INTEGRATED SAFEGUARDS DATA SHEET
APPRAISAL STAGE

Date ISDSPrepared/Updated: 12-May-2017
Date ISDS Approved/Disclosed: 15-May-2017

1. BASIC INFORMATION

1. Basic Project Data

<table>
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<tr>
<th>Country:</th>
<th>Philippines</th>
<th>Project ID:</th>
<th>P153814</th>
</tr>
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<tbody>
<tr>
<td>Project Name:</td>
<td>Metro Manila Flood Management Project (P153814)</td>
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<tr>
<td>Task Team Leader(s):</td>
<td>Joop Stoutjesdijk</td>
<td></td>
<td></td>
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<tr>
<td>Estimated Appraisal Date:</td>
<td>01-Jun-2017</td>
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<tr>
<td>Estimated Board Date:</td>
<td>05-Jul-2017</td>
<td></td>
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<td>Managing Unit:</td>
<td>GWA02</td>
<td>Financing Instrument:</td>
<td>Investment Project Financing</td>
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</tbody>
</table>

Is this project processed under OP 8.50 (Emergency Recovery) or OP 8.00(Rapid Response to Crises and Emergencies)? No

Financing (In USD Million)

| Total Project Cost: | 500.00 |
| Total Bank Financing: | 207.63 |
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<table>
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<th>Financing Source</th>
<th>Amount</th>
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<td>Borrower</td>
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<td>International Bank for Reconstruction and Development</td>
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<td>Asian Infrastructure Investment Bank</td>
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<td>Financing Gap</td>
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<td>Total</td>
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Environmental Category: A - Full Assessment

Is this a Repeater project? No

2. Project Development Objective(s)

The project development objective is to improve flood management in selected areas of Metro Manila.

3. Project Description

Component 1: Modernization of Drainage Areas (US$375.20 million). The Project will construct an estimated 20 new and modernize an estimated 36 existing pumping stations and appurtenant infrastructure and improve their associated waterways and draining channels and develop new channels when needed. Modern, efficient, and high capacity pumping units will be used. The design discharge determination will be underpinned by hydrological studies of the drainage areas and the best type of pump will be selected for each given site. Improvements to appurtenant infrastructure such as flood gates and trash racks will be carried out as necessary.
The energy source will, where needed and possible, be changed from diesel to electricity. The component will also finance dredging, including accumulated sediments and solid waste, and improvements to waterways and drainage channels. Five existing pumping stations (a sub-project) have been selected and designed, with implementation to start during project year 1 (PY1). The component will develop asset management plans, as a minimum for the larger PSs, and operational manuals will be prepared or updated for all PSs and associated waterways to guide MMDA towards proper operation and maintenance of the pumping stations and other drainage infrastructure and to determine the budget required for this. The component will provide specialized modern waterways maintenance equipment, such as floating dozers, couple pontoons, and remote controlled cleaners for closed drains and interceptors, not only to enable DPWH and MMDA to carry out emergency cleaning operations, but also to test and show private contractors what equipment is available for efficient waterways cleaning. Modern equipment for removal of water hyacinth will be introduced as well, as well as programs that encourage processing for reuse of products as community livelihood activities, which are especially practiced by women, and production of biogas on a pilot basis. A program of increasing the water retention capacity within the project drainage areas will be developed and implemented, where suitable. This can include green and other infrastructure such as rooftop rainwater collection, green roofs, permeable pavements, and temporary retention of drainage water in public areas such as basketball courts and parking garages.

Component 2: Minimizing Solid Waste in Waterways (US$48.0 million). Solid wastes that accumulate in waterways significantly reduce the water carrying and retention capacities as well as pumping station efficiencies. Activities under this component will be organized by spatial scales of intervention, but mainly focusing on the area where the pumping station is located and neighborhood-level activities, and to a lesser extent on metropolitan-wide activities. The component will build on the existing systems implemented by LGUs, barangays, and households. The rationale of this approach is to ensure a comprehensive and effective set of interventions to address the challenges of solid waste in waterways, while also enabling specific activities to be customized and focused at the appropriate locations and scales, and avoiding a “one-size fits all” approach. At the neighborhood level, in particular, the proposed activities are intended to complement and reinforce one another, with activities selected for relevance in each location. In particular the component will: (a) carry out neighborhood-level activities, in the vicinity of the pumping stations and waterways and drainage channels targeted under Component 1 of the Project, through improved solid waste collection services, community mobilization, incentives based improved waste collection with independently verified results, and neighborhood upgrading. LGUs within the designated project areas along waterways may choose a combination of some or all of these four options, based on their local needs. Improved solid waste collection services will involve the provision of equipment such as bins, push cards, and larger storage containers, appropriate for local-level waste collection, according to the preferred collection system in a given barangay or municipality. Community mobilization will involve a combination of local-level information, education and communication (IEC) campaigns, with the involvement of local level block leaders, to raise awareness and encourage behavior change for improved solid waste management at the individual and household level. Financial incentives to barangays will encourage behavior change by basing incentive payments on independently verified results of improved waste collection and reduced waste quantities at pumping stations. Investments in neighborhood upgrading will beautify selected waterways and easements where feasible, reinforcing the incentive not to indiscriminately dispose of waste into the waterways; and (b) carry out metropolitan-wide activities for improved solid waste management, including a large scale metro-wide information, education and communication campaign; the development and installation of an integrated management information system (MIS); and a solid waste master plan for Metro Manila. A large-scale metro-wide IEC campaign will complement the local-level IEC and will focus on reducing solid waste, recycling, proper disposal of solid waste, and the impact on landfills. An integrated MIS is crucial for improved operation and performance of Metro Manila's overall solid waste management system. The MIS will help track the implementation of other activities under this component, as well as enable MMDA to better monitor waste collection activities and track performance, and thus deploy needed resources to critical sites in a more strategic, dynamic and efficient manner. The solid waste master plan

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will provide the overall framework for a strategic and coordinated vision for all of Metro Manila, including assessment of waste to energy opportunities and development of new landfills. In the context of existing national frameworks and guidelines, the master plan will provide specific guidance for LGUs, while strengthening the role of MMDA in managing inter-jurisdictional activities.

