



Concept Environmental and Social Review Summary

Concept Stage

(ESRS Concept Stage)

Date Prepared/Updated: 11/15/2019 | Report No: ESRSC00922



BASIC INFORMATION

A. Basic Project Data

Country	Region	Project ID	Parent Project ID (if any)
Philippines	EAST ASIA AND PACIFIC	P171419	
Project Name	Philippines Seismic Risk Reduction and Resilience Project		
Practice Area (Lead)	Financing Instrument	Estimated Appraisal Date	Estimated Board Date
Urban, Resilience and Land	Investment Project Financing	5/11/2020	9/30/2020
Borrower(s)	Implementing Agency(ies)		
Republic of the Philippines	Department of Public Works and Highways		

Proposed Development Objective(s)

The Project Development Objective is to enhance the: (i) safety and seismic resilience of selected public buildings and facilities in Metro Manila, and (ii) disaster response capacity of the Department of Public Works and Highways.

Financing (in USD Million)	Amount
Total Project Cost	300.00

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 proposed Components and subcomponents of the project are as follows:

1. Improving Multi-hazard Resilience of Public Buildings and Facilities

The main objective of this component is to improve the seismic performance and multi-hazard resilience of public buildings with the aim to save lives, ensure their continued functioning (for critical facilities), and reduce economic losses in the event of an earthquake (and other adverse natural events such as typhoons). It is proposed that this component will invest in:

1.1 Structural retrofitting and functional improvement of public facilities and buildings

1.2 In situ replacement of public facilities and buildings



1.3 Facility-based DRM awareness / disaster preparedness activities

2. Improving Emergency Preparedness and Response

The objective of this component is to improve the effectiveness and capacity of the Department of Public Works and Highways (DPWH) to prepare for and respond to disasters in line with its mandate. This component is proposed to support investments in:

2.1 Quick response communication and information systems

2.2 Emergency response equipment for transport and mobility restoration

2.3 Training and capacity building for emergency preparedness & response, and Quick Response Asset management

3. Strengthening Infrastructure Planning and Delivery

The objective of this component is to strengthen the capacity of DPWH and selected line agencies for infrastructure medium- and long-term planning and delivery. It will contribute to establishing a framework for scaling up interventions nationwide. This component is proposed to support investments in:

3.1 Medium-term infrastructure and service planning for resilient public buildings and facilities

3.2 Disaster Management Information System

3.3 Capacity building for contractors

4. Project Management

This component is proposed to focus on strengthening DPWH's organizational and technical capacity to manage and implement long-term seismic risk reduction programs for public buildings/facilities and infrastructure.

4.1 Technical, safeguards, and fiduciary (procurement, financial management) support

4.2 Feasibility studies, and detailed engineering design

5. Contingent Emergency Response

Under a Contingent Emergency Response Component, project funds may be requested for re-allocation to support response and reconstruction in case of a major crisis or emergency. This component (typically with a zero-allocation of funds) would draw from the uncommitted loan resources under the project (from other components).

D. Environmental and Social Overview

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

Metro Manila is transected by numerous earthquake generators, among which the active Valley Fault System is projected to potentially cause the largest impact on the Greater Metro Manila area (GMMA). The Greater Metro Manila Area Risk Assessment Program or GMMA-RAP (PHIVOLCS, 2013) projected the potential effects of a magnitude 7.2 earthquake on the West Valley Fault (the so-called 'Big One' scenario), to include an estimated 48,000 fatalities, US\$48 billion in economic losses, and catastrophic impact on government continuity and service provision.

The Metro Manila Earthquake Impact Reduction Study or MMEIRS (PHIVOLCS, MMDA, JICA, 2004) showed that the West Valley Fault has generated strong earthquakes within the last 1400 years. The approximate return period of these earthquakes is less than 500 years and no event along the West Valley Fault is known after 17th century, suggesting that the active phase of the Valley Fault system is approaching.



Metro Manila is a densely populated area with many old public structures including school buildings and health centers needing reinforcement to address seismic risks. In the long-term, the project will be beneficial for the safety of students, teachers, and users of health facilities. Metro Manila is a highly urbanized area where Indigenous Peoples as defined in the ESF are not present. Subprojects sites are owned by government.

