skills are mostly on construction (e.g. carpentry, construction painting, masonry, electrical installation and maintenance) and services (e.g. driving, auto servicing, beauty care, commercial cooking, and dressmaking). There are also skilled employable in agricultural crops production in Bonbon, Carmen, Balulang, Macasandig and Consolacion. Many (17.2%) of the employable have no skills at all.

Table 4.3.31 Existing Skills of Employable Household Members (N=3260)

Type of Skill	Total	%
Commercial cooking	749	23.0%
Driving	332	10.2%
PC operations	192	5.9%
Entrepreneurship/marketing, sales	189	5.8%
Carpentry	148	4.5%
Performing arts	101	3.1%
Household services	72	2.2%
Tailoring	65	2.0%
Others	704	21.6%
No skills	561	17.2%
Do not know	147	4.5%
TOTAL	3,260	100.0%

Source: JICA Survey Team

■ Skills and Training Preference

The desired skills are generally almost the same as that of the existing ones. This might be attributed to the familiarity of the employable household members with these skills or they just would like to upgrade their existing skills. These skills could be easily acquired at minimal cost and could provide employment, albeit temporarily or could enable them to venture into business (e.g. commercial cooking, marketing and sales, tailoring) as an option to have a source of income. A substantial number of employable (44.5%) do not have any idea on the type of skills/training that they would want to acquire/undertake.

Table 4.3.32 Preferred Skills of Employable Household Members (N=3260)

Type of Skill	Total	%
Commercial cooking	461	14.1%
Welding	134	4.1%
Entrepreneurship/marketing, sales	106	3.3%
Driving	92	2.8%
PC Operations	73	2.2%
Electrical	71	2.2%
Auto body repairing	63	1.9%
Auto servicing	51	1.6%
Computer programming	45	1.4%
Others	434	13.3%
No skills	1450	44.5%
Do not know	280	8.6%
TOTAL	3,260	100.0%

Source: JICA Survey Team

■ Business Interest and Preference

The business activities that are being preferred by the employables are those that would only require minimal start-up capital (except that of internet shop) and basic management skills such as sari-sari (local convenience store popularly seen in residential areas over the country) store operations, carinderia (local commercial cooking), tailoring shop and livestock raising. Others would not even require putting up any shop like nail care (beauty care) and direct selling (marketing and sales). On the other hand, 31.2% of the employables has no business interest in anyway.

Table 4.3.33 Preferred Business of Employable Household Members (N=3260)

Type of Business	Total	%
Sari-sari store	648	19.9%
Commercial cooking	414	12.7%
Entrepreneurship/marketing, sales	318	9.8%
Computer / internet	116	3.6%
Livestock raising	80	2.5%
Tailoring	47	1.4%
Beauty care	43	1.3%
Agricultural crops	39	1.2%
Auto servicing	38	1.2%
Others	241	7.4%
No skills	1018	31.2%
Do not know	258	7.8%
TOTAL	3,260	100.0%

Source: JICA Survey Team

CHAPTER 5 LEGAL FRAMEWORK

5.1 Policy of JICA on Resettlement

5.1.1 Key Principle of JICA Policy

The key principle of JICA policies on involuntary resettlement is summarized below.

- Involuntary resettlement and loss of means of livelihood are to be avoided when feasible by exploring all viable alternatives.
- When, population displacement is unavoidable, effective measures to minimize the impact and to compensate for losses should be taken.
- People who must be resettled involuntarily and people whose means of livelihood will be hindered or lost must be sufficiently compensated and supported, so that they can improve or at least restore their standard of living, income opportunities and production levels to pre-project levels.
- Compensation must be based on the full replacement cost as much as possible. The definition of replacement cost of the Project is summarized in the table below (Table 5.1.1)
- Compensation and other kinds of assistance must be provided prior to displacement.
- For projects that entail large-scale involuntary resettlement, resettlement action plans must be prepared and made available to the public. It is desirable that the resettlement action plan include elements laid out in the WB Safeguard Policy, OP 4.12, Annex A.
- In preparing a resettlement action plan, consultations must be held with the affected people and their communities based on sufficient information made available to them in advance. When consultations are held, explanations must be given in a form, manner, and language that are understandable to the affected people.
- Appropriate participation of affected people must be promoted in planning, implementation, and monitoring of resettlement action plans.
- Appropriate and accessible grievance mechanisms must be established for the affected people and their communities.

Table 5.1.1 Description of Replacement Cost

Type	Kind	Description
Land	Agricultural Land	The pre-project or pre-displacement, whichever is higher, market value of land of equal productive potential or use located in the vicinity of the affected land, plus the cost of preparing the land to levels similar to those of the affected land, plus the cost of any registration and transfer taxes.
	Land in Urban Areas	The pre-displacement market value of land of equal size and use, with similar or improved public infrastructure facilities and services and located in the vicinity of the affected land, plus the cost of any registration and transfer taxes.
Structure	Houses and Other Structures	The market cost of the materials to build a replacement structure with an area and quality similar or better than those of the affected structure, or to repair a partially affected structure, plus the cost of transporting building materials to the construction site, plus the cost of any labour and contractors' fees, plus the cost of any registration and transfer taxes.

Source: JICA Survey Team

5.1.2 Key Principle of WB Policy

The principles stated in Section 5.2.1 are complemented by WB OP 4.12, since it is stated in JICA Guideline that "JICA confirms that projects do not deviate significantly from the WB's Safeguard Policies". Additional key principle based on WB OP 4.12 is as follows.

- Affected people are to be identified and recorded as early as possible in order to establish their eligibility through an initial baseline survey (including population census that serves as an eligibility cut-off date, asset inventory, and socioeconomic survey), preferably at the project identification stage, to prevent a subsequent influx of encroachers of others who wish to take advance of such benefits.
- Eligibility of Benefits include, the PAPs who have formal legal rights to land (including customary and traditional land rights recognized under law), the PAPs who don't have formal legal rights to land at the time of census but have a claim to such land or assets and the PAPs who have no recognizable legal right to the land they are occupying.
- Preference should be given to land-based resettlement strategies for displaced persons whose livelihoods are land-based.
- Provide support for the transition period (between displacement and livelihood restoration)
- Particular attention must be paid to the needs of the vulnerable groups among those displaced, especially those below the poverty line, landless, elderly, women and children, ethnic minorities etc.

In addition to the above core principles on the JICA policy, it also laid emphasis on a detailed resettlement policy inclusive of all the above points; project specific resettlement plan; institutional framework for implementation; monitoring and evaluation mechanism; time schedule for implementation; and, detailed Financial Plan etc.

5.2 Gap Analysis between Philippine's Legal Framework and JICA Guideline

The JICA, WB and the Philippines have legal protection clauses for PAFs. However, there are gaps between the policies.

There are gaps between the JICA Guidelines, World Bank Policies on Involuntary Resettlement and the laws of the Government of the Philippines. However, these gaps may be bridged by the adoption of good practices by the Project proponent aside from softer forms of legislation in support of the Project from the local government unit. The details of the laws and regulations of the Government of the Philippines related to involuntary resettlement are provided in Annex 2.

Local legislation in Cagayan de Oro in support of resettlement includes Executive Orders from the Office of the City Mayor; Executive Order No. 020-13 - An Order Creating the Shelter and Housing Development Multi-Sectoral Task Force (Annex 3). Executive Order No. 039-13 – An Order Reorganizing the Cagayan de Oro Housing Board, Reconstituting the Membership thereof and Defining It's Powers and Functions and for other Purposes (Annex 4).

The Philippine Constitution guarantees just compensation for property taken due to implementation of a government development project. Gaps may happen because of the various officially recognized methods in the valuation of property. For instance, the first offer of zonal value in negotiating sale for land may not cover full replacement cost. In the process of acquiring lands, expropriation is only a last resort which is both costly in terms of time and other resources. The Project intends to generate a reference table (Table 13.2.3) of the current zonal value (from the BIR) and fair market value of lands sourced from the Assessment Department of the Cagayan de Oro City that serves as corroborative verification in the determination of just compensation. This will serve as in the determination of just compensation.

In the preparation of RAP of this Project, plans were formulated according to the principle of enabling the affected persons to restore livelihoods and standards of living to the pre-project level and not be worse off due to the project. Participation and sense of ownership is encouraged by making public consultations meaningful to the project affected people.

Table 5.2.1 presents gap analysis of the policies for key issues.

Table 5.2.1 GAP Analysis

#	JICA Guidelines	World Bank OP 4.12	GOP Laws/ Policies	Gaps between Guidelines and GOP Laws / Policies	Project Policy to Fill-In the Gaps
1	<ul style="list-style-type: none"> - Involuntary resettlement (IR) and loss of means of livelihood are to be avoided when feasible by exploring all viable alternatives. - When population displacement is proved unavoidable, effective measures to minimize impact and to compensate for losses should be taken. 	Avoid or minimize involuntary resettlement (IR) where feasible by assessing all viable alternative designs.	<ul style="list-style-type: none"> - A person deprived of life, liberty, and property is entitled to due process of law and equal protection of the laws (The 1987 Philippine Constitution, Article III, Section 1) - Compensation for private property taken for public use (The 1987 Philippine Constitution, Article III, Section 9). - Compensation is the value of the property at the time of the taking, a fair and full equivalent of the loss incurred (Supreme Court Ruling, G.R. No. L-59603 April 29, 1987). - Assessment of technical and site alternatives including no action alternative is required to minimize adverse environmental impacts on human health and safety, and Environmental Impact Assessment examines how a proposed activity may cause harm to people, their property or their livelihoods, or to nearby developments. Measures are identified to minimize problems and improve the project's sustainability. (DENR, DAO 96-37 Section 8, DAO 30, Sections 1, 4.2, 4.3, and Procedural Manual, Annex B and H - Scoping Checklist) 	There is no significant gap however; there is no specific provision the extent and process of assessment of alternative designs, such as how many alternatives to present or consider, specifically for the purpose of avoiding or minimizing resettlement. .	The Project explored several alternatives and the most viable option was selected based on an In-depth study where involuntary resettlement is minimized while flood risk level is also reduced.

#	JICA Guidelines	World Bank OP 4.12	GOP Laws/ Policies	Gaps between Guidelines and GOP Laws / Policies	Project Policy to Fill-In the Gaps
2	People who must be resettled involuntarily and whose means of livelihood will be hindered or lost must be sufficiently compensated and supported in a timely manner.	<ul style="list-style-type: none"> - Where IR is unavoidable, resettlement should be conceived and executed as sustainable development programs. - Assist displaced persons in restoring or improving their livelihoods and standards of living in real terms relative to pre-displacement levels. 	<ul style="list-style-type: none"> - Eviction of urban and rural poor and demolition of their dwellings shall only be done in accordance with law and in just and humane manner (The 1987 Philippine Constitution, Article XIII, Section 10). - An Environmental Impact Assessment examines how a proposed activity may cause harm to people, their property or their livelihoods, or to nearby developments. Measures are identified to minimize problems and improve the project's sustainability (DENR-DAO-03-30 IRR of the Philippine Environmental Impact Statement System, June 30, 2003) Chapter 1.C). - Basic services and facilities such as water, electricity, access to roads, transportation, health, education, etc. shall be provided in socialized housing and resettlement sites by the NHA and LGU in cooperation with other concerned agencies (Republic Act or RA 7279 Urban Development and Housing Act of 1992, Article V, Section 21). - Livelihood component in socialized housing and resettlement sites includes accessibility to employment opportunities, development of livelihood programs, and grant of livelihood loans (RA 7279 Urban Development and Housing Act of 1992, Article V, Section 22). 	.	<ul style="list-style-type: none"> - Resettlement assistance in terms of livelihood and skills training are being prepared relative to the needs; education and skill inventory of PAPs. - Social preparation including psycho-social needs of PAPs is in consideration for them to carry on in a new environment.

#	JICA Guidelines	World Bank OP 4.12	GOP Laws/ Policies	Gaps between Guidelines and GOP Laws / Policies	Project Policy to Fill-In the Gaps
3	Compensation must be based on full replacement cost.	<p>Compensation for:</p> <ul style="list-style-type: none"> - Land – replacement land or cash compensation at full replacement cost - Housing/structures – replacement houses or cash compensation at full replacement cost - Other properties/ assets – cash compensation at full replacement cost in local markets - Replacement Cost is defined as the method of valuation of assets that helps determine the amount sufficient to replace lost assets and cover transaction costs. In applying this method of valuation, depreciation of structures and assets should not be taken into account. - For agricultural land – it is the pre-displacement, whichever is higher, market value of the land of equal productive potential or use located in the vicinity of the affected land plus the cost of preparing the land to similar levels to those of the affected and cost of any registration and transfer taxes. - For land in urban areas – it is the pre-displacement market value of the land of equal size and use, with similar or improved public infrastructures facilities and services, located in the vicinity of the affected land, plus the cost of any registration and transfer taxes. 	<ul style="list-style-type: none"> - Compensation is payment in cash or in kind at replacement cost for an asset to be acquired or affected by an infrastructure project (LARRIP (2007)) - Replacement cost calculation method is used by the implementing agency to determine the valuation of the improvements and/or structures on the land to be acquired (RA 8974 (2000) Implementing Rules and Regulations, Section 10). - "Fair Market Value" is the price at which a property may be sold by a seller who is not compelled to sell and bought by a buyer who is not compelled to buy (RA 7160 Local Government Code of 1991, Section 199). - The courts may consider relevant standards to facilitate determination of just compensation such as classification and use of land, value declared by owners, current selling price of similar land nearby, price of land based on oral and documentary evidence presented, etc (RA 8974 (2000) An Act to Facilitate the Acquisition of Right-of-Way, Site or Location for National Government Infrastructure Projects and for Other Purposes, Section 5). 	Different methods of land valuation like using zonal value may not add up to full replacement cost or just compensation.	Compensation of losses will be at full replacement cost following the standards in land valuation set by law.[RA 8974]

#	JICA Guidelines	World Bank OP 4.12	GOP Laws/ Policies	Gaps between Guidelines and GOP Laws / Policies	Project Policy to Fill-In the Gaps
		<ul style="list-style-type: none"> - For houses and other structures – it is the market cost of the materials to build a replacement structure with similar or better area and quality than the affected structure or to repair a partially affected structure plus all the costs of: (a) transporting building materials to the construction site , (b) any labor contractors’ fees and (c) any registration and transfer taxes 			
4	Compensation and other kinds of assistance must be provided prior to displacement.	Prior to displacement, necessary measures for resettlement include provision of compensation and of other assistance required for relocation, and preparation and provision of resettlement sites with adequate facilities, where required. In particular, taking of land and related assets may take place only after compensation has been paid and, where applicable, resettlement sites and moving allowances have been provided to the displaced persons.	<ul style="list-style-type: none"> - No eviction of occupants in the area where the project is implemented shall be done unless appropriate relocation sites are provided in accordance with the provision in the Constitution (RA 7160 Local Government Code of 1991, Section 27) - For projects involving acquisition of land and other assets, the LGU shall not allow civil works to start until the compensation has been paid and resettlement, where necessary, is completed to the satisfaction of the PAPs. The compensation package should be agreed upon during the consultation meetings and the payments made properly documented (Department of Finance, Guidelines on Resettlement and Compensation, 2001). - All RAP activities related to land acquisition, resettlement, including compensation determined by the Internal Monitoring Agent (IMA) and External Monitoring Agent (EMA) should have been completed 	No significant gaps	<ul style="list-style-type: none"> - Compensation of losses will also be time-bound. Payment of compensation and transfer of eligible beneficiaries (PAPs) to resettlement sites will be done before the start of implementation of the project’s contract packages. - The Project is working and coordinating with the local government of Cagayan de Oro and other national government agencies including the NHA in the region to provide necessary assistance such as provision of resettlement sites.

#	JICA Guidelines	World Bank OP 4.12	GOP Laws/ Policies	Gaps between Guidelines and GOP Laws / Policies	Project Policy to Fill-In the Gaps
			one month before the start of civil works (LARRIP (2007))		
5	For projects that will result in large-scale involuntary resettlement, resettlement action plans must be prepared and made available to the public.	<ul style="list-style-type: none"> - To address the direct economic and social impacts resulting from Bank-assisted projects and causing involuntary taking of land and/or the involuntary restriction of access to legally designated parks and protected areas, preparation of a Resettlement plan or resettlement policy framework is required. - A resettlement plan or abbreviated resettlement plan is required for all operations that entail involuntary resettlement unless otherwise specified. - The borrower is responsible for preparing, implementing, and monitoring a resettlement plan, a resettlement policy framework or a process framework. - See Items 6 and 7 for policies on information disclosure. 	<ul style="list-style-type: none"> - Proponent agencies are required to submit a Resettlement Action Plan (RAP) to aid in the evaluation of the social acceptability and feasibility of the project. Measures to relocate, resettle, and provide livelihood development for families whose properties will be permanently affected by the project should be included in the plan (NEDA -ICC Guidelines and Procedures Annex B). 	No significant gaps.	A full Resettlement Action Plan (RAP) is prepared for this Project considering the number of affected people. Information from the plan will be made available and accessible to the public.
6	In preparing a Resettlement Action Plan, consultations must be held with the affected people and their communities based on sufficient information made available to them in advance.	Disclose resettlement plans in a timely manner; include documentation of the consultation process.	<ul style="list-style-type: none"> - No resettlement of urban or rural dwellers shall be undertaken without adequate consultation with them and the communities where they are to be relocated (The 1987 Philippine Constitution, Article XIII, Section 10). - All national agencies are required to conduct periodic consultations with appropriate local government units, NGOs and POs, and other concerned sectors of the community before any project or program is implemented in their respective jurisdiction (RA 	No significant gaps.	Public consultations are underway with PAPs, issues and concerns are regarded and documented; measures to address these concerns are being incorporated to the plan.

#	JICA Guidelines	World Bank OP 4.12	GOP Laws/ Policies	Gaps between Guidelines and GOP Laws / Policies	Project Policy to Fill-In the Gaps
			<p>7160 Local Government Code of 1999, Section 2 (c)).</p> <ul style="list-style-type: none"> - Establishment of communication and rapport between the LGU or concerned agency and recognized community leaders. Meet with affected families to explain the following <ul style="list-style-type: none"> - the need to relocate families from danger areas and infrastructure project sites - the government's shelter program - procedure and guidelines for relocation and resettlement - objectives and schedule of census and tagging operations <p>(RA 7279 Urban Development and Housing Act of 1992 IRR, Section 3.1)</p>		
7	When consultations are held, explanations must be given in a form or manner, and language that are understandable to the affected people.	As a condition of appraisal of projects involving resettlement, a draft resettlement instrument is provided, and made available at a place accessible to displaced persons and local NGOs, in a form, manner, and language that are understandable to them. Once accepted, this instrument as providing an adequate basis for project appraisal, the Bank makes it available to the public through its InfoShop. When approved, the final resettlement instrument, the Bank and the proponent disclose it again in the same manner.	The PMO with the support of the ESSD, Regional and District Engineering Offices will carry out information campaign and will be done through community meetings and leaflets printed in the language understandable to project-affected persons or PAPs (LARRIP (2007), Chapter V).	No significant gaps.	With the goal of making the PAPs understand and receptive to the Project, presentations and materials are prepared in the local language, in a form and manner suitable to them.

#	JICA Guidelines	World Bank OP 4.12	GOP Laws/ Policies	Gaps between Guidelines and GOP Laws / Policies	Project Policy to Fill-In the Gaps
8	Appropriate participation of affected people must be promoted in planning, implementation, and monitoring of resettlement action plans.	Displaced persons, their communities, and host communities should be meaningfully consulted, provided timely and relevant information, and offered opportunities to participate in planning, implementing, and monitoring resettlement programs.	<ul style="list-style-type: none"> - The right of the people and their organization to effective and reasonable participation at all levels of social, political, and economic decision-making will not be curtailed. The State, by law, will facilitate the establishment of adequate consultation mechanisms (The 1987 Philippine Constitution, Article XIII, Section 16). - The LGUs, in coordination with the Presidential Commission for the Urban Poor (PCUP) and concerned government agencies shall give program beneficiaries the opportunity to be heard and participate in the decision-making process over matters involving their legitimate interests (RA 7279 Urban Development and Housing Act of 1992, Section 23). - The scope of the monitoring mechanisms involves preparation, implementation, and monitoring of the RAPs (LARRIP (2007), Chapter VIII) 	The gap in parameters is not specific as what is appropriate and how to promote participation.	Discussion concerning the PAPs' roles and benefits in the resettlement process will be made specific early on during consultations to bring on active and continuing participation.

#	JICA Guidelines	World Bank OP 4.12	GOP Laws/ Policies	Gaps between Guidelines and GOP Laws / Policies	Project Policy to Fill-In the Gaps
9	Appropriate and accessible grievance mechanisms must be established for the affected people and their communities.	Affordable and accessible procedures for third-party settlement of disputes arising from resettlement; these grievance mechanisms should take into account the availability of judicial recourse and community and traditional dispute settlement mechanisms.	<ul style="list-style-type: none"> - Complaints in violation of this Implementing Rules and Regulations or IRR: <ul style="list-style-type: none"> - against local government executives may be filed and prepared through the DILG. - against subordinate officials within the administrative jurisdiction of the local chief executives shall be filed with the office of the local chief executive concerned - against officials of other national agencies may be filed in the Office of the President or Office of the Ombudsman - may also be directed to and or seek the assistance of the Commission on Human Rights or the Presidential Commission for the Urban Poor. (Republic Act 7279 Urban Development and Housing Act of 1992 IRR, Section 7) - Grievances related to any aspect of the project will be handled through negotiations and are aimed at achieving consensus following certain procedures. All complaints from PAPs, written and written when received verbally, will be documented and shall be acted upon immediately according to grievance procedure (LARRIP (2007), Chapter VI). 	The gap in the policy is not specific enough as how to make grievance mechanism appropriate and accessible	Accessible, uncomplicated yet functioning grievance procedures, where the affected person assisted in the whole process, from documentation to updates on the progress to final resolution of the complaint, will be established for PAPs and their communities.

#	JICA Guidelines	World Bank OP 4.12	GOP Laws/ Policies	Gaps between Guidelines and GOP Laws / Policies	Project Policy to Fill-In the Gaps
10	Affected people are to be identified and recorded as early as possible in order to establish their eligibility through initial baseline survey (including census that serves as an eligibility cut-off date, asset inventory, and socio-economic survey), preferably at the project identification stage, to exclude subsequent influx of people ineligible for compensation and resettlement assistance. (World Bank OP 4.12 Paragraph 14 and Annex A Paragraph 6) Persons who encroach on the area after the cut-off date are not entitled to compensation or any other form of resettlement assistance. (World Bank OP 4.12 Paragraph 16)		<ul style="list-style-type: none"> - Resettlement Action Plan describes what will be done to address the direct social and economic impacts related to involuntary taking of land or land acquisition (LARRIP (2007)). - Cut-off Date is the date of start of the census of affected families within the project boundaries. Persons not covered at the time of census-taking will not be eligible for claims of compensation entitlements (LARRIP (2007)). - The RAP includes among others, census and socio-economic survey results, and eligibility criteria for PAPs, including cut-off date if necessary (Department of Finance, Guidelines on Resettlement and Compensation, 2001). 	No significant gaps.	<ul style="list-style-type: none"> - The cut-off date was declared officially, then the Mayor of Cagayan de Oro informed the barangays in writing of the cut-off date and commencement of the census. - Census of affected families within the project boundaries commenced on the cut-off date to establish eligibility initially as early as possible to exclude the influx of informal settlers in the project area after the cut-off date.

#	JICA Guidelines	World Bank OP 4.12	GOP Laws/ Policies	Gaps between Guidelines and GOP Laws / Policies	Project Policy to Fill-In the Gaps
11	<p>Criteria for Eligibility. Displaced person may be classified in one of the following groups:</p> <ul style="list-style-type: none"> those who have formal legal rights to land (including customary and traditional rights recognized under the laws); those who do not have formal legal rights to land at the time of the census but have a claim to such land or assets - provided that such claims are recognized under the law those who have no recognizable legal right or claim to the land they are occupying. <p>(World Bank OP 4.12 Paragraph 15)</p>		<ul style="list-style-type: none"> - Landowners/users include <ul style="list-style-type: none"> - Legal owners (agricultural, residential, commercial, and institutional) who have full title, tax declaration, or who covered by customary law, or other acceptable proof of ownership. - Users of arable lands who have no land title or tax declaration - Agricultural lessees - PAF's with Structures include: <ul style="list-style-type: none"> - Owners of structures who have full title, tax declaration, or who are covered by customary law, or other acceptable proof of ownership. - Owners of structures including shanty dwellers, who have no land title, or tax declaration, or other acceptable proof of ownership. - Renters <p>(LARRIP (2007), Chapter III)</p> <ul style="list-style-type: none"> - To qualify for socialized housing programs, a beneficiary must not be a professional squatter or a member of squatting syndicates (RA 7279 Urban Development and Housing Act of 1992, Section 16). 	Persons previously awarded with housing units by the government but sold, leased, lent, or gave them away and settle informally in the same or other areas, are ineligible for compensation.	Measures are being taken to prevent ineligible persons from obtaining compensation and duplication of benefits by verifying and cross-checking with the available documents and lists of beneficiaries from the local government, other national government agencies (NGAs), and non-government organizations (NGOs) handling resettlement.
12	<p>Preference should be given to land-based resettlement strategies for displaced persons whose livelihoods are land-based. (World Bank OP 4.12 Paragraph 11)</p>		<ul style="list-style-type: none"> - Compensation for land may be land swapping or "land for land" will be provided (LARRIP (2007), Chapter III). - Livelihood Component - Socialized housing and resettlement projects shall be located near areas where employment opportunities are accessible (RA 7279 Urban Development and Housing Act of 1992, Article 5, Section 22). 	No significant gaps.	Resettlement strategies for PAPs that are land-based with top priority and strategies will be employed.

#	JICA Guidelines	World Bank OP 4.12	GOP Laws/ Policies	Gaps between Guidelines and GOP Laws / Policies	Project Policy to Fill-In the Gaps
13	Provide support during the transition period (after displacement to a reasonable estimate of time needed to restore livelihood and standards of living). (World Bank OP 4.12 Paragraph 6 c i)		Other types of entitlements or assistance include for loss of business/income, inconvenience allowance, rehabilitation assistance, and transportation allowance among others (LARRIP (2007), Chapter III).	Provision for transitional assistance or support for losses and disturbance is present however, in recent resettlement cases, the amount of assistance may vary.	The Project is in coordination with the local government and other government agencies in determining not only transitional but long-term assistance in view of restoring livelihood and standards of living.
14	Particular attention is paid to the needs of vulnerable groups among those displaced, especially those below the poverty line, the landless, the elderly, women and children, indigenous peoples, ethnic minorities, etc. (World Bank OP 4.12 Paragraph 8)		<ul style="list-style-type: none"> - The State shall develop housing programs for women that are localized, simple, accessible, and secure, with electricity, water, and viable employment. Women will be consulted and involved in community planning and development especially on matters related to land use, zoning, and relocation (RA No. 9710 The Magna Carta of Women, (2009), Section 21). - No ICCs/IPs will be relocated without their free and prior informed consent or through any means except eminent domain or where relocation is considered necessary as an exceptional measure. If return to their ancestral domain is not possible, ICCs/IPs shall : <ul style="list-style-type: none"> - be provided with lands of quality and legal status at least equal to that of the land previously occupied, - Enjoy security of tenure over lands where they have been resettled, - be provided basic services and livelihood to ensure that their needs are adequately addressed. 	Assistance must be more concrete and particularly designed to suit each vulnerable group.	The Project is in coordination with the local government and other government agencies in determining suitable assistance directed for each group, to make them less vulnerable to adverse impacts brought about by involuntary resettlement.

#	JICA Guidelines	World Bank OP 4.12	GOP Laws/ Policies	Gaps between Guidelines and GOP Laws / Policies	Project Policy to Fill-In the Gaps
			<p>(RA No. 8371 The Indigenous Peoples' Rights Act of 1997, Chapter Section 7 c and d)</p> <ul style="list-style-type: none"> - Two of the eligibility criteria for socialized housing programs are: <ul style="list-style-type: none"> - beneficiary must be an underprivileged and homeless citizen; - must not own any real property whether in the urban or rural areas <p>Underprivileged and homeless citizens are individuals or families residing in urban and urbanizable areas whose combined household income fall within the poverty threshold as defined by the National Economic and Development Authority including those who live in makeshift dwelling units and do not enjoy security of tenure (Republic Act 7279 Urban Development and Housing Act of 1992, Section 3 and 16)</p> <ul style="list-style-type: none"> - Women, children, and elderly who are among the PAPs shall likewise be consulted and mobilized to participate in consultation meetings and discuss with them the socio-cultural implication of the Resettlement Action Plan (Land Acquisition, Resettlement, Rehabilitation and Indigenous Peoples' Policy, 3rd edition (2007), Chapter V). 		

#	JICA Guidelines	World Bank OP 4.12	GOP Laws/ Policies	Gaps between Guidelines and GOP Laws / Policies	Project Policy to Fill-In the Gaps
15	For projects entailing land acquisition and involuntary resettlement, an abbreviated resettlement plan may be prepared where impacts on the entire displaced population are minor, or fewer than 200 people are displaced. (World Bank OP 4.12 Paragraph 25)		<ul style="list-style-type: none"> - The Abbreviated Resettlement Action Plan (ARAP) is acceptable: <ul style="list-style-type: none"> - if fewer than 200 people are affected - if more than 200 people are affected as long as all land acquisition is minor (10 percent or less of all holdings is taken) and no physical relocation is required (LARRIP (2007))	No significant gaps.	A full Resettlement Action Plan (RAP) is prepared for this Project.

Source: JICA Survey Team

CHAPTER 6 ELIGIBILITY FOR COMPENSATION AND OTHER ENTITLEMENTS

6.1 Key Principles of the Policy on Land Acquisition and Compensation

The Government of the Philippines will adopt Project Policy on Involuntary Resettlement for the Flood Risk Management Project for Cagayan de Oro River. Specifically, the Project Policy has been developed because of certain gaps between the existing national laws and regulations and JICA's policy. The Project Policy endeavors to fill-in any gaps in what local laws and regulations cannot provide to help ensure that PAPs are able to rehabilitate themselves to at least their pre-project condition. This section discusses the principles of the Project Policy and entitlements of the PAPs based on the type and degree of their losses.

6.1.1 Resettlement

- The resettlement plans will be designed in accordance with the JICA Guidelines and Government of the Philippines laws on resettlement, specifically the Land Acquisition, Resettlement, Rehabilitation and Indigenous People's Policy (LARRIP) of DPWH.
- Land acquisition and involuntary resettlement will be avoided where feasible, or minimized, by identifying possible alternative project designs that have the least adverse impact on the communities in the project area.
- Where a host community is affected by the development of a resettlement site in that community, the host community shall be involved in any resettlement planning and decision-making. All attempts shall be made to minimize the adverse impacts of resettlement upon host communities.
- The resettlement plan must consider the needs of those most vulnerable to the adverse impacts of resettlement (including the poor, those without legal title to land, ethnic minorities, women, children, elderly and disabled) and ensure they are considered in resettlement planning and mitigation measures identified. Assistance should be provided to help them improve their socio-economic status.
- Adequate budgetary support will be fully committed and made available to cover the costs of land acquisition (including compensation and income restoration measures) within the agreed implementation period. The funds for all resettlement activities will come from the Government.

6.1.2 Compensation and Land Acquisition

- Where displacement of households is unavoidable, all PAPs owing assets, livelihoods or resources will be fully compensated and assisted so that they can improve, or at least restore, their former economic and social conditions.
- Compensation and rehabilitation support will be provided to any PAP, that is, any person or household or business which on account of project implementation would have his:
 - Standard of living adversely affected;
 - Right, title or interest in any house, interest in, or right to use, any land (including premises, agricultural and grazing land, commercial properties, tenancy, or right

- in annual or perennial crops and trees or any other fixed or moveable assets, acquired or possessed, temporarily or permanently;
 - Income earning opportunities, business, occupation, work or place of residence or habitat adversely affected temporarily or permanently; or
 - Social and cultural activities and relationships affected or any other losses that may be identified during the process of resettlement planning.
- All affected people will be eligible for compensation and rehabilitation assistance, irrespective of tenure status, social or economic standing and any such factors that may discriminate against achievement of the objectives outlined above. Lack of legal rights to the assets lost or adversely affected tenure status and social or economic status will not bar the PAPs from entitlements to such compensation and rehabilitation measures or resettlement objectives. All PAPs residing, working, doing business and/or cultivating land within the project impacted areas as of the date of the latest census and inventory of lost assets, are entitled to compensation for their lost assets (land and/or non-land assets), at replacement cost, if available and restoration of incomes and businesses, and will be provided with rehabilitation measures sufficient to assist them to improve or at least maintain their pre-project living standards, income-earning capacity and production levels.
 - PAPs that lose only part of their physical assets will not be left with a portion that will be inadequate to sustain their current standard of living. The minimum size of remaining land and structures will be agreed during the resettlement planning process.
 - People temporarily affected are to be considered as PAPs and resettlement plans address the issue of temporary acquisition.
 - Payment for land and/or non-land assets will be based on the principle of replacement cost.
 - Compensation for PAPs dependent on agricultural activities will be land-based wherever possible. Land-based strategies may include provision of replacement land, ensuring greater security of tenure, and upgrading livelihoods of people without legal land titles. If replacement land is not available, other strategies may be built around opportunities for re-training, skill development, wage employment, or self-employment, including access to credit. Solely cash compensation will be avoided as an option if possible, as this may not address losses that are not easily quantified, such as access to services and traditional rights, and may eventually lead to those populations being worse off than without the project.
 - Replacement lands, if the preferred option of PAPs, should be within the immediate vicinity of the affected lands wherever possible and be of comparable productive capacity and potential. As a second option, sites should be identified that minimize the social disruption of those affected; such lands should also have access to services and facilities similar to those available in the lands affected.
 - Resettlement assistance will be provided not only for immediate loss, but also for a transition period needed to restore livelihood and standards of living of PAPs. Such support could take the form of short-term jobs, subsistence support, salary maintenance, or similar arrangements.
 - Displacement does not occur before provision of compensation and of other assistance required for relocation. Sufficient civic infrastructure must be provided in

resettlement site prior to relocation. Acquisition of assets, payment of compensation, and the resettlement and start of the livelihood rehabilitation activities of PAPs, will be completed prior to any construction activities, except when a court of law orders so in expropriation cases (the livelihood restoration measures must also be in place but not necessarily completed prior to construction activities, as these may be ongoing activities.)

6.1.3 Disclosure, Community Participation and Monitoring

- The resettlement plan, and its summary and brochure will be translated into local language of Visayas and disclosed for the reference of PAPs as well as other interest groups.
- PAPs will be involved in the process of developing and implementing resettlement plans.
- PAPs and their communities will be consulted about the project, the rights and options available to them, and proposed mitigation measures for adverse effects, and to the extent possible be involved in the decisions that are made concerning their resettlement.
- Organization and administrative arrangements for the effective preparation and implementation of the resettlement plan will be identified and in place prior to the commencement of the process; this will include the provision of adequate human resources for supervision, consultation, and monitoring of land acquisition and rehabilitation activities.
- Appropriate reporting (including auditing and redress functions), monitoring and evaluation mechanisms, will be identified and set in place as part of the resettlement management system. An external monitoring group will be hired by the project and will evaluate the resettlement process and final outcome. Such groups may include qualified NGOs, research institutions or universities.

6.2 Principle of Replacement Cost

All compensation for land and non-land assets owned by households/shop owners who meet the cut-off-date will be based on the principle of replacement cost. Replacement cost is the amount calculated before displacement which is needed to replace an affected asset without depreciation and without deduction for taxes and/or costs of transaction as follows. The definition of replacement cost is summarized and previously presented in Table 5.1.1.

- Productive land (agricultural, aquaculture, garden and forest) based on actual current market prices that reflect recent land sales in the area, and in the absence of such recent sales, based on recent sales in comparable locations with comparable attributes, fees and taxes or in the absence of such sales, based on productive value;
- Residential land based on actual current market prices that reflect recent land sales, and in the absence of such recent land sales, based on prices of recent sales in comparable locations with comparable attributes; fees and taxes.
- There are existing local government regulations for compensation calculations for building, crops and trees. These regulations will be used where ever a corroborative verification is needed calculating a replacement cost. The corroborative verification will be obtained on building from the assessment office and crops and trees from the

agricultural office of respective local government unit.

- Houses and other related structures based on actual current market prices of affected materials;
- Annual crops equivalent to current market value of crops at the time of compensation;
- For perennial crops, cash compensation at replacement cost that should be in line with local government regulations, if available, is equivalent to current market value given the type and age at the time of compensation.
- For timber trees, cash compensation at replacement cost that should be in line with local government regulations, if available, will be equivalent to current market value for each type, age and relevant productive value at the time of compensation based on the diameter at breast height of each tree.

Aside from the principles mentioned in the above, the costs of lands of the Project in terms of a replacement cost are found to be under peculiar circumstances, which caused to the values of the lands affected by the heavy flooding of TS Sendong occurred along the Cagayan de Oro River including the Project site. The peculiar circumstances on values of lands of the Project site are that: (a) the lands along the river heavily affected by TS Sendong are assessed as no commercial values after TS Sendong hit according to local branches of the government banks, (b) the latest market values of lands available are the market values of the Assessment Department of the Cagayan de Oro City in 2008 before TS Sendong, (c) the comparison of the market values of the city in 2009 and the zonal values of the BIR in 2005 shows the zonal values found approximately equivalent or higher than the market values. Considering the above circumstances peculiarly found in the project site, the zonal values were adopted to estimate the cost of lands affected by the Project. More details are provided in Section 13.2.2.

6.3 Cut-Off-Date of Eligibility

The cut-off-date of eligibility is set to identify PAPs of the Project. In the Project, the cut-off date for PAPs was the commencement date of the population census; July 18, 2013. This date has been disclosed by DPWH to each affected barangay through the city government and the barangays have disclosed to their populations. The establishment of the eligibility cut-off date is intended to prevent the influx of ineligible non-residents who might take advantage of Project entitlements.

CHAPTER 7 COMPENSATION AND ASSISTANCE MEASURES

7.1. Compensation for Loss of Assets

7.1.1 Compensation for Residential, Commercial, Industrial, Institutional, Agricultural Land Loss

Eligible PAPs will be compensated based on replacement cost. The computation of the replacement cost of land shall be pursuant to RA 8974 (an Act to Facilitate the Acquisition of Right-of-Way, Site or Location for National Government Infrastructure Projects and for Other Purposes). Compensation will be offered but not exceeding the current market value.

PAPs may also opt for “land for land” exchange, where a new parcel of land equivalent in market value, features and productivity at a location acceptable under zoning laws and to the affected person. When the affected holding has a higher value than the relocation plot, cash compensation will cover the difference in value.

Holders of a free patent homestead under Commonwealth Act (CA) 141 or the Public Lands Act will be compensated for improvements only at market value. It is noted that CA 141 governed the disposition of lands of the public domain, particularly the homestead and the alienable and disposable lands of the public domain for agricultural purposes contingent upon actual cultivation and residence.

Holders of Certificates of Land Ownership Award (CLOA) under the Comprehensive Agrarian Reform Act (CARA) shall be compensated pursuant to RA 8974. It is noted that CLOA is an evidence to show that tenants, farmers, and regular farmworkers have the right to own directly the land they cultivate under CARA as its beneficiary.

7.1.2 Compensation for Structures

Compensation in cash for the affected portion of the structure, including the cost of restoring the remaining structure at full replacement cost with no deduction for salvaged building materials by DPWH, as determined by the concerned Appraisal Committee or RIC.

7.1.3 Compensation for Improvements

For improvements such as fences, barges, wells, outdoor toilets, animal-pens, etc. to be affected by the project, full replacement cost will be based on the current or prevailing market material, labor, and transportation costs.

7.1.4 Compensation for Crops, Trees and Perennials

Cash compensation will be given for perennials of commercial value as determined by the DENR or the concerned Appraisal Committee or RIC. PAPs will be given sufficient time to harvest crops on the subject land. Damaged crops are to be compensated at market value at the time of taking, based on the cost of production per hectare, in proportion to the affected area. Entitlement for fruit-bearing trees will be based on the assessment of the LGU assessors where the project is located or current market price surveyed and publicized by DENR, LGU, or Department of Agriculture.

7.1.5 Temporal Use of Private Land

Vacant parcels of land along the banks of Cagayan de Oro River that will be used by DPWH for the temporary storage of materials, work sites, etc. will be compensated by rental or lease.

7.2 Other Types of Assistance or Entitlements

7.2.1 Disturbance Compensation

For severely affected agricultural land, the lessees are entitled to compensation equivalent to five times the average of the gross harvest for the past 3 years but not less than PhP15,000.

7.2.2 Income Loss

For loss of business/income, entitlement is income rehabilitation assistance not to exceed PhP15,000 for severely affected structures or based on PAPs' tax record for the period corresponding to the stoppage of business activities.

7.2.3 Inconvenience Allowance

The amount of PhP10,000 as a livelihood assistance will be given to the PAPs identified as affected structure owners and renters.

7.2.4 Rental Subsidy

Subsidy will be provided to renters affected by the Project equivalent to a maximum of 3 months of their rental fees but not to exceed PhP15,000.

7.2.5 Transportation Assistance

PAPs for relocation are entitled to free transportation. Informal settlers in urban centers who will move back to their place of origin in the province are also entitled to transportation assistance.

7.2.6 Livelihood Rehabilitation Assistance

DPWH will monitor the living standards of affected persons or households before, during, and after resettlement. Livelihood and skills training programs in coordination with concerned institutions will be implemented for project affected people. Refer to Section 7.3.

7.3 Assistance Measures

Assistance measures for PAFs, particularly livelihood restoration assistance, are an important component of resettlement. These assistance measures, which are expected to lead to an improved standard of living of PAPs, were sought and are presented in this section. The results of the socioeconomic survey, particularly resettlement assistance needs, were examined to come up with assistance measures in the following sections.

7.3.1 Livelihood Restoration Assistance

Key Findings of Socioeconomic Survey on Livelihood Restoration Assistance

According to the results of the socioeconomic survey, particularly on preferred skills of employable household members provided in Table 4.3.32 and preferred business of employable household members provided in Table 4.3.33, key findings related to livelihood restoration assistance are provided as follows.

- Employable household members addressed to prefer the following top eight service-

oriented skills training programs according to Table 4.3.32 and could take a training program from the “Option 1 Program” provided in Table 7.1.1. It is noted that other than the following eight programs could also be provided by the assisting agencies, according to the needs.

- Commercial cooking,
- Welding,
- Entrepreneurship / marketing, sales,
- Driving,
- Electrical,
- Auto body repairing,
- Auto servicing,
- Computer programming.

- Employable household members interested in the following top nine business development assistance programs according to Table 4.3.33 and could take an assistance program from the “Option 2 Program” provided in Table 7.1.1. It is noted that other than the following nine programs could also be provided by the assisting agencies, according to the needs.

- Sari-sari store,
- Commercial cooking,
- Entrepreneurship / marketing, sales,
- Computer / internet,
- Livestock raising,
- Tailoring,
- Beauty care,
- Agricultural crops,
- Auto servicing.

- Unemployed employable household members could avail of employment assistance through the Option 3 Program” provided in Table 7.1.1.
- For those who addressed as “no skills”, the assistance needs assessment is conducted by the assisting agencies engaged in the implementation of RAP. With results of the assessment, the assisting agencies provide consultation to determine appropriate assistance needs and choose assistance programs among option programs provided in Table 7.1.1.

Assistance Measures for Livelihood Restoration

According to the key findings, assistance measures for restoring livelihood of PAPs are summarized in Table 7.1.1. It is noted that these assistance measures are provided by the LGU through the assisting agencies engaged in the implementation of RAP. The proponent agency of DPWH regularly monitors status of conducting assistance measures for livelihood restoration and its results through its internal and external monitoring in cooperation with the LGU and its assisting agencies. Further, DPWH also discusses and

takes necessary measures with the LGU and its assisting agencies when concerned matters on assistance measures are arisen.

Table 7.3.1 Assistance Measures for Livelihood Restoration

Assistance Programs		Assisting Agencies & Programs	
		Agencies in Charge	Programs
[Option 1 Program] Service Oriented Skills Training Program (Basic and Upgrading)		TESDA-10	Regular Training Program
		DSWD-10	Sustainable Livelihood Program
[Option 2 Program] Business Development Assistance Program (Start-up and Existing Enterprises)	Non-Financial Assistance (Entrepreneurial Skills Development)	DTI-10	Regular Training Program
		DSWD-10	Sustainable Livelihood Program
	Financial Assistance	DSWD-10	Sustainable Livelihood Program
[Option 3 Program] Employment Assistance		PESO (DOLE-10)	Skills Profiling and Job Placement

TESDA = Technical Education and Skills Development Authority

DSWD = Department of Social Welfare and Development

PESO = Public Employment Service Office

DOLE = Department of Labor and Employment

DTI = Department of Trade and Industry

Source: JICA Survey Team

Table 7.3.2 Overview of Livelihood Programs of Concerned Agencies

Agencies in Charge	Program	Overview of Program
TESDA-10	Regular Training Program	[Outline]The program provides regular skills training courses for highly demanded skills in local markets. [Program] Skills training courses targeting to acquire the National Certification (NC).
		• Food Related Courses – Food and Beverage Services, Bread and Pastry, Food Processing, Commercial Cooking, Bartending
		• Construction Related Courses – Carpentry, Construction Painting, Masonry, Plumbing, Welding, AutoCADD
		• Household and Business Related Courses – Dressmaking, Household Services, Housekeeping, Bookkeeping,, Front Office
		• Electrical and Mechanical Related Courses - Electrical and Installation Maintenance, Automobile Servicing
		[Type of Program] Regular training program [Duration] Approximately 2 Weeks ~ 9 Weeks, depending on a course to take [Budget]General Budge of TESDA-10

Agencies in Charge	Program	Overview of Program
DSWD-10	Sustainable Livelihood Program	<p>[Outline]The program is a capability building program of DSWD and local government units which aims to improve the socioeconomic capacity of the poor through a capacity building that will develop the entrepreneurial and technical skills of the poor households identified by enabling them to manage sustainable microenterprises and linking them to locally-available jobs in order to enhance their access to basic social service and their standard of living.</p> <p>[Program] The program has two tracks: (Track A) Microenterprise Development Track and (Track B) Employable Individuals Employment Facilitation Track. Track A is composed of the following components: (a) social preparation, (b) capacity building for business management and productivity and (c) cash assistance for microenterprise.</p> <p>Track B is composed of the following components: (a) occupational guidance and consulting, (b) technical skills training, (c) job referrals and placement service.</p> <p>[Type of Program] Customized program according to needs and levels of participants identified through assistance needs assessments, the number of participants</p> <p>[Duration] Varied depending on customization of the program</p> <p>[Budget] General Budget of DSWD-10</p>
PESO (DOLE-10)	Skills Profiling and Job Placement	<p>[Outline] The service provides assessment of manpower requirements for local establishments to enable better access to locally available jobs and, thereafter, occupational counseling and job referrals through employment orientation counseling and job fairs for persons seeking a job.</p> <p>[Program]The program provides the following public employment services for the unemployed: (a) provision of labor market information, (b) referral and placement service to direct pre-screened jobseekers to employers with vacancies matching their qualifications, (c) career guidance and employment coaching to assist people intellectually and psychologically to make decisions about their career and act to realize it and (d) other programs of DOLE such as community based employment program to provide temporary or immediate employment to skilled, semi-skilled, and low-skilled workers.</p> <p>[Type of Program] Regular service program</p> <p>[Duration] Counter service available anytime during an office hour of PESO Office</p> <p>[Budget] General Budget of PESO (DOLE-10)</p>

Agencies in Charge	Program	Overview of Program
DTI-10	Regular Training Program	<p>[Outline] The one of the training programs is SME Roving Academy to provide generic skills and business-oriented learning trainings for developing micro, small and medium enterprises to become competitive, in order to assist in both start-up and existing businesses.[Program] The program provides a management training program for would-be-entrepreneurs and micro, small and medium enterprise owners through continuous learning program to help participants better set up and step up their operations and improve competitiveness, thereby facilitating easier access to local markets by cooperating with local partners such as LGUs, chambers, trade and industry associations, financial institutions and academes.</p> <p>The program provides participants the following training modules: (a) start-up and capability building (stage 1), (b) market awareness (stage 2), market redness (stage 3) and export awareness (stage 4).</p> <p>[Type of Program] Customized program according to needs and levels of participants identified through assistance needs assessments, the number of participants</p> <p>[Duration] Varied depending on customization of the program</p> <p>[Budget] General Budget of DTI-10</p>

Source: JICA Survey Team

7.3.2 Other Assistance

Psychosocial Assistance

Recognizing the disorientation and sense of loss stemming from being relocated, psychosocial support services need to be provided to relocatees. These services are provided through DSWD-10, Department of Health (DOH) 10 and Department of Education (DepEd) 10. Further, Mental Health and Psychosocial Support Service are also provided through local schools in Cagayan de Oro City such as Xavier University, Liceo de Cagayan University and Mindanao State University (Cagayan de Oro College). These services shall be arranged to be provided for relocatees at resettlement site as community-basis assistance. In relation to livelihood restoration assistance, it is, specifically, noted that provision of livelihood restoration assistance needs to be provided to vulnerable groups of PAPs to ensure that vulnerable groups are given opportunities in skills training and in possible job placement.

Assistance for Vulnerable Groups

For vulnerable groups of PAPs, the provision of specialized programs needs to be implemented in coordination with DSWD-10 and City Social Welfare and Development Office (CSWDO). For women in crisis situations, Services for Women in Especially Difficult Circumstances provide community-based and residential-care services. Additionally, women and persons with disabilities (PWDs) are targeted for specific skills training, possible job placement and capital assistance to mitigate possible loss of livelihood stemming from relocation. Another DSWD Program, Neighborhood Support Services for Elder Persons enhances care-giving skills for the elderly. The program engages the community and neighborhood to take effective steps in the provision of care for elderly persons needing assistance. For persons with disabilities, Sheltered Workshop for Persons with Disabilities is the DSWD community-based facility that provides

livelihood training and productive employment to PWDs. The facility helps PWDs to earn income through the production and selling of goods or services. Through effective coordination between DPWH and the concerned government agencies,, these facilities could be made available to vulnerable groups being relocated.

7.3.3 Arrangement and Implementation of Assistance Measures

The livelihood restoration and other assistance are provided to PAPs by DPWH and/or Cagayan de Oro City through concerned government agencies by entering into the Memorandum of Agreement.

7.4 Entitlement Matrix

Type of loss incurred because of Project implementation, application, eligibility, and entitlements are summarized in Table 7.4.1 below.

Table 7.4.1 Entitlement Matrix

Type of Loss	Entitled Person	Compensation/Entitlements	Responsible Organization
LAND (Classified as Agricultural, Residential, Commercial, or Institutional)	PAPs who are: <ul style="list-style-type: none"> with Transfer Certificate of Title (TCT) or Tax Declaration (if it can be legalized to full title) covered by customary law holders of Certificates of Land Ownership Award (CLOA) granted under Comprehensive Agrarian Reform Act 	<p>PAPs will be entitled to:</p> <ul style="list-style-type: none"> Cash compensation for the loss of land at 100% replacement cost. The replacement cost will be calculated based on zonal value of 2005, considering that the zonal value is equivalent to or higher than the market value of 2008. <p>In case of agriculture activities:</p> <ul style="list-style-type: none"> If land is available, “land for land” compensation will be provided, a new parcel of land of equivalent productivity in a nearby area or at a location acceptable to the PAPs. If land is not available, another option is instead of cash compensation, land for land will be provided in terms of a new parcel of land of equivalent productivity in a nearby area or at a location acceptable to the PAPs. <p>Tax payment is a condition to be entitled:</p> <ul style="list-style-type: none"> Land tax for the first quarter for the replacement land in the host area, but PAPs will still be liable for land tax in arrears due on the property taken in case of taxes of previous years not having paid yet. Cash compensation for damaged crops and cost of production at market value at the time of taking. If agricultural land is severely affected the lessees are entitled to disturbance compensation equivalent to 5 times average of gross harvest for the past 3 years, but not less than PhP15,000. Rehabilitation assistance in the form of skills training equivalent to PhP15,000 per family, if the present means of livelihood is no longer viable and the affected family will have to engage in a new income activity. 	<ul style="list-style-type: none"> UPMO-FCMC (Flood Management Cluster) of DPWH
	<ul style="list-style-type: none"> PAPs without TCT holders of free or homestead patents and CLOAs under CA 141 or the Public Lands Act 	<ul style="list-style-type: none"> No compensation for land Compensation for land improvements only Cash compensation for damaged crops and cost of production at market value at the time of taking. Disturbance compensation equivalent to 5 times the average of the gross harvest for the 3 years but not less than PhP15,000 for agricultural lessors. 	<ul style="list-style-type: none"> UPMO-FCMC of DPWH
STRUCTURES (Residential, Commercial, Industrial/ Institutional)	<ul style="list-style-type: none"> Owners of structures with TCT or Tax Declaration 	<ul style="list-style-type: none"> Cash compensation for the entire structure at 100% replacement cost. Rental subsidy for the time between the submission of complete documents and the release of payment on land. 	<ul style="list-style-type: none"> UPMO-FCMC of DPWH
	<ul style="list-style-type: none"> Owners of structures without TCT or Tax Declaration (526 HH) 	<ul style="list-style-type: none"> Cash compensation for the entire structure at 100% replacement cost, or Housing Program by NHA / LGU through the Low Cost Housing or Socialized Housing Program. 	<ul style="list-style-type: none"> UPMO-FCMC of DPWH NHA

Type of Loss	Entitled Person	Compensation/Entitlements	Responsible Organization
		<ul style="list-style-type: none"> Inconvenience allowance or transportation allowance to those availing of the Housing Program by NHA / LGU. Rental subsidy for the time between the submission of complete documents and the release of payment for structure. Rehabilitation assistance in the form of livelihood and skills training, capital for small business for loss of economic opportunities. 	<ul style="list-style-type: none"> LGU of CDO DSWD TESDA
	Homeless and underprivileged (360 HH) <ul style="list-style-type: none"> Landless, occupants without permission (informal settlers) of lands, whose combined income falls within the poverty threshold set by NEDA Professional squatters and member of squatting syndicates are not included. Vulnerable groups: the poor, women, children, female-headed households, the elderly, the disabled (as spelled out under RA9719)	<ul style="list-style-type: none"> If qualified, may apply for housing program in LGU or NHA resettlement sites Inconvenience allowance Transportation assistance, to transfer to resettlement site or return to place of origin (province, “balik probinsya”) Rehabilitation assistance in the form of livelihood and skills training, capital for small business for loss of economic opportunities. 	<ul style="list-style-type: none"> UPMO-FCMC of DPWH NHA LGU of CDO DSWD TESDA
	<ul style="list-style-type: none"> Renters of the structure Temporary residents in Commercial Business Enterprises (CBEs) and Community Owned Structures (COSs) 	<ul style="list-style-type: none"> Rental subsidy equivalent to 3 months, maximum amount to be determined based city standards but not more than PhP 15,000 	<ul style="list-style-type: none"> UPMO-FCMC of DPWH
	<ul style="list-style-type: none"> Absentee owners of structures with or without TCT or Tax Declaration 	<ul style="list-style-type: none"> Cash compensation for the entire structure at 100% replacement cost 	<ul style="list-style-type: none"> UPMO-FCMC of DPWH
IMPROVEMENTS	<ul style="list-style-type: none"> Owners of improvements with or without TCT or Tax Declaration 	<ul style="list-style-type: none"> Cash compensation for the affected improvements at full replacement cost. 	<ul style="list-style-type: none"> UPMO-FCMC of DPWH
CROPS, TREES, PERENIALS	<ul style="list-style-type: none"> Owners/ Users of the resources 	<ul style="list-style-type: none"> Cash compensation for crops (not yet suitable for harvest), trees, and perennials at current market value as prescribed by the concerned LGU and DENR Compensation for perennials of commercial value as determined by DENR or the LGU Assessors Compensation for fruit-bearing tress as determined by DENR or the LGU Assessors where project is located Compensation for damaged crops, prorated to the affected area, at market value at time of taking 	<ul style="list-style-type: none"> UPMO-FCMC of DPWH
OTHER LOSS OR IMPACT NOT PREDICTED WHEN THE RAP IS PREPARED	<ul style="list-style-type: none"> PAPs or households affected by unanticipated impact identified during RAP implementation 	DPWH, in coordination with other concerned institutions will: <ul style="list-style-type: none"> Recognize and assess severity of the impact Negotiate with PAPs for adequate assistance and compensation of impact 	<ul style="list-style-type: none"> UPMO-FCMC of DPWH

Source: JICA Survey Team

CHAPTER 8 RESETTLEMENT SITE PLAN

8.1. Status of Resettlement Sites for TS Sendong-Affected Persons

8.1.1 Existing Resettlement Sites

As explained in Section 2.3.5, there are 21 existing resettlement sites at present which were developed by the LIAC, particularly the Cagayan de Oro City, the NHA and the non-governmental organizations, in order to provide housing units for persons who were affected by the massive flooding caused by TS Sendong. As of August 31, 2013, the total number of housing units to be constructed is 9,585, and 5,138 units (about 54%) have been completed. Out of the completed units, 4,097 units (about 80%) have been occupied. The status of the 21 existing resettlement sites is presented in Table 8.1.1 below.

Table 8.1.1 Existing Resettlement Sites (as of August 31, 2013)

Resettlement Site	Location (Barangay)	No of Planned Units	Completed	Occupied
Sites under Cagayan de Oro City (CDO)				
CDORSHIP II	Canitoan, CDO	526	415	356
CDORSHIP II - B	Canitoan, CDO	66	66	64
CDORSHIP III	Canitoan, CDO	1,060	1,060	1,041
Calaanan Mahogany	Canitoan, CDO	160	160	30
Calaanan III Extension	Canitoan, CDO	56	40	40
Indahag Relocation Site I	Indahag, CDO	434	434	426
Indahag Relocation Site II	Indahag, CDO	578	578	544
LGU-Berjaya-GK Village	Camaman-an, CDO	126	126	126
Canitoan Relocation Site	Canitoan, CDO	410	342	300
Mambuaya (ARDEP Coop)	Mambuaya, CDO	323	116	59
Pagatpat Relocation Site	Pagatpat, CDO	1,000	300	0
Calaanan III (Quarry)	Canitoan, CDO	300	0	0
Sub-Total		5,039	3,637	2,986
Sites under NHA				
NHA CDO Bayanihan Village I	Camaman-an, CDO	426	420	250
NHA CDO Bayanihan Village II	Camaman-an, CDO	188	0	0
Gusa Eco Village	Gusa, CDO	2,360	0	0
Sub-Total		2,974	420	250
Sites under Non-Profit Organizations				
NASSA & SAC-ACDO Caritas Village	Indahag, CDO	90	90	90
Paglaum Village	Indahag, CDO	65	48	37
Tabang Cagayan Village I	Lumbia, CDO	99	99	70
Tabang Cagayan Village II	Malanang, Opol	150	0	0
Divine Mercy Village	Patag, Opol	600	276	147
Xavier Eco Village	Lumbia, CDO	568	568	517
Sub-Total		1,572	1,081	861
Grand Total		9,585	5,138	4,097

Source: JICA Survey Team

8.1.2 Proposed Resettlement Sites

In addition to the 21 existing resettlement sites, there are 7 resettlement sites being proposed by the Cagayan de Oro City and the NHA, 3 of which are under the Cagayan de Oro City and 4 of which are under the NHA, respectively. The planned number of housing units of these proposed resettlement sites are 4,259. These resettlement sites are basically proposed to develop and provide housing units for affected persons of TS Sendong. It is noted, however, that, while the first priority of these 7 proposed resettlement sites is to provide housing units for persons affected by TS Sendong, these 7

proposed resettlement sites are also intended to possibly provide housing units for persons who are currently living in danger areas and for low-income families, according to the Cagayan de Oro City and the NHA.

Table 8.1.2 Proposed Resettlement Sites (as of August 31, 2013)

Resettlement Site	Location (Barangay)	No. of Planned Units
Sites under Cagayan de Oro City		
Balbal Relocation Site I	Balbal, CDO	500
Balbal Relocation Site Extension	Balbal, CDO	400
Calaanan Relocation Site II-B Extension	Canitoan, CDO	400
Sub-Total		1,300
Sites under NHA		
NHA Mambuaya Village I	Mambuaya, CDO	1,000
Somoso Property	Lumbia, CDO	1,200
Gador Property	Lumbia, CDO	500
Mabulay Property	Indahag, CDO	259
Sub-Total		2,959
Grand Total		4,259

Source: JICA Survey Team

8.1.3 Status of Provision of Housing Units

Applications, screening and awarding processes of the TS Sendong-affected persons for resettlement sites are still on-going at present, and housing units in resettlement sites are still being given time to time, according to the progress of the construction of housing units, as shown in Table 8.1.1.

8.2 Requirements of the Project

8.2.1 PAPs Qualified for Resettlement Sites

As shown in Table 2.1.1, the total number of affected households is 1087 and composed of: (a) formal settlers (201 households) and informal settlers (886 households). Of the informal settlers, the number of informal settlers who are qualified for housing units in resettlement sites was estimated based on the qualifications of beneficiary stated in the City Ordinance No. 9888-2005 (Comprehensive Socialized Housing Program for the Underprivileged and Homeless Citizens) made in accordance with provisions of RA 7279 (Urban Development and Housing Act). One of qualifications of beneficiary is that an applicant must be underprivileged and homeless citizens, which is referred to the beneficiaries of RA 7279 and to individuals or families residing in urban and urbanized areas whose income or combined household income falls below Php 10,000 and who do not own housing units. The number of qualified informal settlers is estimated at 526. In accordance with this figure, the candidate resettlement sites for PAPs were sought.

8.2.2 Possible Options for PAPs Not Qualified for Resettlement Sites

The said qualified informal settlers of PAPs for resettlement sites (526 households) are about 60% of the total number of informal settlers (886 households) affected by the Project .

The remaining informal settlers (360 households) who are not qualified for resettlement sites may need to seek for assistance of the Project in coordination of the NHA to avail of the low-income housing programs such as the low-cost housing programs and the community mortgage program intended for the low-income households. Further, the

Cagayan de Oro City is in the process of coming up with the comprehensive housing and urban development master plan and intends to provide low-income housing programs, which may also be sought for assistance of the Project to avail of housing units for the remaining informal settlers affected by the Project, in coordination with the Cagayan de Oro City. The Cagayan de Oro City is availed of the national government housing financial schemes for local housing programs through the NHA, the Home Guaranty Corporation, the Home Development Mutual Fund, the National Home Mortgage Finance Corporation, the Development Bank of the Philippines, the Land Bank of the Philippines and the Philippine National Bank. Furthermore, for the remaining informal settlers who do not own lands, but own structures and/or improvements, they are entitled to be compensated only for the structure and/or improvements that they own and may, therefore, seek for an option for self-relocation.

It is noted that, among PAPs, formal settlers of 201 households are basically just compensated for loss of land, structures or improvements by the Project and seek for self-relocation.

Of formal settlers and informal settlers, those who are entitled to be compensated for structures/improvements and/or lands and yet who seek for an option for self-relocation, they would be assured compensation for structures and/or lands at just about replacement cost, due to structures to be assessed by replacement cost and lands to be assessed by zonal values in the Cagayan de Oro City found either equivalent or higher than market values.

Although decrease in value of lands after TS Sendong is observed, it is recommended that compensation for land by the Project is recommended to be assessed by zonal value, as stated in Section 13.2.2.

For those who wish to choose self-relocation, appropriate compensation for structures and/or lands shall be provided for those who own structures and/or lands. However, for those who do not own structures and/or land and wish to choose self-relocation, housing programs of the city or NHA may be available if qualifications are met, as stated in Section 8.2.2.

8.3 Candidates Resettlement Sites for the Project

8.3.1 Candidate Resettlement Sites

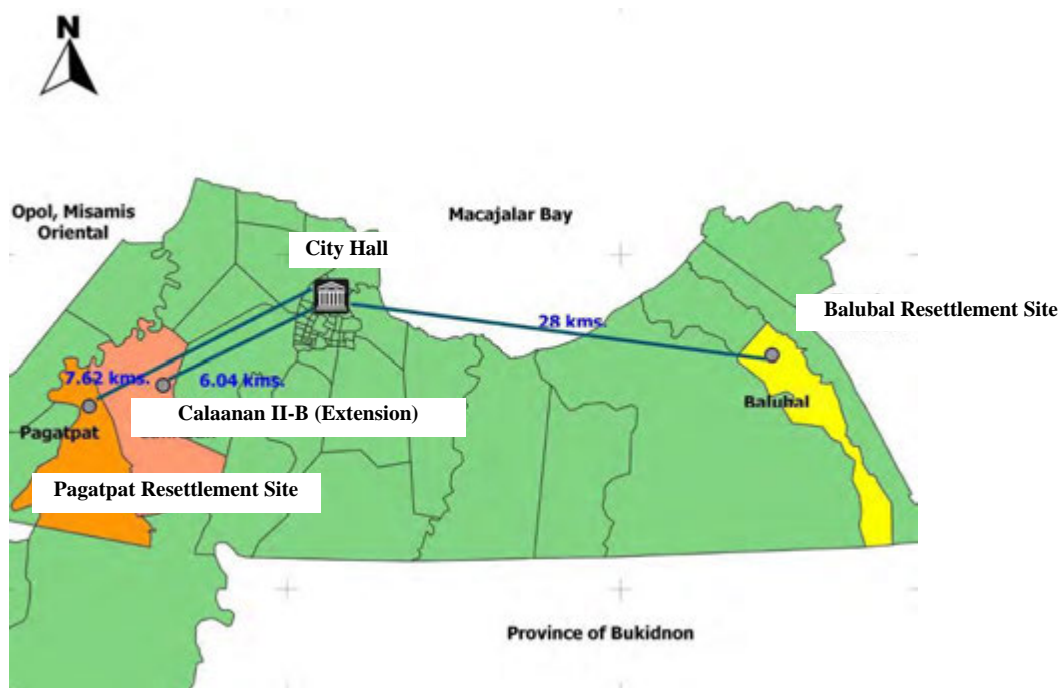
The first priority of resettlement sites of the Cagayan de Oro City and the NHA is to provide housing units to the TS Sendong-affected persons, and applications, screening and awarding processes are still on-going at present as mentioned in the previous section. Under the circumstances, the possible candidate resettlement sites for PAPs at present were sought and, 3 resettlement sites under the Cagayan de Oro City and located within the city such as Balubal Resettlement Site (Barangay Balubal), Calaanan II-B (Barangay Canitoan) and Pagatpat Resettlement Site (Barangay Pagatpat) were given as candidate sites at present in discussion and consultation with concerned parties, considering the estimated number of eligible PAPs for resettlement sites and the planned schedule of relocation and resettlement of the Project.

The total capacity of the 3 candidate resettlement sites shown in Table 8.3.1 can accommodate the estimated number of eligible PAPs for resettlement sites (526 households). The overview of candidate resettlement sites at present is provided in Table 8.3.1, and its location map is shown in Figure 8.3.1.

Table 8.3.1 Status of Possible Candidate Resettlement Sites

	Balubal Resettlement Site	Calaanan II-B (Extension)	Pagatpat Resettlement Site
Location	Barangay Balubal Cagayan de Oro City	Barangay Canitoan Cagayan de Oro City	Barangay Pagatpat Cagayan de Oro City
Distance from City Hall	About 28.0 km	About 6.0 km	About 7.6 km
Travel Time from City Hall by Car	About 1 hour	About 30 min	About 45 min
Land Ownership	Cagayan de Oro City	Cagayan de Oro City	Cagayan de Oro City
Type of Development	Newly Developed Site	Extension of Existing Site	Newly Developed Site
Stage of Development	Under Development	Surveying and Planning	Almost Completed
Area (ha)	6.70	4.00	16.00
Proponent	Cagayan de Oro City	Cagayan de Oro City	Cagayan de Oro City
Planned No. of Units	567	300 ~ 400	1,000
No. of Occupied Units	No Units Constructed Yet-	No Units Constructed Yet	Vacant at Present
Type of Hosing	Single Detached Housing	Duplex Housing	Duplex Housing
Inner Road	Site Grading Work On-Going	Subdivision Layout under Preparation	Road Filling Work Scheduled & Waiting for Mayor's Approval
Water Supply	Source Considering Water District, Barangay Water Supply, National Irrigation Administration	Under Initial Planning Stage at Present	Already Requested to Local Water District to Install Pipelines
Drainage	Open Line Canal Already Designed	Under Initial Planning Stage at Present	Open Line Canal Designed Waiting for Fund from Office of Civil Defense
Sewerage	Individual Septic Tank for Each Unit Designed	Under Initial Planning Stage at Present	Already Constructed for Each Unit
Power Supply	Power Layout to be Done by Local Power Company	Under Initial Planning Stage at Present	Power Layout Being Planned by Local Power Company
Community Facilities (School, Multi-Purpose Hall, Livelihood Center, Health Center, Chapel, Wet Market, Transport Terminal, Day Care Center)	The site is at the stage of land development, so community facilities, whose lots are allocated in site development plan, are still under planning.	The site is at the stage of land development, so community facilities, whose lots are allocated in site development plan, are still under planning.	The site is almost completed, but community facilities, whose lots are allocated in site development plan, are still under planning.
Note	Housing Unit Materials Provided by Japanese Grant Aid	-	-

Source: JICA Survey Team



Source: JICA Survey Team

Figure 8.3.1 Locations of Possible Candidate Resettlement Sites

8.3.3 Further Discussion and Agreement on Resettlement Sites

At present, the Project is still in the process of official arrangement and agreement for its implementation, and further discussion and arrangement on resettlement sites for PAPs are, therefore, necessary to be made officially by DPWH with the Cagayan de Oro City and other concerned parties, posterior to the said official arrangement and agreement are made.

8.4 Efforts on Improvement of Housing Units and Resettlement Site

Posterior to the new administration of the Cagayan de Oro City taken office in July 2013, efforts on improving the quality of various housing development projects of the Cagayan de Oro City has started.

In regard to the above, the Cagayan de Oro City has created the Shelter and Housing Development Multi-Sectoral Task Force in August 2013 by the Local Executive Order (020-13), in order to address and work on the following: (a) preparation of a city comprehensive housing and urban development master plan, (b) formulation of a strategy to provide basic services and sustainable development assistance for internally displaced persons and communities, especially those who are victims of calamities, (c) identification and recommendation of priorities and other urgent concerns in the implementation of the housing program for the homeless and informal settlers in the city, (d) coordination of all activities relative to the implementation of the city's housing program with the key government agencies and (e) provision of an effective strategy to ensure the gradual and substantial reduction in the numbers of informal settlers in the city within the 3-year period for the implementation of the program.

With the said efforts, housing units newly provided in resettlement sites are being planned to improve its living conditions by providing a single detached units rather than a duplex unit and also providing adequate basic utilities and facilities in resettlements sites.

CHAPTER 9 GRIEVANCE REDRESS MECHANISM

9.1 Policy of DPWH

The Land Acquisition, Resettlement, Rehabilitation and Indigenous Peoples' Policy, 3rd edition of DPWH (LARRIPP, 2006) outlines the framework of DPWH to redress concerns related to acquisition, compensation, and other aspects of resettlement.

Grievances related to any aspect of the project or sub-project will be handled through negotiations and are aimed at achieving consensus following the procedures outlined below:

- The grievance shall be filed by the PAP with the Resettlement Implementation Committee (RIC) who will act within 15 days upon receipt, except complaints and grievances that specifically pertain to the valuation of affected assets, since such will be decided upon by the proper courts;
- If no understanding or amicable solution can be reached, or if the PAP does not receive a response from RIC within 15 days of registry of the complaint, he or she can appeal to the concerned Regional Office of DPWH, which should act on the complaint or grievance within 15 days from the day of its filing;
- If the PAP is not satisfied with the decision of the Regional Office, he/she, as a last resort, can submit the complaint to any court of law.

