Concept Environmental and Social Review Summary

Concept Stage

(ESRS Concept Stage)

Date Prepared/Updated: 03/03/2020 | Report No: ESRSC01088
### BASIC INFORMATION

#### A. Basic Project Data

<table>
<thead>
<tr>
<th>Country</th>
<th>Region</th>
<th>Project ID</th>
<th>Parent Project ID (if any)</th>
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<td>Philippines</td>
<td>EAST ASIA AND PACIFIC</td>
<td>P171897</td>
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#### Project Name
Pasig-Marikina River Basin Flood Management Project

#### Practice Area (Lead)
Water

#### Financing Instrument
Investment Project Financing

#### Estimated Appraisal Date
11/2/2020

#### Estimated Board Date
3/25/2021

#### Borrower(s)
Department of Finance

#### Implementing Agency(ies)
Department of Public Works and Highways

#### Proposed Development Objective(s)
To improve flood management in the Pasig-Marikina River Basin.

#### Financing (in USD Million)

<table>
<thead>
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<th>Total Project Cost</th>
<th>Amount</th>
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<td>700.00</td>
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#### B. Is the project being prepared in a Situation of Urgent Need of Assistance or Capacity Constraints, as per Bank IPF Policy, para. 12?
No

#### C. Summary Description of Proposed Project [including overview of Country, Sectoral & Institutional Contexts and Relationship to CPF]
The Pasig-Marikina River source is north-east of Metro Manila and the river flows through the city to Laguna de Bay and Manila Bay. The river has limited conveyance capacity and intensive rainfall events during the rainy season from June to November cause regular flooding in the basin. Metro Manila is one of the most densely-populated cities in the world with a population of around 15 million and the recurrent flooding has significant impact on millions of people’s lives and the economy. Management of floods will be critical to improve the quality of life of the 7.5 million people living in the Pasig-Marikina River Basin. Government, through the Department of Public Works and Highways, has invested in river bank strengthening to safely convey rainfall events with a 1:100 year return period, but this infrastructure cannot function optimally until river flow and capacity issues in the upper section of the river basin have been addressed. These additional interventions will be implemented through the proposed project, including
major structural measures (large dam and a retention basin), related smaller structural measures (catchment rehabilitation, sediment management, and flood forecasting and early warning systems), non-structural measures (inundation mapping, emergency response planning), and support to indigenous people living in the project area.

**D. Environmental and Social Overview**

**D.1. Project location(s) and salient characteristics relevant to the ES assessment [geographic, environmental, social]**

The large dam would be located in Barangays San Rafael and Wawa Rodriguez, Rizal in the northern section of the Pasig-Marikina River Basin within the Upper Marikina River Basin Protected Landscape (UMRBPL). The eastern side is mountainous and forms part of the Southern Sierra Madre Mountain Range in Luzon Island. The Marikina River forms a gorge in the most upstream reach and a valley with hilly to gentle topography in the upstream to midstream reaches. The topography becomes rather gentle to flat land to the westward direction along the lower reach of the Marikina River as well as along the Pasig River. It is covered by a Certificate of Ancestral Domain Title (CADT) of the Dumagat Remontados of Rodriguez Rizal Indigenous Peoples Community that reside together with the many informal settlers who may be displaced by the project. The dam site and access road would increase accessibility to surrounding areas that are currently difficult to access by vehicle but heavily utilized by local communities for mixed small-garden agriculture, particularly the banks of the river and smaller tributaries.

The planned flood retention basin would be located downstream from the dam site on the outskirts of the heavily urbanized area of Rodriguez (San Mateo and Quezon City forming part of the larger and densely populated Metro Manila area) in the flood plains of Marikina River. The basin area is characterized by a mix of informal agriculture and small gardens, sand and gravel extraction, commercial plots, often used for storing vehicles, machinery or construction materials, as well as some settlements and businesses. Overall the area designated for the retention basin has lost most of its original natural characteristics and ecological value.

Analysis of alternatives to achieve reduction in flood waters entering the city were assessed, based on technical, financial, social, and environmental considerations. Alternatives considered included a large dam, a cascade of smaller, but still large dams, and inter-basin transfer. The conclusion was that it would be better to put all design, construction, and supervision efforts in one dam than a cascade, as one dam would be more economical, easier to operate, have less impact on the environment, have the lowest number of people to be resettled, and would minimize infrastructure in the ancestral domain. Inter-basin transfer was not considered economical and would result in serious flooding in the receiving basin. Investigations, survey and drilling was carried out at four potential dam sites to assess technical, financial, social, and environmental considerations. It was found that the preferred site would result in the lowest dam construction cost, has the best foundation and abutment conditions, lowest number of Project Affected People (PAP), and shortest access road.