Of 2,300 buildings that were assessed by the government to be retrofitted, only a maximum of 500 buildings are anticipated to be enrolled under the project upon applying the eligibility criteria and prioritization framework. This number will be programmed over the duration of the project thereby significantly decreasing the number of buildings being retrofitted at a given time (say 50-100-150-200). Civil works are not envisioned to expand outside Metro Manila under this project.

D. 2. Borrower's Institutional Capacity

To date, DPWH has completed 32 buildings for retrofitting to withstand seismic risks. The Earthquake Resilience Project Management Office is the unit dedicated for this and will also be working on this project. In addition, a team composed of four people had been assigned to be in charge of safeguards; one will lead environment and another will lead for social aspects. DPWH has reported not encountering any major safeguards issues during retrofitting including accidents and cases of harassment by workers on students, to which the Bank will conduct due diligence review and validation. Retrofitting activities also happen in phases, meaning buildings in one area/compound are not constructed at the same time to minimize disruption. DPWH also has district offices which it intends to utilize to support project implementation. A training of trainers will be conducted among the safeguards focal persons who will train district staff to be assigned for safeguards.

Under the Inter-agency Earthquake Resilience Group being led by the Office of the President (pursuant to EO 52), the stakeholder agencies and DPWH have regular meetings to discuss the service, functionality, and demand aspects of retrofitting/reconstruction investments. In tandem with DPWH, the asset owner line agencies such as the Department of Education (DepEd) and the Department of Health (DOH) as well as support agencies like Philippine Institute of Volcanology and Seismology's (PHIVOLCS) are involved in relevant projects such as the existing Disaster Risk Reduction and Management activities of the DepEd. Current education, health, and other functional standards should be reviewed and highlighted explicitly in the design of structural and functional/service improvement interventions. DPWH and the PHIVOLCS are signing an MOU to utilize existing risk and scenario impact assessment platforms in the identification of criticality, and performance targets for different occupancy types/building uses and building/infrastructure asset management. This cooperation is particularly focused on the integration of hazard information, updating of fragility/vulnerability curves based on DPWH's post-disaster/forensic assessments of building damage.

Moreover, as a result of implementing World Bank projects in the past, DPWH has created the Environment and Social Safeguards Department (ESSD) in charge of reviewing compliance of projects with safeguards requirements. ESSD is in charge of implementing DPWH's Social and Environment Management Systems (SEMS) Operations Manual last updated in 2016 which aims to integrate social and environmental requirements for the fast-track development of infrastructure projects. DPWH has attended trainings on the ESF.

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



A. Environmental and Social Risk Classification (ESRC)

Substantial

Environmental Risk Rating

Moderate

The Project constitutes moderate environmental risks associated with the structural and non-structural retrofitting (multi-hazard improvement measures and functional improvement), replacement (reconstruction) of national government buildings in use for a total of approximately 500 buildings to be selected after applying the eligibility criteria and prioritization framework to existing 2,300 structures delivering public basic services (around 1,600 schools, 150 health facilities and a number of new construction of 'demonstration' resilient schools) in GMMA. The potential direct impacts of the construction works are expected to be self-contained within the building and any indirect impacts are limited inside the building compound. Anticipated impacts are low-level dust, noise, vibration, and small quantities of materials' stockpile and construction debris. The other construction-related impacts that could pose occupational as well as community health and safety risks to workers, building occupants and surrounding communities are small-scale, short-term and easily manageable. In terms of benefits, the barangay (village) level scenario impact assessments available through the Greater Metro Manila Area (GMMA) Risk Assessment Project can provide information about the population served by facilities to be intervened, which can provide an additional parameter related to criticality / inclusiveness.