PAPs shall be exempted from all administrative and legal fees incurred pursuant to the grievance redress procedures.

All complaints received in writing (or written when received verbally) from PAPs will be documented and shall be acted upon immediately according to the procedures detailed above.

9.2 Objectives of Grievance Redress Procedures

Disputes arising over RAP implementation, whether these are regarding valuation of properties, eligibility, provision of support services or other concerns, need to be addressed. The Grievance Redress Procedures aim to:

- Provide due process in resolving complaints pertaining to RAP implementation
- Monitor RAP implementation, especially adverse impacts on vulnerable populations
- Empower affected communities in the implementation of the project

9.3 Grievance Redress Procedures

Grievance redress is a shared responsibility between RIC (composed of various government agencies and representatives of the affected communities) and DPWH Regional Office. The RIC is a local coordinating and consultative body organized for the implementation of RAP, and established by **UPMO-FCMC** through a Memorandum of Agreement (MOA) with concerned parties prior to the start of Detailed Design. One of the RIC's key responsibilities is to receive and document complaints from PAPs, and act on these grievances accordingly. If the response to a complaint is deemed inadequate, PAPs may elevate their grievance to the DPWH Regional Office X. Table 9.3.1 below delineates the steps in the filing of complaints, the various agencies involved in the redress of grievances, and the time limits for resolution of complaints.

Table 9.3.1 Steps in Filing Grievances and Grievance Redress Structure

Stage	Grievance Procedure	Responsible Agency
Receipt	Grievances may be filed either orally or in writing with RIC. At the barangay level, PAPs could file their complaint with their Barangay Chairperson, a member of RIC. Grievances may also be filed through UPMO-FCMC's Field Office-CDOR. If unsatisfied with the outcome, PAPs may file their complaint with the Regional Office. Courts of law are the last resort for PAPs not in agreement with the decision of the RIC or the Regional Office.	Barangay, UPMO-FCMC, and Field Office CDOR, DPWH Regional Office X.
Documentation	A grievance form will be used to document complaints to ensure all relevant details are obtained. The identity of the complainant (name, address, and contact details), means of reporting complaint, the date grievance was sent and received, and the nature of the complaint needs to be captured in the form. Use of the local language is allowed, and in cases where the complainant lacks literacy skills to fill out the form, grievances could be submitted orally and recorded by an officer of the receiving office.	Barangay, UPMO-FCMC or Field Office-CDOR, and DPWH Regional Office. Note: Complaints are documented through the grievance form drafted by UPMO-FCMC.
Fact-Finding	The RIC shall verify the identity of the complainant and the nature of complaint, and compile supporting evidence. The RIC shall make recommendations for resolution to the appropriate bodies for consideration in the redress of grievance or complaints. If the complainant wishes to appeal the RIC's decision, the grievance is escalated to the Regional Office for resolution.	RIC Members: City Mayor or Representative, UPMO-FCMC or Field Office-CDOR, City Government Officers, Barangay chairperson of each affected barangay, Representative of PAPs for each affected barangay, Representative of NGOs operating within the city, and Representatives of assisting government agencies such as NHA, DOLE, DSWD and DTI.
Feedback	The RIC will be given fifteen (15) days upon receipt of complaint to resolve cases, except for complaints on the valuation of affected assets. The Regional Office will also have 15 days to resolve cases from receipt of complaint. The aggrieved party will be informed of the outcome through UPMO-FCMC's Field Office-CDOR.	UPMO-FCMC / Field Office-CDOR, DPWH Regional Office
Appeal	If the complainant wishes to appeal the RIC's decision, the grievance is escalated to the Regional Office for resolution. If the aggrieved party does not accept the decision of the Regional Office, the grievance could be filed with the appropriate court of law. In property valuation complaints where DPWH has decided to initiate expropriation proceedings, RA 8974 requires PAPs to be paid one hundred percent (100%) of the value of the property based on the current zonal valuation of the Bureau of Internal Revenue (BIR). The amount will be deposited into an escrow account while the court determines the just compensation to be paid to PAPs. After the court decision becomes final and executor, DPWH will pay PAPs the difference between the amounts paid and the just compensation determined by the court.	RIC, DPWH Regional Office, and Courts.

Source: JICA Survey Team

CHAPTER 10 COMMUNITY PARTICIPATION

10.1. Framework for Community Participation in Resettlement Implementation

In order to ensure participation of PAPs in the resettlement implementation, a framework for community participation in resettlement implementation of the Project is summarized in Table 10.1.1.

The basic strategies of the framework are to: (a) ensure active participation and appropriate representation of PAPs, institutionalize a two-way flow of communication between PAPs and the Project and (c) ensure information dissemination and sharing to be provided in simple, appropriate and understandable formats suiting for PAPs through active participation and a two-way communication.

Table 10.1.1 Framework for Community Participation in Resettlement Implementation

Components	Summarized Contents
Purpose of the Framework	<ul style="list-style-type: none"> Provide a framework for community participation, in order to facilitate understanding and participation of PAPs and their concerned local communities on the resettlement implementation of the Project.
Specific Objectives of the Framework	<ul style="list-style-type: none"> Ensure wider participation of PAPs in information dissemination and consultation meetings in advance, and Ensure consultation with PAPs on resettlement options such as compensation, relocation sites, livelihood assistance, necessary procedures and required documents, Ensure participation of PAPs in grievance redress mechanism to be represented through a venue of the Resettlement Implementation Committee (RIC) set by the Project, Ensure participation in the internal monitoring of the resettlement implementation activities of the Project, in order to provide feedback to the Project on a more accurate reading of feelings and reactions of PAPs and concerned local communities on the resettlement implementation and the Project.
Targets of the Framework	<ul style="list-style-type: none"> All PAPs of the Project, and Concerned local communities of PAPs such as respective affected barangays and the local government unit of the Cagayan de Oro City.
Participation Schemes of the Framework	<ul style="list-style-type: none"> Representation of PAPs as a member of RIC to involve in activities of the resettlement implementation of the Project. Regular and ad-hoc small-scale consultation meetings held on the resettlement implementation at zone level in respective affected barangays, Regular and ad-hoc information dissemination on activities of the resettlement implementation through regular and ad-hoc information campaign and communication materials, Regular internal monitoring of the resettlement implementation.
Communication Materials	<ul style="list-style-type: none"> Printed and visual materials (newsletter, brochure and poster), which shall be prepared in both English and Visayas.
Institutional Setup of the Framework	<ul style="list-style-type: none"> Plan, operate and manage framework activities of community participation for PAPs of the Project through RIC, which is a local coordinating and consultative body organized for the implementation of resettlement and set by UPMO-FCMC.

Source: JICA Survey Team

10.2 Community-Based Influx Management Program

In order to prevent the right-of-way areas of the Project and the river areas from encroachment of informal settlers and secure the said areas, a community-based influx management program is summarized in the table below.

Table 10.2.1 Community-Based Influx Management Program

Program Item	Contents of Program
Program Objective	Enforcement of laws and ordinances regarding encroachment into the right-of-way areas of the Project and also the river areas where flood risk level is very high.
Program Components	<ul style="list-style-type: none"> - Program Component 1: Organization and Operations of Barangay Influx Management Action Team (BIMAT) <ul style="list-style-type: none"> • Purpose of Program Component 1 - To implement the community-based influx management program at barangay level. • Concerned Barangays – 15 barangays located along the river banks of Cagayan de Oro River, such as Barangay Bon-Bon, Barangay Kauswagan, Barangay Carmen, Barangay Balulang, Barangay Consolacion, Barangay 17, Barangay 15, Barangay 13, Barangay 10, Barangay 7, Barangay 6, Barangay 6, Barangay 2, Barangay 1, Barangay Nazareth and Barangay Macasandig. • Team Organization – BIMAT shall be organized and operated under Barangay Council of each concerned barangay and supervised and managed under the Resettlement Implementation Committee (RIC) set by the Project. • Team Components – BIMAT shall be composed of the following personnel selected from each concerned barangay such as: (a) Barangay Police (Barangay Tanod), (b) Barangay Council Officials (Sangguniang Barangay Officials), (c) Barangay Youth Council Officials (Sangguniang Kabataan Officials) and (d) Community Volunteer Organizations (CVOs). • Team Responsibilities – BIMAT shall be responsible for: (a) securing the right-of-way area of the Project and also the river area from encroachment through conducting a regular patrol and assigning a watchkeeper to an outpost in a site, (b) placing and managing warning and announcement signs and (c) designing and conducting the Information, Education and Communication (IEC) Program to residents of concerned barangays. - Program Component 2: Design and Preparation of Information, Education and Communication (IEC) Program on Influx Management and Flood Disaster including IEC Kits. <ul style="list-style-type: none"> • Purpose of Program Component 2 - To design and prepare IEC Program on influx management and disaster at barangay level. • Design of IEC Program – IEC Program shall conduct the following activities such as: (a) community meeting for adults on creating and enhancing awareness and understanding on flood disaster and importance of preventing the right-of-way areas and river areas from living and establishing structures and (b) small meeting for children and youths on educating about how flood disaster is occurred and dangerous, how people can be protected from flood disaster and what people need to do about the right-of-way areas and river areas from the viewpoint of flood risk and flood disaster. • Preparation of IEC Program Kits – based on the design of IEC Program, IEC Program Kits shall be prepared both for adults and for children and youths by BIMAT in cooperation with the City Disaster Risk Reduction and Management Council, OCD-10, DILG-10 and DPWH-10. • Training of BIMAT – members of BIMAT shall be trained on influx management and flood disaster management from City Disaster Risk Reduction and Management Council, OCD-10, DILG-10 and DPWH-10

Source: JICA Survey Team

10.3 Consultation Meeting with PAPs

10.3.1 Overview of Consultation Meeting

Consultation meetings with PAPs were held from November 5 to 6, 2013. The overview of Consultation meetings is summarized in the following table. The Minutes of the Meeting are provided in Annex 5, the Attendance List of Consultation Meeting with PAPs in Annex 6 and the Photos of Consultation Meeting with PAPs in Annex 7.

Table 10.3.1 Overview of Consultation Meeting with PAPs

	Consultation Meeting 1	Consultation Meeting 2	Consultation Meeting 3	Consultation Meeting 4
Purposes of Meeting	To present and inform PAPs about the following. - Explanation of flood risk level, high flood risk area and affected area of the Project. - Overall results of socioeconomic survey - Eligibility of PAPs under this Project - Entitlement under the Philippine laws and policies in terms of resettlement - Briefing of JICA Guidelines and gap analysis between the Philippine laws and-JICA Guidelines - Project policy on compensation and assistance - Resettlement sites including status of infrastructure, facilities and timing of relocation, etc. To provide explanation, clarification and/or answers on questions and/or opinions raised by PAPs			
Date of Meeting	November 5, 2013 (AM)	November 5, 2013 (PM)	November 6, 2013 (AM)	November 6, 2013 (PM)
Venue of Meeting	Barangay Nazareth Gym (Cagayan de Oro City)		City Tourism Hall (Cagayan de Oro City)	
Barangays of Participated PAPs	Brgy Balulang Brgy Macasandig Brgy Nazareth	Brgy Carmen	Brgy Bonbon Brgy Kauswagan Brgy 1 Brgy 2 Brgy 6 Brgy 7 Brgy 10 Brgy 13 Brgy 15 Brgy 17	Brgy Consolacion
Number of Participants:	158	115	310	170
-PAPs	134	91	287	148
-City Offices	2	2	1	2
-Barangay Officers	2	2	4	2
-National Government Officers	3	3	1	1
-DPWH	9	9	9	9
-JICA Survey Team	8	8	8	8

Source: JICA Survey Team

10.3.2 Summary of Topics Explained and Points of Discussions

(1) Topics Explained to PAPs

Table 10.3.2 Outline of Topics Explained to PAPs

Topics Explained	Outline of Topics
Flood Risk Level, High Flood Risk Area and Affected Area of the Project	The flood risk of the Cagayan de Oro River was explained through a photo showing a flood-mark of TS Sendong, a flood risk map, a flood risk level criteria, a conceptual cross section of river boundary and a map showing the right-of-way area of the Project.
Overall Results of Socioeconomic Survey	The objective, cut-off date, the number of covered barangays, the number of targeted households and highlighted results of the survey were explained. The highlighted survey results included: (a) claim on land and structure, (b) primary occupation / source of income of household heads and members, (c) monthly income of households, (d) households with business activities, (e) number of households with trees, (f) vulnerability of households, (g) existing and preferred skills and (h) business interest.
Entitlement under Philippine Laws and Policies in Terms of Resettlement, including eligibility of PAPs and gap analysis	Definition of key terms related to resettlement was briefly explained as follows. (a) Resettlement, (b) Replacement cost, and (c) Eligibility of project affected persons (PAPs). Options available for PAPs were presented and explained for those who are: (a) Owner of structure only, (b) Owner or user of resources such as trees and crops, (c) Renter of structure, (d) Loss of business or income, (e) Landless, occupants without permission, underprivileged with income within poverty threshold, (f) Landless occupants with income above poverty threshold, (g) Vulnerable groups such as underprivileged, women, elderly, persons with disability and (h) All PAPs.
Resettlement Sites	The responsibilities and roles of the LGU in terms of resettlement were explained, particularly on provision of assistance to relocation, housing units in resettlement sites and other housing programs.

Source: JICA Survey Team

(2) Points of Discussion

Table 10.3.3 Summarized Points of Discussion

Topics Explained	Summarized Points of Discussion	Response by DPWH
Flood Risk Level, High Flood Risk Area and Affected Area of the Project	1. Affected Areas	
	- Study on the possibility of reducing the affected area of dike construction in Barangay Macasandig by modification of alignment to minimize the number of PAPs	Detailed engineering design will have to be undertaken afterward that may entail adjustments in the project design. These adjustments may result to the possible reduction of the number of affected households but PAPs in Flood Risk Level 4 will have to be relocated.
	- Clarification on the alignment and the extent of the affected households in Burgos St.	Detailed engineering design will have to be undertaken afterward that may entail adjustments in the project design. Hence the number of affected households will also be determined at that time.
	2. Schedule of the Project	
	- Definite start date for the project - Possibility for the project to start earlier than 2016	If approved for funding, the project will begin the Detailed Engineering Design in 2015.
Overall Results of Socioeconomic Survey	1. All PAPs	
	- Clarification if those surveyed are the final PAPs	The socioeconomic survey that was conducted for this Study provided DPWH with the indicative number of PAPs. The number and the list of affected households to be resettled will be finalized after the completion of the detailed engineering design of the Project, possibly in 2015. However, those households living in “no build zones” and in danger areas will have to be resettled earlier.
Entitlement under Philippine Laws and Policies in Terms of Resettlement, including eligibility of PAPs Briefing of JICA Guidelines and gap analysis between the Philippine laws and-JICA Guidelines	1. Absence of land titles as proof of ownership to qualify for entitlement	
	- Most of the land owners in Macasandig have only Deed of Sale in their possession as proof of ownership	Since most of the participants have no certificate of title, participants are advised that tax declaration covering at least 30 years may also substantiate land ownership claim, and could be grounds for entitlement.
	- Recipients of government housing program cannot show documents proving ownership.	
	- The land titles are still in the names of the previous owners (e.g. relatives who had passed away)	Heirs have to execute extrajudicial settlement of estate for deceased relative/s who owned land. For participants whose lands have not yet been sub-divided, division of ownership needs to be finalized before payment is processed.

Topics Explained	Summarized Points of Discussion	Response by DPWH
	2. Most of PAPs in Barangay Consolacion are occupying government land	Project-affected persons in possession of land without the benefit of a title and without consent of the owner have the option to avail of relocation, as long as qualified.
	3. Non-payment of tax declaration that would serve as proof of ownership of structure	The government has to have proof of ownership before disbursing payments, not just for lands but for structures as well. Back taxes have to be paid first before claiming entitlement for property.
	4 Possibility of qualifying for payment of properties even if already a recipient of a housing unit from LGU or other agencies	Participants advised that double compensation is not allowed. Eligible project-affected people may choose either compensation for structures and improvements, or opt for relocation.
	5 Basis for determining current market value of properties	For structures, replacement cost value will be the basis, using the current price index. For land, the latest BIR Zonal Value will be used as basis for current market value.
	6. Clarification that all structures, regardless of size, are treated similarly	Clarified the importance of the project for the better good – participants assured of fair treatment regardless of building size.
Resettlement Sites	1. Available resettlement sites	DPWH assured of several resettlement sites to accommodate PAPs.
	2. Qualifications for becoming a recipient of an NHA housing unit	Reiterated role of NHA as assisting agency in implementing resettlement for the project, and clarified role of LGU as lead implementer of resettlement plan. Requirements will thus be set by the LGU, not the NHA.

Source: JICA Survey Team

10.3.3 Points of Consultation Meeting

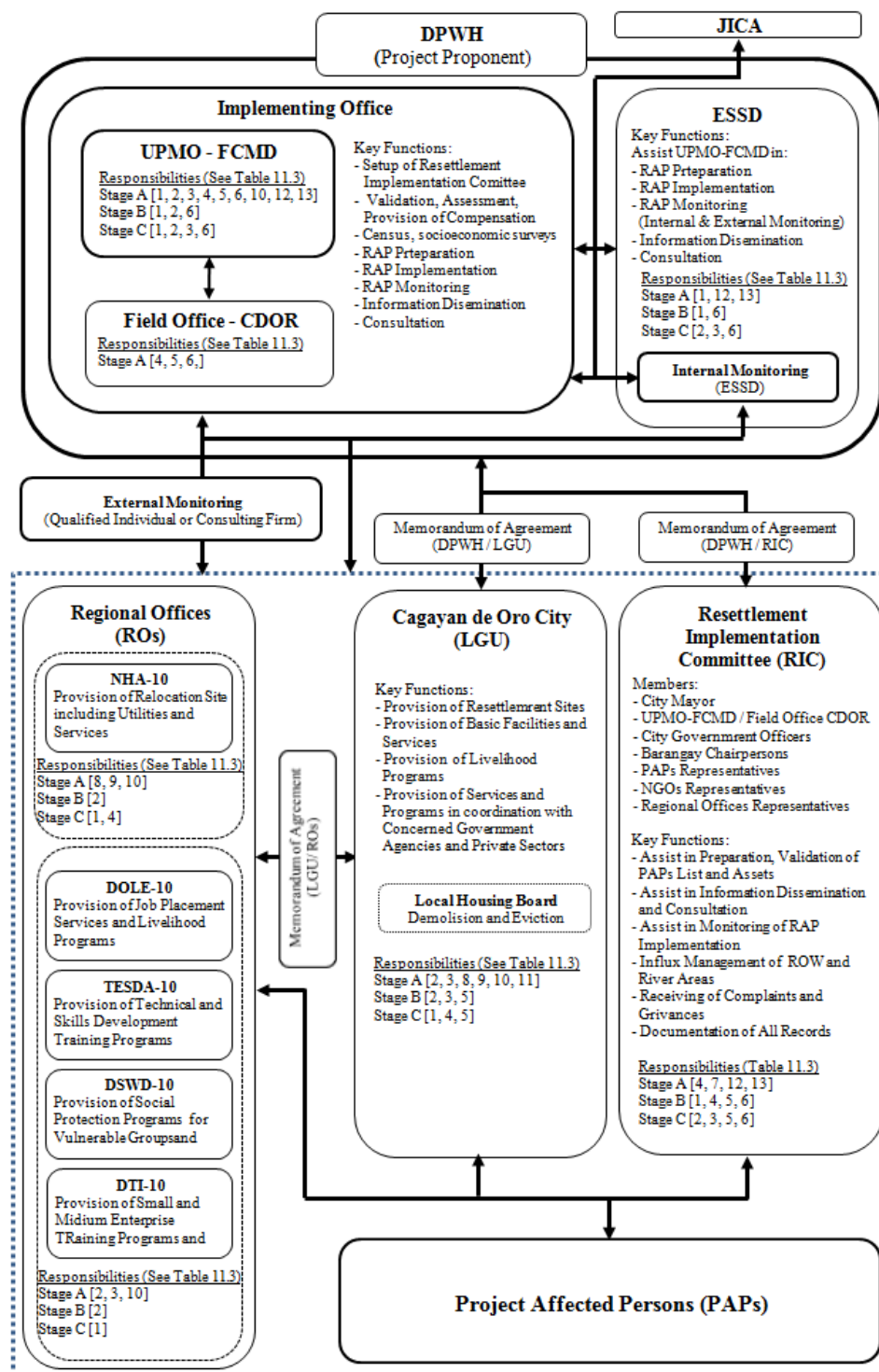
Major points of the Consultation Meeting with PAPs are as follows.

- It was a valuable opportunity for PAPs to learn and inquire about an overview of the Project through a proponent agency and concerned agency, particularly on: (a) flood risk level, high flood risk area and the project areas, (b) entitlements under the Philippine laws and policies in terms of resettlement, including eligibility of PAPs and gap analysis and (c) resettlement sites.
- It was also considered important for a proponent agency as well to directly receive feedback from PAPs on the Project and its information presented and explained to PAPs in the Consultation Meeting. On the project policy on compensation and assistance, the Consultation Meeting provided a good chance and venue to have proper clarification and explanations on how PAPs can go about compensation and assistance and also its procedures and document requirements.
- Considering feedback provided by PAPs in the Consultation Meeting, a proponent agency is expected to continue providing consultation meetings and appropriate information for clarifying concerns of PAPs. Further, feedback provided by PAPs is expected to consider by a proponent agency in the design stage of the Project as well.

CHAPTER 11 INSTITUTIONAL FRAMEWORK

11.1 Organizational Framework for RAP Implementation and Key Responsibilities

Following figure provides an organizational chart of agencies concerned with the implementation of RAP and its key responsibilities.



Source: JICA Survey Team

Figure 11.1.1 RAP Implementation Concerned Agencies & Key Responsibilities

Key responsibilities of each concerned agencies are referred to the relocation stages such as Stage A (Pre-Relocation), Stage B (Actual Relocation) and Stage C (Post-Relocation) and its corresponding responsibilities (numbers indicated in parenthesis) shown in Table 11.3.1.

11.2 Organization Related to Resettlement Implementation

In this section, concerned offices of DPWH, national and local governments on resettlement implementation presented in Figure 11.1.1 are described.

11.2.1 Concerned Offices of DPWH on Resettlement Implementation

The offices of DPWH related to the implementation of resettlement of the Project are presented with its major functions in Table 11.2.1.

Table 11.2.1 Offices of DPWH Related to Implementation of Resettlement

Related Offices	Functions Related to Resettlement
Unified Project Management Office – Flood Control Management Cluster (UPMO-FCMC)	<p>UPMO-FCMC formally called PMO-Flood Control, is the implementing office and functioned as follows.</p> <ul style="list-style-type: none"> Formulate, review, update and approve RAP including a RAP budget plan with assistance from ESSD and in accordance with guidelines with JICA and DPWH. Arrangement with Concerned Parties on RAP Implementation. Set up the Resettlement Implementation Committee (RIC) through entering into the Memorandum of Agreement (MOA) with concerned local parties. Conduct tagging, census, socioeconomic survey, replacement cost survey if necessary. Preparation and validation of list of PAPs and affected assets. Conduct assessment and provision of compensations. Facilitate the consultation meetings and information dissemination of RAP and other relevant stakeholders throughout process of RAP. Monitor the implementation of RAP during RAP process. <p>Field Office for Cagayan de Oro River (CDOR) is created in the project site under UPMO-FCMC and functioned as follows.</p> <ul style="list-style-type: none"> Assist UPMO-FCMC in the management and supervision of the project construction in the project site. Assist UPMO-FCMC in implementation of the right-of-way acquisition including resettlement activities. Assist UPMO-FCMC in the conduct of tagging, census, socioeconomic survey and replacement cost survey, if necessary. Assist UPMO-FCMC in preparation and validation of the list of PAFs and affected assets. Assist UPMO-FCMC in assessment and provision of compensations.
Environmental and Social Safeguards Division (ESSD) of Planning Service	<p>ESSD, formally called ESSO (Environmental and Social Service Office), provides technical guidance and support in the implementation of RAP and responsible for the following.</p> <ul style="list-style-type: none"> Assist UPMO-FCMC in the preparation, review, update and approval of RAP, including a RAP budget plan. Assist UPMO-FCMC in facilitating consultation meetings and information dissemination of PAPs and other relevant stakeholders during RAP process. Assist UPMO-FCMC in conduct of monitoring the implementation of RAP. Assist UPMO-FCMC in resolving concerns and issues encountered during the implementation of RAP.

Source: JICA Survey Team

It is noted that, due to the Rationalization Plan of DPWH which was approved by the

Department of Budget and Management (DBM), PMO-Flood Control was changed to Flood Control Management Cluster (FCMC) and placed under Unified Project Management Office (UPMO). Also, ESSO was changed to Environmental and Social Safeguards Division (ESSD) and placed under Planning Service at Central Office.

11.2.2 Concerned Local and National Governments on Resettlement Implementation

The local and national governments concerned with the implementation of resettlement of the Project are presented with its major functions in Table 11.2.2.

Table 11.2.2 Concerned Local and National Governments on Resettlement Implementation

Concerned Governments	Functions Related to Resettlement
Local Government Unit (LGU) of Cagayan de Oro City	<p>LGU of Cagayan de Oro City is a key local actor related to the implementation of resettlement, mandated by the Urban and Housing Development Act (RA7729) and responsible for the following key matters.</p> <ul style="list-style-type: none"> • Provide resettlement sites. • Provide basic services such as potable water, power and sewerage, in coordination with concerned government agencies and private sector. • Provide other basic facilities such as health, education, communication, security, recreation, relief and welfare, in coordination with concerned government agencies and private sector. • Provide livelihood programs in coordination with concerned government agencies and private sector. • Provide the above basic services, basic facilities and livelihood programs made through entering into MOA with concerned parties. <p>Within the city government, City Estate Management Division (CEMD) under City Planning and Development Office (CPDO) is responsible for following resettlement activities.</p> <ul style="list-style-type: none"> • Administer and maintain existing and new resettlement sites of the city. • Administer applications, screening and awarding of social housing program of the city. • Administer resettlement assistance including transfer of relocating persons
Local Housing Board (LHB) of Cagayan de Oro City	<p>LHB of Cagayan de Oro City is a local special body for housing devoted to address shelter concerns of LGU with a legal basis and authority by the Executive Order 708 (2008), reorganized by the Local Executive Order (No. 039-13) in August 2013 and responsible for the following key matters.</p> <ul style="list-style-type: none"> • Formulate comprehensive city shelter plan of LGU concerned, including the following local housing projects, such as resettlement projects, community mortgage program, regular low-cost housing projects, medium rise housing and rental housing projects and core shelter housing assistance projects. • Administer housing and land development plans, socialized housing programs and coordination with other government agencies. • Conduct demolition and eviction of informal settlers, in coordination with PCUP.
Resettlement Implementation Committee (RIC)	<p>RIC is a local coordinating and consultative body organized for the implementation of RAP and set up by UPMO-FCMC through entering into MOA with concerned parties, prior to the commencement of Detail Design. RIC is composed of and functioned as follows.</p>
	<p>Composition:</p> <ul style="list-style-type: none"> • City Mayor or representative • UPMO-FCMC / Field Office-CDOR

Concerned Governments	Functions Related to Resettlement
	<ul style="list-style-type: none"> City Government Officers Barangay Chairperson of each affected barangay Representative of PAPs of each affected barangay Representative of non-governmental organizations operating within the jurisdiction of the city Representatives of assisting regional government offices such as NHA, Department of Labor and Employment (DOLE), Technical Education and Skills Development Authority (TESDA), Department of Social Welfare and Development (DSWD), Department of Trade and Industry (DTI) and others if necessary. <p>Functions:</p> <ul style="list-style-type: none"> Assist UPMO-FCMC in preparation and validation of the list of PAFs and affected assets. Assist UPMO-FCMC and ESSD in the conduct of consultation meetings and information dissemination of PAPs and other relevant stakeholders during RAP process. Assist UPMO-FCMC and ESSD in monitoring of the implementation of RAP during RAP process. Assist the City Government in the enforcement of laws and ordinances regarding encroachment into the right-of-way areas of the Project, in coordinating with concerned government agencies. Receive complaints and grievances of PAPs and other stakeholders and act accordingly. Maintain record of all public meetings, complaints and actions taken to address complaints and grievances.
National Housing Authority (NHA) Region 10	<p>NHA Region 10 is a key national agency on housing in Cagayan de Oro City and mandated to provide the following related to the implementation of resettlement.</p> <ul style="list-style-type: none"> Provide relocation sites for informal settler including the provision of adequate utilities and services, in anticipation of informal settlers in the site of future infrastructure projects and in coordination with concerned LGUs and other government agencies.
Department of Social Welfare and Development (DSWD) Region 10	<p>DSWD Region 10 is a key agency on social welfare and development in Cagayan de Oro City and mandated to provide the following related to the implementation of resettlement.</p> <ul style="list-style-type: none"> Provide social protection services and programs for the poor, vulnerable, disadvantage, women and children. Provide livelihood assistance and training programs.
Technical Education and Skills Development Authority (TESDA) Region 10	<p>TESDA Region 10 is a key national agency on technical education and skills development in Cagayan de Oro City and mandated to provide the following related to the implementation of resettlement.</p> <ul style="list-style-type: none"> Provide diversified and quality technical and skills development training programs, including some programs targeted for National Certification of TESDA.
Department of Labor and Employment (DOLE) Region 10	<p>DOLE Region 10 is a key national agency on employment development and promotion in Cagayan de Oro City and mandated to provide the following related to the implementation of resettlement.</p> <ul style="list-style-type: none"> Provide job placement services program. Provide livelihood training program.
Department of Trade and Industry (DTI) Region 10	<p>DTI Region 10 is a key agency on industrial and trade development and promotion in Cagayan de Oro City and mandated to provide the following related to the implementation of resettlement.</p> <ul style="list-style-type: none"> Provide small and medium business and enterprise training program. Provide sustainable livelihood training program.

Source: JICA Survey Team

11.3 Organizational Responsibilities on Implementation of RAP

Following table provides summary of responsibilities of organizations concerned with the

implementation of RAP of the Project.

Table 11.3.1 Summary of Organizational Responsibilities

	Responsibilities	Responsible Agencies	Assisting Agencies	Coordinating Agencies
Pre-Relocation Stage [Stage A]	[A-1]Preparation, review, update and approval of RAP including a RAP budget plan	UPMO-FCMC	ESSD	-
	[A-2]Arrangement with Concerned Parties on RAP Implementation	UPMO-FCMC	-	City government and concerned local parties
	[A-3]Setting up of Resettlement Implementation Committee through entering into the Memorandum of Agreement (MOA) with concerned parties	UPMO-FCMC	-	City government and concerned local parties
	[A-4]Conduct of tagging, census, socioeconomic survey and replacement cost survey	UPMO-FCMC	Field Office CDOR	RIC
	[A-5]Preparation and validation of the list of PAPs and affected assets	UPMO-FCMC	Field Office CDOR / RIC	-
	[A-6]Assessment and provision of compensations	UPMO-FCMC	Field Office CDOR	-
	[A-7]Receiving and acting on complaints and grievances of PAPs.	RIC	-	-
	[A-8]Development of resettlement sites	City Government / NHA-10	Private Sector NGOs	-
	[A-9]Provision of utilities and facilities at and access to resettlement sites	City Government / NHA-10	Water District CEPALCO DPWH DepEd Private Sector	-
	[A-10]Provision of livelihood assistance measures (skills trainings / capacity building trainings / institutional building trainings)	City Government	NHA-10 DSWD-10 DOLE-10 TESDA-10 DTI-10 Others if necessary	UPMO-FCMC
	[A-11]Preparation of demolition and eviction of relocatees in the project area.	City Government (City Housing Board)	-	PCUP
	[A-12]Facilitation of consultation meetings and information dissemination of PAPs and other relevant stakeholders on information of relocation procedures and assistance measures during pre-relocation stage.	UPMO-FCMC	ESSD / RIC	-
	[A-13]Periodic monitoring of the implementation of RAP (internal / external monitoring) during pre-relocation stage	UPMO-FCMC	ESSD / RIC	-
Actual Relocation Stage [Stage B]	[B-1]Facilitation of consultation meetings and information dissemination of PAPs and other relevant stakeholders on settlement of relocation procedures and assistance measures during actual relocation stage.	UPMO-FCMC	ESSD / RIC	-
	[B-2]Provision of livelihood assistance measures (skills trainings /	City Government	NHA-10 DSWD-10	UPMO-FCMC

	Responsibilities	Responsible Agencies	Assisting Agencies	Coordinating Agencies
	capacity building trainings / institutional building trainings)		DOLE-10 TESDA-10 DTI-10 Others if necessary	
	[B-3]Preparation and implementation of demolition of structures and transfer of relocatees.	City Government (City Housing Board)	-	PCUP
	[B-4]Receiving and acting on complaints and grievances of PAPs.	RIC	-	-
	[B-5]Enforcement of laws and ordinances regarding encroachment into the right-of-way areas of the Project, in coordinating with concerned government agencies.	City Government	RIC	-
	[B-6]Periodic monitoring of the implementation of RAP (internal / external monitoring) during actual relocation stage	UPMO-FCMC	ESSD / RIC	-
Post-Relocation Stage [Stage C]	[C-1]Provision of livelihood assistance measures (skills trainings / capacity building trainings / institutional building trainings)	City Government	NHA-10 DSWD-10 DOLE-10 TESDA-10 DTI-10 Others if necessary	UPMO-FCMC
	[C-2]Facilitation of consultation meetings and information dissemination of PAPs and other relevant stakeholders on settlement of relocation procedures and assistance measures during actual relocation stage.	UPMO-FCMC	ESSD / RIC	-
	[C-3]Receiving and acting on complaints and grievances of PAPs.	RIC	-	UPMO-FCMC / ESSD
	[C-4]Administration and maintenance of resettlement sites, including periodic monitoring on conditions of relocatees and sites	City Government / NHA-10	Water District CEPALCO DPWH DepEd Private Sector	-
	[C-5]Enforcement of laws and ordinances regarding encroachment into the right-of-way areas of the Project, in coordinating with concerned government agencies.	City Government	RIC	-
	[C-6]Periodic monitoring of the implementation of RAP (internal / external monitoring) during post-relocation stage	UPMO-FCMC	ESSD / RIC	-

Source: JICA Survey Team

CHAPTER 12 IMPLEMENTATION SCHEDULE

12.1 Implementation Schedule of Construction

The implementation schedule of RAP including construction of the Project is provided in Table 12.2.1. It is noted that the Project is implemented by the following 4 contract packages, as presented in Table 12.1.1.

Table 12.1.1 Contract Packages of Construction

Package	Component of Contract Package
Package 1 (P1)	Construction of Dike and Floodwalls in Carmen-Balulang Stretch (L3: L=2,149m), Consolacion-Poblacion Stretch (R2: L=1,736 m) and Removal of Sedimentation
Package 2 (P2)	Construction of Dike and Floodwalls in Balulang Stretch (L4: L=2,181 m), Poblacion Stretch (L3: L=325 m), Poblacion-Nazareth-Macasandig Stretch (R4: L=3,105m) and Construction of Retarding Basin)
Package 3 (P3)	Construction of New Road and Raising Existing Road for Evacuation in Bonbon-Kauswagan Stretch (L1: L=2,756m)
Package 4 (P4)	Improvement of Kagayan Bridge

Source: JICA Survey Team

12.2 Implementation Schedule of RAP

12.2.1 Arrangements for Implementation of RAP

Posterior to the official arrangement of the implementation of the Project made by DPWH, the arrangement with concerned parties on the implementation of RAP and the Resettlement Implementation Committee (RIC) will be set up by DPWH before the commencement of Detail Design (D/D) of the Project.

12.2.2 Review and Update of RAP

During the D/D Stage, the RAP prepared under the JICA Survey will be reviewed and updated, including revalidation and/or conduct of tagging, census, socioeconomic and property surveys if additional households and assets are identified to be affected due to changes of the design of the Project as compared to the design of the feasibility study of the JICA Survey. Accordingly, the current cut-off date will be set for the tagging and census for additionally identified PAPs.

12.2.3 Relocation of PAPs

The relocation of all PAPs including the demolition of affected structures and the preparation of resettlement sites is scheduled to be completed before the commencement of the construction of each contract package as presented in Table 12.1.1.

12.2.4 Compensation and Other Assistance

Compensation will be duly paid before the relocation, and the livelihood and other assistance are scheduled to be provided from pre-relocation stage up to the end of the construction.

12.2.5 Information Dissemination and Consultation

All information on resettlement activities, such as required documents and its procedures, schedules and other necessary information for compensation, relocation, resettlement and other assistance will be provided for all PAPs and its concerned parties through

consultation meetings and media from pre-relocation stage up to the end of the construction.

12.2.6 Grievances

The grievances related to any aspect of the Project are scheduled to be handled through RIC from pre-relocation stage up to the end of the construction and set up before land acquisition and resettlement are implemented.

12.2.7 Monitoring of Implementation of RAP

Internal Monitoring and External Monitoring will be conducted posterior to the commencement of the construction supervision, since the right-of-way acquisition of the Project is scheduled to start from the D/D Stage.

Table 12.2.1 Implementation Schedule of RAP

	Work Item	Agency in Charge	2013		2014				2015				2016				2017				2018				2019				2020			
			3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Construction Schedule	Procurement of Consulting Services for D/D & C/S	DPWH																														
	Detail Design, Preparation of PQ & Tender Document	DPWH																														
	Right-of-Way Acquisition & Resettlement	DPWH																														
	Construction Supervision	DPWH																														
	Package No 1 (L3, R2, Dredging Work) – P1	DPWH																														
	Package No 2 (R3, R4, L4, Retarding Basin) – P2	DPWH																														
	Package No 3 (L1 Road Raising) – P3	DPWH																														
	Package No 4 (Kagayan Bridge Improvement) – P4	DPWH																														
	Non-Structural Measures	DPWH																														
RAP Implementation Schedule	Preparation of RAP	DPWH																														
	Arrangement on RAP Implementation &Set-Up of RIC	DPWH																														
	Establishment of Grievance Redress Mechanism in RIC	DPWH																														
	Review & Update of RAP / Census & Socioeconomic Surveys	DPWH																														
	Preparation & Validation of List of PAPs & Assets	DPWH																														
	P1, 4 - Information Dissemination & Consultation	DPWH																														
	P1, 4 - Preparation of Resettlement Site	LGU / NHA																														
	P1, 4 - Assessment & Provision of Compensations	DPWH																														
	P1, 4 - Preparation & Provision of Livelihood& Other Assistance	LGU																														
	P1, 4 - Transfer of Relocatees to Resettlement Sites	LGU / NHA																														
	P1, 4 - Monitoring & Securing of Right-of-Way Area	LGU / RIC																														
	P2 - Information Dissemination & Consultation	DPWH																														
	P2 - Preparation of Resettlement Site	LGU / NHA																														
	P2 - Assessment & Provision of Compensations	DPWH																														
	P2 - Preparation & Provision of Livelihood & Other Assistance	LGU																														
	P2 - Transfer of Relocatees to Resettlement Sites	LGU / NHA																														
	P2 - Monitoring & Securing of Right-of-Way Area	LGU / RIC																														
	P3 - Information Dissemination & Consultation	DPWH																														
	P3 - Preparation of Resettlement Site	DPWH																														
	P3 - Assessment & Provision of Compensations	LGU / NHA																														
	P3 - Preparation & Provision of Livelihood & Other Assistance	LGU																														
	P3 - Transfer of Relocatees to Resettlement Sites	LGU / NHA																														
	P3 - Monitoring & Securing of Right-of-Way Area	LGU / RIC																														
	Receiving & Acting on Complaints & Grievances	RIC																														
	Internal RAP Implementation Monitoring (Every 1 Mon.)	DPWH / RIC																														
	External RAP Implementation Monitoring (Every 6 Mon.)	DPWH																														

■ = Full-Time Work (Continued Work Basically Required Daily Basis) □ = Intermittent Work (Continued Work, but Not Required Daily Basis)

CHAPTER 13 COST AND BUDGET

13.1 Compensation Cost for Structures

13.1.1 Replacement Cost Survey

The replacement cost survey was conducted to: (a) identify the prevailing building typology and structures in the Cagayan de Oro City through a field investigation, particularly in the project affected area and (b) estimate a unit cost of the prevailing per square meter cost of construction in the Cagayan de Oro City through canvassing the prevailing cost of materials and wages on a replacement cost basis. It is noted that all structures in the project affected area were identified, counted and measured through aerial photographs using the Geographic Information System (GIS) and verified on site.

13.1.2 Identification of Building Typology and Structure

The prevailing building typology was surveyed and identified through analyzing results of field investigation such as the make and materials of the identified structures in the project affected area. As the results of the investigation, the following prevailing building typologies and structures were identified: (a) shanty and hut structure, (b) wood and timber structure, (c) semi-concrete structure, (d) concrete structure and (e) steel structure.

13.1.3 Estimation of Unit Construction Cost

Based on the results of building typology identification and unit cost estimation, the per square meter cost of construction for each of identified building typologies was estimated at market value and presented in Table 13.1.1.

Table 13.1.1 Estimated Unit Construction Cost by Typology

Typology	Estimated Unit Construction Cost (Peso Per Square Meter)	Remarks
Shanty / Hut	3,600	-
Wood / Timber	9,200	-
Semi-Concrete	11,400	-
Concrete	13,500	-
Steel	5,000	Only Case for Covered Court Structures

Source: JICA Survey Team

13.1.4 Number of Affected Structures by Typology and Barangay

The following table (Table 13.1.2) show the number of structures in the project affected area by typology and barangay.

Table 13.1.2 Number of Affected Structures by Typology and Barangay

Barangay	Typology					Total
	Shanty / Hut	Wood / Timber	Semi-Concrete	Concrete	Steel	
Bonbon	0	41	28	18	3	90
Kauswagan	0	3	0	0	0	3
Carmen	3	27	97	115	3	245
Balulang	1	8	7	26	0	42
Consolacion	1	146	99	121	1	368
Barangay 17	0	21	20	6	1	48
Barangay 15	5	23	21	20	1	70
Barangay 13	0	10	19	18	0	47
Barangay 10	0	6	12	6	0	24
Barangay 7	1	12	26	11	1	51
Barangay 6	0	2	0	0	0	2
Barangay 2	0	0	0	0	0	0
Barangay 1	0	0	0	0	0	0
Nazareth	0	1	0	4	0	5
Macasandig	6	43	45	39	0	133
Total	17	343	374	384	10	1128

Source: JICA Survey Team

13.1.5 Cost of Affected Structure by Typology

Table 13.1.3 provides the total cost of structures in the project affected area by typology.

Table 13.1.3 Cost of Affected Structures by Typology

Item	Typology					Total
	Shanty / Hut	Wood / Timber	Semi-Concrete	Concrete	Steel	
Number of Structures by Typology	17	343	374	384	10	1128
Unit Cost of Structures / Floor Area (Peso / m ²)	3,600	9,200	11,400	13,500	5,000	-
Average Floor Area of Structures (m ²)	64.207	50.363	76.607	90.932	133.300	-
Cost of Structures (Peso / Structure)	231,145.2	463,339.6	873,319.8	1,227,582	666,500	-
Total Cost of Structures for Typology (Peso)	3,929,468	158,925,483	326,621,605	471,391,488	6,665,000	967,533,044

Source: JICA Survey Team

13.2 Compensation Cost for Lands

13.2.1 Identification and Area of Affected Lands

The lands affected by the Project were identified and measured through aerial photographs using the Geographic Information System (GIS), according to the proposed alignment of the Project. The area of affected lands by barangay is shown in Table 13.2.1 below. The identified affected lands compose of: (a) lands which are required for the right-of-way of construction of structures of the Project and (b) lands which become river area at very higher flood risk after structures of the Project are constructed. The affected lands do not include areas of the NBZ.

Table 13.2.1 Area of Affected Lands by Barangay

Barangay	Type of Land	Land Area (m ²)
Bonbon	Right-of-Way / River Areas	28,194
Kauswagan	Right-of-Way / River Areas	19,950
Carmen	Right-of-Way / River Areas	82,692
Balulang	Right-of-Way / River Areas	237,422
Consolacion	Right-of-Way / River Areas	74,129
Barangay 17	Right-of-Way / River Areas	8,815
Barangay 15	Right-of-Way / River Areas	14,913
Barangay 13	Right-of-Way / River Areas	8,943
Barangay 10	Right-of-Way / River Areas	6,383
Barangay 7	Right-of-Way / River Areas	13,005
Barangay 6	Right-of-Way / River Areas	4,507
Barangay 2	Right-of-Way / River Areas	1,500
Barangay 1	Right-of-Way / River Areas	1,133
Nazareth	Right-of-Way / River Areas	100,070
Macasandig	Right-of-Way / River Areas	145,639
Total	-	747,296

Source: JICA Survey Team

13.2.2 Cost of Affected Land by Barangay

■ Situations of Current Market Value of Land Affected by TS Sendong

Since TS Sendong hit the Cagayan de Oro City in 2011, the values of the lands affected by TS Sendong and heavily flooded along the Cagayan de Oro River including the Project site have been assessed as no commercial value, according to local banks, particularly local branches of the Development Bank of the Philippines and the Land Bank of the Philippines. No assessment of market values for the said lands has been conducted since TS Sendong, according to the said two banks.

■ Latest Available Market Value of Land

Due to the current market value of lands affected by TS Sendong, the latest available market value of lands was sought, and its value in 2008 was obtained from the Assessment Department of the Cagayan de Oro City and presented in the following table (Table 13.2.2). The market value in 2008 can be regarded as the most recent one. A replacement cost of the said lands would be assumed to be lower than the said market value of lands in 2008 if a replacement cost survey for the said lands is conducted currently.

Table 13.2.2 Market Value of Land for Affected Area by Barangay in 2008

Barangay	Vicinity	Market Value (Peso / m ²)
Bonbon	Along Pasil Road	940
	Pasil - Interior	860
Kauswagan	Pasil	840
Carmen	Acacia – Section 1	900
	Acacia – Section 2	1400
Balulang	Villa Angela (All Lots)	780
Consolacion	Along Burgos Street	1520
	All Other (Interior)	1130
Barangay 17	Burgos	1660
Barangay 15	Burgos-Interior	1820
Barangay 13	Burgos-Interior	1820
Barangay 10	Burgos	2630

Barangay	Vicinity	Market Value (Peso / m ²)
Barangay 7	Tirso Neri St to Cruz Taal St (including Burgos Area)	4660
	Cruz Taal St to Julio Pacana St (including Burgos Area)	2630
Barangay 6	Burgos Street	4660
Barangay 2	Capistrano Street	15300
Barangay 1	Fernandez Street	1820
Nazareth	Fernandez Street	1820
Macasandig	Cala-Cala (Piso-Piso)	430

Source: JICA Survey Team

■ Alternative Market Value of Land

With the above situations observed, the effective zonal values of the Bureau of Internal Revenue in the Cagayan de Oro City were sought for the lands affected by the Project, and its latest values in 2005 issued by the Department Order 37-05 of the Department of Finance (September 4, 2005) were obtained and presented in the following table (Table 13.2.3).

Table 13.2.3 Latest Zonal Value of Affected Lands by Barangay in 2005

Barangay	Zonal Vicinity	Zonal Value (Peso / m ²)
Bonbon	Pasil	1,000
Kauswagan	Pasil	1,600
Carmen	Acacia	3,200
Balulang	Villa Angela	1,000
Consolacion	Burgos	1,285
Barangay 17	Burgos	7,700
Barangay 15	Burgos-Interior	7,700
Barangay 13	Burgos-Interior	8,100
Barangay 10	Burgos	8,500
Barangay 7	Burgos	12,000
Barangay 6	Burgos	12,000
Barangay 2	Capistrano	15,375
Barangay 1	Fernandez	6,875
Nazareth	Fernandez	6,875
Macasandig	Piso-Piso	500

Source: JICA Survey Team

■ Comparison of Market Value and Zonal Value

The said market values in 2008 were compared to the said zonal values in 2005, and its comparison is presented in Table 13.2.4.

Table 13.2.4 Comparison of Market Value and Zonal Value

Barangay	Zonal Vicinity	Market Value in 2008 (Peso / m ²)	Zonal Value in 2005 (Peso / m ²)
Bonbon	Pasil	940	1,000
Kauswagan	Pasil	840	1,600
Carmen	Acacia	1,400	3,200
Balulang	Villa Angela	780	1,000
Consolacion	Burgos	1,520	1,285
Barangay 17	Burgos	1,660	7,700
Barangay 15	Burgos-Interior	1,820	7,700
Barangay 13	Burgos-Interior	1,820	8,100
Barangay 10	Burgos	2,630	8,500
Barangay 7	Burgos	4,660	12,000

Barangay	Zonal Vicinity	Market Value in 2008 (Peso /m ²)	Zonal Value in 2005 (Peso /m ²)
Barangay 6	Burgos	4,660	12,000
Barangay 2	Capistrano	15,300	15,375
Barangay 1	Fernandez	1,820	6,875
Nazareth	Fernandez	1,820	6,875
Macasandig	Piso-Piso	430	500

Source: JICA Survey Team

■ Adapted Value and Cost of Land

According to the results of the comparison, the zonal values were found approximately equivalent or higher than the market values. Therefore, the zonal values were adapted to estimate the cost of lands affected by the Project (Table 13.2.5).

Table 13.2.5 Adapted Cost of Affected Lands by Barangay

Barangay	Land Area (m ²)	Zonal Value (Peso /m ²)	Zonal Vicinity	Total Land Cost (Peso)
Bonbon	28,194	1,000	Pasil	28,194,480
Kauswagan	19,950	1,600	Pasil	31,920,432
Carmen	82,692	3,200	Acacia	264,613,376
Balulang	237,422	1,000	Villa Angela	237,422,290
Consolacion	74,129	1,285	Burgos	95,255,829
Barangay 17	8,815	7,700	Burgos	67,872,882
Barangay 15	14,913	7,700	Burgos-Interior	114,833,180
Barangay 13	8,943	8,100	Burgos-Interior	72,440,001
Barangay 10	6,383	8,500	Burgos	54,258,645
Barangay 7	13,005	12,000	Burgos	156,050,520
Barangay 6	4,507	12,000	Burgos	54,085,080
Barangay 2	1,500	15,375	Capistrano	23,063,730
Barangay 1	1,133	6,875	Fernandez	7,791,163
Nazareth	100,070	6,875	Fernandez	687,981,663
Macasandig	145,639	500	Piso-Piso	72,819,665
Total	747,296	-	-	1,968,602,935

Source: JICA Survey Team

13.3 Total Estimated Cost of Resettlement

Table 13.3.1 shows the summary of the total estimated cost of the resettlement of the Project.

Table 13.3.1 Total Estimated Resettlement Cost

Item	Unit	Cost	Remarks
Compensation for Structures (No.)			
- Shanty / Hut	17	3,929,468	Market Value
- Wood / Timber	343	158,925,483	Market Value
- Semi-Concrete	374	326,621,605	Market Value
- Concrete	384	471,391,488	Market Value
- Steel	10	6,665,000	Market Value
Sub-Total		967,533,044	-
Compensation for Lands (m ²)			-
- Residential	747,296	1,968,602,935	Zonal Value
Sub-Total		1,968,602,935	-
Total		2,936,135,980	-

Source: JICA Survey Team

13.4 Budget of Resettlement Cost

13.4.1 Funds for RAP Implementation

DPWH as the project proponent and UPMO-FCMC as the implementing office of the Project shall be responsible for securing and providing needed funds for the implementation of RAP as part of the cost of the Project. The resettlement cost of the Project shall be the component of the counterpart funds provided by DPWH called ROW funds and includes compensation for affected structures and acquisition of affected lands.

13.4.2 Preparation RAP Budget Plan

Consistent with the provisions of the Land Acquisition, Resettlement, Rehabilitation and Indigenous Peoples' Policy (LARRIPP) of DPWH, the ESSD shall assist UPMO-FCMC in preparation, review, update and approval of a RAP budget plan of the Project. The UPMO-FCMC shall, thereafter, submit the RAP budget plan to the Central Office of DPWH for approval of the flow of funds following due diligence review by ESSD.

13.4.3 Procedures for Flow of Funds

DPWH, specifically the implementing office of UPMO-FCMC shall be responsible in securing and providing the funds needed for RAP implementation. Disbursement of funds for the implementation of RAP shall be requested to and obtained by the Central Office of DPWH and implemented and monitored by UPMO-FCMC through Field Office-CDOR.

CHAPTER 14 MONITORING AND EVALUATION

14.1 Primary Purpose of RAP Monitoring

The primary purpose of monitoring the Resettlement Action Plan (RAP) is to ensure that resettlement is carried out based on the RAP. This is also to look into the progress made in terms of comprehensive and timely implementation of RAP and to identify problems as early as possible to facilitate resettlement and necessary mitigations. Included in the monitoring are land acquisition, payment of compensation for lost assets, resettlement of people impacted by the project and release of funds.

14.2 Implementation of Monitoring by DPWH

DPWH undertakes monitoring on implementation of RAP through the Internal Monitoring, which is conducted by ESSD, as well as through the External Monitoring, which is carried out by either a qualified individual or a consulting firm to ensure the neutrality of monitoring of implementation of RAP.

14.2.1 Internal Monitoring

The evaluation and in-house monitoring of the implementation of RAP will be conducted by ESSD and will serve as the Internal Monitoring Agent (IMA) supported by the Project Consultants. The tasks of IMA are to:

- Regularly supervise and monitor the implementation of RAP in coordination with the concerned Resettlement Implementation Committee (RIC). The findings will be documented in a quarterly report to be submitted to UPMO-FCMC and ESSD.
- Verify that the re-inventory baseline information of all PAPs has been carried out and that the valuation of assets lost or damaged, the provision of compensation and other entitlements, and relocation, if any, has been carried out in accordance with LARRIPP and RAP.
- Ensure that RAP is implemented as designed and planned;
- Verify that the funds for RAP implementation are provided by UPMO-FCMC in a timely manner and in the amount sufficient for the purpose;
- Record all grievances and their resolution and ensure that complaints are dealt with promptly.

14.2.2 External Monitoring and Evaluation

The UPMO-FCMC will commission an External Monitoring Agent (EMA) to undertake independent external monitoring and evaluation. The EMA needs to have certain level of monitoring expertise and experiences required by DPWH to be qualified to meet requirements for participating in bidding and selection process of DPWH. It is often that either a qualified individual or consultancy firm is selected to undertake an external monitoring and evaluation work. Prior to the engagement of the EMA, DPWH will prepare the Terms of Reference (TOR) for the EMA. External monitoring and evaluation will entail random observation visits and consultations with PAPs at their current pre-project residence and their relocation site. The tasks of EMA are to:

- Verify results of internal monitoring;
- Verify and assess the results of the information campaign on rights and entitlements of PAPs;
- Verify that the compensation process has been carried out with the procedures communicated with PAPs during consultations;
- Assess if resettlement objectives have been met, specifically if livelihoods and living standards have been restored or improved;
- Assess efficiency, effectiveness, impact and sustainability of resettlement and RAP implementation drawing lessons as a guide to future resettlement;
- Ascertain if the resettlement is appropriate to meet the objectives, and if those objectives are suited to the PAPs' conditions;
- Suggest modification in the implementation procedures of RAP, if necessary; to achieve the principles and objectives of the Resettlement Policy;
- Review how compensation rates were evaluated; and
- Review the handling of compliance and grievances cases.

The EMA shall also include in the monitoring, the results of the disclosure of LARRIPP and RAP to the PAPs during public consultation/s conducted for each project contract package.

14.3 Framework of Monitoring Activities

The monitoring activities and frequency are summarized in the table below:

Table 14.3.1 Monitoring Activities and Frequency

Monitoring Activity	Description	Schedule/ Frequency	Monitoring Agent Responsible
Inception Report and Compliance Monitoring Report	First activity to undertake to determine if RAP is carried out as planned and according to policy.	One month after receipt of Notice to Proceed for the engagement of IMA/ EMA.	IMA, EMA
Monthly Monitoring	Monitoring of RAP implementation activities.	Monthly	IMA
Semi-Annual Monitoring and Evaluation	To verify and follow up if the social and economic conditions of PAPs after project implementation have improved or are at least restored. If PAPs are found worse off in terms of standard of living and livelihood, DPWH in coordination with concerned institutions will provide assistance such as livelihood and skills training.	Every six months until construction work ends.	IMA, EMA
Final Evaluation	Final evaluation of the implementation of LARRIPP.	Three months after completion of compensation payments to PAPs.	IMA
Post Evaluation Monitoring	To determine if the social and economic conditions of PAPs after project implementation have improved or are at least restored.	One year after the completion of the project.	IMA, EMA

Source: JICA Survey Team

14.4 Schedule of Implementation of RAP and Monitoring

The schedule for the implementation of RAP and the required monitoring in view of the project's implementing schedule will be established by UPMO-FCMC in coordination with the ESSD. The activities in the implementation of RAP require quality and quantity results that are time bound. It is expected that all RAP activities like land acquisition, resettlement including compensation have been determined by the IMA and EMA and are completed one month prior to the start of the civil works.

14.5 Reporting

The monitoring reports of the IMA prepared by ESSD and the EMA prepared by an external agent are reported to ESSD and are accountable to UPMO-FCMC. The UPMO-FCMC, which receives monitoring reports through ESSD, reviews and, thereafter, submits the monitoring reports of the IMA and EMA to JICA.

14.6 Monitoring Indicators

(1) Indicators for Internal Monitoring

The table below is the indicators for the Internal Monitoring according to LARRIPP.

Table 14.6.1 Monitoring Indicators for IMA

Monitoring Indicators	Checklist/ Basis for Indicators
Budget and Timeframe	<ul style="list-style-type: none"> ○ Have all land acquisition and resettlement staff been appointed and mobilized for the field and office work on schedule? ○ Have capacity building and training activities been completed on schedule? ○ Are resettlement implementation activities being achieved against the agreed implementation plan? ○ Are funds for resettlement being allocated to resettlement agencies on time? ○ Have resettlement offices received the scheduled funds? ○ Have funds been disbursed according to the RAP? ○ Has the social preparation phase taken place as scheduled? ○ Has all land been acquired and occupied in time for project implementation?
Delivery of Compensation and Entitlements	<ul style="list-style-type: none"> ○ Have all PAPs received entitlements according to numbers and categories of loss set out in the entitlement matrix? ○ Have PAPs received payments for affected structures on time? ○ Have all received the agreed transport costs, relocation costs, income substitution support and any resettlement allowances, according to schedule? ○ Have all replacement land plots or contracts been provided? Was the land developed as specified? Are measures in train to provide land titles to PAPs? ○ How many PAPs resorted to expropriation? ○ How many PAPs received land titles? ○ How many PAPs received housing as per relocation options in the RAP? ○ Does house quality meet the standards agreed? ○ Have relocation sites been selected and developed as per agreed standards? ○ Are the PAPs occupying the new houses? ○ Are assistance measures being implemented as planned for host communities? ○ Is restoration proceeding for social infrastructure and services?

Monitoring Indicators	Checklist/ Basis for Indicators
	<ul style="list-style-type: none"> ○ Are the PAPs able to access schools, health services, cultural sites and activities at the level of accessibility prior to resettlement? ○ Are income and livelihood restoration activities being implemented as set out in income restoration Plan? For example utilizing replacement land, commencement of production, numbers of PAPs trained and provided with jobs, micro-credit disbursed, number of income generating activities assisted? ○ Have affected businesses received entitlements including transfer and payments for net losses resulting from lost business and stoppage of production?
Public Participation and Consultation	<ul style="list-style-type: none"> ○ Have consultations taken place as scheduled including meetings, groups, and community activities? Have appropriate resettlement leaflets been prepared and distributed? ○ How many PAFs know their entitlements? How many know if they have been received? ○ Have any PAFs used the grievance redress procedures? What were the outcomes? ○ Have conflicts been resolved? ○ Was the social preparation phase implemented?
Benefit Monitoring	<ul style="list-style-type: none"> ○ What changes have occurred in patterns of occupation, production and resources use compared to the pre-project situation? ○ What changes have occurred in income and expenditure patterns compared to pre-project situation? What have been the changes in cost of living compared to pre-project situation? Have PAFs' incomes kept pace with these changes? ○ What changes have taken place in key social and cultural parameters relating to living standards? ○ What changes have occurred for vulnerable groups?

Source: JICA Survey Team

(2) Indicators for External Monitoring

The table below is the indicators for the External Monitoring according to LARRIPP.

Table 14.6.2 Monitoring Indicators for EMA

Monitoring Indicators	Checklist/ Basis for Indicators
Basic Information on Project-affected Households	<ul style="list-style-type: none"> ○ Location ○ Composition and structures, ages, education and skill levels ○ Gender of household head ○ Ethnic group ○ Access to health, education, utilities and other social services ○ Housing type ○ Land use and other resource ownership patterns ○ Occupation and employment patterns ○ Income sources and levels ○ Agricultural production data (for rural households) ○ Participation in neighborhood or community groups ○ Access to cultural sites and events ○ Value of all assets forming entitlements and resettlement entitlements
Restoration of Living Standards	<ul style="list-style-type: none"> ○ Were house compensation payments made free of depreciation, fees or transfer costs to the PAP? ○ Have PAPs adopted the housing options developed? ○ Have perceptions of “community” been restored? ○ Have PAPs achieved replacement of key social cultural elements?
Restoration of Livelihoods	<ul style="list-style-type: none"> ○ Were compensation payments free of deduction for depreciation, fees or transfer costs to the PAP? ○ Were compensation payments sufficient to replace lost assets? ○ Did transfer and relocation payments cover these costs? ○ Did income substitution allow for re-establishment of enterprises and production? ○ Have enterprises affected received sufficient assistance to re-establish themselves? ○ Have vulnerable groups been provided income-earning opportunities? ○ Are these effective and sustainable? ○ Do the jobs provided restore pre-project income levels and living standards?
Levels of PAP Satisfaction	<ul style="list-style-type: none"> ○ How much do PAPs know about resettlement procedures and entitlements? Do PAPs know their entitlements? ○ Do they know if these have been met? ○ How do PAPs assess the extent to which their own living standards and livelihood been restored? ○ How much do PAPs know about grievance procedures and conflict resolution procedures? How satisfied are those who have used said mechanisms?
Effectiveness of Resettlement Planning	<ul style="list-style-type: none"> ○ Were the PAPs and their assets correctly enumerated? ○ Was the time frame and budget sufficient to meet objectives? ○ Were entitlements too generous? ○ Were vulnerable groups identified and assisted? ○ How did resettlement implementers deal with unforeseen problems?
Other Impacts	<ul style="list-style-type: none"> ○ Were there unintended environmental impacts? ○ Were there unintended impacts on employment or incomes?

Source: JICA Survey Team

PART-II PUBLIC RELATIONS

CHAPTER 15 UNDERTAKING OF PUBLIC RELATIONS ACTIVITIES

15.1 Key Objective

The key objective of the public relations activities of the Survey is to “disseminate information on the Survey and the Project to stakeholders for their acceptance of the Project.” This will be achieved through promoting participation and enlightenment as well as generating awareness and understanding of stakeholders on the objectives and activities of the Survey and the Project.

15.2 Preparation of Public Relations Plan

In order to achieve the key objective, a public relations plan of the Survey was discussed and prepared in consultation with DPWH and submitted to DPWH on October 31, 2012 and gained the consent of DPWH on November 26, 2012.

15.3 Components of Public Relations Plan

The public relations plan basically consists of the following main activities: (a) stakeholder meetings and (b) public relations media for information dissemination.

15.4 Framework of Stakeholder Coordination

The stakeholder meetings were originally planned to conduct three times during the conduct of the Survey. However, an environmental category of the Survey was changed to Category A from B in April 2013, and, therefore, the stakeholder coordination framework was revised to hold five times, according to the JICA Guideline for Environmental and Social Consideration.

The stakeholder coordination framework was revised to hold five times and explain and discuss local stakeholders the following information on environmental and social consideration: (a) scoping of EIA, (b) outline of draft SEA and M/P, (c) outline of draft EIA and RAP and (d) outline of the Project, overview of results of socioeconomic survey, compensation and assistance measures and overview of resettlement sites exclusively for the project affected persons (PAPs).

The revised stakeholder coordination framework is presented in Table 15.4.1.

Table 15.4.1 Outline of Stakeholder Meetings

	1 st Stakeholder Meeting	2 nd Stakeholder Meeting	3 rd Stakeholder Meeting	4 th Stakeholder Meeting	5 th Stakeholder Meeting
Overall Objective	In order to facilitate implementation of the Project, it is necessary to obtain understanding and cooperation from local governments, local residents, other concerned government agencies and organizations. Therefore, an overall objective is to explain objectives, necessity, overview and environmental and social consideration aspects of the Project and the Survey, so as to generate understanding and awareness of importance of the Project and its implementation as well as to reflect feedback obtained from stakeholders in planning of the Survey. Through holding stakeholder meeting four times, it is expected that stakeholder meetings are functioned as platform to generate understanding and cooperation of the project and the Survey.				

	1 st Stakeholder Meeting	2 nd Stakeholder Meeting	3 rd Stakeholder Meeting	4 th Stakeholder Meeting	5 th Stakeholder Meeting
Specific Objective	Explanation and discussion on outline of the Survey	Prior explanation on socioeconomic survey, and explanation and discussion on draft scoping of EIA Study	Explanation and discussion on draft SEA and draft M/P	Explanation and discussion on project outline (flood risk, flood risk area, affected area), overview of results of socioeconomic survey, compensation and assistance measures, overview of resettlement sites.	Explanation and discussion of draft Feasibility Design, draft EIA, draft RAP
Office in Charge	Project Management Office - Flood Control (PMO-FC)				
Date	January 22 – 25, 2013	July 20, 27, 2013 (Cluster Meeting) September 5, 2013 (Wrap-up Meeting)	October 25, 2013	November 5-6, 2013	November 15, 2013
Venue	Cagayan de Oro and upstream towns (Talakag, Baungon, Libona)	Cagayan de Oro	Cagayan de Oro	Cagayan de Oro	Cagayan de Oro
Invited Stakeholders	<p><u>1st, 2nd, 3rd, 5th Stakeholder Meetings</u> Following stakeholders concerned with the Project and the Survey are invited from the area of the local government unit where the stakeholder meeting was held.</p> <ul style="list-style-type: none"> - Representative from departments and offices of city or municipal governments, - Representatives from private sector and NGO (local business sector, socially vulnerable groups, women's groups, ICC/IPs, etc.) which are members of the city or municipal development councils, - Representatives of barangay chairman of barangays located along river banks of the Cagayan de Oro River, including project affected persons. <p>Aside from the abovementioned participants, the following were also invited to attend the stakeholder meetings (these participants were included in stakeholder meetings held in Cagayan de Oro City).</p> <ul style="list-style-type: none"> - Representatives from regional offices, including other government agencies such as Department of Public Works and Highways (DPWH), Department of Environment and Natural Resources (DENR), National Irrigation Administration (NIA), Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), National and Economic Development Authority (NEDA), Department of Interior and Local Government (DILG), Department of Social Welfare and Development (DSWD), National Housing Authority (NHA), Housing and Urban Development Coordinating Council (HUDCC), Housing and Land Regulatory Board (HLRB), Presidential Commission on Urban Poor (PCUP), Presidential Commission on Women (PCW), Mindanao Development Authority (MINDA), etc, - Representatives from public organizations such as Cagayan de Oro River Basin Management Council (CDORBMC) and Regional Development Council 10 (RDC-10). - Representatives of provinces of Misamis Oriental and Bukidnon, - Representatives of local research institutes or universities and colleges. <p><u>4th Stakeholder Meeting</u></p> <ul style="list-style-type: none"> - Representatives of project affected households (1087 households), - Representatives of barangay councils which project affected households are residing - Representatives of LGU of Cagayan de Oro City 				
No. of Participated Stakeholders	205	741	61	753	88

Source: JICA Survey Team

15.5 Framework of Public Relations Media

The public relations media framework is summarized in the table shown below.

Table 15.5.1 Overview of Public Relations Media Framework

			Contents
Overall Objective			In order for JICA to assist DPWH in providing information on the Survey and the Project to stakeholders, certain types of public relations media such as press release, newsletter, tarpaulin and website are used to generate awareness and understanding of the Survey's and Project's objectives and activities for public acceptance of the Project.
Type of Public Relations Media	Press Release	Objective	To inform a wide range of stakeholders of brief and general information on the Survey and Project through local media.
		Approach	To use opportunities like the Media Forum of NEDA-R10 on projects in the Region 10 scheduled every quarter to present information on the Survey and Project.
		Time Schedule	Next available Media Forum scheduled February or March 2013 is considered. Forthcoming forum scheduled during conduct of the Survey are possibly considered as well.
	Newsletter	Objective	To provide updated information on selected topics of the Survey and the Project (major activities, events and meetings, announcements, etc) to stakeholders in institutions.
		Format	A4 size double-sided format in color print
		Language Used	Local dialect of Cebuano is used. In addition, an English version is prepared before releasing a newsletter for review of contents by JICA and DPWH.
		Location of Distribution	Distributed to major stakeholders in institutions, such as the concerned LGUs (province, city, municipality and barangay), regional offices of national governments and some locally concerned institutions such as the Cagayan de Oro River Basin Management Council and Xavier University, for example.
		Number of Copies	Minimum of 200, additional copies to be printed as need arises.
		Frequency of Circulation	Every milestone of the Survey and Project according to the timetable.
	Tarpaulin Drop-down Banners	Objective	To provide most popular topics selected from the newsletter of the Survey and the Project for a wider range of stakeholders.
		Format	A1 size single-sided and double-spread format in color print.
		Language Used	Local dialect of Cebuano is used. In addition, an English version is prepared before releasing the newsletter for review of contents by JICA and DPWH.
		Location of Placement	Placed at major public facilities and/or buildings such as provincial compound, city hall, town hall, barangay hall, regional offices of national governments, hospitals, and churches.
		Number of Banners	Minimum of 10, additional streamers to be produced as need arises.
		Frequency of Circulation	Every milestone of the Survey and Project according to the timetable.
	Website	Objective	To provide comprehensive information on the Survey and the Project for stakeholders and also a communication platform between the Survey and stakeholders.
		Location of Website	Linked to an official website of DPWH through assistance of Public Information Division of DPWH
		Advertisement of Website Address	Website address is used in many public relations materials, such as calling cards of members and letterheads of the JICA Survey Team, presentation materials, newsletters, and tarpaulin banners.
		Language Used	Local dialect of Cebuano and English are used.

Source: JICA Survey Team

CHAPTER 16 RECORDS OF MAJOR PUBLIC RELATIONS ACTIVITIES

16.1 Stakeholder Meetings

16.1.1 1st Stakeholder Meeting

Date: January 25, 2013

Venue: N Hotel, Cagayan de Oro City

Number of Participants: 70

Date: January 23-24, 2013

Venue: Town Halls for 3 Municipalities in Bukidnon Province (Talakag, Baungon, Libona)

Number of Participants: 135 (Total for 3 Municipalities)

Topics: Explanation and discussion on outline of the Survey

Table 16.1.1 Major Contents of 1st Stakeholder

Location of Meeting	Major Points of Discussion	Response
Meeting in Cagayan de Oro (Downstream of the Cagayan de Oro River)	- From the viewpoint of consideration on landscape, there are concerns on height of structures such as dikes.	From the viewpoint of safety, it is basically a policy that structures which obstacles landscape of river areas and inland areas shall not be considered (DPWH)
	- There shall be enough coordination with local communities to be made on land acquisition and relocation.	The scope of work of the Survey includes social consideration of the Project and looks into the concerns on land acquisition and relocation to come up with necessary measures, considering opinions of stakeholders to be affected (JICA Survey Team).
Meetings in Municipalities in Bukidnon Province (Upstream of the Cagayan de Oro River)	- Request for financial assistance of government agencies, particularly on tree planting for river basin watershed conservation	DENR is the agency responsible for watershed management and tree planting activities. These matters should be coordinated with the said agency for funding assistance (DPWH).