Component 3: Participatory Housing and Resettlement (US$55.76 million). Component 3 aims to ensure proper resettlement of people from areas where they will pose a constraint on construction and/or proper O&M of pumping stations and waterways to ensure optimum water flow in waterways leading to such stations. The component also aims to strengthen the affected people’s resilience to external risks by providing access to better housing on safer grounds, basic public services, more stable income sources, and stronger community organizations. The magnitude of project affected persons (PAP) to be resettled, mostly ISFs, is expected to be around 11,500 (equivalent to about 2,500 households). The actual number of ISFs may change based on the pumping stations that will ultimately be targeted under the project. Component 3 will provide US$15.34 million loan funds in addition to US$40.42 million government counterpart funds (for land acquisition and site and housing development) to finance the following: (a) carry out a program of activities to resettle people away from the Technical Footprint (see below for explanation) of the Project by providing access to better housing and basic services and building stronger community organizations, including land acquisition, site development, housing construction, rental support for transition period as needed, livelihood assistance programs, and technical assistance and capacity building activities to strengthen the communities, LGUs, and implementing and housing agencies. Viable relocation options will be offered to PAPs, with priority being in-city resettlement in vertical housing. Other possible options include near-city resettlement defined as areas that will result in minimal economic dislocation and with secure access to basic services in adjacent local government units, where people can ideally physically and financially commute to their livelihoods of origin and one-off lump-sum cash compensation. Other options expressed as preference during consultations with PAPs (e.g. off-city resettlement) will be considered as well; and (b) assess the needs for, through due diligence, and implement either individual assistance activities to PAPs and/or community development activities in selected sites where people have been resettled by government resettlement programs from the Technical Footprint of the Project for the purpose of carrying out the Project activities. Community development activities can include community based infrastructure, community livelihood programs, and local economic development.

Component 4: Project Management and Coordination (US$20.0 million). The component will provide support for the operation of the Project Management Offices (PMO) in DPWH and MMDA with respect to the management and coordination of their respective parts of the Project, including in each case: (i) payment of incremental operating costs; (ii) provision of office equipment and materials; (iii) provision of training and carrying out of knowledge sharing and peer-to-peer learning activities; (iv) provision of technical assistance in engineering, monitoring and evaluation for the Project, and design of activities for the implementation of the Program; and (v) establishment and operation of a grievance redress mechanism.

Gender-related activities will be addressed under components 2 and 3. Under component 2, among informal waste pickers, many are women (and their children) because they lack alternative livelihood options and may face specific hardships (e.g. as single parents and female heads of household). On the other hand, other jobs in the solid waste sector are typically the domain of men (e.g. more formal jobs as waste collectors, whether through handcarts or municipal garbage trucks). Government has certain programs in place to train and support resettled women with alternative livelihood activities at their new locations, which will also be included under component 3. The project will take, as needed and feasible, gender dimensions into consideration when designing specific actions. Gender impacts will be specifically monitored.

4. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)

The project sites cover the Greater Metro Manila Area. Environmentally, Metro Manila is a very challenged
area considering that it is located in a low-lying delta, surrounded by Manila Bay to the west with its storm
surge risks, Laguna de Bay to the south-east with annual flooding issues, and closed in to the north and north-
east by mountain ranges that drain flash floods into the Pasig-Marikina River System during typhoon events.
Many areas in the Greater Metro Manila Area are flood prone, with insufficient protection against frequent
inundation as natural drainage is restricted. Intensive rainfall in the Philippines is especially severe during the
typhoon season from June through October when typically around 80 percent of the annual rainfall falls, which
for the Metro Manila Area is about 1,700 mm out of the approximate 2,100 mm average annual rainfall. As a
result, flooding of urban areas is a recurrent problem affecting a large proportion of the residents in the Greater
Metro Manila either directly (living in flood prone areas) or indirectly (e.g. traffic restrictions when roads are
flooded). With floods occurring annually, Metro Manila suffers chronic economic, social, and financial losses
dampening its development potentials.

There is an inventory of 139 existing and proposed pumping stations and associated drainage areas, but the
specific interventions to be financed by the project in each drainage area (except for five PY1 areas) are not yet
known and will need to be investigated, surveyed, assessed, and designed during project implementation. An
Environmental and Social Impact Assessment (ESIA) has been prepared which gives an inventory of the
pumping stations in Metro Manila. A Social Impact Assessment (SIA) is included as part of the ESIA,
providing details on the social and economic impact of flooding and the potential impact of the proposed
project. At the core of the Social Impact Assessment is the situation of ISFs living along many of the
waterways. A number of them have been the subject of a government relocation program that aims to move
them to safer areas away from the danger of being washed away by flooding. The aim of this government
program that started in 2011 was to relocate ISFs in Metro Manila out of danger areas during a five year period.
Prominent danger areas considered under the program included flood prone areas adjacent to and over
waterways where ISFs are affected on a regular basis by flooding. Although Oplan Likas and the proposed
Project have different objectives, there are certain areas where they overlap. That overlap is determined by the
Project area of influence for resettlement, also referred to as the ‘technical footprint’. Resettlement under the
Project will be unavoidable where dwellings and structures established by informal settlers impede the flow or
inhibit access for effective maintenance and operation of the facilities. The technical footprint covers the
pumping station and its related facilities as well as sections of waterways serving the pumping stations. The
physical limits of technical footprints for waterways are established on the basis of hydrological and engineering
criteria for each drainage area. Waterway sections within the technical footprint are typically in relatively close
proximity to the pumping facility. People who live or have properties within the Project’s technical footprint or
those who were resettled from the technical footprint under Oplan Likas are considered project-affected persons
(PAP) under the Project.

Five pumping stations (a sub-project) were selected and prepared for project year 1 (PY1) implementation.
Three pumping stations (Vitas, Balut, and Paco) are located in Manila, Tripa de Galina is located in Pasya, and
Labasan in Taguig. The ESIA describes the location and interventions for each of the first five pumping stations
and a RAP for one of them (Vitas) and due diligence reports for the other four have been prepared. For the
other pumping stations to be implemented during later project years, interventions will vary from drainage area
to drainage area. Similarly, a number of potential areas have been identified for new pumping stations proposed
for financing under the project.

The project area of influence (referred to as the ‘project footprint) of each sub-project is different from the
technical footprint for resettlement purposes as described above. The technical footprint overlaps with the
project footprint, but is typically much smaller. The project area of influence can comprise the pump station and
yard, drainage areas, waterways and drainage channels, and ancillary facilities such as access roads, disposal
sites for dredged materials and solid wastes from pumping stations, resettlement sites, as well as temporary sites
needed for equipment parks and materials stockpiles. The exact area of influence for a sub-project will be
determined based on the specific interventions that will be determined during project implementation when each
drainage area will be investigated and studied in detail to first of all determine whether inclusion of a proposed site in the project is required, feasible, and viable, and if yes, what is required to fulfill the objective of the project.