**D. 2. Borrower’s Institutional Capacity**

The Project Management Office is located in the Flood Control Management Cluster of the Department of Public Works and Highways (DPWH) and will be responsible for overall project management and coordination. DPWH has moderate technical and institutional capacity. Its track record of implementation for the Metro Manila Flood Management Project shows that it relies heavily on consultants to do the necessary tasks including safeguards. While DPWH has an Environment and Social Safeguards Division (ESSD) borne out of implementing World Bank projects in the past, it is unable to provide adequate assistance to the PMO. As the ESSD attends to many DPWH projects under the government’s Build, Build, Build Program, its manpower is heavily stretched. This has on previous occasions led to lack of focus and sustained action in ensuring timely and effective safeguards implementation. DPWH also has limited
capacity in coordinating among various shelter agencies needed for the relocation of informal settler families. The ESIA will include a detailed assessment of borrower E&S capacity and identify measures to be taken, including budget, to address E&S capacity issues. To address these issues, an environmental and social capacity development program for DPWH will be incorporated in project design (under Component 3 financing for project implementation, management and coordination).

II. SCREENING OF POTENTIAL ENVIRONMENTAL AND SOCIAL (ES) RISKS AND IMPACTS

A. Environmental and Social Risk Classification (ESRC) High

Environmental Risk Rating High

a. Project type, location and scale: Project includes construction of a new concrete gravity dam (81 meters high with a 350 meter long crest to be constructed across a gorge of the Marikina River. The total gross storage capacity is about 90 million m³, including 9.3 million m³ for water supply and 7.5 million m³ dead storage for sediment accumulation) with prime purpose of flood control, secondary purpose water supply. The original land cover at the site of the proposed gravity dam (primary growth forest) is almost completely converted into plantations, secondary growth forest, swidden and bamboo groves. There are remnants of original forest in the watershed area, not impacted by the dam, reservoir, appurtenant structures or associated facilities. Baseline conditions are generally not sensitive as the area is mostly modified habitat, experiencing ongoing pollution-related impacts and long-existing hydrotechnical installations. Access to project site would involve mainly upgrading of existing roads, and the construction of few km of new roads. No significant induced or indirect impacts are expected in proj. area/surroundings. The Marikina River (as key receptor) is currently impacted by pollution related to animal husbandry and a large closed waste dump upstream. A ca. 10 m high weir 2-4 km downstream of the planned dam location has existed 50-60 years, constituting a barrier for migratory aquatic life. The area is under legal protection status, designated as “Upper Marikina River Basin Protected Landscape”, for flood protection purposes. The flood retention basin (11 Millm3 capacity) would be located in heavily urbanized Rodriguez (Quezon City) in the flood plains of Marikina River. These are characterized by a mix of informal agriculture / small gardens, sand and gravel extraction, commercial plots, often used for storing vehicles, machinery or construction materials, as well as some settlements and businesses. Overall the area designated for the retention basin is heavily urbanized and has lost most of its original natural characteristics and ecological value. Overall, risks from project location and baseline conditions are expected to be significant.

b. ES risks and impacts: There would be significant impacts from project relating to physical footprint on current environmental baseline conditions: On terrestrial side mostly on modified habitats. Aquatic ecosystem is already modified by human activities, fish and amphibians are not under endangered status and are not migratory species. Significant temporary risks and impacts for communities are expected to result from construction-related noise, dust, emissions, traffic, labor influx, waste and waste-water generation, and communicable diseases. Moderate impacts are expected from dam operation, mainly on flows, sediment load, reservoir water quality and GHG releases, with significant positive impacts resulting from the dam’s flood management function. River hydrology is expected to be impacted. November to April the water level will rise to 115 masl (FSL) for around 55 Millm3 in the reservoir for continued drinking water supply and maintaining environmental flows during dry periods. May to October the water level is lowered to 93 masl (NHWL) for around 9 Millm3 in the reservoir in order to maintain sufficient buffer for flood water storage / peak attenuation during rainy periods. The dam is equipped with un-gated overflow spillways at 120 masl and three outlet works at 93 masl; latter would be fully opened during the
flood season and discharge the allowable peak amount of water (i.e. 1,250 m³/s in total) downstream in case of 100-years floods (incoming flow of 3,200 m³/s). Minimum flows required during dry periods needs to be defined within the ESIA and written into the ESMP and the dam’s operational manual.

