

## Philippines : Metro Manila Flood Management

### 1. Project Information

Project ID:	P000023	Instrument ID:	L0023A
Member:	Philippines	Region:	South-Eastern Asia
Sector:	Water	Sub-sector:	Water disaster resilience
Instrument type:	<input checked="" type="checkbox"/> Loan:207.60 US Dollar million <input type="checkbox"/> Guarantee	Co-financier(s):	World Bank
ES category:	A	Borrowing Entity:	Department of Finance, Philippines
Implementing Entity:			
Project Team Leader:	Ronald Muana (Responsible DG: Rajat Misra; Responsible Department: INF1)		
Project Team Members:	Odil Akbarov, OSD - Social Development Specialist; Liu Yang, Project Counsel; Yi Geng, OSD - Financial Management Specialist; Gerardo Pio Parco, OSD - Environment Specialist; Rabindra Shah, OSD - Procurement Specialist; Jinghui Li, Project admin		
Completed Site Visits by AIIB:	Mar, 2018 Mar. 5-12, 2018 Oct, 2018 Oct. 1-10, 2018 Jun, 2019 Jun. 3-7, 2019 Dec, 2020 Dec. 7 – 10, 2020 (virtual) Jan, 2020 Jan. 20-24, 2020 Apr, 2021 Apr 12-16, 2021 (virtual) Aug, 2022 August 10, Site-inspection by PTL Ronald Muana Jan, 2022 Jan-Feb 2022 (Virtual) Oct, 2022 October 19 to Nov 4, 2022: Supervision mission, online participation by PTL Ronald Muana, Gerry Parco, Odil Akbarov		
Planned Site Visits by AIIB:	Feb, 2023 Proposed supervision mission with WB. On-site		
Current Red Flags Assigned:	1		
Current Monitoring Regime:	Regular Monitoring		
Previous Red Flags Assigned:	1		
Previous Red Flags Assigned Date:	2022/03		

### 2. Project Summary and Objectives

The Project aims to improve flood management in selected areas of Metro Manila. The Project focuses on about 56 potentially critical drainage areas with an approximate land area of 11,100 ha or over 17 percent of the total area of Metro Manila. The total population of these drainage areas is estimated at 3.5 million while the direct Project beneficiaries, i.e., those adversely affected by regular flooding, are estimated at 1.7 million.

The project objective will be achieved through the following activities: (i) modernizing drainage areas, involving the construction of new pumping stations or rehabilitation of existing ones and associated drainage infrastructure; (ii) strengthening of solid waste collection and disposal; and (iii) supporting participatory housing and resettlement, involving land acquisition, housing construction, rental support and livelihood assistance.

### 3. Key Dates

Approval:	Sep. 27, 2017	Signing:	Dec. 19, 2017
Effective:	Mar. 15, 2018	Restructured (if any):	
Orig. Closing:	Nov. 30, 2024	Rev. Closing (if any):	

### 4. Disbursement Summary (USD million)

Contract Awarded:		Cancellation (if any):	0.00
Disbursed:	21.69	Most recent disbursement (amount/date):	3.00/Nov. 14, 2022
Undisbursed:	185.91	Disbursement Ratio (%) <sup>1</sup> :	10.45

### 5. Project Implementation Update

**Component 1-Modernizing Drainage Areas.** This component includes the rehabilitation and improvement of 36 existing flood pumping stations (PS), construction of 20 new PS, dredging of waterways, improvement of PS facilities, and purchase of modern maintenance equipment. One PS has been completed; three PS are under implementation and are on target to complete; four PS are under bid evaluation; two dredging works and two contracts on the improvement of PS facilities are under procurement, and the rest is under preparation for procurement. The sites for 8 new PS have been finalized and agreed upon with the local government units. Procurement of works is now moving at a faster pace using the Design, Supply, and Install (DSI) mode of contracting. The Project is expected to go full speed on pumping stations with no ISFs to significantly increase disbursements. A total of US\$60 million has been committed for this Component, which will increase to US\$167.8 million at the end of 2022 and US\$338.4 million by mid-2023. (costs combined AIIB, WB, and GoP)

**Component 2-Minimizing Solid Waste in Waterways.** The Metropolitan Manila Development Authority (MMDA) has shown continuous progress for Component 2. There are three main classifications under this component: facility-based, community-based, and metro-wide-based sub-projects. For the facility-based initiative, MMDA has now increased the diversion rate of recyclable renewable waste materials from 5% to 8% at the Vitas PS. A pilot waste-to-energy (WTE) system has also been installed in Vitas; a water hyacinth processing facility that will generate charcoal briquettes is being installed in Tapayan PS. Community-based activities for solid waste management (SWM) such as providing mobile

<sup>1</sup> Disbursement Ratio is defined as the volume (e.g. the dollar amount) of total disbursed amount as a percentage of the net committed volume.

materials recovery facilities (MMRF) and information, education, and communication (IEC) campaigns in selected barangays in the project drainage areas are starting to show good results. The metro-wide Solid Waste Management Master Plan of Metro Manila has been completed. A total of US\$11.13 million has been committed to this component and an additional US\$29.85 million is either undergoing or about to start procurement. (costs combined AIIB, WB, and Government of the Philippines “GoP”)

**Component 3-Participatory Housing and Resettlement.** The Project has made some progress in starting the relocation of informal settler families (ISFs). From zero ISFs during the mid-term review (MTR), the Project has successfully moved 143 ISFs from the Vitas technical footprint to Trece Martires, Cavite. The target to complete the resettlement of all successfully validated ISFs in Vitas is by the end of the year.

