PROJECT INFORMATION DOCUMENT (PID)
CONCEPT STAGE

Report No.: PIDC918

Project Name	Studies for Sustainable Flood Mgmt. (P145391)
Region	EAST ASIA AND PACIFIC
Country	Philippines
Sector(s)	Flood protection (100%)
Theme(s)	Water resource management (70%), Natural disaster management (30%)
Lending Instrument	Specific Investment Loan
Project ID	P145391
Borrower(s)	Department of Finance
Implementing Agency	Department of Public Works and Highways
Environmental Category	A-Full Assessment
Date PID Prepared/ Updated	28-Mar-2014
Date PID Approved/ Disclosed	28-Mar-2014
Estimated Date of Appraisal Completion	
Estimated Date of Board Approval	31-Dec-2015
Concept Review Decision	Track II - The review did authorize the preparation to continue

I. Introduction and Context

Country Context

Intensive rainfall and flooding are events that occur annually in the Philippines, including in Metro Manila and the adjacent areas of Laguna Lake and part of Bulacan Province (hereafter Greater Metro Manila Area). These events are especially severe during the typhoon season from June through October when typically around 80 percent of the annual rainfall falls, which for Metro Manila is about 1,700 mm out of the approximate 2,100 mm average annual rainfall. On average, 20 typhoons affect the Philippines every year. Many areas in the Greater Metro Manila Area are designated as flood prone, with insufficient protection against frequent inundation. This includes areas around the Pasig-Marikina River and its tributaries, as well as many areas bordering Laguna Lake. Typhoons and tropical storms that affect the Greater Metro Manila Area result in flooding of many low-lying areas, with extensive localized flooding that can last for a long period of time. Considering that the Greater Metro Manila Area contributes about 35 percent to the economy of the Philippines and is home to around 17 million people, the recurrent flooding has a negative impact on millions of people's lives and the economy.

There seems to be a trend towards more numerous and more devastating floods in recent years, especially caused by human activities such as deforestation and rapid urbanization, and possibly by climate change. On September 26, 2009, tropical storm Ondoy (international name Ketsana) brought extensive rainfall over the Greater Metro Manila Area. Ondoy was a disastrous event that resulted in extensive inundation of urban areas caused by water flows that were well above the capacities of rivers, floodways, and esteros/drains that lack regular maintenance, including dredging of silts and cleaning of solid waste, and encroachment of their banks. The latter puts people living along these structures at risk during flash flood events. In many areas the flooding after Ondoy receded within days, but other areas remained flooded for months, especially around Laguna Lake.

Sectoral and Institutional Context

Ondoy was so damaging and lasting that it renewed the focus on improving flood management and making the Greater Metro Manila Area a safer place for its inhabitants by implementing measures that will substantially reduce flood risks.

To reduce flood risks, the Government of the Philippines (GoP), especially with financial and technical support of JICA, including OECF and JBIC, has already made a number of flood management investments during the past decades, including floodways, embankments, and pumping stations. Although those investments have contributed to a reduction in flood damage in parts of Metro Manila, much more needs to be done to prevent and control floods within the Greater Metro Manila Area.

The Post Disaster Needs Assessment (PDNA) carried out after Ondoy recommended that a master plan be prepared that proposes a comprehensive flood risk management plan and determines a set of priority structural and non-structural measures that will provide sustainable flood management up to a certain safety level.

The Flood Management Master Plan for the Greater Metro Manila Area (hereafter the Master Plan) has since been prepared, with World Bank assistance. It was approved by the NEDA Board on September 4, 2012. The total estimated cost for the implementation of the Master Plan is about Peso 352 billion (US$8.7 billion) over the next 20-25 years. The Master Plan proposes solutions to reduce flooding from river systems, around Laguna Lake, and for urban drainage. It also makes proposals for such non-structural measures as flood forecasting and early warning systems and community-based flood risk management. Finally, the Master Plan makes recommendations to improve the institutional structure to deal with flood management in an integrated manner. To incorporate practices related to past and current planning and implementation of flood risk management activities, key development partners, have been involved during the preparation of the Master Plan to share information and discuss findings and outputs.

The NEDA Board also approved an initial allocation of Peso 5 billion to start the implementation of the Master Plan with some activities that can be implemented quickly and with minimum design, yet by itself will have some impact on flood management. The GoP has indeed started working on some smaller and easier activities, such as dredging and modernization of pumping stations. However, the GoP is also interested that some of the larger and more complicated priority structural and non-structural measures are prepared to a level ready for appraisal/investment by government and development partners. It is also seeking more advice on appropriate institutional developments.

In terms of institutional framework, the Government's National Disaster Risk Reduction and Management Act was approved in 2010 to shift focus from emergency response to disaster prevention, reduction, and mitigation. The Act strengthens the mandates of institutions involved in DRRM and expands the use of national and local fiscal resources for ex-ante investments. The Act is supported by a NDRRM Framework, Implementing Rules and Regulations, and a National Action Plan for DRRM. The NDRRM Action Plan translates the country's DRRM priorities into programs, projects, and budgets that will be undertaken over the short- to medium term. Improvements in flood management are an important part of the Action Plan. In addition, the GoP has also enacted the Climate Change Adaptation (CCA) Act to complement actions in addressing weather-related hazards which are compounded by climate change. The institutional and operational features of the DRRM and CCA Acts are being harmonized as supported by a Memorandum of Understanding between the National DRRM and the Climate Change Councils.