(CONTINUED: environmental risk description continued under ESS1)

Social Risk Rating

A. Project type, location and scale: While the project is expected to provide significant benefits to the large urban population living in downstream flood prone areas, the general arrangement of the proposed concrete gravity dam site will transform an upland social landscape characterized by indigenous culture, by subsistence and commercial livelihoods, and by increasing encroachment from nearby urban populations. While the area surrounding the retention basin is heavily urbanized, most of the basin footprint appears to be characterized by informal agriculture and small gardens and acts as a natural flood plain. There may also be some sand and gravel extraction, commercial plots used for storing machinery and materials in the area.

B. ES risks and impacts: The project involves significant social risks and impacts including the physical and economic displacement of private land owners, informal settler families, and Indigenous Peoples. Impacts directly associated with clearance of the dam site and indirect and cumulative impacts downstream from the dam site are expected on swidden plantation areas, bamboo groves and non-timber forest product resource areas, and plantations of banana, palm, cassava and timber, as well as some fishing. Physical displacement of a significant number of households is also likely to be unavoidable. Impacts associated with the access road are mainly due to rehabilitation of existing roads as well as a half mile extension to reach the dam site. Clearance of right of way may displace households and agricultural activities. During the construction phase of the dam the roads will be a source of hazard as communities will be unfamiliar with large volumes of traffic and transportation of heavy materials and this will require road safety management measures. The road itself will be beneficial to local communities as it may facilitate greater market access for local produce, transport, and access to facilities.

The Dumagat Remontados Indigenous Peoples community have communal claims to the land in the project area and are holders of a Certificate of Ancestral Domain title (CADT) at the dam site. Remontados of the Sierra Madre highlands are traditionally reliant on subsistence agriculture and maintain distinct cultural traditions associated with the landscape. Outsiders who have settled in the area recognize the IPs’ rights and call themselves “dayo” (new settlers). Complex social assessment and sensitive stakeholder engagement and development planning will be required to address requirements under Environmental and Social Standard 7 on Indigenous Peoples and the Indigenous Peoples Rights Act of the Philippines which affords Indigenous Peoples protections including right to Free, Prior and Informed Consent and full participation in development benefits. Community health and safety risks are also significant. These include construction-related noise, dust, emissions, increase in heavy vehicle traffic, spread of communicable diseases, increasing prevalence of Gender-Based Violence, and other impacts as a result of significant labor influx during the construction phase. Labor management risks include potential for weak management of accommodation, transport, and working conditions generating unsafe interactions between workers and community. Such risks are more acute if the operation opens up more inaccessible areas to the dam site but are also present for project facilities that are to be constructed close to built-up urban areas (eg. retarding basin). More generally there may be stakeholder engagement risks associated with concerns or distrust resulting from perceived inadequacy of historical consultations on previous development projects in the area (for example the Kaliwa hydropower projects has come under scrutiny for the quality of their engagement with indigenous and other stakeholders).

(CONTINUED: social risk description continued under ESS1)

B. Environment and Social Standards (ESSs) that Apply to the Activities Being Considered
B.1. General Assessment

ESS1 Assessment and Management of Environmental and Social Risks and Impacts

Overview of the relevance of the Standard for the Project:

Continued: environmental risk description:
c. Borrower: While Borrower has experience managing large investments and familiar with Bank’s safeguards policies, good ES practice is not yet firmly established, & ESS application is expected to be constrained by lack of qualified staff. While the Borrower has already produced a pre-FS and E/S due diligence report, these require strengthening and gap-filling. Overall, Borrower risk is deemed significant.
d. Other areas of risk: The dam would be constructed within the Valley Fault System containing two active faults close to the dam, i.e. West Valley Fault and East Valley Fault with distance of 5.4 km and 9.5 km respectively to the dam site with the estimated earthquake magnitude of 6.2-7.2. The results of deterministic and probabilistic seismic hazard assessments will be reviewed and incorporated into the design of the dam and associated structures. The consequences of a dam failure would be extreme due to the large population and infrastructure value concentrated downstream. The seismic risk / dam safety risk would thus be classified as high. The dam is designed to regulate up to a 100 year flood reducing the peak incoming flood (3,200 m3/s) to 1,250 m3/s in line with the allowable discharge capacity of the downstream river as per the flood management plan. The dam is also designed to be safe under the extreme flood condition under the Probable Maximum Flood (PMF) of around 6,300 m3/s.