Source: JICA Survey Team

The Minutes of Meeting on the 1st Stakeholder Meeting are provided in Annex-8.

16.1.2 2nd Stakeholder Meeting

Date: July 20, 2013

Venue: Kawsuwagan Elementary School, Cagayan de Oro City

Number of Participants: 131 (in the morning session held for Barangays Bonbon, Kawsuwagan) and 106 (in the afternoon session held for Barangays Carmen, Balulang)

Date: July 27, 2013

Venue: North First District Elementary School, Cagayan de Oro City

Number of Participants: 336 (in the morning session held for Barangays Puntod, Consolacion) and 98 (in the afternoon session held for Barangays Nazareth, Macasandig, 1, 2, 6, 7, 10, 17)

Topics: Prior explanation on socioeconomic survey, and explanation and discussion on draft scoping of EIA Study

Table 16.1.2 Major Contents of 2nd Stakeholder

Location of Meeting	Major Points of Discussion	Response
Barangays Kauswagan and Bonbon in Cagayan de Oro (Cluster Meeting 1)	- Construction of dike along the Nabuslutan Creek was requested to be used as a port for local fisherman.	Construction of a port is not part of the project (DPWH)
	- Repair of a road damaged by on-going construction of DPWH was requested.	This matter will be brought to the attention of the contractor to take appropriate measures (DPWH).
	- In case the Bonbon National High School is affected by the Project, relocation was requested.	Flood risk level of Bonbon area is low, so flood risk is planned to be mitigated through construction of evacuation road and conduct of non-structural measures. Except for the right-of-way area for evacuation road, other areas are not required for relocation and shall not be affected by the Project with thoughtful consideration on planning and construction of the Project (JICA Survey Team)
	- Assistance on livelihood and economic activities is requested if relocation was requested to be provided.	DPWH will handle this matter by coordinating with concerned agencies such as NHA and DSWD (JICA Survey Team).
	- Giving consideration on preservation of nipa and mangrove was requested in the implementation of the Project.	Appropriate consideration will be given, since the Survey includes a survey on mangrove (DPWH).
Barangays Carmen and Balulang in Cagayan de Oro (Cluster Meeting 2)	- Location of resettlement site closed to the city core was requested so as not to affect current business and /or job.	DPWH will look into this matter in detail in coordination with concerned agencies such as NHA, DSWD and LGU from now on (DPWH)
	- Due to effect of drainage caused by the Binonoan Creek, this matter was requested to be included in the Project.	The area affected by drainage from the Binonoan Creek is not located in the Project area, but in the section of the urgent rehabilitation work of DPWH. Therefore, it is suggested that LGU should be responsible to look into this matter (JICA Survey Team).
	- Giving an opportunity of hiring the project affected persons as construction workers of the Project was requested.	Consideration of hiring the project affected persons as construction workers will be looked into by the Project (JICA Survey Team).

Location of Meeting	Major Points of Discussion	Response
	- Provision of socio-psychological care was requested for those who are affected by flooding and required to be relocated.	DPWH will look into this matter and provide socio-psychological care services in coordination with concerned agencies such as NHA, DSWD and LGU from now on (DPWH)
Barangays Puntod and Consolacion in Cagayan de Oro (Cluster Meeting 3)	- Information on compensation, resettlement sites and livelihood assistance for those who are required to be relocated was requested be shared.	DPWH will look into matters on compensation through conducting socioeconomic survey with assistance of LGU and based on replacement cost. Resettlement sites will be looked into in coordination with concerned agencies such as NHA and DSWD (DPWH).
	- Information on how pre-consultation with the project affected persons is undertaken for the on-going urgent rehabilitation work of DPWH was requested to be shared.	Consultation meetings will be accordingly undertaken by DPWH (DPWH)
	- Information on safe distance from the river on flooding and also restrictions on putting building was requested to be shared.	According to the Water Code of the Philippines, extent of easement is 40 meters from the riverbank for the forest area, 20 meters for the agricultural area and 3 meters for the urban area, and putting up building is prohibited (DPWH).
	- Opinion on taking an overlong time of 2 years to start implementing the Project was addressed.	As emergency precautions, the urgent rehabilitation work such as for the structures damaged by TS Sendong are undertaken by DPWH (DPWH)
	- Necessary utilities and amenities were requested to be provided in resettlement sites.	DPWH will handle this matter by coordinating with concerned agencies such as NHA and DSWD (DPWH).
	- Giving priority of hiring the project affected persons to the Project and provision of livelihood assistance were requested.	Consideration of hiring the project affected persons as construction workers will be looked into by the Project (JICA Survey Team).
	- Participation of concerned barangays in operation and management of constructed structures of the Project was requested.	DPWH will basically take a responsibility of operation and management of the constructed structures of the Project, in cooperation with LGUs and other concerned agencies (JICA Survey Team).
Barangays Nazareth, Macasandig, 1, 2, 6, 7, 10, 17 (Cluster Meeting 4)	- Provision of resettlement sites and livelihood assistance was requested.	DPWH will handle this matter by coordinating with concerned agencies such as NHA and DSWD (DPWH).
	- Provision of necessary information on relocation in advance for the project affected persons was requested.	Advance explanation will be provided, in order for the project affected persons to be well prepared for relocation (DPWH)
	- Information on whether the Isle de Oro will be gone or remained by the implementation of the Project was requested to be shared.	The Survey is still in the stage of data collection and analysis. Therefore, a plan for the Isle de Oro is not yet done.
	- Provision of livelihood assistance, public facilities such as schools was	DPWH will look into this matter in detail in coordination with concerned

Location of Meeting	Major Points of Discussion	Response
	requested.	agencies such as NHA, DSWD and LGU from now on (DPWH)
	- Information on source of funding the Project and schedule of the Project was requested to be shared. Early implementation of construction of dikes was also requested.	The Project is assumed to be implemented by Japanese yen loan, and schedule of the Project is not yet finalized. However, the Project is tentatively targeted to start implementation in 2016 (JICA Survey Team).
	- Improvement of drainage in the city was requested to be included in the Project.	Drainage improvement is not included in the Project. However, the Project will look into the matter that the implementation of Project will not affect the drainage in the city (DPWH)
	- Preservation of swamp area in Barangay Nazareth for habitat of creatures was requested.	Swamp area in Barangay Nazareth is planned to be functioned as retarding basin, so habitat for creatures will be basically remained.
Wrap-Up Meeting	- Information on distance of the affected area of the Project from the riverbank was requested to be shared.	According to the Water Code of the Philippines, extent of easement is 40 meters from the riverbank for the forest area, 20 meters for the agricultural area and 3 meters for the urban area, and putting up building is prohibited (DPWH).
	- Concerns on effects of the Project for the cultural heritage (Huluga Cave) were addressed.	The Project area is located 2 – 3 kilometers downstream from the Hulga Cave. The Hulga Cave is, therefore, will not be affected by the implementation of the Project (JICA Survey Team).
	- Opinion of including municipalities of Talakag and Baungon in the upstream as the affected area of the Project was addressed.	The survey area of the environmental assessment study of the Project shall be limited to the directly affected area, which is the Cagayan de Oro City (DENR).
	- Information on whether the dam planned upstream is considered in the environmental assessment study was requested.	The Survey is studying to propose integrating the flood control function to the hydropower dam planned upstream (JICA Survey Team).
	- Opinion of considering effect of the Project on existing gravel mining was addressed.	Effect to gravel mining by the Project will be looked into, considering providing access to the river as part of river structure planning.

Source: JICA Survey Team

The Minutes of Meeting on the 2nd Stakeholder Meeting are provided in Annex-9.

16.1.3 3rd Stakeholder Meeting

Date: October 25, 2013

Venue: N Hotel, Cagayan de Oro City

Number of Participants: 61

Topics: Explanation and discussion on draft SEA and draft M/P

Table 16.1.3 Major Contents of 3rd Stakeholder

Location of Meeting	Major Points of Discussion	Response
Cagayan de Oro	- Following four suggestions were addressed: (a) coordination on the Project with Cagayan de Oro River Basin Management Council, (b) the wide range of the landscape-considered development and utilization of the river area such as pedestrian walk and park, (c) utilization of the river as transportation, and (d) utilization of the proposed retarding basin for park.	Three suggestions ((a), (c), (d)) were received as local opinions for the Project, and one suggestion (b) was addressed as the same opinion as DPWH (DPWH) The three suggestions ((a), (c), (d)) shall be discussed and coordinated with DENR and the City (JICA Survey Team)
	- Following two questions were asked: (a) the implementation schedule of the Project and (b) explanations on flood risk considering a long-term project of a dam construction after the Project with the 25-year return period is completed.	For the section from the river mouth to the 12 kilometer upstream, the urgent rehabilitation works are being undertaken in some portions by DPWH as a short-term project, and the remaining portions are expected to be undertaken by the Project as a mid-term project, in order to accommodate flooding of the 25-year return period. It is assumed that the Project can still accommodate the flooding level of the TS Sendong with the designed freeboard of 1.2 meter (DPWH).
	- The possibility of adaptation of storm wells for the Cagayan de Oro River Basin was asked.	Considering that the source of flood is from the river in the upstream, effects of storm wells for reducing flood water at the downstream of the river are limited. It is, however, noted that storm wells are effective for drainage of inland water (JICA Survey Team) Storm well shall be planned, designed and implemented with drainage for inland water, in order to make effective. There are, however, some concerns, such as: (a) the possibility of impact on grand water and (b) the low effectiveness of reducing flood water while required a certain number of facilities and its associated high costs (DPWH).
	- The possibility of adapting the Alternative 1 considering project and relocation costs was asked.	The Alternative 1 requires relocation of approximately 10,000 houses and is not considered feasible for implementation, due to social impacts and also its associated high cost of land acquisition. Comparing with this extreme alternative, the Alternative 3 to relocate houses in the area of the Flood Risk Level 4 is proposed, in order to reduce social impacts and its associated costs (DPWH).

Location of Meeting	Major Points of Discussion	Response
	- The necessity of removing sedimentation at the river mouth.	The movement of sedimentation at the river mouth is still under analysis in the Survey, and this matter will be looked into by its results for possible counter measures if necessary (DPWH).
	- Following two suggestions were addressed: (a) discussion on the plan for dam construction with the Department of Energy (DOE) and the National Power Corporation (NPC) and (b) explanation on the dam plan to the Cagayan de Oro River Basin Management Council.	For the suggestion (a), DPWH explained that the dam plan is to propose to include flood control allocation to the current plan of the hydropower dam (DPWH). The suggestion (b) was received as local opinions for the Project, (DPWH)
	- Following two questions were asked: (a) utilization of the results of the laider survey and (b) the necessity of countermeasures for drainage and inland water.	The question (a) was received as a local opinion for the Project, and the question (b) was answered that sluice ways are proposed in the Project as part of flood control structures(DPWH)

Source: JICA Survey Team

The Minutes of Meeting on the 3rd Stakeholder Meeting are provided in Annex-10.

16.1.4 4th Stakeholder Meeting

Date: November 5, 2013

Venue: Barangay Nazareth Gym, Cagayan de Oro City

Number of Participants: 158 (in the morning session held for Barangays Balulang, Macasandig, Nazareth) and 115 (in the afternoon session held for Barangay Carmen)

Date: November 6, 2013

Venue: City Tourism Hall, Cagayan de Oro City

Number of Participants: 310 (in the morning session held for Barangays Bonbon, Kawsuwagan, 1, 2, 6, 7, 10, 13, 15, 17) and 170 (in the afternoon session held for Barangay Consolacion).

Topics: Explanation and discussion on project outline (flood risk, flood risk area, affected area), overview of results of socioeconomic survey, compensation and assistance measures, overview of resettlement sites.

Table 16.1.4 Major Contents of 4th Stakeholder

Location of Meeting	Major Points of Discussion	Response
Cagayan de Oro	- Location of structures and affected areas of the Project was asked.	The structures and alignment of the Project planned under the Survey will be reviewed during the Detailed Engineering Design. Therefore, it is possible that the number of affected households may possibly be decreased. However, it is necessary that residents living in the areas of the Flood Relevel 4 are necessary to be relocated. (DPWH)
	- The implementation schedule of the Project such as the time to start the Project was asked.	The Detailed Engineering Design of the Project is scheduled to start from 2015 if the implementation of the Project is approved as planned (DPWH).
	- The time to confirm the number of affected households of the Project was asked.	The number of affected households identified under the Survey will be finalized in the Detailed Engineering Design (DPWH).
	- The contents and eligibility of compensation for loss of assets and assistance measures were asked.	For eligibility of compensation for loss (lands and buildings), either certificate of title or certificate of tax declaration is necessary. Further, double entitlements are not allowed. (DPWH).
	- The assessing criteria for compensation for loss of assets were asked.	For buildings, replacement cost is used, and zonal value of the BIR is used for lands. (DPWH).
	- The eligibility for a housing unit at resettlement sites is asked.	It is the responsibility of DPWH to secure necessary resettlement sites for PAPs by discussing with LGU. (DPWH) The responsibility of NHA is to assist LGU in implementation of resettlement. Therefore, LGU is responsible for implementation of resettlement (NHA)

Source: JICA Survey Team

The Minutes of Meeting on the 4th Stakeholder Meeting are provided in Annex-11.

16.1.5 5th Stakeholder Meeting

Date: November 15, 2013

Venue: N Hotel in Cagayan de Oro City

Number of Participants: 88

Topics: Explanation and discussion of Draft Feasibility Design, Draft EIA, Draft RAP

Table 16.1.5 Major Contents of 5th Stakeholder

Location of Meeting	Major Points of Discussion	Response
Cagayan de Oro	- Sharing information on Draft EIA and Draft RAP was asked.	EIA and RAP Reports will be completed soon and disclosed after these reports are approved by concerned agencies. (City Mayor)
	- Following three questions were asked: (a) consistency of the Survey with the national development plan and the regional development plan, (b) changes from the previous M/P of DPWH and (c) countermeasure for storm surge in relation to the recently occurred storm surge in Leyte.	Following responses were provided that: (a) the Survey is in line with the national and regional development plans, since the Project contributes to fostering development of the Cagayan de Oro City as a central city of the Northern Mindanao Region by reducing flood risk and making the city safer city (JICA Survey Team), (b) the study area of the previous M/P was downstream area, while the this M/P was to cover the river basin, the planned flood scale is targeted at 25 years for the previous M/P and 50 years for this M/P, the flood control measure of this M/P is based mainly on banking for entire river basin (DPWH), and (c) the scope of the Project does not include countermeasure for storm surge. However, it is noted that urgent rehabilitation work of DPWH is ongoing to repair dikes damaged by TS Sendong located nearby the river mouth (DPWH).
	- Following three questions were asked: (a) the necessity of constructing evacuation roads leading to upland area, (b) information about volcanic disaster, and (c) consideration for fish.	Following responses were provided that: (a) at the area where the participant who asked this question resides, the preparation of hazard map and also designation of evacuation roads will be possibly made, (b) in the river basin, Mt. Kitanglad is classified as inactive volcano, and Mt. Kalatungan is active volcano, but status of precursors of a volcanic activities are unknown, and (c) the a certain degree of derangement of habitat of fishes in the river may possibly be unavoidable by dredging and/or excavation work, and there is no inviolable countermeasures. However, the establishment of the sheet to prevent the spreading of turbid water in connection with dredging is proposed in the Project. (JICA Survey Team).
	- The development of resettlement sites and its status was asked.	No descriptions in Japanese version (City Government).
	- Consideration for cultural and historical heritage was asked.	It was confirmed that there is no possibility of affecting cultural and historical heritage by the Project, due to distance from the Project site and elevation. (DPWH).

Location of Meeting	Major Points of Discussion	Response
	- The necessity of developing weather forecasting network system was asked in connection with climate change.	It is hoped that rainfall observation and discharge measurement in the upstream area of the river shall be conducted, in order to enhance the hydrological network in the river basin and its surrounding areas (JICA Survey Team)
	- Early implementation of resettlement site development, preparation and sharing of a list of relocatees were addressed by the congressman.	Addressed requests were duly received. (DPWH)
	- M/P and F/S of the Project have been completed, and the Project has been endorsed by the City Development Council in October 2013. The city, the region and the national government concerned with the Project are currently working together for promoting the implementation of the Project. The area required for land acquisition will be confirmed in the forthcoming Detailed Engineering Design. It is expected that technical solutions will be prepared to be able to obtain social consensus for the implementation of the Project. These remarks were addressed by the city mayor.	Addressed remarks were duly received. (DPWH)
	- The earthquake-resistant design of the proposed structures was asked in connection with the recently occurred earthquake disaster in Bohol.	The design of the proposed structures is based on respective design criteria of the Philippine government (JICA Survey Team).

Source: JICA Survey Team

The Minutes of Meeting on the 5th Stakeholder Meeting are provided in Annex-12.

16.2 Endorsement of the Project by Local Authorities

Toward the implementation of the Project, the Project was approved and endorsed by the local authorities, such as the City Development Council of the Cagayan de Oro City and the Regional Development Council Region 10. The brief outline is summarized in the following table.

Table 16.2.1 Project Endorsement by Local Authorities

		Contents
Executive Committee Meeting of Regional Development Council Region 10 (RDC-10)	Date	October 23, 2012
	Venue	Conference Room, NEDA-R10, Cagayan de Oro City, Misamis Oriental
	Opportunity	Presentation on the overview and preliminary findings of the Survey and the Project was made to the Infrastructure and Utilities Development Committee & Economic Development Committee Meeting of RDC-10.
	Results	Through the endorsement of the Infrastructure and Utilities Development Committee & the Economic Development Committee, the Executive Committee Meeting resulted in seconded and cognizant of the importance of the Survey in forming up of the structural and non-structural measures for flood mitigation of the Cagayan de Oro River Basin. Therefore, the Executive Committee endorsed to support the conduct of the Survey and recommend for supports by RDC-10.
City Development Council of the Cagayan de Oro City	Date	October 14, 2013
	Venue	The Dynasty Court Hotel, Cagayan de Oro City, Misamis Oriental
	Opportunity	Presentation on the overview of the Project was made to the City Development Council Meeting of the Cagayan de Oro City.
	Results	The City Development Council resolved to approve the implementation of the Project and further endorse to the Regional Development Council Region 10 for approval.
Full Council Meeting of Regional Development Council Region 10 (RDC-10)	Date	December 5, 2013
	Venue	Tangub City Hall, Tangub City, Misamis Occidental
	Opportunity	Presentation on the overview of the Project was made to the Full Council Meeting of the Regional Development Council Region 10.
	Results	Through the endorsement of the City Development Council of Cagayan de Oro City and the Infrastructure and Utilities Development Committee of RDC-10, the Full Council Meeting of the Regional Development Council Region 10 endorsed the implementation of the Project.

Source: JICA Survey Team

The Resolutions of the three meetings mentioned in the above table are provided as the following appendixes such as Appendix M (the Executive Committee Meeting of Regional Development Council Region 10), Appendix N (the City Development Council of the Cagayan de Oro City) and Appendix O (the Full Council Meeting of Regional Development Council Region 10).

16.3 Public Relations Media

The following public relations media namely the Newsletter and Tarpaulin Banner were finalized after review by DPWH and JICA and distributed to stakeholders during the 1st Stakeholder Meetings, from January 23 – 25, 2013. It is noted that Newsletter and Tarpaulin Banner were prepared in two languages: (a) one in English for the purpose of review by DPWH and JICA and (b) another one in Visayas for the purpose of distribution to stakeholders. The Newsletter and Tarpaulin Banner are provided as Appendix P).

ANNEXES

Annex-1
***Survey Questionnaire for the Census, Socioeconomic, and
Resettlement Assistance Needs Surveys***

SOCIO-ECONOMIC SURVEY

Questionnaire Number:					
Replacement Cost Survey Tag:					

PROJECT DESCRIPTION: The DPWH is undertaking a flood risk management study for Cagayan de Oro River to develop and eventually put up flood mitigation measures along the affected areas in the river while taking into consideration minimizing the impact on the natural and social environment.

QUESTIONNAIRE IDENTIFICATION

(Q1) Name of Interviewer: _____

(Q3) Time Start: _____ (Q4) Time End: _____

(Q6) Name of Respondent: _____

(Q2) Date of Interview: _____

(Q5) Interview Status: _____ 1st Visit _____ 2nd Visit _____ 3rd Visit _____ Refused _____

(Q7) Reason for Refusal: _____

QUESTIONNAIRE STATUS

Reviewed		Validated and Coded		Checked with encoded data	
Name	Date	Name	Date	Name	Date

PART 1: CENSUS

(C.1.0) Unit under census	[1] Household	[2] Business Establishment	[3] Community Establishment	[4] Business cum Residence	[5] Other, specify _____
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C.2.0 Location of land or property	(C.2.1) House/Bldg #	(C.2.2) Street	(C.2.3) Purok/Sitio	(C.2.4) Barangay
------------------------------------	-------------------------	-------------------	------------------------	---------------------

(C.2.5) Owner/ Occupant of Land in ROW:	[1] Yes	[2] No
(C.2.6) Owner/ Occupant of Land, river area:	[1] Yes	[2] No

C.3.0 Head of Affected Household/ Establishment (HHH)

(C.3.1) Name of Household/ Establishment Head:

(C.3.2) Name of the respondent, if not the Household Head:

(C.3.3) How many households are currently living in this structure/house?

(C.3.4) Religion: [1] Roman Catholic [2] Protestant [3] Barn Again [4] Islam [5] INC [6] Other, specify _____

(C.3.5) Ethnic Group: [1] Non - Indigenous [2] Indigenous, specify _____

(C.3.6) Place of Origin:

[1] Within barangay	[2] Other barangay, within city (CDO)	[3] Within province (Misamis Oriental except CDO)
[4] Mindanao (except Misamis Oriental)	[5] Visayas	[6] Luzon
		[7] Other, specify _____

SOCIO-ECONOMIC SURVEY

C.4.0 Household Profile

(C.4.1) Number of household members: _____ [Include non-relatives who are staying in the house]

(C.4.2) Household members' data:

HMM #	Name	Relation to HH (1)	Age	Sex (2)	Civil Status (3)	Educ'g Attainment (4)	Schooling Status (5)	Primary Occupation/ Income Source (include income from remittance, pension, and rental)	Monthly Income	Work place (6)	Physical/ Health Condition (7)
C.4.2.1	C.4.2.2	C.4.2.3	C.4.2.4	C.4.2.5	C.4.2.6	C.4.2.7	C.4.2.8	C.4.2.9	C.4.2.10	C.4.2.11	C.4.2.12
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											

CODES:

1- Household Head	8- Granddaughter
2- Spouse/Partner	9- Grandfather
3- Son	10- Grandmother
4- Daughter	11- Other Relative
5- Son-in-law	12- Helper
6- Daughter-in-law	13- Other, specify
7- Grandson	

2 Sex:
1- Male
2- Female

3 Civil Status:
1- Single
2- Married
3- Widow/er
4- Separated
5- Live-in

4 Educational Attainment:
0- No formal education
1- Not of school age
2- Pre-school
3- Elementary Undergraduate
4- Elementary graduate
5- High School undergraduate
6- High School graduate
7- Vocational/ Technical
8- Certificate course
9- College undergraduate
10- College graduate
11- Some Post-graduate
12- Post-graduate

5 Schooling Status:
For Household Members 6 – 21 years old.
1- Enrolled
2- Not Enrolled

7 Physical/ Health Condition:
1- Normal
2- Elderly
3- Disabled, Mental
4- Disabled, Physical
5- Chronically ill, specify: _____

6 Workplace
1- At Home
2- Within barangay
3- Within city
4- Within province
5- Within Mindanao
6- Other, specify: _____

SOCIO-ECONOMIC SURVEY

C.5.0 Household/ Establishment tenure and use of the affected land

- (C.5.1) Type of use of this land: _____ [1] Residential [2] Commercial [3] Residential cum commercial [4] Agriculture
 [5] Industrial [6] Institutional [7] Other, specify _____
- (C.5.2) Tenurial Status: _____ [1] Owner [2] Co-Owner [3] Occupant with permission [4] Occupant w/out permission
 [6] Renter [7] Sharer [8] Caretaker [9] Encroacher [10] Other, specify _____
- (C.5.3) Type of land ownership: _____ [1] Private [2] Public (government)
- (C.5.4) What is the total area of this land, in sq.m? _____
- (C.5.5) What is the affected area in sq. m. of this land? _____
- (C.5.5.1) Used for Residential: _____ (C.5.5.3) Used for Agricultural: _____ (C.5.4.5) Used for Institutional: _____
 (C.5.5.2) Used for Commercial: _____ (C.5.4.4) Used for Industrial: _____ (C.5.4.6) Used for other, specify _____

(C.5.6) How long have you been staying or utilizing this land? _____ year/s

For Household/ Establishment that owns/claims the land

[ONLY FOR OWNER/S OR CO/OWNER/S. REFER TO C.5.2]

- (C.5.7) Do you have valid document to prove ownership of this land? _____ [1] Yes [2] No ⇒ If "NO", proceed to C.5.12
- (C.5.8) If yes, what kind of document do you have? _____ [1] Land title [2] Real Estate Tax Receipts [3] Other, specify _____
- (C.5.9) Under whose name is the document? _____
- (C.5.10) When did you obtain the document? _____ Month: _____ Year: _____
- (C.5.11) How much did you pay to obtain said document? _____ [1] Php [2] None/free of charge
- (C.5.12) How did you obtain the land? _____ [1] Purchased [2] Inherited [3] Given [4] Allocated by the government [5] Other, specify _____
- (C.5.13) Do you pay the real estate tax for the land? _____ [1] Yes [2] No
- (C.5.13.1) If yes, how much? _____ Php

For Household/ Establishment that rents the land

[ONLY FOR RENTER/S. REFER TO C.5.2]

- (C.5.14) How long have you been in this land? _____ [1] _____ year/s [2] Do not remember
- (C.5.15) How long are you going to stay in this land? _____ [1] _____ year/s [2] Not very sure
- (C.5.16) Who is the owner of the land? Please name the owner. _____
- (C.5.16.1) Owner's address: _____
- (C.5.17) What type of arrangement of renting do you have? _____ [1] Written contract [2] Verbal agreement [3] Other, specify _____
- (C.5.18) How much is the rental fee per month? Php _____ (For land only or for land and structure)
- (C.5.19) Is your household a permanent or seasonal dweller in this land? _____ [1] Permanent [2] Seasonal

SOCIO-ECONOMIC SURVEY

Ask ALL Households

(C.5.20) Apart from this land (in affected area), do you have any land nearby or somewhere else? [1] Yes [2] No [If "YES", provide details in table below]
[If "NO" ⇒ proceed to C.6.1]

Other land	Type of Use (1)	Tenure (2)	Total Area (in sq m)	Distance from this land (in km)	# of years owned/ used (years)	Location/ Address (3) Write down address and code.
C.5.20.1	C.5.20.2	C.5.20.3	C.5.20.4	C.5.20.5	C.5.20.6	C.5.20.7
1						
2						
3						
4						
5						

CODES:

1 Type of Use
1- Residential
2- Commercial/ Business
3- Agricultural
4- Fallow/ grazing
5- Other, specify:

2 Tenure
1- Owner
2- Co -owner
3- Occupant with permission
4- Occupant without permission
5- Encroacher
specify:

3 Location
1- Within barangay
2 -Within city
3-Within province
4- Within Mindanao
5- Visayas
6- Luzon
7- Other, specify:

C.6.0 Household Claim to the Affected Main Structure

(C.6.1) Are you an/ a of this affected structure/house? [1] Owner [2] Co-Owner [3] Occupant with permission [4] Occupant w/out permission
(C.6.2) Type of structure ownership: [1] Private [2] Public (government) [3] Occupant with permission [4] Occupant w/out permission
(C.6.3) What is the total area of this structure, in sq.m?
(C.6.4) What type of house are you living in? [1] Attached to ground [2] 2nd floor [3] Sitting on stilts [4] Other, specify

(C.6.5) Other permanent structures/ improvements detached from the main structure within the lot area. Write down number of each.

(C.6.5.1) Shed	(C.6.5.2) Toilet	(C.6.5.3) Fence	(C.6.5.4) Storeroom	(C.6.5.5.1) Other, specify: <u> </u>	(C.6.5.5.2) Number

C.7.0 Business operated / other activity in the structure / establishment: (If any)

C.7.1 Business Information

C.7.1.1	(C.7.1.2) Type of Business (1) Write down specific type of business and code.	(C.7.1.3) Number of Employees	(C.7.1.4) Years in business	(C.7.1.5) Business License (2)	(C.7.1.6) Average Monthly Income (in PhP)
1					
2					
3					
4					
5					

CODES:

1 Type of Business:	
1- Trading	4- Home/ Small-scale Industry
2- Manufacturing	5- Transport
3- Personal Services	6- Service Contracting
	7- Agri-business
	8- Other, specify: _____

2 Business License:
1- With license
2- Without license

C.7.2 Employee Information

C.7.2.1	(C.7.2.2) Name of Employee	(C.7.2.3) Address/ Origin (1) Write down address and code.	(C.7.2.4) Employment Status (2)	(C.7.2.5) Monthly Salary (in PhP)
1				
2				
3				
4				
5				
6				
7				
8				

CODES:

1 Address/ Origin:	
1- At home	4- Within province
2- Within barangay	5- Within Mindanao
3- Within city	6- Other, specify: _____

2 Employment Status:	
1- Permanent/ Regular	4- Seasonal/ Intermittent
2- Casual/ Temporary	5- Self-employed
3- Contractual	6- Other, specify: _____

SOCIO-ECONOMIC SURVEY

Definition of a Household:

	A person living alone or a group of persons (not necessarily related) who:	Include:
1	Occupy a part of or an entire building	1 Non-relatives
2	Live together at the same address with common housekeeping	2 Whether member is or is not at home during survey or temporarily absent
3	Pool their income	3 Household member coming back weekly or bi-weekly regularly
4	Share the same kitchen/ living room and eat at least one meal together	
5	Have a common arrangement for the preparation and consumption of food	

Coding Instruction for Questionnaire Number:

Number	Letter/ Number	
1st	Barangay Code	Left Bank Barangays: Bonbon (Bo), Kauswagan (Ka), Carmen (Ca), Balulang (Ba) Right Bank Barangays: Macabalan (Mb), Puntod (Pu), Consolacion (Co), Nazareth (Na), Macasandig (Mc) Right Bank Poblacion Barangays: 1, 2, 6, 7, 10, 13, 15, 17
2nd	L or R only	Refer to the map. L stands for Left Bank and R stands for Right Bank of the Cagayan de Oro River.
3rd	1, 2, 3, or 4 only	Refer to the map. The number refers to the specific area either in the left or right bank of the river.
4th	D or I only	D refers to structures in the Right of Way (ROW, directly affected while I refers to structures in the River area (indirectly affected)
5th	001, 002, 003	Generic questionnaire number: 001 to 999 +++ (Will depend on the number of affected households)
6th	A, B, C, D, E	Use separate questionnaires if households are 2 and above in a structure. Use A if there is only 1 household, if multiple use B, C, D

SAMPLE QUESTIONNAIRE NUMBER:

Ca	L2	D	008	A	Structure is in Barangay Carmen, left bank (L), Area (2), 008 (generic questionnaire number), 1 household only (A)
17	R4	D	157	B	Structure is in Barangay 17, right bank (R), Area (4), 157 (generic questionnaire number), 2 households in one and the same structure (B)
17	R4	D	157	C	Structure is in Barangay 17, right bank (R), Area (4), 157 (generic questionnaire number), 2 households in one and the same structure (C)

PART II: HOUSEHOLD AND LIVING CONDITION

H.1.0 Household Information

(H.1.1) Length of Stay in Current Residence: _____ year/s

H.1.2 Reason for Establishing Residence/ Business in the Area [Choose only one answer among Economic, Social and Other Reason]

(H.1.2.1) Economic Reason: _____ [1] Proximity to livelihood [2] Rent-free/ Affordable rental rate

(H.1.2.2) Social Reason: _____ [1] Family ties [2] Near school [3] Got married/ separated

(H.1.2.3) Others: _____ [1] Awardee [2] Acquired right [3] Emergency (calamity, demolition) [4] No other place to go [5] Other, specify _____

(H.1.3) Family Type: _____ [1] Nuclear [2] Extended [3] Joint

H.2.0 Monthly Income and Expenditure

(H.2.1) Total Monthly Income of Household: _____ (in PhP)

H.2.2 Average Monthly Expenditure:

Item	Amount (in PhP)
(H.2.2.1) TOTAL for Food	

Item	Amount (in PhP)
(H.2.2.3) TOTAL Food + Non-Food	

Item		Amount (in PhP)	Item	Amount (in PhP)
(H.2.2.2a)	Electricity		(H.2.2.2g)	Clothing
(H.2.2.2b)	Water		(H.2.2.2h)	Housing/ Rent
(H.2.2.2c)	Education		(H.2.2.2i)	Entertainment, Vices
(H.2.2.2d)	Transportation		(H.2.2.2j)	House help, Salary
(H.2.2.2e)	Communication		(H.2.2.2k)	Other, specify
(H.2.2.2f)	Medicines		(H.2.2.2)	TOTAL for Non-Food

(H.2.3) Who is managing household income and expenditure? _____ [1] Male [2] Female

H.2.4 Household assets:

SOCIO-ECONOMIC SURVEY

Assets	1. Number of Working Assets	2. Number of Non-working Assets	Assets	1. Number of Working Assets	2. Number of Non-working Assets
(H.2.4a) Minibus			(H.2.4k) Refrigerator		
(H.2.4b) Truck			(H.2.4l) Television		
(H.2.4c) Car/ Jeep			(H.2.4m) Electric Fan		
(H.2.4d) Motorboat/ Banca			(H.2.4n) Gas/ Electric Stove, Oven		
(H.2.4e) Motorbike			(H.2.4o) Washing Machine		
(H.2.4f) Tricycle			(H.2.4p) Landline phone		
(H.2.4g) Pedicab			(H.2.4q) Mobile phone		
(H.2.4h) Bicycle			(H.2.4r) Computer/ Laptop		
(H.2.4i) Pushcart			(H.2.4s) Radio/ CD/DVD Player		
(H.2.4j) Mobile cart for business			(H.2.4t) Other, specify		

H.2.4.1 Other Assets (Animals) Write down number of each.

(H.2.4.1a) Pig	(H.2.4.1b) Chicken/ Duck	(H.2.4.1c) Dog	(H.2.4.1d) Goat	(H.2.4.1e) Cow	(H.2.4.1f) Other, specify	(H.2.4.1f) Other, specify number

H.2.4.2 Other Assets (Trees)

Kind of Tree	1. Number	2. Age (in year/s)	Kind of Tree	1. Number	2. Age (in year/s)
(H.2.4.2a)			(H.2.4.2e)		
(H.2.4.2b)			(H.2.4.2f)		
(H.2.4.2c)			(H.2.4.2g)		
(H.2.4.2d)			(H.2.4.2h)		

H.2.4.3 Other Assets (Crops)

Kind of Crop	1. Number	2. Plot area (in sq.m.)
(H.2.4.3a)		
(H.2.4.3b)		
(H.2.4.3c)		
(H.2.4.3d)		

H.3.0 Standard of Living

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(H.3.1) Kind of Dwelling: _____ [1] single detached [2] duplex [3] two-storey [4] multi-storey [3 storeys and above] [5] apartment/ townhouse [6] condominium unit [7] row house [8] Others, specify _____

(H.3.2) Type of Housing Materials: _____ [1] Salvaged (plastic, tin, cardboard, etc.) [2] Light (nipo, cogon, bamboo, wood) [3] Strong (hollow blocks, GI sheets, wood) [4] Mixed (light and strong)

(H.3.3) What kind of toilet facility does your household use? _____ [1] Water sealed lotrine [2] Pit lotrine [3] Open-pit [4] None

(H.3.4) What type of energy source does your household use? _____ [1] Power grid line [2] Generator [3] Battery [4] Kerosene [5] Other, specify _____

(H.3.5) What is the main source of drinking water for members of your household? _____ [1] Piped water [2] Public tap [3] Tube-well [4] Dugwell [5] Pond [6] Refilling Station [7] Other, specify _____

(H.3.5.1) What is the main source of domestic water for members of your household? _____ [1] Piped water [2] Public tap [3] Tube-well [4] Dugwell [5] Pond [6] Other, specify _____

(H.3.6) What is the main source of information/news of your household? _____ [1] Radio [2] Television [3] Newspaper [4] Magazine

H.3.7 How far is your house from the following facilities (in km)?

(a) Health Center	(b) Hospital	(c) Primary School	(d) High School	(e) College	(f) Market	(g) Place of Worship

H.3.8 Has any member of your family affected by any illness in the last 30 days? _____ [1] Yes [2] No [If "YES", provide details in table below] [If "NO" ⇒ proceed to H.3.9]

HH member by age breakdown	1. Male (Number)	2. Female (Number)	3. Type of Illness/ Sickness. Write down illness and code.	4. Code
(a) 9 years old and below				
(b) 10-19 years old				
(c) 20-29 years old				
(d) 30-39 years old				
(e) 40-49 years old				
(f) 50-59 years old				
(g) 60 years old and above				
(h) Total				

H.3.9 How many among the household members are:

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	(1) Decision maker	(2) Income earner	(3) Property holder	(4) Elected local official	(5) NGO/ Community Organization member: Specify Name of Organization
(a) Men					
(b) Women					
(c) Children					

H.4.0 Business Activity

[If "YES", please indicate the details below]

(H.4.1) Are you engaged in any business activity? _____

[1] Yes [2] No

[If "NO", proceed to Question H.5.0]

If "YES", please indicate the details:

(1) Type of Business	(2) Location	(3) Registration	(4) Size of Business Area (sq m)	(5) Initial Capital (in PhP)	(6) Source of Capital (4)	(7) Present Capitalization (in PhP)	(8) Year/s in Operation (year/s)	(9) Monthly Net Income (in PhP)	(10) Number of Workers (number)
(a)	(2)	(3)	(sq m)	(in PhP)	(4)	(in PhP)	(year/s)	(in PhP)	(number)
(b)									
(c)									
(d)									
(e)									

CODES:

1- Trading
2- Manufacturing
3- Personal Services
4- Home/ Small-scale Industry
5- Transport
6- Service Contracting
7- Agri-business
8- Other, specify: _____

Location	
1- Within affected property	6- Visayas
2- Outside property, within barangay	7- Luzon
3- Outside barangay, within city	8- Multi locations
4- Outside city, within province	9- Other, specify: _____
5- Outside province, within Mindanao	

3 Registration
1 - With business permit
2 - Without business permit

4 Source of Capital
1- Personal savings
2- Private moneylender
3- Cooperative
4- Relatives/ Friends
5- Other, specify: _____

(H.4.2) Do you intend to expand your business? _____ [1] Yes [2] No

(H.4.2.1) If "Yes", what assistance do you need? _____ [1] Additional capital [2] Additional manpower [3] Training, specify _____

[4] Other, specify _____

H.5.0 Assistance Received from Government/ Non-government Organizations

(H.5.1) Has your household been a recipient of government and/or non-government assistance in the last 5 years? _____ [1] Yes [2] No
If "YES", please indicate the details:

	(1) Name of GO/ NGO	(2) Type of assistance received	Period	
			(3) Start	(4) End
(a)				
(b)				
(c)				

H.6.0 Major Problems in the Community

Please check only one level for each problem .

List of Problems	Severe	Moderate	Not Severe	None
(H.6.1) Drugs				
(H.6.2) Theft/Robbery				
(H.6.3) Malnutrition				
(H.6.4) Common illness				
(H.6.5) Sanitation				

List of Problems	Severe	Moderate	Not Severe	None
(H.6.6) Solid Waste				
(H.6.7) Drainage				
(H.6.8) Water				
(H.6.9) No security of tenure				
(H.6.10) Others, specify				

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H.7.0 Awareness, Perception, and Attitude Regarding the Project

(H.7.1) Are you aware of the proposed project? _____ [1] Yes [2] No [If "NO", inform about the project then proceed to H.7.2]

(H.7.1.2) If "YES", how did you know about it? _____ [1] Public meetings with LGUs [2] neighbors [3] friends/relatives [4] Other, specify _____

(H.7.2) What do you think about it? _____ [1] Very good [2] Good [3] Bad [4] No Answer

(H.7.3) Why do you think so? State the reason/s for the answer. _____

(H.7.4) If the answer is "Bad", what could be the possible solutions to lessen/eliminate the negative results of the project? _____

(H.7.5) For those who answered "Bad" and who gave solutions: Would you approve of the proposed project, if the negative results of the project would be lessened or eliminated? _____ [1] Yes [2] No [3] No answer

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(H.7.6) Should the project affect your area/ household and necessitate resettlement/ relocation, how will it affect your view of the project? _____
 [1] Very good [2] Good [3] Bad [4] No Answer

(H.7.7) Why do you think so? Please state the reason/s for the answer. _____

(H.7.8) Should the project necessitate the resettlement/relocation of the affected households, would you be willing to be resettled/ relocated? _____ [1] Yes [2] No

(H.7.9) Why? Please state the reason/s for the answer. _____

(H.7.10) If the answer is "Yes", how soon could you vacate your present residence? _____ [1] 1 month [2] 2 months [3] more than 2 months
 [4] After end of school year [5] Other, specify _____

(H.7.11) Have you or any member of your household been offered a housing unit in any of the resettlement sites for Cagayan de Oro residents? _____ [1] Yes [2] No
[If "NO" ⇒ proceed to H.7.13]

(H.7.11.1) When was the offer made? _____ Month _____ Year

(H.7.11.2) Institution/ government agency that offered a housing unit. _____

(H.7.11.3) Resettlement site/ location _____

(H.7.12) Did you or any member of your household accept the offer of a housing unit in any of the resettlement sites for Cagayan de Oro residents? _____ [1] Yes [2] No

(H.7.12.1) Why? Please state the reason/s for the answer. _____

(H.7.13) Have you or any member of your household been awarded a housing unit in any of the resettlement sites for Cagayan de Oro residents? _____ [1] Yes [2] No

(H.7.13.1) When was the award made? _____ Month _____ Year

(H.7.13.2) Institution/ government agency that awarded a housing unit. _____

(H.7.13.3) Resettlement site/specify _____

R.1.0 Relocation and Income Restoration Option

(R.1.1) If you are asked to relocate, what is your preferred relocation option? [1] Some barangay [2] Nearby barangay [3] Within the city [4] Nearby towns [5] On own land elsewhere [6] Push back in the same land

(R.1.2) If you will be relocated what type of relocation do you prefer? [1] Self-relocation with project assistance [2] Group relocation with project assistance [3] Resettlement in government sponsored site [4] Other, specify

(R.1.3) Preferred assistance for livelihood and income restoration: [1] Cash assistance to buy replacement land and reconstruction of house structure [2] Replacement land [3] Transport assistance and transition allowance [4] Access to loan [5] Skill development training [6] Other, specify

(R.1.4) Most desired basic services/ facilities in relocation site: [1] Health Center [2] Private Clinic [3] Government Hospital [4] Police Outpost [5] Livelihood Center [6] Market [7] Elementary School [8] High School [9] Barangay Center [10] Other, specify

(R.1.5) Whether land is available for your relocation: [1] Yes [2] No [If "NO" => proceed to R.1.6]

(R.1.5.1) If, yes, price of available land: [1] PhP per sq.m. for residential land [2] PhP per sq.m. for commercial land [3] PhP per ha for agricultural land

(R.1.5.2) If yes, what is the distance from the existing location? [1] Residential: [2] Commercial: [3] Agricultural: [1] less than 1km [2] between 1 to 2km [3] between 3 to 4km [4] between 5 to 10km [5] more than 10km

(R.1.6) If you receive compensation in cash what will you use the money for? [1] Purchase land [2] Construction of new house [3] Repair of house [4] Invest in business [5] Placement fee for job abroad [6] Wedding of children [7] Other, specify

(R.1.7) Indicate type of vulnerability of Household, if any: [1] Landless [2] Disabled household head [3] Female headed household [4] Elderly household head [5] Solo parent household head [6] Indigenous people [7] Child-headed household [8] None [9] Other, specify

R.2.0 Employable Household Members' Data (For household members 15 years old and above)							[REFER TO C.4.2, INCLUDE HOUSEHOLD HEAD]		
#	(a.1) Name of Employable HH Member	(a.2) Educ. Att.	(a.3) Primary Occupation/ Income Source	(a.4) Reason for Unemployment	(a.5) Monthly Income	(a.6) Employment Status (1)	(a.7) Workplace (2)	(a.8) Mode of Payment (3)	Transportation (a.9) Time (minutes) (a.10) Cost (PhP)
1									
2									
3									
4									
5									

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[REFER TO C.4.2, INCLUDE HOUSEHOLD HEAD]

# HH	(b.1) Name of Employable HH Member	(b.2) Secondary Occupation/ Income Source	(b.3) Monthly Income	(b.4) Employment Status (1)	(b.4) Workplace	(b.5) Mode of Payment (3)	(b.6) Fund Membership (4)
1							
2							
3							
4							
5							

CODES:

1 Employment Status
1- Permanent/ Regular
2- Casual/ Temporary
3- Contractual,
4- Seasonal/ Intermittent
5- Self-employed
6- Other, specify: _____

2 Workplace
1- At Home
2- Within barangay
3- Outside, barangay, within city
4- Outside city, within province
5- Outside province, within Mindanao
6- Other, specify: _____

3 Mode of Payment
1- Daily
2- Weekly
3- Bi-monthly
4- Monthly
5- Pakyaw/ Piecemeal
6- Commission
7- Other, specify: _____

4 Fund Membership
1- GSIS
2- SSS
3- Pagibig
4- GSIS and SSS
5- GSIS and Pagibig
6- SSS and Pagibig
7- GSIS, SSS and Pagibig
8- None

(R.2.1) Information on Skills, Business Interests, and Training Needs of Employable Household Members (Employed and Unemployed, 15 years old and above)

[REFER TO C.4.2, INCLUDE HOUSEHOLD HEAD]

HH M #	(a) Name of Employable HH Member	(b) Existing/ Present Skills	(c) Skills/ Training Preference	(d) Business Interest/ Preference
1				
2				
3				
4				
5				

[REFER TO C.7.2]

R.3.0 Other Information on Employees of Business Establishments

	(a) Name of Employee	(b) Existing/ Present Skills	(c) Skills/ Training Preference
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Name of Respondent	:	Name of Interviewer	:
Contact Number of Respondent	:		
Signature of Respondent	:	Signature of Interviewer	:
Date Signed	:	Date Signed	:
Verified by Supervisor	:	Date	:

Annex -2
Philippine Laws and Regulations Related to Resettlement

Fundamental National Laws on Resettlement

Laws and Regulations	Provisions	JICA Guideline # of Table 5.2
The 1987 Constitution of the Republic of the Philippines	The provisions of the Constitution providing basic legal foundation of the State on resettlement are:	
	ARTICLE III BILL OF RIGHTS	
	Section 1. No person shall be deprived of life, liberty, or property without due process of law, nor shall any person be denied the equal protection of the laws.	1
	Section 7. The right of the people to information on matters of public concern shall be recognized. Access to official records, and to documents and papers pertaining to official acts, transactions, or decisions, as well as to government research data used as basis for policy development, shall be afforded the citizen, subject to such limitations as may be provided by law.	6
	Section 9. Private property shall not be taken for public use without just compensation.	
	ARTICLE XIII SOCIAL JUSTICE AND HUMAN RIGHTS	
	Section 1. The Congress shall give highest priority to the enactment of measures that protect and enhance the right of all the people to human dignity, reduce social, economic, and political inequalities, and remove cultural inequities by equitably diffusing wealth and political power for the common good.	1
	To this end, the State shall regulate the acquisition, ownership, use, and disposition of property and its increments.	
	URBAN LAND REFORM AND HOUSING	
	Section 9. The State shall, by law, and for the common good, undertake, in cooperation with the private sector, a continuing program of urban land reform and housing which will make available at affordable cost, decent housing and basic services to under-privileged and homeless citizens in urban centers and resettlement areas. It shall also promote adequate employment opportunities to such citizens. In the implementation of such program the State shall respect the rights of small property owners.	2
	Section 10. Urban or rural poor dwellers shall not be evicted nor their dwelling demolished, except in accordance with law and in a just and humane manner.	2,6
	No resettlement of urban or rural dwellers shall be undertaken without adequate consultation with them and the communities where they are to be relocated.	
	ROLE AND RIGHTS OF PEOPLE'S ORGANIZATIONS	
	Section 16. The right of the people and their organizations to effective and reasonable participation at all levels of social, political, and economic decision-making shall not be abridged. The State shall, by law, facilitate the establishment of adequate consultation mechanisms.	8

National Laws on Land Acquisition and Compensation

Laws and Regulations	Provisions	JICA Guideline # of Table 5.2
Executive Order 1035 (1985) Providing the Procedures and Guidelines for the Expeditious Acquisition by the Government of Private Real Properties or Rights thereon for Infrastructure and other Government Development Projects	<p>Procedures and guidelines for expeditious acquisition:</p> <p>Title A Activities Preparatory to Acquisition of Property</p> <p>Section 2. Feasibility studies shall be undertaken for all major projects, and such studies shall, in addition to the usual technical, economic and operational aspects, include the social, political, cultural and environmental impact of the project.</p> <p>Title D Assistance to Displaced Tenants/Occupants</p> <p>Sec. 17. Relocation/Resettlement of Tenants/Occupants Affected by Property/ROW Acquisitions.</p> <p>In case where the land to be acquired for the project would involve displacement, concerned agencies shall extend full cooperation and assistance to the implementing agency in the relocation and resettlement of displaced tenants, farmers and other occupants.</p>	<p>10</p>
Supreme Court Ruling	<p>Aspects of rulings on just compensation in relation to valuation of property:</p> <p>G.R. No. L-59603 April 29, 1987</p> <p>Just compensation is defined as the value of the property at the time of the taking; a <i>fair and full equivalent</i> for the loss sustained taking into account the condition of the property and its surroundings, its improvements and capabilities.</p> <p>G.R. No. 150936 August 18, 2004</p> <p>The just compensation to which the owner of a condemned property is entitled is generally the market value. Market value is "that sum of money which a person wanting but not compelled to buy, and an owner willing but not compelled to sell", would agree on as a price to be given and received. Such amount is not limited to the assessed value of the property or to the schedule of market values determined by the provincial or city appraisal committee. However, these values may be in consideration in the judicial valuation of the property.</p> <p>G.R. No. 169957 and G.R. No. 171558 July 11, 2012</p> <p>In the determination of just compensation, The "just"-ness of just compensation can only be attained by using reliable and actual data as bases in fixing the value of the condemned property. Recommended valuation should be supported by corroborative evidence, such as sworn declarations of realtors in the area concerned and tax declarations or zonal valuation from the Bureau of Internal Revenue (BIR).</p> <p>G.R. No. 173520 January 30, 2013</p> <p>Just compensation has been defined as "the full and fair equivalent of the property taken from its owner by the expropriator. The measure is not the taker's gain, but the owner's loss. The word 'just' is used to qualify the meaning of the word 'compensation' and to convey that the amount to be tendered for the property to be taken shall be real, substantial, full and ample." Rulings have been consistent that statutes and executive issuances fixing or providing for the method of computing just compensation are not binding on courts and, at best, are treated as mere guidelines in determining the amount.</p>	<p>1</p> <p>3</p> <p>3</p>
Republic Act 7160 Local Government	<p>Provisions of this Act include principle in appraisal and definition of fair market value.</p> <p>Book I General Provisions, Title II Real Property Taxation</p>	

Laws and Regulations	Provisions	JICA Guideline # of Table 5.2
Projects	<p>Section 5. Quit Claim – It is the mode applicable to private property or land acquired under the provisions of special laws, particularly P.O. No. 635 which provides a 60-meter strip of land easement by the government for public use with damages to improvements only. No payment by the government shall be made for land acquired under this mode.</p> <p>Section 6. Exchange or Barter – The owner of a property needed for a ROW of a national government project may request the government to exchange or barter his property with an old abandoned government road or other government property near the project, instead of being paid the money value of his property, subject to the provisions of relevant laws and conditions such as the exchange shall be done on a "value-for-value" basis.</p> <p>Section 7. Negotiated Sale or Purchase - If the owner of the property needed for a ROW is not willing to donate his property to the government, the Implementing Agency shall negotiate with the owner for the purchase of the property by offering first as just compensation the price in the current zonal valuation issued by the Bureau of Internal Revenue (BIR) for the area where the private property is located. In case the owner disagrees with the first offer, negotiation for the purchase price shall not be higher than the fair market value of the property to be determined by using prescribed standards for assessment of land value (Section 5).</p> <p>Section 8. Expropriation - If the owner of a private property does not agree to convey his property to the government by any of the modes of acquiring and/or transferring ownership of the property, then the government shall exercise its right of eminent domain by filing a complaint with the proper Court for the expropriation of the private property.</p> <p>Section 10. Valuation of Improvements and/or Structures</p> <p>The Implementing Agency shall determine the valuation of the improvements and/or structures on the land to be acquired using the replacement cost method. It is the amount necessary to replace the improvements/structures, based on the current market prices for materials, equipment, labor, contractor's profit and overhead, and all other attendant costs associated with the acquisition and installation in place of the affected improvements/structures.</p> <p>In the valuation of the affected improvements/structures, the kinds and quantities of materials/equipment used, the location, configuration and other physical features of the properties, and prevailing construction prices shall be considered by the Implementing Agency.</p> <p>Section 11. Engagement of Appraisers – If the Implementing Agency deems it necessary, may engage the services of government financing institutions and/or private appraisers duly accredited by the said institutions to undertake the appraisal of the property and to determine its fair market value. The Implementing Agency shall consider the recommendations of the said appraisers in deciding on the purchase price of or just compensation for the property.</p>	<p>3</p> <p>3</p>

National Laws and National Agencies' Guidelines on Resettlement

Laws and Regulations	Provisions	JICA Guideline # of Table 5.2
<p>Republic Act 7160 Local Government Code of 1991</p>	<p>This act mandates public consultations. Book I General Provisions, Title I Basic Principles Chapter I The Code: Policy and Application</p> <p>Section 2. (c) Requires all national agencies to conduct periodic consultations with appropriate local government units, NGOs and POs, and other concerned sectors of the community before any project or program is implemented in their respective jurisdiction.</p> <p>Chapter III Intergovernmental Relations Article I National and Local Government Units</p> <p>Section 26. Duty of National Government Agencies in the Maintenance of Ecological Balance. - It shall be the duty of every national agency or government-owned or controlled corporation involved in the planning and implementation of any project or program that may cause pollution, climatic change, depletion of non-renewable resources, loss of crop land, rangeland, or forest cover, and extinction of animal or plant species, to consult with the local government units, nongovernmental organizations, and other sectors concerned and explain the goals and objectives of the project or program, its impact upon the people and the community in terms of environmental or ecological balance, and the measures that will be undertaken to prevent or minimize the adverse effects.</p> <p>Section 27. Prior Consultations Required - No project or program shall be implemented by government authorities unless the consultations mentioned in Sections 2 (c) and 26 are complied with, and prior approval of the Sanggunian concerned is obtained: Provided, that occupants in areas where such projects are to be implemented shall not be evicted unless appropriate relocation sites have been provided, in accordance with the provisions of the Constitution.</p>	<p>6</p> <p>4</p> <p>4</p>
<p>Republic Act 7279 (1992) Urban and Housing Act of 1992</p>	<p>The Act mandates the provision of basic services, livelihood, and a resettlement site for underprivileged persons and participation of beneficiaries.</p> <p>Section 3 and 16 Among the eligibility criteria for socialized housing programs are: - beneficiary must be an underprivileged and homeless citizen; - must not own any real property whether in the urban or rural areas - must not be a professional squatter or a member of squatting syndicates.</p> <p>Underprivileged and homeless citizens are individuals or families residing in urban and urbanizable areas whose income or combined household income falls within the poverty threshold as defined by the National Economic and Development Authority include those who live in makeshift dwelling units and do not enjoy security of tenure.</p> <p>Article V, Section 21: Basic Services – Socialized housing or resettlement areas shall be provided by the LGU and NHA in cooperation with private</p>	<p>14</p> <p>12</p>

Laws and Regulations	Provisions	JICA Guideline # of Table 5.2
Republic Act 7279 (1992) Urban and Housing Act of 1992 Implementing Rules and Regulations (IRR)	<p>developers and concerned agencies basic services and facilities such as potable water, electricity, sewage, access to primary roads, and transportation facilities. Provision of other basic services; health, education, communications, security, recreation, relief and welfare shall be planned and shall be given priority for implementation by the implementing local government unit and concerned agencies in cooperation with the private sector and the beneficiaries themselves.</p>	
	<p>Article V, Section 22: Livelihood Component - To the extent feasible, socialized housing and resettlement projects shall be located near areas where employment opportunities are accessible. The government agencies dealing with the development of livelihood programs and grant of livelihood loans shall give priority to the beneficiaries.</p>	2
	<p>Article V, Section 23 The LGUs, in coordination with the PCUP and concerned government agencies, shall afford program beneficiaries the opportunity to be heard and to participate in the decision-making process over matters involving the protection and promotion of their legitimate collective interest which shall include appropriate documentation and feedback mechanisms.</p>	8
	<p>Section 28 Eviction or demolition as a practice shall be discouraged. However, it may be allowed under the following situations: (a) when persons or entities occupy danger areas such as esteros, railroad tracks, garbage dumps, riverbanks, shorelines, waterways, and other public places such as sidewalks, roads, parks, and playgrounds, (b) when government infrastructure projects with available funding are about to be implemented, or (c) when there is a court order for eviction and demolition.</p>	2
	<p>Section 29 Within two (2) years from the effectively of this Act, the local government units, in coordination with the National Housing Authority, shall implement the relocation and resettlement of persons living in danger areas such as esteros, railroad tracks, garbage dumps, riverbanks, shorelines, waterways, and in other public places such as sidewalks, roads, parks and playgrounds. The local government unit, in coordination with the National Housing Authority, shall provide relocation or resettlement sites with basic services and facilities and access to employment and livelihood opportunities sufficient to meet the basic needs of the affected families.</p>	
	<p>Section 3.1 Pre-relocation Phase 2.0 Community Relations Operations: The LGU or concerned agency shall establish communication and rapport with recognized resident community leaders; meet the affected families to explain the government's shelter program, the need to relocate families from danger areas and infrastructure project sites, procedures and guidelines on relocation and resettlement, and objectives and schedule of the census and tagging operation.</p>	6
	<p>Section 7, Venue for Grievance Complaints of violations of this IRR against local government executives shall be filed and prepared in accordance with Section 61 of the Local Government Code of 1991 through the</p>	9

Laws and Regulations	Provisions	JICA Guideline # of Table 5.2
	<p>DILG.</p> <p>Complaints against subordinate officials within the administrative jurisdiction of the local chief executives shall be filed with the office of the local chief executive concerned who shall cause to be instituted administrative and judicial proceedings against subordinate official who may have committed an offense.</p> <p>Complaints against officials of other national agencies may be filed in the Office of the President or Office of the Ombudsman. The complaints of aggrieved parties may also be directed to and or seek the assistance of the Commission on Human Rights or the Presidential Commission for the Urban Poor.</p>	
<p>Republic Act No. 8371 The Indigenous Peoples' Rights Act of 1997</p>	<p>Chapter Section 7 c and d</p> <p>States that no ICCs/IPs will be relocated without their free and prior informed consent or through any means except eminent domain or where relocation is considered necessary as an exceptional measure. They shall be guaranteed the right to return to their ancestral domain and if said return is not possible, ICCs/IPs shall be provided with lands of quality and legal status at least equal to that of the land previously occupied by them, suitable to provide for their present needs and future development.</p> <p>In case displacement occurs as a result of natural catastrophes, the displaced ICCs/IPs shall be resettled in suitable areas where they can have temporary life support systems while maintaining the right to return to their abandoned lands until such time that the normalcy and safety of such lands shall be determined. Should their ancestral domain cease to exist and normalcy and safety of the previous settlements are not possible, displaced ICCs/IPs shall enjoy security of tenure over lands to which they have been resettled, be provided basic services and livelihood to ensure that their needs are adequately addressed.</p>	14
<p>Republic Act No. 9710 The Magna Carta of Women (2009)</p>	<p>Section 21. Right to Housing</p> <p>The State shall develop housing programs for women that are localized, simple, accessible, with potable water, and electricity, secure, with viable employment opportunities and affordable amortization. In this regard, the State shall consult women and involve them in community planning and development, especially in matters pertaining to land use, zoning, and relocation.</p>	14
<p>DENR DAO-03-30 IRR of the Philippine Environmental Impact Statement (EIS) System, June 30, 2003) Chapter 1.C</p> <p>DENR DAO 96-37 Section 8, DAO 30, Sections 1, 4.2, 4.3, and Procedural Manual page 134 Annex B and H - Scoping Checklist</p>	<p>An Environmental Impact Assessment (EIA) also examines how a proposed activity may cause harm to people, their property or their livelihoods, or to nearby developments. After foreseeing potential problems, measures are identified in the EIA to minimize the problems and recommends ways to improve the project's sustainability.</p> <p>Requires the assessment of technical and site alternatives including no action alternative to minimize adverse environmental impacts on human health and safety.</p>	<p>2</p> <p>1</p>
<p>Executive</p>	<p>The Order provides basis and guidelines relative to the creation</p>	

Laws and Regulations	Provisions	JICA Guideline # of Table 5.2
<p>Order 708 (2008) - Amending Executive Order No. 152 (2002) and Devolving the Functions of the Presidential Commission on the Urban Poor as Clearing House for the Conduct of Demolition and Eviction Activities Involving the Homeless and the Underprivileged Citizens to the Respective Local Government Units Having Territorial Jurisdiction over the Proposed Demolition and Eviction Activities of Government Agencies</p>	<p>of local housing boards.</p> <ul style="list-style-type: none"> • Section 1 (Devolution of Clearinghouse Functions) – The clearinghouse functions of the PCUP are devolved to the respective cities and municipalities in whose territorial jurisdiction the proposed demolition and eviction activities of government agencies are to be undertaken. • Section 2 (Creation of Housing Boards) - The Local Government Units must create their own Local Housing Boards or any similar body through an appropriate ordinance before conducting the clearinghouse functions granted to them in this Executive Order. • Section 3 (Guidelines in Enactment of Ordinance) - The Department of Interior and Local Government (DILG) is ordered to issue the necessary guidelines for the enactment of ordinances creating Local Housing Boards or any similar body to Local Government Units (LGUs) within six (6) months from the effectivity of this Executive Order. The PCUP shall assist the Local Government Units in enacting the ordinances in whatever capacity they can provide within the same period. • Section 4 (Residual Functions) – The PCUP continues with its monitoring and reporting functions. However, all clearinghouse functions, including issuance of notices and clearances are to be the primary responsible of the Local Government Unit concerned. <p>In relation to the Order, DILG issued Memorandum Circular (2008-143) in September 2008 to all Local Chief Executives, Local Legislative Members and DILG Regional Directors on creation of Local Housing Boards with quote from Section 3 of the Order, which circulate to provide the following information such as legal basis, authority, purpose and coverage of local housing boards as follows.</p> <ul style="list-style-type: none"> • Legal Basis and Authority – Sections 2 and 3 of the Order. • Purpose – Provision of guidelines relative to the creation of local housing boards to address shelter concerns in formulation, development and implementation of comprehensive and integrated housing and land development program of LGU. • Coverage – Following areas are covered by this Memorandum Circular that cities and municipalities with informal settlers, excluding the ARMM Region, in: (a) danger areas such as esteros, railroad tracks, garbage dumps, landfills, creeks, riverbanks, shorelines, waterways, (b) public places such as sidewalks, public cemeteries, roads, parks and playgrounds and (c) government projects. 	
<p>Department of Finance Guidelines on Resettlement and Compensation (2001)</p>	<p>Projects involving acquisition of land and other assets and resulting in adverse impacts, the LGU shall not proceed with the project unless a compensation package is agreed upon between the sponsoring LGU and the owners of land/ assets as well as those who stand to lose their jobs and sources of income.</p> <p>The LGU shall not allow civil works to start until the compensation has been paid and resettlement, where necessary, is completed to the satisfaction of the PAPs. The compensation package should be agreed upon during the consultation meetings and the payments made properly documented.</p> <p>The Resettlement Action Plan (RAP) includes among others, census and socio-economic survey results, and eligibility criteria for PAPs, including cut-off date if necessary.</p>	<p>4</p> <p>15</p>

Laws and Regulations	Provisions	JICA Guideline # of Table 5.2
	In the event that more than 200 PAPs (40-50 households) are involved in a project, a detailed Resettlement Action Plan (RAP) will be prepared in accordance with the provisions of these Guidelines.	
National Economic and Development Authority (NEDA) - Investment Coordination Committee (ICC) Guidelines and Procedures	<p>Annex B</p> <p>Requires proponent agencies to submit a Resettlement Action Plan to aid in the evaluation of the social acceptability and feasibility of the project. Measures to relocate, resettle, and provide livelihood development for families whose properties will be permanently affected by the project should be included in the plan.</p>	5

Department Orders of DPWH on Resettlement

Department Orders	Provisions	JICA Guideline # of Table 5.2
<p>Department Order 5 (2003) Creation of the Infrastructure Right of Way and Resettlement Project Management Office and the Implementation of the Improved IROW Process</p>	<p>The Order provides policies and procedures to improve the process of implementation of the infrastructure right-of-way through creation of Project Management Office (PMO) for Infrastructure Right-of-Way (IROW).</p> <p>All projects, whether locally or foreign-funded, requiring right-of-way (ROW) acquisition requires the preparation of a Resettlement Action Plan (RAP).</p> <ul style="list-style-type: none"> • Policies – Major policies addressed are: (a) the implementing office shall ensure that IROW costs are always included in project costs, (b) district offices shall be responsible and accountable for the proper management of all right-of-way and ensure that encroachments, structures and informal settlers are not allowed within right-of-way limits. • Procedures – Details of improved process of IROW such as workflow of the process and procedures are provided in the IROW Procedural Manuals (2003). • PMO-IROW – Creation of PMO-IROW to manage the right-of-way process 	<p>5</p>

Policy of DPWH on Eligibility, Compensation and Other Entitlements

Department Orders	Provisions	JICA Guideline # of Table 5.2
Land Acquisition, Resettlement, Rehabilitation and Indigenous Peoples' Policy, 3rd edition (2007)	<p>The following are the provisions of the Policy :</p> <p>Defines the following as:</p> <p>Resettlement Action Plan (RAP) is the planning document that describes what will be done to address the direct social and economic impacts connected to involuntary taking of land or land acquisition.</p> <p>Cut-off Date is the date of commencement of the census of affected families within the project boundaries. Persons not covered at the time of census-taking will not be eligible for claims of compensation entitlements.</p> <p>Compensation is payment in cash or in kind at replacement cost for an asset to be acquired or affected by an infrastructure project.</p>	10
	<p>Project Affected Person (PAP) includes any person or persons, household, a firm, or a private or public institution who, on account of the execution of the project, would have their right, title or interest in all or any part of a house, land (e.g., residential, agricultural or pasture), annual or perennial crops and trees, or any other fixed or moveable asset acquired or possessed, in full or in part, permanently or temporarily.</p>	10
	<p>Professional Squatters as defined by Republic Act 7279, are persons who have previously been awarded home lots or housing units by the government but who sold, leased or transferred these to settle illegally in the same place or in another urban area; to non bona fide occupants; and to intruders of lands reserved for socialized housing. This also refers to individuals or groups who occupy lands without the expressed consent of the landowner and who have sufficient income for legitimate housing. This excludes individuals or groups who simply rent land and housing from professional squatters or squatting syndicates.</p> <p>Squatting Syndicates, in R.A. 7279 these are groups of persons who are engaged in the business of illegal housing for profit or gain.</p>	3
	<p>Chapter III Policy on Eligibility, Compensation and other Entitlements</p> <p>A. Criteria for Eligibility for Compensation, 1 and 2</p> <p>Landowners include:</p> <ul style="list-style-type: none"> - Legal owners (agricultural, residential, commercial, and institutional) who have full title, tax declaration, or who covered by customary law, or other acceptable proof of ownership. - Users of arable lands who have no land title or tax declaration - Agricultural lessees <p>PAF's with Structures include:</p> <ul style="list-style-type: none"> - Owners of structures who have full title, tax declaration, or who covered by customary law, or other acceptable proof of ownership. - Owners of structures including shanty dwellers, who have no land title, or tax declaration, or other acceptable proof of ownership. - Renters <p>A. Criteria for Eligibility for Compensation, 4 d ii (a notation of provision)</p> <p>Compensation for land may be among others, land swapping if</p>	11
		12

Department Orders	Provisions	JICA Guideline # of Table 5.2
	<p>feasible, 'land for land', will be provided. A new parcel of land of equivalent market value at a location acceptable under zoning laws, or a plot of equivalent value, whichever is larger.</p> <p>A. Criteria for Eligibility for Compensation, 4 e (a notation of provision)</p> <p>Other types of entitlements or assistance include:</p> <ul style="list-style-type: none"> - Income loss, for loss of business/income, the Project- affected family (PAF) will be entitled to an income rehabilitation assistance not exceeding PhP 15,000 for severely affected structures or to be on the latest copy of the PAF's tax record for the period that the business activities have stopped. - Inconvenience Allowance, PhP 10,000 will given to PAFs with severely affected structures, requiring relocation and new construction. - Rehabilitation assistance, skills training and other development activities equivalent to PhP 15,000 will be provided per family in coordination with other government agencies, if the PAF's present means of livelihood is no longer viable and will have to engage in a new income activity. - Transportation allowance or assistance, free transportation for PAFs, if relocating. Free transportation will also be provided to informal settlers in urban center who opt to go back to their place of origin in the province or be moved to government relocation sites. <p>Chapter V, Public Consultation and Participation</p> <p>The information campaign will carried out by PMO with the support of ESSO, the Regional Offices and District Engineering Offices and will be implemented through community meetings and leaflets printed in the language understandable to project-affected persons (PAPs).</p> <p>The women, children, and elderly who are among the PAPs shall likewise be consulted and mobilized to participate in the consultation meeting and discuss with them the socio-cultural implication of the Resettlement Action Plan.</p> <p>Chapter VI, Grievance Procedures</p> <p>Grievances related to any aspect of the project or sub-project will be handled through negotiations and are aimed at achieving consensus following certain procedures. All complaints from PAPs, written and written when received verbally, will be documented and shall be acted upon immediately according to procedure.</p> <p>Chapter VIII, Monitoring Mechanisms</p> <p>B. Scope</p> <p>The preparation, implementation and monitoring of RAPs shall cover all the items mentioned in the RAP outline including but not limited to the identification and compensation for the affected structure and other Improvements, and land that will have to be taken for right-of-way, and income restoration.</p> <p>E. Schedule of Implementation of RAP and Monitoring</p> <p>The PMO with ESSO shall establish a schedule for the implementation of RAPs and IPAPs and the required monitoring considering the project's implementing schedule. All RAP, IPAP, and MOA activities (related to land acquisition, resettlement, including compensation) determined by the Internal Monitoring Agent (IMA) and External Monitoring Agent (EMA) should have been completed one month before the start of civil works.</p>	<p>13</p> <p>7</p> <p>14</p> <p>9</p> <p>8</p> <p>8</p>

Annex -3

***Executive Order No. 020-13 of the City Mayor of the Cagayan de
Oro City for an Order Creating the Shelter and
Housing Development Multi-Sectoral Task Force***



Republic of the Philippines
City of Cagayan de Oro

OFFICE OF THE CITY MAYOR

EXECUTIVE ORDER NO. 020-13

**AN ORDER CREATING THE SHELTER AND HOUSING DEVELOPMENT
MULTI-SECTORAL TASK FORCE**

WHEREAS, the City Government of Cagayan de Oro recognizes that shelter is a basic need, especially for the Internally Displaced Persons, who are victims of natural calamities and those belonging to the low and middle-income families;

WHEREAS, these Internally Displaced Persons usually inhabit in urbanized areas and/or in the hazard-calamity prone zones of the city are in dire need of basic services and sustainable assistance;

WHEREAS, there is an urgent need to re-evaluate the objectives and initiatives of the present housing and urban development projects in the city and to re-define its collaborative framework to allow the inclusive participation of other government agencies, the private sector and the non-governmental organizations, in its housing development programs, for better coordination and monitoring of existing activities;

WHEREAS, there is a need to encourage private sector participation in low-cost housing program, particularly in the area of finance;

WHEREAS, there is a need to formulate a 3-year comprehensive housing and urban development master plan for the city;

Now, therefore, I, **OSCAR S. MORENO**, by virtue of the powers vested in me by law as mayor of the City of Cagayan de Oro, do hereby Order:

Sec. 1. Cagayan de Oro City Shelter and Housing Development Task Force. There is hereby created and constituted the Cagayan de Oro City Shelter and Housing Development Task Force, which shall have the following members, to wit:

RAMON L. FERNANDEZ	-	Chairman
VERONICA FE T. FERNANDEZ	-	Administrative Assistant
NIKKI M. ALONG	-	Administrative Staff
Engr. ROLAND M. PACURIBOT	-	Land Development/Planning Engineer
Atty. NOEL S. BEJA	-	Consultant
Engr. ISIDRO OBLIGADO	-	Housing Agencies Coordinator
ART TANGARE	-	Multi-Stakeholder Coordinator

Sec. 2. Duties and Functions. The Cagayan de Oro City Shelter and Housing Development Task Force shall perform the following duties and functions, to wit:

1. Prepare short, medium and long term plans for housing and urban development in the city that specifically incorporate the hazard-calamity prone areas to be identified as no-build zones;

2. Formulate a strategy, to provide basic services and sustainable development assistance for the Internally Displaced Persons and Communities, especially those who are victims of natural calamities;
3. Formulate resource mobilization programs for construction projects, performance-based funding and evaluation of service programs and grants from government housing agencies;
4. Identify and recommend priorities and other urgent concerns in the implementation of the housing program for the homeless and illegal settlers in the city;
5. Formulate a program that will expedite enrolment procedures for all homeless persons and other housing beneficiaries and the adoption of a fool-proof system which would ensure that only qualified applicants can avail of the program;
6. Design a program that will create a data base (Housing and Urban Development Management Information System) for the efficient and effective program implementation;
7. Formulate a program that will develop and implement minimum standards for all shelter and housing programs;
8. Coordinate all activities relative to the implementation of the city's housing program with the key government housing agencies;
9. Provide an effective strategy which will encourage the active participation of the private sector in all aspects of housing and urban development, particularly in the area of finance;
10. Formulate policies and effective strategies to ensure the gradual and substantial reduction in the numbers of illegal settlers in the city within the 3-year period for the implementation of the program;
11. Formulate basic policies, guidelines and implementing mechanisms for the disposal or development of acquired or existing assets relative to city government's housing program;
12. Recommend new legislation or amendments to existing ordinances and executive orders, as may be necessary, for the attainment of the city's housing and urban development planning objectives;
13. Exercise such other powers and perform other duties and functions as may be deemed necessary, proper or incidental to the attainment of programs purpose and objectives.