The Department of Public Works and Highways (DPWH) is one of the key members of the National DRRM Council. DPWH is mandated to undertake the planning, design, construction, and operation and maintenance of major infrastructure. During many disasters, DPWH is tapped by the national government to provide immediate response activities, since it has the personnel and equipment that can be deployed to clear disaster-affected areas. DPWH is a major recipient of the Quick Response Fund under the National DRRM Fund to support the repair, rehabilitation, and reconstruction of partially or totally damaged public infrastructure. In addition, the Secretary of DPWH has been appointed by the President of the Philippines as Water Czar, with the responsibility of leading the preparation and implementation of comprehensive water resources management activities, including the setting up of a Water Resources Council and flood management. In Metro Manila, DPWH is responsible for the construction of major flood infrastructure. After construction, much of this infrastructure is transferred to Metro Manila Development Authority (MMDA) for operation and maintenance.

Relationship to CAS

The proposed studies are consistent with government's priorities and the forthcoming Country Partnership Strategy (CPS, FY15-18). The Philippine Government formulated the Philippine Development Plan for 2011-16, which puts high priority on disaster risk reduction and climate change as themes that underlie various sectors. Under the upcoming CPS, one of the engagement areas will support increased resilience to natural disaster and climate change impacts, and Metro Manila will be a geographic focus under the strategy.

II. Proposed Development Objective(s)

Proposed Development Objective(s) (From PCN)

The proposed development objective is to prepare priority projects that aim to improve flood management and resilience in the Greater Metro Manila Area.

Key Results (From PCN)

The key result is:

(i) Project proposals for structural measures that are ready for appraisal and are technically, economically, socially, and environmentally sound.

III. Preliminary Description

Concept Description

Based on mathematical models linked to flood hazard maps and a detailed assessment of a long list of options, the Master Plan proposes a program of priority infrastructure to safely manage and control major flood events in the Greater Metro Manila Area. Among the key priority interventions that have been identified in the Master Plan are: (i) a high dam in the upper Marikina River catchment area to reduce the peak flows entering the city during typhoon events; (ii) flood protection works in the Marikina River, upstream of the proposed JICA Phase IV of the Pasig-Marikina River Channel Improvement Program; (iii) land reclamation along the western shore of Laguna Lake to protect the population against high water levels in the lake; and (iv) further development of a comprehensive flood forecasting system and monitoring and early warning system for the Greater Metro Manila Area, with maximum participation of local communities.

The GOP is very interested to start the implementation of the Master Plan with substantial investments as soon as possible. It is therefore necessary to prepare some of the large high priority investments, both structural and non-structural, as well as develop improved institutional arrangements for flood management. This proposed AusAID grant will finance two components, the main one related to the development of feasibility and design studies of priority infrastructure that will lead to substantially increased safety of the population during flood events. A small second component relates to project management and administration.

Component A – Preparation of feasibility and design studies for priority flood management infrastructure. Feasibility and design studies will be prepared for: (i) a high dam in the upper Marikina River catchment area; and (ii) land reclamation along the western shore of Laguna Lake. Multi-disciplinary teams of consultants, including expertise in civil engineering, dam engineering, resettlement, hydrology, economics, social science, environment, etc., will be recruited to prepare detailed feasibility and design studies for the above mentioned proposed interventions.
The feasibility studies will review the various options for flood management improvements in the study areas to be followed immediately by design studies of the selected option. The design work will include the technical and engineering studies, economic studies, and social and environmental studies.

Particular mention is made of the need for very detailed social and resettlement (also called ‘rehousing’ in the Philippines) studies as some 300,000 people, often informal settlers, are living in the flood plain of the Laguna Lake study area. Most of these people would have to move out of the flood plain to allow land reclamation to take place, but it is envisaged that the majority will return to live on the reclaimed land in multi-story social housing units. Nevertheless, government's track-record with resettlement is not very good as emphasis has mainly been on off-site resettlement in places far from Metro Manila. The Master Plan emphasizes that there are opportunities for on-site and in-city resettlement that have to be pursued and that these opportunities have to be assessed in close cooperation with the affected people who should be involved in participatory planning processes. There will have to be extensive formal (through workshops) and informal consultations with the affected communities, non-governmental organizations (NGO) and civil society organizations (CSO) that work with the affected communities, Local Government Units (LGU), government agencies, etc. to ensure that the rehousing/resettlement proposals will be understood and acceptable to all parties. The Bank task team in close cooperation with DPWH and other agencies will work on an information campaign that emphasizes expectations and transparency. Finally, an independent Panel of Experts which will include expertise in social, resettlement, and

technical issues, will be established to oversee the implementation of the studies and provide guidance, where needed.

Component B – Project management and administration. Operational expenses for DPWH will be financed to manage the implementation of the grant and monitor the consultants and the outputs of the services. Fixed costs, such as staff costs, will be paid for by DPWH.

IV. Safeguard Policies that might apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
Environmental Assessment OP/BP 4.01	×		
Natural Habitats OP/BP 4.04	×		
Forests OP/BP 4.36			×
Pest Management OP 4.09		×	
Physical Cultural Resources OP/BP 4.11			×
Indigenous Peoples OP/BP 4.10			×
Involuntary Resettlement OP/BP 4.12	×		
Safety of Dams OP/BP 4.37	×		
Projects on International Waterways OP/BP 7.50		×	
Projects in Disputed Areas OP/BP 7.60		×	

V. Financing (in USD Million)

Total Project Cost:	7.00	Total Bank Financing:	0.00
Financing Gap:	0.00		

Financing Source	Amount
Borrower	0.00
Philippines - Free-standing Trust Fund Program	7.00
Total	7.00

VI. Contact point

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