Continued: social risk description:
C. Borrower Capacity: The implementing agency (DPWH) has some previous experience with regard to implementation of social safeguards but capacity is weak as evidenced by the additional due diligence and support required for the Metro Manila Flood Management Project. There is concern over DPWH’s capacity to assess and manage the range of sensitive issues associated with high risk infrastructure operations (resettlement, Indigenous Peoples engagement, labor influx and gender-based violence. The Bank is advising the consulting team hired by DPWH in order to update an existing pre-feasibility stage Environmental and Social Impact Assessment for the Dam site to ensure consistency with good international practice. An environmental and social capacity development program for DPWH will pay particular attention to complex social risk management.
D. Contextual risks: Increased access to previously difficult to access areas by the development of new roads may involve potential for some in-migration from nearby urban areas and encroachment on indigenous ancestral domain resulting in further conversion for commercial use of natural resources upon which local indigenous communities are dependent for subsistence and for tangible and intangible cultural heritage values. Such encroachment, along with utilization of the water from the dam for urban water supply needs also has potential to lead to social tensions and conflict if it is perceived to be excluding the interests of domain title holders.

ESS1:
A preliminary environmental assessment previously undertaken along with preliminary feasibility designed for the dam will inform a detailed ESIA to be produced by independent specialists to assess the significance of ES risks and impacts anticipated for the recommended design options (gravity dam, retention basin, access roads and ancillary facilities). The assessment will cover direct, indirect and cumulative risks and impacts associated with the project proposal. Depending on the ESIA, one or more ESMPs will be prepared, detailing the mitigating measures, monitoring parameters, frequency, responsible agencies and costs. Labor management procedures, and a Community Health and Safety Plan will also be developed, incorporating measures to manage risk of gender-based violence.
Dam safety plans will include (i) construction supervision & QA plan, ii) preliminary O&M plan, incl. reservoir operation during floods and sediment management; and (iii) framework plan for emergency preparedness including downstream flood inundation maps. A dam safety panel will be established to review/confirm adequacy of design, construction plan, and other required safety measures for dams and associated facilities.

The ESIA will include a comprehensive social assessment component in order to confirm extent of impacts on livelihoods activities and indigenous culture and other vulnerable groups in the project area. Findings and recommendations of the social assessment will be identified in collaboration with affected stakeholders and guide the development of a Resettlement Plan, Indigenous Peoples Plan, and provision of integrated community development interventions for affected communities in the area. In addition to assessing and managing risks and impacts, the project also incorporates development opportunity into its design with a component dedicated to improving the livelihoods of smallholder farmers and Indigenous Peoples living in the project area. This component will assist communities to undertake community-driven development activities including development of alternative housing options and sustainable livelihood activities related to agriculture and eco-tourism. These activities would be selected with active participation of beneficiary communities including marginal and vulnerable groups. They will be assisted to organize into associations and engage stakeholders, including government agencies.

An independent ES Panel may be required to monitor and advise on mitigation of ES risk, and on the effective implementation of the integrated community development interventions. Decision on formation and function of the panel, will be determined prior to appraisal. The panel will function to provide independent advice and oversight for the E&S aspects of the project, including monitoring mitigation of E&S risk and effective implementation of the integrated community development interventions.

Areas where “Use of Borrower Framework” is being considered:
Currently no areas are considered for the use of the Borrower's ES systems.

ESS10 Stakeholder Engagement and Information Disclosure
The Project will engage with a wide range of stakeholders comprising of local government, direct beneficiaries, Dumagat Remontados indigenous community members, project-affected persons (especially those expected to be physically or economically displaced, those whose livelihoods would be impacted downstream, and those who live downstream and will need to know about the plan for emergency preparedness). Other interested stakeholders include civil society and other cause-oriented groups. National and international contractors will likely be involved in construction activities, and private water supply companies may be engaged during operation of the dam. Any PPP arrangement will be governed by the ESF regarding ES risk management and undergo the same process of ES impact assessment and management. Even though the primary function of the dam is flood management, a public good, opposition by segments of the population and NGOs about dam development may result in organized advocacy campaigns, public petitioning, and significant critical media attention. Other recent development proposals in Quezon province, such as the Kaliwa Hydropower Dam, have generated significant critical attention from NGOs and media. Concerns have been raised about quality of public participation in environmental impact studies, and about bidding process integrity and foreign investment practices.
A Stakeholder Engagement Plan (SEP) including a stakeholder assessment to assist with planning participation in the community driven development interventions under component two. The SEP will be prepared to ensure that
information disclosure and consultations are thoroughly planned and well-managed to ensure that affect stakeholders are able to understand the project and its risks and so that they are able to provide feedback to inform project design and implementation. Separate consultation processes will be held with women and vulnerable and marginal groups in a manner that creates a safe enabling environment for open discussion to seek their views and inputs. The plan will document consultations on the findings of the updated Environmental and Social Impact Assessment and associated management plans. It will also identify and propose measures to manage stakeholder interests through construction and implementation phases of the project. The plan will also describe the process, resources and responsibilities for managing the project-level grievance mechanism (GRM). Resources have been allocated under component three to support implementation of the GRM by DPWH’s Unified Project Management Office – Flood Control Management Cluster (UPMO-FCMC).

