Project Information Document/ Integrated Safeguards Data Sheet (PID/ISDS)

Concept Stage | Date Prepared/Updated: 04-Oct-2018 | Report No: PIDISDSC25738

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Parent Project ID (if any)	Project Name
Philippines	P168670		Integrated Water Quality Management Project (P168670)
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
EAST ASIA AND PACIFIC	Nov 26, 2018	Mar 29, 2019	Environment & Natural Resources
Financing Instrument	**Borrower(s)**	**Implementing Agency**	**GEF Focal Area**
Investment Project Financing	Republic of the Philippines	Laguna Lake Development Authority	International waters

Proposed Development Objective(s)

The development objective of this project is to strengthen institutional capacity and systems to manage water pollution in Manila Bay and its Tributaries

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	17.30
Total Financing	17.30
of which IBRD/IDA	0.00
Financing Gap	0.00

DETAILS

Non-World Bank Group Financing

Counterpart Funding	9.90
National Government	9.90
Trust Funds	7.40
Global Environment Facility (GEF)	7.40

Environmental Assessment Category	Concept Review Decision
B - Partial Assessment	Track I-The review did authorize the preparation to continue

Other Decision (as needed)

B. Introduction and Context

Country Context

Manila Bay is central to the economic development of the country, affecting the lives of some 30 million people, 13 million of which are in Metro Manila. With a 190km coastline and an area of 17,600 km^2, Manila Bay's coastal and marine resources provide livelihood and food to millions of Filipinos and is considered the country's main port for maritime, trade and travel. It also acts as a main water catchment for many bodies of water. The country's largest lake, Laguna de Bay, connects to the Bay through the Pasig River which runs across tributaries and numerous small canals throughout Manila. Four other major river systems that surrounds the provinces of Bulacan, Cavite, Pampanga and Bataan also drain into Manila Bay. Collectively, the Manila Bay and its inland waterways are comprised of 26 major catchments covering nine (9) provinces, 21 cities and 177 municipalities.

Years of institutional neglect and environmental abuse rendered the water quality of the Bay unfit for human contact. Organic pollution, heavy metals, and fecal coliform levels in some hotspots are in the hazardous range. Coliform levels range from 50,000 to 80,000 MPN/ml (200 MPN/ml are considered swimmable). Sixty percent of the annual biochemical oxygen demand (BOD) load (150,000 MT BOD) entering the Bay come from Laguna Lake-Pasig River system, another 32% come from the Marilao-Meycauayan-Obando river system in Bulacan province (80,000 MT BOD). The rest comes from Cavite and Pampanga rivers at 3% each (7,500 MT BOD) and Bataan rivers at 2% (5,000 MT BOD). [1]

Sources of organic pollution vary across the waterways, but come primarily from domestic sources (62%), industry (28%), and agriculture (10%). Only 13% of Metro Manila is connected to a sewerage system. As a result, some 86% of incidence of diarrhea in Metro Manila is attributed to poor water supply and sanitation. The situation outside Metro Manila is worse wherein majority of the Local Government Units (LGUs) are not even connected to any form of sewerage system. Also, more than 50% of the 207 LGUs in the catchment area continue to operate open dumps.

The alarming decline of Manila Bay's water quality eventually led to a Supreme Court ruling in December 2008 requiring relevant government agencies to undertake the cleanup, rehabilitation, protection and preservation of Manila Bay as part of their statutory responsibilities. A subsequent directive in February 2011 has required the 13 government agencies to report regularly to the court on their clean-up accomplishments, and the Department of Environment and Natural Resources (DENR) has been designated by the Supreme Court as the lead agency for coordinating the process. In the same directive, the Supreme Court mandated the creation and updating of the Operational Plan for Manila Bay Coastal Strategy (OPMBCS), which serves as the blueprint of cooperation, operation and implementation of various agencies' mandates/programs towards the clean-up, rehabilitation and preservation of the Manila Bay Region[2]. The DENR created the Manila Bay Coordinating Office (MBCO) primarily to facilitate the efficient

[1] Supreme Court Mandamus, 2008
[2] 2017 Manila Bay Coordinating Office Annual Report

and effective implementation of the OPMBCS. The 2017-2022 OPMBCS approved by the Supreme Court in June 2017 has 6 clusters with respective cluster heads and targets which are assessed quarterly. Since the OPMBCS approval, the MBCO has been convening quarterly meetings with the concerned inter-government agencies to report findings and progress of the various initiatives in response to the Supreme Court ruling. In 2017, the MBCO's annual report highlighted the following findings: 1) water quality monitoring showed most areas monitored have poor water quality, 2) only 48% of monitored establishments have discharge permits, 3) water service providers are off target on sewerage and sanitation targets, 4) only 60% of the LGUs have 10-year solid waste management plans and 5) 21% of the 281,958 informal settler families (ISFs) has been resettled while the rest are targeted over the next five years.