Sec. 3. Separability Clause. If any provision of this Executive Order is declared invalid or unconstitutional, the other provisions not affected thereby shall remain valid and subsisting.

Sec. 4. Repealing Clause. All orders and issuances, or parts thereof, which are inconsistent with this Executive Order, are hereby repealed, amended, or modified accordingly.

Sec. 5. Effectivity. This Executive Order shall take effect immediately upon issuance, and shall remain in force until it is revoked and/or annulled.

Done, in the City of Cagayan de Oro, this 13 day of August, in the year of our Lord, Two Thousand and Thirteen.


OSCAR S. MORENO
 Mayor

Annex -4

***Executive Order No. 039-13 of the City Mayor of the Cagayan de
Oro for an Order Reconstituting the Membership
thereof and Defining It's Powers and Functions
and for Other Purposes***



Republic of the Philippines
City of Cagayan de Oro

OFFICE OF THE CITY MAYOR

EXECUTIVE ORDER NO. 039-13

AN ORDER REORGANIZING THE CAGAYAN DE ORO HOUSING BOARD, RECONSTITUTING THE MEMBERSHIP THEREOF AND DEFINING IT'S POWERS AND FUNCTIONS AND FOR OTHER PURPOSES.

WHEREAS, Republic Act No. 7279 or the Urban Development and Housing Act (UDHA) of 1992 provided a blueprint for socialized housing, and just and humane eviction and demolition processes at the local government level.

WHEREAS, while UDHA spells out "local government units" as its main implementing entity, urban poor sectoral advocates who call for effective people's participation at the local government level are at a loss as to which particular department or division of their respective LGUs will provide such genuine opportunity.

WHEREAS, local housing boards are envisioned to provide urban poor communities, Pos and NGTOs more direct participation in the planning and implementation of local housing programs.

WHEREAS, Section 5, paragraph 2 of Memorandum order No. 74 issued by President Gloria Macapagal-Arroyo last September 13, 2002, directed the LGUs without local housing boards to "create their respective housing boards, or their equivalent, within thirty (30) days from the affectivity of this Order".

NOW THEREFORE:

I, OSCAR S. MORENO, by virtue of the powers vested in me as City Mayor of Cagayan de Oro; do hereby **CREATE THE CAGAYAN DE ORO CITY HOUSING BOARD**, **DEFINING ITS POWERS AND FUNCTIONS AND FOR OTHER PURPOSES, to wit:**

SECTION 1. There is hereby created a local housing board in the city of which shall be called as the Cagayan de Oro City Housing Board.

SECTION 2 COMPOSITION of Executive Order No. 005-12. The Composition of the CAGAYAN DE ORO HOUSING BOARD, is hereby amended by increasing the composition and deleting the names of the persons designated as Chairperson and members thereof, and to read as follows:

SECTION 2.A. COMPOSITION. The Cagayan de Oro City Housing Board, herein referred to the "Board" shall be composed of the following:

Chairperson: Hon. Oscar S. Moreno
City Mayor

Vice-Chairperson: Ramon L. Fernandez, Chairman of the Shelter and Housing Development Multi-Sectoral Task Force (EO No. 020-13)



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Members:

Chedilyn Aissa Dulguime – Sajulga, Department Head of City Planning Office
Engr. Rolando Pacuribot, Land Development/Planning Engineering of Shelter and Housing Development Multi-Sectoral Task Force
Engr. Fe Ancheta, OIC/District 1 Manager, National Housing Authority – 10
Representative from the Presidential Commission on Urban Poor (PCUP)
Atty. Leon Du M. Gan, City Councilor – Chairperson, Committee on Urban and Rural Poor
Astrid Jose C. Bana, Archdiocesan Coordinator, Commission on Social Apostolate
Atty. Noel Beja, Shelter and Housing Development Multi-Sectoral Task Force
Dr. Hilly Ann Roa-Quiaoit, Representative from the Cagayan de Oro Academe Community.
Representative – Subd. And Housing Developers Assn. NorMin.

SECTION 3. POLICIES. The Board shall, among other things, formulate, develop, implement and monitor policies on the provision for housing and resettlement areas, and on the observance of the right of the underprivileged and homeless to just and humane eviction and demolition.

SECTION 4. POWERS AND FUNCTIONS. The Board shall have the following powers and functions.

- a) Prepare, based on local shelter plan guideline and with the assistance of the HUDCC and other concerned government agencies, a comprehensive city shelter plan which shall form part of the city development plan; Provided, that public hearings shall be conducted for the purpose;
- b) Designate at least one (1) representative of the Board to the City Development Council; Provided, that said representative is not already a member of the Council;
- c) Assist the City Development Council in the formulation of its Comprehensive Land Use Plan (CLUP);
- d) Approve preliminary and final subdivision schemes and development plans of subdivisions, residential, commercial, industrial, and other purposes, in accordance with the provisions of Presidential Decree No. ___ as amended, otherwise known as the Subdivision and Condominium Buyer's Protective Decree, and its implementing standards, rules and regulations concerning approval of subdivisions plans;
- e) Approve preliminary and final subdivision schemes and development plans of all economic and socialized housing projects as well as individual or group building and occupancy permits covered by Batas Pambansa 220 and its implementing standards, rules and regulations.
- f) Evaluate and resolve any opposition to the issuance of development permits for any of the projects stated in the two (2) preceding promulgated by the Housing and Land Use Regulatory Board;

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- g) Monitor the nature and progress of land development projects it has approved, as well as the housing constructions in the case of house and lot packages, to ensure their faithful compliance with the approved plans and specifications, and the imposition of appropriate measures to enforce compliance therewith;
- h) Ensure compliance with the balanced housing requirement as provided for in Section 18 of RA 7179 and its implementing rules and regulations;
- i) Conduct an inventory of all lands within the city, and update the same every three (3) years, in accordance with Section 7 of PZA 7279 and the guideline issued for the purpose;
- j) Identify the sites for socialized, subject to the requirements prescribed by Section 8 of RA 7179 and guidelines issued for the purpose;
- k) Advise the Sanggunian on matters of local taxation which may affect the city government socialized housing program, including but not limited to, the formulation of a socialized housing tax, idle lands tax, and an additional levy on the real property tax to constitute a Special Socialized Housing Fund;
- l) Recommend, for approval of the City Mayor, formulated schemes for the acquisition and disposition of lands within the city/ municipality for socialized housing purposes, subject to Section 9 to 14 of RA 7279 and the implementing guidelines enacted for the purpose;
- m) Recommend, for approval of the Mayor, partnership arrangements with the national government on, but not limited to, the following programs;
 - i. Housing Production Assistance, Resettlement Assistance, Local Housing, Cost Recoverable Joint Venture and other relevant programs of the national Housing Authority (NHA);
 - ii. Local government housing assistance program of the Home development Mutual Fund (HDMF), (National Home Mortgage Finance Corporation (NHMFC), and the Home Guarantee Corporation (HGC), and for this purpose, the Board shall coordinate with the Advisory Committee created to oversee the implementation of the Local Government Pabahay Program; and
 - iii. Other socialized housing projects undertaken by other national government agencies (NGAs) and government-owned and controlled corporations (GOCCs) within the city;
- n) Ensure the registration of underprivileged and homeless urban or rural dwellers as socialized housing beneficiaries under Sections 16 and 17 of RA 7279; Provided, that the Board shall assume the functions of the city registration of the same Sections;
- o) Coordinate with the government agencies and instrumentalities performing functions which may affect housing and urban development;
- p) Submit to the President and Congress of the Philippines an annual report as provided by Section 41 of RA 7279 and



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- q) Perform such other related functions established by law or by ordinance as necessary to implement the mandate of local government units under the Urban Development and Housing Act.

SECTION 5. RESOURCES. The Board is hereby constituted as the primary entity tasked to advise the City Mayor on matters of sourcing of funds for socialized housing.

For this purpose, the Board may recommend the following schemes for funding socialized housing projects:

- a) Build-operate-transfer and other related schemes;
- b) Bond flotation and other credit financing arrangements;
- c) Availment of foreign or local grants for which the Board is authorized by this ordinance to receive foreign and local grants, which shall be remitted to the city treasury, and shall be credited to the socialized housing account of the city government of
- d) Loan packages from the government financing or lending institutions;
- e) Joint venture projects with private sector groups or developers; and
- f) Pooling of resources with other LGUs, the private sector, NGOs and Pos

SECTION 6. EVICTION AND DEMOLITION. The Board is hereby tasked to oversee implementation of Section 28 of the RA 7279 and its implementing rules and regulations: *Provided*, that just and humane eviction and demolition procedures under the said provision of law are likewise made applicable to rural areas of the city/ municipality.

For this purpose, the Board shall:

- a) Oversee and coordinate government activities relative to consultation, relocation and resettlement of underprivileged and homeless urban or rural poor dwellers in cases when evictions and demolitions affecting them are necessary and allowed by existing laws.
- b) Recommend policy measures and undertake appropriate action to ensure full compliance with the constitutional mandate and statutory requirements prior to the evictions and/or demolitions
- c) Affecting underprivileged and homeless urban and rural poor dwellers; and
- d) Issue directives, rules and regulations not otherwise inconsistent with existing laws, as it may deem necessary to effectively carry out the purposes of the constitutional mandate to ensure just and humane evictions and demolitions.

SECTION 7. COMPLIANCE REPORT. Before undertaking eviction or demolitions that will affect underprivileged and homeless urban or rural poor dwellers, the city/ municipal government, national government agencies or other proponents of evictions and demolition activities, including employees of the judiciary, shall submit a compliance Report to the Board, with a statement under oath that:

- a) Adequate consultation as defined and outline under pertinent laws, rules, regulations have already been undertaken with the affected residents;



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- b) Adequate relocation, as defined and outlined under pertinent laws, rules and regulations is available, ready and sufficiently supported by relocation and resettlement funding; and
- c) The requirement and procedures prescribed under the implementing rules and regulations of Section 28 of RA 7279, specifically on the Pre-Relocation, Relocation, and Post-Relocation Phases of eviction or demolition activities have been or shall be observed, as the case may be.

The Compliance report shall include a certified list of families to be evicted or relocated. The Board shall have the power to review the Compliance Report and approve or disapprove the same.

SECTION 8. MEETING AND QUORUM. The Board shall meet at least once a month or as often as may be deemed necessary. The presence of the Chairman or the Vice-Chairman and the majority of the members of the Board shall constitute a quorum to transact official business.

SECTION 9. EXECUTIVE COMMITTEE. The board shall create a three-member Executive Committee (Exe Com) from among its members represent it and act in its behalf when it is not in session. The Mayor or his duly designated representative shall head the Execom.

SECTION 10. ALLOWANCES. members of the Board who are not government officials or employees shall be entitled to the necessary traveling expenses and allowances chargeable against the funds of the Board, subject to existing accounting and auditing rules and regulations.

SECTION 11. BUDGET. The city government shall appropriate at least one percent (%) of its annual Internal Revenue Allotment (IRA) for the operations and activities of the Board.

SECTION 12. PENALTIES. Failure to submit the Compliance reports as required under Section 7 of this Executive Order, or any act of misrepresentation or fraud in connection with any information contained in a submitted Compliance Report, shall subject the government officials or employees responsible for such omission, misrepresentation or fraud to:

SECTION 13. IMPLEMENTING RULES AND REGULATIONS. Within sixty (60) days after the enactment of this Executive Order, the City Mayor shall, in consultation with the concerned government agencies, the private sector, and Pos and NGOs, formulate the appropriate rules and regulations necessary to effectively implement any or all of the provisions of this Executive Order.

Such rules and regulations shall include, among others, guidelines on the following:

- a) Resource generation and mobilization for socialized housing purposes;
- b) Schemes for city government housing assistance; and
- c) Accreditation and selection of representatives of the private sector, NGOs and POs to the Board.



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SECTION 14. REPEALING CLAUSE. All Executive Orders and other city issuances, or part or parts thereof, which are inconsistent with the provisions of this Executive Order are hereby repealed or modified accordingly.

SECTION 15. SEPARABILITY CLAUSE. If, for any valid reason, any provisions of this Executive Order are declared invalid or unconstitutional, the remaining provisions not affected thereby shall continue to be in force and

SECTION 16. EFFECTIVITY CLAUSE. This Executive Order shall take effect upon its approval.


Let copies of this order be served to all concerned for their guidance and compliance.

SO ORDERED.

Done this 27th day of August 2013 in the City of Cagayan de Oro, Philippines.


OSCAR S. MORENO
City Mayor *js*

Attested By:


MARIA CANSULUA A. TAGOTONGAN
ADMINISTRATIVE OFFICER V
Secretary to the City Mayor

Annex -5
Minutes of Meeting of Consultation Meeting with PAPs

Flood Risk Management for Cagayan de Oro River

Minutes of Consultation Meeting 1

November 05, 2013, 9:40AM-11:50AM

Barangay Nazareth Gym, Barangay Nazareth, Cagayan de Oro City

Total Number of Participants

PAPs	134
City Offices	2
Barangay Officers	2
National Government Officers	3
DPWH	9
JICA Survey Team	8
Total	158

Participating Barangay(s):	Barangay Balulang, Barangay Macasandig, Barangay Nazareth
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XXXXXX, City Information Officer, called the meeting to order at 09:40AM. This was followed by the invocation and singing of the national anthem led by XXXXXX, Kagawad (Councilor) of Barangay Nazareth. XXXXXX, Barangay of Macasandig, delivered the welcome remarks. XXXXXX of the DPWH-PMO-Flood Control provided an overview of the project. XXXXXX of the DPWH-PS-ESSD presented the overall results of the Socio-Economic Survey conducted by the JICA Survey Team. XXXXXX of the DPWH-PMO-IROW explained the entitlements under Philippine laws and policies in terms of resettlement, while XXXXXX of the NHA-Region 10 presented the possible resettlement sites which could be used for relocating qualified beneficiaries. The public meeting also served as the venue to solicit feedback/clarification and questions from the project affected persons. All speakers were on hand during the open forum to address concerns and to answer questions about the presentation.

XXXXXX briefly outlined the city government's housing priorities and challenges. Advisory was also given for mitigating risks associated with the onslaught of Typhoon Yolanda. To close the public meeting, XXXXXX thanked the participants for their time. The public meeting ended at 11:50 AM.

Highlights of Discussion:

Question 1:

(XXXXXX, Cagayan de Oro City)

XXXXXX commented that he appreciates the entitlement options that DPWH plans to offer because he thought that these entitlement options are very fair and very just. His question was: If you happen to

be the owner of the land and structure, does it mean that you will have cash compensation both for the land and structure plus rental subsidy?

Reply:

(XXXXXX, DPWH-PMO-IROW)

The owners of land and/or structure can only avail of the cash compensation for the land and/or structure. They will not be paid rental subsidy since it will already be considered as double compensation.

Suggestion 1:

XXXXXX also suggested the following:

- a) The government should have available financial resources to pay for compensation for the land and structure/improvement as well as to develop resettlement sites that will accommodate the affected households.
- b) The documentary requirements to qualify for entitlements should be published so that they will know the legal basis why some of them will not be qualified for cash compensation. For example, for those who are living in the land and structure located in the danger zone, it will not be possible for them to pay property tax or to have the land titled which are requirements to qualify for cash compensation.
- c) DPWH needs to put up a center wherein all the concerned agencies will be able to hold offices and provide assistance to the affected households in the completion of requirements regarding entitlements.
- d) The NHA and LGU should give priority to the project affected households to live in the resettlement sites.

Suggestion 2:

(XXXXXX, Barangay Macasandig)

XXXXXX requested DPWH to revisit/review the target area for the construction of the dike and to explore the possibility of reducing the target area from say, 100 meters away from the river bed to 50 meters. This space reduction may also result in minimizing the number of PAPs from 1,087 to 500 or probably even down to 200 households, and in effect lowering the number of PAPs to be resettled. He recognized that the Project is very useful since the construction of the dike is meant to protect the lives and the properties of the people. However, they are very sad to learn that they will have to be resettled because of this dike. He also asked XXXXXX to have this matter discussed with CDO Mayor XXXXXX.

XXXXXX clarified that they are not blaming DPWH; they are just asking that, if possible, no structures should be affected. Looking at the map, they observed that the design missed a couple of structures like the City Hall so it should be possible that the dike could be designed such that no structure will be affected.

XXXXXX also noted that they only have the mother title issued to his grandfather. Learning that the title should be under the name of the present owner to qualify for cash compensation, he also sought clarification on this regard.

Reply:

(XXXXXX, DPWH-PS-ESSD)

XXXXXX clarified that only the master plan is being presented in the public meeting. Detailed engineering design will have to be undertaken afterward that may entail adjustments in the project design. The 1,087 affected households identified in the master plan might be reduced in the detailed engineering design of the project. However, the households living in the No Build Zone and in areas classified as Flood Risk Level 4 (very high risk of casualty) will really have to be resettled. President Aquino himself stated that people in the No Build Zone should be relocated from the river bank. XXXXXX also emphasized that the intention of the project is to save and rebuild lives.

(XXXXXX, Information Officer, Cagayan de Oro City)

It is assured that all your concerns will be conveyed to Mayor XXXXXX. We would like to let you know that the Mayor's knowledge regarding these matters (e.g. engineering works) are limited. I'm sure that the Mayor will consult with experts including City Engineer, Mayor's Advisor for Infrastructure and DPWH and decide on the matter.

(XXXXXX, Consultant, DPWH-PMO-IROW)

If the mother title of the land is still in the name of XXXXXX's grandfather, they will have to undergo the legal process to have the land title transferred to the present owners such as filing of extra-judicial settlement of the estate and having the land subdivided.

Question 2:

(XXXXXX, Barangay Macasandig)

Were those surveyed the only households that will be affected by the project? When will the construction of the dike start?

Reply:

(XXXXXX, DPWH-PS-ESSD)

The socioeconomic survey that was conducted for this Survey provided DPWH with the indicative number of PAPs. The number and the list of affected households to be resettled will be finalized after the completion of the detailed engineering design of the Project. However, as previously mentioned, those households living in the No Build Zone and in very high risk areas will have to be resettled earlier.

(XXXXXX, Information Officer, Cagayan de Oro City)

I just would like to check if there are still people living in these violet areas (No Build Zones) in the map. Cala-cala. none. Isla Puntod. none. Tambo. There are some households. We would like to reiterate that people still living in these areas will have to consider transferring.

(XXXXXX, DPWH-PMO-Flood Control)

The DPWH Region 10 has already started the construction of the short-term, urgent program of works related to the project that is being financed by local funds. The foreign-assisted component that will entail the construction of the dike will start in 2016. The loan agreement is expected to be finalized in 2014 while the detailed engineering design is targeted to be completed in 2015.

Question 3:

(XXXXXX, Barangay Macasandig)

What we have in our possession is the mother title of our land in the name of our grandfather. In our case about 3/4 of our land will be affected, the rest (1/4) will not be included. How can we segregate this land? Another question is for XXXXXX, we would like to know what particular agency we would ask help from regarding our resettlement concerns. Will it be the NHA, our local Barangay or the LGU?

Reply:

(XXXXXX, Consultant, DPWH-PMO-IROW)

The concerned household will be responsible for the segregation of their land. They will have to transfer the title from the father to his children (12 siblings in this case). If DPWH will pay them for the 3/4 of the land, they will have to divide the payment equally among themselves. DPWH will only pay for the land that is titled under the name of the claimant. In the same manner that the replacement cost for the affected structure/improvement will be paid to the person under whose name that the tax declaration has been issued.

(XXXXXX, NHA-Region 10)

Regarding resettlement concerns, the LGU will be the one to help you. In fact, the Task Force on Housing was created by the City Government to address the concerns on housing including resettlement. NHA provides assistance to LGU on aspects like land development and identification of beneficiaries.

Question 4:

(XXXXXX, Barangay Balulang)

- a) Way back to 1998 we had an induction at the Karinugan Riverside in the presence of the Vice Mayor, the Chief of Police and our Barangay Captain. During that induction, the Vice Mayor told us that from that day all the lots where we are residing will be ours and that they will be the one to process the land titles. When we applied for water and electrical connection we were asked to go to DENR and secure some papers. From DENR I received a document that states that my lot number

is no. 25. However, we have not yet been able to get the land titles as promised. What will happen to us since we do not have the required documents, we will not be paid for our structures?

b) Why is it that during the conduct of the socio-economic survey the houses were marked?

Reply:

(XXXXXX, Information Officer, Cagayan de Oro City)

I would like to ask if you are referring to the Piso-Piso program. As far as I know, all areas which are designated as the No Build Zone can never be titled. With regards to your concern about the land being given to you, I'm sorry I could not answer in behalf of the previous administration. It would be best, however, to have a separate discussion on this issue on entitlements with the DPWH.

(XXXXXX, DPWH-PS-ESSD)

The markings on the houses were made to serve as an indicator to the survey team members that the households were already interviewed and were not meant for tagging purposes. As explained previously, the final number and list of the project-affected households will only be determined during the detailed engineering design probably in 2015.

Question 5:

(XXXXXX, Barangay Macasandig)

As a Sendong victim, I applied for a housing unit with NHA. I also had an interview with EMD and even applied for CMP so that I would be able to relocate since our house is in the danger zone. Why is it taking long for our application to be approved?

Reply:

(XXXXXX, NHA-Region 10)

The form that was filled-up was not an application form but a survey form. Actually the NHA does not give out application forms; it is the LGU that determines to whom the housing units will be awarded.

(XXXXXX, Information Officer, Cagayan de Oro City)

One of the programs of Mayor XXXXXX is the resettlement program wherein there are three focus areas: (1) Sendong-related resettlement sites; (b) Piso-Piso areas; and (c) informal settlers. She advised not only XXXXXX but other Sendong victims who have not yet been resettled to coordinate with the City Information Office so that they could be referred to EMD (headed by XXXXXX). She further suggested that their respective issues and concerns be properly documented so that appropriate action could also be provided.

Question 6:

(XXXXXX, Barangay Balulang)

I do not have any document as proof that I own the land and the structure built on it. All my neighbors who are Christians have been already relocated but a couple of us Muslims are not.

Reply:

(XXXXXX, DPWH-PS-ESSD)

All structures located near the riverbanks will be relocated but those structures which are located a couple of meters away from the riverbank will have to wait for our detailed engineering design if they will be affected. It is assured that all relocations will not be based on religion or ethnicity.

Question 7:

(XXXXXX, Barangay Macasandig)

Is there a way for the project to start before 2016? We had Typhoon Sendong back in 2011. Then there will be a Presidential election in 2016 that may also bring changes in government policy.

Reply:

(XXXXXX, DPWH-PMO-Flood Control)

Some components of the project using local funds have already been started by DPWH-Region 10. We have to observe the standard operating procedure for the JICA loan that is why 2016 is our projection for its implementation. We will try our best to shorten the process (e.g. procurement procedures) to enable us to start the project earlier.

Flood Risk Management for Cagayan de Oro River

Minutes of Consultation Meeting 2

November 05, 2013, 01:00PM-04:00PM

Barangay Nazareth Gym, Barangay Nazareth, Cagayan de Oro City

Total Number of Participants:

PAPs	91
City Offices	2
Barangay Officers	2
National Government Officers	3
Department of Public Works and Highways	9
JICA Survey Team (FRIMP-CDOR)	8
Total	115

Participating Barangay(s):	Barangay Carmen
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XXXXXX, in behalf of the City Information Office, began the public meeting at 02:05 PM. Invocation and singing of the national anthem were led by XXXXXX, Barangay Nazareth Kagawad. XXXXXX, Barangay Carmen Kagawad, delivered the welcome remarks.

XXXXXX of the DPWH-PMO-Flood Control provided an overview of the project. XXXXXX of the DPWH-PS-ESSD presented the overall results of the Socio-Economic Survey conducted by the JICA Survey Team. XXXXXX of the DPWH-PMO-IROW explained the entitlements under Philippine laws and policies in terms of resettlement, and XXXXXX of the NHA-Region 10 presented possible resettlement sites which could be used for relocating qualified project affected persons. The public meeting is conducted to present the results of the socio-economic survey, and to solicit feedback. All speakers, including XXXXXX, Consultant, DPWH, PMO-IROW were on hand during the open forum to address concerns and answer questions about the presentation. XXXXXX, City Information Officer also outlined the city government's housing priorities and challenges. Advisory was also given for mitigating risks associated with the upcoming Typhoon Yolanda. The public meeting ended at 04:12 PM.

After the presentation, the participants raised questions and concerns about the material presented.

Highlights of Discussion:

Question 1:

(XXXXXX, Barangay Carmen)

I am a structure owner, renting the land where my house is located. It was discussed in the presentation that as long as ownership documents are complete, one may qualify for a housing unit at the resettlement sites. My documents are complete, can I also apply?

Reply:

(XXXXXX, NHA-Region 10)

If you have the documents required, you have the option to apply for either relocation, or ask payment at replacement cost for the structure.

Question 2:

(XXXXXX, Acacia Street, Zone 5, Barangay Carmen)

My question is related to the amount deducted when materials are salvaged from structure by owners. Why is 10% of salvage value deducted?

Reply:

(XXXXXX, Consultant, DPWH-PMO-IROW)

Salvage value is deducted because once the government pays for the structure; everything in the structure becomes government property. DPWH staff has to account for items when COA audits, thus the deduction for salvaged materials in cases where owners salvage items like G.I. sheets, toilet bowls and others.

Question 3:

(XXXXXX, Barangay Carmen)

The entitlement packages mentioned are attractive.

- a) Our concern is, can you give us an assurance that these provisions will be applied accordingly during project implementation?
- b) We understand that the state has the power of eminent domain - can you assure that project-affected persons who have submitted all the requirements will not be given a difficult time in claiming due compensation?

Reply:

(XXXXXX, Consultant, DPWH-PMO-IROW)

- a) I can assure you that as per Republic Act 8974, due compensation will be paid for land value, and replacement cost for structures and other improvements, including trees and crops. As for provisions on renters, NHA may give you a better idea on rental subsidies.

(XXXXXX, DPWH-PS-ESSD)

- b) When the government signs the loan agreement with JICA, it is committed to providing the budget needed for right-of-way. The law is clear on the entitlements for project affected persons, and effective systems are in place which will be activated during implementation.

Question 4:

(XXXXXX, Barangay Carmen)

I think it is important that urban planning should be considered in the project. Did DPWH hire an urban planner for the project?

Reply:

(XXXXXX, DPWH-PMO-Flood Control)

The Detailed Engineering Design will be undertaken in the next stage, however, urban planning for Cagayan de Oro City is beyond the scope of the proposed project.

(XXXXXX, DPWH-ESSD)

Results of the preparatory survey regarding danger areas near the river, like areas in the No Build Zone, will be included in Cagayan de Oro City's Comprehensive Land Use Plan (CLUP). The structural and non-structural measures to address risks will also be included in the CLUP.

Question 5:

(XXXXXX, Zone 7, Barangay Carmen)

You mentioned in the discussion that flood control structures will be put up to protect our communities from adverse flooding. Since our communities are to be protected.

- a) Is it possible that there will be no need to resettle us since we will already be protected from floods with the construction of the dike?;
- b) My follow-up question - is the list of households to be affected by the project already finalized and how many are from our barangay?
- c) Lastly, if owners of land and structures will be paid based on current market value, what will be the basis of 'current market value' and who will determine the current market value of the property?

Reply:

(XXXXXX, DPWH-PMO-Flood Control)

- a) It is not possible to protect all residents from recurring floods with structural measures. Please be understood that those residing in areas identified as Risk Level 4 should be resettled.

(XXXXXX, DPWH-PS-ESSD)

- b) The number and the list of households to be affected by the project will be finalized after the Detailed Engineering Design is completed in 2015.

(XXXXXX, Consultant, DPWH-PMO-IROW)

- c) The current prices of construction materials will be the basis for the replacement cost of structures and improvements. As for land, the BIR Zonal Value will be used to determine the current market value. If there is disagreement between the owner and the government on the purchase price of the land, then the government will file an expropriation case for the court to determine just compensation for said property. It may take less than a year for payment to be made

Question 6:

(XXXXXX, Acacia Street, Zone 5, Barangay Carmen)

I am a Sendong victim, and it seems I will also be a victim of this government project. If and when the project is implemented, will big buildings just beside the river also be relocated? These include buildings like the Pelaez building and the Liceo.

Reply:

(XXXXXX, DPWH-PS-ESSD)

DPWH will rely on the Detailed Engineering Design to finally decide. If the lands on which these structures are built are needed for public use, then the government will use its power of eminent domain.

Question 7:

(XXXXXX, Barangay Carmen)

Will we be given just compensation for our houses and land in case we are affected by the project? Because I know a person whose house and lot was affected by a DPWH project and until now he is not compensated. My final question is, when did the survey start or when will the survey start?

Reply:

(XXXXXX, Cagayan de Oro City Information Office)

Your question had been answered earlier. It is assured that you will be justly compensated as long as you have all the necessary documents required. Regarding your concern about that particular person that you knew which was not compensated, all these agency heads present here will do their best that such incident will not happen.

(XXXXXX, DPWH-PS-ESSD)

The survey that was conducted was for the master plan and another survey will be conducted during the detailed engineering design to determine the final number of families or structures that will be affected by the project.

(XXXXXX, Cagayan de Oro City Information Officer)

We, from the city government our role is to assist these agencies involve so the project will be successful. We know how difficult it is to be affected but we need to look at the project at a different perspective. It is for the good of the entire community, we need to sacrifice a little to save a lot of lives. Our City Government right now is focusing on a 3-point resettlement program. First is the Sendong related relocation, second are those people living in the "Piso-Piso areas", and third are the Informal Settling Families. For any concerns you can visit me at the City Information Office or for any Sendong related relocation concerns, visit our Estate Division Management and look for XXXXX.

Flood Risk Management for Cagayan de Oro River

Minutes of Consultation Meeting 3

November 06, 2013, 9:20AM-11:31AM

Tourism Hall of the City Government, Cagayan de Oro City

Total Number of Participants

PAPs	287
City Offices	1
Barangay Officers	4
National Government Officers	1
DPWH	9
JICA Survey Team	8
Total	310

Participating Barangay(s):	Barangay Bonbon, Barangay Kauswagan, Barangay 1, Barangay 2, Barangay 6, Barangay 7, Barangay 10, Barangay 13, Barangay 15, Barangay 17
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XXXXXX, in behalf of the City Information Office, called the meeting to order at 09:20 AM. This was followed by the invocation and singing of the national anthem led by XXXXX of Barangay 7. XXXXX of Barangay 13 delivered the welcome remarks.

XXXXXX of the DPWH-PMO-Flood Control provided an overview of the project. XXXXX of the DPWH-PS-ESSD presented the overall results of the Socio-Economic Survey conducted by the JICA Survey Team. XXXXX of the DPWH-PMO-IROW explained the entitlements under Philippine laws and policies in terms of resettlement, while XXXXX of the NHA-Region 10 presented the possible resettlement sites which could be used for relocating qualified beneficiaries. The public meeting also served as the venue to solicit feedback/clarification/questions from project affected persons. All speakers were on hand during the open forum to address concerns, and to answer the questions from participants.

The public meeting ended at 11:31 AM.

Highlights of Discussion

Question 1:

(XXXXXX, Barangay Bonbon)

- a) Will it still be possible to modify the alignment? About 1/3 of Bonbon will be gone if the Project will be implemented. On the right side is the National High School, a newly established school.

The residents had waited for a long time before the said school was constructed. The best solution is to transfer it but there is no available land in the barangay at present. The mangroves maybe affected as well. Based on the map the dike alignment is following a creek, why not construct the dike near the river banks where less people would be affected? (Note: XXXXX of Barangay Bonbon has the same suggestion.)

- b) I would like to commend our National government and our LGU for making such effort to protect our people. I know that this project would be of great help to the community. I would like to point out that after the typhoon Sendong we have a temporary relocation site at Zone 9 and until now there are still families living in the said relocation site. I do hope that during the implementation of this project they will be included on the list of families to be resettled since they are really located on a high risk area. Can they be accommodated?

Reply:

(XXXXXX, DPWH-PMO-Flood Control)

The residents living near the river mouth area will definitely be affected. The mangroves need to be protected. If we place the dike along the river bank, the mangroves will die and the water levels will even be higher. There is a tendency that if we place the dike there the area will be constricted and the water will rise from said area by 1 meter up to about 4 m and would necessitate increasing the level of the dike from 5 to 6 meters.

(XXXXXX, DPWH-PS-ESSD)

The school is in a swampy area that is flood prone area. We also have to consider that the natural course of the river has changed. The suggestion to have the school transferred in a safer ground within the barangay must be given due consideration by all concerned. There is a need to discuss this problem with the LGU to come up with the possible solution/decision on this matter.

(XXXXXX, NHA Region 10)

There are government resettlement sites that will accommodate the affected households although some are still lacking basic facilities such as electricity and water. You may need to coordinate with the City Government.

Question 2:

(XXXXXX, Barangay 15)

Is the project really a dike or a road widening project?

Reply:

(XXXXXX, DPWH-PMO-Flood Control)

The proposed plan is to construct a dike. Based on experience, the most effective structural measure for flood control, among others is the dike system. The exact level of the dike will be determined

during the detailed engineering design. Isla de Oro will become part of the river and is proposed to be converted into park during the dry season. Structures will not be allowed to be built in this area anymore. We will also be requesting the City Government to include in its CLUP those in-between the dikes as the No Build Zone.

Question 3:

(XXXXXX, Barangay 15)

Where is the exact location of the dike within Burgos St.? Is the dike located on the riverward side or the landward side of Burgos St? We would like to clarify if all structures that are located on the landward side of Burgos St will be affected.

Reply:

(XXXXXX, DPWH-PMO-Flood Control)

We have been studying some schemes. One of the schemes is to make a concrete flood wall along Burgos St up to City Hall with Boulevard. It is assured that we will finalize the plan by consulting our City Mayor and the residents in identifying the best scheme to implement.

Follow-up to question 3 (XXXXXX, Barangay 15)

It is still possible that the structures located on the landward side of Burgos St will be retained. My initial understanding is that all of the structures will be affected; however, according to the explanations given in the meeting today, it is likely that there will be residents that will continue residing in the area located on the landward side of Burgos St.

Question 4:

(XXXXXX, Barangay 7)

Will DPWH pay for the loss of property? Will the landowners be paid and be eligible as well for free housing? Will the Cathedral and City Hall be also affected? If City Hall will just be lightly affected, then we should be, too.

Reply:

(XXXXXX, DPWH-PMO-IROW)

Generally, if your improvement will be affected, you are the owner of the land and the structure and you also will have the documents to prove such ownership, then you will be compensated for the structure even if you opt for resettlement.

(XXXXXX, DPWH-PMO-Flood Control)

It is only City Hall that would be affected.

Question 5:

(XXXXXX, Barangay Bonbon)

The land which was owned by his late grandfather has already been subdivided among his children but the title of the land is still under his name. Will they be paid if they have to resettle? (Note: Same question was raised by XXXXXX of Barangay Bonbon.) XXXXXX also suggested to make the visual aids bigger and to provide these in the handouts.

Reply:

(XXXXXX, Consultant, DPWH-PMO-IROW)

DPWH will pay only the person under whose name that the title has been issued. They need to expedite the transfer of the land title from the previous owners to the names of the present ones. For improvements/structure, the payment will be made to the person whose name appears on the tax declaration.

Question 6:

(XXXXXX, Barangay 15)

We filed an application for a housing unit to NHA. What happened?

Reply:

XXXXXX(, NHA Region 10)

The NHA did not solicit housing applications, we just did a survey after Sendong to determine possible relocation sites, establish baseline data on the affected households, e.g. identification of those whose houses are totally damaged, partially damaged and flooded, etc.

Question 7:

(XXXXXX, Barangay Bonbon)

Will relocation be by household or by structure?

Reply:

(XXXXXX, NHA Region 10)

In general we prioritize depending on status and location. There will be system for relocation that will be in place if project will be implemented.

Question 8:

(XXXXXX, Barangay Bonbon)

Most of the residents in Barangay Bonbon are occupying government land. What will happen to them?

Reply:

(XXXXXX, Consultant, DPWH-PMO-IROW)

Since they are occupying a government land they will not have entitlement for the land. Structure will be paid if they have tax declaration as proof of ownership. As informal settlers, they may be eligible for resettlement in government housing projects if they meet the qualifications.

Flood Risk Management for Cagayan de Oro River

Minutes of Consultation Meeting 4

November 06, 2013, 01:00PM-04:00PM

Tourism Hall of the City Government, Cagayan de Oro City

Total Number of Participants

PAPs	148
City Offices	2
Barangay Officers	2
National Government Officers	1
Department of Public Works and Highways	9
JICA Survey Team (FRIMP-CDOR)	8
Total	170

Participating Barangay(s):	Barangay Consolacion
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XXXXXX, in behalf of the City Information Office, began the public meeting at 01:51 PM. Invocation and singing of the national anthem were led by Barangay Consolacion. XXXXXX, Barangay Consolacion XXXXXX, delivered the welcome remarks.

XXXXXX of the DPWH-PMO-Flood Control provided an overview of the project. XXXXXX of the DPWH – ESSD presented the overall results of the Socio-Economic Survey conducted by the JICA Survey Team. XXXXXX of the DPWH-PMO-IROW explained the entitlements under Philippine laws and policies in terms of resettlement, and XXXXXX of the NHA-Region 10 presented possible resettlement sites which could be used for relocating qualified project affected persons. The public meeting is conducted to present the results of the socio-economic survey, and to solicit feedback. All speakers, including XXXXXX, Consultant, DPWH-PMO-IROW, were on hand during the open forum to address concerns and answer questions about the presentation.

XXXXXX, City Information Officer, gave the closing remarks - outlining the city government's housing priorities and challenges. Advisory was also given for mitigating risks associated with the upcoming Typhoon Yolanda. The public meeting ended at 03:35 PM.

Highlights of Discussion:

Question 1:

(XXXXXX, District 4, Barangay Consolacion)

If ever we don't have any documents like land title or tax declaration are we going to be paid with the replacement cost of the structure. For example I have invested 500,000.00 for my structure, will I get the same amount as payment for it?

Reply:

(XXXXXX, DPWH-PMO-IROW)

If no proof of ownership could be procured, the government has no basis for making a payment. It is the same with those who own structures only, a tax declaration for improvements is needed. Project affected persons who qualify though can apply for relocation as informal settlers.

Question 2:

(XXXXXX, District 3, Barangay Consolacion)

We only have a tax declaration for our structure for five years.

- a) Are we going to be paid with the replacement cost of the structure?
- b) Additionally, does one need to be an SSS, GSIS, or Pag-ibig member to be eligible for relocation?

Reply:

(XXXXXX, Consultant, DPWH-PMO-IROW)

- a) If you have a tax declaration for both land and house, and have been paying for at least 30 years, then you are eligible for entitlements.

(XXXXXX, NHA Region 10)

- b) For resettlement, membership in SSS, GSIS or PAG-IBIG not a requirement.

Question 3:

(XXXXXX, District 4, Barangay Consolacion)

We are renting the lot where our house is located. The land is not ours but we own the structure.

- a) Can we get a tax declaration for the structure, and where could we get one?
- b) Also, this question was requested to be relayed to the panel: Tax payments for property have been made by parents, who are now deceased. How do the heirs assume payments for the property?

Reply:

(XXXXXX, Consultant, DPWH-PMO-IROW)

- a) Yes, you could apply for Tax Declaration at the City Assessment Department. Make sure to bring a written contract between you and the land owner authorizing you to utilize the land.
- b) If the parents who used to pay for the property tax are deceased, the heirs will need to execute an extrajudicial division of estate.

Question 4:

(XXXXXX, District 2, Barangay Consolacion)

I do not know if the land where my house is located is a government owned lot or a private lot.

- a) Can I still get a tax declaration for the structure?
- b) Also, what is the basis for delineating which houses are affected – e.g. 30 meters away from the river bed?

Reply:

(XXXXXX, Consultant, DPWH-PMO-IROW)

- a) You can visit the City Assessment Department to know the status of the land that you are using or you can also check with the Department of Environment and Natural Resources. For structures on private land you need to have permission from the land owners before you can obtain a Tax Declaration for your improvements.

(XXXXXX, DPWH-PMO-Flood Control)

- b) The Flood Risk Level of an area will be the basis for determining which could still be saved from inundation. Houses located at Flood Risk Level 3 and below will be protected by the proposed flood control structures, while areas located in Flood Risk Level 4 areas will need to be resettled. Although precise structural alignments will be determined in the Detailed Engineering Design stage of the project, there should not be any substantial changes to the assessment of flood risk levels. DPWH will carefully consider the alignment determined by the Detailed Engineering Design before implementation proceeds.

Question 5:

(Barangay Consolacion XXXXX)

For public structures, like barangay halls, what entitlements are available to the LGU?

Reply:

(XXXXXX, DPWH-PS-ESSD)

The government will compensate the LGU, such that barangay can look for a suitable venue for rebuilding public structure.

Question 6:

(XXXXXX, District 3, Barangay Consolacion)

We understand the project is still in the preparatory stage. Can you give us an estimate of how many will be affected by the project?

Reply:

(XXXXXX, NHA Region 10)

The Detailed Engineering Design stage is in 2015, the final project design will be determined then, along with the final list of household and establishments to be affected by the project.

(XXXXXX, Cagayan de Oro City Information Officer)

Our City Government right now is focusing on a 3-point resettlement program. Sendong related relocation is a priority right now. Beneficiaries of the 'Piso-Piso' program of the previous city administration are also being focused on. The third focal point of the local housing program is the Informal Settler families. For any concerns you can visit me at the City Information Office or for any Sendong related relocation concerns visit our Estate Division Management and look for XXXXX.

Annex -6
Attendance List of Consultation Meeting with PAPs



Flood Risk Management Project for Cagayan de Oro River (FRIMP-CDOR)

Public Meeting

Barangay Nazareth Gym, Barangay Nazareth, Cagayan de Oro City

05 November 2013; 08:30 AM - 12:00 NN

BARANGAY BALULANG

1/4

	Name	Street, Purok / Sitio	Barangay	Gender	Age	Signature
1		CARISNA REVEREND	Balulang	M	23	—
2		CARINA, BALULANG	Balulang	M	27	ck
3		CARINA, BALULANG	Balulang	M	23	RC
4		CARISNA	Balulang	M		51 yechule
5		CARISNA	Balulang	F	22	Jatira
6		Carisna	Balulang	F	78	cs
7		CARINA - BALULANG	Balulang	M	31	Jun
8		Carisna Bal.	Balulang	M.	33	Jan
9		Carina Bal.	Balulang	F	44	Maruki
10		Carina Bal.	Balulang	F	47	Jr.
11		Carina Balulang	Balulang	M	33	—
12		Carina Balulang	Balulang	F	33	Angela
13		Carina Balulang	Balulang	F	32	Arles
			Balulang			
14		Zone A Nazareth, CDO	Balulang	M	60	JR



Flood Risk Management Project for Cagayan de Oro River (FRIMP-CDOR)

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BARANGAY BALULANG

2/4

	Name	Street, Purok / Sitio	Barangay	Gender	Age	Signature
15		Riverside	Balulang	F	57	
16		River side	Balulang	F	38	
17		River side	Balulang	F	32	
18		Riverside	Balulang	F	32	
19		Riverside	Balulang	M	67	
20		River side	Balulang	F	38	
21		Carina Riverside B	Balulang	M	31	
22		Carina Riverside B	Balulang	F	30	
23		Carina Riverside	Balulang	M	46	
24		Carina Riverside	Balulang	M	63	
25		Carina Riverside	Balulang	F	30	
26		Carina Riverside	Balulang	M	46	
27		Carina Riverside	Balulang	M	35	
28		Carina Riverside	Balulang	M	42	
29		RIVER SIDE CARINA	Balulang	M	44	



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BARANGAY BALULANG

3/4

	Name	Street, Purok / Sitio	Barangay	Gender	Age	Signature
30		Carlsha	Balulang	F	37	Notaya
31		carisha	Balulang	F	35	PARIDA
32		carishon	Balulang	F	23	Rafael
34		carishon	Balulang	F	47	SAPAH
35		carishon	Balulang	F	22	ASIAH
36		Carinagan	Balulang	M	50	
37		Barbajis	Balulang	M	36	
38		CAPINUGAN	Balulang	M	44	M. Solin
39		Balulang	Balulang	M	-	Kyng
40		carishon	Balulang	M	JK	
41		"	Balulang	M	34	rina
			Balulang			
			Balulang			
			Balulang			
			Balulang			



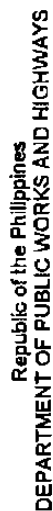
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BARANGAY BALULANG

A/4

	Name	Street, Purok / Sitio	Barangay	Gender	Age	Signature
42		CARISNA BALULANG	Balulang	M	35	<i>[Signature]</i>
43		CARISNA BALULANG BALULANG	Balulang	M	40	<i>[Signature]</i>
44		Buadong	Balulang	M	68	<i>[Signature]</i>
45		CARISNA	Balulang	F	48	<i>[Signature]</i>
46		CARISNA	Balulang	F	40	<i>[Signature]</i>
47		CARISNA	Balulang	F	38	<i>[Signature]</i>
			Balulang			
			Balulang			
			Balulang			
			Balulang			
			Balulang			
			Balulang			
			Balulang			
			Balulang			
			Balulang			
			Balulang			



Flood Risk Management Project for Cagayan de Oro River (FRIMP-CDO)

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BARANGAY NAZARETH

●●●●●

	Name	Street, Zone	Barangay	Gender	Age	Signature
1		Maria-Elisa B. Flores 9000 Macapuno	Nazareth	F	66	[Signature]
2			Nazareth			
3		Pomponco H. Moris de la Cruz	Nazareth	F	57	[Signature]
4		(SLA DE OM)	Nazareth			[Signature]
			Nazareth			
			Nazareth			
			Nazareth			
			Nazareth			
			Nazareth			
			Nazareth			
			Nazareth			/
			Nazareth			
			Nazareth			
			Nazareth			
			Nazareth			
			Nazareth			



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BARANGAY MACASANDIG 1/6

	Name	Street, District	Barangay	Gender	Age	Signature
1		BARANGAY MACASANDIG	Macasandig	M	47	
2		BIASONG MACASANDIG	Macasandig	F	75	
3			Macasandig	F	65	
4			Macasandig	M	63	
5		BIASONG MACASANDIG	Macasandig	M	54	
6		BIASONG MACASANDIG	Macasandig	F/M	28/31	
7		MAKIS DE LARA	Macasandig	M	72	
8		" "	Macasandig	M	63	
9		" "	Macasandig	F	64	
10		" "	Macasandig	M	68	
11		BIASONG, MACASANDIG	Macasandig	M	32	
12		" "	Macasandig	M	44	
13		" "	Macasandig	M	48	
14		" "	Macasandig	F	38	
15		de Biosong	Macasandig	F	18	



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BARANGAY MACASANDIG

2/6

	Name	Street, District	Barangay	Gender	Age	Signature
16		Biasong	Macasandig	F	64	
17		Biasong	Macasandig	F	31	
18		Biasong	Macasandig	M	56	
19		Biasong Macasandig	Macasandig	F	41	
20		BIASONG MACASANDIG	Macasandig	M	53	
21		BIASONG MACASANDIG	Macasandig	M	72	
22		" "	Macasandig	F	48	
23		TOMAS SACA 14 MARIZ DE LARA MACASANDIG CDO	Macasandig	F	41	
24		TOMAS SACA 14 MARIZ DE LARA MACASANDIG CDO	Macasandig	F	46	
25		BIASONG	Macasandig	M	77	
26		BIASONG, LITE.	Macasandig	F	56	
27		BIASONG, LITE	Macasandig	M	43	
28		Biasong mado	Macasandig	F	52	
29		BIASONG	Macasandig	F	27	
30		BIASONG, LITE	Macasandig	M	53	



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BARANGAY MACASANDIG

3/2

	Name	Street, District	Barangay	Gender	Age	Signature
31		DIASONG MACASANDIG	Macasandig	M	56	
32		" "	Macasandig	M	50	
33		Diasong	Macasandig	M	80	
34		Biasong	Macasandig	F	48	
35		Biasong	Macasandig	F	42	
36		Biasong	Macasandig	F	49	
37		MACASANDIG T.	Macasandig	M	41	
38		DIASONG	Macasandig	M	71	
39		Biasong	Macasandig	F	49	
40		Biasong	Macasandig	F	48	
41		Biasong	Macasandig	F	34	
42		Biasong	Macasandig	M	59	
43		Biasong	Macasandig	M	59	
44		DIASONG	Macasandig	M	29	
45		Biasong	Macasandig	F	57	



Flood Risk Management Project for Cagayan de Oro River (FRIMP-CDOR)

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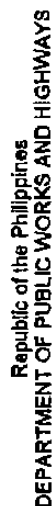
Barangay Nazareth Gym, Barangay Nazareth, Cagayan de Oro City

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BARANGAY MACASANDIG

4/6

Name	Street, District	Barangay	Gender	Age	Signature
46	BIASONG, Macasandig	Macasandig	F	48	
47	BIASONG	Macasandig	M	53	
48	MATES DE LARA, Macasandig	Macasandig	M	67	
49	naño de lara st.	Macasandig	F	64	
50	Macasandig 11	Macasandig	F	71	
51	Macasandig, DELARA	Macasandig	F	39	
52	DE LARA	Macasandig	M	70	
53	"	Macasandig	F	66	
54	BIASONG	Macasandig	F	63	
55	BIASONG	Macasandig	M	40	
56	BIASONG	Macasandig	M	77	
57	BIASONG	Macasandig	F	48	
58	BIASONG	Macasandig	F	36	
59	BIASONG	Macasandig	M	63	
60	BIASONG	Macasandig	F	25	



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BARANGAY MACASANDIG

 $\frac{7}{5}$

Name _____

Name	Street, District	Barangay	Gender	Age	Signature
61	Bisang Macalandig	Macasandig	F	68	Renty E. Espino
62	Bisang Macalandig	Macasandig	M	52	Plapaya
63	Bisang Macalandig	Macasandig	M	60	2/2/2020
64	Bisang Macalandig	Macasandig	M	56	2/2/2020
65	ST. IGNATIUS	Macasandig	M	61	2/2/2020
66	Bisang Macalandig	Macasandig	F	52	2/2/2020
67	Bisang Macalandig	Macasandig	M	40	2/2/2020
68	Bisang Macalandig	Macasandig	M	38	2/2/2020
69	Bisang Macalandig	Macasandig	M	54	2/2/2020
70	Bisang Macalandig	Macasandig	F	44	2/2/2020
71	Bisang Macalandig	Macasandig	F	39	2/2/2020
72	Bisang Macalandig	Macasandig	M	64	2/2/2020
73	Bisang Macalandig	Macasandig	M	60	2/2/2020
74	Bisang Macalandig	Macasandig	M	63	2/2/2020



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BARANGAY MACASANDIG

C/L

Name	Street, District	Barangay	Gender	Age	Signature
76.	Biasong	Macasandig	F	50	[Signature]
77	Biasong	Macasandig	F	79	[Signature]
77	Biasong	Macasandig	F	46	[Signature]
78	Biasong	Macasandig	F	57	[Signature]
79	Biasong	Macasandig	F	53	[Signature]
80	Biasong	Macasandig	F	41	[Signature]
81	Biasong	Macasandig	M	32	[Signature]
82	Transaco 14, Barangay Nazareth	Macasandig	F	25	[Signature]
83	Biasong	Macasandig	F	52	[Signature]
84	Biasong	Macasandig	M	32	[Signature]
		Macasandig			
		Macasandig			
		Macasandig			
		Macasandig			
		Macasandig			



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BARANGAY CARMEN

Name

1/6

	Street, Zone	Barangay	Gender	Age	Signature
1	ACACIA EXT. ZONE 7-A	Carmen	M F	54	<i>[Signature]</i>
2	Acacia Zone 7-A	Carmen	M	25	<i>[Signature]</i>
3	Acacia Zone 7-A	Carmen	M	29	<i>[Signature]</i>
4	Zone 7-A Acacia St.	Carmen	F	41	<i>[Signature]</i>
5	Zone 7-A Acacia St.	Carmen	M	60	<i>[Signature]</i>
6	Zone 4-A Acacia St.	Carmen	F	73	<i>[Signature]</i>
7	Zone 5-B C.D.O.	Carmen	M	40	<i>[Signature]</i>
8	Zone 5-B, C.D.O.	Carmen	F	50	<i>[Signature]</i>
9	Zone 5-B C.D.O.	Carmen	M	24	<i>[Signature]</i>
10	Zone 5-B C.D.O.	Carmen	M	59	<i>[Signature]</i>
11	ACACIA 5 C.D.O.	Carmen	F	59	<i>[Signature]</i>
12	Zone 7 ACACIA ST.	Carmen	F	45	<i>[Signature]</i>
13	Zone 5 Acacia St. Carmen	Carmen	F	29	<i>[Signature]</i>
14	Zone 7 Acacia St.	Carmen	F	56	<i>[Signature]</i>
15	145 Acacia Bldg. 2-7	Carmen	F	53	<i>[Signature]</i>

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BARANGAY CARMEN

2/6

	Name	Street, Zone	Barangay	Gender	Age	Signature
16		Zone-5 Acacia St.	Carmen	Male	37	
17		Zone-5 Acacia St.	Carmen	F	50	
18		Zone-7 Acacia St.	Carmen	M	51	
19		Zone-5 Acacia St.	Carmen	M	74	
20		Zone-5 Acacia St.	Carmen	M	47	
21		Zone-5 Acacia St.	Carmen	M	63	
22		Zone-7 Acacia St.	Carmen	F	72	
23		Zone-7 Acacia St.	Carmen	F	65	
24		Zone-7 Acacia St.	Carmen	F	50	
25		Zone-7 Acacia St.	Carmen	F	60	
26		Zone-7 Acacia St.	Carmen	F	68	
27		Zone-7 Acacia St.	Carmen	M	42	
28		Zone-7 Acacia St.	Carmen	F	42	
29		Zone-7 Acacia St.	Carmen	F	71	
30		Zone-7 Acacia St.	Carmen	M	34	

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BARANGAY CARMEN

3/6

Sl	Name	Street, Zone	Barangay	Gender	Age	Signature
31		Zone 7 Acacia	Carmen	F	54	
32		Zone 7 Acacia	Carmen	F	56	
33		Zone 7 Acacia St.	Carmen	F	34	
34		Zone 7 Acacia	Carmen	F	68	
35		Zone 7-A Acacia	Carmen		54	
36		Zone 7-A Acacia	Carmen	M	60	
37		Zone 5 Acacia	Carmen	F	61	
38		Zone 5 Acacia	Carmen	F	53	
39		Zone 5 Acacia	Carmen	F	57	
40		Zone 2-B Acacia	Carmen	F	65	
41		Zone 2-B Acacia	Carmen	F	54	
42		Zone 2-B Acacia	Carmen	F	58	
43		Zone 2-B Acacia	Carmen	F	58	
44		Zone 2-B Acacia	Carmen	F	54	
45		Zone 2-B Acacia	Carmen	F	55	
46		Zone 2-B Acacia	Carmen	M	64	



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BARANGAY CARMEN

4/6

Name	Street, Zone	Barangay	Gender	Age	Signature
47	2-7 ACACIA EXT. CARMEN	Carmen	F	30	
48	2-7 ACACIA EXT. CARMEN CDO	Carmen	F	32	
49	2-7 ACACIA ST. CARMEN	Carmen	M	62	
50	2-7 ACACIA CARMEN	Carmen	F	62	
51	2-5 ACACIA CARMEN	Carmen	M	63	
52	2-5 ACACIA ST. CARMEN	Carmen	F	57	
53	2-5 ACACIA ST. CARMEN	Carmen	F	60	
54	2-5 ACACIA ST. CARMEN	Carmen	F	60	
55	2-5 ACACIA ST. CARMEN	Carmen	F	53	
56	2-5 ACACIA ST. CARMEN	Carmen	F	—	
57	2-5 ACACIA ST. CARMEN	Carmen	M	34	
58	2-5 ACACIA ST. CARMEN	Carmen	F	52	
59	2-5 ACACIA ST. CARMEN	Carmen	M	34	
60	2-5 ACACIA ST. CARMEN	Carmen	F	37	
61	2-7 ACACIA ST. CARMEN	Carmen	F	50	



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5/6

BARANGAY CARMEN

	Name	Street, Zone	Barangay	Gender	Age	Signature
62		Zone 7, A C A S I A ST				
63		EVERASTING ST. ZONE 6	Carmen	M	29	
64		Zone 7				
65		Mc AGACIA ST. KAYA CARMEN	Carmen	F	54	
66		Zone 7 B CARMEN	Carmen	F	44	
67		Zone 7 CARMEN	Carmen	F	34	
68		Zone 5 CARMEN	Carmen	M	44	
69		Zone 5 Y	Carmen	F	61	
70		Zone 7 A CARMEN	Carmen	F	42	
71		Zone 7 A Agacia St. Carmen	Carmen	F	73	
72		Zone 7 A A C A S I A	Carmen	F	45	
73		Zone 5 Agacia, Carmen	Carmen	F	22	
74		Zone 7 A Agacia St. Carmen	Carmen	F	65	
75		Zone 5, Agacia St. Carmen	Carmen	F	61	
76		Zone 5, Agacia St. Carmen	Carmen	F	65	
77		Zone 5, Agacia St. Carmen	Carmen	F	94	



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BARANGAY CARMEN

6/6

	Name	Street, Zone	Barangay	Gender	Age	Signature
78		122 ACACIA ST - CARMEN	Carmen	M	33	
79		267 ACACIA ST. - Carmen	Carmen	F	34	
80		17th St. - NAZARETH CPO	Carmen	M	57	
81		35 HA KONGI CARMEN	Carmen	M	51	
82		ZONE 7 - ACACIA	Carmen	M	68	
83		Zone 7A - Nazareth	Carmen	M	29	
84		Zone 7A - Acacia	Carmen	F	89	
85		Zone 7 - KONGI ST.	Carmen	F	64	
86		Zone 7 - ACACIA ST.	Carmen	M	43	
87		Zone 7 - ACACIA ST.	Carmen	M	59	
88		Zone 7 - ACACIA ST.	Carmen	F	84	
89		Zone 7 - ACACIA ST.	Carmen	M	93	
90		Zone 7 - ACACIA ST.	Carmen	F	48	
91		Zone 7 - ACACIA ST.	Carmen	M	20	



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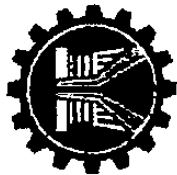
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BARANGAY BONBON

1/6

	Name	Street	Barangay	Gender	Age	Signature
1		Zone 5	Bonbon	F	41	<i>[Signature]</i>
2		Zone 5	Bonbon	F	57	<i>[Signature]</i>
3		Zone 5	Bonbon	F	38	<i>[Signature]</i>
4		R 5	Bonbon	M	67	<i>[Signature]</i>
5		Zone 3	Bonbon	F	52	<i>[Signature]</i>
6		Zone 5	Bonbon	M	45	<i>[Signature]</i>
7		Zone 3	Bonbon	F	78	<i>[Signature]</i>
8		Zone 5	Bonbon	F	16	<i>[Signature]</i>
9		Zone 5	Bonbon	F	28	<i>[Signature]</i>
10		Zone 5	Bonbon	M	52	<i>[Signature]</i>
11		Zone 5	Bonbon	F	59	<i>[Signature]</i>
12		Zone 5	Bonbon	F	57	<i>[Signature]</i>
13		Zone 5	Bonbon	F	57	<i>[Signature]</i>
14		Zone 3	Bonbon	F	46	<i>[Signature]</i>
15		Bonbon NHS	Bonbon	F	38	<i>[Signature]</i>



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BARANGAY BONBON

2/6

	Name	Street	Barangay	Gender	Age	Signature
16		Z-5 BONBON	Bonbon	M	48	
17		Z-5 BONBON	Bonbon	F	42	
18		Z-5 BONBON	Bonbon	M	42	
19		Z-5 BONBON	Bonbon	F	30	
20		Z-4 BONBON	Bonbon	F	46/36	
21		Z-5 BONBON	Bonbon	F	24	
22		ZONE - 5	Bonbon	M	31	
23		ZONE - 5	Bonbon	M	48	
		ZONE - 5	Bonbon	M	32	
24		ZONE - 5	Bonbon	M	41	
25		ZONE - 4	Bonbon	M		
26		ZONE - 5	Bonbon	M	29	
27		ZONE - 5	Bonbon	M	43	
28		Zone - 5	Bonbon	F	51	
29		Zone I. Bonbon	Bonbon	F	59	



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BARANGAY BONBON

3/6

	Name	Street	Barangay	Gender	Age	Signature
30		ZONE 2	Bonbon	F	57	
31		ZONE 5	Bonbon	F	52	
32		ZONE 5	Bonbon	M	46	
33		ZONE 5	Bonbon	F	68	
34		ZONE 5	Bonbon	M	50	
35		ZONE 3	Bonbon	F	53	
36		ZONE 5	Bonbon	M	40	
37		ZONE 4	Bonbon	M	42	
38		ZONE 4	Bonbon	M	58	
39		ZONE 5	Bonbon	M	52	
40		ZONE 5	Bonbon	M	40	
41		ZONE 5	Bonbon	M	78	
42		ZONE 5	Bonbon	F	33	
43		ZONE 5	Bonbon	M	29	
44		ZONE 5	Bonbon	F	24	



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BARANGAY BONBON

4/6

Name	Street	Barangay	Gender	Age	Signature
45	Zone 5	Bonbon	M	45	
46	Zone 5	Bonbon	F	62	
47	Zone 4	Bonbon	M	60	
48	Z - 5	Bonbon	F	34	
49	ZONE - 5	Bonbon	F	46	
50	Zone 5	Bonbon	F	49	
51	Zone 5	Bonbon	M	61	
52	ZONE 5	Bonbon	M	42	
53	ZONE 5	Bonbon	M	61	
54	Zone 4	Bonbon	F	38	
55	Zone 4	Bonbon	M	44	
56	ZONE 5	Bonbon	M	40	
57	ZONE 5	Bonbon	M	26	
58	ZONE 5	Bonbon	M	65	
59	Zone 5	Bonbon	M	20	



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BARANGAY BONBON

5/6

	Name	Street	Barangay	Gender	Age	Signature
60		Zone 8	Bonbon	F	44	<i>[Signature]</i>
61		Zone 8	Bonbon	F	26	<i>[Signature]</i>
62		Zone 8	Bonbon	F	26	<i>[Signature]</i>
63		Zone 8	Bonbon	F	37	<i>[Signature]</i>
64		Zone 4	Bonbon	F	51	<i>[Signature]</i>
65		Zone 5	Bonbon	F	49	<i>[Signature]</i>
66		Zone 5	Bonbon	F	29	<i>[Signature]</i>
67		Zone 5	Bonbon	F	35	<i>[Signature]</i>
68		Zone 5	Bonbon	F	40	<i>[Signature]</i>
69		Zone 5	Bonbon	F	33	<i>[Signature]</i>
70		Zone 5	Bonbon	F	55	<i>[Signature]</i>
71		Zone 5	Bonbon	M	30	<i>[Signature]</i>
72		Zone 5	Bonbon	F	48	<i>[Signature]</i>
73		Zone 5	Bonbon	F	31	<i>[Signature]</i>
74		Zone 5	Bonbon	F	44	<i>[Signature]</i>



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BARANGAY BONBON

6/6


Name	Street	Barangay	Gender	Age	Signature
75	ZONE 3 BONBON	Bonbon	MALE	28	
76	ppmt - pmo	Bonbon			
77	Bygy Bonbon	Bonbon	male	68	
78	3-5 Bonbon	Bonbon	F	42	
79	DOLONGIS CAKEMAN	Bonbon	F	23	
80	ZONE 5 BONBON	Bonbon	F	34	
81	ZONE 5 Bone	Bonbon	M	23	
82	3-4 Bonbon	Bonbon	F	38	
	2-6 Bonbon	Bonbon	F	33	
83	Bonbon	Bonbon	F	89	
84	Bonbon	Bonbon	M	35	
85	Bonbon	Bonbon	F	36	
86	Zone Bonbon	Bonbon	F	54	
		Bonbon			
		Bonbon			



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KASUGAKAN
1/1
BARANGAY 6

Name	Street	Barangay	Gender	Age	Signature
1	<i>KASUGAKAN</i>	<i>KASUGAKAN</i> Brgy. 6	M	65	
		Brgy. 6			
		Brgy. 6			
		Brgy. 6			
		Brgy. 6			
		Brgy. 6			
		Brgy. 6			
		Brgy. 6			
		Brgy. 6			
		Brgy. 6			
		Brgy. 6			
		Brgy. 6			
		Brgy. 6			
		Brgy. 6			
		Brgy. 6			
		Brgy. 6			
		Brgy. 6			



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1/1

BARANGAY 1

	Name	Street	Barangay	Gender	Age	Signature
1		#18 Fernandez - Tiaino	Brgy. 1	M	53	
2		#88- Fernandez - Tiaino	Brgy. 1	F	57	
3		#R- Fernandez - Tiaino	Brgy. 1	M	62	
			Brgy. 1			
			Brgy. 1			
			Brgy. 1			
			Brgy. 1			
			Brgy. 1			
			Brgy. 1			
			Brgy. 1			
			Brgy. 1			
			Brgy. 1			
			Brgy. 1			
			Brgy. 1			
			Brgy. 1			
			Brgy. 1			
			Brgy. 1			



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BARANGAY 7

1/3

	Name	Street	Barangay	Gender	Age	Signature
1		Cruz Tagal	Brgy. 7	M	60	
2		Mr. Borja Burgos	Brgy. 7	M	33	
3		Mr. Borja Burgos	Brgy. 7	M	23	
4		JR Dorja Burgos	Brgy. 7	F	34	
5		Gomez Burgos	Brgy. 7	F	34	
6		Cruz Tagal	Brgy. 7	F	38	
7		"	Brgy. 7	F	35	
8		"	Brgy. 7	F	29	
9		"	Brgy. 7	M	38	
10		JR Borja Burgos	Brgy. 7	F	38	
11		Cruz Tagal Burgos	Brgy. 7	M	45	
12		Cruz Tagal Burgos	Brgy. 7	M	38	
13		Gomez S.A.	Brgy. 7	M	34	
14		Gomez S.A.	Brgy. 7	F	40	
15		Gomez S.A.	Brgy. 7	F	50	



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BARANGAY 7

2/3

	Name	Street	Barangay	Gender	Age	Signature
16		Burgos Stoney			23	
17		GOMEZ BURGOS ST.	BRGY. 7	F	44	
18		11	BRGY. 7	M	33	
19		Gomez-Burgos St.	BRGY. 7	F	42	
20		Cruz Tal	BRGY. 7	F	47	
21		Cruz Tal	BRGY. 7	M	45	
22		Jaimey PC	BRGY. 7	F	38	
23		Cruz Tal	BRGY. 7	F	51	
24		BURGOS-TAL	BRGY. 7	M	49	
25		BURGOS ST	Consolidated BRGY. 7	M	69	
26		BURGOS .	BRGY. 7	M	50	
27		Burgos St.	BRGY. 7	F	33	
28		Burgos St.	BRGY. 7	F	64	
29		BURGOS ST	BRGY. 7	F	29	
30		Burgos Corral	BRGY. 7	F	51	
			BRGY. 7			



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BARANGAY 7

3/3

	Name	Street	Barangay	Gender	Age	Signature
31		CRAZ-TAAL BURGOS	Brgy. 7	F	31	
32		JR Brgy Burgos	Brgy. 7	F	40	
33		CRAZ-TAAL BURGOS	Brgy. 7	NA	43	
			Brgy. 7			
			Brgy. 7			
			Brgy. 7			
			Brgy. 7			
			Brgy. 7			
			Brgy. 7			
			Brgy. 7			
			Brgy. 7			
			Brgy. 7			
			Brgy. 7			
			Brgy. 7			
			Brgy. 7			
			Brgy. 7			
			Brgy. 7			
			Brgy. 7			
			Brgy. 7			



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BARANGAY 10

1/1

Name	Street	Barangay	Gender	Age	Signature
	690 Burgos St., CDO	Brgy. 10	F	54	<i>[Signature]</i>
	<i>yacayin burgas</i>	Brgy. 10	F	50 yrs	<i>[Signature]</i>
	"	Brgy. 10	M	<i>yacayin</i>	<i>[Signature]</i>
	"	Brgy. 10	F	78	<i>[Signature]</i>
	"	Brgy. 10	F	74	<i>[Signature]</i>
	<i>yacayin Burgos St.</i>	Brgy. 10	F	36y	<i>[Signature]</i>
		Brgy. 10			
		Brgy. 10			
		Brgy. 10			
		Brgy. 10			
		Brgy. 10			
		Brgy. 10			
		Brgy. 10			
		Brgy. 10			
		Brgy. 10			
		Brgy. 10			
		Brgy. 10			