A detailed communication strategy and plan will be developed as part of the SEP to address each phase of the project, assessment, construction and operation, in order to adequately inform downstream and surrounding populations about the project, its risks and benefits, as well as possible contentious issues such as the proximity of the dam to earthquake fault lines, water quality in the event of provision of raw water, health and safety concerns. For the dam operation phase, community awareness of risks associated with dam operation (e.g. drowning risks from rapid release of water ahead of expected heavy rains) will need to be addressed in the communications strategy as well as in the ESIA and in specific management plans to be produced during project implementation.

A detailed Indigenous Peoples engagement strategy will be developed as part of the Indigenous Peoples Plan (proposed under ESS7) in order to ensure that a process of free, prior, informed consent is followed consistent with ESS7 and the Indigenous Peoples Rights Act of the Philippines and with the involvement of the National Indigenous Peoples Commission. It will be particularly important to allay any concerns or distrust resulting from perceived inadequacy of historical consultations on previous development projects in the area. The plan will include engagement with organizations representing the rights and interests of Indigenous Peoples of Dumagats and other community groups.

B.2. Specific Risks and Impacts

A brief description of the potential environmental and social risks and impacts relevant to the Project.

ESS2 Labor and Working Conditions

Significant influx of hundreds/thousands of workers is anticipated during the construction phase of the project, with small numbers of skilled workers required for ongoing maintenance during operations. Skilled and semi-skilled labor including direct workers, contract workers and primary supply workers is likely sourced from the nearby metropolitan area and will involve the use of contractors for development of project infrastructure and ancillary facilities such as new roads. Given the inaccessibility of the location of the dam and facilities it is also likely that worker camps would need to be established.

The project should look to identify opportunities to maximize local hire of semi-skilled and unskilled labor to ensure local participation in the employment benefits associated with the project. Community driven development activities undertaken as part of component two of the project may involve some community labor and this will be monitored
to verify voluntary nature and OHS issues governed by use of an ECOP. Community development initiatives will involve participatory planning of local communities and will be monitored to avoid hazardous or exploitative child labor. Child labor is an ILO-documented risk in the Philippines, and is largely associated with agriculture, factories, and street and domestic work. There are few documented cases of use of child labor on large-scale infrastructure development.

A labor risk assessment will be undertaken as part of the ESIA. Labor management procedures will be developed for approval by the Bank prior to finalization of contracts and deployment of workers for construction activities. The procedures will describe roles and responsibilities of Borrower and contractors, training requirements, occupational health and safety requirements, and measures to address worker grievances. Precautionary measures to avoid hazardous or exploitative work will be taken and all project activities will be undertaken by approved contractors, codes or conduct in the scope of work of the owner’s engineer and contractors will describe associated prohibitions and penalties under Philippines law. National regulatory requirements will be assessed for consistency with the requirements of ESS2 and gap filling measures included. Labor arrangements will be monitored throughout the project cycle.

The management procedures will describe the type and location of work and the expected critical labor risks identified in the ESIA which may be associated with this work, as well as the process, resourcing and responsibilities for a dedicated labor grievance redress mechanism. It will also refer to Gender-based violence risks (screened under ESS4) and how they are to be addressed.

ESS3 Resource Efficiency and Pollution Prevention and Management

This standard will be relevant due to the expected risks and impacts from (i) construction-related pollution (waste, waste water, spills and accidents involving fuels, lubricants and other chemicals – e.g. concrete additives), (ii) water demand (water can be scarce in the project area during the dry season and water use needs to be managed and monitored); (iii) GHG emissions during reservoir filling and operation; (iv) disposal of excavation materials from retention basin and (to lesser extent) dam sites.

Pollution and water economy will be dealt with in the ESIA; the borrower will have to coordinate with relevant government agencies and local government units to improve water quality management in the area. The final decision on the allocation of water supply for domestic consumption will determine the water quality parameters that should be maintained and elaborated in a water quality management plan.

While the river is not currently used for domestic water supply, it will be the primary source of water during the construction period. Regardless of a potential co-utilization of the dam as drinking water supply, the ESIA will include a water quality assessment on the watershed level, identifying existing and potential pollution sources and their respective impacts on overall water quality. This assessment will need to take seasonal fluctuations into account.