5. Environmental and Social Safeguards Specialists on the Team

Frederick Edmund Brusberg (GSU03)
Gerardo Pio Francisco Parco (GEN2B)
Roberto B. Tordecilla (GSU02)

6. Safeguard Policies That Might Apply

<table>
<thead>
<tr>
<th>Safeguard Policies</th>
<th>Triggered?</th>
<th>Explanation (Optional)</th>
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<tr>
<td>Environmental Assessment OP/BP 4.01</td>
<td>Yes</td>
<td>OP/BP 4.01 on Environmental Assessment is triggered as environmental and social impacts will occur in modernizing existing pump stations, constructing new pumping stations, the cleaning of waterways and drainage channels related to pump stations, and expanded solid waste management activities. This also includes impacts from ancillary facilities (off sites), resettlement programs, as well as social impacts. Anticipated environmental (and social) impacts include relocation of informal settlers within the technical footprint, impacts from dredging activities, collection and disposal of solid waste and construction debris, dredged silt and spoils, worker health and safety, disruptions to local traffic, disposal of worn-out pumps and equipment, spent fuel, oil and lubricants from the pumping stations, dust and noise during construction works, run-off, loss of vegetation, cut and fill of undeveloped terrain, loose soil and debris during site development and construction, siltation of waterways, and poor aesthetic quality. The ESIA has validated that these impacts may potentially occur. An ESIA has been prepared to assess the impacts of the project. This includes the assessment of impacts of ancillary facilities such as disposal sites of solid wastes and dredged materials/sludge, including an environmentally-sound scheme for the final disposal of dredged materials/sludge based upon the thorough analysis and characteristics of the sludge, resettlement site development and social impacts beyond those related to resettlement (e.g., impacts of riparians during dredging, impacts on livelihoods of waste pickers in waterways, impacts on health, odor, nuisance, etc.). An Environmental Code of</td>
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Practice (ECOP) has been prepared to cover the typical and common impacts of pumping station rehabilitation. Site specific Environmental and Social Management Plans (ESMP) have been prepared for the five pumping station rehabilitation activities to be carried out in Year 1 of the project. Specific activities/interventions in each drainage area of the remaining pumping stations will only be determined during project implementation when each area will be investigated and studied in detail. In addition, Site-Specific ESMP will be required from each contractor prior to commencing any works in each of the pumping stations. The Site-Specific ESMPs will include a detailed Dredged Materials Management Plan and Solid Waste Management Plan.

An Environment and Social Management Framework (ESMF) has been prepared to define the process for addressing all safeguards concerns during project implementation. The ESMF is intended to screen existing and new pumping stations and drainage areas that will be identified during implementation and to guide the preparation of specific instruments/plans during implementation. The ESMF describes the process for the environment and social assessment of the potential impacts of all activities taking place within the drainage areas for all project components combined. It contains information, resources, institutional responsibilities, and technical assistance on how to implement it. It is noted that a separate Resettlement Policy Framework (RPF) has been prepared and disclosed before appraisal. The ESMF will include a summary of the content and requirements of the RPF. The ESMF will also provide information how alternatives, if any, will be assessed and how induced and cumulative impacts, when relevant, will be assessed during project implementation.

The ESMF includes an approach to the conduct of a cumulative impact assessment (CIA). The CIA will be conducted during the second half of project implementation after all drainage areas to be improved under the project have been identified. An initial inventory of projects and assessment of proposed valued environmental components (VEC) is included in the ESMF. A ToR with cost estimates has also been prepared and is included in
the ESMF.

A Grievance Redress Mechanism will incorporate existing channels used by the implementing agencies, DPWH and MMDA.

Natural Habitats OP/BP 4.04  Yes  Interventions on existing pumping stations, associated drainage areas and waterways, and related activities will take place in original locations and will not affect natural habitats. Activities related to new pump stations and associated waterways will take place in built-up areas in urban settings, which are unlikely to be considered as natural habitats. There is a remote possibility that new pumping stations sites may be proposed near the Laguna Lake area, although the long-list of potential new pumping stations does not include a site near Laguna Lake. Where relevant, screening for impacts to natural habitats will be conducted. Possible impacts will be due to temporary increased turbidity due to construction, change in water flow which may impact habitats or direct destruction of habitats due to pumping station construction.

The policy is also triggered as the project area may potentially impact natural habitats outside the city at resettlement sites, although the project will not support activities that would significantly convert or degrade natural or critical natural habitats. The screening criteria in the ESMF will determine the potential impacts on existing and new pumping stations, their drainage areas, ancillary facilities and related activities such as disposal sites and resettlement sites. Screening will also be conducted for potential impacts on natural habitats for candidate relocation sites for the project affected people. No settlements will be allowed in critical natural habitats as prescribed in this OP and in accordance with the national regulations.

Forests OP/BP 4.36  No  This policy is not triggered. The project and its activities take place in urban areas where there are no forests.

Pest Management OP 4.09  No  This policy is not triggered as the project will not use pesticides.

Physical Cultural Resources OP/BP 4.11  Yes  This policy is triggered as a number of new pumping stations and resettlement sites will be developed. The ESMF includes the screening for the presence of physical cultural resources and specify chance finds procedures. The first five (PY1) pumping station sites were screened for PCR...
and were found to have no PCR in the primary nor secondary area of influence. In the remaining pumping station sites, the screening matrix in the ESMF will determine any possible cause of disturbance and negative impacts to PCR such as historical areas, architectural landmarks and other cultural property, which may need to be mitigated. During construction, the landscape of the existing and new sites and off-site facilities may also be affected and structural damage to old structures may occur due to vibrations and excavation of adjacent areas. The ESMF will confirm impacts of project activities on PCRs, and where needed, a PCR management plan will be formulated as part of the ESMP, including chance find procedures that will be followed during construction.