**Component 4-Project Management.** The overall management of the Project has improved considerably and consultants are in place to assist the implementing agencies.

**Next Steps.** The latest supervision mission confirmed that only 8 PS (in 5 sites) out of 20 PS as envisaged in the original project design will be constructed. This is due to right-of-way (ROW) and site acquisition issues. This development will have implications on the results framework indicators and reallocation/cancellation of funds to offset the reduction of new PS by increasing activities in other components. Therefore, the PIU is advised by AIIB and WB to revisit the long list of PS identified during preparation and to prepare a final list of potential activities which could be implemented. Moreover, because of the huge jump in the exchange rate of the USD to PHP (from 47 PHP to 59 PHP/1 USD), there could be gains in the loan amount that may be further utilized for additional sub-projects, subject to a review of budgetary allowed by the Department of Budget the forward obligational authority. The PIUs are advised to look at projects upstream of the PS and waterways, that will address localized flooding, especially in perennially flooded areas in Manila. The agencies were advised to check completed feasibility studies such as flood forecasting and early warning systems and other drainage improvement works. From the review of the AIIB and WB (“Bank team”), while there is substantial progress in the past 12 months, it is clear that the project will need to be extended by at least two years to complete the 8 new PS. The Bank team advised the agencies to proceed with the technical preparation of the new PS and initiate the request for time extension and other restructuring actions within the Government of the Philippines (GoP). The next supervision mission is planned for February 2023 to follow through on progress and action items toward project restructuring.

Components	Physical Progress	Environmental & Social Compliance	Procurement
Component 1: Modernizing drainage areas (USD168.84 million)	The modernization of the Balut Pumping Station (PS) has been completed. Ongoing works in Vitas PS at 61% completion; Labasan PS at 48%; Paco PS at 24%. All Batch 1 contracts.	DPWH and MMDA have taken actions to enhance E&S implementation. An E&S monitoring dashboard was developed to monitor E&S compliance with all contracts.  DPWH is to conduct environmental due diligence for nominated disposal sites of dredged materials before awarding the dredging contracts.	Batch 1, Tripa de Gallina PS, is under bid evaluation.  Batch 2 includes 3 PS: Makati, Libertad, and Sta. Clara. All PS is under bid evaluation  Batch 3 includes 11 Malabon PS which are all under bid preparation.

		Resettlement discussion is covered in Component 3 (see below)	Batch 4 has 6 PS for rehabilitation and upgrade and all PS is under bid preparation.
Component 2: Minimizing solid waste in waterways (USD21.6 million)	Procurement of solid waste management and cleaning equipment (USD 2 million) has been completed.	E&S implementation in compliance with the approved plan MMDA will finalize updated project list within Q4 2022.	Technical and procurement documents are under preparation.
Component 3: Participatory housing and resettlement (USD7.64 million)	Nine pumping stations (PS) are anticipated to involve the relocation of informal settler families (ISFs) -- Vitas in Manila, seven in Malabon, and potentially Dona Imelda in Quezon City. Through the support of a team of consultants headed by a Resettlement Specialist, the Project has so far relocated 143 ISFs to Trece Martires in Cavite from Vitas pumping station.	For Vitas PS, from zero ISFs relocated at mid-term, the project has now successfully relocated 143 out of 229 ISFs to Trece Martires in Cavite.  For the 227 ISFs in Malabon, DPWH and NHA are finalizing the conditions for the use of an in-city relocation site.  The newly created Department of Human Settlements and Urban Development (DHSUD) and DPWH are working on an agreement on the remaining resettlement activities so that DHSUD can take a more active role.	n/a
Component 4: Project management and coordination (USD9.0 million)	All consultants are on board for both agencies.	DPWH and MMDA were advised to add full-time manpower to undertake numerous land acquisition and resettlement activities and compliance activities remaining for environmental and social safeguards.	n/a

**Financial Management:**

The agencies are in general compliance with financial covenants. Procurement is moving and there are no major concerns. The project team is closely monitoring the progress of ongoing procurement against updated work plans.

**6. Status of the Grievance Redress Mechanism (GRM)**

GRM is operational using the Grievance Redress Systems (GRS) of DPWH and MMDA with dedicated people. Complaints or suggestions can be registered through general departmental hotlines, text messages, websites, and walk-ins.