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BARANGAY 13 ^{1/2}

	Name	Street	Barangay	Gender	Age	Signature
1		600 BONGOR P. BARRIO	BRGY. 13	M	55	<i>[Signature]</i>
2		594 Burgos Montalvan	BRGY. 13	M	31	<i>[Signature]</i>
3		628 BARRIO PASIBULAN	BRGY. 13	M	69	<i>[Signature]</i>
4		108 Burgos Montalvan	BRGY. 13	F	68	<i>[Signature]</i>
5		148 Burgos Montalvan	BRGY. 13	F	36	<i>[Signature]</i>
6		11	BRGY. 13	M	52	<i>[Signature]</i>
7		11	BRGY. 13	M	41	<i>[Signature]</i>
8		129 MARIANI BURGOS	BRGY. 13	M	45	<i>[Signature]</i>
9		594 Burgos Montalvan	BRGY. 13	M	39	<i>[Signature]</i>
10		Montalvan Burgos	BRGY. 13	M	37	<i>[Signature]</i>
11		Montalvan Burgos	BRGY. 13	F	25	<i>[Signature]</i>
12		MONTALVAN, BURGOS	BRGY. 13	M	61	<i>[Signature]</i>
13		Montalvan, Burgos	BRGY. 13	F	21	<i>[Signature]</i>
14		594 Burgos Montalvan	BRGY. 13	M	44	<i>[Signature]</i>
15		594 Burgos Montalvan barrio	BRGY. 13	F	48	<i>[Signature]</i>



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BARANGAY 13

	Name	Street	Barangay	Gender	Age	Signature
16		BURLOS, MONTEBAN	Brgy. 13	M	39	
17		Burgo Monteban	Brgy. 13	F	44	
18		Burgo Burgo M.	Brgy. 13	F	70	
19		Monteban - Burgo & Co.	Brgy. 13	F	83	
20		Monteban	Brgy. 13	F	34	
21		Monteban, Burgo & Co.	Brgy. 13	F	36	
			Brgy. 13			
			Brgy. 13			
			Brgy. 13			
			Brgy. 13			
			Brgy. 13			
			Brgy. 13			
			Brgy. 13			
			Brgy. 13			
			Brgy. 13			
			Brgy. 13			



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BARANGAY 15

1/5

	Name	Street	Barangay	Gender	Age	Signature
1		Burgos Makahambus	Brgy. 15	F	42	
2		-du	Brgy. 15	M	62	
3		Burgos del Pelar	Brgy. 15	M	22	
4		makahambus st-	Brgy. 15	F	42	
5		Nacahambus Burgos	Brgy. 15	F	43	
6		11 11	Brgy. 15		46	
7		11 11	Brgy. 15		28	
8		11	Brgy. 15	F	57	
9		11	Brgy. 15	M	48	
10		Burgos Br. 15.	Brgy. 15	F	47	
11		Burgos Br. 15	Brgy. 15	M	25	
12		Burgos BRGY #15	Brgy. 15	M	57	
13		Burgos-del Pelar Cd	Brgy. 15	F	72	
14		Burgos Makahambus st-	Brgy. 15		44	
15		Burgos Makahambus st 15	Brgy. 15	M	28	



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BARANGAY 15

2/5

	Name	Street	Barangay	Gender	Age	Signature
14		BURGOS- MACAHAMBUS	Brigv. 15	F	76	<i>[Signature]</i>
17		BURGOS MAKATAMBUS ST.	Brigv. 15	M	32	<i>[Signature]</i>
18			Brigv. 15	F	27	<i>[Signature]</i>
19		BURGOS, MAKATAMBUS ST - CDO	Brigv. 15	F	26	<i>[Signature]</i>
20		BURGOS MAKATAMBUS ST.	Brigv. 15	F	47	<i>[Signature]</i>
21		BURGOS MAKATAMBUS ST.	Brigv. 15	M	39	<i>[Signature]</i>
22		BURGOS MAKATAMBUS ST.	Brigv. 15	F	56	<i>[Signature]</i>
23		BURGOS MAKATAMBUS ST.	Brigv. 15	M	35	<i>[Signature]</i>
24		BURGOS MAKATAMBUS ST.	Brigv. 15	F	33	<i>[Signature]</i>
25		BURGOS MAKATAMBUS ST.	Brigv. 15	M	60	<i>[Signature]</i>
26		BURGOS MAKATAMBUS	Brigv. 15	M	43	<i>[Signature]</i>
27		BURGOS MAKATAMBUS	Brigv. 15	F	82	<i>[Signature]</i>
28		76 MAKATAMBUS BURGOS	Brigv. 15	M	34	<i>[Signature]</i>
29		544 MAKATAMBUS BURGOS	Brigv. 15	M	26	<i>[Signature]</i>
30		Makatabus BURGOS	Brigv. 15	M	27	<i>[Signature]</i>



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BARANGAY 15

3/5

	Name	Street	Barangay	Gender	Age	Signature
31		BRGY-K BURGOS CDO		M	54	
32		BRGY. 15 BURGOS CDO	Brvg. 15	F	58	
33		BRGY. 15. BURGOS CDO	Brvg. 15	F	38	
34		BRGY. 15. BURGOS Cdo	Brvg. 15	M	22	
35		BRGY. 15. BURGOS CDO	Brvg. 15	F	33	
36		BRGY. 15 BURGOS CDO	Brvg. 15	F	21	
37		BRGY. 15 BURGOS CDO	Brvg. 15	M	62	
38		BRGY. 15 BURGOS CDO	Brvg. 15	F	57	
39		BRGY. 15 CDO	Brvg. 15	M-	49-	
40		BRGY. 15 BURGOS C.D.O	Brvg. 15	F	49	
41		B-15	Brvg. 15	F	30	
42		B-15 BURGOS C.D.O	Brvg. 15	F	20	
43		B-15 BURGOS Makabambus	Brvg. 15	F	47	
44		10-15 BURGOS Makabambus	Brvg. 15	F	27	
45		B-15 BURGOS RE N.O	Brvg. 15	F	82	
46		BRUY. 15 BURGOS ST.	Brvg. 15	F	31	



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BARANGAY 15

4/5

	Name	Street	Barangay	Gender	Signature
47		Makahambus	BrGY. 15	F	Ching
48		Makahambus - Burgos Sta	BrGY. 15	F	Ching
49		Makahambus Burgos	BrGY. 15	F	Ching
50		Makahambus Burgos	BrGY. 15	M	Ching
51		Makahambus, Burgos	BrGY. 15	F	Ching
52		Makahambus, Burgos	BrGY. 15	F	Ching
53		Makahambus Burgos	BrGY. 15	F	Ching
54		Makahambus Burgos	BrGY. 15	F	Ching
55		Makahambus Burgos	BrGY. 15	F	Ching
56		Makahambus Burgos	BrGY. 15	F	Ching
57		Makahambus Burgos	BrGY. 15	F	Ching
58		Makahambus Burgos	BrGY. 15	M	Ching
59		Makahambus Burgos	BrGY. 15	F	Ching
60		Makahambus Burgos	BrGY. 15	F	Ching
61		Makahambus Burgos	BrGY. 15	F	Ching



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BARANGAY 15 5/5

	Name	Street	Barangay	Gender	Age	Signature
62		Burgos	Brgy. 15	F	29	
63		MAKA HAMBUN, BURGOS	Brgy. 15	M	24	
64		MAKAHAMBUN, BURGOS	Brgy. 15	M	22	
65		MAKAHAMBUN, BURGOS	Brgy. 15	M	22	
66		MAKAHAMBUN, BURGOS	Brgy. 15	F	27	
67		MAKAHAMBUN, BURGOS	Brgy. 15	F	23	
68		MAKAHAMBUN, BURGOS	Brgy. 15	M	28	
69		Burgos Jelpilan	Brgy. 15	M	37	
70		BURGOS	Brgy. 15	M	45	
71		BURGOS	Brgy. 15	M	47	
72		Burgos	Brgy. 15	M	46	
73		Burgos	Brgy. 15		31	
74		Burgos	Brgy. 15	M	51	
			Brgy. 15			
			Brgy. 15			



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BARANGAY 17

1/5

	Name	Street	Barangay	Gender	Age	Signature
1		Burgos Del Pilar	Brgy. 17	F	44	
2		DEL PILAR ST.	Brgy. 17	M	68	
3		DEL PILAR ST.	Brgy. 17	M	34	
4		DEL PILAR STREET	Brgy. 17	M	23	
5		BURGOS DEL PILAR ST.	Brgy. 17	M	30	
6		BURGOS DEL PILAR ST.	Brgy. 17	M	33	
7		Burgos del Pilar St	Brgy. 17	M		
8		Burgos del Pilar St	Brgy. 17	F		
9		Burgos Del Pilar St.	Brgy. 17	F	51	
10			Brgy. 17	M	67	
11		RIVER SIDE	Brgy. 17	F	74	
12			Brgy. 17	F	78	
13		RIVER SIDE	Brgy. 17	F	74	
14			Brgy. 17	F	23	
15		River side Burgos	Brgy. 17	F	40	



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BARANGAY 17

	Name	Street	Barangay	Gender	Age	Signature
16		Burgos del Pilar St.	Brgy. 17	F	48	
17		Burgos del Pilar St.	Brgy. 17	F	72	
18		Burgos del Pilar St.	Brgy. 17	F	29	
19		BURGOS DEL PILAR ST.	Brgy. 17	M	50	
20		BURGOS DEL PILAR ST.	Brgy. 17	F	33	
21		BURGOS DEL PILAR ST.	Brgy. 17	M	55	
22		Burgos del Pilar St.	Brgy. 17	M	74	
23		Burgos del Pilar St.	Brgy. 17	F	37	
24		Burgos del Pilar St.	Brgy. 17	F	63	
25		Burgos del Pilar	Brgy. 17	F	39	
26		Burgos del Pilar	Brgy. 17	F	25	
27		Burgos del Pilar	Brgy. 17	F	17	
28		San. Burgos del Pilar	Brgy. 17	M	72	
29		San. Burgos	Brgy. 17	NV	44	
30		BURGOS DEL PILAR ST.	Brgy. 17	M	42	



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BARANGAY 17 3/5

	Name	Street	Barangay	Gender	Age	Signature
31		BURGOS ST CDO	Brig. 17	M.	74	
32		Burgos del Pilar	Brig. 17	F	33	
33		Brig. 17-	Brig. 17	F	45	
34		Brig. 17-	Brig. 17	F	44	
35		Burgos 17-	Brig. 17	F	39	
36		Brig. 17 River Side	Brig. 17	F	49	
37		River Side	Brig. 17	F	32	
38		Brig. 17- river side	Brig. 17	F	75	
39		Brig. 17.	Brig. 17	M.	37	
40		Brig. 17	Brig. 17	F	36	
41		Barangay 17	Brig. 17	M	23	
42		BURGOS ST. B-17	Brig. 17	M	61	
43		Burgos del Pilar, Brig. 17	Brig. 17	M	59	
44		Burgos del Pilar Brig. 17	Brig. 17	F	45	
45			Brig. 17	F	20	



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Public Meeting, Cagayan de Oro City

Tourism Hall, Cagayan de Oro City

06 November 2013; 08:30 AM - 12:00 NN

BARANGAY 17

4/5

Name		Street	Barangay	Gender	Age	Signature
46		Brg. 17 Burgos Del Pilar	Brgv. 17	F	44	
47		Brg. 17 Burgos Del Pilar	Brgv. 17	F	45	
48		Burgos Del Pilar	Brgv. 17	F	61	
49		Burgos Del Pilar	Brgv. 17	F	40	
50		Burgos Del Pilar	Brgv. 17	F	60	
51		Burgos Del Pilar	Brgv. 17	F	31	
52		Burgos Del Pilar	Brgv. 17	M	75	
53		Burgos Del Pilar St.	Brgv. 17	M	53	
54		MBC DAREN (ANDY)	Brgv. 17			
55		Brg. 17 Burgos	Brgv. 17	F	55	
56		Burgos	Brgv. 17			
57		Burgos	Brgv. 17	M	52	
			Brgv. 17			
			Brgv. 17			
			Brgv. 17			



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BARANGAY 17

	Name	Street	Barangay	Gender	Age	Signature
52		Burgos del Pilar St. CDO	Brgy. 17	F	85	<i>[Signature]</i>
53		Brgy. 17 CDO	Brgy. 17	F	42	<i>[Signature]</i>
54		432 Burgos Del Pilar	Brgy. 17	F	60	<i>[Signature]</i>
55		Burgos St. CDO	Brgy. 17	F	31	<i>[Signature]</i>
56		BURGOS St. CDO	Brgy. 17	M	42	<i>[Signature]</i>
57		Barangay Burgos	Brgy. 17	F	79	<i>[Signature]</i>
58		Burgos Del - Pilar	Brgy. 17	F	52	<i>[Signature]</i>
59		Burgos del Pilar St.	Brgy. 17	F	20	<i>[Signature]</i>
60		Burgos del Pilar St.	Brgy. 17	M	36	<i>[Signature]</i>
			Brgy. 17			
			Brgy. 17			
			Brgy. 17			
			Brgy. 17			
			Brgy. 17			
			Brgy. 17			



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Public Meeting

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BARANGAY CONSOLIDACION 1/10

Name	Street, District	Barangay	Gender	Age	Signature
1	D-4 Consolidacion	Consolidacion	F	43	
2	D-4 Consolidacion	Consolidacion	F	25	
3	D-2 Consolidacion	Consolidacion	F	56	
4	D-4 Consolidacion	Consolidacion	F	43	
5	D-4 Cor	Consolidacion	F	41	
6	D-4 Consolidacion	Consolidacion	F	20	
7	D-4 Consolidacion	Consolidacion	F	42	
8	D-4 Consolidacion	Consolidacion	F	29	
9	D-4	Consolidacion	M	25	
10	D-4	Consolidacion	M	30	
11	D-4	Consolidacion	F	20	
12	D-4	Consolidacion	M	23	
13	D-4	Consolidacion	M	24	
14	D-3	Consolidacion	F	46	
15	D-3	Consolidacion	F	39	



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BARANGAY CONSOLIDATION		Name	Street, District	Barangay	Gender	Age	Signature
16			DIST. 4 CONSOLIDATION	Consolidation	F	38	[Signature]
17			D-2 CONSOLIDATION	Consolidation	M	40	[Signature]
18			D-4 Consolidation	Consolidation	F	57	[Signature]
19			D-4 Consolidation	Consolidation	F	73	[Signature]
20			D-4 "	Consolidation	F	37	[Signature]
21			D-5 "	Consolidation	M	63	[Signature]
22			DIST-2	Consolidation	M	50	[Signature]
23			D-3	Consolidation	F	26	[Signature]
24			D-3 CONSOLIDATION	Consolidation	F	40	[Signature]
25			D-3 Consolidation	Consolidation	F	24	[Signature]
26			D-4 Consolidation	Consolidation	F		[Signature]
27			D-4 Consolidation	Consolidation	F		[Signature]
28			D-3 Consolidation	Consolidation	F		[Signature]
29			D-3 CONSOLIDATION	Consolidation	M	42	[Signature]
30			D-4 CONSOLIDATION	Consolidation	F	19	[Signature]



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BARANGAY CONSOLIDATION	Name	Street, District	Barangay	Gender	Age	Signature
31		DIST. 3	Consolidation	M	47	
32		DIST. 3	Consolidation	F	47	
33		DIST. 4	Consolidation	F	65	
34		DIST. 4	Consolidation	F	60	
35		DIST. 4	Consolidation	F	38	
36		DIST. 4	Consolidation	F	39	
37		DIST. 3	Consolidation	F	62	
38		DIST. 3	Consolidation	F	32	
39		DIST. 3	Consolidation	F	46	
40		DIST. 3	Consolidation	F	37	
41		DIST. 3	Consolidation	F	29	
42		DIST. 3	Consolidation	F	31	
43		DIST. 3	Consolidation	F	59	
44		DIST. 3	Consolidation	M	17	
45		DIST. 3	Consolidation	F	39	



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BARANGAY CONSOLACION

Name

4/10

	Street, District	Barangay	Gender	Age	Signature
46	DIST. 4	Consolacion	F	60	<i>[Signature]</i>
47	DIST. 4	Consolacion	F	47	<i>[Signature]</i>
48	DIST. 4	Consolacion	F	35	<i>[Signature]</i>
49	D-4	Consolacion	F	41	<i>[Signature]</i>
50	D-3	Consolacion	F	42	<i>[Signature]</i>
51	D-3	Consolacion	F	48	<i>[Signature]</i>
52	D-3	Consolacion	M	32	<i>[Signature]</i>
53	D-3	Consolacion	F	50	<i>[Signature]</i>
54	D-3	Consolacion	F	27	<i>[Signature]</i>
55	D-3	Consolacion	F	50	<i>[Signature]</i>
56	D-3	Consolacion	F	54	<i>[Signature]</i>
57	D-4	Consolacion	F	27	<i>[Signature]</i>
58	D-3	Consolacion	M	63	<i>[Signature]</i>
59	D-3	Consolacion	F	31	<i>[Signature]</i>
60	D-3	Consolacion	F	44	<i>[Signature]</i>



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BARANGAY CONSOLIDATION

5/10

Name	Street, District	Barangay	Gender	Age	Signature
61	134 D-4 Consolidation	Consolidation	F	28	<i>[Signature]</i>
62	134 D-4	Consolidation	F	65	<i>Mar celina</i>
63	0-4 Consolidation	Consolidation	F	34	<i>[Signature]</i>
64	D-4 Consolidation	Consolidation	F	60	<i>[Signature]</i>
65	D-4 Consolidation	Consolidation	F	45	<i>[Signature]</i>
66	D-4 Consolidation	Consolidation	F	54	<i>[Signature]</i>
67	D-4 Consolidation	Consolidation	F	61	<i>[Signature]</i>
68	D-3 Consolidation	Consolidation	F	42	<i>[Signature]</i>
69	D-4 Consolidation	Consolidation	F	35	<i>D. R. Cairney</i>
70	D-3 do	Consolidation	F	71	<i>[Signature]</i>
71	D-4 Consolidation	Consolidation	F	38	<i>[Signature]</i>
72	D-4 con	Consolidation	F	65	<i>[Signature]</i>
73	D-4	Consolidation		42	<i>[Signature]</i>
74	D-3 Consolidation	Consolidation	F	44	<i>[Signature]</i>
75	D-3 consolidation	Consolidation	M	29	<i>[Signature]</i>



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BARANGAY CONSOLIDACION		Name	Street, District	Barangay	Gender	Age	Signature
76			D-4	Consolidacion	F	40	<i>[Signature]</i>
77			D-4	Consolidacion	M	60	<i>[Signature]</i>
78			D-4	Consolidacion	F	—	<i>[Signature]</i>
79			D-4	Consolidacion	M	41	<i>[Signature]</i>
80			D-3	Consolidacion	F	23	<i>[Signature]</i>
81			D-4	Consolidacion	F	60	<i>[Signature]</i>
82			D-4	Consolidacion	F	30	<i>[Signature]</i>
83			D-4	Consolidacion	F	29	<i>[Signature]</i>
84			D-4	Consolidacion	F	44	<i>[Signature]</i>
85			D-4	Consolidacion	F	54	<i>[Signature]</i>
86			D-3	Consolidacion	F	52	<i>[Signature]</i>
87			D-3	Consolidacion	F	43	<i>[Signature]</i>
88			D-3	Consolidacion	F	0	<i>[Signature]</i>
89			D-3	Consolidacion	F	41	<i>[Signature]</i>
90			D-4	Consolidacion	M		<i>[Signature]</i>



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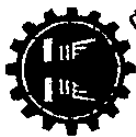
Flood Risk Management Project for Cagayan de Oro River (FRIMP-CDOF)
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BARANGAY CONSOLIDATION

No.	Name	Street, District	Barangay	Gender	Age	Signature
91		D-4			53	
92		D-4	Consolidation	F	50	Glenn
93		D-4	Consolidation	F	67	707
94		D-4	Consolidation	F	40	808
95		D-4	Consolidation	F	46	4 J
96		D-4	Consolidation	F	30	P
97		D-4	Consolidation	F	57	2 J
98		D-4	Consolidation	F	25	Gagay
99		D-4	Consolidation	F	30	S.E. Daga
100		D-3	Consolidation	F	57	707
101		D-4	Consolidation	F	50	707
102		D-2	Consolidation	F	56	707
103		D-3	Consolidation	F	52	707
104		D-3	Consolidation	F	47	707
105		D-3	Consolidation	F	67	707



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BARANGAY CONSOLACION

8/10

	Name	Street, District	Barangay	Gender	Signature
106		Dist III Tola baguao	Consolacion	F	iferran
107		Dist-3 Isla Bugnaw	Consolacion	M	BY. Elizaga
108		Dist-3 Isla Bugnaw	Consolacion	F	perante
109		Dist-3 Isla Bugnaw	Consolacion	F	
110		Dist-3 Isla Bugnaw	Consolacion	F	
111		Dist-4	Consolacion	F	
112		Dist-4	Consolacion	M	
113		Dist-2	Consolacion	M	
114		Dist-4	Consolacion	M	
115		P-3	Consolacion	F	William
116		D-3 Isla Bugnaw	Consolacion	F	Jan
117		D-3 Isla Bugnaw	Consolacion	M	Edel
118		P-3 Isla Bugnaw	Consolacion	M F	
119		P-4	Consolacion	M	
120		D-4	Consolacion	M F	



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BARANGAY CONSOLIDATION

Name	Street, District	Barangay	Gender	Age	Signature
121	Bignay, Dist. 3	Consolidation	F	34	[Signature]
122	Dist 4 Cons.	Consolidation	F	54	[Signature]
123	Dist 2 Consolidation	Consolidation	F	29	[Signature]
124	Dist. 3	Consolidation	M	53	[Signature]
125	DIST. 4 CONSOLIDATION	Consolidation	M	70	[Signature]
126	DIST. 3 Consolidation	Consolidation	F	74	[Signature]
127	DIST-3 Consolidation	Consolidation	M	37	[Signature]
128	DIST 4 Consolidation	Consolidation	F	31	[Signature]
129	DIST 4 Consolidation	Consolidation	F	42	[Signature]
130	DIST 5, Consolidation	Consolidation	F	36	[Signature]
131	D-4 Consolidation	Consolidation	F	49	[Signature]
132	D-4 Consolidation	Consolidation	F	42	[Signature]
133	D-3 Consolidation	Consolidation	M	50	[Signature]
134	D-5 Consolidation	Consolidation	M	30	[Signature]
135	D-4 Consolidation	Consolidation	F	63	[Signature]



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BARANGAY CONSOLIDACION	Name	Street, District	Barangay	Gender	Age	Signature
136		D-4 - Consolidacion	Consolidacion	F	49	<i>[Signature]</i>
137		D-4 - Consolidacion	Consolidacion	F	29	<i>[Signature]</i>
138		D-4 Consolidacion	Consolidacion	M	46	<i>[Signature]</i>
139		D-3 Consolidacion	Consolidacion	F	33	<i>[Signature]</i>
140		D-3 Consolidacion	Consolidacion	F	24	<i>[Signature]</i>
141		D-4 Consolidacion	Consolidacion	F	33	<i>[Signature]</i>
142		D-4 Consolidacion	Consolidacion	M	55	<i>[Signature]</i>
143		D-4 CONSOLIDACION	Consolidacion	NA	39	<i>[Signature]</i>
144		D-3 CO	Consolidacion	F	37	<i>[Signature]</i>
145		DIST. 4 Samarill	Consolidacion	F	57	<i>[Signature]</i>
146		DIST 4 Samarill	Consolidacion	F	34	<i>[Signature]</i>
147		DIST-3 Igha Baguio	Consolidacion	F	29	<i>[Signature]</i>
148		DIST-3 Igha Baguio	Consolidacion	M	60	<i>[Signature]</i>
			Consolidacion			
			Consolidacion			

Annex-7
Photos of Consultation Meeting with PAPs

Consultation Meeting 1 & 2

November 5, 2013

Barangay Nazareth Gym, Cagayan de Oro City



Consultation Meeting 3 & 4

November 6, 2013

City Tourism Hall, Cagayan de Oro City



Annex-8
Minutes of Meeting on 1st Stakeholder Meeting

Annex-8 Minutes of Meeting on 1st Stakeholder Meeting

8.1 Stakeholder Meetings for Outline of the Project

Stakeholder meetings for presenting the outline of the project were held four times in January 2013. The discussions in the stakeholder meetings are summarized below:

8.1.1 Cluster Meetings for Outline of the Project at Municipality of Talakag

Stakeholder meeting at Talakag, Bukidnon (23 January 2013, 9:00 to 12:00 NN at Mayor's Office Conference Hall, Talakag Bukidnon.

1) Participants

Table 8.1.1 Number of participants from Talakag, Bukidnon

<i>Group/Sector</i>	<i>Number of Participants</i>
Municipal Government Offices	15
Barangays	24
NGOs/CSOs	7
Department of Public Works and Highways	2
JICA Survey Team (FRIMP-CDOR)	9
Total	57

2) Minutes of the Meeting

The meeting officially started at 9:39 AM and ended at 11:45 AM

The DPWH representative made the presentation covering both the purpose and importance of holding the stakeholder meeting and the objectives; outline; initial findings and outcome of the Preparatory Survey for Flood Risk Management for Cagayan de Oro River. The stakeholder meeting is conducted to explain the objectives and necessity of the survey and the project to stakeholders; to generate appropriate understanding and awareness of stakeholders on the project and the necessity of its implementation; and to obtain opinion and information from stakeholders.

After the presentation, the participants raised some questions and comments about the Survey. Similar questions or concerns from some participants were integrated.

1) XXXXX, Municipal Councilor and Chair of the Committee on Environment

A) Question/s

What is the basis for declaring a certain area "NO BUILD ZONE"? The local government of Talakag is planning to make an ordinance on "NO BUILD ZONE" area/s and we need assistance in formulating technical guidelines.

B) Responses

a) XXXXX, JICA Survey Team

As of the moment, there is no concrete definition or guidelines for declaring an area

as “NO BUILD ZONE”. The guidelines are still being polished by the Philippine Government.

b) XXXXX, Representative, DPWH, Major Flood Control

In the Water Code of the Philippines, casement is contingent on the location of the river, that is, 20 meters from the edge of the river channel in urban areas and 40 meters in forested areas. My opinion is that one of the bases should be the history of flooding in the area itself where great damage to properties and high death toll occurred.

2) XXXXX, Barangay San Antonio

A) Question/s

When will the reconstruction of Ugiaban Bridge start and when will it be finished?

B) Responses

a) XXXXX, Representative, DPWH, Major Flood Control

The reconstruction of Ugiaban Bridge is not included in the study. The rehabilitation and reconstruction of the bridge is under the jurisdiction of DPWH Regional Office.

3) XXXXX, Municipal Councilor of Talakag

A) Question/s

Can JICA extend assistance to the people affected by typhoon?

B) Responses

a) XXXXX, JICA Survey Team

The objective of this study is to formulate plans to prevent great damage caused by flood and to cater to the damages brought about by flood is not part of this study.

4) XXXXX, Cacaon Lantaw Livelihood Association

A) Question/s

What can the NGOs do or contribute to the study?

B) Responses

a) XXXXX, JICA Survey Team

The NGOs can help in the non-structural measures of the study. The group is requested to cooperate in the activities related to the study such as participation in the stakeholder surveys. The NGOs can give their inputs/suggestions that may be considered and incorporated into the Master Plan.

b) XXXXX, JICA Survey Team

NGOs can help by cooperating and supporting the Watershed Management Specialists of the Survey Team during their consultations with the stakeholders.

5) XXXXX, LIDASAF/Integrated Social Forestry (ISF) Multi-Purpose Cooperative

A) Comment/Suggestion

A task force must be created to assist in this study.

B) Responses

a) XXXXX, Association of Barangay Captains (ABC)

Talakag has its own Disaster Risk Reduction and Management Council (DRRMC) already that could extend assistance to this study. This DRRMC has identified 8 barangays for the maintenance of the river basin.

b) XXXXX, Municipal Councilor and Chair of the Committee on Environment

The municipality has the Barangay Disaster Risk Reduction and Management Council and Municipal Disaster Risk Reduction and Management Council despite the fact that Talakag is not a flood-prone area.

6) XXXXX, DIMAACBAT People's Organization of Tikalaan

A) Question

Is there funding for activities like planting trees? People cannot be prevented from building houses near the river banks; the stakeholders are to make plans to prevent floods like planting trees.

B) Responses

a) XXXXX, JICA Survey Team

The objective of the survey is for the in-depth study of flood mitigation.

b) XXXXX, Representative, DPWH, Major Flood Control

Tree planting activities should be administered by DENR.

c) XXXXX, BENRO of Talakag

The city government of Cagayan de Oro could at least assist in funding the projects related to river basin rehabilitation such as tree planting and perhaps JICA could do so also. The upland areas are willing to plant trees but the problem is the lack of funding to produce seedlings.

d) XXXXX, Municipal Councilor and Chair of the Committee on Environment

The Municipality of Talakag gave two hundred thousand pesos for the protection of forests land and the City of Cagayan de Oro, however, gave nothing.

e) XXXXX, Municipal Local Government Operating Officer, DILG

Through executive Order No. 26, barangays are required to plant trees. The city government of Cagayan de Oro should assist them on this activity since it is a national concern.

7) XXXXX, Municipal Councilor and Chair of the Committee on Environment

A) Question

Can you clarify the difference between CDOR-BMC and FRIMP-CDOR?

B) Responses

a) XXXXX, JICA Survey Team

The CDOR-BMC is a council composed of different sectors committed to facilitate, monitor, and oversee the activities related to the Cagayan de Oro River Basin. It is a council that is permanent. FRIMP-CDOR, on the other hand is a preparatory

Survey with the intention of coming up with measures to mitigate flood in the Cagayan de Oro River Basin. The study is scheduled for completion in November 2013.

8) XXXXX, JICA Survey Team

A) Question

Members of the Talakag community were requested to confirm the findings of the study in the barangays (shown during the presentation) affected by the Tropical Storms Sendong and Pablo and provide additional data on the damages incurred and cause/s of these damages from the said tropical storms. Were there other barangays affected but was not included in the presentation?

B) Responses

a) All the Participants

The participants affirmed that the barangays affected by Tropical Storm Sendong; San Antonio, Sto. Nino, Cacaon, and Lingoan are correctly presented in the map.

b) XXXXX, Municipal Councilor and Chair of the Committee on Environment

More houses were damaged in TS Pablo than in TS Sendong because of very strong winds. The reported extensively damaged houses were because of landslide (2), washed out by flood (2), and falling trees (2).

c) All the Participants

Almost all barangays were affected by TS Pablo. The biggest damage incurred is in the agricultural sector and the main cause is very strong winds, not flood. The single death recorded was due to the insistence of the person to cross the river despite the high water level and strong current.

9) XXXXX, JICA Survey Team

A) Announcement

Notice of the survey and data gathering on disaster risk reduction and management plan in mid –February in the municipal and barangay levels was announced at the end of the meeting. The Survey Team requested for the support and cooperation of the participants in the forthcoming data gathering activity.

10) XXXXX, Municipal Planning Development Officer

A) Comment

The Survey Team is asked to provide the schedule of the survey in advance so the barangays and communities can prepare.

8.1.2 Cluster Meetings for Outline of the Project at Municipality of Baungon

Stakeholder meeting at Baungon, Bukidnon (24 January 2013, 9:00 to 12:00 NN at Baungon Multipurpose Hall, Baungon, Bukidnon.

1) Participants

Table 8.1.2 Number of participants from Baungon, Bukidnon

<i>Group/Sector</i>	<i>Number of Participants</i>
---------------------	-------------------------------

Municipal Government Offices	15
Barangays	5
NGOs/CSOs	2
Department of Public Works and Highways	2
JICA Survey Team (FRIMP-CDOR)	7
Total	31

2) Minutes of the Meeting

The meeting officially started at 10:00 AM and ended at 12:00 Noon

The DPWH representative made the presentation covering both the purpose and importance of holding the stakeholder meeting and the objectives; outline; initial findings and outcome of the Preparatory Survey for Flood Risk Management for Cagayan de Oro River. The stakeholder meeting is conducted to explain the objectives and necessity of the survey and project to stakeholders; to generate appropriate understanding and awareness of stakeholders on the project and the necessity of its implementation; and to obtain opinion and information from stakeholders.

After the presentation, the participants raised some questions and comments about the Survey. Similar questions or concerns from some participants were integrated.

1) XXXXX, IP Main Representative/Municipal Tribal Chieftain

A) Question

This is addressed to all concerned, what can be done to help the Municipality of Baungon especially with the damaged Cabula Bridge that greatly affected transportation of agricultural products and conveyance of the riding public from Baungon to Cagayan de Oro City?

B) Response

a) XXXXX, Representative of DPWH, Major Flood Control

Funding for the said damaged Cabula Bridge due to Tropical Storm Sendong is directly under the jurisdiction of DPWH Region 10, the office of Regional Director XXXXX. There is a need to follow-up the status of the Program of Works (POW) and Design of proposed structures needed for the repair.

2) XXXXX, Staff, Municipal Mayor's Office

A) Comment

The release of budget intended for the damaged Cabula and Tumalaong Bridges costing PhP 370 million is being allocated by the Department of Budget and Management (DBM) through Secretary Abad. We have already made follow-ups with the Planning and Design Division XXXXX at DPWH Region 10. The Program of Works (POW) and Proposed Redesign of Damaged Bridge Construction (Cabula and Tumalaong) were already forwarded to Manila DPWH Central Office for approval.

3) XXXXX, Representative, DPWH, Major Flood Control

A) Suggestion

The proposed repair of the damaged Cabula Bridge should be reviewed to carry/accommodate huge volume of water from upstream sections of Cagayan de Oro River.

4) XXXXX, Staff, Municipal Mayor's Office

A) Question

What would be the best recommendation/s to prevent erosion along river banks in the vicinity of Cabula Bridge which was damaged by Tropical Storm Sendong?

B) Responses

a) XXXXX, JICA Survey Team

Flexible and not costly structures such a gabion mattress would be useful to prevent river bank erosion, even though it is a temporary structure and needs periodical maintenance.

b) XXXXX, Representative of DPWH, Major Flood Control

Planting trees in the watershed areas is one of the measures to prevent soil erosion aside from using coconets to protect slopes. The tree planting activities should be closely coordinated with the DENR Region 10 for appropriate funding while slope protection works is under DPWH Regional and District offices.

5) XXXXX, Municipal Tribal Coordinator, Office of the Municipal Mayor

A) Question

What government agency would be directly responsible for watershed management project especially tree planting activities to facilitate assistance/funding?

B) Responses

a) XXXXX, Representative of DPWH, Major Flood Control

DENR is the agency responsible for watershed management and tree planting activities. These matters should be coordinated with the said agency for funding assistance.

6) XXXXX, Baungon Federation of Irrigators Association –BAFIA

A) Question

How can the study of the JICA Survey Team help in terms of financial assistance for the repair of damaged structures in the NIA Project, particularly the NIA Mabuhay Project Phase II, due to Tropical Storm Sendong?

B) Response

a) XXXXX, JICA Survey Team

The on-going JICA Preparatory Study will focus on gathering data on the directly affected barangays by Tropical Storm Sendong, however funding assistance is not part of the study.

7) XXXXX, Municipal Agricultural and Fisheries Council

A) Question

Due to Typhoon Sendong, the original course of the waterways in Bubunawan River has been divided that caused many river courses to be formed and large amounts of sediment deposited in the river. Is there any plan for this study to conduct dredging works along the river to regulate flood waters easily?

B) Response

a) XXXXX, JICA Survey Team

No dredging works is conceivable in the middle/upstream of the rivers such as Bubunawan River.

8) XXXXX, JICA Survey Team

A) Question

The participants were presented with the list of information and findings from the Study Team that needed confirmation from the members of the Baungon community. Were there other damages/barangays affected by Tropical Storms Sendong and Pablo but not included in the presentation? What were the causes of these damages?

B) Response

a) All the Participants

The participants affirmed that the damaged structures due to Tropical Storm Sendong are Cabula Bridge, Langaon Bridge, Bubunawan River Irrigation Project (RIP) in Diversion Works and Bench Flume, and Tumalaong Causeway.

b) XXXXX, Barangay Liboran

Response is summarized in the table below:

Table 8.1.3 Summary of Damage Caused by TS Sendong and TS Pablo to various Barangays

Barangay	TS Sendong Damages			TS Pablo Damages		
	Structure / Property	People	Cause	Structure / Property	People	Cause
Poblacion (Imbatug)	None	Missing - 11	Flash Flood – People were residing in danger zones.	Houses	Dead – 1	Very strong winds – 1 casualty, insisted on crossing the river despite strong current
Lingating	Bridge, Spillways – (Danatag) 1 Sitio – Washed-out	Dead – 35 Missing – 24 Injured – 7	Flash Flood – Strong current	Houses	None	Very strong winds
Mabunga	Agricultural crops	None	Flash Flood	Agricultural crops, houses	None	Very strong winds
Balintao	Agricultural crops	None	Flash Flood	Agricultural crops, houses	None	Very strong winds
San Vicente	Agricultural crops, causes	None	Flash Flood	Agricultural crops, houses	None	Very strong winds
Tumalaong	Bridge	None	Flash Flood – Strong current with uprooted trees	Houses	None	Very strong winds

There was only one casualty during TS Pablo because the people were prepared and have evacuated to higher grounds. Details of damages from TS Sendong and TS Pablo will be given by the Municipal Social Welfare and Development Office (MSWDO), Baungon.

9) XXXXX, JICA Survey Team

A) Announcement

Notice of the survey and data gathering on disaster risk reduction and management plan in mid –February in the municipal and barangay levels was announced at the end of the meeting. The Survey Team requested for the support and cooperation of the participants in the forthcoming data gathering activity.

8.1.3 Cluster Meetings for Outline of the Project at Municipality of Libona

Stakeholder meeting at Libona, Bukidnon (24 January 2013, 2:00 to 5:00 PM at Mayor's Office Conference Hall, Libona, Bukidnon.

1) Participants

Table 8.1.4 Number of participants from Libona, Bukidnon

<i>Group/Sector</i>	<i>Number of Participants</i>
Municipal Government Offices	20
Barangays	8
NGOs/CSOs	10
Department of Public Works and Highways	2
JICA Survey Team (FRIMP-CDOR)	7
Total	47

2) Minutes of the Meeting

The meeting officially started at 2:40 PM and ended at 5:05 PM

The DPWH representative made the presentation covering both the purpose and importance of holding the stakeholder meeting and the objectives; outline; initial findings and outcome of the Preparatory Survey for Flood Risk Management for Cagayan de Oro River. The stakeholder meeting is conducted to explain the objectives and necessity of the survey and the project to stakeholders; to generate appropriate understanding and awareness of stakeholders on the project and the necessity of its implementation; and to obtain opinions and information from stakeholders.

After the presentation, the participants raised some questions and comments about the Survey. Similar questions or concerns from some participants were integrated.

1) XXXXX, Municipal Councilor

A) Question

When will the repair of the bridge (commonly called Camp 9 Bridge) in Purok Camp 9, Barangay Laturan that was damaged by Tropical Storm Sendong start? The detour used by the riding public is deteriorating and if it deteriorates further there is no other access except the said bridge which is the shortest route to Cagayan de Oro City.

B) Response

a) XXXXX, Representative of DPWH, Major Flood Control

This would be under the jurisdiction of DPWH District/Regional Office under Regional Director XXXXX, for the budget and status of repair of the damaged bridge in Purok Camp 9. It is better to inquire from or follow-up the said office for possible calamity fund for the destruction brought about by Tropical Storm Sendong and Tropical Storm Pablo.

b) XXXXX, Municipal Social Welfare and Development Officer and Chairperson, MDRMC

The Office of Civil Defense (OCD) has allocated certain funds for the repair of the damaged bridge. XXXXX, Municipal Engineer of Libona has already made follow up to the DPWH regarding the preparation of Program of Works (POW) and

proposed design of the structure to be built to facilitate the immediate repair of the damaged bridge in Purok Camp 9.

2) XXXXX, Supervisor, Agrinanas Industry

A) Question

What causes the delay in the proposed repair of the damaged bridge in Purok Camp 9? It is now almost two years and it has not been repaired?

B) Response

a) XXXXX, Representative, DPWH, Major Flood Control

There is a need to follow-up DPWH District/Regional Office for the status of the repair and rehabilitation of the bridge.

3) XXXXX, Chairman, MCDC Kiliog

A) Question

Is there available funding assistance or support from the National Government especially the DENR to rehabilitate existing forest lands in barangays devastated by Tropical Storm Sendong? Soil erosion on sloping areas occurred due to cutting of trees.

B) Response

a) XXXXX, Representative, DPWH, Major Flood Control

The DENR is directly responsible for releasing appropriate funds for reforestation in a long term plan where tree planting is best recommended. Cutting of round logs in the declared forest lands when Tropical Storm Sendong occurred caused the debris to be carried away by flash flood that swept away houses and other structures in the low-lying areas especially in Cagayan de Oro City.

4) XXXXX, President OICCA, Barangay Capihan

A) Suggestion

The proposed watershed management project of the DENR should be long term with regards to funding release to make it more sustainable and not affected by changes in political administration. If it is not long term, next releases will be affected by the next administration's priority.

5) XXXXX, Community Development Assistant, MENRO

A) Comment

The Municipal Government of Libona had passed a resolution declaring 20 meters on both sides of the river banks as forest reserve area for the proposed tree planting to be funded by DENR. Erosion can be prevented by way of planting trees that maintains stability on sloping areas.

6) XXXXX, Municipal Agriculture and Fisheries Council (MAFC)

A) Question

Is there any assistance or subsidy from the government for agriculture particularly for crops or livestock damaged by tropical storms?

B) Response

a) XXXXX, Representative, DPWH, Major Flood Control

Funding source must be sought from the Department of Agriculture. This agency is tasked to fast track the inventory of damaged crops or livestock and other agricultural farmlands after Tropical Storm Sendong hit the province. The Office of Civil Defense (OCD) also made calamity fund assistance for damages brought about by TS Sendong and TS Pablo.

7) XXXXX, JICA Survey Team

A) Question

Members of the Talakag community were requested to confirm the findings of the study in the barangays (shown during the presentation) affected by the Tropical Storms Sendong and Pablo and provide additional data on the damages incurred and cause/s of these damages from the said tropical storms. Were there other barangays affected but was not included in the presentation?

B) Responses

a) All the Participants

The participants affirmed that the barangays affected by Tropical Storm Sendong are all included in the presentation.

b) XXXXX, Barangay Poblacion

More houses were damaged in TS Pablo than in TS Sendong because of very strong winds.

c) All the Participants

Almost all barangays were affected by TS Pablo. The biggest damage incurred is in the agricultural sector and the main cause is very strong winds, not flood.

8) XXXXX, JICA Survey Team

A) Announcement

Notice of the survey and data gathering on disaster risk reduction and management plan in mid –February in the municipal and barangay levels was announced at the end of the meeting. The Survey Team requested for the support and cooperation of the participants in the forthcoming data gathering activity.

8.1.4 Cluster Meetings for Outline of the Project at Cagayan de Oro City

Stakeholder meeting at Kauswagan, Cagayan de Oro City (25 January 2013, 9:00 to 12:00 PM at Cattleya Function Room, N Hotel, Kauswagan Highway, Cagayan de Oro City.

1) Participants

Table 8.1.5 Number of participants from Kauswagan, Cagayan de Oro City

<i>Group/Sector</i>	<i>Number of Participants</i>
House of Representatives	1
City Government Offices	8
Barangays	22

NGOs/CSOs	9
Provincial Government of Misamis Oriental	1
Provincial Government of Bukidnon	1
City Government of Iligan	1
National Government Agencies Regional Offices	12
Department of Public Works and Highways, MFC	2
JICA Survey Team (FRIMP-CDOR)	13
Total	70

2) Minutes of the Meeting

The meeting officially started at 9:45 AM and ended at 12:12 PM

The DPWH representative made the presentation covering both the purpose and importance of holding the stakeholder meeting and the objectives; outline; and initial findings and outcome of the Preparatory Survey for Flood Risk Management for Cagayan de Oro River. The stakeholder meeting is conducted to explain the objectives and necessity of the survey and the project to stakeholders; to generate appropriate understanding and awareness of stakeholders on the project and the necessity of its implementation; and to obtain opinions and information from stakeholders.

After the presentation, the participants raised some questions and comments about the Survey. Similar questions or concerns from some participants were integrated.

1) XXXXX, Congressman, Cagayan de Oro City

A) Questions

The JICA Survey Team is requested to consider the following in its formulation of the Master Plan:

a) Can the completion of the Master Plan be fast tracked? This Master Plan is needed to guide the City Government on its revetment projects that are currently implemented in the 2nd district that stretches from Cala-Cala to Macabalan and costs 2.6 billion pesos. Recommendation on how high the revetments should be is requested from the Survey Team. The revetment project already has 600 million pesos funding and part of it was the 399 million pesos released by the President of the Philippines from the calamity fund.

b) To prioritize dredging, identify which areas of the river are for dredging since it is not suitable in all areas and to consider constructing boulevards on the side of the revetments.

c) Secretary has requested the Survey Team to consider construction of Sabo Dam in the upstream areas (i.e. Baungon, Talakag).

d) Water catchments on both sides of the river and possibly construct parks in it; Isla de Oro or Cala-Cala as possible park areas.

B) Response

a) XXXXX, JICA Survey Team)

- i) The study will be finished by November 2013 as planned but the Survey Team will prepare documents for the next stage of the study and will be presented around July of this year.
- ii) With regards dredging and construction of boulevard, the Survey Team must make a plan considering not only structural aspects but also the environmental factors and the cost.
- iii) The Survey Team will determine the possibility of Sabo Dam structures in the Master Plan depending on the result of the study.
- iv) Relative to the water catchment, as of this stage, the Study Team was not able to identify a place to which a water catchment can be constructed.

2) XXXXX, Barangay Balulang

A) Suggestion

Emily Homes in Balulang needs a river dike (12 ft width by 12 ft length), a boulevard, and to rechannel the river.

B) Response

a) XXXXX, Representative, DPWH, Major Flood Control

Dike and boulevard construction will be assessed by the Survey Team; the construction of the boulevard will depend on the cost and right of way (ROW) acquisition.

b) Vice Mayor, Cagayan de Oro City

Regarding the rechanneling of the river, Mayor already has a request to the Office of the President of the Philippines and the Mayor is just waiting for the approval of this request. The City Government also requested other personalities and offices of the National Government, particularly, the Congress to follow-up our request.

3) XXXXX, Barangay Nazareth

A) Question/Comment

For the Survey Team to consider following in the study:

- a) Protection of the environment
- b) Include in the recommendation in the Master Plan the construction of a fish sanctuary located between Barangay 1 and Barangay Nazareth
- c) Building more roads leading to higher grounds
- d) Building more evacuation centers
- e) Include Mt. Kalatungan, an active volcano in the study so that precautionary measures for disaster when the volcano erupts will be studied as well

B) Responses

a) Vice Mayor, Cagayan de Oro City

In support of Barangay Kagawad XXXXX's suggestions, the Survey Team should consider the protection of the environment especially in the Bukidnon area since the biggest part of the river is located there.

b) XXXXX, JICA Survey Team

The protection of the environment is really being considered by the Survey Team through the non-structural measures of the study and is being worked out by the Watershed Management Experts of the study

c) XXXXX, JICA Survey Team

We appreciate the stakeholders' specific recommendations to be included and considered in the Master Plan by the Study Team. The construction of more roads should be a government effort. The volcano and risk of eruption is out of the scope of the study.

Evacuation centers are part of the study and considered in the non-structural measures but the study is to mitigate the damage of the flood and hopefully, the project would minimize the need for more evacuation centers.

d) XXXXX, City Councilor, Cagayan de Oro City

The issue on the volcano should be addressed to the right agency, the DENR, specifically the Mines and Geosciences Bureau.

Regarding dredging, the DPWH will follow-up the City Mayor's request for this matter since there is already rehabilitation being done by DPWH along the riverside especially in the Acasia, Carmen area. The earlier the approval for mass dredging, the better to avoid great damage should flood come.

e) XXXXX, Representative of Governor of Bukidnon, BENRO, Bukidnon)

In support of the point made by Vice Mayor relative to the environmental aspect, the suggestion is for the Survey Team to include a reforestation component in the Master Plan. Reforestation is part of Bukidnon's project but we do not have enough funding for it.

4) XXXXX, Promote Cagayan de Oro, Former Chair, Chamber of Commerce

A) Question

Is the Master Plan purely for the river basin; that is flood control, because there are hazard areas as well as people beside the river?

Regarding the suggestions of boulevard and water catchment, the widening of revetments will hit settlements. Instead of constructing big revetments, the Master Plan should include recommendation to systematically move the people away from the river. The City Government has started relocation but the resources are not enough.

B) Response

a) XXXXX, JICA Survey Team

The Study Team must consider the appropriate scale of the structure and consider not only revetments but also activities to mitigate flood.

5) XXXXX, Representative, Mindanao Development Authority

A) Question

Does the scope of the FRIMP-CDOR Master Plan include the entire river basin? Is there a previous Master Plan and whether that Master Plan only covers the Cagayan

de Oro River?

There is a Master Plan for Cagayan de Oro River Basin by the DENR, RBCO in Manila and bidding for the said Master Plan is being conducted. Hopefully, the two Master Plans, FRIMP-CDOR's and the one currently on bid would jive or complement each other.

There are two river basin councils (1 from Cagayan de Oro and 1 from Bukidnon) and these councils are always conducting meetings for the development of the Cagayan de Oro River Basin.

B) Response

a) XXXXX, JICA Survey Team

The scope of the study and Master Plan covers the entire Cagayan de Oro River Basin but only for flood risk mitigation.

6) XXXXX, Representative of City Councilor, Cagayan de Oro City

A) Question

Is Iponan River included in the FRIMP-CDOR preparatory study since the river covers 11 barangays and also causes flood?

B) Response

a) XXXXX, JICA Survey Team

Iponan River is not part of the study but the City Government has plans for it.

b) Vice Mayor, Cagayan de Oro City

The City Government already has preliminary plans for Iponan River, one of which includes dredging.

c) XXXXX, Chief of Staff, Department of Public Works and Highways, Region X

DPWH Region 10 sent a letter to Secretary to request JICA to include the study of 3 rivers (Iponan River, Mandulog River, and Iligan River) but until now there is no response.

7) XXXXX, City Planning and Development Office, Cagayan de Oro City

A) Question

What is the scope of the project? Does FRIMP-CDOR Master Plan include the 142,000 hectares in which Cagayan de Oro is only about 12% of the river basin? Is it possible to construct a water retention dam upstream to accommodate the water generated by the reported 100-year return period flood?

B) Response

a) XXXXX, JICA Survey Team

The Survey Team does not know yet if construction of a dam will be included in the Master Plan of FRIMP-CDOR.

8) XXXXX, Oro Chamber of Commerce, Cagayan de Oro City

A) Question

What is the process of implementing the "NO BUILD ZONE" policy as mentioned

in the presentation? The City Government should pass a clear “NO BUILD ZONE” ordinance.

B) Response

a) XXXXX, JICA Survey Team

The basis to implement the NO BUILD ZONE in several areas in Cagayan de Oro City is only the direct verbal order of the President of the Philippines immediately after the Typhoon Sendong. The PNP was ordered to implement the NO BUILD ZONE by preventing people from building structures on the devastated areas. There is no other basis for the NO BUILD ZONE other than President’s said declaration.

9) XXXXX, Regional Technical Head, National Housing Authority, Region X

A) Question

How will the occupants who are formal settlers and title holders be addressed in the implementation of the project? The study should consider the cost of relocating people that will be affected and how they will be informed.

B) Response

a) XXXXX, JICA Survey Team

Part of the study is the social consideration aspect; specialists are working on what can be done regarding this matter. The Survey Team will consider all options and consult the stakeholders that will be affected during implementation of the project.

Annex -9
Minutes of Meeting on 2nd Stakeholder Meeting

Annex-9 Minutes of Meeting on 2nd Stakeholder Meeting

9.1 Stakeholder Meetings for Scoping

Stakeholder meetings for public scoping of the EIA Study were held at four times along the CDO River in July, 2013. In addition, another stakeholder meeting for technical scoping was held in September, 2013. The discussions in the stakeholder meetings are summarized below:

9.1.1 Cluster Meetings for Public Scoping

(1) Stakeholder Meeting for Cluster 1 (8:00 to 12:00, Jul. 20, 2013 at Kauswagan Elementary School, Brgy. Kauswagan, Cagayan de Oro City)

Targeted barangays for this stakeholder meeting were Brgy. Bonbon and Brgy. Kauswagan.

1) Participants

Table 9.1.1 Number of participants from Brgy. Bonbon and Kauswagan

<i>Group/Sector</i>	<i>Number of Participants</i>
Barangay Residents	105
Barangay Officials	4
City Government Offices	3
DPWH-PMO	4
DPWH Region 10	5
Department of Education (Elementary and High School Teachers)	5
JICA Survey Team (FRIMP-CDOR)	5
Total	131

2) Program and Presentations

Table 9.1.2 Program schedule for stakeholder meeting for Brgy. Bonbon and Kauswagan

No.	Activity	Person(s) in charge
1	Registration (1 hr)	DPWH 10 & City Government Team
	Over-all Master of Ceremony/Facilitator	XXXXXX City Information Officer
2	Preliminaries:	
	Opening Prayer	XXXXXX Resident, Barangay Kauswagan
	National Anthem	XXXXXX Resident, Barangay Bonbon
	Opening Remarks	XXXXXX Chair, BDRRMC Barangay Kauswagan
3	Project Rationale & Overview (30 min.)	XXXXXX Chief, Planning and Design Divison DPWH 10
4	Flood Risk Mitigation Measures (30 min.)	XXXXXX

No.	Activity	Person(s) in charge
		Project Manager II DPWH - FCSEC
5	Environmental and Social Considerations (45 min.)	XXXXXX Engineer III DPWH-ESSO-PS
6	Group Discussion by Barangay (30 min.)	DPWH 10 <u>Group Facilitators:</u> XXXXXX Engr. II XXXXXX EMS II XXXXXX Engr. II XXXXXX Documenters: XXXXXX XXXXXX
7	Recapitulation (30 min.)	XXXXXX Project Manager II DPWH-FCSEC
	Closing Remarks	XXXXXX Technical Coordinator to the Mayor Cagayan City Government

3) Top Five Issues per Barangay

A) Barangay Bonbon

- Construction of Nabuslutan Creek wall or dike is requested. (Nabuslutan Creek is the one located at the west of CDO River mouth flowing in a large marshy area.) This wall or dike will serve as harbor of fisherman during bad weather.
- Drainage and repair of barangay road through which DPWH heavy vehicle and equipment traverse were requested. Digging, riprap, and heavy use have caused sinking and destruction of the barangay road.
- The alignment of structural measures of the Project may affect the Bonbon National High School. If so, all possible ways should be studied on how to replace or rebuild the Bonbon National High School in another location.
- Relocation/resettlement with livelihood and economic activity should be provided to project-affected residents.
- Preservation/protection of the environment, mangroves, and "Nipa" should be included in the implementation plan because the mangroves sustain the fishing as livelihood in the community and the mangroves are also an important ecosystem.

B) Barangay Kauswagan

- When the time comes that their homes will be removed and they will be asked to move from their land because of the Project, will the government relocate and provide them homes to move in, where and when?

- If they are forced to abandon their place of livelihood, will the government assist to relocate their businesses or train them to new skills for jobs?
- Sand quarrying is a predominant means of livelihood in riverside area of Kauswagan, especially among poor young people employed as sand haulers. Their concern is that they might lose their jobs because the government will stop the sand quarry operations or they will not have access to the river because of the Project.
- What is the procedure and who will approach when seeking assistance regarding relocation and secure livelihood/employment?
- It is unfair that some residents who are not qualified for resettlement assistance, have received assistance; while other residents who are qualified, have not received help.

4) Recapitulation

On Nabuslutan Creek flood wall or dike, XXXXX explained the danger and hazards in places near shoreline. But she clarified that harbor construction is not part of the project. She also emphasized that the mangrove area at Bonbon is part of project area of study.

Regarding drainage and road repair, Engr. XXXXX responded that he will discuss and bring this problem to the attention of the Contractor currently undertaking the on-going riprap project to repair the road that they have destroyed, as result of the transport of heavy loads to the project site. He believes it is the responsibility of contractor to repair the road that they destroyed.

On relocation and livelihood assistance, XXXXX of DPWH-ESSO-Planning Services responded that the DPWH 10 will coordinate with local and national agencies, such as the NHA, DSWD and LGUs for the affected resident's relocation package of benefits. A socio-economic survey is now being conducted in the affected barangays by the DPWH, assisted by JICA, as basis for government to properly plan and prepare to provide requirements of affected residents. Also, it is important to improve the system of identifying and granting of relocation and other assistance.

On sand quarrying in the river, XXXXX emphasized that continuation of quarrying operations in the river will largely depends on the DENR. And as with all other extractive permits granted to concessionaires, such activities should always be "controlled," (monitored and regulated). Both the DENR and DPWH should identify the area in the river which can be quarried, and determining the access points thereto.

(2) Stakeholder Meeting for Cluster 2 (13:30 to 17:30, Jul. 20, 2013 at West City Central School, Carmen, Cagayan de Oro)

The targeted barangays for this stakeholder meeting were Brgy. Carmen and Brgy. Balulang.

1) Participants

Table 9.1.3 Number of participants from Brgy. Carmen and Balulang

<i>Group/Sector</i>	<i>Number of Participants</i>
Barangay Residents	176
Barangay Officials	9
City Government Offices	3
DPWH-PMO	4

DPWH Region 10	5
Department of Education (Elementary and High School Teachers	4
JICA Survey Team (FRIMP-CDOR)	5
Total	106

2) Program and Presentations

Table 9.1.4 Program schedule for stakeholder meeting for Brgy. Carmen and Balulang

No.	Activity	Person(s) in charge
1	Registration (1 hr)	DPWH 10 & City Government Team
	Over-all Master of Ceremony/Facilitator	XXXXXX City Information Officer
2	Preliminaries:	
	Opening Prayer	XXXXXX Resident, Barangay Balulang
	National Anthem	XXXXXX Resident, Barangay Bonbon
	Opening Remarks	XXXXXX Chair, Committee on Infrastructure Barangay Carmen
3	Project Rationale & Overview (30 min.)	XXXXXX Chief, Planning and Design Division DPWH 10
4	Flood Risk Mitigation Measures (30 min.)	XXXXXX Project Manager II DPWH - FCSEC
5	Environmental and Social Considerations (45 min.)	XXXXXX Engineer III DPWH-ESSO-PS
6	Group Discussion by Barangay (30 min.)	DPWH 10 <u>Group Facilitators:</u> XXXXXX Engr. II XXXXXX EMS II XXXXXX Engr. II XXXXXX Documenters: XXXXXX XXXXXX
7	Recapitulation (30 min.)	XXXXXX Project Manager II DPWH-FCSEC

3) Top Five Issues per Barangay

A) Barangay Carmen

- The affected residents inquired about the government's program on relocation and livelihood assistance. As much as possible they would like to be relocated close to the city center where they continue with their enterprises/businesses.
- Residents affected by the overflow and flooding caused of Binono-an Creek, which is located on left bank side between Maharlika bridge and Ysalina bridge, inquired if they will be included in the relocation plans. According to them, strong waters from SM Mall and other more elevated and nearby subdivisions.
- The residents emphasized that affected constituents should be hired as workers during the construction period.
- People affected by calamity should immediately be given psycho-social care, and also given the same intervention once they are relocated to new areas/environs.

B) Barangay Balulang

- Residents feel it is very important to re-design the current drainage system to improve/correct the poor drainage situation in the area, and also include road rehabilitation.
- Residents should be given early notice of the project design, so that they will know if they are affected or not, and to also know how the design will affect the physical lay-out of their community.
- There should be proper planning and implementation to relocate affected households, structures, and institutions (i.e., mosque, schools, community centers, etc.)
- Communities still feel that they are not adequately prepared to respond to flood and other disasters.
- The Project should include, as component, the dredging of Cagayan de Oro River, especially at the Balulang-side of the river.

4) Recapitulation

In response to have concerns expressed by representatives from Balulang, XXXXX mentioned that with regards relocation the project really have programs for it and the project will partner with various agencies like NHA, DSWD, LGUs, DENR, CSOs, NGOs, and others to provide these programs to the affected residents and institutions. She also focused on the concerns of women particularly their fear of flooding, when a participant requested for the program for disaster preparedness. XXXXX assured them not to fear because there are already government agencies that monitor the condition of the river and there are already early warning device implemented by the City Disaster Risk Reduction Management Council (CDRRMC).

XXXXX, a participant of Barangay Carmen, commented that dredging has never made an effect in reducing flood risk, and that he was surprised that it was being considered in the Project. XXXXX responded that dredging, though a palliative measure, does have an effect. When dredging is stopped, it will be observed that after 5 years or so, an "isla" or delta will start to develop. Also, it is important to identify the location of where the dredged material will be stockpiled/disposed.

(3) Stakeholder Meeting for Cluster 3 (8:00 to 12:00, Jul. 2K9.1013 at North-1 District Elementary School, Puntod, Cagayan de Oro City)

The targeted barangays for this stakeholder meeting were Brgy. Macabalan, Brgy. Puntod and Brgy. Consolacion.

1) Participants

Table 9.1.5 Number of participants from Brgy. Macabalan, Puntod and Consolacion

<i>Group/Sector</i>	<i>Number of Participants</i>
Barangay Residents	2K9.1
Barangay Officials	33
City Government Offices	1
DPWH-PMO	4
DPWH Region 10	5
Department of Education (Elementary and High School Teachers	14
JICA Survey Team (FRIMP-CDOR)	7
Total	336

2) Program and Presentations

Table 9.1.6 Program schedule for stakeholder meeting for Brgy. Macabalan, Puntod and Consolacion

No.	Activity	Person(s) in charge
1	Registration (1 hr)	DPWH 10 & City Government Team
	Over-all Master of Ceremony/Facilitator	XXXXXX Engr. II, DPWH 10
2	Preliminaries	Host Barangay
	Opening Prayer	
	National Anthem	
	Opening Remarks	XXXXXX Barangay Chairman, Puntod
3	Project Rationale & Overview (15 min.)	XXXXXX Chief, PDD, DPWH 10
4	Flood Risk Management Measures (30 min.)	XXXXXX Project Manager II, DPWH - FCSEC
5	Environmental and Social Considerations (30 min.)	MXXXXXX Engineer III, DPWH - ESSO-PS
	Refreshment	
6	Group Discussion by Barangay (40 min.)	DPWH 10 <u>Group Facilitators:</u> XXXXXX Engr. II XXXXXX Engr. II XXXXXX EMS II XXXXXX Engr. II <u>Documenters:</u> XXXXXX XXXXXX
7	Recapitulation (30 min.)	XXXXXX Project Manager II DPWH - FCSEC
	Closing Remarks	CDO City Representative

3) Top Five Issues per Barangay

A) Barangay Macabalan

- Residents inquired as to how much will be the repayment cost of lots and what assistance will each family identified receive, including the renter and sharer; and when, how and where they will be relocated, considering that their livelihood, which is mainly fishing, is linked with Macajalar Bay.
- Pertaining to the on-going dike construction project of DPWH, the residents questioned if there was proper consultation with, and survey of the community, because they observed that some residents at riverside were given relocation assistance while others were not given.
- How many meters from the river can people be considered safe? In the outside of the so-called danger zone, where can the people build their homes?
- Barangay officials asked why the project will take two years to be implemented, considering that calamities usually come every December, each year; and also asked the Project to include the improvement of the large drainage canal at Macabalan.
- Teachers and youth representatives expressed concern about the preparedness of the community to effectively respond to calamity events. Barangay Kauswagan

B) Barangay Puntod

- Wish to relocation for all affected families including married sons and daughters living with their parents in the households. The relocation site should have complete amenities like water, lights, good drainage and good roads.
- Priorities of employment for affected families in affected barangays to include livelihood assistance and other economic benefits shall be provided.
- Wish to compensation for affected families to include lots, house, and improvements.
- Drainage and maintenance of drainage and canals shall be included in the Project.
- Regarding maintenance and monitoring of the project, barangay councils of Puntod, Macabalan and Consolacion should monitor and actively participate in the monitoring and maintenance of the project.

C) Barangay Consolacion

- The community inquired if the affected residents would be given relocation and financial assistance. They were especially concerned that the relocation site might not have basic facilities such as cemented road, water, and electricity; and would be far away from the city, and thus, far away from their places of work and micro-enterprises and their children's schools.
- The residents are interested in/want to be clarified as to the processes and procedures for availing of relocation and possible financial assistance (i.e., what office is responsible, timeframe and what are the compensation schemes for land lot and house owners, dwellers of a multi-family house, and renters/sharers; and if materials (wood, roofing, doors, etc.) from the demolition can be kept and re-used by the home owners.
- The residents inquire as to the basis for determining if they will be affected (i.e., distance of their house from the river) and how much longer can those people in Isla Bognao stay now that it is declared as No-Build Zone or Danger Zone.

- The residents want to know more about the FRIMP-CDOR (i.e., when will the project begin, at what point the dike will start from the mouth of the river, its length, and distance from the river bank) and if it is possible to incorporate drainage for Consolacion Elementary School as a mitigating measure since the school is situated near the river.
- Residents expressed concern about how surveys are undertaken in their community (i.e., interviewers used pencil to write the answers of respondents which they say can be edited) and if the outcome will result in fair method of awarding relocation to those who really deserve it (i.e., residents have doubts about Barangay LGU Master List of affected families since those who are closely connected to local officials seem to have the advantage in getting relocation priority).

4) Recapitulation

XXXXXX said that relocation has a process that involves the Local Government and concerned agencies. Before, it was purely based on compensation of affected lands and structures, computed on the basis of zonal valuation and fair market values in a particular area. Now, relocation is required component of government projects, where the Local Government acquires the land and the National Housing Authority (NHA) develops the area and assists in formulating easy financing terms for the beneficiaries. However, not all local governments have the means to acquire relocation sites, and so it is fortunate that some projects are provided funds by the national government.

XXXXXX continued that when it comes to easement, the law stipulates 40 meters from the riverbank in forestlands and 20 meters for agricultural lands and 3 meters for urban areas. These areas are supposed to be "controlled," meaning that no permanent structure is allowed to be constructed by any private person or entity. Unfortunately, this has not been case in practice. There is now a move by the Department of Environment and Natural Resources (DENR), the Lands Management Service (LMS), Department of Interior and Local Government (DILG) and other agencies to look into penalizing those involved in titling easement areas.

With regard to community consultation concerning the on-going DPWH project, XXXXXX said that consultations are required to be conducted. However, the on-going projects in the area of Macabalan and Puntod are viewed as on-going repair and enhancement of already existing infrastructure. It is an emergency measure, funded through emergency funds of the national government. Identification of immediately affected residents in the aftermath of Tropical Storm Sendong went through a humanitarian intervention process. Currently, the existing infrastructure and basic facilities cannot keep up with the rapid growth of the population. The area is saturated. Unfortunately, under the on-going project, additional basic facilities cannot be directly provided.

XXXXXX emphasized the importance of the community's cooperation in the conduct of the social surveys so that the government can properly plan and allocate resources, and later on determine appropriate beneficiaries and the level assistance to be provided.

XXXXXX of Barangay Puntod explained that relocation of affected families in the project is different in the relocation of Sendong victims. Situation of Sendong is different because that was an emergency and disasters so all are victims whether you are the house owner, renters, or sharers so they are provided relocation sites.

Affected families for this project are not victims but rather affected by the project. So those that will be provided relocation are the house owners and not renters and sharers.

- (4) Stakeholder Meeting for Cluster 4 (13:30 to 17:30, Jul. 27, 2013 at Brgy. Nazareth Conference Hall, Barangay Nazareth Cagayan de Oro)

The targeted barangays for this meeting were Brgy. Poblacion 1, 2, 6,7, 10, 13, 15,17, Brgy. Nazareth and Brgy. Macasandig

1) Participants

Table 9.1.7 Number of participants from Brgy. Poblacion, Nazareth and Macasandig

<i>Group/Sector</i>	<i>Number of Participants</i>
Barangay Residents	53
Barangay Officials	26
City Government Offices	1
DPWH-PMO	4
DPWH Region 10	5
Department of Education (Elementary and High School Teachers	2
JICA Survey Team (FRIMP-CDOR)	7
Total	98

2) Program and Presentations

Table 9.1.8 Program schedule for stakeholder meeting for Brgy. Poblacion, Nazareth and Macasandig

No.	Activity	Person(s) Responsible
1	Registration (1 hr)	DPWH 10 & City Government
	Master of Ceremony/Over-all Facilitation	XXXXX Engr. II, DPWH 10
2	Preliminaries:	Host Barangay
	Opening Prayer	
	National Anthem	
	Opening Remarks	XXXXX Barangay Chairperson, Nazareth
3	Project Rationale & Overview (15 min.)	XXXXX Engr. II DPWH 10
4	Flood Risk Management Measures (30 min.)	XXXXX Project Manager II DPWH-FCSEC
5	Environmental and Social Considerations (30 min.)	XXXXX Engineer III DPW- ESSO-PS
	Refreshment	
6	Group Discussion by Barangay (30 min.)	DPWH 10 <u>Group Facilitators:</u> XXXXX Engr. II XXXXX Engr. II XXXXX

		EMS II XXXXXX Engr. II <u>Documenters:</u> XXXXXX XXXXXX
7	Recapitulation (30 min.)	Answered by Officials of DPWH-PMOO and DPWH 10
	Closing Remarks	CDO City Representative

3) Top Five Issues per Barangay

A) Barangay Poblacion 10, 17 & Nazareth

- Affected residents must be given relocation and livelihood assistance, because once they are asked to move, they have no place to go. Basic things are really needed, such as water & electricity, market, school, clinic, etc.
- Residents request that they be given ample notice, prior to the time they have to vacate their area
- Will those victims of Tropical Storm Sendong who have not been given relocation assistance, including those living in temporary shelters, be included in the relocation program in the Project?
- There are two streams/channels at Isla de Oro. Will the little stream be filled-up, in other words, will Isla de Oro cease to exist, or will it remain, as is?
- The Cagayan de Oro really needs to be cleaned up because the river swells very quickly when it rains.

B) Barangay Poblacion 15

- Residents who think they are affected say that they would like to be relocated (house and lot) near the city so they can be close to sources of livelihood/jobs, basic services and their children's schools. Suggestions for relocation sites: Indahag, Lumbia and Calaanan.
- Residents are interested in knowing how families in multi-household abodes can avail of relocation benefits and if they can request for livelihood assistance/compensation for the businesses they will lose.
- The residents are requesting for prior notice as to when they will be have vacate the affected areas, so they can prepare themselves.
- Isla de Oro has two channels, one is clean and the other is dirty because it has been clogged/closed. A clean up should be undertaken for the clogged channel.
- Residents inquire about which financial institution will be tapped for the Project, and how soon will implementation be?

C) Barangay Poblacion 6, 7, 13 and Macasandig

- Construction of dike and other project structures shall be done as soon as possible with relocation sites and assistance and just compensation of affected properties.

- The Project shall consolidate drainage of every barangay with the project and include waste water treatment facility so it will not pollute the Macajalar Bay.
- Employment and livelihood assistance to cover priority for affected households in affected barangays shall be ensured.
- Sustainability and operation and maintenance of the project beyond 2016 shall be ensured. It should include plans for maintenance.
- Fish and wildlife sanctuary and protected and wetland in Barangay Nazareth accretion shall be considered.