Sectoral and Institutional Context

The current efforts to cleanup Manila Bay and its waterways are fragmented and lacks a strategic framework for monitoring and management of water pollution. The existing approach to the Manila Bay clean-up reflects the fragmented institutional set-up and weak institutional mechanism for coordination and effective regulation. The agencies involved have varied responsibilities, ranging from use of anti-fouling paints on ships, solid and liquid waste disposal, to informal settlers and management of fish cages. In terms of regulation, the Environmental Management Bureau (EMB) of the DENR is responsible for enforcement of water quality standards and monitoring compliance. With the exception of Laguna Lake and most parts of the Pasig River (four cities excluded), which are under the regulatory authority of the Laguna Lake Development Authority (LLDA). Point sources of pollution are monitored by both EMB and LLDA. These are typically the industrial/manufacturing and commercial facilities which are required to report the wastewater discharges through the EMB regulatory requirements. LGUs on the other hand are responsible for addressing solid waste. LGUs also have a role in regulatory enforcement, implementation of investments, community projects and coordination of private sector initiatives that are necessary for sustained and comprehensive clean-up actions.

The GoP also has several existing and planned programs in addressing water quality issues in the Manila Bay Catchment Area. For example, addressing wastewater and septage outside of the private water concession areas in Metro Manila is being pursued under the proposed Philippine Water Supply and Sanitation Master Plan (PWSSMP) led by the National Economic Development Authority (NEDA). The PWSSMP is an action plan, with corresponding investment and financing program, to execute the water supply and sanitation roadmaps meant to help achieve targets of the Philippine Development Plan (PDP) and Sustainable Development Goals (SDG). Another initiative also led by NEDA is the Manila Bay Sustainable Development Masterplan (MBSDMP) which is one of the roadmaps and masterplans meant to guide government agencies in implementing the PDP (2017-2022).

Sector reforms also include the proposed establishment of several entities, including, a: a) Department of Water (to address the institutional challenge of multiple agencies with overlapping responsibilities relating to water supply and sanitation WSS sector), and b) Water Regulatory Commission (to consolidate economic regulatory powers of the various institutions involved to improve regulation and oversight of the sector). The bills for the creation of both proposed agencies are currently being deliberated at the House of Representatives. At the operational level, the Philippine Clean Water Act of 2004 provides for the establishment of Water Quality Management Areas (WQMAs) and for governing boards to formulate strategies, coordinate policies and oversee action plans. WQMA boards are composed of representatives of municipal and city mayors and provincial governors, as well as representatives of relevant national agencies, NGOs, water utility and business sectors. The DENR representative chairs the governing board. Given the wide range of institutions and stakeholders, the Supreme Court designated the DENR through MBCO to coordinate the

cleanup efforts.

Global Environment Facility (GEF). The GEF will provide the needed support in the optimization of the country's efforts in cleaning up the most important body of water in the Philippines, owing its importance to its historical, economic and geographical significance. Deteriorating water quality of Manila Bay has led to loss of biodiversity. The tributaries/rivers in the urban setting of Metro Manila are effectively biologically dead due to persistent anaerobic conditions. Fisheries and fish stocks in Manila Bay are in danger of disappearing or being greatly reduced due to poor water quality. This GEF financing is will be useful in reversing this trend. It complements the existing and future investment activities of both government and the private sector, by leveraging institutional change, capacity building and monitoring/decision making tools. The grant is funding technical assistance to establish an essential tool in managing the water quality which is a Decision Support System.