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<th>OP/BP 4.10</th>
<th>No</th>
<th>There are no indigenous communities in the project areas.</th>
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<td>Indigenous Peoples</td>
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<tr>
<td>Involuntary Resettlement</td>
<td>Yes</td>
<td>Works to be undertaken within existing pump stations will not need land acquisition or resettlement of ISFs as they are well fenced and contained. However, the technical footprint in a number of drainage areas linked to existing pumping stations have ISFs that need to be resettled, like the ISFs in Vitas PS.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Most of the new pump station sites are expected to be in densely populated urban areas. For a number of these new sites, land acquisition of limited areas will be needed, some through acquiring private lots. Other new pumping stations may be located along public roads or waterway easements, thus minimizing displacement of people.</td>
</tr>
<tr>
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<td>Despite avoidance and minimizing resettlement, an estimated 2,500 ISFs now living along waterways and on potential pump station sites for new pumping stations will need to be resettled or were resettled after the project’s identification date from around 15 sites by the project as their presence in the technical footprint along and over waterways would affect the O&amp;M of drainage systems, including pumps.</td>
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<td>MMDA and DPWH have prepared three site-specific social safeguards instruments for the five PY1 drainage areas, namely a RAP for Vitas, a DDR for Paco, and a combined DDR for Balut, Tripa de Galina, and Labasan pumping stations and</td>
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| OP/BP 4.12                          | Yes          | Works to be undertaken within existing pump stations will not need land acquisition or resettlement of ISFs as they are well fenced and contained. However, the technical footprint in a number of drainage areas linked to existing pumping stations have ISFs that need to be resettled, like the ISFs in Vitas PS. |
|                                     |              | Most of the new pump station sites are expected to be in densely populated urban areas. For a number of these new sites, land acquisition of limited areas will be needed, some through acquiring private lots. Other new pumping stations may be located along public roads or waterway easements, thus minimizing displacement of people. |
|                                     |              | Despite avoidance and minimizing resettlement, an estimated 2,500 ISFs now living along waterways and on potential pump station sites for new pumping stations will need to be resettled or were resettled after the project’s identification date from around 15 sites by the project as their presence in the technical footprint along and over waterways would affect the O&M of drainage systems, including pumps. |
|                                     |              | MMDA and DPWH have prepared three site-specific social safeguards instruments for the five PY1 drainage areas, namely a RAP for Vitas, a DDR for Paco, and a combined DDR for Balut, Tripa de Galina, and Labasan pumping stations and |
drainage areas. The RAP for Vitas was prepared for the 165 ISFs living within the technical footprint based on a validation census conducted by the MMDA in November 2015. The PAPs have already decided that they will move to two resettlement sites, expected before the end of 2017. A group of 88 PAPs will move to a newly developed site about 30 km from Vitas (Benjamin Village 8 BV8), while a group of 77 PAPs will move to a NHA site about the same distance from Vitas (Pandi). In-city choices for resettlement discussed with the ISFs were said to be unsafe as they are proposed at sites characterized by criminality and related social problems. Off-city choices were thus seen as preferable.

The BV8 relocation site is within a developed community of several villages/subdivisions developed by private sectors providing supply of affordable housing for low income earners. Social services infrastructure such are or will be made available within Barangay Muzon of the City of San Jose Del Monte. The LGU will construct a day care center with personnel to manage the services near the resettlement site. Access to municipal health services, schools elementary and high school is in the barangay center accessible by a 5-minute tricycle ride. An open space of more than 2,000 square meters is allotted for playground and space for BV8’s livelihood training center. Pandi is one of the 18 resettlement sites that have been allotted funds from the P1.8 billion social infrastructure budget allotted from the General Appropriations Act of 2017 to be used to improve the basic services and livelihood conditions. These include ensuring the provision of water facilities, additional classroom, day care centers, and health and livelihood multi-purpose facilities. These measures have been incorporated in the RAP. DPWH will work with concerned agencies to ensure that the resettlement of these 165 ISFs is compliant with the requirements of OP 4.12.

A total of 74 PAPs were resettled from Paco’s technical footprint in 2011 to Towerville 6 Resettlement Site. Due diligence of the site showed that In general, access of the ISFs to basic services is acceptable. The remaining challenge faced by the relocates is finding adequate sources of income or jobs within and around the vicinity of the
relocation site and part of the PhP 1.8 billion will be used to implement a comprehensive livelihood program in Towerville 6. The DDR describes the proposed program and contains some additional remedial measures to fill in any gaps in the programs currently being carried out, including improvement in the grievance redress system.

The DDR for Balut, Tripa de Galina, and Labasan found that the sites are free of settlers and no land acquisition or resettlement took place after December 8, 2014. The latest resettlement was recorded in 1996 to give way to the construction of the Balut PS.

Many ISFs are occupying land along and over easements for drains and associated waterways. Since 2011, they have been resettled and continue to be resettled to physically safe locations under an on-going government program (Oplan Likas) that is to be completed around the time the project is expected to become effective. Oplan Likas focuses on removing ISFs from danger zones. The MMFMP is not linked with Oplan Likas as it does not meet the three criteria of OP 4.12 para 4, namely (a) directly and significantly related to the Bank-assisted project, (b) necessary to achieve its objectives as set forth in the project documents; and (c) carried out, or planned to be carried out, contemporaneously with the project. However, some activities financed by the project overlap spatially with Oplan Likas as they are located within the technical footprint of the project. Moreover, the Bank has provided TA in support of Oplan Likas as explained in the Annex of the PAD.

Therefore, resettlement activities that took place prior to Bank engagement in the project (December 8, 2014 - the date of project identification mission) within the footprint of the project is considered a legacy issue. Resettlement before that date has to be in accordance with country legislation and consistent with objectives of OP 4.12. Should this past resettlement not have been consistent with the national legislation and the objectives of OP 4.12, remedial measures will have to be provided. This will be done at the community level for equity purposes and to avoid conflicts with persons relocated to the same resettlement sites from other areas not related to the Project. The safeguard
instrument to be prepared is a Due Diligence Report that will describe the remedial measures to be provided and an action plan if and as needed to ensure the consistency of past rehousing/resettlement with the objectives of OP 4.12.

After the date of project identification, resettlement has to be compliant with OP 4.12, including compensation at full replacement cost for loss of assets and other resettlement assistance. Two groups of PAPs have been identified: (i) people who were resettled from the technical footprint after the project identification date (December 8, 2014), but prior to the date a census is initiated in all sub-project sites during the early stage of project implementation (cut-off date); and (ii) people who will be resettled from the technical footprint after the cut-off date during project implementation. For the first group due diligence will have to be conducted and the individual PAPs that were resettled from the technical footprint will have to be traced to the extent possible. Should their current resettlement conditions not be in compliance with OP 4.12, the project will have to provide remedial measures to address the gaps, described in a RAP and measures will have to be applied retroactively to ensure compliance with OP 4.12. Remedial measures will include compensation to individual PAPs, or through community level interventions for equity purpose if this is acceptable to the PAPs.

When the project starts working on a particular drainage area during project implementation, a systematic due diligence on the past resettlement, if any, from waterways in a drainage area will be carried out. It is likely that the due diligence in a number of areas will reveal that ISFs have been resettled out of the city, far from livelihood sources and employment and removed from pre-existing social networks.

The project proponent will provide before sub-project appraisal data that show the potential overlaying between the (i) pumping station’s technical footprint; (ii) the areas that have been cleared (or are planned to be cleared) by the GoP-funded Oplan Likas Program; and (c) a matrix setting out details of the entitlements that the ISFs resettled under the GoP Oplan Likas Program have
received. This information is important to the understanding of the scope of the potential legacy and land issues of the project. The risks related to the Bank’s involvement in Metro Manila Flood Management Master Plan as a whole and this project in particular need to be articulated in project documents. Specifically, the PAD includes an annex that provides: (i) a thorough explanation of the Bank’s involvement in the Master Plan and Oplan Likas and an explanation of the relationship between the Project and the Oplan Likas program; and (ii) a table with all the identified TAs that were supported by the Bank for the preparation of the Master Plan and the conceptualization and implementation of Oplan Likas.