4) Recapitulation

XXXXXX informed the clustered barangays that all affected residents will undergo the process and procedures for relocation and assistance, and this includes adequate prior information to the community, and proper procedures in vacating and clearing the affected areas. By this manner, the community is prepared to move. Those who have claims for compensation must provide and submit proof and other documentary requirements, which will be received and processed by the appropriate offices/agencies of the local and national government that are involved in this project.

The Project is now in the data gathering and analysis phase, there is no such final plan yet regarding Isla de Oro or of Cagayan de Oro River as a whole.

XXXXXX said that it is important the community cooperate and answer the question of surveyors so that the DPWH, the City Local Government, and other agencies such as the NHA, can look into the needs of those affected and determine who and the level of assistance to be provided. This is now the data gathering stage and the government agencies can only act according to the information they gather from the community and the applicable national laws, rules and implementation guidelines.

K9.1.2 Wrap-up Meeting for Technical Scoping

(1) Date, Time and Venue

The wrap-up meeting was conducted from 8:00 to 12:50 at the Cattleya Function Room, N-Hotel, Kauswagan Highway, Cagayan de Oro City. The targeted barangays for this meeting were Cagayan de Oro City, Poblacion Barangays 1, 2, 6, 7, 10, 13, 15, and 17, Balulang, Bonbon, Carmen, Consolacion, Kauswagan, Macabalan, Macasandig, Nazareth, and Puntod.

(2) Participants

Table 9.1.9 Number of participants in the wrap-up meeting of the 2nd Stakeholder Meeting

<i>Group/Sector</i>	<i>Number of Participants</i>
Barangay Officials	18
City Government Offices	11
DPWH-PMO	5
DPWH 10	5
DENR 10 – EMB	2
JICA Survey Team (FRIMP-CDOR)	14
DILG	2
NEDA	3
NHA	1
DSWD	1

CDOR-BMC	1
Xavier University	3
House of Representatives	4
Other Government Offices	4
Private Sector/Media	4
Total	78

(3) Program and Presentation

Table 9.1.10 Program schedule for wrap-up meeting held on 5 September 2013

Time	Activity	Person(s) Responsible
8:00 A.M.	Registration	DPWH 10 Team
	Opening Prayer	XXXXXX Head, Social Action Center Metropolitan Archdiocese of Cagayan de Oro
	National Anthem	
9:00 A.M.	Welcome Remarks	XXXXXX Project Manager II, DPWH – PMO-FC
	Introduction of Participants	
	Talk	XXXXXX Mayor, Cagayan de Oro City
	Rational and overview of Wrap-up Meeting	XXXXXX Engr. II, Task Force Sendong – DPWH 10
	Refreshment	
9:45 A.M.	Flood Risk Management Measures	XXXXXX Project Manager II, DPWH – FCSEC
	Refreshment	
	Environmental and Social Considerations	XXXXXX Engineer III, DPWH - ESSO-PS
	Recapitulation of Comments raised in Stakeholder Meetings	XXXXXX Project Manager II, DPWH – FCSEC
11:20 A.M.	Forum	
12:45 P.M.	Closing Remarks	XXXXXX Project Manager II, DPWH – PMO-FC

Master of Ceremony: **XXXXXX** – DPWH 10

(4) City Mayor's Remarks

Mayor started his message by conveying how unfortunate the Sendong event for Cagayan de Oro and worst the City was not prepared for it.

He felt hurt upon hearing the information from Engr. XXXXXX that Cagayan de Oro is one of the 18 major River Basins in the Philippines because as River Basin, Cagayan de Oro River is supposed to have regular budgets and or appropriations for flood control. Yet nothing was done to put up flood control project. He emphasized that we much make up for this generation of neglect. He is not blaming DPWH because they have the whole country to serve. Sendong was a very painful price for the City and there is need to wake up and catch up.

Mayor express his gratitude to everybody for taking part in the process, in particular, he thank the Archdiocese of Cagayan de Oro for taking the initiative in organizing Cagayan

de Oro River Basin Management Council (CDOR-BMC). He also mentioned that he is very happy that JICA, the Japanese Government is taking a closer look at the problems. He was informed that the project is now in its finishing stages of the assessment phase and the next stage is the feasibility study. He is hoping that something concrete will happen and will culminate in the signing of the agreement between the Philippines and the Japanese Governments.

The Mayor closed his remarks by saying, "I am glad that everybody is here to do this. Let us not wait for another Sendong to happen. It is not going to be easy. This is not just putting the embankment and other flood control structures. This is where we need the cooperation of Barangay Officials to help relocate those who are residing in the area that will be affected by the project. We need to work together and I hope the Barangay election will not in any way affect our working together. We belong to different parties but this is irrelevant. What is important, we must work for the welfare of the people. Life is at stake and the future of Cagayan de Oro cannot be compromised".

(5) Discussions

1) Congressman XXXXX (Party List Representative – ABANTE MINDANAO OR ABAMIN)

A) Question/s

When will the feasibility be finished?

When will construction start?

B) Responses

a) XXXXX (Project Manager II, DPWH –FCSEC)

XXXXX responded by providing first some history of the Master Plan. She informed the assembly that in 2009, there was already a National Program Assessment Study, where more than 1,000 river basins in the country were assessed according to some risk criteria and Cagayan de Oro River Basin is one of the 56 river basins prioritized for flood control. In 2009, there was already a local funding to do a Master Plan for Cagayan de Oro River Basin. The Master Plan was completed in 2011 but unfortunately before it can be utilized, Sendong happened. Sendong resulted to the changes in the river configuration and these necessitate the updating of the previous Master Plan. This study was conducted for the purpose of updating the previous master plan.

b) XXXXX (JICA Survey Team)

When will the feasibility study completed? The schedule to complete the feasibility study is in November. The original schedule was this month but because of some environmental considerations (delays due to election period, the delay in the socio-economic survey, and the JICA security concern), the schedule for the completion of feasibility study was moved to November.

c) XXXXX (Project Manager II, DPWH –FCSEC)

When will construction start? President and DPWH Secretary are willing to invest some local funds to provide preliminary works on flood control so construction for these locally funded works have already started.

The Japanese Mission is coming this September to start ground work for the negotiation of the project.

For those huge projects that need large funds (e.g. retarding basin-to slow down the flow of water from upstream to downstream), According to XXXXX there is a two

years gestation of the loan so the earliest that we can begin construction is by 2016.

2) Congressman XXXXX (Party List Representative – ABANTE MINDANAO OR ABAMIN)

A) Question/s

How much is the expected project cost?

B) Responses

a) XXXXX (JICA Survey Team)

The team estimated preliminary construction cost to 2 billion to 3 billion pesos. This cost may increase depending on the cost of social considerations factors (e.g. right of way acquisition, resettlement of affected residents, compensation, and others).

b) XXXXX (Project Manager II, DPWH –FCSEC)

XXXXX mentioned cases that sometimes the cost of construction maybe lower than the cost of right of way acquisition, resettlement, compensation package of affected residents, others.

c) Congressman XXXXX (Party List Representative, ABANTE MINDANAO/ABAMIN)

I am a member of the Appropriations Committee in Congress and the President has committed at least 2 billion pesos for Cagayan de Oro River. He mentioned that in their part (with Congressman XXXXX) they filed a bill in Congress to reforest 3,000 hectares of watershed in upstream barangays of Dansolihon, Tignapoloan, Tagpangi, and other upstream barangays. The reforestation has an approved budget of 37 million pesos.

3) XXXXX (Barangay Consolacion)

A) Question/s

Not to pre-empt the project study, may we, the LGUs with in the river banks know at this moment, the approximate distance from the bank, which will be affected by the project. This is in order to avoid further construction of new public social infrastructures facilities.

B) Responses

a) XXXXX (Project Manager II, DPWH –FCSEC)

River banks under the water code have easements laws. We need to apply these easement laws. Thus, we are discouraging the LGU to put up structures within the easement areas.

b) XXXXX (Barangay Macabalan)

There is an on-going DPWH project which is the construction of a sea wall in Barangay Macabalan. Thirty seven (37) affected families were already relocated to Pagatpat but I am concerned with the remaining 16 affected families that have been awarded already to be relocated in Pagatpat but have not move yet because they need financial assistance.

c) XXXXX (Project Manager II, DPWH –FCSEC)

XXXXX requested Engr. XXXXX (Eng. II Task Force Sendong- DPWH 10) to talk to XXXXX of Macabalan to find out the exact need of the remaining residents to be relocated.

d) Congressman XXXXX (Party List Representative – ABANTE MINDANAO OR

ABAMIN)

He instructed XXXXX of Macabalan to approach the office of Congressman XXXXX because he is willing to assist and help in the moving of the remaining beneficiaries to their relocation sites in Pagatpat.

4) XXXXX (Museo de Oro, Xavier University)

A) Question/s

Before asking her question XXXXX made two important points: First, she expressed her appreciation to the Survey Team for considering reforestation and to look into the watershed. She feels that whatever measures we do for flood control without protecting the watershed is useless because it will not be sustainable. Second, she informed the body that there is an NGO, the Psychosocial Association of the Philippines headed by XXXXX, a Guidance Councilor and a Sociologist. She informed the Study Team that the group is willing to assist and extend help for those who need Psychosocial assistance during disasters or calamities.

As an Archeologist, I am concerned with the cultural heritage of Cagayan de Oro City. I am wondering why Taguanao one of the barangay of Cagayan de Oro affected by Sendong was not included in your study? Taguanao is the site of Huluga Cave, the heritage site of Cagayan de Oro. The barangay was affected by Sendong.

B) Responses

a) XXXXX (JICA Survey Team)

Taguanao is one of the Sitio of Barangay Indahag where Huluga Cave is located upstream of Pelaez Bridge. Taguanao is covered by the study including Talakag and Baungon. However, the proposed structures only covers the stretch from the river mouth (Macabalan and Bonbon) up to about 11.6 kilometers, a little upstream of Balulang. The proposed structures are about 2 to 3 kilometers away from the site of Huluga Cave. The proposed project covers only the downstream because these are the areas where more damaged happened during Sendong and therefore there is immediate need of protection from the flood.

b) XXXXX (JICA Survey Team)

Why are we doing the project only from the river mouth to the downstream of Pelaez bridge? These are the areas where many were affected by the flood.

c) XXXXX (Project Manager II, DPWH –FCSEC)

This is good that the matter of Huluga Cave surface so it will be addressed and the Team should pay attention to it. Later when the proposed feasibility study is available, then the group can check whether the Huluga Cave will be affected.

d) XXXXX (EMB, DENR-10)

As agreed with JICA Team, this is the last scoping sessions. There will be no more convocations for scoping assessment. It is now up to JICA Survey Team to check whether Huluga Cave will be affected by the proposed structures of the project. The existing law requires 1 kilometer radius or distance from the structure to be considered safe from effects.

5) XXXXX (City Director, DILG Cagayan de Oro City)

A) Question/s

I just wondered why Baungon and Talakag are not part of the study because we are not just talking about the effect of the project to the environment but the future effect

of the economic activities upstream to the project and the environment. We need the communities upstream to have co-ownership of the project here in Cagayan de Oro. It is a fact that the City is receiving waste, water and other debris from upstream communities. They must be involved and I am wondering if in the scoping of the project, economic activities upstream were included.

B) Responses

a) XXXXX (Project Manager II, DPWH –FCSEC)

The study included and considered economic activities upstream including areas of Huluga Cave and Baungon and Talakag being part of the whole Cagayan de Oro River Basin. Communities upstream were involved in the data gathering to include the socio-economic, hydrologic, environmental data of for the whole River Basin.

b) XXXXX (CLENRO)

CLENRO is part of the Cagayan de Oro River Basin Management Council (CDOR-BMC) spearheaded by Archbishop XXXXX. I would like to inform the body that CDOR-BMC involved the communities upstream in the rehabilitation of the forest areas. One of the identified mechanisms of the CDOR-BMC reforestation project is to include a component of reforestation integrating it with the livelihood activities of residents in upstream communities where they get paid for every replanting services that they do.

c) XXXXX (EMB, DENR - 10)

The comment on the watershed concept upstream that means involve other activities like reforestation and land and environmental management is a holistic approach. Our study here in Cagayan de Oro is more specific that look into direct impact-primary impact because if we study the whole river system, until 10 years we are still studying and will not see the implementation of the project. We need to limit our concern according to priorities. Otherwise, we will not finish and complete the study.

The purpose of the scoping is to scope what are the primary issues and concern that will come out in the study that we need to respond and mitigate and provide resources for these direct concerns.

d) XXXXX (City Director, DILG Cagayan de Oro City)

I would like to propose that this study be presented to the CDOR-BMC because representative of upstream LGUs are also member and part of the council.

Follow –up Written Proposal 2: handed to XXXXX by Engr. XXXXX (Engr. XXXXX, Engineering Resource Center, Xavier University and Representing the Executive Committee of CDOR-BMC)

I am supposed to personally and privately invite the DPWH-JICA team for a presentation to the CDOR-BMC Executive Committee (Execom). But since the matter already surfaced, I am officially inviting the DPWH-JICA team to present the project before it gets finalized and especially because there is also a Cagayan de Oro River Basin Master Plan.

XXXXX (JICA Survey Team), after the session, personally talked with Engr. XXXXX and explained that the JICA Survey Team (JST) will present the Master Plan in the next Stakeholder Meeting scheduled next month instead of presenting it in CDOR-BMC conference. Engr. XXXXX agreed to this proposal.)

6) XXXXX (CLENRO)

A) Question/s

Have you taken into consideration the Hydroelectric Dam to be constructed at Cagayan de Oro River in the side of Barangay Lumbia? (Dam Project of XXXXX)
What is the impact of this dam to the dike?

B) Response/s

a) XXXXX (JICA Survey Team)

According to our study, there are no existing hydroelectric power dams in the midstream of mainstream of Cagayan de Oro Rivers that will be affected by the proposed project. In the course of the study, it was found that there is a proposed hydroelectric power dam which is approximately 120 meters in height. Our study considered this power generation dam but it will not be affected by the project. One idea is to use the dam as multipurpose structure not only for hydroelectric power generation but also to use for flood control.

7) XXXXX (Cagayan de Oro City Administrator)

A) Question/s

I would like to react first to the issue of turning over flood control structures to LGUs. I believed flood control structures are not just a concern of any one LGU but involved a lot of LGUs. So I would like to support the previous discussion that it should remain under the management of DPWH.

This is important especially that the local government is now in the process of looking into the application for renewal of quarrying permits. What is the role of local government agencies? What is the plan of the city, where and how to extract very important resources? Resources like gravel and sand that comes from the river that is important to our infrastructures development in the city. We cannot just say no to this quarrying business because the city needs this resource from the river. The project will construct embankment in the river banks. Are there provisions and considerations for entry and exit to and from the river?

B) Response/s

a) XXXXX (Project Manager II, DPWH –FCSEC)

The design of the dike considers several important stop gates for maintenance purposes. But in addition to this, there are some social considerations entries and exits (e.g. gender considerations) provided in the planned or proposed structures. If there are quarrying activities present in an area, the design of the structures should facilitate entrance and exits in the area.

It is important that LGUs be involved. There are instances in other project of stealing of expensive equipments for flood control. LGUs contribute so much in informing barangay residents to take care of these equipments.

b) XXXXX (JICA Survey Team)

Small sand mining and excavation is considered by the study, in particular if in midstream. The proposed structures will consider providing exits and entrances for small sand mining and quarrying in the river.

c) XXXXX (EMB, DENR-10)

With regards the question of the City Administrator asking for the existence of institutional mechanisms with regards the issuance of quarrying of sand and gravel permits. Actually DPWH now is directly involve because issuance of permits need consent of DPWH whether the group or business is allowed or not allowed to quarry

in that particular area of the river. The mechanism is between the LGU that issue the quarrying permits and DPWH that give clearance whether the area of the river is allowed for quarrying or not. Technically speaking, there is a need to define the gradient that one is allowed to quarry. How far from the structure downstream and upstream of the structure is allowed? Who and where the guidelines should come from? Who should monitor and maintain that the guidelines are followed? Otherwise, the tendency of the group is to quarry in areas that are easy and most accessible.

I think there must be a master plan and we should follow a master plan. What gradient should be maintained adjacent to the structure. Is it possible that the Technical Team of JICA will be able to come up with the prescribed gradient from Taguanao to the mouth of the river? This is the gradient that we should follow.

These small sand mining and quarrying excavation must be regulated and plan properly by the City and by DPWH. Which part of the river should it be allowed and what amount of sand should be taken out? The City and DPWH must regulate these extraction activities.

d) XXXXX (Project Manager II, DPWH –FCSEC)

As a follow-up to points made by XXXXX, XXXXX explained that not only elevation and gradient study are needed but also sedimentation study. What kinds of sediments are present and in what part or area of the river? In dredging project, we required clearance from EMB of what will be dredged and what volume of materials will be taken out. What is the plan elevation of the river that should be maintained and that you want to achieve upstream and downstream. The actual shape of river elevation desired must be maintained so we cannot just allow dredging anywhere without clearance from EMB of DENR. In similar manner, the LGU and EMB of DENR must not only monitor the dredging part but also where the spoilage is dumped.

The hydraulic part is the main concern of DPWH but the extraction of sediments or quarrying of sand and gravel and other mining activities are DENR and LGU matters. Thus, LGU should monitor those entities that she gave quarrying and or dredging permits.

Annex-10
Minutes of Meeting on 3rd Stakeholder Meeting

Annex-10 Minutes of Meeting on 3rd Stakeholder Meeting

10.1 Stakeholder Meetings for Master Plan and Examination of Alternatives

Stakeholder meeting for Master Plan and Alternative Studies for the Project was held in CDO City on Oct. 25, 2013, 8:30 to 12:00 at the Cattleya Function Room, N-Hotel, Kauswagan Highway, Cagayan de Oro City. The following are the minutes of discussion in the meeting:

(1) Participants

Table 10.1.1 Number of participants of the Stakeholder Meeting on Oct. 25, 2013

<i>Group/Sector</i>	<i>Number of Participants</i>
City Government Officials	1
Barangay Government Officials	10
Municipal Government Officials	2
Civil Society/Non-Government Organizations	9
Government Regional Offices/Agencies	11
Utilities	2
Academe	2
Business/Private Sector	2
DPWH -- PMO	7
DPWH 10	8
JICA Study Team	7
Total	61

(2) Program and Presentation

Table 10.1.2 Program schedule for the Stakeholder Meeting on Oct. 25, 2013

<i>Time</i>	<i>Program Activities</i>	<i>Speaker/In-charge</i>
8:00-9:00	1. Registration	DPWH SHM Preparation Team (DPWH Team) assisted by XXXXX & XXXXX
9:00-9:20	2. Opening Ceremonies Opening Prayer National Anthem	Master of Ceremonies: XXXXX, Admin. Officer V, DPWH 10
9:20-9:40	3. Welcome/Inspirational Message	XXXXXX Chief, PDD, DPWH 10
9:40 – 9:50	4. Short Message	XXXXXX City Mayor, Cagayan de Oro City
9:50-10:10	5. Project Rationale and Overview	XXXXXX Asst. Head, Task Force Sendong, DPWH 10
Refreshment		
10:10-10:40	6. The FRIMP-CDOR Master Plan	XXXXXX Project Manager II, DPWH-FCSEC
10:40 – 11:10	7. Environmental Evaluation and the Examination of Alternatives	XXXXXX DPWH-ESSD-PS
11:10 – 11:50	8. Open Forum	Moderator: XXXXX
11:50 - 12:00	9. Closing Remarks	XXXXXX Project Manager II, DPWH – FCSEC

Master of Ceremonies: XXXXX, Admin. Officer V

(3) Minutes of the Meeting

1) Welcome Remarks on behalf of DPWH 10 Regional Director

The Chief Planning and Design Division, XXXXX of the DPWH 10 welcomed the participants to the Third Stakeholders' Meeting on behalf of the Regional Director XXXXX. He reminded that other areas were hit by Tropical Storm Sendong in 2011, but it was in Cagayan de Oro City that the greatest devastation was experienced. He said that prudent policies and plans with an informed community will can sustain life and avert damages. That is why there is a need for greater assessment and study for the Cagayan de Oro River which is being conducted by the DPWH in cooperation with the JICA Survey Team. He invited the participants to actively participate in the open forum. He added that with support of local officials and cooperation of stakeholders, the DPWH will be able to implement a Flood Risk Management Project that can cope with the demands of the inhabitants, in order to have a flood-free Cagayan de Oro in the future.

2) Discussion (Questions and Answers)

A) Question/Comment

XXXXX (TOUCH Foundation) requested the JICA Survey Team to facilitate an orientation/consultation for all of the Cagayan de Oro River Basin Management Council members.

He noted that in the past, Cagayan de Oro River used to be a main transport route and the riverbanks were still a source of a scenic beauty. Then, with regard to the design, specifically the walkway, he pointed out that it is too narrow and then suggested to the Survey Team to consider widening the walkway so that in the future, it can be utilized for the construction of concrete structures to create parks/recreation areas in hopes of creating a scenic view close, if not similar, to Han River in South Korea.

If the retarding basin could not be utilized for the parks, XXXXX pointed out that there are still areas/portions of land that can be utilized without requiring a right of way.

B) Responses

a) XXXXX (Project Manager II, DPWH –FCSEC)

XXXXX commented that the Survey Team shares the same vision with XXXXX regarding the possibility of constructing park/recreation area structures. However, because of the structures, mostly residential, which are built in the riverbanks without taking into consideration the 3-meter rule of the Water Code, the riverbanks do not have enough easement to cater to the construction of parks/recreation areas. Also, financially, Philippines just could not afford such development at the moment. The walkway provided in the project should be enough to let the people maximize/enjoy the ambiance of the present river scenery. In addition, she explained that the walkway is just part of the rehabilitation of the existing walkway since there are people and properties that need to be protected in the area. Buying these properties so that it could be fully utilized will be more costly than the proposed project itself.

b) XXXXX (JICA Survey Team)

XXXXX said that if there are recommendations from the local government or DENR on how to utilize the area, citing Isla de Oro as an example, maybe the Survey Team

will consider. But temporarily, the Survey Team is recommending a river station for navigation around the river.

A) Question/Comment

XXXXXX (NEDA 10) noted that Case 3 alternative, which is designed for a 25-year flood return period and would cost the lowest compared to the 1st and 2nd alternatives, would not be enough to accommodate the volume of the water released from Bulanog-Batang dam in case of the 50-year flood return period. Once the water is released from it, then there is a possibility that water could still overflow from the river despite the dike. And in addition to his question, he asked if the project will be implemented one-time or by tranche.

B) Responses

a) XXXXXX (Project Manager II, DPWH –FCSEC)

XXXXXX responded that the 12.6 km project will be a one-time implementation since that is the scope of this short-term project.

b) XXXXXX (JICA Survey Team)

XXXXXX said the concept for construction for 50-year flood event will be a dam in the upstream. Sendong level flood was around 2,700 m³/sec. and will go directly downstream without dam, but if a dam is constructed upstream the flow can be reduced to 1,000 m³/second. This is the effect of the dam. So the dike should be complemented with dam.

c) XXXXXX (Project Manager II, DPWH – PMO-FC)

XXXXXX added that although the project is designed to address a 25-year flood return, aside from the design's elevation, a 1.2-meter freeboard within the framework of the design was suggested to the Survey Team by the DPWH Bureau of Design. With the freeboard, the structure may be able to accommodate a 50-year flood return period. Currently, the Survey Team is evaluating the said proposal.

A) Question/Comment

XXXXXX (Safer River Life Saver Foundation and Liceo de Cagaya University) inquired if the Survey Team considers the storm well as an alternative for mitigate flood.

B) Responses

a) XXXXXX (JICA Survey Team)

XXXXXX explained that storm well in the urban environment of Cagayan de Oro will not be effective because the floodwater is coming from the upstream. It might be effective if the drainage system in the city will be improved.

b) XXXXXX (Project Manager II, DPWH –FCSEC)

XXXXXX added that storm well should be compatible with the drainage network, it needs accessories to be linked to the drainage network, it is dangerous and could pollute the ground water which is the source of drinking water from some residents in the city and lastly, storm well is expensive and CDO would need a lot of storm wells for a 2700 m³/sec. flow in the upstream basin.

A) Question/Comment

XXXXXX (Pueblo de Oro Development Corp and nominee as Co-Chair of the Regional Development Council 10) inquired about total project cost and suggested to spend the project cost for relocating all the people occupying the flood areas instead of constructing a structure that could still possibly not work in case of extreme

flood.

B) Responses

XXXXXX (Project Manager II, DPWH –FCSEC) answered that, it is very difficult to remove the people from the affected area. There are about 10,000 houses (40,000 -50,000 people) to be relocated. Buying the lands would cost more than the proposed flood mitigation structure itself. Also, there are government structures which are just not possible to remove. As explained in the presentation, people living in the Flood Risk Level 4 area shall be relocated to safe place while the area in the Flood Risk Level less than 3 shall be protected by the proposed dike. With the help of LGUs, the Survey Team is devising plans on what could be done for the people without spending too much.

A) Question/Comment

XXXXXX (Paseo del Rio) asserted to address “natural problems” rather than infrastructure constraints. In the case of Cagayan de Oro River, he asked the Survey Team to look in to the mouth of the river and deal with the silted area.

B) Responses

XXXXXX (Project Manager II, DPWH –FCSEC) emphasized that the analysis of the situation in the mouth of the river is part of the study along with watershed activities, economic implications and other issues. The reason for the infrastructure component of the study is to protect the existing activities in the affected area. Also, she noted that United Nations Framework for climate change recommends one basic strategy, which is to remove the people at risk that is why the study is also looking at relocating people occupying the river area.

A) Question/Comment

XXXXXX (MINDA) pointed out, with regard to the question of XXXXXX that the Bulanog-Batang Dam project is not within the control of the study and can be further discussed separately. If so, would the discussions be with the Department of Energy (DOE) or National Power Corporation (NPC)?

He suggested to CDORBMC to invite the agencies who are developing the master plan for the Cagayan de Oro River Basin in their next meeting. He also mentioned to include inviting the Macajalar Bay Development Alliance for the discussion regarding the reefs in the affected area.

He asked if the track of the funding would be ODA or PPP. He is concerned that the proposal might change track from ODA to PPP, and yet reversed again, as with the case of the Mindanao Railways Project.

B) Responses

XXXXXX (Project Manager II, DPWH –FCSEC) made a clarification on the concept for the dam. She explained that for the requirements of this project, it would not involve the whole or total storage of capacity of the dam, in order to address the 50-year flood. Rather, since there is already that hydropower dam proposal, this flood control project would only “ride-on” to the dam’s storage capacity. So for example, if the existing height of the dam is 50 meters, then the project would only add 10 meters to that, order address the long-term flood mitigation requirement.

XXXXXX maintained that the track of the project is ODA since it is protection from disaster which is basically a government undertaking, and will less likely generate income. Hence, it could not be in a PPP track. But this will not stop DPWH from putting up funds for other components. It has already been putting up funds for the

immediate restoration of the destroyed infrastructures during previous flood events, including protection of some dikes. But bulk of this will be ODA.

XXXXXX said that according to BOT Office of the Department of Finance, there would be a need to lump this flood mitigation component with other projects within the basin to make it an attractive for PPP. She added that perhaps with the dam, PPP is feasible since there is income in power generation. She added, this can be an area of discussion in the future that perhaps, DPWH subsidizes a portion of the construction of the dam, and then, other components would be through PPP. It is a financing mechanism that can be studied in the future.

A) Question/Comment

XXXXXX (Paseo del Rio) added that if the Philippines is looking at the 50-year flood protection level, holistic approach should be considered and the master plan should be created as comprehensive as possible.

B) Responses

XXXXXX (Project Manager II, DPWH –FCSEC) agreed with XXXXXX's suggestion, however, according to her, it is difficult to integrate all the plans for the river basin because apparently, in the Philippines, there are more than 30 water agencies. This makes it difficult to synchronize the activities.

A) Question/Comment

XXXXXX (Pueblo de Oro Development Corp and nominee as Co-Chair of the Regional Development Council 10) reiterated that MINDA is supposed to be the super body for Mindanao. He also concurred on the previous statement of XXXXXX that holistic approach is important. Then, he asked if there is a way to converge all the activities in the CDO River Basin to come up a long-term solution to the problems. And in addition, he said there is a PhP50 Billion budget allocated by the Philippine government for moving people away from the danger zones in the different parts of the country. Lastly, he requested the different agencies for CDO river basin to get access at least part of the PhP50 Billion budget to start moving away the people living along Cagayan de Oro River.

B) Response

XXXXXX (Project Manager II, DPWH –FCSEC) expressed that in order to start making the plans in moving people away from the riverbanks, the group would need a Basin Plan which is currently not yet available. RBCO is tasked to do it but unfortunately, the focused is on administrative planning.

A) Question/Comment

XXXXXX, being the Co-chair of CDORBMC is inviting the JICA Study Team to present to the Council on its next board meeting, possibly on December this year, the result of the study.

He also suggested that the model used by the Survey Team in the analysis be integrated with the LiDAR model of XXXX, UP.

With regard to the design of the project with consideration of the water from hinterland, XXXXXX asked if how the drainage water will flow out to the river if the river has a wall (dike) and especially if the water in the river is already at a high level.

B) Responses

XXXXXX, DPWH 10, reported that there would be outfall and flood gates to accommodate the water flowing out from the drainage. He noted that the project

actually applies a holistic approach.

A) Question/Comment

XXXXXX (Planning Office of Barangay Bonbon) inquired about the design, why the design of the project traverses inside the Barangay tramping almost 1/3 of the barangay's total land area.

B) Responses

a) XXXXXX (JICA Survey Team)

Mr. Fukuda explained that the reason for the design traversing big part of the barangay is for protection and for access from the side of the raised road, so that it could be used for evacuation should the need arise.

Annex-11
Minutes of Meeting on 4th Stakeholder Meeting

Annex-11 Minutes of Meeting on 4th Stakeholder Meeting

11.1 Stakeholder Meetings for Public Consultation Meetings

(1) Minutes of Consultation Meeting 1

November 05, 2013, 9:40AM-11:50AM

Barangay Nazareth Gym, Barangay Nazareth, Cagayan de Oro City

Total Number of Participants

PAPs	134
City Offices	2
Barangay Officers	2
National Government Officers	3
DPWH	9
JICA Survey Team	8
Total	158

Participating Barangay(s):	Barangay Balulang, Barangay Macasandig, Barangay Nazareth
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XXXXXX, City Information Officer, called the meeting to order at 09:40AM. This was followed by the invocation and singing of the national anthem led by XXXXXX, Kagawad (Councilor) of Barangay Nazareth. XXXXXX, Barangay of Macasandig, delivered the welcome remarks. XXXXXX of the DPWH-PMO-Flood Control provided an overview of the project. XXXXXX of the DPWH-PS-ESSD presented the overall results of the Socio-Economic Survey conducted by the JICA Survey Team. XXXXXX of the DPWH-PMO-IROW explained the entitlements under Philippine laws and policies in terms of resettlement, while XXXXXX of the NHA-Region 10 presented the possible resettlement sites which could be used for relocating qualified beneficiaries. The public meeting also served as the venue to solicit feedback/clarification and questions from the project affected persons. All speakers were on hand during the open forum to address concerns and to answer questions about the presentation.

XXXXXX briefly outlined the city government's housing priorities and challenges. Advisory was also given for mitigating risks associated with the onslaught of Typhoon Yolanda. To close the public meeting, XXXXXX thanked the participants for their time. The public meeting ended at 11:50 AM.

Highlights of Discussion:

Question 1:

(XXXXXX, Cagayan de Oro City)

XXXXXX commented that he appreciates the entitlement options that DPWH plans to offer because he thought that these entitlement options are very fair and very just. His question was: If you happen to be the owner of the land and structure, does it mean that you will have cash compensation both for the land and structure plus rental subsidy?

Reply:

(XXXXXX, DPWH-PMO-IROW)

The owners of land and/or structure can only avail of the cash compensation for the land and/or structure. They will not be paid rental subsidy since it will already be considered as double compensation.

Suggestion 1:

XXXXXX also suggested the following:

- a) The government should have available financial resources to pay for compensation for the land and structure/improvement as well as to develop resettlement sites that will accommodate the affected households.
- b) The documentary requirements to qualify for entitlements should be published so that they will know the legal basis why some of them will not be qualified for cash compensation. For example, for those who are living in the land and structure located in the danger zone, it will not be possible for them to pay property tax or to have the land titled which are requirements to qualify for cash compensation.
- c) DPWH needs to put up a center wherein all the concerned agencies will be able to hold offices and provide assistance to the affected households in the completion of requirements regarding entitlements.
- d) The NHA and LGU should give priority to the project affected households to live in the resettlement sites.

Suggestion 2:

(XXXXXX, Barangay Macasandig)

XXXXXX requested DPWH to revisit/review the target area for the construction of the dike and to explore the possibility of reducing the target area from say, 100 meters away from the river bed to 50 meters. This space reduction may also result in minimizing the number of PAPs from 1,087 to 500 or probably even down to 200 households, and in effect lowering the number of PAPs to be resettled. He recognized that the Project is very useful since the construction of the dike is meant to protect the lives and the properties of the people. However, they are very sad to learn that they will have to be resettled because of this dike. He also asked XXXXXX to have this matter discussed with CDO Mayor XXXXXX.

XXXXXX clarified that they are not blaming DPWH; they are just asking that, if possible, no structures should be affected. Looking at the map, they observed that the design missed a couple of structures like the City Hall so it should be possible that the dike could be designed such that no structure will be affected.

XXXXXX also noted that they only have the mother title issued to his grandfather. Learning that the title should be under the name of the present owner to qualify for cash compensation, he also sought clarification on this regard.

Reply:

(XXXXXX, DPWH-PS-ESSD)

XXXXXX clarified that only the master plan is being presented in the public meeting. Detailed engineering design will have to be undertaken afterward that may entail adjustments in the project design. The 1,087 affected households identified in the master plan might be reduced in the detailed engineering design of the project. However, the households living in the No Build Zone and in areas classified as Flood Risk Level 4 (very high risk of casualty) will really have to be resettled. President Aquino himself stated that people in the No Build Zone should be relocated from the river bank. XXXXXX also emphasized that the intention of the project is to save and rebuild lives.

(XXXXXX, Information Officer, Cagayan de Oro City)

It is assured that all your concerns will be conveyed to Mayor XXXXXX. We would like to let you know that the Mayor's knowledge regarding these matters (e.g. engineering works) are limited. I'm sure that the Mayor will consult with experts including City Engineer, Mayor's Advisor for Infrastructure and DPWH and decide on the matter.

(XXXXXX, Consultant, DPWH-PMO-IROW)

If the mother title of the land is still in the name of XXXXXX's grandfather, they will have to undergo the legal process to have the land title transferred to the present owners such as filing of extra-judicial settlement of the estate and having the land subdivided.

Question 2:

(XXXXXX, Barangay Macasandig)

Were those surveyed the only households that will be affected by the project? When will the construction of the dike start?

Reply:

(XXXXXX, DPWH-PS-ESSD)

The socioeconomic survey that was conducted for this Survey provided DPWH with the indicative number of PAPs. The number and the list of affected households to be resettled will be finalized after the completion of the detailed engineering design of the Project. However, as previously mentioned, those households living in the No Build Zone and in very high risk areas will have to be resettled earlier.

(XXXXXX, Information Officer, Cagayan de Oro City)

I just would like to check if there are still people living in these violet areas (No Build Zones) in the map. Cala-cala. none. Isla Puntod. none. Tambo. There are some households. We would like to reiterate that people still living in these areas will have to consider transferring.

(XXXXXX, DPWH-PMO-Flood Control)

The DPWH Region 10 has already started the construction of the short-term, urgent program of works related to the project that is being financed by local funds. The foreign-assisted component that will entail the construction of the dike will start in 2016. The loan agreement is expected to be finalized in 2014 while the detailed engineering design is targeted to be completed in 2015.

Question 3:

(XXXXXX, Barangay Macasandig)

What we have in our possession is the mother title of our land in the name of our grandfather. In our case about 3/4 of our land will be affected, the rest (1/4) will not be included. How can we segregate this land? Another question is for XXXXXX, we would like to know what particular agency we would ask help from regarding our resettlement concerns. Will it be the NHA, our local Barangay or the LGU?

Reply:

(XXXXXX, Consultant, DPWH-PMO-IROW)

The concerned household will be responsible for the segregation of their land. They will have to transfer the title from the father to his children (12 siblings in this case). If DPWH will pay them for the 3/4 of the land, they will have to divide the payment equally among themselves. DPWH will only pay for the land that is titled under the name of the claimant. In the same manner that the replacement cost for the affected structure/improvement will be paid to the person under whose name that the tax declaration has been issued.

(XXXXXX, NHA-Region 10)

Regarding resettlement concerns, the LGU will be the one to help you. In fact, the Task Force on Housing was created by the City Government to address the concerns on housing including resettlement. NHA provides assistance to LGU on aspects like land development and identification of beneficiaries.

Question 4:

(XXXXXX, Barangay Balulang)

- a) Way back to 1998 we had an induction at the Karinugan Riverside in the presence of the Vice Mayor, the Chief of Police and our Barangay Captain. During that induction, the Vice Mayor told us that from that day all the lots where we are residing will be ours and that they will be the one to process the land titles. When we applied for water and electrical connection we were asked to go to DENR and secure some papers. From DENR I received a document that states

that my lot number is no. 25. However, we have not yet been able to get the land titles as promised. What will happen to us since we do not have the required documents, we will not be paid for our structures?

b) Why is it that during the conduct of the socio-economic survey the houses were marked?

Reply:

(XXXXXX, Information Officer, Cagayan de Oro City)

I would like to ask if you are referring to the Piso-Piso program. As far as I know, all areas which are designated as the No Build Zone can never be titled. With regards to your concern about the land being given to you, I'm sorry I could not answer in behalf of the previous administration. It would be best, however, to have a separate discussion on this issue on entitlements with the DPWH.

(XXXXXX, DPWH-PS-ESSD)

The markings on the houses were made to serve as an indicator to the survey team members that the households were already interviewed and were not meant for tagging purposes. As explained previously, the final number and list of the project-affected households will only be determined during the detailed engineering design probably in 2015.

Question 5:

(XXXXXX, Barangay Macasandig)

As a Sendong victim, I applied for a housing unit with NHA. I also had an interview with EMD and even applied for CMP so that I would be able to relocate since our house is in the danger zone. Why is it taking long for our application to be approved?

Reply:

(XXXXXX, NHA-Region 10)

The form that was filled-up was not an application form but a survey form. Actually the NHA does not give out application forms; it is the LGU that determines to whom the housing units will be awarded.

(XXXXXX, Information Officer, Cagayan de Oro City)

One of the programs of Mayor XXXXXX is the resettlement program wherein there are three focus areas: (1) Sendong-related resettlement sites; (b) Piso-Piso areas; and (c) informal settlers. She advised not only XXXXXX but other Sendong victims who have not yet been resettled to coordinate with the City Information Office so that they could be referred to EMD (headed by XXXXXX). She further suggested that their respective issues and concerns be properly documented so that appropriate action could also be provided.

Question 6:

(XXXXXX, Barangay Balulang)

I do not have any document as proof that I own the land and the structure built on it. All my neighbors who are Christians have been already relocated but a couple of us Muslims are not.

Reply:

(XXXXXX, DPWH-PS-ESSD)

All structures located near the riverbanks will be relocated but those structures which are located a couple of meters away from the riverbank will have to wait for our detailed engineering design if they will be affected. It is assured that all relocations will not be based on religion or ethnicity.

Question 7:

(XXXXXX, Barangay Macasandig)

Is there a way for the project to start before 2016? We had Typhoon Sendong back in 2011. Then there will be a Presidential election in 2016 that may also bring changes in government policy.

Reply:

(XXXXXX, DPWH-PMO-Flood Control)

Some components of the project using local funds have already been started by DPWH-Region 10. We have to observe the standard operating procedure for the JICA loan that is why 2016 is our projection for its implementation. We will try our best to shorten the process (e.g. procurement procedures) to enable us to start the project earlier.

(2) Minutes of Consultation Meeting 2

November 05, 2013, 01:00PM-04:00PM

Barangay Nazareth Gym, Barangay Nazareth, Cagayan de Oro City

Total Number of Participants:

PAPs	91
City Offices	2
Barangay Officers	2
National Government Officers	3
Department of Public Works and	9
JICA Survey Team (FRIMP-CDOR)	8
Total	115

Participating Barangay(s):	Barangay Carmen
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XXXXXX, in behalf of the City Information Office, began the public meeting at 02:05 PM. Invocation and singing of the national anthem were led by XXXXXX, Barangay Nazareth Kagawad. XXXXXX, Barangay Carmen Kagawad, delivered the welcome remarks.

XXXXXX of the DPWH-PMO-Flood Control provided an overview of the project. XXXXXX of the DPWH-PS-ESSD presented the overall results of the Socio-Economic Survey conducted by the JICA Survey Team. XXXXXX of the DPWH-PMO-IROW explained the entitlements under Philippine laws and policies in terms of resettlement, and XXXXXX of the NHA-Region 10 presented possible resettlement sites which could be used for relocating qualified project affected persons. The public meeting is conducted to present the results of the socio-economic survey, and to solicit feedback. All speakers, including XXXXXX, Consultant, DPWH, PMO-IROW were on hand during the open forum to address concerns and answer questions about the presentation. XXXXXX, City Information Officer also outlined the city government's housing priorities and challenges. Advisory was also given for mitigating risks associated with the upcoming Typhoon Yolanda. The public meeting ended at 04:12 PM.

After the presentation, the participants raised questions and concerns about the material presented.

Highlights of Discussion:

Question 1:

(XXXXXX, Barangay Carmen)

I am a structure owner, renting the land where my house is located. It was discussed in the presentation that as long as ownership documents are complete, one may qualify for a housing unit at the resettlement sites. My documents are complete, can I also apply?

Reply:

(XXXXXX, NHA-Region 10)

If you have the documents required, you have the option to apply for either relocation, or ask payment at replacement cost for the structure.

Question 2:

(XXXXXX, Acacia Street, Zone 5, Barangay Carmen)

My question is related to the amount deducted when materials are salvaged from structure by owners. Why is 10% of salvage value deducted?

Reply:

(XXXXXX, Consultant, DPWH-PMO-IROW)

Salvage value is deducted because once the government pays for the structure; everything in the structure becomes government property. DPWH staff has to account for items when COA audits, thus the deduction for salvaged materials in cases where owners salvage items like G.I. sheets, toilet bowls and others.

Question 3:

(XXXXXX, Barangay Carmen)

The entitlement packages mentioned are attractive.

- a) Our concern is, can you give us an assurance that these provisions will be applied accordingly during project implementation?
- b) We understand that the state has the power of eminent domain - can you assure that project-affected persons who have submitted all the requirements will not be given a difficult time in claiming due compensation?

Reply:

(XXXXXX, Consultant, DPWH-PMO-IROW)

- a) I can assure you that as per Republic Act 8974, due compensation will be paid for land value, and replacement cost for structures and other improvements, including trees and crops. As for provisions on renters, NHA may give you a better idea on rental subsidies.

(XXXXXX, DPWH-PS-ESSD)

- b) When the government signs the loan agreement with JICA, it is committed to providing the budget needed for right-of-way. The law is clear on the entitlements for project affected persons, and effective systems are in place which will be activated during implementation.

Question 4:

(XXXXXX, Barangay Carmen)

I think it is important that urban planning should be considered in the project. Did DPWH hire an urban planner for the project?

Reply:

(XXXXXX, DPWH-PMO-Flood Control)

The Detailed Engineering Design will be undertaken in the next stage, however, urban planning for Cagayan de Oro City is beyond the scope of the proposed project.

(XXXXXX, DPWH-ESSD)

Results of the preparatory survey regarding danger areas near the river, like areas in the No Build Zone, will be included in Cagayan de Oro City's Comprehensive Land Use Plan (CLUP). The structural and non-structural measures to address risks will also be included in the CLUP.

Question 5:

(XXXXXX, Zone 7, Barangay Carmen)

You mentioned in the discussion that flood control structures will be put up to protect our communities from adverse flooding. Since our communities are to be protected.

- a) Is it possible that there will be no need to resettle us since we will already be protected from floods with the construction of the dike?;
- b) My follow-up question - is the list of households to be affected by the project already finalized and how many are from our barangay?
- c) Lastly, if owners of land and structures will be paid based on current market value, what will be the basis of 'current market value' and who will determine the current market value of the property?

Reply:

(XXXXXX, DPWH-PMO-Flood Control)

- a) It is not possible to protect all residents from recurring floods with structural measures. Please be understood that those residing in areas identified as Risk Level 4 should be resettled.

(XXXXXX, DPWH-PS-ESSD)

- b) The number and the list of households to be affected by the project will be finalized after the Detailed Engineering Design is completed in 2015.

(XXXXXX, Consultant, DPWH-PMO-IROW)

- c) The current prices of construction materials will be the basis for the replacement cost of structures and improvements. As for land, the BIR Zonal Value will be used to determine the current market value. If there is disagreement between the owner and the government on the

purchase price of the land, then the government will file an expropriation case for the court to determine just compensation for said property. It may take less than a year for payment to be made

Question 6:

(XXXXXX, Acacia Street, Zone 5, Barangay Carmen)

I am a Sendong victim, and it seems I will also be a victim of this government project. If and when the project is implemented, will big buildings just beside the river also be relocated? These include buildings like the Pelaez building and the Liceo.

Reply:

(XXXXXX, DPWH-PS-ESSD)

DPWH will rely on the Detailed Engineering Design to finally decide. If the lands on which these structures are built are needed for public use, then the government will use its power of eminent domain.

Question 7:

(XXXXXX, Barangay Carmen)

Will we be given just compensation for our houses and land in case we are affected by the project? Because I know a person whose house and lot was affected by a DPWH project and until now he is not compensated. My final question is, when did the survey start or when will the survey start?

Reply:

(XXXXXX, Cagayan de Oro City Information Office)

Your question had been answered earlier. It is assured that you will be justly compensated as long as you have all the necessary documents required. Regarding your concern about that particular person that you knew which was not compensated, all these agency heads present here will do their best that such incident will not happen.

(XXXXXX, DPWH-PS-ESSD)

The survey that was conducted was for the master plan and another survey will be conducted during the detailed engineering design to determine the final number of families or structures that will be affected by the project.

(XXXXXX, Cagayan de Oro City Information Officer)

We, from the city government our role is to assist these agencies involve so the project will be successful. We know how difficult it is to be affected but we need to look at the project at a different perspective. It is for the good of the entire community, we need to sacrifice a little to save a lot of lives. Our City Government right now is focusing on a 3-point resettlement program. First

is the Sendong related relocation, second are those people living in the “Piso-Piso areas”, and third are the Informal Settling Families. For any concerns you can visit me at the City Information Office or for any Sendong related relocation concerns, visit our Estate Division Management and look for XXXXX.

(3) Minutes of Consultation Meeting 3

November 06, 2013, 9:20AM-11:31AM

Tourism Hall of the City Government, Cagayan de Oro City

Total Number of Participants

PAPs	287
City Offices	1
Barangay Officers	4
National Government Officers	1
DPWH	9
JICA Survey Team	8
Total	310

Participating Barangay(s):	Barangay Bonbon, Barangay Kauswagan, Barangay 1, Barangay 2, Barangay 6, Barangay 7, Barangay 10, Barangay 13,Barangay 15, Barangay17
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XXXXXX, in behalf of the City Information Office, called the meeting to order at 09:20 AM. This was followed by the invocation and singing of the national anthem led by XXXXX of Barangay 7. XXXXX of Barangay 13 delivered the welcome remarks.

XXXXXX of the DPWH-PMO-Flood Control provided an overview of the project. XXXXX of the DPWH-PS-ESSD presented the overall results of the Socio-Economic Survey conducted by the JICA Survey Team. XXXXX of the DPWH-PMO-IROW explained the entitlements under Philippine laws and policies in terms of resettlement, while XXXXX of the NHA-Region 10 presented the possible resettlement sites which could be used for relocating qualified beneficiaries. The public meeting also served as the venue to solicit feedback/clarification/questions from project affected persons. All speakers were on hand during the open forum to address concerns, and to answer the questions from participants.

The public meeting ended at 11:31 AM.

Highlights of Discussion

Question 1:

(XXXXXX, Barangay Bonbon)

- a) Will it still be possible to modify the alignment? About 1/3 of Bonbon will be gone if the Project will be implemented. On the right side is the National High School, a newly established school. The residents had waited for a long time before the said school was constructed. The best solution is to transfer it but there is no available land in the barangay at present. The mangroves maybe affected as well. Based on the map the dike alignment is following a creek, why not construct the dike near the river banks where less people would be affected? (Note: XXXXX of Barangay Bonbon has the same suggestion.)

- b) I would like to commend our National government and our LGU for making such effort to protect our people. I know that this project would be of great help to the community. I would like to point out that after the typhoon Sendong we have a temporary relocation site at Zone 9 and until now there are still families living in the said relocation site. I do hope that during the implementation of this project they will be included on the list of families to be resettled since they are really located on a high risk area. Can they be accommodated?

Reply:

(XXXXXX, DPWH-PMO-Flood Control)

The residents living near the river mouth area will definitely be affected. The mangroves need to be protected. If we place the dike along the river bank, the mangroves will die and the water levels will even be higher. There is a tendency that if we place the dike there the area will be constricted and the water will rise from said area by 1 meter up to about 4 km and would necessitate increasing the level of the dike from 5 to 6 meters.

(XXXXXX, DPWH-PS-ESSD)

The school is in a swampy area that is flood prone area. We also have to consider that the natural course of the river has changed. The suggestion to have the school transferred in a safer ground within the barangay must be given due consideration by all concerned. There is a need to discuss this problem with the LGU to come up with the possible solution/decision on this matter.

(XXXXXX, NHA Region 10)

There are government resettlement sites that will accommodate the affected households although some are still lacking basic facilities such as electricity and water. You may need to coordinate with the City Government.

Question 2:

(XXXXXX, Barangay 15)

Is the project really a dike or a road widening project?

Reply:

(XXXXXX, DPWH-PMO-Flood Control)

The proposed plan is to construct a dike. Based on experience, the most effective structural measure for flood control, among others is the dike system. The exact level of the dike will be determined during the detailed engineering design. Isla de Oro will become part of the river and is proposed to be converted into park during the dry season. Structures will not be allowed to be built in this area anymore. We will also be requesting the City Government to include in its CLUP those in-between the dikes as the No Build Zone.

Question 3:

(XXXXXX, Barangay 15)

Where is the exact location of the dike within Burgos St.? Is the dike located on the riverward side or the landward side of Burgos St? We would like to clarify if all structures that are located on the landward side of Burgos St will be affected.

Reply:

(XXXXXX, DPWH-PMO-Flood Control)

We have been studying some schemes. One of the schemes is to make a concrete flood wall along Burgos St up to City Hall with Boulevard. It is assured that we will finalize the plan by consulting our City Mayor and the residents in identifying the best scheme to implement.

Follow-up to question 3 (XXXXXX, Barangay 15)

It is still possible that the structures located on the landward side of Burgos St will be retained. My initial understanding is that all of the structures will be affected; however, according to the explanations given in the meeting today, it is likely that there will be residents that will continue residing in the area located on the landward side of Burgos St.

Question 4:

(XXXXXX, Barangay 7)

Will DPWH pay for the loss of property? Will the landowners be paid and be eligible as well for free housing? Will the Cathedral and City Hall be also affected? If City Hall will just be lightly affected, then we should be, too.

Reply:

(XXXXXX, DPWH-PMO-IROW)

Generally, if your improvement will be affected, you are the owner of the land and the structure and you also will have the documents to prove such ownership, then you will be compensated for the structure even if you opt for resettlement.

(XXXXXX, DPWH-PMO-Flood Control)

It is only City Hall that would be affected.

Question 5:

(XXXXXX, Barangay Bonbon)

The land which was owned by his late grandfather has already been subdivided among his children but the title of the land is still under his name. Will they be paid if they have to resettle? (Note: Same question was raised by XXXXXX of Barangay Bonbon.) XXXXXX also suggested to make the visual aids bigger and to provide these in the handouts.

Reply:

(XXXXXX, Consultant, DPWH-PMO-IROW)

DPWH will pay only the person under whose name that the title has been issued. They need to expedite the transfer of the land title from the previous owners to the names of the present ones. For improvements/structure, the payment will be made to the person whose name appears on the tax declaration.

Question 6:

(XXXXXX, Barangay 15)

We filed an application for a housing unit to NHA. What happened?

Reply:

XXXXXX(, NHA Region 10)

The NHA did not solicit housing applications, we just did a survey after Sendong to determine possible relocation sites, establish baseline data on the affected households, e.g. identification of those whose houses are totally damaged, partially damaged and flooded, etc.

Question 7:

(XXXXXX, Barangay Bonbon)

Will relocation be by household or by structure?

Reply:

(XXXXXX, NHA Region 10)

In general we prioritize depending on status and location. There will be system for relocation that will be in place if project will be implemented.

Question 8:

(XXXXXX, Barangay Bonbon)

Most of the residents in Barangay Bonbon are occupying government land. What will happen to them?

Reply:

(XXXXXX, Consultant, DPWH-PMO-IROW)

Since they are occupying a government land they will not have entitlement for the land. Structure will be paid if they have tax declaration as proof of ownership. As informal settlers, they may be eligible for resettlement in government housing projects if they meet the qualifications.

(4) Minutes of Consultation Meeting 4

November 06, 2013, 01:00PM-04:00PM

Tourism Hall of the City Government, Cagayan de Oro City

Total Number of Participants

PAPs	148
City Offices	2
Barangay Officers	2
National Government Officers	1
Department of Public Works and Highways	9
JICA Survey Team (FRIMP-CDOR)	8
Total	170

Participating Barangay(s):	Barangay Consolacion
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XXXXXX, in behalf of the City Information Office, began the public meeting at 01:51 PM. Invocation and singing of the national anthem were led by Barangay Consolacion. XXXXXX, Barangay Consolacion XXXXXX, delivered the welcome remarks.

XXXXXX of the DPWH-PMO-Flood Control provided an overview of the project. XXXXXX of the DPWH – ESSD presented the overall results of the Socio-Economic Survey conducted by the JICA Survey Team. XXXXXX of the DPWH-PMO-IROW explained the entitlements under Philippine laws and policies in terms of resettlement, and XXXXXX of the NHA-Region 10 presented possible resettlement sites which could be used for relocating qualified project affected persons. The public meeting is conducted to present the results of the socio-economic survey, and to solicit feedback. All speakers, including XXXXXX, Consultant, DPWH-PMO-IROW, were on hand during the open forum to address concerns and answer questions about the presentation.

XXXXXX, City Information Officer, gave the closing remarks - outlining the city government's housing priorities and challenges. Advisory was also given for mitigating risks associated with the upcoming Typhoon Yolanda. The public meeting ended at 03:35 PM.

Highlights of Discussion:

Question 1:

(XXXXXX, District 4, Barangay Consolacion)

If ever we don't have any documents like land title or tax declaration are we going to be paid with the replacement cost of the structure. For example I have invested 500,000.00 for my structure, will I get the same amount as payment for it?

Reply:

(XXXXXX, DPWH-PMO-IROW)

If no proof of ownership could be procured, the government has no basis for making a payment. It is the same with those who own structures only, a tax declaration for improvements is needed. Project affected persons who qualify though can apply for relocation as informal settlers.

Question 2:

(XXXXXX, District 3, Barangay Consolacion)

We only have a tax declaration for our structure for five years.

- a) Are we going to be paid with the replacement cost of the structure?
- b) Additionally, does one need to be an SSS, GSIS, or Pag-ibig member to be eligible for relocation?

Reply:

(XXXXXX, Consultant, DPWH-PMO-IROW)

- a) If you have a tax declaration for both land and house, and have been paying for at least 30 years, then you are eligible for entitlements.

(XXXXXX, NHA Region 10)

- b) For resettlement, membership in SSS, GSIS or PAG-IBIG not a requirement.

Question 3:

(XXXXXX, District 4, Barangay Consolacion)

We are renting the lot where our house is located. The land is not ours but we own the structure.

- a) Can we get a tax declaration for the structure, and where could we get one?
- b) Also, this question was requested to be relayed to the panel: Tax payments for property have been made by parents, who are now deceased. How do the heirs assume payments for the property?

Reply:

(XXXXXX, Consultant, DPWH-PMO-IROW)

- a) Yes, you could apply for Tax Declaration at the City Assessment Department. Make sure to bring a written contract between you and the land owner authorizing you to utilize the land.
- b) If the parents who used to pay for the property tax are deceased, the heirs will need to execute an extrajudicial division of estate.

Question 4:

(XXXXXX, District 2, Barangay Consolacion)

I do not know if the land where my house is located is a government owned lot or a private lot.

- a) Can I still get a tax declaration for the structure?
- b) Also, what is the basis for delineating which houses are affected – e.g. 30 meters away from the river bed?

Reply:

(XXXXXX, Consultant, DPWH-PMO-IROW)

- a) You can visit the City Assessment Department to know the status of the land that you are using or you can also check with the Department of Environment and Natural Resources. For structures on private land you need to have permission from the land owners before you can obtain a Tax Declaration for your improvements.

(XXXXXX, DPWH-PMO-Flood Control)

- b) The Flood Risk Level of an area will be the basis for determining which could still be saved from inundation. Houses located at Flood Risk Level 3 and below will be protected by the proposed flood control structures, while areas located in Flood Risk Level 4 areas will need to be resettled. Although precise structural alignments will be determined in the Detailed Engineering Design stage of the project, there should not be any substantial changes to the assessment of flood risk levels. DPWH will carefully consider the alignment determined by the Detailed Engineering Design before implementation proceeds.

Question 5:

(Barangay Consolacion XXXXX)

For public structures, like barangay halls, what entitlements are available to the LGU?

Reply:

(XXXXXX, DPWH-PS-ESSD)

The government will compensate the LGU, such that barangay can look for a suitable venue for rebuilding public structure.

Question 6:

(XXXXXX, District 3, Barangay Consolacion)

We understand the project is still in the preparatory stage. Can you give us an estimate of how many will be affected by the project?

Reply:

(XXXXXX, NHA Region 10)

The Detailed Engineering Design stage is in 2015, the final project design will be determined then, along with the final list of household and establishments to be affected by the project.

(XXXXXX, Cagayan de Oro City Information Officer)

Our City Government right now is focusing on a 3-point resettlement program. Sendong related relocation is a priority right now. Beneficiaries of the 'Piso-Piso' program of the previous city administration are also being focused on. The third focal point of the local housing program is the Informal Settler families. For any concerns you can visit me at the City Information Office or for any Sendong related relocation concerns visit our Estate Division Management and look for XXXXXX.

Annex-12
Minutes of Meeting on 5th Stakeholder Meeting

Annex-12 Minutes of Meeting on 5th Stakeholder Meeting

12.1 Stakeholder Meetings for Feasibility Study and EIA

Stakeholder meeting for Feasibility Study and EIA for the Project was held in CDO City on Nov. 15, 2013, 8:30 to 12:00 at the Cattleya Function Room, N-Hotel, Kauswagan Highway, Cagayan de Oro City. The following are the minutes of discussion in the meeting:

(1) Participants

Table 12.1.1 Number of participants of the Stakeholder Meeting on Nov. 15, 2013

<i>Group/Sector</i>	<i>Number of Participants</i>
City Government Officials	20
Barangay Government Officials	24
Congress Representatives	1
Government Regional Offices/Agencies	12
Utilities	1
Academe	8
Business/Private Sector	3
DPWH – PMO	6
DPWH 10	5
JICA Study Team	8
Total	88

(2) Program and Presentation

Table 12.1.2 Program schedule for the Stakeholder Meeting on Nov. 15, 2013

Time	Program Activities	Speaker/In-charge
08:30 - 09:00	1. Registration	XXXXXX
09:00 - 09:10	2. Opening Ceremonies Opening Prayer National Anthem	DPWH SHM Preparation Team
09:10 - 09:25	3. Welcome	XXXXXX Mayor, Cagayan de Oro City
09:25 – 09:40	4. Short Talk	XXXXXX Representative, 2 nd Congressional District Cagayan de Oro City
09:40 -09:50	5. Project Rationale and Overview	XXXXXX Engr. IV, Unified Project Management Office – Flood Control Management Cluster, DPWH
09:50 – 10:10	6. Feasibility Design (F/D)	XXXXXX Asst. Head, Task Force Sendong, DPWH 10
10:10 – 10:30	7. Environmental Impact Assessment (EIA)	XXXXXX Engr. III, Environment & Social Services Division-Planning Service, DPWH
10:30 – 10:50	8. Resettlement Action Plan (RAP)	XXXXXX Information Systems Analyst, Infrastructure Right-of-Way, DPWH
10:50 – 11:50	7. Open Forum	
11:50 - 12:00	8. Closing Remarks	XXXXXX Project Manager, Unified Project Management

		Office – Flood Control Management Cluster, DPWH
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Master of Ceremonies: XXXXX, City Information Officer of Cagayan de Oro City

(3) Minutes of the Meeting

1) Opening Remark

Mayor welcomed all the participants. He reminded that this gathering is for our barangays and communities in Cagayan de Oro City. He said, the project not only affects the people now but the many generations to come. So, it is important to work together, that politics has nothing to do with what is being undertaken now. The Project impacts far beyond the present, the even the current stakeholders of the project will be forgotten. But what is important is that the future generation will see and be inspired by what this generation has done, and that they were considered in what is being done today. He reminded that the JICA and DPWH provided this venue to listen to views and opinions, negative or positive, and suggestions. He informed that the city government has also been in consultation with the Survey Team, where the City Government has expressed its views, including social acceptability issues. He explained the formal approval procedure that the Project must undergo from the local level up to the national, then the government-to-government engagement between Japan and the Philippines. He informed that group of his participation in a recent international conference on “safer cities,” which promotes “safer environment, smart cities and smarter people.”

2) Short Talk

Congressional Representative XXXXX of Cagayan de Oro thanked everyone, especially the barangay officials for their interest in the study for FRIMP-CDOR. He reminded everyone that he is responsible for concerns on the west bank of CDO River, Congressional Representative XXXXX for the east bank, while Mayor is over-all in-charge of both banks of the river. He emphasized that as far as the national government is concerned, construction of river dikes have been started and are on-going, in consonance with the JICA-assisted plans. In the west bank, the river dikes are being constructed in the Carmen area. While, in the east bank, most of the Macabalan stretch is almost finished, and costing PhP 80 Million. Another PhP 70 Million will be going to Puntod stretch, and savings from the DPWH amounting to PhP 80 Million will go to the Cathedral area stretch. All of these totaling more than PhP 200 Million. Also, the Office of the President will soon release the amount of PhP 700 Million for the study and construction of various retaining walls in the 1st District and PhP 500 Million for the 2nd District.

He emphasized that the on-going construction of river dikes by DPWH is aligned with the FRIMP-CDOR study design, because there was constant consultation with the JICA Survey Team. In the next 3 to 5 years, all the FRIMP-CDOR plans will be finalized and this includes the combination of concrete dikes, retarding basins, retaining walls and flood gates, throughout the 12 kilometer stretch being considered at the both banks of the river.

He mentioned the plan for road construction, once the retaining wall is constructed, so that inside/beside the retaining wall, we can have a river boulevard at both east and west banks. We can make this since the retaining wall will be in the river and after that reclaim. He emphasized that what is important is that aside from the infrastructure, there is also a resettlement plan. That is the social aspect. He

encouraged the participants to listen well, and for stakeholders to come out with their concerns, question and suggestions because these matters concern our barangays and our city. So, the Survey Team should get all their concerns before the details of the study are finished. He called on everyone to work together and continue the right way of protecting the city through the Project study.

4) Discussion (Questions and Answers)

A) Question/Comment

Congressman XXXXX inquired that if the project will be implemented based on the presentation, would the residents of the whole stretch of Burgos Street need to be relocated? He emphasized that it would always be desirable to save the barangays that have been there for so long.

B) Response

Engr. XXXXX said this project will be implemented phase by phase, if the local government desires to limit the affected area, the basic flood structures can still be implemented.

A) Question/Comment

a) Barangay Captain inquired if it is possible to move the alignment a little further toward the riverbank because if this is not done government property will also be affected. Is it possible to design only the walk and not the boulevard?

b) Congressman XXXXX requested to restudy the considerations because if based on the scheme presented, practically 50% of the barangays will have to be removed.

B) Response

Engr. XXXXX said, there are various design schemes for Burgos Street. One scheme requires only the construction of the flood wall without the walkway.

A) Question/Comment

Congressman XXXXX inquired what the retarding basin is for. The structural measure seems to imply that there should be no more buildings there, no more vertical structures. What is the study's suggestion on what can be done with the retarding basin.

B) Response

Engr. XXXXX said, design the basin according to its function and for other purposes, as well. He the case with Global City, where underneath the area, a retarding basin had been constructed, that is why it did not overall easily as compared to other areas in metro-Manila

A) Question/Comment

a) Congressman XXXXX commented that he fully agreed with measures for the Cala-cala area. This area is Ground Zero. He informed the participants that the Office of the President will soon release PhP 200 to 300 million for the development of the area. He pointed out that Cala-cala will be free land which can be developed but with no vertical structures.

b) XXXXX of Kinaadman Research Center of Xavier University observed in the EIA presentation that, the focus was on the potential impact and motivation only in the pre-construction and construction phases of the project and not much on the post-construction.

She also pointed out that under the Japanese system, the aspect on aquatic biota was rated “-B.” She inquired if this was adequately addressed in the study.

B) Response

- a) XXXXX emphasized that even under the Philippine system the aspect on aquatic biotic is also seriously addressed. The “-B” rating was considered disturbance of the aquatic biota, especially during the construction phase is only temporary. She clarified that under the Philippine Environmental Impact System (PEISS) only an Initial Environmental Examination (IEE) was required, but the JICA guidelines for environmental and social considerations is more strict, requiring more in depth study.
- b) XXXXX informed that copies of the study have already been proved the relevant agencies, such as DPWH, EMB and NEDA in the region. She said that they can request for a copy.

A) Question/Comment

- a) XXXXX, Xavier University Center for Legal Assistance, referred to the first presentation and the first slide, that the objective of the survey is to update a previous master plan. Xavier University serves as the Secretariat of the CDORBC and our office is now reviewing the policies pertaining to river basins. What is this previous master plan? Is this mitigation of the local or national government, implemented/coordinated with the national government?
- b) XXXXX inquired: 1) If there has been a thorough investigation as to the presence of IPs in the area, and if there is a map of this; 2) What the Relocation Action Plan (RAP) framework was all about; and 3) Can the storm surge be addressed with this project.

She added that they are very interested in the plan, the non-structural measures, especially the forest. She asked why Bukidnon is not part of the study?

B) Response

- a) XXXXX responded to XXXXX that the previous master plan and feasibility study was initiated 2009 and completed in 2011, however, these needed to be updated because the recommendations were pre-Sendong. There were already information with hydrologic analysis. With regards to the flood, there is a need to establish your target safety level within the river area. She related that in Japan they can plan and implement projects for 200-year flood and in the United States for 500-year flood. They can afford it. Unfortunately, in the Philippines, this is dictated by economic considerations. If the IRR is high, this can be considered for ODA. But if it is low, it is piecemeal. And, we have learned the piece meal approach is not good for the whole river basin. The integrated and holistic approach is promoted.

She emphasized that expounded that the study focuses in the whole river basin, to include non-structural measures in the upstream, in Bukidnon. The ridge to reef is basic part of the river basin concept, but it is important to prioritize within the master, the focus area that we want to target for protection. That is the reason why the priority flood stretch has been identified. However, the master plan gives recommendations on the different components, including non-structural measures in the upstream. There are recommendations for watershed management and also on the mangroves. She assured that once approved, the full master plan report will be made available.

A) Question/Comment

XXXXX emphasized that, as part of an academic institution, they are interested in the science of these matters, and also in being part of the study especially on the environmental impact and monitoring of the project.

B) Response

Mayor said that XU representatives want background information of the master plan, because apparently, they are not aware. He said the issue is simply about the Project team sharing information with the XU academe. He explained that XU is also looking into the river basin that is why the Archdiocese of Cagayan de Oro has tapped them. They have looked into the area even before Sendong; and now, they hear about this master plan. The Mayor encouraged that information be shared with XU.

A) Question/Comment

XXXXXX of Barangay Nazareth commented that the master plan seems good. He noticed in the Second District, there no emergency exits to higher grounds, which will serve as life savers. These areas can be developed as new growth/expansion of Cagayan de Oro.

He also inquired if that since this is a 50-year study, has Mt. Kalatungan been investigated since, according to him, this is the most active volcano in Mindanao, which is inside the Cagayan de Oro River. Meaning, what will flow out of that volcano will also flow down CDO river.

He also thanked the Project for including protection of CDO wetlands where fish and migratory birds still thrive.

B) Response

a) XXXXXX that for this project, the evacuation road is recommended and provides means for people to exit to higher grounds or out of the area

b) Engr. XXXXXX added that evacuation areas need roads along low-lying areas to higher grounds.

c) Mayor commented that such roads should be established since there seems to be a strongly felt need for it.

A) Question/Comment

XXXXXX, technical assistant to the mayor, inquired from the NHA who made Canitoan and Pagatpat as relocation site. He emphasized that during Sendong/Pablo 50% of Canitoan was inundated. In the second flood, he says, it will be 75% of the area and third and forth, the floods will be 90% inundated.

B) Response

a) Engr. XXXXXX of the NHA responded that these areas are LGU lands identified for development as relocation sites.

b) Mayor emphasized that although this development initiated by the previous administration, there is a need to resolve this relocation site problem.

A) Question/Comment

a) XXXXXX of the Cagayan de Oro Chamber of Commerce and Industry Foundation, Inc. (Oro Chamber) said that her interest with the Relocation Action Plan (RAP). She said that her organization is interested in getting data profile of male and female respondents who are interested to do business. She informed that group that Oro Chamber is currently implementing and Entrepreneurship Program and will accept those affected who are interested to participate.

b) XXXXXX, the Museo de Oro at Xavier University (XU) noted that the plan involves building infrastructure from the mouth of river up to Pelaez Bridge. But up to which part of Pelaez Bridge? She said that her concern was the Huluga Caves nearby might be affected. This is the limestone crematorium of the earliest

settlement in Cagayan de Oro. It is filled with local Pre-Spanish history and culture, so much heritage. During the construction stage, how do you address this? You need to get the attention of the National Museum to help in undertaking an Archeological Impact Study.

B) Response

a) Engr. XXXXX said that the structure would be downstream of Pelaez Bridge. In response to XXXXX comments that the whole area is part of the Huluga Complex called the Himulogan Settlement, he suggested that a separate discussion can be done to thoroughly look into the matter, later.

b) Mayor XXXXX said concurred and suggested that an ocular inspection be conducted.

A) Question/Comment

a) XXXXX of PAGASA commented on Stage II, #10 impact on meteorological concerns. The establishment of a concrete dike system may contribute to urban heating. However, she emphasized that more importantly, the project addressed issues on global warming such as need to remove residents from dangerous areas.

b) Congressmen XXXXX emphasized on the importance of immediately starting to relocate some 5,000 households, another Sendong event happens pouring in 187mm into the river basin. He said construction can already be started for 1,000 households. He asked the barangay officials present if there is already a breakdown of households affected. He inquired from the NHA if the plan can be fast tracked for level 4 & 3 affected residents, also with residents from barangays 6 to 17.

B) Response

Engr. XXXXX informed the participants Level 4 & 3 affected residents have already been listed numbering some 1,087, who are also Typhoon Sendong victims. Of these, some 17 to 24 households are also affected by the DPWH project.