Relationship to CPF

The proposed project supports the World Bank's Country Partnership Strategy (CPS) 2015 – 2019 Engagement Area 4 "Resilience to Climate Change, Environment and Disaster Risk Management" by improving water quality in the Manila Bay Area and its Tributaries and reducing the health impact on the community by properly managing polluted water. An indicator under Strategic outcome 4.2 is the "reduced pollution in Manila Bay". In addition, the Department of Finance, in a letter to the Bank (see Annex), reiterated that this project is in line with the priorities of the government under the Philippine Development Plan (PDP 2017 - 2022). The proposed activity will complement both the current and proposed Bank projects which are meant to accelerate the enhancement of the water quality in Manila Bay including. the Metro Manila Wastewater Management Project, which is aimed at improving the wastewater services in selected areas to improve the Manila Bay, and the Metro Manila Flood Management Project implemented in 2017 includes solid waste management which is expected to improve the water quality in selected waterways draining to the Manila Bay

C. Proposed Development Objective(s)

The development objective of this project is to strengthen institutional capacity and systems to manage water pollution in Manila Bay and its Tributaries

Key Results (From PCN)

i) Updated Manila Bay clean-up plan developed and validated with stakeholders [3]
ii) Water Quality Decision Support System operational [4]
iii) Coverage of Decision Support System [5]
iv) Completed and operational innovative pollution control facilities [6]

[3] The clean-up plan refers to the Operational Plan for Manila Bay Coastal Strategy (OPMBCS). It is an existing document which lists the different agency programs, plans and activities which relate to improving water quality in Manila Bay and its Tributaries. The MBCO is the office in-charge of coordinating and compiling the OPMBCS. Under Component 2 of the project, water quality data and simulation information, will assist the government in prioritizing activities in the OPMBCS thereby improving planning.
[4] The DSS is the main output of Component 2. It is the main tool by which the system of planning and prioritizing actions in the Manila Bay are processed/filtered. This also directly contributes to the outcome under the GEF Program Framework Document (PFD) under Pollution Reduction "informed decision making and improved public awareness of non-point pollution issues".
[5] Contributes directly to Outcome 1.1 under the GEF PFD "Improved management of effectiveness of existing and new protected areas. The DSS contributes to an informed decision making system for the government based on actual and simulated results of water quality.
[6] Contributes directly to outputs under the GEF PFD. Demonstration of these systems to manage urban water pollution will lead to investment by LGUs and communities on these low-cost and easy to reproduce systems.

v) Water quality monitoring data publicly accessible[7]

D. Concept Description

The proposed project has four components to meet the Development Objective:

Component 1: Strengthening Institutions. The objective is to support the development of improved institutional arrangements for continued water quality improvement of the Manila Bay. The importance of the correct institutional arrangement is critical to a more effective management of Manila Bay. Activities under this component will include: (i) review of water quality-related interventions (including new programs and activities, recently completed, on-going and planned), (ii) reassessment of national agencies which have a stake at the clean-up of the Manila Bay Region or watershed area, (iii) benchmarking water quality management structures against similar initiatives in other countries, (iv) consultative formulation of institutional arrangements for the management and governance of water quality for the Manila Bay, including public consultations on proposed institutional arrangement for inputs from stakeholders, and (v) providing support in enhancing the reporting mechanism to the Supreme Court. Based on the result of the activities of this component, an institutional structure will be proposed including the establishment of an appropriate body with the required authority/mandate and resources to lead the clean-up of Manila Bay.

Component 2: Decision Support System to Strengthen Planning and Implementation. A strong technical basis for the comprehensive cleanup of Manila Bay and its Tributaries is essential. This component will produce the main tool needed to support the management and improvement of water quality in the Manila Bay catchment area. It will provide the technical basis for decisions to be undertaken by government in relation to the clean-up of Manila Bay. This tool will also provide materials for the participation of the public and the engagement with the stakeholders through appropriate disclosure of results of the monitoring and simulation of water quality. This component has two major deliverables:

Sub-Component 2a: Water Quality Model. This component aims to (i) implement a water quality-hydrodynamic (WQ-HD) simulation model of the Manila Bay catchment area combined with the development of an evidence-based decision-making tool for LLDA/DENR, (ii) develop capacity in the use and application of the model, and (iii) establish or upgrade water quality monitoring facilities (at minimum 3).