Displaced people will be consulted - using a participatory approach - and offered different options that will include among them in-city resettlement, near-city resettlement, and cash compensation. A Resettlement Policy Framework has been prepared to guide all actions related to involuntary resettlement.

Any land acquisition needed for Component 2 (Minimizing Solid Waste in Waterways) will also be covered by the RPF. Further, it will also contain a Social Management Framework for policies and procedures in livelihood restoration of those whose loss of income is not due to land acquisition, e.g. informal waste pickers.

The ESMF and the RPF will be monitored to determine issues met in implementation so that it may contribute to future resettlement required by the implementation of the Master Plan for Flood Management in Metro Manila and Surrounding Areas.

A RAP has been prepared for Vitas, and due diligence reports have been prepared for Paco, and Tripa de Gallina, Balut and Labasan (a combined report for the last three areas).

All future RAPs will be reviewed and cleared by RSA.

| Safety of Dams OP/BP 4.37 | No | This policy is not triggered since it will not require the construction of dams nor will any project structure rely on dams. |
II. Key Safeguard Policy Issues and Their Management

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

Benefits of the Project.

Flood Reduction. The main benefit of the project is the reduction in human risks to life and property arising from flood protection. People currently residing in flood-prone areas will directly benefit from the project. Considering that the water bodies that will receive water from the pumping stations are typically affected by tidal flows, the pumping stations are particularly important in periods of high tide when their water levels are higher than the level of the flood control channels.

Improvement of Quality of Life. With reduced flood incidence in the project drainage areas, there is anticipated improvement in the quality of life, health, and sanitation of the people affected by flooding. Project benefits include the reduction of damage to properties and infrastructure, income loss (livelihood and business), and loss of lives and injuries brought about by the operation of the flood control facilities. Diseases that occur from exposure to flood waters such as skin rashes, gastrointestinal infection, leptospirosis, and other water-borne diseases will also be reduced. There is also a lesser need for evacuation of people to safe areas during periods of intense rainfall and typhoons and resulting floods.

Impacts during Construction Works.

Construction Wastes. Demolition and removal of equipment and facilities at the pumping stations will result in the generation of wastes consisting of old equipment, scrap metal, wires, lighting fixtures, and other construction spoils. Most of the wastes are considered as recyclable, but the project will produce residual waste materials that require appropriate disposal to prevent adverse environmental impacts. Solid waste will also be generated from the installation of equipment and facilities. These wastes generally consist of scrap metal, aggregates, empty cement bags, and other construction spoils. These materials will also be disposed properly to avoid negative impacts to land and waterways.

Solid Wastes. The presence of construction workers at the site will generate solid wastes that consist of biodegradable wastes (food wastes, paper) and non-biodegradable wastes such as plastics, food containers, glass, bottles, and aluminum cans. These wastes will have a negative effect on the environment when improperly disposed on land and in waterways.

Oily Wastes. Waste oil and lubricants from the dismantling of motors, pumps, and other auxiliary equipment may result in negative impacts to land and waterways when disposed inadvertently. There are no anticipated PCB-containing transformers that will be decommissioned during project implementation. The impact of waste oil will be confined to the working area and will occur during the extent of the construction activity only. In addition, the generation of waste oil and lubricants is limited in volume since most of these will be contained in dismantled motors and pumps. Adverse effects of waste oil may come from accidental spill or leaks from the dismantled equipment, but these will be cleaned up immediately and will result in a limited effect on the environment.
Occupational Safety. Construction activities may result in negative impact to workers due to accidents and mechanical, electrical, tripping, and fall hazards at the workplace. The impact of occupational hazards is not significant because occupational health and safety measures will be implemented as part of ECOP for construction.

Community health and safety. Construction activities, including dredging, could be an issue for community health and safety given the highly congested conditions of most of the pumping stations and drainage systems and difficult accessibility. There will be clauses for the contractor to follow in order to minimize possible impact on community health and safety. Measures to ensure the safety of residents living along access roads to the construction activities have been identified in the ESIA and will be included in ESMPs, as required.

Impacts of Dredging Activities.

Resuspension of Sediments. The dredging of sediments from the waterways can result in resuspension of sediments which can cause a negative impact on the water quality and aquatic life remaining in the rivers. Based on the results of secondary data review and actual sampling indicating the current poor water quality conditions in the esteros, resuspension of sediments will have a limited effect and change to water quality.

Generation and Disposal of Dredged Materials. The disposal of dredged materials removed from waterways can cause a negative impact on the environment since these contain organic materials and contaminants such as heavy metals. Dredged materials possibly contain contaminants and heavy metals such as chromium (Cr+6), copper (Cu), zinc (Zn), lead (Pb), and nickel (Ni) as experienced during previous sediment sampling conducted at Manila Bay. Considering that the sediments in Manila Bay are eroded materials that were deposited from the estuaries and tributaries in Metro Manila, the dredged materials from the pumping station channels are likely contaminated with these heavy metals as well. However, based on the toxicity analysis conducted for the five PY1 pumping stations, the sediments were found not to be hazardous using the TCLP criteria.

Removal of Water Hyacinths. The waterway clearing operations will involve the removal of water hyacinth which proliferate in some waterways in Metro Manila. Limited impacts will occur on fisheries and other aquatic resources because of the deterioration of habitat of fish. The removal of water hyacinth will occur intermittently and sporadically over the life of the project. The extent of water hyacinth is expected to persist due to the presence of high nutrient conditions. This impact is not applicable to all pumping station sites but rather in selected areas near the Laguna Lake and at Pasig River tributaries.

Odor. Foul odor may be emitted during dredging because of the decomposition of organic materials that occurs in the river water and bottom sediments. When anaerobic conditions worsen, pollutants such as ammonium ions, nitrogen, phosphate, and hydrogen sulphide are released.

Impacts During Operations.

Disposal of Solid Wastes. The solid waste management practices of the communities, particularly the improper disposal of garbage in waterways has an impact on the long-term sustainability of a flood control project. A major operational concern of the existing pumping stations is the accumulation and disposal of solid wastes trapped at the flood control gates. The accumulation of solid wastes at the pumping station will have a negative impact to the environment without regular collection and appropriate disposal methods. This waste will be removed by licensed contractors and disposed of in an appropriate location. The component on solid waste management will result in a reduction in solid waste being disposed of in waterways and drainage channels.