A) Question/Comment

XXXXX of Bonbon said that many of the affected residents of his barangay, up to this time, have not been assisted. There are three groups of the urban poor from his barangay who have not been included in that list

B) Response

Mayor XXXXX emphasized that this project will still undergo the detailed engineering project phase. Currently the project is still in the preparation phase and will still go through the various processes of approval with the city, then regional council. And, once this is done, the project will go to the NEDA ICC and we can start to negotiate from there. He said that there are many issues still, and he is concerned about the social acceptability aspect. He cited Puntabon, Burgos St. and Rodelsa area. Is the government condemning these areas. It is a form of confiscation. He believes there can be an engineering solution, but he understands that the bigger and more complicated the project is, the costlier it will be, and the number of households could increase. There are many questions raised which cannot be addressed by JICA and DPWH.

He said there will be more to be relocated. Many have already been relocated though they were not deserving of it. The government is now land banking for relocation sites. There is 67 hectares which we can maximize with adequate planning

A) Question/Comment

- a) XXXXX of Oro Chamber said that she understands that there is a faultline nearby. Cagayan de Oro does want another Bohol earthquake event. She asked if the structures planned for the project can withstand a 7.2 magnitude earthquake.
- b) XXXXX, Geologist Specialist at XU Engineering Resource Center expressed that with the earth dike being proposed, she doubts that it can withstand a tremor of that (7.2) magnitude.
- c) XXXXX further said that the project area is a silted area, and a major concern is liquefaction. Aside from silt there are also limestone areas. Also, she said for the project to consider storm surges.
- d) XXXXX of Nazareth said that Iponan and Tagoloan rivers are over a fault line and quite possibly, Bigaan River.

B) Response

- a) XXXXX said that the structures follow Philippine structural standards and he expressed confidence that it can withstand an earth of that magnitude.
- b) Mayor suggested to the academe to do more of their research and to build their case accordingly. Also, he suggested that if they've better suggestions, to provide these suggestions to DPWH and the JICA Study Team. He asked that the contact details be flashed on the screen.

Annex-13
***Resolution of Regional Development Council Region 10 for Support
on Survey***



Republic of the Philippines
REGIONAL DEVELOPMENT COUNCIL
Region 10 (Northern Mindanao)
National Economic and Development Authority
Regional Office 10, corner Capistrano-Echem Streets
9000 Cagayan de Oro City

Tel. No. (8822) 723436, (088) 8581920 ♦ Telefax (8822) 728072 ♦ e-mail: nedardc10@yahoo.com ♦ Website: www.norminet.org.ph

REGIONAL DEVELOPMENT COUNCIL-X
Executive Committee Resolution No. 18 (s. 2012)

**SUPPORTING THE PREPARATORY SURVEY FOR FLOOD RISK MANAGEMENT
PROJECT FOR CAGAYAN DE ORO RIVER (FRIMP-CDOR)**

WHEREAS, the DPWH, with the technical assistance of the Japan International Cooperation Agency (JICA), is currently undertaking the preparatory survey for FRIMP-CDOR;

WHEREAS, a JICA study team composed of Japanese and Filipino specialists has been deployed to carry out such preparatory survey;

WHEREAS, the objectives of the survey are the following:

- a) To review and update previous Master Plan and Feasibility Study based on the inspection and investigation of latest topographic conditions, development situation, damage surveys and current changes in the flood mitigation policy of the Government of the Philippines (GOP) for the Cagayan de Oro River Basin; and,
- b) To assist GOP in formulating Yen loan project for flood mitigation, which includes structural and non-structural measures for the Cagayan de Oro River Basin based on the results of the above-cited review;

WHEREAS, the survey area shall cover Cagayan de Oro City and three municipalities of Bukidnon namely: Baungon, Libona and Talakag;

WHEREAS, the study is implemented from August 2012 until November 2013 with the following three stages:

- a) Basic survey stage (August 2012-February 2013);
- b) Master plan stage (March 2013-July 2013); and,
- c) Feasibility study stage (August 2013-November 2013);

WHEREAS, specific outputs from the survey shall include:

- a) Survey reports for master plan and feasibility study;
- b) Implementation Program;
- c) Initial environmental examination;
- d) Abbreviated Resettlement Plan;
- e) Stakeholder Meetings (3);
- f) Seminar (Technology Transfer); and,
- g) Topographic Survey (40 sq. km for 1/1,000 map and 1,500 sq. km for 1/10,000);

WHEREAS, the ongoing study is deemed supportive to the realization of the construction/improvement of dike and retaining wall along Cagayan de Oro River, one of the projects proposed under the Region 10 Strategic Action Plan (SAP) for the Rehabilitation and Recovery of Areas Affected by Typhoon Sendong;

WHEREAS, the importance of the study in firming up the structural and non-structural measures for flood mitigation of the Cagayan de Oro River Basin is being recognized;


BE IT RESOLVED, THEREFORE, AS IT IS HEREBY RESOLVED, that the RDC-X Executive Committee supports the conduct of the preparatory survey for Flood Risk Management Project for Cagayan De Oro River (FRIMP-CDOR);

FINALLY RESOLVED, that copies of this resolution be furnished to the Central and Region-10 offices of the member-agencies of the FRIMP-CDOR Preparatory Survey Steering Committee (DPWH, DENR, NIA, OCD, NEDA, PAGASA, and NWRB); the local chief executives of the city government of Cagayan de Oro, provincial government of Bukidnon, municipal governments of Baungon, Libona and Talakag; and other parties concerned for their appropriate action.

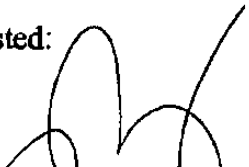
APPROVED, 23 October 2012
101st RDC-10 Executive Committee meeting
Main Conference Room, NEDA/RDC-10 Building,
Capistrano-Echem Streets, Cagayan de Oro City

-oOo-


Certified Correct:

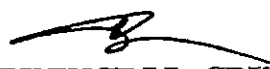

FE D. DOMINGO, PhD
Secretary, RDC-10
Assistant Regional Director, NEDA-10

Attested:


LEON M. DACANAY, JR., CESO III
Vice-Chairperson, RDC-10
Regional Director, NEDA-10

Approved:


ARSENIO L. SEBASTIAN III
Co-Chairperson, RDC-10
RDC-10 Private Sector Representative


LAWRENCE LL. CRUZ
Chairperson, RDC-10
Mayor, Iligan City
(Presiding Officer)

Annex-14
Resolution of City Development Council of Cagayan de Oro City for
Project Endorsement

CITY DEVELOPMENT COUNCIL

Resolution No. 003- 2013

RESOLUTION APPROVING THE PROJECT IMPLEMENTATION PROGRAM ON FLOOD RISK MANAGEMENT PROJECT FOR CAGAYAN DE ORO RIVER AND ENDORSING THE SAME TO THE REGIONAL DEVELOPMENT COUNCIL, NEDA-X

WHEREAS, mitigating flood risks in the Cagayan de Oro River Basin is our prime and utmost concern considering climate change impacts;

WHEREAS, in order to strengthen disaster resilience of communities around and outside of Cagayan de Oro City, there is a need of an urgent flood risk management measures for the River Basin of both non-structural and structural measures;

WHEREAS, the Cagayan de Oro River Basin was among the selected priority river basins for technical assistance under the Japan International Cooperation Agency (JICA);

WHEREFORE, on motion jointly made and seconded by the members present, it was;

RESOLVED, as the City Development Council hereby resolved to approve the Project Implementation Program on Flood Risk Management Project for Cagayan de Oro River and endorse the same to the National Economic and Development Authority – X, Regional Development Council for further appropriate action.

UNANIMOUSLY APPROVED.

Done in the City of Cagayan de Oro this 14th day of October 2013.

I HEREBY CERTIFY to the correctness of the above Resolution.

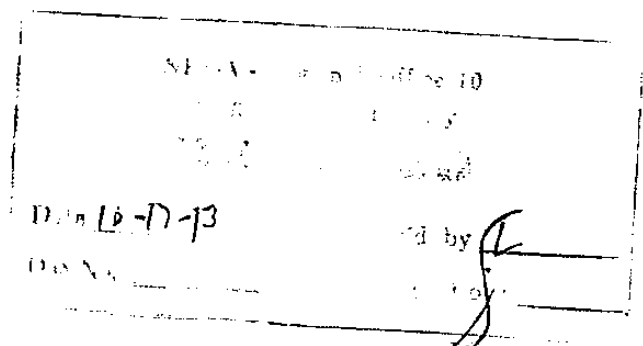

CHEDILYN AISSA P. DULGUIME-SAJULGA
City Planning and Development Office
HEAD-City Development Council Secretariat

APPROVED:


OSCAR S. MORENO

City Mayor

Chairperson, City Development Council



Annex-15
Resolution of Regional Development Council Region 10 for Project
Endorsement



Republic of the Philippines
REGIONAL DEVELOPMENT COUNCIL - NORTHERN MINDANAO

**REGIONAL DEVELOPMENT COUNCIL-X
Resolution No. 51 (s. 2013)**

**ENDORISING AND APPROVING THE PROPOSED FLOOD RISK MANAGEMENT
PROJECT FOR CAGAYAN DE ORO RIVER (FRIMP-CDOR)**

WHEREAS, the Cagayan de Oro River Basin is one of the 56 priority river basins under the "Nationwide Flood Risk Assessment and the Flood Mitigation Plan for the Selected Areas 2006-2008" study by the Department of Public Works and Highways (DPWH), with the technical assistance of the Japan International Cooperation Agency (JICA) and consequently, the DPWH prepared the Master Plan and Feasibility Study (FS) for the Cagayan de Oro River Basin which was completed in June 2011,

WHEREAS, Tropical Storm (TS) Sendong hit Northern Mindanao on 16-17 December 2011 and caused widespread and severe flooding which resulted to loss of lives and damage to properties and one of the seriously damaged cities is Cagayan de Oro City located at the downstream of the Cagayan de Oro River Basin, where about 600,000 people live;

WHEREAS, due to the geo-physical changes brought about by TS Sendong, the DPWH with technical assistance from JICA in March 2012, started the conduct of the Preparatory Survey for Flood Risk Management Project for Cagayan de Oro River and the results of the survey was used in the formulation of a Yen Loan Project for flood risk management of the Cagayan de Oro River;

WHEREAS, on the 14th of October 2013, the City Development Council of Cagayan de Oro passed Resolution No. 003-2013 entitled "Resolution Approving the Project Implementation Program on Flood Risk Management Project for Cagayan de Oro River and Endorsing the same to the Regional Development Council";

WHEREAS, the primary objective of the project is to mitigate flood risk in the Cagayan de Oro River Basin through flood mitigation measures, which include structural and non-structural measures;

WHEREAS, the identified structural and non-structural measures to be implemented in the short to medium-term (2014-2021) are the following:

STRUCTURAL MEASURES	NON-STRUCTURAL MEASURES
1. Construction of new dike/retaining wall	1. Preparation/update of flood hazard map, evacuation planning
2. Installation of gate and drainage outlets	2. Flood Forecasting and Warning System (FFWS)
3. Construction of new road/raising of existing road for evacuation	3. Community-Based Flood Early Warning System (CBFEWS)
4. Improvement of Kagayan Bridge	
5. Construction of retarding basin	

6. Periodic monitoring of river cross section and regular maintenance dredging/channel excavation	4. Information campaign and publicity for the project (Structural Measures)
	5. Technical assistance for land use regulation for habitual inundation area
	6. Technical assistance for riparian forest establishment in the agricultural lands
	7. Technical assistance for mangrove forest establishment along the coastal areas

WHEREAS, the estimated project cost is PhP8.747 Billion and is proposed to be funded under a Yen Loan Package by the Government of Japan of PhP5.118 Billion and counterpart of PhP3.559 Billion from the Government of the Philippines:

WHEREAS, based on the initial project proposal, the design of the flood structures will only respond to a 25-year return period, the RDC-10 Infrastructure and Utilities Development Committee, therefore, emphasized to the DPWH on the need to design the flood structures to respond to a TS Sendong like flood scale:


WHEREAS, fully recognizing the relevance and urgency of the project, the RDC-10 Infrastructure and Utilities Development Committee, during its meeting on 29 November 2013, favorably recommended for endorsement and approval by RDC-10, the proposed Flood Risk Management Project for Cagayan de Oro River (FRIMP-CDOR):

NOW, THEREFORE, BE IT RESOLVE, AS IT IS HEREBY RESOLVED, on motion duly seconded, to endorse and approve, the proposed Flood Risk Management Project for Cagayan de Oro River (FRIMP-CDOR).

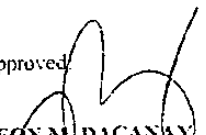
RESOLVED FINALLY, to furnish copies of this resolution to the Mayor of Cagayan de Oro City, Secretary of the Department of Public Works and Highways (DPWH), Secretary of the Department of Budget and Management (DBM), Secretary of Socioeconomic Planning and Director General of NEDA, Regional Director of DPWH-10, Regional Director of the DBM-10, for their support and appropriate action.

Approved, 5 December 2013
99th RDC-X Full Council Meeting
Function Hall 1, Tangub City

Certified Correct:


FE D. DOMINGO, PhD
Secretary, RDC-X
Assistant Regional Director, NEDA-X

Approved:


LEON M. DACANAY, JR., CESO III
Vice-Chairperson, RDC-X
Regional Director, NEDA-X
(Presiding Officer)

RDC-X Full Council Resolution No. 51 s. 2013

Page 2 of 2

Annex-16
Newsletter and Tarpaulin of Public Relations Media

In the course of the Survey, the intention is to encourage participation among stakeholders and obtain their inputs. From the beginning, members of the team have been meeting and consulting with the concerned government agencies and non-government organizations on a regular basis to gather data and discuss the progress of the Survey.



A series of stakeholders' meetings is scheduled separately in Cagayan de Oro City and the Municipalities of Baungon, Libona, and Talakag in Bukidnon to communicate and connect with the institutions and individuals potentially affected directly or indirectly in the Survey area and to update people at the barangay level on the developments and forthcoming activities of the Survey.



FRIMP-CDOR Steering Committee

- Department of Public Works and Highways (DPWH)
- Department of Environment and Natural Resources (DENR)
- National Economic and Development Authority (NEDA)
- Office of Civil Defense (OCD)
- Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)
- National Irrigation Administration (NIA)
- National Water Resources Board (NWRB)

Contact Us:

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FRIMP-CDOR CAGAYAN DE ORO SATELLITE OFFICE
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Engineer's Hill, Bulua
Cagayan de Oro City
Tel. No.: (088) 850-0210

Preparatory Survey for FLOOD RISK MANAGEMENT PROJECT FOR CAGAYAN DE ORO RIVER FRIMP-CDOR



**We cannot STOP TYPHOONS...
But we can MITIGATE
FLOOD DISASTERS!**

The Philippines is one of the countries most susceptible to natural disasters. In the recent years, typhoons and torrential rains are occurring more frequently due to climate change. These recurring disasters resulting to floods and landslides are bringing about enormous economic damages and loss of lives. Cagayan de Oro City and Iligan City suffered the onslaught of Typhoon Sendong in 2011 where more than a thousand people lost their lives and many are still missing to date. Thousands lost their homes, and damages in agriculture and infrastructure amounted to more than a billion pesos.

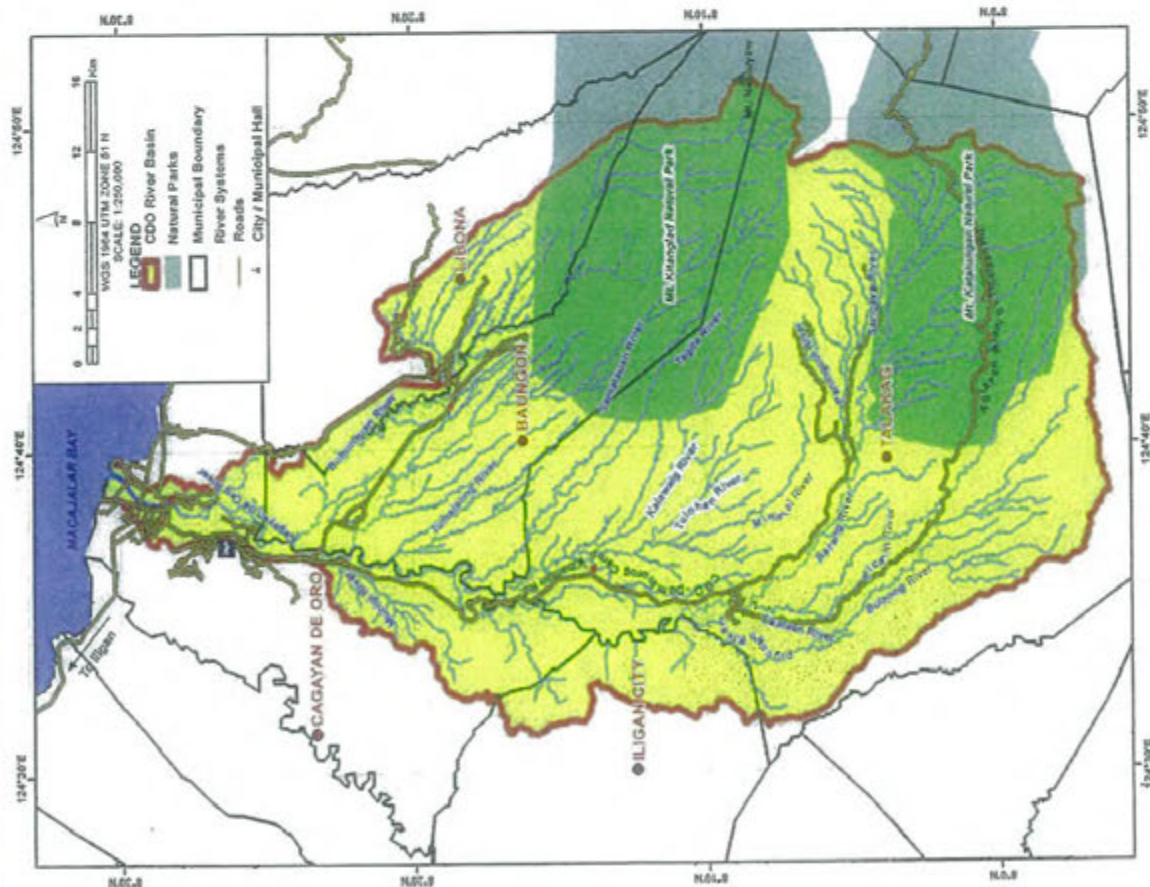


**IF UNMITIGATED, FLOODS CAN
DESTROY LIVES, PROPERTY,
AND INFRASTRUCTURE.**

**REMEMBER THE LESSONS
FROM SENDONG!**



The Department of Public Works and Highways (DPWH) with assistance from Japan International Cooperation Agency (JICA) is currently undertaking the Preparatory Survey for Flood Risk Management for Cagayan de Oro River (FRIMP-CDOR) to guide in the development of flood mitigation measures in the affected areas.



Cagayan de Oro River Basin

Survey Objectives:

- Review and update previous studies
- Formulate flood mitigation measures

Survey Area:

Cagayan de Oro River Basin covers portions of the cities of Cagayan de Oro and Iligan, and the municipalities of Baungon, Libona, and Talakag in Bukidnon.

The JICA Survey Team for FRIMP-CDOR is composed of several specialists in different fields of expertise related to flood risk management and is currently conducting activities in the Cagayan de Oro River Basin.

To generate the best possible structural measures, the Survey Team specialists in-charge of technical matters are holding on-going discussions with various government agencies and non-government organizations and undertaking the following tasks:

- Assessment of existing flood mitigation measures
- Preliminary design and river boundary
- Hydrological and run-off analysis
- Assessment of sediment yield and balance
- Surveys on slope failure, topography, river cross-section and profile, boreholes and soil tests



For non-structural, environmental, and social considerations, the Survey Team is conducting the following activities:

- Assessment of existing non-structural measures like land use plan, environment, watershed, disaster risk reduction management plans
- Survey on institutional structures for project implementation, operation and maintenance
- Data collection and site inspection for preliminary environmental scoping
- Preparation for stakeholders meetings

In generating comprehensive measures for flood mitigation, the Survey Team realizes the significance of exchange of information with stakeholders in the Survey area.



Partisipasyon ug Pag-panginilabot sa mga Stakeholders:
Sa panahon sa Survey, ang katuyoan mao ang pag-aghat sa tanang stakeholders ug pagkuha sa ilang mga sugyot. Gikan sa sinugdanan, ang mga sakop sa Survey Team makanunayong nakipagkilambigit (meetings) ug nagkonsulta sa mga ahensya sa government ug non-government nga organisasyon aron mokuha ug datus ug informasyon ug ingon man aron hisgutan ang progreso o dagan sa Survey.



Steering Committee Meeting, DPMW Manila



Steering Committee Meeting, DPMW Region 10, Cagayan de Oro City

Sunod-sunod nga iskedyul sa stakeholder's meetings sa Cagayan de Oro City ug sa mga munisipyo sa Baungon, Libona, ug Talakag. Bukidnon aron makapahibalo ug makapagkilambigit sa mga institusyon, organisasyon ug mga lumulupyo nga posibleng maapekahan sa komunidad kung asa ang survey pagahimoon ug pag-pahibalo sa mga lumulupyo sa barangay sa mga kalihukan kalabot sa Survey



FRIMP-CDOR Steering Committee

- Department of Public Works and Highways (DPWH)
- Department of Environment and Natural Resources (DENR)
- National Economic and Development Authority (NEDA)
- Office of Civil Defense (OCD)
- Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)
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Contact Us:

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Engineer's Hill, Bulua
Cagayan de Oro City
Tel. No. (088) 510-0216

PROJECT NEWSLETTER

Issue No.1
January 2013

Preparatory Survey for FLOOD RISK MANAGEMENT PROJECT FOR CAGAYAN DE ORO RIVER FRIMP-CDOR



Dili nato mapugngan ang bagyo... Apan mapugngan nato ang katalagman tungod sa baha!

Ang Pilipinas usa sa mga nasud nga kanunay ma-agian sa katalagman. Sa ni-aging mga katu-igan, bagyo ug mga pagbundak ug pagbuhos sa ulan ang kasagaran nahitabo tungod sa pag-usab-usab sa atong klima. Kini nagamugna ug katalagman nga miresulta sa pagbaha ug pagdahili sa yuta nga nakahatag ug dakong kadaot sa atong ekonomiya ug nikulito sa kinabuhi sa mga katawhan.

Ang syudad sa Cagayan de Oro ug iligan maoy nag-antos sa kadaot nga ginadulot sa Bagyong Sendong sa miaging tuig 2011 diin mikabat sa usa ka libo ka tawo ang nakabsan sa ilang kinabuhi ug daghan pang nangawala ug liboan ka tawo ang nawad-an sa ilahang panimalay, ug pagkadaot sa atong agrikultura ug infrastruktura nga mikabat sa kapin sa usa ka bilyon ka pesos.

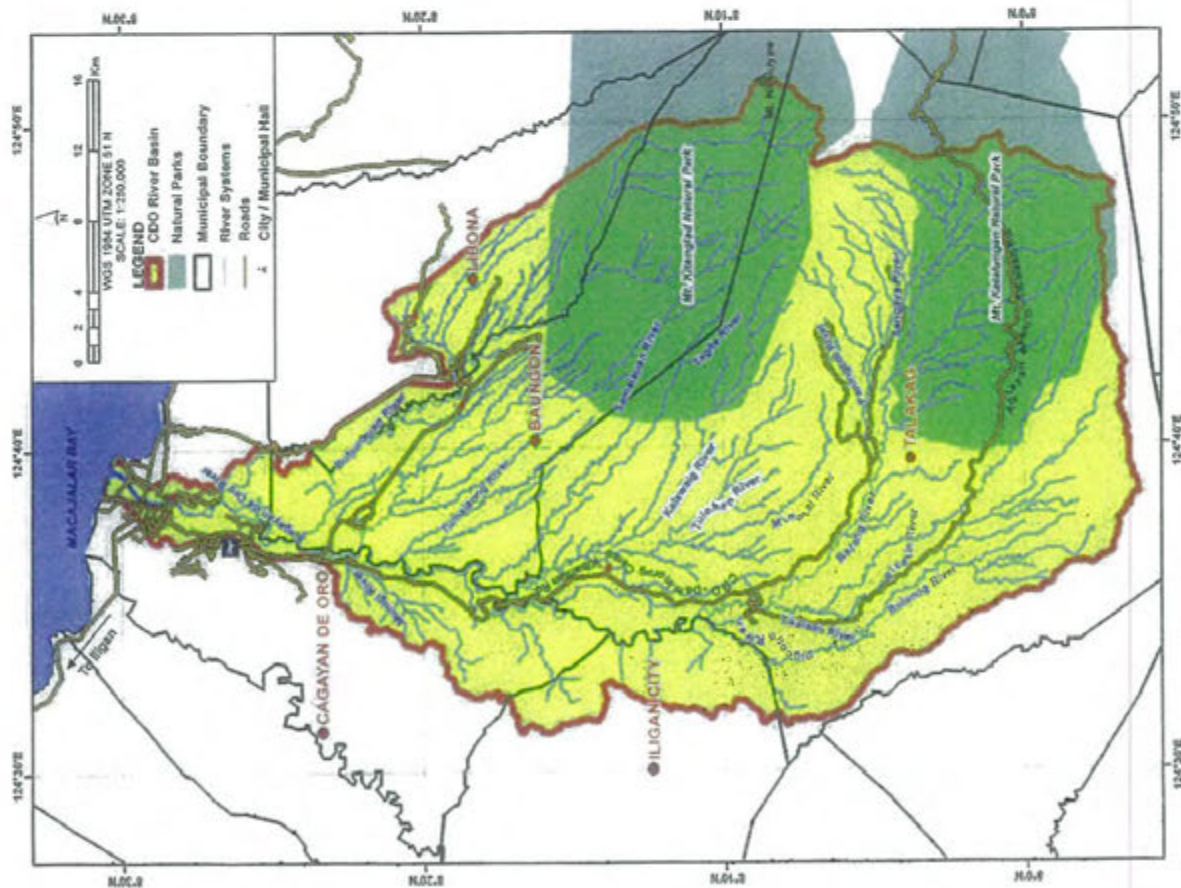


KUNG DILI ATIMANON UG SULBARON ANG
BAHA MOKUTLO SA KINABUHI UG MOGUBA
SA MGA KABTANGAN UG PROPIEDAD.

HINUMDUMI ANG MGA LEKSYON SA SENDONG!



Ang Department of Public Works and Highways (DPWH) inabagan sa Japan International Cooperation Agency (JICA) nagahimo sa usa ka masusing pagtuon/survey alang sa pag-aliman ug pag-bantay sa kakuyaw nga data sa baha sa Cagayan de Oro River (FRIMP-CDOR) aron mahimong sumbanan sa pagmugna sa mga pamaagi sa pagpugong sa baha sa apektado nga mga komunidad.



Cagayan de Oro River Basin

Katugyan sa Survey:

- Sushon, pagdayon ug ayohon ang nangaging mga pagtuon
- Mopaday ug mohimo sa mga pamaagi aron mapugngan ang baha

Nahilakip sa Survey:

- Cagayan de Oro River Basin lakip ang kabahin sa syudad sa Cagayan de Oro ug Iligan, ug ang mga munisipyo sa Baungon, Libona, ug Talakog, Bukidnon.

Ang JICA Survey Team alang sa FRIMP-CDOR gihilambigan sa daghanang eksperto sa nagkalain-laing especialisasyon o kahibalo ug kaalam sa pamaagi sa pag-aliman sa kakuyaw nga data sa baha ug nga sa pagkakaroon nagahimo ug mga kalihukan alang niini sa Cagayan de Oro River Basin.

Alang sa pagkab-ol sa pinakamaayong pamaagi o structural measures, ang mga eksperto sa Study Team nga in-charge sa mga technical nga kalihukan maoy nangunay sa pag-pakiglabigt ug padayon nga pag-pakigsulti sa mga ahensya sa government ug non-government nga organisasyon aron paghimo sa mosunod nga gimbuhaton:

- Sushon ang ginapasunod karon nga mga pamaagi sa pagpugong sa baha
- Kasamtangang mga desinyo ug hilisgutan o diskusyon sa tema sa duluna sa suba o river boundary
- Pagsusi sa gikusgon sa bundak sa ulan ug dagan sa tubig
- Sushon ang mga sediment yield (anod nga data sa dagan sa tubig) ug ang mga anod nga mabilin o mapuon sa ilawom sa suba (balance)
- Survey o pagtuon sa pagdahlil sa yula, topography, lain-laing bahin sa suba (river cross-section) ug kinaiya (profile/characteristic), boreholes, ug soil tests

Alang sa non-structural, kinaiyahanon, ug katlingbanong hiyas, and Survey team nagahimo sa mosunod nga mga kalihukan:

- Pagsusi sa mga non-structural nga mga pamaagi sama sa land use plan o plano sa pag-gamit sa kayutaan; kinaiyahan, watershed, ug plano alang sa pag-aliman ug pamaagi sa pag-preparar kontra o sa pagmenos sa kakuyaw nga data sa kalagman o kalamidad
 - Survey o pagtuon sa mga estruktura nga institusyonal (institutional structures) alang sa implementasyon sa proyekto, operasyon ug maintenance
 - Pagkuha o pagkolekta sa mga datos o impormasyon ug pag-inspeksyon sa dapit alang sa kasamtangang pagsusi ug pagtuon sa kinaiyahan
 - Preparasyon alang sa stakeholders' meetings
- Sa pagkab-ol sa usa ka kinatibuk-an pamaagi sa pagpugong sa baha, ang Survey Team nakaamgo kung unsa kaimportante ang pag-pakiglabigt ug pag-binayloay sa impormasyon kalambayong ang mga stakeholders ug lumulupyo sa komunidad kung asa ang Survey pagahimoon.



Preparatory Survey for FLOOD RISK MANAGEMENT PROJECT FOR CAGAYAN DE ORO RIVER FRIMP-CDOR

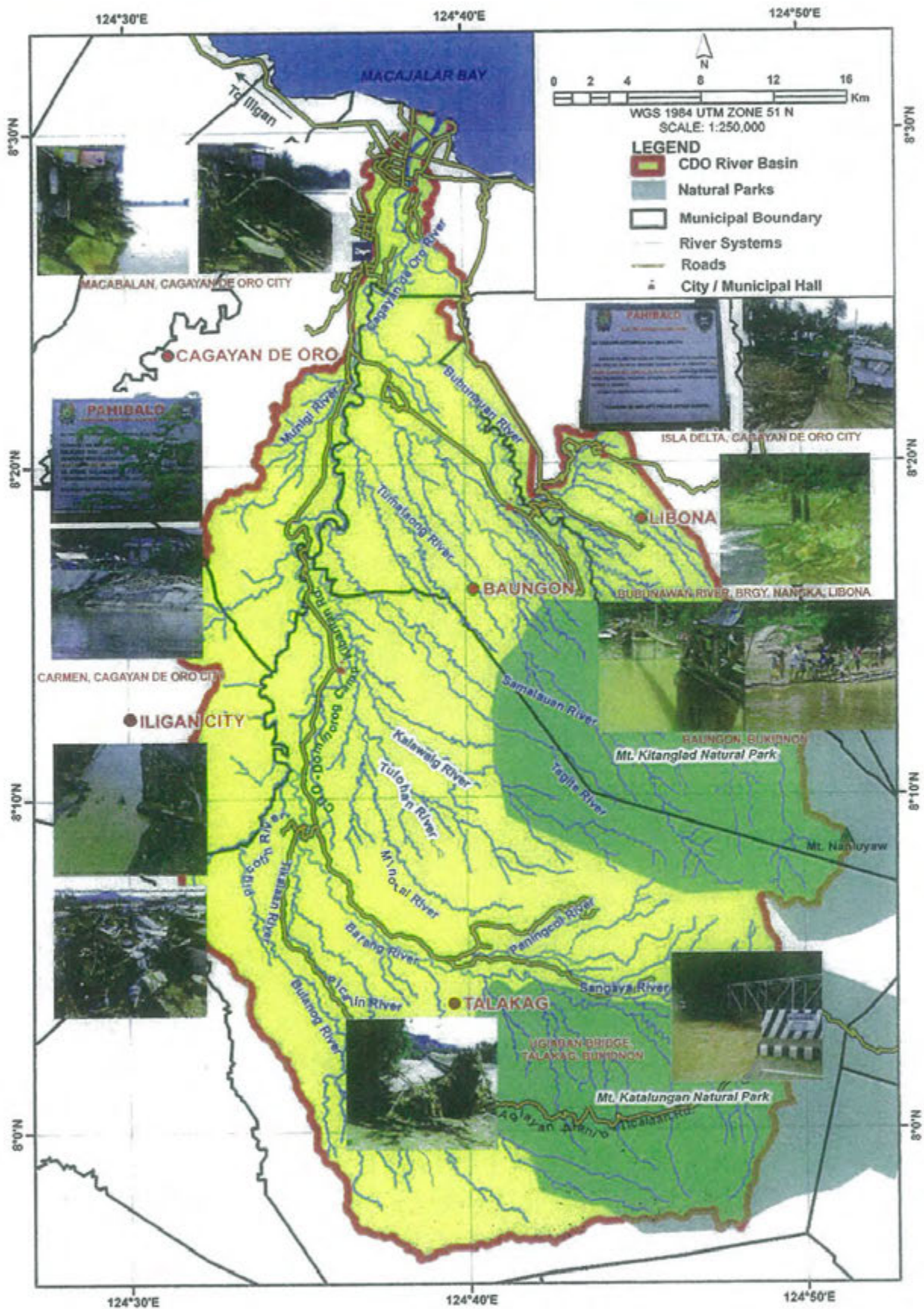
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Preparatory Survey for FLOOD RISK MANAGEMENT PROJECT FOR CAGAYAN DE ORO RIVER FRIMP-CDOR

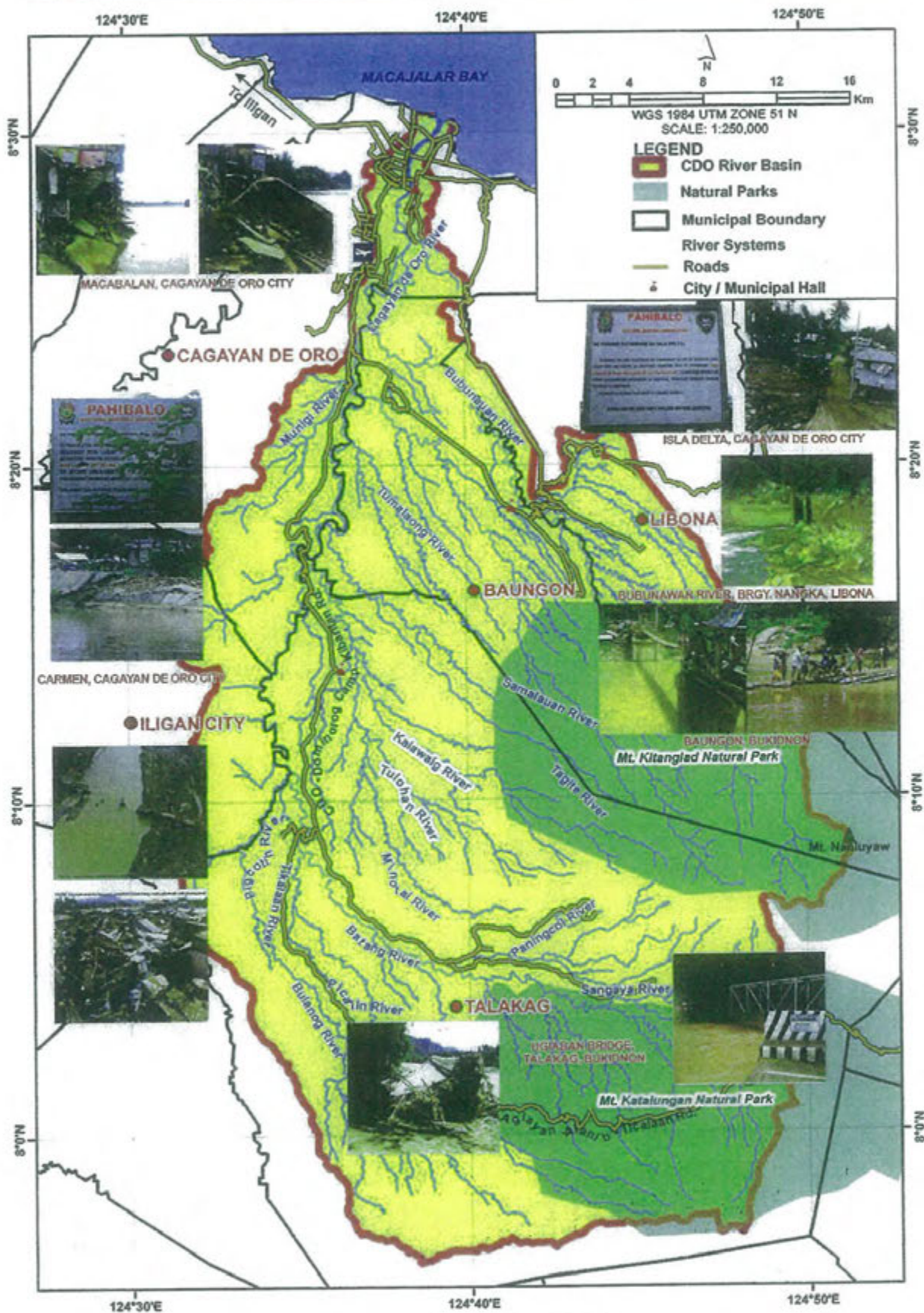
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BAHA MOKUTLO SA KINABUHI UG MOGUBA
SA MGA KABTANGAN UG PROPIEDAD.**

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Ang Department of Public Works and Highways (DPWH) inabagan sa Japan International Cooperation Agency (JICA) nagahimo sa usa ka masusing pagtuon/survey alang sa pag-atiman ug pag-bantay sa kakuyaw nga dala sa baha sa Cagayan de Oro River (FRIMP-CDOR) aron mahimong sumbanan sa pagmugna sa mga pamaagi sa pagpugong sa baha sa apektado nga mga komunidad.



Cagayan de Oro River Basin

Katuyuan sa Survey:

- Suetihon, pandayon ug ayohon ang nangaging mga pagtuon
- Mopanday ug mohimo sa mga pamaagi aron mapugnan ang baha

Nahilakip sa Survey:

Cagayan de Oro River Basin lakip ang kabahin sa syudad sa Cagayan de Oro ug Iligan, ug ang mga munisipyo sa Baungon, Libona, ug Talakag, Bukidnon.

Supporting Report
Appendix L
Economic Analysis

PREPARATORY SURVEY
FOR
FLOOD RISK MANAGEMENT PROJECT
FOR
CAGAYAN DE ORO RIVER (FRIMP-CDOR)
IN
THE REPUBLIC OF THE PHILIPPINES

FINAL REPORT

VOLUME IV SUPPORTING REPORT (II)

Appendix L
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¹ While there has been neither analysis nor specific rates of damage to physical structures in the country, those in The Ministry of Land, Infrastructure, Transport and Tourism, Japan, *Manual on Economic Study of Flood Control Projects*(2005) has presumably been applied to the current analysis.

CHAPTER 1 ECONOMIC ANALYSIS FOR THE MASTER PLAN

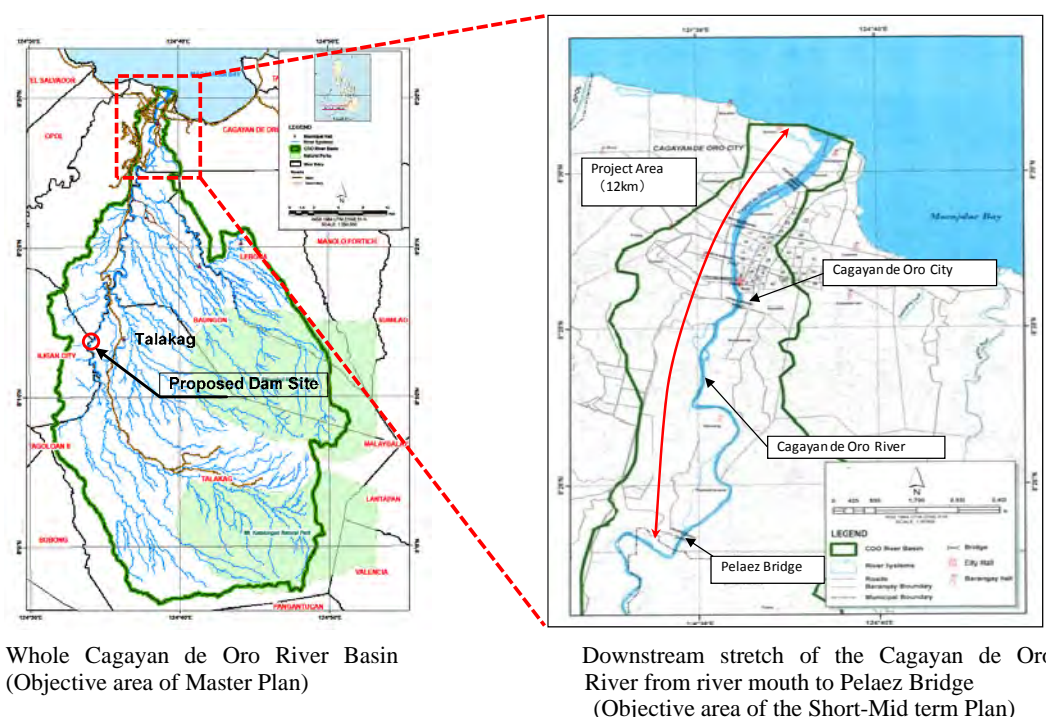
1.1 Scope of Work for Analysis

The economic analysis is carried out to evaluate the formulated Master Plan which is composed of the Short-Medium term plan and Long term plan. While the rehabilitation works are being carried out by the Department of Public Works (DPWH), the analysis undertake the evaluation of economic feasibility based on the cost accrued and benefit attributed to the proposed projects. The scope of the Master Plan and Objective Area of Master Plan are shown in Table 1.1.1 and Figure 1.1.1, respectively.

Table 1.1.1 Scope of Work for the Master Plan

Item	Scope of Work	
	Short-Medium-Term Plan	Long-Term Plan
Project Component	Flood control through river improvement by construction of Dike and Flood wall, etc.	Flood control through river improvement and flood regulation by multi-purpose dam
Project Site	Cagayan de Oro River downstream reach, from River Mouth to Pelaez Bridge for 12 km	Whole Cagayan de Oro River Basin
Construction Duration	6 years (2016~2021)	9 years(2023~2031)
Target Flood Probability (Design Scale)	25-year	Sendong scale flood(equiv. 50 or more year)

Source: JICA Survey Team



Source: JICA Survey Team

Figure 1.1.1 Objective Area of Master Plan

1.2 Assumptions for Analysis

(1) References

Methodology applied in this analysis is duly in compliance with the followings.

- Manual on Economic Study of Flood Control Projects, 2005, the Ministry of Land, Infrastructure, Transport and Tourism, Japan
- JICA supported-DPWH Guidelines¹
- JICA study reports on flood control and management in the Philippines, guidelines and other relevant documents prepared by the Government of the Philippines (DPWH/NEDA), Japan (JICA 2002), Asian Development Bank (ADB 1988), and the World Bank (WB 1998)²

(2) Framework

Economic Internal Rate of Return (EIRR), net present value (NPV) and benefit-cost ratio (B/C) are major indexes to measure investment feasibility, while taking in view the following prepositions of (i) “with and without” the project analysis (incremental analysis), (ii) time discount method converting all of costs and benefits accrues in the future to the present value, and (iii) cash-flow analysis. The sensitivity analysis is carried out for the Short-Medium term plan by changing the costs and benefits to verify the economic feasibility.

(3) Cost and Benefit Defined

Because DPWH is currently constructing dikes and slope protection works along the Cagayan de Oro River using GOP fund, the Project cost does not include these preceding costs. As regards project benefit, it is considered that the benefit of the physical structures constructed by GOP will be accrued after completion of the Project (river improvement works by construction of dike and flood wall).

(4) Assets in the Flood Control Area

Currently around 1,200 households are in place in the flood control area of the Project. Costs and benefits related to the resettlement of all of these households are to be included in the economic analysis due to the followings.

- The Philippines *Water Code* (Article 4)³ prohibits the construction of physical structures in the flood control areas
- DPWH internal discussions concluded the resettlement of all households in the flood control area covered by the concerned Project (DPWH Director Minutes of Discussions, 2013.2.19)
- With this, houses in the flood control area are to be relocated to flood-disaster free area by the Project, as such this value is counted as benefit.

¹ JICA/DPWH, *Technical Standards and Guidelines for Planning and Design of Flood Control Projects* (draft, 2002)

² DPWH, *Master Plan and Feasibility Study of Flood Control and Drainage Projects of the Selected River Basins Nationwide, Package 3*, October 2010 and June 2011, FS pp. 4-1 to 4-10, JICA, *Laoag River Basis Flood Control and Sabo Project*, pp.15-25, JICA, *Agno River Flood control Project*, ADB, *Flood Mitigation Project*, RRP, 2003, pp. 49-53, ADB, *Klang River Basin Environmental Improvement and Flood Mitigation Project*, CR, 2007, pp. 39-45, ADB, *Songhua River Flood Management Sector Project*, CR, 2011, pp. 40-46

³ *Water Code of the Philippines* and the *Amended Implementing Rules and Regulations*, House of Representative 2012, National Water Resources Boards, March 2005

1.3 Variables and Assumptive Parameters

Variables and assumptive parameters applied to the analysis are summarized in the following table, while referring to the latest data of the Bank of Japan and the IMF, as well as the recent JICA study reports, and others of relevance. Regarding on the conversion factors, it is concluded that those of the project (b) (see 6 in footnote) are adopted as the result of comparison of recent two similar projects with this project by the reasons of;

- (i) The financial and economic costs are described in the project (a) but the conversion factors are not described clearly,
- (ii) These two cost and the conversion factor are surely described in the project (b) and the implementation of the project is executed in advance of the project (a) and
- (iii) The project (b) is more similar example as a river improvement project of which river flowing down in the urban area.

Table 1.3.1 Model Configuration

	Variables	Parameters
1	Benefit generation period	50 years after construction
2	Exchange rate (JPY/PhP) ⁴	2.274
3	Physical Contingency (% of base cost)	5.0%
4	Price Contingency escalation rate (Foreign) ⁵	1.3%/year
5	Price Contingency escalation rate (Local) ⁵	2.1%/year
6	OM Cost (of Direct Construction Cost)	0.5%
7	OM Cost (of Direct Construction Cost for Hydropower Generation Dam)	1.0%
8	Discount rate (NPV/BC Ratio, NEDA)	15%
9	Local cost conversion factor (Direct construction cost) ⁶	0.79
10	Local cost conversion factor (House compensation cost) ⁶	0.57
11	Local cost conversion factor (Administration cost) ⁶	0.97
12	Local cost conversion factor (Consulting service cost) ⁶	1.19

Source: JICA Survey Team:

1.4 Economic Benefits

1.4.1 Definition and Classification

Economic benefits accrued from the flood control is the reduction amount of economic costs (damages and losses) by the concerned flood risk management and control project, and estimated as the difference (reduction) in costs between the “Without-” and “With-the Project” as estimated by the flood hydraulic analysis model. These costs have been estimated by flood probability⁷.

Due to a paucity of classified economic entities in the official flood disaster related documents, economic entities in the current analysis are defined as (i) Households, (ii) Manufacturing sector, (iii) Commercial sector (wholesale & retail shops), (iv) Service sector (hotels and restaurants), (v) Education facilities, and (vi) Health and government

⁴ Source: The Bank of Japan (USD Japanese Yen mid-month average rates) and IMF Representative rates (January 2004-July 2013)

⁵ JICARate (2013.7)

⁶ (a)The Preparatory Study for Sector Loan on Disaster Risk Management, Final Report Part II-C,Jan.2010

(b)JICA Preparatory Study for Pasig-Marikina River Channel Improvement Project (Phase III) Final Report 2011

⁷ References: The Ministry of Land, Infrastructure, Transport and Tourism, Japan, *Mop. Cit.*, 2005, DPWH, *Technical Standards and Guidelines for Planning and Design of Flood Control Projects*, 2002

facilities, while referring to the property tax collection data in the Cagayan de Oro City Treasury Division.

Further, the type of fixed assets defined herewith as (i) Building and (ii) Other assets, due to a lack of official data and documents that delineate the depreciable and inventory assets, and family facilities.

1.4.2 Benefits by Flood Control

(1) Stock effects of flood risk reduction and management project

Following costs reduced by flood risk reduction and management projects are specifically considered in the current analysis, while agriculture sector values are not estimated due to no agricultural and fisheries sectors in the deployment of the City business entities.

1) Direct cost (1): General Assets (Fixed Assets)

The number and location of fixed assets (buildings and others) owned by 6 economic entities are identified on the 100 x 100 meter meshes and incorporated into database by carrying out the inventory survey and data collected from each of the Barangay Halls in the concerned 21 administrative divisions in the City. As such the cost of fixed assets damages by flood hazard by return period is estimated by the formula below. i and j in the formula denote respective of entities and meshes.

$$\sum_{j=1}^N \left[\sum_{i=1}^6 \left(\text{Unit cost of damage}_{ij} \times \text{Number of units}_{ij} \times \text{Damage rate}_{ij} \times \text{Inundation rate}_{ij} \right) \right]$$

2) Direct cost (2): Infrastructure and Lifelines

Costs of flood damage directly emanates from the City Disaster Risk Reduction and Management Council (CDRRMC) statistics collected immediately after the Sendong hazard. Besides, the expected average annual damages were estimated based on the rate of damages of each return period to those of 50 year return period by taking account of the damages by Sendong Typhoon as 50 year return period.

3) Indirect Effect (1) Opportunity costs of business and household earnings

Value added earning (before tax in Profit-Loss Statement) as borne out by business entities is estimated by city property tax collection data with City Assessor's tax Assessment Level and average corporate tax of 15 percent. Meanwhile, the average household income emanated from NEDA census. Days of business/and family earning suspension is largely based on interview survey in the City and Municipalities in concern, as well as those who had suffered from hazards

4) Indirect effects (2): Emergency relief funds (Indirect cost)

Relief and Reconstruction Operation Financial and in-kind including condolence transfer to the demised, house repairs, seeds, cattle, and other livestock are being considered, while confining economic benefit to those of depleted scarce resources in the society

(2) Survey on Asset Data and Underlying Data for Economic Benefit Estimation

1) Inventory Survey

The inventory survey was extended beyond the inundated areas of TS Sendong, because the economic benefits of the project is considered to be generated from structures in wider area than those physically saved from flooding.

An inventory of facilities was undertaken in thirty-eight (38) barangays. The inventory was made use of inundation maps (50-year return period) delineated into 100m x 100m meshes. The project-influence area was divided into 1,913 meshes. Consistent with classifications used in national and local publications and available data, economic entities in the analysis are categorized as (i)Residential, (ii)Manufacturing, (iii)Commercial (wholesale & retail shops), (iv)Service (hotels and restaurants), (v) Education, and (vi) Health/Religious/Government. The survey for manufacturing, education and health/religious/government facilities was conducted for all 38 barangays. For residential, commercial and service facilities, five (5) urban barangays (Balulang, Carmen, Consolacion, Macasandig and Barangay 18) and one (1) rural barangay (Indahag) was covered in the facilities inventory. Entities covered by the survey (22,351) account for 53.7 percent of the total 41,607 entities in the project-influence area. For residential, commercial and service facilities, averaged figures were used for 32 barangays with similar rural and urban classification.

The costs of damage of general fixed assets accrued to the affected entities⁸ are estimated by the number of entities in the meshes, while presumably allotting the registered entities over the project area. The number of entities by barangay and facility type are summarized in Table 1.4.1.

⁸ The registered number of entities (*Barangay Profile 2012, Barangay Business Directory, Mid-term Barangay Development Plan*, as well as interview survey by the Team) in each of the meshes × rate of inundation rate

Table 1.4.1 Number of Entities Aggregated from 100x100m Mesh Data for 38 Barangays

No.	Barangay	Residen- tial	Manuf- acturing	Commer- cial	Service	Educa- tion	Hospital/ religion/ Government	Total
1	Barangay 1	255.7	-	52.0	25.3	2.0	2.0	337.0
2	Barangay 2	95.5	-	19.5	-	-	1.0	116.0
3	Barangay 3	63.7	-	13.0	6.3	-	-	83.0
4	Barangay 4	95.5	-	19.5	9.5	2.0	-	126.5
5	Barangay 5	63.7	-	13.0	6.3	-	1.0	84.0
6	Barangay 6	63.7	-	13.0	6.3	2.0	1.0	86.0
7	Barangay 7	159.2	-	32.5	15.8	2.0	6.0	215.5
8	Barangay 8	127.3	-	26.0	12.7	-	-	166.0
9	Barangay 9	31.8	-	6.5	3.2	-	-	41.5
10	Barangay 10	188.8	-	4.7	5.2	1.0	2.0	201.7
11	Barangay 11	95.5	-	19.5	9.5	-	-	124.5
12	Barangay 12	63.7	-	13.0	6.3	-	-	83.0
13	Barangay 13	223.3	-	20.6	4.5	-	2.0	250.4
14	Barangay 14	95.5	-	19.5	9.5	-	-	124.5
15	Barangay 15	254.7	-	52.0	25.3	2.0	3.0	337.0
16	Barangay 16	63.7	-	13.0	6.3	1.0	-	84.0
17	Barangay 17	298.2	-	15.7	7.8	-	-	321.7
18	Barangay 18	191.0	1.0	39.0	19.0	1.0	5.0	256.0
19	Barangay 19	63.7	-	13.0	6.3	-	-	83.0
20	Barangay 20	95.5	-	19.5	9.5	1.0	1.0	126.5
21	Barangay 21	257.7	-	52.0	25.3	-	-	335.0
22	Barangay 22	318.3	1.0	65.0	31.7	3.0	2.0	421.0
23	Barangay 23	284.7	-	56.0	28.3	2.0	3.0	374.0
24	Barangay 25	244.3	-	40.8	19.9	3.0	2.0	310.0
25	Barangay 27	63.7	-	13.0	6.3	-	2.0	85.0
26	Barangay 29	286.5	-	58.5	28.5	2.0	3.0	378.5
27	Barangay 40	159.2	-	32.5	15.8	1.0	-	208.5
28	Balulang	7108.4	19.0	523.5	119.5	15.0	18.0	7803.4
29	Bayabas	105.8	-	15.9	6.8	-	-	128.5
30	Bonbon	1956.6	5.0	294.7	125.4	6.0	5.0	2392.8
31	Carmen	7273.9	11.0	944.6	441.9	27.0	25.0	8723.4
32	Consolacion	1470.4	5.0	222.0	89.7	4.0	16.0	1807.1
33	Indahag	558.9	-	52.4	10.6	1.0	5.0	628.0
34	Kauswagan	4204.1	3.0	633.3	271.5	5.0	9.0	5125.9
35	Macabalan	2017.9	7.0	208.7	105.1	17.0	20.0	2375.7
36	Macasandig	2681.9	5.0	204.3	65.4	9.0	20.0	2985.6
37	Nazareth	802.0	-	65.6	102.8	-	1.0	971.3
38	Puntod	2707.9	1.0	407.3	176.9	5.0	7.0	3305.1
Total		35091.6	58.0	4314.7	1866.4	114.0	162.0	41606.6

Source: JICA Survey Team (Interview Survey)

2) Unit Asset Value by Economic Entity

The estimated unit assets value of building and other assets by entity classification are summarized in the following Table 1.4.2 based on the replacement cost of houses at the TS Sendong hazards and property tax collection data⁹. While there has been little consideration on the split of valuation (damage assessment in monetary value) between buildings and other depreciable/inventory assets as well as household contents in the preceding studies or official surveys¹⁰, the analysis

⁹ The agriculture sector has only been estimated the cost of damage and losses in the official documents thus far.

¹⁰ Thorough review on the past documents and reports as well as interview survey to the national/local government agencies of close and the World Bank (Global facilities for Disaster Risk Reduction) took place in this connection.

applied the survey results undertaken by the Central Bank of the Philippines¹¹ and property tax data and numerical information of the City Treasury Office¹².

Table 1.4.2 Unit Value of General (Fixed) Assets by Economic Entity (PhP mil)

Economic Entity	Buildings	Other Assets	Total
Households	0.63	0.07	0.21
Manufacturing	3.74	4.17	7.91
Commercial	1.18	2.93	4.11
Service	4.79	2.87	7.66
Education	4.33	6.37	10.69
Hospital/Government	24.84	28.68	53.52

Source: JICA Survey Team

3) Damage Rates by Inundation Depth

Flood damages in the Cagayan de Oro River area is categorically considered as flood flushing type, well alike those in Japan in the light of flood speeding, inundation time, and others. Since there has been no technical data or numerical information on this hydrological issue in the country as confirmed by DPWH, Office of Civil Defense and National Disaster Reduction and Management Council, current analysis applied the rates used in Japan.

Table 1.4.3 Flood Damage Rates by Inundation Depth¹³

Assets	= 0m	< 0.5 m	≥ 0.5 m and <1.0 m	≥ 1.0 m and < 2.0 m	≥ 2.0 m and < 3.0 m	≥ 3.0 m
Building	0.0	0.092	0.119	0.266	0.380	0.834
Other Assets ¹⁴	0.0	0.168	0.349	0.628	0.930	0.989

Source: The Ministry of Land, Infrastructure, Transport and Tourism, Japan, *Manual on Economic Study of Flood Control Projects*(2005)

As mentioned the above explanation, the formula for assets damages costs by return period and mesh is described as follows including the relationship of Table 1.4.1 through 1.4.3.

The Assets Damages Costs=Inundation Rate x Damage Rate by Inundation

Depth (Table 1.4.3) x Number of Assets (Table 1.4.1) x Unit Value of Assets (Table 1.4.2)

(3) Expected Reduction of Annual Flood Damages

Based on the results of hydraulic analysis, expected annual flood damages by economic entity and return period are figured. The indirect damages costs except for 50-year return period were estimated by applying the rate of the direct damages of each return period to those of 50-year return period to the indirect damages of 50-year return period, respectively.(See Table 1.4.4)

¹¹ The Central Bank of the Philippines, *Finance Consumer Survey*, 2010

¹² Sources: City and Municipality Offices of Treasurer, tax revenue statistics 2013, The Central Bank of the Philippines, *Consumer Finance Survey*, 2010, Feasibility Study report (2009)

¹³ While there has been neither analysis nor specific rates of damage to physical structures in the country, those in The Ministry of Land, Infrastructure, Transport and Tourism, Japan, *Manual on Economic Study of Flood Control Projects*(2005) has presumably been applied to the current analysis.

¹⁴ The average of three assets for depreciation, inventory, household effects described in op. cit. The Ministry of Land, Infrastructure

Table 1.4.4 Estimated Flood Damage Cost

Unit: Million PhP

Chart: Million Pairs							
Type	Category		Return Period (year)				
			2	5	10	25	50
Direct Damage Cost	Buildings	Residential	461.5	809.4	1,127.4	2,143.0	3,745.5
		Manufacturing	7.6	10.9	16.7	27.7	45.8
		Commercial	83.9	140.9	191.7	357.8	613.3
		Service	130.3	224.9	318.3	589.2	1,003.9
		Education	5.9	7.8	12.5	27.2	55.2
		Health and Other	60.9	113.0	189.0	352.1	679.6
		Sub-Total	750.1	1,306.9	1,855.5	3,496.9	6,143.2
	Other Assets	Residential	567.5	968.3	1,386.4	2,557.5	4,065.5
		Manufacturing	19.9	28.8	37.8	60.7	93.1
		Commercial	488.1	797.0	1,104.9	1,986.4	3,178.7
		Service	184.9	316.2	438.4	798.9	1,259.7
		Education	19.5	27.1	44.6	95.1	184.8
		Health and Other	164.0	292.6	473.6	904.3	1,582.9
		Sub-Total	1,443.9	2,429.9	3,485.7	6,402.9	10,364.7
	Total	Residential	1,029.0	1,777.6	2,513.8	4,700.6	7,811.0
		Manufacturing	27.5	39.7	7,811.0	88.4	138.9
		Commercial	572.0	937.9	138.9	2,344.1	3,792.0
		Service	315.2	541.1	3,792.0	1,388.0	2,263.6
		Education	25.4	34.8	2,263.6	122.3	240.0
		Health and Other	224.9	405.6	240.0	1,256.4	2,262.5
	Total		2,194.0	3,736.8	2,262.5	9,899.8	16,508.0
Other Direct Damage Costs and Indirect Cost			22.0	37.4	53.5	99.1	165.3
Total Damage Cost			2,216.0	3,783.6	5,408.8	10,005.7	16,673.2

Source: JICA Survey Team

Annual average costs of flood damage by return period are given in Table 1.4.5, with the formula of the following.

$$D_i = \sum \frac{1}{2} \{D(Q_{i-1}) + D(Q_i)\} * \{P(Q_{i-1}) - P(Q_i)\}$$

Where,

D_i denotes average annual flood damage in each return period i , $D(Q_{i-1})$ and $D(Q_i)$ as flood damages caused by Q_{i-1} and Q_i discharges, respectively. $P(Q_{i-1})$ and $P(Q_i)$ denote probability (return period) of flood with Q_{i-1} and Q_i discharges, respectively.

Table 1.4.5 Expected Reduction of Annual Flood Damage Cost

Unit: Million PhP

Return Period	Probability	Without Project		Damage with Project	Reduction of Damage Cost	Aver. Damage Cost	Expected Annual Ave Damage Cost	Economic Benefit due to Project
		Direct Damage Cost	Indirect Damage Cost					
2-yr	0.50	2,194.0	22.0	0.0	2,216.0			
5-yr	0.20	3,736.8	37.4	0.0	3,774.2	2,995.1	898.6	898.5
10-yr	0.10	5,341.2	53.5	0.0	5,394.7	4,584.4	458.4	1,357.0
25-yr	0.04	9,899.8	99.1	0.0	9,998.9	7,696.8	461.8	1,818.8
50-yr	0.02	16,508.0	165.3	0.0	16,673.3	13,336.1	266.7	2,085.5

Source: JICA Survey Team

(4) Other Direct and Indirect Damages

The other direct and indirect damages for the Long-Term Plan for 50-year return period are figured out to be PHP 165.3 million as shown Table 1.4.6. Indirect cost by item of 25-year return period is estimated in proportion to direct damage cost of 25-year return period by comparing with that of 50-year return period.

Table 1.4.6 Other Direct and Indirect Flood Damages

Unit: Million PhP

Return Period	Item	Infra-structure ¹⁵	Lifelines ¹⁶	Business VA ¹⁷	House-holds ¹⁸	Financial and in-kinds Assistance ¹⁹
50-yr	Unit costs per day	NA	NA	0.002	0.001	NA
	Suspension Days	NA	NA	21	15	NA
	Damage Cost	77.22	75.81	0.045	0.0105	12.17
	Total of Other Direct and Indirect damage Cost	165.25				
25-yr	Damage Cost	46.31	45.46	0.03	0.01	7.30
	Total of Other Direct and Indirect damage Cost	99.11				

Source: JICA Survey Team

1.5 Economic Cost and Investment Schedule

The cost items by procurement source (foreign and local costs portions: LC and FC) are realigned. The purpose of this alignment is to convert the financial costs to the economic costs and conversion factors of LC and FC are different from each other. The assumptions for costs of physical contingency, tax and duties, administration, consulting services and components of construction are described in Appendix H in details. Conversion from the financial cost to the economic costs is conducted with a view to eradicating “market

¹⁵ Source : Municipality DRRMC questionnaires to Barangay chairman for damage report, with numbers affected and amounts of costs by classification and Barangay, December 2011 and 2012, NDRRMC, *Final Report on the Effects and Emergency Management re Tropical Storm “SENDONG” (Washi)*, 10FEB2012. Regional Development Council Region 10, *Strategic Action Plan for the Rehabilitation and Recovery of the Areas Affected by Tropical Storm Sendong (Washi)*, February 2012,

¹⁶ Source : Municipality DRRMC, *Ibid*, NDRRMC, *Ibid*,

¹⁷ Value Added generated by business entities (Earnings before tax) is estimated by the business tax collection data and average corporate tax rate.

¹⁸ Source : reference : NEDA Region X, The Central Bank of the Philippines, *Op. cit*.

¹⁹ Source : Department of Agriculture Region X office, Department of Social Welfare and Development Region X, Office of Civil defense, region X

distortions²⁰ in the domestic economy. The conversion factors are shown in Table 1.3.1. Further, transfer payments (taxes and duties) and price contingency have been removed from financial cost for EIRR estimation. The financial and economic costs and investment schedule are given in Tables 1.5.1 through 1.5.2, respectively.

Table 1.5.1 Economic and Financial Costs for Sort -Medium-Term Plan

(Unit: PhP Million)

Economic Cost	FC	LC	Total	Financial Cost	FC	LC	Total
Construction	2,394.7	1,358.6	3,753.3	Construction	2,394.7	1,719.8	4,114.5
Land Acquisition		1,122.1	1,122.1	Land Acquisition		1,968.6	1,968.6
House compensation		551.5	551.5	House compensation		967.5	967.5
Consulting Services	453.0	179.7	632.7	Consulting Services	453.0	151.0	604.0
Taxes and Duties	-	-	-	Taxes and Duties		622.7	622.7
Base Cost	2,847.7	3,211.9	6,059.6	Base Cost (BC)	2,847.7	5,429.6	8,277.3
Physical Contingency	42.5	21.5	64.0	Physical Contingency	42.5	29.1	71.6
Base cost + Physical Contingency	2,890.2	3,233.4	6,123.6	Base cost + Physical Contingency	2,890.2	5,458.7	8,348.9
Price Contingency	-	-	-	Price Contingency	188.9	209.9	398.8
Total Cost	2,890.2	3,233.4	6,123.6	Total Cost	3,079.1	5,668.6	8,747.7

Source: JICA Survey Team

Table 1.5.2 Investment Schedule in Economic Price for Sort-Medium-Term Plan

Year	1st	2nd	3rd	4th	5th	6th	7th	8th	Total
%	0.0%	6.0%	8.6%	27.6%	16.5%	24.3%	16.8%	0.2%	100.0%
PhP million	0.0	365.7	526.5	1,687.5	1,013.0	1,489.7	1,025.8	15.3	6,123.6

Source: JICA Survey Team

In the Master Plan, it is proposed that the existing dam plan for hydropower generation (Batang-Bulanog Dam Plan) will be integrated as multipurpose use with flood control to mitigate flood risk in the Cagayan de Oro River basin. Then it is assumed that the annual power generation could be reduced and the cost for it could be saved as PHP 1,617 million in money terms. On this context, the annual cost for reduced power generation during the period from 2031 to 2080 are converted into the present values discounted by 15%. Then the discounted values of the present values as PHP 1,000,9 million are assumed to be the initial investment costs for the Long-Term Plan.

1.6 Results of Economic Evaluation

(1) Investment Feasibility by Indices

1) Short-Medium-Term Plan

The cash flow of economic cost and benefits for the Short-Medium Term Plan and the Long-Term Plan are shown in Table 1.6.1. EIRR, ENPV, and BC Ratio of the Short-Medium-Plan are estimated at 19.71%, PHP 1,206.4 million, and 1.44 respectively. It could be judged that this project is economically feasible because the EIRR is higher than 15.0% as the criteria of the economic feasibility in the Philippines.

The sensitivity analysis for the Short-Medium-Term Plan was conducted for the purpose of verifying its economic feasibility by changing, (i) increasing 20% of the

²⁰ "Distortions" stands for deviation of the national economy from optimal resource allocation include, in general, taxes and duties, monopoly and monopsony, externality, average cost diminishing industries, and so forth.

costs, (ii) decreasing 20% of the benefits, and (iii) combination of (i) and (ii). The results are shown in Table 1.6.3. The sensitivity analysis indicates that the EIRRs of cases of (i) and (ii) are figured out to be higher than 15% but the EIRR of (iii) is less than 15%. Then the Short-Medium-Term Plan is economically feasible for (i) and (ii).

2) Long-Term Plan

The cash flow of economic cost and benefits for the Short-Medium Term Plan and the Long-Term Plan are shown in Table 1.6.2. EIRR, ENPV, and BC Ratio of the Long-Term Plan as the Master Plan are estimated at 19.44%, PHP 1,370.5 million, and 1.41 respectively. It can be concluded that the Long-Term Plan is economically feasible as well as of the Short-Medium Plan by taking account of higher EIRR than 15% as judgment criteria for the economic feasibility.