Sub-Component 2b: Update of the OPMBCS and related implementation plans for several key implementing agencies (LLDA/DENR/Department of Interior and Local Government/Manila Bay LGUs/MMDA) based on the output of the model developed under sub-component 2a. Development of the Water Quality Model and Decision Support System under sub-component 2a will be the first activity of the project. This is expected to be operating and generating technical information on water quality by the mid-term of the project. This sub-component will include the following actions:

i. Support the existing government mechanisms in updating the OPMBCS with results from the decision support system under component 2a;
ii. Identify and prioritize investments and supporting measures under the OPMBCS considering the crucial areas and time-frame for implementation; and
iii. Assess existing regulations which support the effective implementation of the OPMBCS and

[7] Reliability is defined as using international standard methods of analysis of water quality. The disclosure of water quality information is an essential element of the success of the DSS as a tool for government planning. Public awareness leads to public pressure to act on local water quality issues. It also contributes directly to the GEF PFD output on having “reliable and disclosed monitoring data”.

recommend enhancements.

Component 3: Innovative Solutions to reduce pollution using tertiary treatment methods. Small scale pilots of innovative solution will be established in priority areas. This component will demonstrate activities that have the potential to improve the management of the water quality of Manila Bay in the short-term and implemented regularly as part of the overall Manila Bay clean up initiatives. These interventions may be scaled up based on actual performance. These innovate solutions will be piloted in areas whose urban drainage are discharged into Manila Bay. The innovative solutions include: (i) management of plastic waste specifically in main urban drainage areas, and (ii) nutrient removal thru green infrastructure (i.e., implementation of green barriers/engineered reed beds/vegetated swales; reed Beds have been shown to be natural passive systems with low operating cost and effective organic and nutrient removal capability). This component will actively engage stakeholders in sharing and learning experiences through Knowledge Management activities.

Component 4: Project Management and Monitoring and Evaluation. This component will support the day-to-day management, coordination, supervision, procurement, financial management, environmental and social management, including undertaking measures to mitigate adverse social impacts and the monitoring and evaluation of project results, including field visits and review missions. The component also will also support the development and implementation of a communication strategy to engage stakeholders regarding the outputs and recommendations of the project.

SAFEGUARDS

A. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

The project covers the Manila Bay catchment area covering the National Capital Region (NCR), Region 4A and Region 3. NCR is a highly urbanized area and Region 4A and Region 3 are both considered part of the rural urban fringe. With a 190km coastline and an area of 17,600 km2, Manila Bay's coastal and marine resources provide livelihood and food to millions of Filipinos and is considered the country's main port for maritime, trade and travel. It also acts as a main water catchment for many bodies of water: the country's largest lake, Laguna de Bay, connects to the Bay through the Pasig River which runs across tributaries and numerous small canals throughout Manila and four other major river systems that surrounds the provinces of Bulacan, Cavite, Pampanga and Bataan also drain into Manila Bay. Collectively, the Manila Bay and its inland waterways are comprised of 26 major catchments covering nine (9) provinces, 21 cities and 177 municipalities. Years of institutional neglect and environmental abuse rendered the water quality of the Bay unfit for human contact. Organic pollution, heavy metals, and fecal coliform levels in some hotspots are in the hazardous range: coliform levels range from 50,000 to 80,000 MPN/ml (200 MPN/ml are considered swimmable). Sixty percent of the annual biochemical oxygen demand (BOD) load (150,000 MT BOD) entering the Bay come from Laguna Lake-Pasig River system, another 32% come from the Marilao-Meycauayan-Obando river system in Bulacan province (80,000 MT BOD). The rest comes from Cavite and Pampanga rivers at 3% each (7,500 MT BOD) and Bataan rivers at 2% (5,000 MT BOD)

B. Borrower's Institutional Capacity for Safeguard Policies

The project will be implemented by participating government agencies. These agencies are the Environmental Management Bureau (EMB) in Regions III, IVA and NCR; the Laguna Lake Development Authority (LLDA); and the Philippine Coast Guard (PCG). The PMO will be established within the LLDA. The LLDA has an environmental and social

safeguards specialists within its organization. A previous WB funded project implemented over 10 years, the Laguna de Bay Institutional Strengthening and Community Participation (LISCOP). has developed familiarity and capacity to implement safeguards in the agency. Being an environmental regulatory agency, there is adequate familiarity and capacity to undertake environmental assessment. The project will allocate funds for safeguards training of key staff from the different participating agencies through the Philippine Center for Environmental and Social Sustainability at the UP NEC.