Health and Safety Issues for Workers. The operation of pumps, motors, generator sets, conveyors, trash racks,
and other equipment at pumping stations are potential sources of mechanical hazards due to the presence of
dangerous moving parts. Mechanical accidents may also be caused by unsafe methods and the lack of safety
guards that are fitted to the machine and pumping station facilities. There are open channels at the pumping
stations which require adequate guard rails and fences to avoid accidents and fall hazards. Workers will be
properly trained in hazards and provided appropriate personal protective equipment.

Specific Social Impacts.

Relocation of Informal Settlers. As certain areas (technical footprint) need to be cleared to ensure optimum
water flow in waterways leading to pumping stations, some people who are mostly ISFs, will have to be
relocated. For poor households, the destruction of their houses and possessions makes them more fragile as it
could take quite a while for them to rebuild their asset base. Lack of safe drinking water, no electricity, and
being cut off from markets and public services can make communities feel helpless and isolated. Poor
conditions in staging sites aggravate the disruption in people’s lives. Other potential negative impacts of
relocation include loss of economic networks, loss of social networks, and loss of access to social services. The
resettlement processes and measures provided in this RPF are designed to avoid or mitigate these losses/impacts.

Those who will be found living within the Project’s technical footprint at the time of census will be resettled.
ISFs along waterways leading to the pumping stations are aware that their houses and structures and the waste
they contribute obstruct the flow of water and affect the efficiency of the pumping stations. ISFs in Vitas are
willing to move out of danger zones provided that they are relocated in livable areas where they can earn a
living and their children can go to school. In Tripa de Gallina where some ISFs in Maricaban Creek have
already been relocated from areas outside the technical footprint of the drainage area, residents who used to be
neighbors with the relocated families said that they missed their neighbors, but recognized that fewer ISFs led to
easier water flow and lower floodwaters in the community.

Loss of livelihood or access to livelihood. The governments’ approach of successive off-city resettlement has
been mired with resistance and criticisms in the past, owing to the lack of consideration for the socio-economic
impacts (e.g., loss of livelihood and disruption of social networks) on the affected households. Absence of
livelihood and/or mismatch between skills and job opportunities is often present during resettlement, resulting in
a sharp decline in incomes after resettlement. Many decide to migrate back into the informal settlements in
Metro Manila. It should be noted that under Oplan Likas, 76% of the targeted ISFs were relocated off-city away
from their sources of livelihood and moved them to areas with limited opportunities for employment and
income-generating activities.

In the survey for the Due Diligence Report for the resettled families within the Paco Pumping Station technical
footprint, 60% of the respondents claimed they are still working in or near Paco, Manila. Of these, 59% travel to
Manila on a weekly basis, 26% travel daily and remaining 15% travel once or twice a month. Apart from
increased transportation costs, one can also imagine the difficult life of daily commuting in a 40 kilometer
distance characterized by poor public transportation and massive traffic gridlock. On the other hand, people who
travel weekly or monthly have to bear the impact of temporary separation from their loved ones in order to save
money.

A World Bank commissioned study found that 72% of the surveyed households resettled off-city reported
decreased income up to as much as a 43%. They also reported increased expenditure driven by higher costs of
transportation to schools, work, and health services. Thirty-five percent of those resettled off-city also reported
difficulties in finding assistance for their daily needs due to disruption in their social support network. From its
study of 10 resettlement sites, the Presidential Commission for the Urban Poor (PCUP) reported that 40% of the
households lost jobs after the transfer and decrease in income ranges from 5%-57%. The same study called the
attention of the National Housing Authority and other concerned agencies for the “serious issues on social
services, power and water.” The IPC 2011 study found that a significant proportion of households in the two study sites were considering leaving their current place of residence (26% in Southville 5A and 39% in Eusébio Bliss). For those resettled off-city the main reason was the limited access to employment.

Under Components 1 and 2, the proposed project could potentially lead to economic displacement of water hyacinth pickers and weavers and waste pickers and in the process impoverish them further. Waste pickers constitute a subgroup of ISFs relying on garbage picking as their main source of livelihood. However, almost all the recyclable garbage picked by them is done outside the waterways, so the impact of reduced garbage in the waterways on the waste pickers’ livelihood would be small. Harvesters of water hyacinths comprise a very small fragment of Metro Manila’s poor who supply dried water hyacinth stalks to local and international buyers at low prices. Water hyacinths will be removed from critical locations only where they affect the performance of the drainage systems, and the impact on hyacinth pickers will be very small. Livelihood restoration opportunities will also be offered to affected vulnerable groups, including provision of alternative job opportunities for affected waste pickers or formalize their employment to collect solid waste (eco-aides) and support the processing of hyacinth stalks for example for production of biogas and fuel briquettes.

Compensation and resettlement assistance discrepancies. In the context of the wider resettlement program of the government, host communities can be existing communities or new communities of resettlers within or outside Metro Manila that will live together with project-displaced ISFs in the same neighborhood. Resettlement to nearby in-city resettlement sites will be least disruptive and there would normally be few compensation and resettlement assistance discrepancies. The case is different for off-city host communities where support to PAPs may be much higher than received by already resettled people. The project will support remedial measures at the community level for equity purposes and to avoid conflicts with other persons at resettlement sites. Measures could include development of infrastructure, e.g. a training hall, or provision of skill training programs.

Community health and safety issues. Community hazards and accidents from the movement of vehicles along narrow roads leading to the pumping stations may compromise people’s safety. Other related issues include nuisance and problems caused by noise, odor, and dust. These risks will be minimized through the implementation of traffic control and safety measures, signage, and educational campaigns that are specifically provided in the Environment and Social Management Plan of each PS.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:

Induced Impacts. Floods disturb the normal course of life and pose a real threat to human life and property. As a result of flood mitigation measures there will be positive effects to the communities because of reduced incidence and impact of annual flooding. Positive impacts to the community that are anticipated because of flood control and improvement measures include possible changes in land use, increase in land values, and development of more business opportunities.

Cumulative Impacts. Aside from the Metro Manila Flood Management Project, there are other related projects and activities that are ongoing or proposed which when considered together could result in cumulative impacts. The scope of the ESIA involves the assessment of the potential environmental effects of Phase 1 at a project level assessment. A cumulative impact assessment (CIA) will be done in later phases of the project to consider the impacts of pumping stations in relation to other projects and activities in a defined spatial and temporal framework. The CIA will assess these impacts on key valued components and identify management measures to be undertaken by the Government and other project proponents to provide collaborative solutions to minimizing cumulative impacts.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.