Table 1.6.1 Cash Flow of Economic Cost and Benefits of Short-Medium Plan

Year in Order	Year	(Unit : PHP Million)				
		Economic Cost			Economic Benefits	Net Benefits
		Project Cost	OM Cost	Total	Reduced Flood Damages	
0	2013	0.0	0.0	0.0	0.0	0.0
1	2014	0.0	0.0	0.0	0.0	0.0
2	2015	365.7	0.0	365.7	0.0	-365.7
3	2016	526.5	0.0	526.5	0.0	-526.5
4	2017	1,687.5	0.0	1,687.5	0.0	-1,687.5
5	2018	1,013.0	0.0	1,013.0	0.0	-1,013.0
6	2019	1,489.7	0.0	1,489.7	0.0	-1,489.7
7	2020	1,025.8	0.0	1,025.8	0.0	-1,025.8
8	2021	15.3	0.0	15.3	1,818.8	1,803.5
9	2022	0.0	18.8	18.8	1,818.8	1,800.0
10	2023	0.0	18.8	18.8	1,818.8	1,800.0
11	2024	0.0	18.8	18.8	1,818.8	1,800.0
12	2025	0.0	18.8	18.8	1,818.8	1,800.0
13	2026	0.0	18.8	18.8	1,818.8	1,800.0
14	2027	0.0	18.8	18.8	1,818.8	1,800.0
15	2028	0.0	18.8	18.8	1,818.8	1,800.0
16	2029	0.0	18.8	18.8	1,818.8	1,800.0
17	2030	0.0	18.8	18.8	1,818.8	1,800.0
18	2031	0.0	18.8	18.8	1,818.8	1,800.0
19	2032	0.0	18.8	18.8	1,818.8	1,800.0
20	2033	0.0	18.8	18.8	1,818.8	1,800.0
21	2034	0.0	18.8	18.8	1,818.8	1,800.0
22	2035	0.0	18.8	18.8	1,818.8	1,800.0
23	2036	0.0	18.8	18.8	1,818.8	1,800.0
24	2037	0.0	18.8	18.8	1,818.8	1,800.0
25	2038	0.0	18.8	18.8	1,818.8	1,800.0
26	2039	0.0	18.8	18.8	1,818.8	1,800.0
27	2040	0.0	18.8	18.8	1,818.8	1,800.0
28	2041	0.0	18.8	18.8	1,818.8	1,800.0
29	2042	0.0	18.8	18.8	1,818.8	1,800.0
30	2043	0.0	18.8	18.8	1,818.8	1,800.0
31	2044	0.0	18.8	18.8	1,818.8	1,800.0
32	2045	0.0	18.8	18.8	1,818.8	1,800.0
33	2046	0.0	18.8	18.8	1,818.8	1,800.0
34	2047	0.0	18.8	18.8	1,818.8	1,800.0
35	2048	0.0	18.8	18.8	1,818.8	1,800.0
36	2049	0.0	18.8	18.8	1,818.8	1,800.0
37	2050	0.0	18.8	18.8	1,818.8	1,800.0
38	2051	0.0	18.8	18.8	1,818.8	1,800.0
39	2052	0.0	18.8	18.8	1,818.8	1,800.0
40	2053	0.0	18.8	18.8	1,818.8	1,800.0
41	2054	0.0	18.8	18.8	1,818.8	1,800.0
42	2055	0.0	18.8	18.8	1,818.8	1,800.0
43	2056	0.0	18.8	18.8	1,818.8	1,800.0
44	2057	0.0	18.8	18.8	1,818.8	1,800.0
45	2058	0.0	18.8	18.8	1,818.8	1,800.0
46	2059	0.0	18.8	18.8	1,818.8	1,800.0
47	2060	0.0	18.8	18.8	1,818.8	1,800.0
48	2061	0.0	18.8	18.8	1,818.8	1,800.0
49	2062	0.0	18.8	18.8	1,818.8	1,800.0
50	2063	0.0	18.8	18.8	1,818.8	1,800.0
51	2064	0.0	18.8	18.8	1,818.8	1,800.0
52	2065	0.0	18.8	18.8	1,818.8	1,800.0
53	2066	0.0	18.8	18.8	1,818.8	1,800.0
54	2067	0.0	18.8	18.8	1,818.8	1,800.0
55	2068	0.0	18.8	18.8	1,818.8	1,800.0
56	2069	0.0	18.8	18.8	1,818.8	1,800.0
57	2070	0.0	18.8	18.8	1,818.8	1,800.0
Total		6,123.5	919.6	7,043.1	90,938.1	83,895.1
Source: The Survey Team					EIRR	19.71%
Note: 15% as the discount rate was applied according to					NPV	1,206.4
the Government of the Philippines.					B/C	1.44

Table 1.6.2 Cash Flow of Economic Cost and Benefits of Long-Term Plan

Year in Order	Calendar Year	Economic Cost				(Million Pesos)			
						Economic Benefits			Net Benefits
		Short - Middle Term (River Improvements)		Long Term (Dam)		Total	Flood Control	Total	
		Project Cost	OM Cost	Project Cost	OM Cost				
0	2013	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	2014	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	2015	365.7	0.0	0.0	0.0	365.7	0.0	0.0	-365.7
3	2016	526.5	0.0	0.0	0.0	526.5	0.0	0.0	-526.5
4	2017	1,687.5	0.0	0.0	0.0	1,687.5	0.0	0.0	-1,687.5
5	2018	1,013.0	0.0	16.7	0.0	1,029.7	0.0	0.0	-1,029.7
6	2019	1,489.7	0.0	8.3	0.0	1,498.0	0.0	0.0	-1,498.0
7	2020	1,025.8	0.0	16.7	0.0	1,042.5	0.0	0.0	-1,042.5
8	2021	15.3	0.0	35.6	0.0	50.9	1,818.8	1,818.8	1,767.9
9	2022	0.0	18.8	13.2	0.0	32.0	1,818.8	1,818.8	1,786.8
10	2023	0.0	18.8	70.2	0.0	89.0	1,818.8	1,818.8	1,729.8
11	2024	0.0	18.8	128.0	0.0	146.7	1,818.8	1,818.8	1,672.0
12	2025	0.0	18.8	128.0	0.0	146.7	1,818.8	1,818.8	1,672.0
13	2026	0.0	18.8	128.0	0.0	146.7	1,818.8	1,818.8	1,672.0
14	2027	0.0	18.8	128.0	0.0	146.7	1,818.8	1,818.8	1,672.0
15	2028	0.0	18.8	128.0	0.0	146.7	1,818.8	1,818.8	1,672.0
16	2029	0.0	18.8	128.0	5.0	151.8	1,818.8	1,818.8	1,667.0
17	2030	0.0	18.8	68.0	10.1	96.8	1,818.8	1,818.8	1,722.0
18	2031	0.0	18.8	4.4	10.1	33.2	2,085.5	2,085.5	2,052.3
19	2032	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
20	2033	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
21	2034	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
22	2035	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
23	2036	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
24	2037	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
25	2038	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
26	2039	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
27	2040	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
28	2041	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
29	2042	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
30	2043	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
31	2044	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
32	2045	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
33	2046	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
34	2047	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
35	2048	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
36	2049	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
37	2050	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
38	2051	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
39	2052	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
40	2053	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
41	2054	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
42	2055	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
43	2056	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
44	2057	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
45	2058	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
46	2059	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
47	2060	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
48	2061	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
49	2062	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
50	2063	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
51	2064	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
52	2065	0.0	18.8	233.0	10.1	261.8	2,085.5	2,085.5	1,823.7
53	2066	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
54	2067	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
55	2068	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
56	2069	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
57	2070	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
58	2071	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
59	2072	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
60	2073	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
61	2074	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
62	2075	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
63	2076	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
64	2077	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
65	2078	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
66	2079	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
67	2080	0.0	18.8	0.0	10.1	28.8	2,085.5	2,085.5	2,056.7
Total		6,123.5	1,107.2	1,233.9	517.7	8,982.3	122,462.8	122,462.8	113,480.5
Source: The Survey Team									
Note: 15% as discount rate was adopted according to the Government of the Philippines.									
								EIRR	19.44%
								NPV	1,370.5
								B/C	1.41

Table 1.6.3 Results of Sensitivity Analysis for the Short-Medium Term Plan

	Base Case	Cost 20% Up	Benefit 20% Down	Simultaneous Change
EIRR(%)	19.71%	17.23%	16.71%	14.51%
NPV(PHP Million)	1,206.4	655.7	414.4	-136.4
B/C ratio	1.44	1.20	1.15	0.96

Source: JICA Survey Team

(3) Conclusion

It could be concluded that (i) the Short-Medium-Term Plan is basically the economically feasible but not always feasible because the sensitivity analysis tells us that the future conditions such as project costs and benefits would change, and (ii) the Long-Term Plan is also economically feasible. Then it could finally be concluded that the Master Plan is overwhelmingly economically feasible except the case of the unexpected changes of project costs and benefits for the Short-Medium-Term Plan.

CHAPTER 2 ECONOMIC ANALYSIS FOR FEASIBILITY STUDY

The conclusion of the economic analysis for the feasibility study is basically as the same as of the Short-Medium Plan and then the description of the feasibility study is abbreviated.

CHAPTER 3 STUDY ON BENEFITS OF POWER GENERATION BY DAM PROJECT

3.1 Benefits by Power Generation by Dam Project

In this Chapter, the benefits of power generation of hydropower development plan by multipurpose dam in the Long-Term Plan is estimated. The outlines of hydropower plan is shown in the following table.

Table 3.1.1 Assumptions of Hydropower Development

Items	Peak Operation (Dry Season: 5months)	Off Peak Operation (Rainy Season: 7 months)
Max. Power Output(MW)	133.0	126.0
Energy Generation(GWh)	178.0	187.59
Annual Energy Generation(GWh/year)	365.5	

Source: JICA Survey Team

The benefits of hydropower development are derived from comparison with costs of an alternative thermal power generation, which is assumed to be the diesel power plant in this analysis

(1) Power Benefit

The power benefit is the cost of construction/installation of an alternative power plant with equivalent power capacity to the hydropower. Annual power benefit is based on the installed capacity of power plant per MW.

1) Energy Benefit

The energy benefit is operation cost of an alternative power plant including fuel cost and O&M cost. Annual energy benefit is based on the power energy production cost per kWh.

The energy benefit is calculated by applying the unit cost of diesel oil of diesel power development and O&M cost to total annual power generation of the hydro power plant.

The power benefit and energy benefit of power development are figured out to be PHP 2,660.0 million and PhP 5,994.2 million per year for fuel cost and PhP 60.0 million for O&M cost as shown in Table 3.1.2, respectively.

Table 3.1.2 Expected Benefits by Hydro Power Development

(1) Diesel Power Plant

Installed Capacity	A	MW	100(50 x 2)
Construction Cost	B	Million PhP	2,000
Power Cost	C=B/A	Million PhP/MW	20.0
Fuel Consumption Rate	D	L/kWh	0.34
Fuel Cost	E	PhP/L	48.2
	F=DxE	PhP/kWh	16.4
O&M Cost	G=Bx0.03	Million PhP	60.00

(2) Benefit of Hydropower Development

Installed Capacity	H	MW	133.0
Power Benefit	I=CxH	Million PhP	2,660.0
Annual Energy Output	J	GWh/year	365.5
(1) Fuel Cost	K=FxJ	Million PhP	5,994.2
(2) O&M Cost	L	Million PhP	60.0
Annual Energy Benefit	K+L	Million PhP	6,054.2

- Source: 1. Interim Mindanao Electricity Market(IMEM) Offer Cap, Department of Energy for fuel cost.
2. National Power Corporation(NAPOCOR) is for Construction cost and capacity of diesel power Plant.
3. Energy generation and capacity are based on preliminary study in the Master Plan.

- Note: 1. The figures are in 2013 price.
2. The annual energy benefits will generate from ninth year of construction works.

2) Total Benefit Expected through Implementation of Master Plan

The benefits of the Master Plan are summarized as (i) PhP 1,818.8 million per year for flood control to meet probable 25-year flood as the Short-Medium-Term Plan, (ii) PHP 2,085.5 million per year for flood control for over 25-year to 50-year probable flood and (iii) PHP 8,714.2 million per year for hydro power development in 2013 price (PHP 2,660.0 million for power benefit + HP 6,054.2 million for energy benefit), respectively.

3.2 Economic Cost and Investment Schedule

The financial and economic costs and investment schedule for the Dam project are given in Tables 3.2.1 through 3.2.2, respectively.

Table 3.2.1 Economic and Financial Costs for Long-Term Plan

(Unit: PhP Million)

Economic Cost	FC	LC	Total	Financial Cost	FC	LC	Total
Construction	10,609	6,145	16,754	Construction	10,609	7,778	18,387
Land Acquisition & House Compensation		112	112	Land Acquisition & House Compensation		197	197
Consulting Services(Inc. Investigation/Survey)	1,722	2,109	3,831	Consulting Services(Inc. Investigation/Survey)	1,722	1,772	3,494
Taxes and Duties	NA	NA	0	Taxes and Duties		3,322	3,322
Base Cost	12,331	8,366	20,697	Base Cost (BC)	12,331	13,069	25,400
Physical Contingency	204	117	321	Physical Contingency	204	175	379
Base cost + Physical Contingency	12,535	8,483	21,018	Base cost + Physical Contingency	12,535	13,244	25,779
Price Contingency			0	Price Contingency	2,272	2,956	5,228
Total Cost	12,535	8,483	21,018	Total Cost	14,807	16,200	31,007

Source: JICA Survey Team

Table 3.2.2 Investment Schedule in Economic Cost

Year	Short-Medium-Term Plan		Long-Term Plan		Total
	PhP Million	%	PhP Million	%	PhP Million
2013					
2014					
2015	366	6.0%			366
2016	527	8.6%			527
2017	1,688	27.6%			1,688
2018	1,013	16.5%	350	1.7%	1,363
2019	1,490	24.3%	175	0.8%	1,665
2020	1,026	16.8%	350	1.7%	1,376
2021	15	0.2%	747	3.6%	762
2022			278	1.3%	278
2023			1,474	7.0%	1,474
2024			2,687	12.8%	2,687
2025			2,687	12.8%	2,687
2026			2,687	12.8%	2,687
2027			2,687	12.8%	2,687
2028			2,687	12.8%	2,687
2029			2,687	12.8%	2,687
2030			1,427	6.8%	1,427
2031			92	0.4%	92
Total	6,124	100.0%	21,018	100.0%	27,142

Source: JICA Survey Team

The replacement cost of PHP 2,815.7 million in the economic price (PHP 3,564.2 million in the financial price) for dam equipments and facilities is allocated in the year of 2065 after 35 years of completion of dam.

3.3 Economic Analysis on Dam with Hydropower Generation Project

The cash flow of economic cost and benefits of dam with hydropower generation is shown in Table 3.3.1. The EIRR, NPV and B/C ratio are 19.1%, PhP 3,116.5 million and 1.45, respectively. Especially, the EIRR is higher than 15% as the criteria for judgment on economic feasibility and it can be concluded that the power generation by the multipurpose dam project is satisfactorily feasible.

**Table 3.3.1 Cash Flow of Economic Cost and Benefits of the Long-Term Plan
(Including Dam with Hydropower Generation Project)**

(Unit :PHP Million)												
Year in Order	Year	Economic Cost					Economic Benefits					
		Short - Middle Term (River Improvements)		Long Term (Dam)		Total	Reduction of Flood Damages	Hydro Power Development			Total	Net Benefits
		Project Cost	OM Cost	Project Cost	OM Cost			Power Benefit	Energy Benefit	Subtotal		
0	2013	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	2014	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	2015	365.7	0.0	0.0	0.0	365.7	0.0	0.0	0.0	0.0	0.0	-365.7
3	2016	526.5	0.0	0.0	0.0	526.5	0.0	0.0	0.0	0.0	0.0	-526.5
4	2017	1,687.5	0.0	0.0	0.0	1,687.5	0.0	0.0	0.0	0.0	0.0	-1,687.5
5	2018	1,013.0	0.0	336.3	0.0	1,349.3	0.0	0.0	0.0	0.0	0.0	-1,349.3
6	2019	1,489.7	0.0	168.1	0.0	1,657.8	0.0	0.0	0.0	0.0	0.0	-1,657.8
7	2020	1,025.8	0.0	357.3	0.0	1,383.1	0.0	0.0	0.0	0.0	0.0	-1,383.1
8	2021	15.3	0.0	756.6	0.0	771.9	1,818.8	0.0	0.0	0.0	1,818.8	1,046.8
9	2022	0.0	18.8	273.2	0.0	292.0	1,818.8	0.0	0.0	0.0	1,818.8	1,526.8
10	2023	0.0	18.8	1,471.3	0.0	1,490.0	1,818.8	0.0	0.0	0.0	1,818.8	328.8
11	2024	0.0	18.8	2,690.3	0.0	2,709.1	1,818.8	0.0	0.0	0.0	1,818.8	-890.3
12	2025	0.0	18.8	2,690.3	0.0	2,709.1	1,818.8	0.0	0.0	0.0	1,818.8	-890.3
13	2026	0.0	18.8	2,690.3	0.0	2,709.1	1,818.8	0.0	0.0	0.0	1,818.8	-890.3
14	2027	0.0	18.8	2,690.3	0.0	2,709.1	1,818.8	0.0	0.0	0.0	1,818.8	-890.3
15	2028	0.0	18.8	2,690.3	0.0	2,709.1	1,818.8	0.0	0.0	0.0	1,818.8	-890.3
16	2029	0.0	18.8	2,690.3	0.0	2,709.1	1,818.8	0.0	0.0	0.0	1,818.8	-890.3
17	2030	0.0	18.8	1,429.2	83.8	1,513.8	1,818.8	0.0	0.0	0.0	1,818.8	287.0
18	2031	0.0	18.8	84.1	167.5	270.4	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,529.3
19	2032	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
20	2033	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
21	2034	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
22	2035	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
23	2036	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
24	2037	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
25	2038	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
26	2039	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
27	2040	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
28	2041	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
29	2042	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
30	2043	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
31	2044	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
32	2045	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
33	2046	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
34	2047	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
35	2048	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
36	2049	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
37	2050	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
38	2051	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
39	2052	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
40	2053	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
41	2054	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
42	2055	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
43	2056	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
44	2057	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
45	2058	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
46	2059	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
47	2060	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
48	2061	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
49	2062	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
50	2063	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
51	2064	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
52	2065	0.0	18.8	2,815.7	167.5	3,002.0	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	7,797.7
53	2066	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
54	2067	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
55	2068	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
56	2069	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
57	2070	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
58	2071	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
59	2072	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
60	2073	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
61	2074	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
62	2075	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
63	2076	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
64	2077	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
65	2078	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
66	2079	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
67	2080	0.0	18.8	0.0	167.5	186.3	2,085.5	2,660.0	6,054.2	8,714.2	10,799.7	10,613.4
Total		6,123.5	1,107.2	23,833.7	8,460.8	39,525.2	122,462.8	133,000.0	302,710.0	435,710.0	558,172.8	518,647.6
Source: The Survey Team												
Note: 15% as discount rate was applied according to the Government of the Philippines.												
											EIRR	19.11%
											NPV	3,116.5
											B/C	1.45

CHAPTER 4 UPGRADING BENEFITS OF LAND USE

4.1 Definition of Benefits of Land Use Upgrading

The study was carried out for the economic benefits accrued from land use upgrading for the flood control area regarding on the economic feasibility.

The benefits of upgrading of land use is considered caused by the heightened land price due to change of land use by improvement of safety level derived from the proposed flood risk management project. The change of land use is generally accrued from expansion of building area followed by urbanization and by sprawl phenomenon. In this study, the land price of buildings in the flood control area is considered as the objectives for the valuation, and the heightened price of the land is regarded as the benefits of land use upgrading.

4.2 Land Price

The heightened land price is reflected by land use plan which is being prepared by the Planning and Development Office of CDO but not yet finalized. The comprehensive land use plan showing more concrete area of flood prone area and land price is not yet prepared. Thus, in this study, the land prices on which we based are the zonal values per square meter that are determined by the LGU which are mainly for taxation purpose. The zonal value do not exactly reflect fair market values of properties but is considered the basic value reflecting historical variation..

4.3 Average Land Price by Category

For projection of heightened land price, the past data of zonal values of three years of 1994, 1997 and 2006 of 38 Barangays as the flood control area was utilized. It is assumed that if the Short-Medium Term Plan of the flood control project would be implemented, the growth rate of historical trend of zonal values could be realized in the future because the big scales of flood had not hit the CDO. Most of the floods which happened in the years of 1982, 1991, 1993 and 1998 were 5-year return period and then the zonal values could grow without any serious affects by those floods. For the flood control area, it was used the zonal values at 2006 as the land prices at 2013 because the zonal values at 2006 is the latest published zonal values of land properties by the City and they have not yet updated since then. Besides the survey team conducted the random interviews on actual land prices, it was found that real property prices presently are even much lower than the zonal values at 2006 because of the devastating natural calamities in the recent past. Given limitations of information available, the zonal values at 2006 are sound and fundamental basis of the fair market prices. Therefore the land price at 2006 in the flood prone area is assumed to be the land price at 2013.

4.4 Projection of Land Price

The future zonal values are projected by setting up of annual growth rate by building category taking account of the average annual growth rates of the historical zonal values for 1994, 1997 and 2006 and the devastating natural calamities in the recent past. (See Table 4.4.1)

Table 4.4.1 Projection of Zonal Values of the Flood Control Area

(Unit: PhP/sq.m)

Year	Residential	Commercial	Industrial	Institutional
1994	3,229.8	7,628.0	N.A.	9,288.9
1997	3,647.2	8,697.6	N.A.	10,566.7
2006	10,994.5	13,864.6	9,625.0	N.A.
2013	10,994.5	13,864.6	9,625.0	10,566.7
2020	16,099.9	20,302.7	14,094.5	15,473.4
2021	17,162.5	21,845.7	15,165.6	16,494.6
2030	30,506.7	42,235.4	29,320.5	29,319.6
2040	60,574.5	84,649.5	58,765.0	58,217.3
2050	120,277.6	169,657.1	117,778.7	115,597.1
2060	197,793.5	281,662.8	195,534.8	190,096.5
2070	295,610.1	425,017.4	295,053.8	284,106.6
Average Annual Growth Rate				
1994/2006(20013)	10.7%	5.1%	N.A.	1.1%
2013/2020	5.6%	5.6%	5.6%	5.6%
2020/2030	6.6%	7.6%	7.6%	6.6%
2030/2040	7.1%	7.2%	7.2%	7.1%
2040/2050	7.1%	7.2%	7.2%	7.1%
2050/2060	5.1%	5.2%	5.2%	5.1%
2060/2070	4.1%	4.2%	4.2%	4.1%

Source: "IMPLEMENTATION OF THE REVISED ZONAL VALUES OF REAL THE CITY OF CAGAYAN DE ORO UNDER REVENUE DISTRICT OFFICE NO. 98 CAGAYAN DE ORO CITY), REVENUE REGION NO. 16 (CAGAYAN DE ORO CITY) FOR INTERNAL REVENUE TAX PURPOSES", Republic of the Philippines, DEPARTMENT OF FINANCE, Manila; 1994, 1997 and 2006

Note : 1. The actual land values in 2013 are lower than zonal values in 2006 mainly because the devastating natural calamities including TS Sendong.
2. The shaded figures are the actual data.

The average annual growth rate of zonal values (AAGR, hereinafter) from 2016 to 2020 is set up at 5.6% as the average annual growth rate from 1994 to 2006 by taking account of (i) the economic situation of not completely recovery after the devastating natural calamities including big scale of floods such as TS Sendong(2011, 50-year return period) and TY Pablo(2012, 25-year return period), (ii) lower actual land value than zonal values at 2006 and (iii) the difficulty to prospect the annual average growth rate by category of building at the same level of growth rate before 2006.

The AAGR from 2020 to 2040 is set up by taking into account of (i) prospect of mostly economic recovery from the damages of natural disasters after 2013, (ii) accelerating of growth rate of zonal values by completion of construction for flood risk management project and (iii) expecting higher growth rate of commercial and industrial zonal values than those of other category of buildings.

The AAGR from 2040 to 2050 is assumed to be kept the same level from 2030 to 2040. After 2050, the AAGR is set up by taking into consideration of the growth rate to be not to increase higher than the previous periods but to decrease gradually.

The category of building for zonal values is different from that of this Survey and the zonal values of the commercial and the institutional buildings areas are used as common to two categories of this Survey as shown in Table 4.4.2.

Table 4.4.2 Comparative Table for Category of Building

Zonal Values	F/S
Residential	Residential
Commercial	Commercial
	Services
Industrial	Manufacturing
Institutional	Educational
	Health and Other Institutions

Source: JICA Survey Team

4.5 Total Area of Building in Flood Control Area

Total area of building in the inundated area is estimated multiplying the number of building in the flood control area and the average area of the buildings by each category which was obtained from the result of the socioeconomic survey in this Survey.

Table 4.5.1 Estimates of Average Land Area by Category of Building

Category of Building	Total Number of Building in Flood Control Area (unit)	Average Unit Area (sq.m./unit.)	Total Area of Building in Flood Control Area (sq.m.)
Residential	35,092	70.6	2,478,349.5
Manufacturing	58	62.8	3,643.6
Commercial	4,315	97.6	421,273.0
Services	1,866	107.1	199,885.9
Educational	114	138.7	15,816.4
Health and Other Institutions	162	96.7	15,662.0
Total	41,607	75.4	3,134,630.4

Source: JICA Survey Team (the Result of Socio-economic Survey)

4.6 Area of Inundated Building by Return Period

The total area of inundated building by return period is estimated as shown in Table 4.6.1. It is assumed that the number of inundated building for each mesh is proportional to the rate of inundated area derived from the results of inundation analysis.

Table 4.6.1 Area of Inundated Building by Return Period

Category of Building	(Unit: m ²)				
	2-yr	5-yr	10-yr	25-yr	50-yr
Residential	218,696	324,963	440,565	753,069	850,968
Manufacturing	604	879	1,066	1,480	1,642
Commercial	41,253	59,871	76,591	131,340	145,733
Services	18,766	26,957	33,935	59,977	73,324
Educational	1,326	1,606	2,187	5,418	5,994
Health and Other Institutions	1,524	2,142	2,885	6,231	6,243
Total	282,171	416,418	557,230	957,516	1,083,904

Source: JICA Survey Team

4.7 Land Price of Inundated Building

The total land price of inundated building in 2021, 2030, 2040, 2050, 2060 and 2070 is estimated on the basis of the area of inundated building and the projected zonal values per square meter by category of building as shown in Table 4.8.1 through Table 4.8.3, respectively.

4.8 Expected Annual Upgrading Land Use Benefit

Annual upgrading land use benefit by return period is calculated every year from 2021 as

the first year after the completion of construction of dike and river wall to 2070 as shown in Table 4.8.4, respectively.

Table 4.8.1 Expected Annual Upgrading Land Use Benefits (2021and 2030)

(Unit: PHP Million)							
Items	Year	Category of Building	Return Period(Yr.)				
			2	5	10	25	50
Land Price	2020	Residential	3,521.0	5,231.9	7,093.1	12,124.3	13,700.5
		Manufacturing	8.5	12.4	15.0	20.9	23.1
		Commercial	837.6	1,215.5	1,555.0	2,666.6	2,958.8
		Service	381.0	547.3	689.0	1,217.7	1,488.7
		Education	20.5	24.9	33.8	83.8	92.7
		Health and Other Institution	23.6	33.1	44.6	96.4	96.6
		Total	4,792.2	7,065.1	9,430.5	16,209.7	18,360.4
	2021	Residential	3,753.4	5,577.2	7,561.2	12,924.5	14,604.7
		Manufacturing	9.2	13.3	16.2	22.4	24.9
		Commercial	901.2	1,307.9	1,673.2	2,869.2	3,183.6
		Service	410.0	588.9	741.3	1,310.2	1,601.8
		Education	21.9	26.5	36.1	89.4	98.9
		Health and Other Institution	25.1	35.3	47.6	102.8	103.0
		Total	5,120.7	7,549.1	10,075.6	17,318.6	19,616.9
Upgrading Land Use Benefist (2021-2020)	2021	Residential	232.4	345.3	468.1	800.2	904.2
		Manufacturing	0.6	0.9	1.1	1.6	1.8
		Commercial	63.7	92.4	118.2	202.7	224.9
		Service	29.0	41.6	52.4	92.5	113.1
		Education	1.4	1.6	2.2	5.5	6.1
		Health and Other Institution	1.6	2.2	2.9	6.4	6.4
		Total	328.6	484.0	645.0	1,108.9	1,256.5
Land Price	2029	Residential	6,258.6	9,299.8	12,608.1	21,551.3	24,352.9
		Manufacturing	16.5	23.9	29.0	40.3	44.7
		Commercial	1,619.3	2,350.1	3,006.4	5,155.4	5,720.3
		Service	736.6	1,058.1	1,332.0	2,354.2	2,878.1
		Education	36.5	44.2	60.2	149.0	164.8
		Health and Other Institution	41.9	58.9	79.4	171.4	171.7
		Total	8,709.4	12,835.0	17,115.0	29,421.7	33,332.7
	2030	Residential	6,671.7	9,913.5	13,440.2	22,973.7	25,960.2
		Manufacturing	17.7	25.8	31.2	43.4	48.1
		Commercial	1,742.3	2,528.7	3,234.9	5,547.2	6,155.1
		Service	792.6	1,138.5	1,433.3	2,533.2	3,096.9
		Education	38.9	47.1	64.1	158.9	175.7
		Health and Other Institution	44.7	62.8	84.6	182.7	183.1
		Total	9,307.9	13,716.4	18,288.3	31,439.0	35,619.1
Upgrading Land Use Benefist (2029-2030)	2030	Residential	413.1	613.8	832.1	1,422.4	1,607.3
		Manufacturing	1.3	1.8	2.2	3.1	3.4
		Commercial	123.1	178.6	228.5	391.8	434.7
		Service	56.0	80.4	101.2	178.9	218.7
		Education	2.4	2.9	4.0	9.8	10.9
		Health and Other Institution	2.8	3.9	5.2	11.3	11.3
		Total	598.5	881.4	1,173.3	2,017.3	2,286.4

Source: The Survey Team

Table 4.8.2 Expected Annual Upgrading Land Use Benefits (2040 and 2050)

Items	Year	Category of Building	(Unit: PHP Million)				
			Return Period(Yr.)				
			2	5	10	25	50
Land Price	2039	Residential	12,369.2	18,379.5	24,917.9	42,592.7	48,129.8
		Manufacturing	33.1	48.2	58.4	81.1	90.0
		Commercial	3,257.5	4,727.7	6,047.9	10,371.2	11,507.7
		Service	1,481.8	2,128.6	2,679.7	4,736.0	5,790.0
		Education	72.1	87.3	118.9	294.5	325.8
		Health and Other Institution	82.9	116.4	156.8	338.7	339.4
		Total	17,296.7	25,487.7	33,979.6	58,414.3	66,182.6
	2040	Residential	13,247.4	19,684.5	26,687.0	45,616.8	51,547.0
		Manufacturing	35.5	51.6	62.6	87.0	96.5
		Commercial	3,492.1	5,068.1	6,483.4	11,117.9	12,336.2
		Service	1,588.5	2,281.9	2,872.6	5,077.0	6,206.8
		Education	77.2	93.5	127.3	315.4	348.9
		Health and Other Institution	88.8	124.7	168.0	362.8	363.5
		Total	18,529.5	27,304.3	36,401.0	62,576.9	70,899.0
Upgrading Land Use Benefist (2039-2040)	2040	Residential	878.2	1,304.9	1,769.2	3,024.1	3,417.2
		Manufacturing	2.4	3.5	4.2	5.8	6.5
		Commercial	234.5	340.4	435.5	746.7	828.6
		Service	106.7	153.3	192.9	341.0	416.9
		Education	5.1	6.2	8.4	20.9	23.1
		Health and Other Institution	5.9	8.3	11.1	24.0	24.1
		Total	1,232.8	1,816.5	2,421.3	4,162.6	4,716.4
Land Price	2049	Residential	24,560.5	36,494.6	49,477.3	84,572.7	95,567.1
		Manufacturing	66.4	96.5	117.1	162.6	180.4
		Commercial	6,528.8	9,475.4	12,121.5	20,786.2	23,064.0
		Service	2,970.0	4,266.3	5,370.7	9,492.1	11,604.4
		Education	143.2	173.4	236.0	584.8	646.9
		Health and Other Institution	164.5	231.2	311.4	672.6	673.9
		Total	34,433.3	50,737.4	67,634.0	116,271.0	131,736.8
	2050	Residential	26,304.2	39,085.7	52,990.2	90,577.4	102,352.4
		Manufacturing	71.2	103.5	125.5	174.3	193.4
		Commercial	6,998.9	10,157.6	12,994.2	22,282.8	24,724.7
		Service	3,183.8	4,573.5	5,757.4	10,175.5	12,439.9
		Education	153.3	185.7	252.8	626.3	692.8
		Health and Other Institution	176.2	247.6	333.5	720.3	721.7
		Total	36,887.7	54,353.6	72,453.6	124,556.7	141,124.9
Upgrading Land Use Benefist (2049-2050)	2050	Residential	1,743.8	2,591.1	3,512.9	6,004.7	6,785.3
		Manufacturing	4.8	6.9	8.4	11.7	13.0
		Commercial	470.1	682.2	872.7	1,496.6	1,660.6
		Service	213.8	307.2	386.7	683.4	835.5
		Education	10.2	12.3	16.8	41.5	45.9
		Health and Other Institution	11.7	16.4	22.1	47.8	47.8
		Total	2,454.3	3,616.2	4,819.6	8,285.7	9,388.2

Source: The Survey Team

Table 4.8.3 Expected Annual Upgrading Land Use Benefits (2060 and 2070)

Items	Year	Category of Building	(Unit: PHP Million)				
			Return Period(Yr.)				
			2	5	10	25	50
Land Price	2059	Residential	41,157.6	61,156.5	82,912.4	141,724.2	160,148.4
		Manufacturing	112.3	163.3	198.1	275.1	305.2
		Commercial	11,045.1	16,029.9	20,506.5	35,165.1	39,018.6
		Service	5,024.4	7,217.5	9,085.9	16,058.3	19,631.8
		Education	239.9	290.5	395.6	980.0	1,084.1
		Health and Other Institution	275.7	387.5	521.9	1,127.1	1,129.3
		Total	57,855.2	85,245.2	113,620.3	195,329.8	221,317.3
	2060	Residential	43,256.7	64,275.5	87,141.0	148,952.2	168,315.9
		Manufacturing	118.2	171.8	208.4	289.4	321.0
		Commercial	11,619.5	16,863.5	21,572.9	36,993.7	41,047.6
		Service	5,285.7	7,592.8	9,558.3	16,893.3	20,652.6
		Education	252.2	305.3	415.7	1,030.0	1,139.4
		Health and Other Institution	289.8	407.2	548.5	1,184.6	1,186.9
		Total	60,822.0	89,616.1	119,444.7	205,343.1	232,663.4
Upgrading Land Use Benefist (2059-2060)	2060	Residential	2,099.0	3,119.0	4,228.5	7,227.9	8,167.6
		Manufacturing	5.8	8.5	10.3	14.3	15.9
		Commercial	574.3	833.6	1,066.3	1,828.6	2,029.0
		Service	261.3	375.3	472.5	835.0	1,020.9
		Education	12.2	14.8	20.2	50.0	55.3
		Health and Other Institution	14.1	19.8	26.6	57.5	57.6
		Total	2,966.8	4,370.9	5,824.4	10,013.3	11,346.1
Land Price	2069	Residential	62,102.6	92,278.8	125,106.2	213,847.1	241,647.2
		Manufacturing	171.1	248.8	301.7	419.0	464.9
		Commercial	16,826.6	24,420.6	31,240.4	53,572.0	59,442.5
		Service	7,654.4	10,995.5	13,841.8	24,463.8	29,907.8
		Education	362.0	438.4	596.9	1,478.7	1,635.7
		Health and Other Institution	416.1	584.6	787.4	1,700.6	1,704.0
		Total	87,532.8	128,966.6	171,874.5	295,481.3	334,802.2
	2070	Residential	64,648.8	96,062.2	130,235.6	222,614.8	251,554.8
		Manufacturing	178.3	259.2	314.4	436.6	484.4
		Commercial	17,533.3	25,446.3	32,552.5	55,822.0	61,939.1
		Service	7,975.9	11,457.3	14,423.1	25,491.3	31,163.9
		Education	376.8	456.3	621.3	1,539.4	1,702.8
		Health and Other Institution	433.1	608.6	819.7	1,770.4	1,773.8
		Total	91,146.3	134,289.9	178,966.7	307,674.5	348,618.9
Upgrading Land Use Benefist (2069-2070)	2070	Residential	2,546.2	3,783.4	5,129.4	8,767.7	9,907.5
		Manufacturing	7.2	10.4	12.7	17.6	19.5
		Commercial	706.7	1,025.7	1,312.1	2,250.0	2,496.6
		Service	321.5	461.8	581.4	1,027.5	1,256.1
		Education	14.8	18.0	24.5	60.6	67.1
		Health and Other Institution	17.1	24.0	32.3	69.7	69.9
		Total	3,613.5	5,323.3	7,092.2	12,193.2	13,816.7

Source: The Survey Team

Table 4.8.4 Expected Annual Average Upgrading Land Use Benefits

(Unit: PHP Million)								
Year	Return Period	Average Annual Probability of Occurrence (Pi)	Without Project Non Heightend Land Price	With Project Hightened Land Price (Di)	Ave. Hightened Land Price (Di-1+Di)/2	Interval Probability (Pi-1-Pi)	Annual Ave. Hightened Land Price (Di-1+Di)/2	Expected Ave. Annual Hightened Land Price
2021	2-yr	0.50	328.6	328.6	0	0	0	0
	5-yr	0.20	484.0	484.0	406	0	122	122
	10-yr	0.10	645.0	645.0	565	0	56	178
	25-yr	0.04	1,108.9	1,108.9	877	0	53	231
2050	2-yr	0.50	2,454.3	2,454.3	0	0	0	0
	5-yr	0.20	3,616.2	3,616.2	3035	0	911	911
	10-yr	0.10	4,819.6	4,819.6	4218	0	422	1332
	25-yr	0.04	8,285.7	8,285.7	6553	0	393	1726
2070	2-yr	0.50	3,613.5	3,613.5	0	0	0	0
	5-yr	0.20	5,323.3	5,323.3	4468	0	1341	1341
	10-yr	0.10	7,092.2	7,092.2	6208	0	621	1961
	25-yr	0.04	12,193.2	12,193.2	9643	0	579	2540
Source: The Survey Team								

4.9 Economic Cost and Investment Schedule

The economic cost and investment schedule have already been described in the chapter of the Master Plan and are abbreviated in this section.

4.10 Result of Economic Analysis for the Benefits of Land Use Upgrading

The cash flow of economic cost and benefits is shown in Table 4.10.1. EIRR, NPV, and BC Ratio are estimated at 22.24%, PHP 2,114.1 million and 1.77, respectively. It could be judged that this project is economically feasible because the EIRR is higher than 15.0% as the criteria of the economic feasibility in the Philippines.

**Table 4.10.1 Cash Flow of Economic Cost and Benefits for the Short-Medium-Term Plan
(Including Benefits of Land Use Upgrading)**

(Unit: PHP Million)								
Year in Order	Calendar Year	Economic Cost			Economic Benefits			Net Benefits
		Project Cost	OM Cost	Total	Reduced Flood Damages	Upgrading Land Use	Total	
0	2013	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	2014	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	2015	365.7	0.0	365.7	0.0	0.0	0.0	-365.7
3	2016	526.5	0.0	526.5	0.0	0.0	0.0	-526.5
4	2017	1,687.5	0.0	1,687.5	0.0	0.0	0.0	-1,687.5
5	2018	1,013.0	0.0	1,013.0	0.0	0.0	0.0	-1,013.0
6	2019	1,489.7	0.0	1,489.7	0.0	0.0	0.0	-1,489.7
7	2020	1,025.8	0.0	1,025.8	0.0	0.0	0.0	-1,025.8
8	2021	15.3	0.0	15.3	1,818.8	231.0	2,049.7	2,034.4
9	2022	0.0	15.69	15.7	1,818.8	246.9	2,065.6	2,049.9
10	2023	0.0	15.7	15.7	1,818.8	263.8	2,082.6	2,066.9
11	2024	0.0	15.7	15.7	1,818.8	282.0	2,100.8	2,085.1
12	2025	0.0	15.7	15.7	1,818.8	301.4	2,120.2	2,104.5
13	2026	0.0	15.7	15.7	1,818.8	322.2	2,140.9	2,125.2
14	2027	0.0	15.7	15.7	1,818.8	344.3	2,163.1	2,147.4
15	2028	0.0	15.7	15.7	1,818.8	368.0	2,186.8	2,171.1
16	2029	0.0	15.7	15.7	1,818.8	393.4	2,212.1	2,196.4
17	2030	0.0	15.7	15.7	1,818.8	420.4	2,239.2	2,223.5
18	2031	0.0	15.7	15.7	1,818.8	452.0	2,270.8	2,255.1
19	2032	0.0	15.7	15.7	1,818.8	485.9	2,304.7	2,289.0
20	2033	0.0	15.7	15.7	1,818.8	522.4	2,341.1	2,325.4
21	2034	0.0	15.7	15.7	1,818.8	561.6	2,380.3	2,364.6
22	2035	0.0	15.7	15.7	1,818.8	603.7	2,422.5	2,406.8
23	2036	0.0	15.7	15.7	1,818.8	649.0	2,467.8	2,452.1
24	2037	0.0	15.7	15.7	1,818.8	697.7	2,516.5	2,500.8
25	2038	0.0	15.7	15.7	1,818.8	750.0	2,568.8	2,553.1
26	2039	0.0	15.7	15.7	1,818.8	806.3	2,625.1	2,609.4
27	2040	0.0	15.7	15.7	1,818.8	866.8	2,685.6	2,669.9
28	2041	0.0	15.7	15.7	1,818.8	928.6	2,747.4	2,731.7
29	2042	0.0	15.7	15.7	1,818.8	994.8	2,813.5	2,797.8
30	2043	0.0	15.7	15.7	1,818.8	1,065.7	2,884.4	2,868.7
31	2044	0.0	15.7	15.7	1,818.8	1,141.6	2,960.4	2,944.7
32	2045	0.0	15.7	15.7	1,818.8	1,223.0	3,041.8	3,026.1
33	2046	0.0	15.7	15.7	1,818.8	1,310.2	3,128.9	3,113.2
34	2047	0.0	15.7	15.7	1,818.8	1,403.5	3,222.3	3,206.6
35	2048	0.0	15.7	15.7	1,818.8	1,503.6	3,322.3	3,306.6
36	2049	0.0	15.7	15.7	1,818.8	1,610.7	3,429.5	3,413.8
37	2050	0.0	15.7	15.7	1,818.8	1,725.5	3,544.3	3,528.6
38	2051	0.0	15.7	15.7	1,818.8	1,758.5	3,577.3	3,561.6
39	2052	0.0	15.7	15.7	1,818.8	1,792.2	3,610.9	3,595.3
40	2053	0.0	15.7	15.7	1,818.8	1,826.5	3,645.2	3,629.5
41	2054	0.0	15.7	15.7	1,818.8	1,861.4	3,680.2	3,664.5
42	2055	0.0	15.7	15.7	1,818.8	1,897.0	3,715.8	3,700.1
43	2056	0.0	15.7	15.7	1,818.8	1,933.3	3,752.1	3,736.4
44	2057	0.0	15.7	15.7	1,818.8	1,970.3	3,789.1	3,773.4
45	2058	0.0	15.7	15.7	1,818.8	2,008.0	3,826.8	3,811.1
46	2059	0.0	15.7	15.7	1,818.8	2,046.4	3,865.2	3,849.5
47	2060	0.0	15.7	15.7	1,818.8	2,085.6	3,904.3	3,888.6
48	2061	0.0	15.7	15.7	1,818.8	2,127.1	3,945.8	3,930.1
49	2062	0.0	15.7	15.7	1,818.8	2,169.4	3,988.2	3,972.5
50	2063	0.0	15.7	15.7	1,818.8	2,212.6	4,031.3	4,015.6
51	2064	0.0	15.7	15.7	1,818.8	2,256.6	4,075.4	4,059.7
52	2065	0.0	15.7	15.7	1,818.8	2,301.5	4,120.3	4,104.6
53	2066	0.0	15.7	15.7	1,818.8	2,347.3	4,166.1	4,150.4
54	2067	0.0	15.7	15.7	1,818.8	2,394.1	4,212.8	4,197.1
55	2068	0.0	15.7	15.7	1,818.8	2,441.7	4,260.5	4,244.8
56	2069	0.0	15.7	15.7	1,818.8	2,490.3	4,309.1	4,293.4
57	2070	0.0	15.7	15.7	1,818.8	2,539.9	4,358.6	4,342.9
Total		6,123.5	768.9	6,892.4	90,938.1	64,935.7	155,873.8	148,981.4
Source: The Survey Team							EIRR	22.24%
Note: 15% as the discount rate was applied according to							NPV	2,114.1
the Government of the Philippines.							B/C	1.77

Supporting Report
Appendix M
TOR for Consulting Service

PREPARATORY SURVEY
FOR
FLOOD RISK MANAGEMENT PROJECT
FOR
CAGAYAN DE ORO RIVER (FRIMP-CDOR)
IN
THE REPUBLIC OF THE PHILIPPINES

FINAL REPORT

VOLUME IV SUPPORTING REPORT (II)

Appendix M
TOR OF CONSULTING SERVICES

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List of Attachments

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Chapter 1 TOR for Consulting Services on Detailed Design

The Terms of Reference(TOR) for the Consulting Services on the Detailed Design of Flood Risk Management Project for Cagayan de Oro River(FRIMP-CDOR) is composed of the following Sections, out of which Section 2 and Section 3 are attached in Attachment M1.

- (1) Background
- (2) Objective of Consulting Services (Attached)
- (3) Scope of Consulting services (Attached)
- (4) Expected Time Schedule
- (5) Staffing
- (6) Reporting
- (7) Undertaking of the Government

Chapter 2 TOR for Consulting Services on Construction Supervision

The Terms of Reference(TOR) for the Consulting Services on the Construction Supervision of Flood Risk Management Project for Cagayan de Oro River(FRIMP-CDOR) is composed of the following Sections, out of which Section 2 and Section 3 are attached in Attachment M2.

- (1) Background
- (2) Objective of Consulting Services (Attached)
- (3) Scope of Consulting services (Attached)
- (4) Expected Time Schedule
- (5) Staffing
- (6) Reporting
- (7) Undertaking of the Government

2. Objectives of Consulting Services

27. The consulting services shall be provided by an international consulting firm (hereinafter referred to as "the Consultant") in association with national consultants in compliance with Guidelines for the Employment of Consultants under Japanese ODA Loans, April 2012. The objective of the consulting services is to achieve the efficient and proper preparation and implementation of the FRIMP-CDOR Project through the following works:

- 1) Preparation of pre-qualification documents
- 2) Preparation of the detailed design and bidding document;
- 3) Additional Study Regarding Environmental Considerations;
- 4) Review and Implementation of Resettlement Action Plan (RAP), and
- 5) Transfer of technology.

3.Scope of Consulting Services

28. The services that the Consultant is responsible for carrying out on behalf of and in collaboration with DPWH are stated below. Other government offices, such as, Department of Environment and Natural Resources (DENR), Office of the Civil Defense (OCD), the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), Local Government Units (LGU), Non-Government Organizations (NGO) and other organizations concerned will be extensively involved in the implementation of the consulting services. DPWH will make all the coordination and arrangement with the said agencies/organizations concerned and provide necessary data/information to the Consultant.

29. The Consultant will coordinate with other agencies/organizations concerned in order to reach a common ground for the implementation of the activities at every stage of the consulting services.

3. 1 Detailed Design

30. The Consultant will conduct the following activities to prepare the detailed design and bidding documents for the FRIMP-CDOR Project through the following activities:

- (1) To prepare the detailed design; and
- (2) To prepare bidding documents including tender drawings.

31. When preparing bidding documents for procurement of works, the Consultant will make sure to meet the followings:

In preparation of Prequalification Document, the Consultant shall:

- (a) Define technical and financial requirements, capacity and/or experience for PQ criteria taking into consideration technical feature of the Project; and
- (b) Prepare PQ documents in accordance with the latest version of Standard Prequalification Documents under Japanese ODA Loans.

In preparation of Bidding Document, the Consultant shall:

(c) Prepare bidding documents in accordance with the latest version of Standard Bidding Documents under Japanese ODA Loans for Procurement of Works together with all relevant specifications, drawings and other documents;

(d) Prepare bidding documents which includes the clauses to have Contractor comply with the requirement of the Environmental Management Plan (EMP) and JICA Guidelines for environmental and social considerations (April 2010) (JICA Environmental Guidelines

32. More specifically, the Consultant will provide the following:

(a) Inception Stage

- 1) To collect and review all of the available existing data to be utilized, and determine its adequacy and appropriateness;
- 2) To review the feasibility study prepared by Preparatory Survey for the FRIMP-CDOR Project and to conduct the site survey to confirm if the current conditions on site will influence the feasibility design previously carried out;
- 3) To define the work to be done and data required to be collected to progress the services; to identify the points and areas where the topographical survey, the soils/materials survey and any other surveys are to be conducted;
- 4) To seek DPWH's comments on the Inception Report that includes the items 1), 2) and 3) stated above, and to obtain JICA's approval.

(b) Survey and Study

- 5) To undertake the topographical survey for preparation of the topographic map and all other necessary data for the detailed engineering design including the following;
 - Establishment of horizontal and vertical control monuments
 - River Center-line survey
 - Topographic profile survey along the center line
 - River Cross-section survey (Interval of cross-sections will be 20 m or more for straight and uniform river reaches, 10 m at minor bends and 5 to 10 m at sharp bends.)
 - Topographic survey to reflect all natural changes and man-made structures with contour lines
- 6) To purchase satellite images to cover the project area, if it is deemed necessary due to any big change in site conditions.
- 7) To undertake the soils/materials survey and the geotechnical investigation;
 - To undertake test pitting, boring and corresponding laboratory tests.
 - To collect materials samples at candidate material sources, and to undertake necessary laboratory tests for samples.

- To study utilization of materials for embankment.
 - Material Resource Investigation at quarry site
- 8) To study possibility of liquefaction, and existence of soft ground based on the surveys above; to study necessary countermeasures to be incorporated in the detailed engineering design if liquefaction layers and soft ground layers are confirmed;
 - 9) To conduct consultation meeting, in order to coordinate with stakeholders in undertaking parcellary survey, and conduct the parcellary survey in close coordination with respective District Engineering Offices of DPWH and PMO;
 - 10) To conduct the study on disposal of dredged materials, including the activities stated below;
 - To prepare the plan on sampling materials to be dredged, which will clarify the sampling points, to seek DPWH's comments on it, and to obtain JICA's approval.
 - To take samples of materials in accordance with the plan mentioned above, and to conduct toxicity characteristic leaching procedure (TCLP) test, elutriate test, particle size distribution test for samples.
 - To establish the methodology of inspection to secure safe dumping of dredged/excavated materials.

(c) Project Definition Stage

- 11) To define the expected functions of the FRIMP-CDOR Project (i.e., pertinent spec, required output, etc.);
- 12) To establish the following design criteria and standards reflecting the surveys and studies mentioned above to fulfill required functions, in close consultation with the Bureau of Design (BOD) and PMO-Flood Control (FCSEC) of DPWH;
 - Typical cross-sections of Cagayan de Oro River and disposal site
 - Design criteria and standards of revetment, embankment, flood wall, sluiceway, dredging, disposal site, and other structures, if any
- 13) To define the approach to implementation of the FRIMP-CDOR Project (i.e., the project delivery system)
- 14) To define alternative solutions that can technically meet the required functions, develop alternatives to a level that will permit preliminary global costing of each estimate, and propose to select the alternatives to be examined in more detail;
- 15) To seek DPWH's comments on the Project Definition Report that includes the items 10), 11), 12) and 13) stated above and presents the results of surveys conducted, and to obtain JICA's approval.

(d) Detailed Engineering Design

- 16) To conduct further surveys and investigations as necessary;

- 17) To conduct hydraulic model test concerning a proposed retarding basin particularly and other facilities as required based on the survey results. Results of the model test shall be reflected in the detailed design.
- 18) To develop detailed engineering design of the selected alternative in accordance with the design criteria and standards established to the required level of detail and according to the agreed implementation approach and packaging (i.e., the designs may be developed to the level required for construction to proceed, or be developed for tendering on the assumption that further drawings will be issued during construction)
- 19) To prepare all necessary design drawings at an appropriate scale for the civil works to be implemented;
- 20) To estimate quantities in accordance with the construction pay items;
- 21) To prepare the construction execution plan covering construction procedures, construction schedule, location and size of construction camp and equipment motor pool/workshop, safety measures, methodologies to mitigate environmental impacts, disposal sites of dredged materials, materials sources, material transport routes and traffic control measures along the transport routes, and environmental monitoring system;
- 22) To study inflow of construction materials and outflow of construction waste and disposal materials and identify all negative impacts; to specify possible mitigation measures in the special provision of the construction contract;
- 23) To prepare the Traffic Management Plan during construction to avoid or at least mitigate traffic congestion, traffic accidents, traffic disturbance to school children, commuters, local business, etc, that is to be specified in the special provisions of the construction contract;
- 24) To undertake unit price analysis classified into labor, material, equipment, tax, overheads, profit, etc; to estimate cost based on the established unit prices;
- 25) To perform price analysis and cost estimates as construction proceeds
- 26) To perform constructibility review and value engineering review;
- 27) To seek DPWH's comments on the Detailed Design Report that includes all the items stated above, and to obtain JICA's approval.

(e) Tender Documentation

- 28) To prepare bidding documents including the followings;
 - Pre-qualification documents and its evaluation criteria
 - Bidding documents including the followings and Bid evaluation criteria
 - a. Instruction to Bidders
 - b. Form of Contract
 - c. General Conditions of Contract
 - d. Special Provisions of Contract
 - e. Form of Tender
 - f. Technical Specifications

- g. Plans
- Detailed cost estimate

3.2 Additional Study Regarding Environmental Considerations

33. The Consultant will conduct the study on the site and its surroundings regarding adverse environmental impact, and will carefully prepare environmental consideration activities through the preparation of detailed engineering design, bidding documents, the Environmental Management Plan (EMP) and the Environmental Monitoring Plan (EMoP) to ensure that the Project comply with the JICA's Environmental and Social Guidelines.

34. More specifically, the Consultant will provide the following:

- (1) To review Environment Impact Statement (EIS), and revision/updates of EMP and EMoP, if necessary;
- (2) To assist DPWH in preparing EMP and EMoP in accordance with EIS and ECC.
- (3) To monitor the compliance of the FRIMP-CDOR Project with conditions stated in the Environmental Compliance Certificate (ECC), and make recommendations on environmental mitigation measures to DPWH and contractors of the FRIMP-CDOR Project when necessary;
- (4) To assist DPWH obtaining EIS/IEE from DENR, when necessary. To reflect the requirement of ECC into bidding documents, when ECC is already issued;
- (5) To provision of on-the-job-training to DPWH staffs in management activity of contractors of implementation of monitoring of environmental management plans;.
- (6) To assist DPWH in preparation of environmental monitoring report which is to be submitted to JICA as a part of quarterly progress report, by filling in the monitoring form(Form to be prepared);
- (7) To assist DPWH in preparation of the answer to the request from JICA's advisory committee(JICA Advisory Committee for Environmental and Social Considerations) if necessary; and
- (8) To assist DPWH in causing JICA to be furnished with all environmental relevant information on the Project as JICA may reasonably request.

3.3 Review and Implementation of Resettlement Action Plan (RAP)

35. The Consultant will assist DPWH in finalizing and implementing the RAP entirely, fairly and timely with full transparency, and in monitoring of implementation of RAP and livelihood restoration of of Project Affected Families (PAFs). The Consultant will prepare necessary livelihood restoration program, and assist DPWH in provision of necessary assistances to PAFs. .

36. More specifically, the Consultant will provide the following:

- (1) To review the Resettlement Action Plan (RAP) and to make necessary revision/updates of RAP based on the results of Detailed Design.

- (2) To review all the data/information of Project Affected Families (PAFs) collected during preparation of RAP to establish the correct Inventory of Loss. In case new areas to be acquired, carry out census for additional areas;
- (3) To assist DPWH in identifying the Entitled PAFs, and in preparation/updating of the list of Entitled PAFs and 'Payment Statement' for individual Entitled PAFs. The places where each Entitled PAFs will relocate to are necessary to be recorded so that DPWH can implement monitoring on income and living conditions of resettled people;
- (4) To assist DPWH in evaluation of compensation and ensure that the amount is equivalent to full replacement cost;
- (5) To assist DPWH in payment of compensations and delivering assistances following recommendation of the Local Inter-Agency Committee(LIAC) and ensures that all resettlement benefits are paid accordingly, and provide technical services for keeping and updating records related to resettlement activities such as entitled people's file, calculation and processing of payment, progress, and performance of participatory monitoring;
- (6) To ensure dissemination of information on the project and resettlement policy to the PAFs and others (community groups, local administration, etc.) who are instrumental in effective and transparent implementation of the RAP. To assist DPWH in informing Entitled PAFs about resettlement benefits adequately;
- (7) To assist DPWH and the local representatives in organizing consultation and recording the outcome of the meetings;
- (8) To assist DPWH in the physical resettlement activities of PAFs (such as informing the PAFs about the documents required for collecting compensation and resettlement benefit);
- (9) To ensure that the PAFs are fully aware of the grievance redress procedure and the process of bringing their complaints, investigate the veracity of the complaints, and recommends actions/measures to settle them amicably, fairly and transparently before they go to the redress committee or the courts of law; and To provide technical services with grievance redress committee for keeping and updating records when necessary;
- (10) To prepare livelihood restoration program and assist DPWH in provision of necessary assistances for restoration of income and living conditions of PAFs, in coordination with related organizations, when necessary;
- (11) To assist DPWH in conducting social assessment during early stage of the detailed design stage and review the existing income restoration plan and special assistance plan for vulnerable PAFs and revise/update the contents of the plans if necessary based on priorities identified with support of relevant government agencies and Non-Governmental Organizations (NGOs). The following contents should be included in the plans
 - i. Skills Training
 - ii. Project related Job Opportunities
 - iii. Provision of social welfare grant

iv. Provision of Agricultural Extension Services

v. Provision of the special allowance to vulnerable PAFs;

- (12) To monitor and supervise resettlement activities, including utilization of manpower input, updates of RAP, progress, grievance redress, and restoration of income and living conditions of PAFs, etc;
- (13) To assist DPWH in preparation of monthly and annual monitoring reports on resettlement;
- (14) To assist DPWH in preparation of quarterly monitoring reports on resettlement, which is to be submitted to JICA as a part of quarterly progress report, based on the monitoring plan described in RAP;
- (15) To assist DPWH in preparation of the answer to the request from JICA's advisory committee (JICA Advisory Committee for Environmental and Social Considerations), if necessary; and
- (16) To assist DPWH to furnish JICA with project-related information on resettlement and social issues as JICA may reasonably request.

3.4 Transfer of Technology

37. The Consultant shall carry out the technology transfer as an important aspect in design works. The Consultant shall provide the opportunity to the DPWH officers and staffs to be involved in the working team of the Consultant during the design works for their capacity building wherever possible. If requested by DPWH, the Consultant shall brief and demonstrate the survey and design procedure. The consultant shall assist DPWH and its staff to build their capacity as a part of on the job training under the Project.

2. OBJECTIVE OF CONSULTING SERVICES

27. The consulting services shall be provided by an international consulting firm (hereinafter referred to as "the Consultant") in association with national consultants in compliance with Guidelines for the Employment of Consultants under Japanese ODA Loans, April 2012. The objective of the consulting services is to achieve the efficient and proper preparation and implementation of the FRIMP-CDOR Project through the following works:

- 1) Assistance to DPWH in bidding procedure;
- 2) Construction supervision;
- 3) Facilitation of implementation of Environmental Management Plan (EMP) and Environmental Monitoring Plan (EMoP);
- 4) Facilitation of implementation of Resettlement Action Plan (RAP)
- 5) Technical assistance in formulation of non-structural measures; and
- 6) Transfer of technology.

3. SCOPE OF CONSULTING SERVICES

28. The Consultant shall perform his duties during the construction period in accordance with the contracts to be executed between the Employer and the contractors. FIDIC MDB Harmonized Edition (2010) complemented with the Specific Provisions as included in the Standard Bidding Documents under Japanese ODA Loans for Procurement of Works will be applied to the civil works of the Project.

29. The services that the Consultant is responsible for carrying out on behalf of and in collaboration with DPWH are stated below. Other government agencies and/or institutions, such as, Department of Environment and Natural Resources (DENR), Office of the Civil Defense (OCD), the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), Local Government Units (LGU), Non-Government Organizations (NGO) and other organizations concerned will be extensively involved in the implementation of the consulting services. DPWH will make all the coordination and arrangement with the said agencies/organizations concerned and provide necessary data/information to the Consultant.

30. The Consultant will coordinate with other agencies/organizations concerned in order to reach a common ground for the implementation of the activities at every stage of the consulting services.

3.1 Bidding Procedure

31. The Consultant will conduct the following activities at the pre-construction stage:

- (1) To familiarize with pre-qualification documents and its evaluation criteria prepared by the consulting services for Detailed Design, and assist DPWH in the evaluation of pre-qualification;
- (2) To review and finalize detailed design prepared by the consulting services for the Detailed Design
- (3) To review and finalize bid documents including tender drawings; and
- (4) To assist DPWH in the evaluation of bids and awarding of contract for construction of the Project works:

Assistance in Pre-Qualification(PQ)

- (a) Assist DPWH in PQ announcement, addendum/corrigendum, and clarifications to the applicants' queries;
- (b) Evaluate PQ applications in accordance with the criteria set forth in PQ documents;
- (c) Prepare a PQ evaluation report for approval of the PQ evaluation committee

Assistance in Bidding Procedure

- (a) Assist DPWH in issuing bid invitation, conducting pre-bid conferences, issuing addendum/corrigendum, and clarifications to bidders' queries.
- (b) Evaluate bids in accordance with the criteria set forth in the bidding documents. In such evaluation, the Consultant shall carefully confirm that bidders' submissions in their technical proposal including, but not limited to, site organization, mobilization schedule, method statement, construction schedule, safety plan, and EMP have been prepared in harmony each other and will meet such requirements set forth in applicable laws and regulations, specifications and other parts of the bidding documents;
- (c) Prepare a bid evaluation report for approval of the bid evaluation committee;
- (d) Assist DPWH in contract negotiation by preparing agenda and facilitating negotiations including preparation of minutes of negotiation meeting; and
- (e) Prepare a draft and final contract agreement

3.2 Construction Supervision

32. The Consultant shall act as the Engineer to execute construction supervision and contract administration services in accordance with the power and authority to be delegated by DPWH:

- (a) Provide assistance to the Employer concerning variations and claims which are to be ordered/issued at the initiative of the Employer;
- (b) Issue the commencement order to the Contractors;
- (c) Provide recommendation to DPWH for acceptance of the Contractor Performance security, advance payment security and required insurances;
- (d) Review and approve the proposals submitted by the contractors which include work program, method statements, material sources, manpower and equipment deployment. In light of Section 3.03 of Guidelines for the Employment of Consultants under Japanese ODA Loans, April 2012, the Consultant shall pay attention, in particular, to whether such proposals will meet the safety requirements set forth in the applicable laws and regulations, the specifications or other parts of the contract;

- (e) Explain and/or adjust ambiguities and/or discrepancies in the Contract Documents and issue any necessary clarifications or instructions;
- (f) Review, verify and further detail the design of the works, approve the Contractors' working drawings and, if necessary, issue further drawings and/or give instructions to the Contractor;
- (g) Liaise with the appropriate authorities to ensure that all the affected utility services are promptly relocated;
- (h) Carry out field inspections on the contractor's setting out to ensure that the works are carried out in accordance with drawings and other design details;
- (i) Assess the adequacy of all inputs such as materials and labor provided by the contractor and his methods of works in relation to the required rate of progress; to keep and regularly update a list of the Contractor's equipment (and its condition) to ensure compliance with the list of equipment which the Contractor provided in his bid;
- (j) Regularly monitor physical and financial progress against the milestones as per the contract so as to ensure completion of contract in time;
- (k) Supervise the works so that all the contractual requirements will be met by the contractors, including those in relation to i) quality of the works, ii) safety and iii) protection of the environment. In light of Section 3.03 of Guidelines for the Employment of Consultants under Japanese ODA Loans (April 2012), the Consultant shall confirm that an accident prevention officer proposed by contractor is duly assigned at the project site and that construction works are carried out according to the requirements set forth in the applicable laws and regulations, the specifications or other parts of the contract ;
- (l) Supervise field tests, sampling and laboratory test to be carried out by the contractors;
- (m) Inspect the construction method, equipment to be used, workmanship at the site, and attend shop inspection and manufacturing tests in accordance with the specifications;
- (n) Survey and measure the work output performed by the contractors and issue payment certificates such as interim payment certificates and final payment certificate as specified in the contract;
- (o) Coordinate the works among different contractors employed for the Project;
- (p) Modify the designs, technical specifications and drawings, relevant calculations and cost estimates as may be necessary in accordance with the actual site conditions, and issue variation orders (including necessary actions in relation to the works performed by other contractors working for other projects, if any);
- (q) Carry out timely reporting to DPWH for any inconsistency in executing the works and suggesting appropriate corrective measures to be applied;
- (r) Monitor the strict adherence to the safety plan during construction as follows:

- i) The Consultant shall review the Program submitted by contractors from the point of views of securing the safety during construction and require them to submit further details, if necessary
- ii) During the supervision of construction works, the Consultant shall confirm that an accident prevention officer proposed by contractor is duly assigned at the project site and that construction works are carried out according to the safety plan as well as the safety measures prescribed in the Program. If the Consultant recognizes any questions regarding the safety measures in general including the ones mentioned above, the Consultant shall require contractors to make appropriate improvements
- (s) Inspect, verify and determine claims issued by the parties to the contract (i.e. DPWH and contractors) in accordance with the civil works contract;
- (t) Perform the inspection of the works and to issue certificates such as the Taking-Over Certificate, Performance Certificate as specified in the civil works contract;
- (u) Prepare disbursement schedule on a quarterly basis for submission to JICA, through DPWH
- (v) Supervise commissioning and carry out testing during commissioning;
- (w) Provide periodic and/or continuous inspection services during defects liability period and if any defects are noted, instruct the contractor to rectify;
- (x) Check and certify as-built drawings for the parts of the works designed by the contractors, if any; Prepare and submit an operation and maintenance manual for the facilities constructed in the Project;
- (y) To prepare Operation and Maintenance (O&M) manual of flood control facilities constructed in the FRIMP-CDOR Project; to prepare annual O&M plan including cost estimate, staffing and equipment required in consultation with DPWH; and
- (z) Prepare and submit reports to the DPWH.

3.3 Facilitation of Implementation of Environmental Management Plan (EMP) and Environmental Monitoring Plan (EMoP)

33. The Consultant shall, in accordance with JICA Environmental Guidelines (April, 2010) provide the following

- (a) Update EMP as appropriate; incorporate necessary technical specifications with design and contract documentation;
- (b) Assist DPWH in dissemination and explanation of additionally confirmed and identified environmental issues to public including holding public consultations;
- (c) During the preparation of bidding documents, clearly identify environmental responsibilities as explained in the EIA/IEE and EMP;

- (d) To be the focal point, together with DPWH, for the management of project related environmental impacts, and to support DPWH bringing the grievances, where grievances regarding environmental impact are planned to be dealt with
- (e) Assist DPWH to review the Construction Contractor's Environmental Program to be prepared by the contractor in accordance with EMP, relevant plans and JICA Environmental Guidelines and to make recommendations to DPWH regarding any necessary amendments for its approval
- (f) Assist DPWH to implement the measures identified in the EMP
- (g) Monitor the effectiveness of EMP and negative impacts on environment caused by the construction works and provide technical advice, including a feasible solution, so that DPWH can improve situation when necessary;
- (h) Assist DPWH in monitoring the compliance with conditions stated in the EPC and the requirements under EMP and JICA Environmental Guidelines
- (i) Assist DPWH in preparation of the answer to the request from JICA's advisory committee for environmental and social considerations if necessary
- (j) Assist DPWH in causing JICA to be furnished with all environmental relevant information on the Project as JICA may reasonably request
- (k) Assist DPWH in the capacity building of DPWH staff on environmental management through on-the-job training on environmental assessment techniques, mitigation measure planning, supervision and monitoring, and reporting

3.4 Facilitation of Implementation of Resettlement Action Plan (RAP)

34. The Consultant will assist DPWH in implementing the RAP entirely, fairly and timely with full transparency, and in monitoring of implementation of RAP and livelihood restoration of Project Affected Families (PAFs)

- (a) Update and/or prepare RAP as necessary based on detailed design in accordance with the agreed resettlement framework, including entitlement matrix and compensation plan; coordinate with various agencies in preparing the procedures for timely land acquisition and disbursement of compensation to project affected Families (PAFs)
- (b) Assist DPWH in identifying the eligible PAFs, and in preparation/updating of the list of eligible PAFs and 'Payment Statement' for individual eligible PAFs. The places where each eligible PAFs will relocate to are necessary to be recorded so that DPWH could implement monitoring on income and living conditions of resettled persons
- (c) Assist DPWH in conducting social assessment and review the existing income restoration plan and special assistance plan for vulnerable PAFs and revise/update the contents of the plans if necessary based on priorities identified with support of relevant government agencies and Non-Governmental Organizations (NGOs). The following contents should be included in the plans
 - i. Skills Training

- ii. Project related Job Opportunities
 - iii. Provision of social welfare grant
 - iv. Provision of Agricultural Extension Services
 - v. Provision of the special allowance to vulnerable PAFs
- (d) Assist DPWH) to implement the measures identified in the revised RAP
 - (e) Monitor land acquisition and compensation activities being undertaken by DPWH and/or competent authorities, and report the results in monthly progress reports;
 - (f) Assist in procurement of Implementation NGO (INGO) and external monitoring agency (EMA), as may be required in RAP;
 - (g) Assist DPWH in facilitating stakeholder's participation (including focus group discussions for vulnerable PAFs) and providing feedback their comments on RAP as well as preparing necessary records of the meeting and discussions;
 - (h) Ensure dissemination of information on the project and resettlement policy to the PAFs and others (community groups, local administration, NGOs etc.) who are instrumental in effective and transparent implementation of the RAP;
 - (i) Assist DPWH in organizing public consultations and/or focus group discussions and recording the outcome of the meetings;
 - (j) Assist DPWH in establishment of grievance redress mechanism including formation of Grievance Redress Committee and ensuring effective functions of GRM such as updating all records;
 - (k) Assist DPWH to ensure that the PAFs are fully aware of the grievance redress procedure and the process of bringing their complaints, investigate the veracity of the complaints, and recommends actions/measures to settle them amicably, fairly and transparently before they go to the redress committee or the courts of law;
 - (l) Assist DPWH in discussing with JICA on the revision/updates of the RAP if necessary;
 - (m) Assist DPWH in the discussion with JICA on JICA's concurrence to the income restoration plan and special assistance plan for vulnerable PAFs if necessary;
 - (n) Assist DPWH in preparation of the answer to the request from JICA's advisory committee(JICA Advisory Committee for Environmental and Social Considerations), if necessary; and
 - (o) Assist DPWH to furnish JICA with project-related information on resettlement and social issues as JICA may reasonably request.

3.5 Non-Structural Measures

35. Since non-structural flood mitigation measures proposed in the Feasibility Study Report, such as technical assistance for Flood management planning / DRRM policy,

Hydrologic study and Watershed management are to be implemented together with the structural flood mitigation works, the Consultant will conduct technical assistance in formulation of non-structural flood mitigation measures applicable in the FRIMP-CDOR Project and assist DPWH, concerned agencies and LGUs concerned as follows:

(1) Preparation/Update of Flood Hazard Map, Evacuation Planning

Following measures are proposed:

- Preparation/Update of Flood Hazard Map
- Evacuation Planning (Number, Location, Capacity of Facilities (Area, Water Supply, Toilet, etc.), Route, Transportation, Role, etc.)

(2) FFWS

PAGASA is planning to introduce FFWS for the CDO River Basin with an open-ended type as an initial development stage with a limited number of monitoring stations (rain gauges and water level gauges), which is to be connected to "River Center" to be constructed in PAGASA compound which is located in Barangay Molugan, El Salvador Misamis Oriental, however, details of the type of the system are not known. Following measures are proposed:

- Review of flood model established in this Survey
- Study on additional rainfall and water level stations and revision of model due to the addition
- Establishment of Step 1 model
- Capacity development for FFWS PAGASA staff
- Preliminary study on future System based upon cooperation between PAGASA Central Office- Hydro Meteorological Division and PAGASA River Centre

(3) Community Based Flood Early Warning System (CBFEWS)

It will aim at one of the non-structural measures for selected barangays in the CDO River Basin. Following measures are proposed:

- Selection of Conventional Rainfall and River Water Level Stations
- Technical Assistance for Warning by Rainfall, River Water Level, etc.
- Capacity Development for LGUs

(4) Information Campaign and Publicity for the Project (Structural Measures)

As one of the IEC program, Information Campaign and Publicity for the Project (Structural Measures) are proposed.

- Information Campaign and Publicity for Proposed Structural Measures (by Web site, leaflet, etc.)
- Capacity Development by Seminar, Workshop, etc.
- Disaster Education w/ DepED/PAGASA, OCD, etc. (Understanding of Disaster, Evacuation, Illegal Disposal of Garbage to River, etc.)

(5) Technical Assistance for Land Use Regulation for Habitual Inundation Areas

It will aim to inform of the areas that are risky for floods to residents in the vicinity and to minimize flood damages. Following measures are proposed:

- Database by GIS for Land Use Regulation of Habitual Inundation Areas
- Study on Land Use Regulation based on Flood Hazard Map

(6) Technical Assistance for Riparian Forest Establishment in the Agricultural Lands

Following measures are proposed.

- Institutional arrangement and technical assistances on reinforcement in cooperation with LGUs both in the upper and lower watersheds and DPWH as the executing agency of the Project
- Technical advices on selection of the target rivers and creeks to establish the riparian forests
- Institutional arrangement and technical assistances on establishment and maintenances of the riparian forests in coordination with LGUs both in upper and lower watersheds and DPWH

(7) Technical Assistance for Mangrove Forest Establishment along the Coastal Areas

Following measures are proposed.

- Technical advices on selection of the target areas to establish the mangrove forests
- Institutional arrangement and technical assistances on establishment and maintenances of the mangrove forests in coordination with barangays, LGUs, DENR and DPWH

3.6 Transfer of Technology

36. The Consultant shall carry out the technology transfer as an important aspect in construction works. The Consultant shall provide the opportunity to the DPWH officers and staffs to be involved in the working team of the Consultant during the construction works for their capacity building wherever possible. If requested by DPWH, the Consultant shall brief and demonstrate the survey and design procedure. The consultant shall assist DPWH and its staff to build their capacity as a part of on the job training under the Project