A water demand assessment will be undertaken based on the projected peak water demand during RCC placement for the main dam works, and using mean low flow rates as a comparator. In the unlikely case that water demand
could be above supply (RCC uses low water ratios of only about 15%), recommendations for water conservation will be made, such as temporary storage to capture water during the rainy season and use it during low flow.

The Borrower will need to prepare a gross GHG emission estimate for the project, which the Bank will assist with if required. The reservoir of Marikina Dam would have special characteristics as compared to e.g. hydro-power or water supply dams. The reservoir water level goes up and down in the range of 93 masl (NHWL) and 115 masl (FWL) between different seasons, and this would create some risks impacts: erosion / siltation of reservoir, landslides and mudslides. Since the estimated sediment yield of the catchment area is also high (580 m3/km2/year), it is important to prepare and implement a sediment management plan in a comprehensive manner for ensuring sustainability of the reservoir. But the exposed reservoir slopes could also offer opportunities for agricultural purposes for at least one growing season per year for suitable crops (cassava, highland rice). There may be an opportunity for combined slope stabilization measures by promoting agricultural use of the reservoir slopes involving the neighboring communities. This should be explored in the ESIA process and expressed in the ESMPs (construction / operation) derived from the ESIA.

The ESIA will identify options for handling, transport and disposal of excavated materials, which are expected to be large in volume. The materials are unlikely to be polluted, but there may be localized contamination, especially in the area of the flood retention basin. The ESIA would investigate an optimized material balance, maximizing the amount of excavated materials that can be reused elsewhere for construction purposes. Traffic safety on the transport routes and around work-sites and deposits will be covered by the ESMPs.

The Borrower has completed an initial GHG emission assessment for the reservoir which will be reviewed, detailed and confirmed during project preparation.

ESS4 Community Health and Safety

Project activities are expected to involve significant labor influx, significant community and project traffic safety risks, occupational health and safety concerns, impacts on ecosystem services (e.g. river used as waterway, charcoal production in forest, fishing in river) and the potential risks to adjacent communities from site control, site access and security personnel deployed at project sites.

Traffic safety will be a major concern, as construction traffic is expected to be heavy, and access to the sites passes through densely populated areas and / or narrow roads through communities not used to heavy traffic. Traffic safety will be addressed and emphasized in all ESMPs for work-sites, and traffic management / pedestrian safety well be part of all civil works contracts and the supervising engineers TOR.

The influx of workers and increased accessibility to the project area may result in the spread of infectious diseases among local indigenous and migrant communities. If not properly managed, the waste generated by them can lead to contamination of the water source and overall environment which though not pristine is generally conducive to healthy living. Once under operation the reservoir may be utilized for fishing and other water activities presenting increased risk of water safety issues. Private security personnel may be utilized to secure the project site during
construction and risks associated with use of these personnel will be assessed in the ESIA. Measures to manage these community risks, including influx, will be elaborated in a Community Health and Safety Plan.

Initial screening for GBV identified a moderate risk given the existence of legal protections (anti-violence against women and children) and active regional and national GBV working groups but with a higher-than-regional-average prevalence of sexual violence and low incidence of help seeking. The significant influx of workers, including potential use of contractors, and need for labor camps in the presence of vulnerable indigenous groups indicates a heightened risk for GBV. The project will map service-providers for the project area. The project grievance redress mechanisms will include GBV sensitive approaches and the project unit will ensure that a trained specialist is available to respond to emerging incidents. In addition contractual arrangements for hiring and management of workers will include GBV codes of conduct, worker training and signatures of awareness prior to start of employment on the project. Where worker camps exist, management measures will also be put into place to ensure separate facilities for men and women and GBV-free signage utilized. These measures will be described in a GBV action plan included as part of the project’s environmental and social management plan.

For the dam operation phase emergency preparedness and response planning, and community awareness of risks associated with dam operation (e.g. drowning risks from rapid release of water ahead of expected heavy rains) will need to be addressed in the ESIA and in specific management plans to be produced during project implementation. The project will entail construction of the Marikina Dam (81 m in height, 90 million cubic meters in total reservoir capacity, and 350 m in crest length), which would require the client to undertake sufficient dam safety measures as per Annex 1 – Safety of Dams of ESS4. In particular, these would include: i) completion of a number of investigation, survey, assessment, design study, etc. in sufficient details covering seismic, geological, hydrological, geotechnical, hydraulic, structural, electro-mechanical, and other construction-related aspects; ii) preparation of dam safety plans including: a) construction supervision & quality control plan, b) instrumentation plan, c) operation and maintenance plan (including reservoir operation and sediment management), and d) emergency preparedness plan; and iii) the establishment of an independent dam safety panel of experts to oversee the quality of the investigation, design, construction, and operation & maintenance of the dam and associated facilities and to ensure their safety during project preparation and implementation up to the first reservoir impoundment, commissioning and initial operation periods.

ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

Land taking for the two sites is likely to displace over 300 households although efforts will be taken to avoid and minimize any unnecessary resettlement. It is also expected that livelihood activities, now generally subsistence agriculture adjacent to the downstream river banks and in the inundation area, will likely be disturbed. Downstream impacts will be identified by the ESIA. The project requires displacement and involuntary resettlement of formal title holders and informal settlers and land users at the retention basin and at dam sites. Recommended location of the Marikina dam, one with least environmental and social impacts, would inundate 2.4 km of forest landscape and displace an estimated 165 households (to be confirmed during preparation). Around 150 households would be displaced from the retention basin area located adjacent an established urban area with exact numbers depending on final layout. Measures to allow continued dry season agriculture utilization in the retention basin area are being considered. Added to this are those living in areas for ancillary activities such as access roads. Two schools and a
church have been identified for possible relocation. As swidden farming of rice and vegetables as well as subsistence gathering of rattan, bamboo and non-timber forest resources occurs in remote areas the development of the dam and associated facilities may also involve temporary access restrictions to traditional areas relied upon for livelihoods and with cultural and spiritual values. Minor land taking is likely to be required for the access road, which involves upgrading of existing roads into the area as well as construction of a new half mile section close to the dam site. Households and agricultural plots within the right of way would likely require resettlement. The physical and economic displacement described here may affect indigenous peoples with ancestral domain (described under ESS7) but this is unlikely to involve relocation of this indigenous community away from their ancestral domain as the physical impact areas of the project only consistute a small portion of the total ancestral domain. Any necessary arrangements for relocation will be identified in collaboration with the indigenous ancetral domain holders and require their consent and be described in the indigenous peoples planning measures. In coordination with the findings of the ESIA, a Resettlement Action Plan (RAP) will be developed and consulted on prior to appraisal to manage project-related displacement. Livelihoods restoration undertaken as part of the RAP will also be integrated with the community driven development programming under project component two. The project Grievance Redress Mechanism will be designed to ensure that complaints and concerns related to the resettlement process, compensation entitlements and livelihood restoration are addressed. Independent monitoring arrangements will be described in the RAP.

ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

This standard will be applicable due to the expected impacts on the modified natural habitats prevailing in the project area, both terrestrial and aquatic.

The project site will encroach on a small part of the Upper Marikina River Basin Protected Landscape (UMRBPL), formerly named as Marikina Watershed Reservation (MWR). UMRBPL has an area of 26,125.64 hectares covering five municipalities of Rizal – Rodriguez, Antipolo, Baras, San Mateo and Tanay. It was established through Presidential Proclamation 296 in 2001 as a watershed reservation and later upgraded to a protected landscape under NIPAS. It is surrounded by significant bodies of water including the Boso-Boso River, Sapa Bute-Bute, Tayabasan River, Montalban River and the Wawa River.

The UMRBPL is considered one of the most important protected areas being supervised by the DENR as the watershed is a potential source of water for Metro Manila. It is home to the Labuyo (Gallus gallus), Quail (Coturnix sp.), and the Philippine Hawk Eagle (Spizaetus philippensis) as well as deers, wild pigs, palm civet cats, pythons and monitor lizards.

The ESIA will analyze and summarize ecological and habitat-related baseline conditions, including the presence of rare or endangered fauna and flora, and assess impacts, and identify mitigation measures. The mitigation measures will be detailed and operationalized in the ESMPs covering both the construction phase as well as the dam operational phase, for example, through spatial planning and organization of the construction works, codes of conduct, and monitoring / reporting on water quality and habitat-related issues in collaboration with the PA authority).
ESS7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities

The Dumagat Remontados Indigenous Peoples have communal claims to the land in the project area and are holders of a Certificate of Ancestral Domain title (CADT) measuring 19,523.47 hectares surrounding the project location. According to NCIP records, the indigenous population is 3,995 individuals. The Dumagat Remontado community live in the uplands of eastern Rizal in the project area and utilize existing water flows for their livelihoods and traditional rites. Their cultural identity is tied to the land and their survival as a people depends on it. Environmental disruption, infrastructure development and influx of workers is likely to place significant pressure on their traditional way of life, which is largely subsistence agriculture based. While the indigenous population has remained historically stable over time, encroachment of non-indigenous settlements and land use has increased significantly in recent decades. Interviews with these new settlers reveal that they respect the IPs and co-exist with them. However, cultural differences and conflict of interest between Rementado and additional migrant populations who resettle due to increased access resulting from the development may be also be source of community conflict.