1. Upgrading and Modernization of Pumping Stations.
Metro Manila has 57 pumping stations scattered throughout the city which are operated by the MMDA. Many of these pumping stations were constructed 20 to 40 years ago and are no longer performing well. The main function of the pumping stations is to pump out water from the estero side of the pumping stations into the Pasig River, Paranaque River, Laguna de Bay, and Manila Bay. As it is not possible to have natural drainage from the areas served by pumping stations, pumps are essential for drainage management and there are no alternatives.

2. Replacement of Diesel Engines with Electrical Motors

Many existing pumps are diesel engine driven. The pumps are either of the horizontal axial type or of the vertical wet pit axial type. Axial flow pumps are less resilient in the case of clogged inlets. The performance drops quickly if certain head is exceeded due to recirculation in the impeller. Also the shaft torque increases sharply and loads the motors or engines excessively. The operating cost is high. An option that was considered is the replacement of the diesel engines by electrical motors with standby generator sets to reduce the running costs and increase the reliability of the function during brownouts. Mixed flow pumps are better alternative to overcome torque problems. This implies that the pumping stations will have to be coupled to the 3-phase electrical network of MERALCO. There is also a need to apply diesel engine generator sets with large diesel tanks (one per pump) to accommodate for power interruption. This will guarantee that there will always be enough diesel fuel in the stations since the tanks will remain full during the normal electrical operation.

3. Dredging

Dredging is an activity that is considered by DPWH and MMDA under the project to increase the flow capacity and also as part of the maintenance of the esteros. Options evaluated include the deepening of the esteros or channels, or enlargement of the width of the esteros. The main effect of deepening of the estero will be the lowering of the flow velocity at a certain discharge, thereby, lowering the needed hydraulic gradient. Widening of the estero also lowers the flow velocity and has an advantageous effect on the storage capacity of the drainage area, thereby lowering the flood levels. However, considering that most of the esteros have already defined drainage channels with revetments, and that there are settlements on both sides of the esteros, widening will require resettlement of affected households and was not considered as an alternative.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

An Environmental and Social Impact Assessment (ESIA) and a complementary Social Impact Assessment (SIA) of the project were carried out, the results and findings of which were used to draft and Environmental and Social Management Framework (ESMF) and the Resettlement Policy Framework (RPF). Public consultations, carried out as part of project preparation contributed to the finalization of these documents.

The ESMF and RPF serve to guide development, implementation, and operation of the project in compliance with the requirements of the World Bank's environmental and social safeguard policies and applicable Government of the Philippines (GOP) laws and regulations. Sub-projects will be undertaken in a variety of ecological and social contexts in a number of LGUs, which are the political and quasi-autonomous administrative units which make up Metro Manila. The ESMF and RPF present social and environmental safeguards screening procedures, specific arrangements for management of environmental and social impacts (both negative and positive), including monitoring and reporting for the project as a whole and for each pumping station sub-project to be undertaken. More specifically, the ESMF and RPF serve as guidance instruments to ensure that environmental and social impacts are identified and assessed, and that appropriate mitigation, management, and monitoring measures are incorporated and applied in implementation. They set out the institutional and organizational arrangements, procedures, and implementation arrangements for identification, management and monitoring of environmental and social impacts, mitigation and management. They address
mechanisms for public consultation, participation, and disclosure of project documents as well as for redress of possible grievances and management of project-related issues which may arise during implementation. The conduct of a Cumulative Impact Assessment is also described and will be done during the second half of project implementation.

The MMFMP has selected five pumping station sub-projects to be initiated in the first year of implementation. An ESIA was prepared for these five pumping stations and one RAP and four Due Diligence Reviews (DDR) (described in two DDR reports) have been prepared as well. A RAP was prepared for the Vitas PS at which 165 informal settler families (ISF) will be resettled from the technical footprint area to ensure unobstructed water flow to the pumping station. A retrospective due diligence was undertaken for the Paco PS by means of a tracer study to ascertain to what degree the current resettlement conditions of people who resided within the technical footprint and resettled in 2011/12 by a government program correspond with government policies and the objectives of OP 4.12. Additional due diligence carried out for the three other Year-1 sites (at the Tripa de Gallina, Balut, and Labasan PSs) confirmed previous scoping findings by the project preparation team which indicated that there was no past resettlement from the technical footprint of these sub-projects.

Both the DPWH and the MMDA have a team assigned to implement safeguards requirements of the project. There are separate teams working on the social safeguards aspects and another team managing the implementation of the environmental safeguards arrangements. Extensive meetings and discussions have been undertaken during project preparation to explain the project's safeguards requirements and arrangements. Preparation of the safeguards instruments (ESIA, SIA, ESMF, RPF, RAP, DDR) have also made MMDA and DPWH teams get familiar with the agreed safeguards requirements. The agencies’ staff have also attended training on safeguards in the UP Learning Resource Center on Environmental and Social Sustainability. In addition, safeguards specialists will be mobilized as needed to augment current staffing in the agencies. Prior to implementation of the project, extensive capacity building/training exercises will be conducted by the WB safeguards specialist to ensure proper implementation of the agreed instruments. During implementation, a joint WB-PMO team will conduct capacity-building activities for partner LGUs. LGUs will have limited impact for component 1, as the pumping stations and drainage systems are managed by MMDA, but will be involved in components 2 and 3. LGUs are responsible for solid waste management and will be involved in managing training and awareness programs. Under component 3 the LGUs will be involved in land acquisition and monitoring of site and housing developments, while they will also be involved in provision of basic services, including schools and health clinics.

Specifically for Component 3, DPWH and MMDA have conducted a series of consultations with shelter agencies (HUDCC, NHA, SHFC) and secured their commitments for the implementation of Component 3.

After about one year of project implementation, a review of the practices and experiences with the implementation of the safeguards instruments will take place with participation of all relevant government agencies and the Bank’s task team and safeguards specialists, and necessary changes and updates to the safeguards documents can then be made, as needed.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

In compliance with the requirements of Philippine EIA law and OP 4.12 and part of the development of Safeguards documents, DPWH and MMDA conducted public consultations where the following documents were shared and discussed: (a) project background (including objectives, components, benefits, etc.); (b) ESIA; (c) ESMF; (d) RPF; and (5) the three PY1 safeguards documents. Project briefs and flyers highlighting the key sections of the safeguards documents written in Filipino were provided to the five communities prior to the consultation. English versions of the documents were also provided to the five barangays to ensure that interested individuals could easily have access to the full versions of the documents.
The draft ESIA, covering the rehabilitation and modernization of the first five pumping stations and drainage areas, and the Executive Summary of the ESIA, ESMF, and RPF were disclosed on February 8, 2016. Consultations on the ESMF, RPF and other safeguards instruments were conducted on August 17-18, 2015, November 9, 2015, and February 24, 2016.