The project will only concentrate within the GMMA which is under the administrative jurisdiction of the DPWH National Capital Region (NCR) Regional Office, headed by a Regional Director who manages nine (9) District Engineering Offices (DEO), headed by 9 District Engineers. Each of the DEO, with a staffing complement of at least fifty (50) technical, administrative and skilled workers, will support the project . The capacity of DPWH to institute Environmental and Social sfaseguards compliance is high as they have a well-established Environment and Social Safeguards Department (ESSD) which has satisfactorily supported several World Bank projects in the past few years. While DPWH has an Social and Environmental Management System (SEMS) in place, a project Environment and Social Management Framework (ESMF) will be prepared to ensure that the overall approach to the selection, design and implementation of the retrofitting and reconstruction of this project is consistent with the World Bank's Environment and Social Framework (ESF) and the national and local governments' pertinent policies, rules and regulations. A standardized Environment Code of Practice (ECOP) or site-specific Environment and Social Management Plans (ESMP) will be prepared based on an Environmental and Social Safeguards screening criteria. An Environmental and Social Commitment Plan (ESCP) will include the preparation of an ESMF, ESMP and ECOP as well other relevant safeguard instruments, as applicable.

Social Risk Rating

Substantial

A total 500 buildings are expected to be retrofitted over the time frame of the project, all buildings targeted under the project have social significance (i.e. hospital, schools) and therefore the potential of the operations to disrupt education and healthcare and temporarily interfere with youth development or provision of care needs to be carefully managed. The civil works will be done in phases, but not all construction will be done during school vacation period and hospitals are facilities of significant social significance and the scheduling of civil works should be carefully managed. Additionally, the improvements include multi-hazard measures and functional improvements, replacement/ reconstruction. The scale of such works will not be known until assessment of the buildings are conducted and hence the extent of works and impact is difficult to assess at this time. While no land is anticipated to be appropriated, there will be potential temporary economic livelihood impacts.

Public Disclosure



The project eligibility criteria excludes buildings that will have impacts on private lots, structures, and properties. The project will operate in government-owned compounds which are fenced off to discourage informal businesses and settlements inside their premises. Economic displacement is therefore not expected except for canteens and food concessionaires operating in the buildings to be retrofitted. Such businesses are expected to be temporarily relocated within compounds to allow for continued operations and avoid livelihood impacts. The project activities are located within Metro Manila and there is local availability of skilled workers with experience and capacity to engage in retrofitting. Significant labor influx issues are not anticipated as only small number of workers (10-20 per worksite per 8 hour shift) are expected to be present on any one site. Clear occupational and community health and safety measures will be put in place to enforce worksite separations. As much as possible, retrofitting activities will be conducted during vacation but with the number schools that will be constructed at a given time, there will be areas where laborers will be in some proximity to school children. The GBV screening for the project has identified low risk and suitable precautionary measures are to be taken to ensure that codes of conduct are clearly defined and monitored, that workers and community members have access to grievance redress, and that third-party service providers are available.

Complaints from stakeholders such as school and health administrations, parents, communities, barangay leaders, and users of public facilities may ensue if they are not consulted on the best time for construction and not informed of how services will continue while buildings are undergoing reinforcement. The Stakeholder Engagement Plan and grievance redress mechanism will respond to these issues.

DPWH has experience and capacity to manage and exclude site-specific risks and impacts, backed by examples of existing practice. Based on physical accomplishment reports and environment and social safeguards compliance monitoring reports of similar construction activities prepared by DWP project staff, the risks remain site specific and low magnitude even given the number of site-specific activities that may make the receiving environment more unpredictable.

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:

This Standard applies since the Project's retrofitting/ replacement (in-situ) construction activities are expected to pose site-specific low magnitude environment and social risks and impacts that need to adequately assessed, managed and monitored throughout the project's life cycle to improve the project's overall environment and social performance. The anticipated environmental impacts are low intensity dust, noise and vibration due to the piece-by-piece demolition of targeted walls and columns and corresponding quantity of construction debris, outdoor construction staging area of around 20 square meters and nominal use of ingress/egress access points to the building for the delivery of construction materials. The anticipated social risks and impacts are temporary inconvenience due to presence and movement of construction workers and delivery vehicles during the demolition and construction phases and temporary disruption to educational activities and healthcare provision. The borrower will prepare an Environmental and Social Assessment (ESA), OSH and community health and safety guidelines and Environmental Code of Practice (ECOP) as part of the ESMF, to identify the project's impacts and risks and help formulate all feasible avenues to implement multi-hazard risk management measures (and site-specific plans) in project/building design