Indigenous Peoples Rights Act of the Philippines affords Indigenous Peoples significant protections including right to Free, Prior and Informed Consent (FPIC) consistent with ESS7 and full participation in development benefits. A detailed Indigenous Peoples engagement strategy will be developed by an independent qualified specialist as part of the project’s Stakeholder Engagement Plan (SEP) describing how Indigenous Peoples are to be engaged to obtain FPIC and to participate in the ESIA and resulting management activities and project benefits. The SEP will include guidance on the process, resourcing and responsibilities for a culturally appropriate grievance redress mechanism. Proposed project component two will involve integrated community development planning interventions targeting small farmers and indigenous communities living in the project area. These activities would include alternative housing options and livelihood improvement projects, training and support for implementation of agriculture, housing, ecotourism and other community development activities selected with active participation of beneficiary communities. Community associations will be assisted to form and to engage with government service delivery agencies. These interventions will be described in an Indigenous Peoples Plan.

ESS8 Cultural Heritage

The landscape in the project area is imbued with cultural significance. A cultural marker called Estamang Bato along the river is considered by the Dumagat Remontados as sacred. It is said that other Agta tribe from as far as Quezon Province visit the site specially during Holy Week in the belief that it has healing qualities. It is also believed that it protects them from other harms and disasters. Other potentially significant cultural sites in the vicinity of the project are the Pamitinan Cave and the Bernardo Carpio Gorge. Both are not affected by civil works but may suffer from temporary disturbance during construction.

Presence of upland indigenous cultural heritage including cemeteries and sacred sites will be investigated during the environmental and social assessment. Indigenous ecological knowledge and taxonomy of flora and fauna may be at risk of erosion or exploitation if increased access to the area and enhanced development transforms livelihoods. A baseline survey will identify these intangible and tangible cultural heritage elements and assess potential project impacts as part of the the environmental and social impact assessment with mitigation measures in the ESMP (chance finds procedures, rapid response process) and Indigenous Peoples Plan, including participatory community development programming.
ESS9 Financial Intermediaries
Financial intermediaries will not be involved.

C. Legal Operational Policies that Apply

| OP 7.50 Projects on International Waterways | No |
| OP 7.60 Projects in Disputed Areas | No |

III. WORLD BANK ENVIRONMENTAL AND SOCIAL DUE DILIGENCE

A. Is a common approach being considered?  
No

Financing Partners
No financing partners are considered at this time.

B. Proposed Measures, Actions and Timing (Borrower’s commitments)

Actions to be completed prior to Bank Board Approval:
ESIA, including Social Assessment (assessing directly, indirect, cumulative impacts) and ES management plans for construction and operation phases
ESCP
SEP (including project Grievance Redress Mechanism)
Resettlement Plan
Indigenous Peoples Plan
Labor Management Procedures (including worker’s Grievance Redress Mechanism)
Community Health and Safety Plan (including influx management)
GBV Action Plan (included in ESMP)
Dam safety plans including: i) construction supervision & quality assurance plan, ii) preliminary operation & maintenance plan, including reservoir operation plan during floods and sediment management; and iii) broad framework plan for emergency preparedness
Establishment of the dam safety Panel of Experts (POE) and its confirmation of the adequacy of design, construction plan, and other required safety measures for the dams and associated facilities;
Environmental and Social Capacity Development Program for DPWH

Possible issues to be addressed in the Borrower Environmental and Social Commitment Plan (ESCP):

Production of ESIA and ESMPs, corresponding with and informing techno-economic studies and design process; especially analysis of dam siting options and design alternatives;
Completion of design and construction plan of the dams and associated structures in sufficient details including all required investigation, assessment, analyses, etc.
Production of dam safety plans including: i) construction supervision & quality assurance plan, ii) instrumentation plan, iii) operation & maintenance plan; and i) emergency preparedness plan;
Early establishment of a dam safety panel (DSP) from preparation through construction into operational phase
Establishment of an Environmental and Social Panel (ESP) as required;
Implementation of Environmental and Social Capacity Development Program for DPWH

C. Timing
Tentative target date for preparing the Appraisal Stage ESRS 02-Nov-2020

IV. CONTACT POINTS

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V. FOR MORE INFORMATION CONTACT

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VI. APPROVAL

Task Team Leader(s): Joop Stoutjesdijk
Practice Manager (ENR/Social) Susan S. Shen Recommended on 26-Feb-2020 at 23:43:46 EST
Safeguards Advisor ESSA Peter Leonard (SAESSA) Cleared on 03-Mar-2020 at 08:46:33 EST