Additional consultation was carried out on September 9, 2016 to discuss the project, the ESMF and the results of the ESIA. The copies of these documents were made available at the DPWH-Unified Project Management Office (UPMO), DPWH-Environmental and Social Safeguards Division (ESSD), DPWH-Unified Project Management Office (UPMO), and at the MMDA-Planning Office. The consultation meeting was attended by representatives from the local government units, Social Housing Finance Corporation, Pasig River Rehabilitation Commission, Presidential Commission for Urban Poor, MMDA, and district engineering offices of DPWH.

Another set of consultation meetings was held September 23, 2016 for the PAPs in Vitas pumping station. Stakeholders that participated included the City of Manila through the Urban Settlements Office, Barangays 150 and 93, NHA, PCUP, SHFC, and AGOM and Share Foundation, which are local NGOs and community-based organizations in the area, as well as PAPs. Similar community consultations were organized by DPWH, with support from other agencies, for the other four PY1 drainage areas from October 10 to 13, 2016, along with a stage two consultation for the PAPs in Vitas pumping station on October 10, 2016 to further discuss the details of the RPF and RAP. A separate consultation activity was held at Towerville 6 Resettlement Site in San Jose del Monte, Bulacan to discuss the resettlement legacy issues and to learn lessons from past Government resettlement activities that will help improve project implementation. Prior to these public consultations, all the safeguards instruments including a Project Information Booklet in Tagalog containing the pertinent details of the project and executive summary of the RAP and ESIA were widely distributed in advance to the stakeholders and PAPs. The consultations were generally well attended, with more than 100 participants at the Paco and Vitas consultations. The RPF as well as the other safeguards instruments were revised based on the feedbacks generated from the consultations.

Important stakeholders of the project include project affected communities, informal settlers along waterways, MMDA, DPWH, housing agencies, solid waste collectors, pumping station staff, CSOs, and communities in the relocation sites. Consultations in each of the PY1 drainage areas to discuss the relevant safeguard instruments took place in October 2016. The minutes of each of the consultations are annexed to the ESIA. Local disclosure of the approved safeguards documents will be done through the websites of DPWH and MMDA.

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**B. Disclosure Requirements**

| Environmental Assessment/Audit/Management Plan/Other |
|---------------------------------|-----------------|
| Date of receipt by the Bank      | 05-Feb-2016     |
| Date of submission to InfoShop   | 08-Feb-2016     |

For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors: 16-May-2017

"In country" Disclosure

**Philippines**

| Date of receipt by the Bank      | 05-Feb-2016     |
| Date of submission to InfoShop   | 08-Feb-2016     |

Comments: Resettlement Action Plan/Framework/Policy Process

| Date of receipt by the Bank      | 05-Feb-2016     |
| Date of submission to InfoShop   | 08-Feb-2016     |

"In country" Disclosure
If the project triggers the Pest Management and/or Physical Cultural Resources policies, the respective issues are to be addressed and disclosed as part of the Environmental Assessment/Audit/or EMP.

If in-country disclosure of any of the above documents is not expected, please explain why:

### C. Compliance Monitoring Indicators at the Corporate Level

#### OP/BP/GP 4.01 - Environment Assessment

<table>
<thead>
<tr>
<th>Does the project require a stand-alone EA (including EMP) report?</th>
<th>Yes [X]</th>
<th>No [ ]</th>
<th>NA [ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?</td>
<td>Yes [X]</td>
<td>No [ ]</td>
<td>NA [ ]</td>
</tr>
<tr>
<td>Are the cost and the accountabilities for the EMP incorporated in the credit/loan?</td>
<td>Yes [X]</td>
<td>No [ ]</td>
<td>NA [ ]</td>
</tr>
</tbody>
</table>

#### OP/BP 4.04 - Natural Habitats

<table>
<thead>
<tr>
<th>Would the project result in any significant conversion or degradation of critical natural habitats?</th>
<th>Yes [ ]</th>
<th>No [X]</th>
<th>NA [ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the project would result in significant conversion or degradation of other (non-critical) natural habitats, does the project include mitigation measures acceptable to the Bank?</td>
<td>Yes [ ]</td>
<td>No [X]</td>
<td>NA [ ]</td>
</tr>
</tbody>
</table>

#### OP/BP 4.11 - Physical Cultural Resources

<table>
<thead>
<tr>
<th>Does the EA include adequate measures related to cultural property?</th>
<th>Yes [X]</th>
<th>No [ ]</th>
<th>NA [ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the credit/loan incorporate mechanisms to mitigate the potential adverse impacts on cultural property?</td>
<td>Yes [X]</td>
<td>No [ ]</td>
<td>NA [ ]</td>
</tr>
</tbody>
</table>

#### OP/BP 4.12 - Involuntary Resettlement

<table>
<thead>
<tr>
<th>Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?</th>
<th>Yes [X]</th>
<th>No [ ]</th>
<th>NA [ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?</td>
<td>Yes [X]</td>
<td>No [ ]</td>
<td>NA [ ]</td>
</tr>
<tr>
<td>Is physical displacement/relocation expected?</td>
<td>Yes [X]</td>
<td>No [ ]</td>
<td>TBD [ ]</td>
</tr>
<tr>
<td>11,500 Provide estimated number of people to be affected</td>
<td>Yes [ ]</td>
<td>No [X]</td>
<td>TBD [X]</td>
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</tbody>
</table>

#### The World Bank Policy on Disclosure of Information

<table>
<thead>
<tr>
<th>Have relevant safeguard policies documents been sent to the World Bank's Infoshop?</th>
<th>Yes [X]</th>
<th>No [ ]</th>
<th>NA [ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?</td>
<td>Yes [X]</td>
<td>No [ ]</td>
<td>NA [ ]</td>
</tr>
</tbody>
</table>

#### All Safeguard Policies

| Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies? | Yes [X] | No [ ] | NA [ ] |
Have costs related to safeguard policy measures been included in the project cost? | Yes [X] | No [] | NA []
--- | --- | --- | ---
Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies? | Yes [X] | No [] | NA []
--- | --- | --- | ---
Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents? | Yes [X] | No [] | NA []
--- | --- | --- | ---

### III. Approval

<table>
<thead>
<tr>
<th>Task Team Leader(s):</th>
<th>Name: Joop Stoutjesdijk</th>
</tr>
</thead>
</table>

*Approved By:*

<table>
<thead>
<tr>
<th>Safeguards Advisor:</th>
<th>Name: Peter Leonard (SA)</th>
<th>Date: 02-May-2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice Manager/Manager:</td>
<td>Name: Sudipto Sarkar (PMGR)</td>
<td>Date: 15-May-2017</td>
</tr>
</tbody>
</table>