**7. Results Monitoring**

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**Project Objective Indicators #1**

Flood-prone areas that are free of water within 24 hours after a major rainfall event (Ha)

Year	Target	Actual	Comments, if any
Jan. 01, 2017	0	-	
Jan. 01, 2018	0	-	
Jan. 01, 2019	0	-	
Jan. 01, 2020	400	-	
Jan. 01, 2021	1500	-	
Jan. 01, 2022	3000	-	
Jan. 01, 2023	4200	-	
Jan. 01, 2024	4900	-	

### Project Objective Indicators #2

Direct Project beneficiaries, of which females (million (Females))

Year	Target	Actual	Comments, if any
Jan. 01, 2017	0	-	
Jan. 01, 2018	0	-	
Jan. 01, 2019	0	-	
Jan. 01, 2020	0.55 (0.27)	-	
Jan. 01, 2021	0.71 (0.35)	-	
Jan. 01, 2022	1.16(0.58)	-	
Jan. 01, 2023	1.40(0.70)	-	
Jan. 01, 2024	1.70 (0.85)	-	

### Project Objective Indicators #3

Solid wastes collected at targeted existing pumping stations (1000 cu.m)

Year	Target	Actual	Comments, if any
Jan. 01, 2017	17	-	
Jan. 01, 2018	17	-	
Jan. 01, 2019	17	-	
Jan. 01, 2020	17	-	
Jan. 01, 2021	13.5	-	
Jan. 01, 2022	11.4	-	
Jan. 01, 2023	9.5	-	
Jan. 01, 2024	8.5	-	

### Project Objective Indicators #4

Households successfully resettled from areas where they would obstruct proper O&M of the drainage systems. (Number)

Year	Target	Actual	Comments, if any
Jan. 01, 2017	0	-	
Jan. 01, 2018	0	-	
Jan. 01, 2019	0	-	
Jan. 01, 2020	137	-	
Jan. 01, 2021	1451	-	
Jan. 01, 2022	2500	-	
Jan. 01, 2023	2500	-	
Jan. 01, 2024	2500	-	

**Project Objective Indicators #5**

Beneficiaries satisfied with reduced vulnerability to flooding in Project areas (Percentage)

Year	Target	Actual	Comments, if any
Jan. 01, 2017	0	-	
Jan. 01, 2018	0	-	
Jan. 01, 2019	0	-	
Jan. 01, 2020	0	-	
Jan. 01, 2021	20	-	
Jan. 01, 2022	70	-	
Jan. 01, 2023	50	-	
Jan. 01, 2024	80	-	

**Intermediate Result Indicators #1**

Existing pumping stations rehabilitated (Number)

Year	Target	Actual	Comments, if any
Jan. 01, 2017	0	-	
Jan. 01, 2018	0	-	
Jan. 01, 2019	0	-	
Jan. 01, 2020	5	-	
Jan. 01, 2021	10	-	
Jan. 01, 2022	21	-	
Jan. 01, 2023	36	-	
Jan. 01, 2024	36	-	

**Intermediate Result Indicators #2**

New pumping stations constructed and operational (Number)

Year	Target	Actual	Comments, if any
Jan. 01, 2017	0	-	
Jan. 01, 2018	0	-	

Jan. 01, 2019	0	-	
Jan. 01, 2020	0	-	
Jan. 01, 2021	0	-	
Jan. 01, 2022	0	-	
Jan. 01, 2023	6	-	
Jan. 01, 2024	20	-	

**Intermediate Result Indicators #3**

Barangays with improved solid waste management programs in place. (Numbers)

Year	Target	Actual	Comments, if any
Jan. 01, 2017	0	-	
Jan. 01, 2018	0	-	
Jan. 01, 2019	0	-	
Jan. 01, 2020	25	-	
Jan. 01, 2021	75	-	
Jan. 01, 2022	125	-	
Jan. 01, 2023	200	-	
Jan. 01, 2024	200	-	

**Intermediate Result Indicators #4**

Community consultations undertaken (Numbers)

Year	Target	Actual	Comments, if any
Jan. 01, 2017	3	-	
Jan. 01, 2018	3	3	
Jan. 01, 2019	6	6	
Jan. 01, 2020	12	-	
Jan. 01, 2021	24	-	
Jan. 01, 2022	30	-	
Jan. 01, 2023	30	-	
Jan. 01, 2024	30	-	

**Intermediate Result Indicators #5**

Grievances registered related to delivery of Project benefits that are actually addressed (percentage)

Year	Target	Actual	Comments, if any
Jan. 01, 2017	0	-	
Jan. 01, 2018	90	-	
Jan. 01, 2019	90	-	
Jan. 01, 2020	90	-	
Jan. 01, 2021	90	-	

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Jan. 01, 2022	90	-	
Jan. 01, 2023	90	-	
Jan. 01, 2024	90	-	

**Remarks:**

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