C. Environmental and Social Safeguards Specialists on the Team

Roberto B. Tordecilla, Social Specialist
Maria Ayn Jella Villanueva Roxas, Environmental Specialist

D. Policies that might apply

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	The following activities under this project would have potential environmental impacts 1) upgrade of equipment of three water quality laboratories. Impacts from this is the generation of chemical waste and Occupational hazards from working in a chemical analysis laboratory. Mitigation measures will be the review and update of chemical waste management plan and EHS plan. 2) updating of the Operational Plan for Manila Bay Coastal Strategy (OPMBCS). Actual implementation of the activities in the plan will not be financed under this Grant. The implementation of those plans may lead to impacts. To mitigate these impacts, an environmental and social management framework will be drafted as part of the output of Component 2 which will serve as an operational document of the OPMBCS - Construction of Pilot Facilities Demonstrating innovative wastewater treatment and nutrient removal. This will be financed under the Metro Manila Flood Management Project. A total of four to five drainage areas will be selected for the demonstration. Criteria for the selection would be the absence of any resettlement activities and legacy issues due to past resettlement issues. Impacts will be mainly due to the construction of these facilities. The pilot demonstration activities will be the construction of natural reed beds, vegetated swales and similar nature based interventions to control sediment and nutrient loading in the easement of the drainage areas. An ESMF will be drafted during project preparation to cover these activities which will be identified during

		project implementation. ESMPs will be developed once the sites are determined. Category B is proposed for this project. This is due to the impacts from the generation of chemical wastes from laboratories, and from the impacts of construction of the pilot facilities to demonstrate nutrient removal. Stakeholder Engagement. As part of the ESMP development, public consultations will also be conducted. At least one public consultation on the design of the green barriers along the easement of drainage areas, will be conducted with the immediate community barangay. During project implementation, stakeholder consultations will be carried out for component 1 (institutional strengthening) and component 2 (Decision support system). Since the activities for Components 1 and 2 are Manila Bay Catchment wide in scope public consultations will be conducted.
Performance Standards for Private Sector Activities OP/BP 4.03	No	Not applicable
Natural Habitats OP/BP 4.04	Yes	Likely impacts to natural habitats will be determined based on the location of the Demonstration Pilot Facilities under Component 3. Mitigation measures to be captured under the ESMP.
Forests OP/BP 4.36	No	This policy is not triggered given that the project will not finance activities that affect forests
Pest Management OP 4.09	No	This policy is not triggered given that the project will not finance the purchase or use of pesticide
Physical Cultural Resources OP/BP 4.11	No	This policy is not triggered given that there will be no expected impacts on physical cultural resources
Indigenous Peoples OP/BP 4.10	No	This policy is not triggered. There are no known indigenous peoples living in the potential pilot areas.
Involuntary Resettlement OP/BP 4.12	Yes	Four to five drainage areas from the list of selected drainage areas under the Metro Manila Flood Management Project (MMFMP) will be selected as pilot sites for innovative wastewater treatment under Component 3. There is no envisaged land acquisition as the innovative solutions will be implemented right in the drainage areas. The project also intends to select drainage areas that have no legacy issues. However, given the fast-changing nature of informal settlements in and along Metro Manila drainage areas, it is possible that one or two of the selected sites may have to relocate a small number of informal settler

		families. If that happens, an Abbreviated RAPs with livelihood restoration elements will be developed and implemented.
Safety of Dams OP/BP 4.37	No	This policy is not triggered given that the project will not support the construction or rehabilitation of dams, nor will support other investments which rely on the services of existing dams
Projects on International Waterways OP/BP 7.50	No	This policy is not triggered given that the project will not affect international waterways as defined under the policy
Projects in Disputed Areas OP/BP 7.60	No	This policy is not triggered given that the project will not affect disputed areas as defined under the policy

E. Safeguard Preparation Plan

Tentative target date for preparing the Appraisal Stage PID/ISDS

Nov 16, 2018

Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the Appraisal Stage PID/ISDS

Safeguards preparatory work will commence following the PCN review meeting, most likely in early September to be completed prior to the Appraisal in December 10, 2018.
The safeguards instruments and timing of delivery are as follows

ESMF covering Component 3 activities	before Appraisal (December 10, 2018)
ESMPs for 4-5 Component 3 activities	during project implementation (developed together with the design)
ARAP (if needed) for Component 3	during project implementation
Chemical Management Plans for 3 laboratories	during project implementation (before delivery of new equipment for be procured under the project)

Public Consultations

ESMF	before Appraisal
ESMP and ARAP	in the selected barangays of drainage areas (once the design and EMSP have been completed)
Chemical Management Plans	before finalization

CONTACT POINT

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APPROVAL

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