and project implementation. The mitigating measures for both the environmental and social risks are to secure the necessary building permits, agree on the schedule with the building management of the construction activities to avoid disruption of the building services/ activities and put up appropriate signages before the construction on all entrance and exit points of the building and the compound, especially in front of and around the targeted building component, secure with strong construction covers to cordon off dust and noise during demolition and construction, use innovative demolition techniques and small construction tools to limit vibration during construction. The prioritization framework to be developed will take into consideration the criticality of various locations and types of facilities, and also differentiate criteria based on the occupancy type, number of occupants, vulnerabilities of the existing buildings and additional functional upgrades as well as community health and safety risks and impacts at the work site. Where risk of temporary disruption to provision of services is identified, alternative measures to ensure continuation of such services will be detailed in the ESMF and enforced in construction management procedures. Temporary disruption of classes, health services and food concessions will be avoided by identifying alternative venues in-situ or further minimizing disruption by taking a phased approach to construction. Activities that involve significant disruption to education and health services that are unable to be resolved in-situ or risk harm to youth development or healthcare provision will be identified and excluded during screening.

Areas where “Use of Borrower Framework” is being considered:

There are no areas where the use of Borrower Framework is considered.

ESS10 Stakeholder Engagement and Information Disclosure

Primary stakeholders are the public building, school, and health facilities’ administrations, occupants including staff, building users, students, parents, and the communities using the facilities. Stakeholders will be fully engaged on the best time for construction activities and for mitigating temporary disruption of services, and avoiding community interactions with construction activities, building on the current approaches used under the 2018-2019 retrofitting program (i.e. during vacation, using a phased approach), as well as school-time shifts of morning and afternoon classes were added to the national curriculum by the Department of Education (different grade levels are assigned to attend full-day classes, either in the morning shift which starts at 6:00 am to 12:00 noon or the the afternoon shift which begins at 12 noon to 6 pm). Food concessionaires in the buildings and nearby residents will also be consulted. Local leaders including the barangay will also be consulted and permits will be secured as necessary. DPWH’s Social and Environment Management Systems Operations Manual includes procedures for grievance redress. This will be reviewed and strengthened as necessary.

A Stakeholder Engagement Plan will be developed during appraisal identifying those likely to be affected by renovation activities and proposing information dissemination and communications actions. It will also include a grievance redress mechanism that builds on DPWH's current systems that will address concerns of stakeholders throughout project implementation.

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

Public Disclosure



The operation will employ direct project workers of ten (10) to twenty (20), for eight (8) hours work shift per building per worksite (including contractors and subcontractors). The target buildings are mostly compact, one to two storeys in height and for a few not more than four (4) storeys tall. The size of the classroom for elementary and secondary schools are 7.0 meters in width/depth x 9.00 meters in length or 9.00 meters in width/depth x 7.00 meters in length measured from the centers of the walls. Most if not all workers will be from the Metro Manila area and skills and training required for retrofitting are readily available locally. Since the project is in GMMA, public transportation is readily available and accessible although DPWH arranges pick up points for its vehicles to ferry DPWH staff as well as construction workers going to and from their work places.

The Borrower will develop and implement OSH measures and written labor management procedures including details of a grievance redress mechanism. Child labor is not anticipated to be significant risk as occurs mainly in agriculture and factory labor rather than construction activities. Labor management procedures will set out the way in which project workers will be managed, in accordance with the requirements of national law and this ESS. Though the occupational, health and safety issues are anticipated to be easily mitigated, precautionary management and monitoring requirements will be set out in the labor management procedures to ensure that workers adhere to codes of conduct and enforce clear workplace separations.

ESS3 Resource Efficiency and Pollution Prevention and Management

This Standard applies as the Project will entail construction activities for the structural and non-structural retrofitting and reconstruction of buildings. This will require the responsible Construction units to consider ambient conditions and apply technically and financially feasible resource efficiency and pollution prevention measures proportionate to the risks and impacts associated with the project following the principles of a circular economy. The Construction methods and techniques will also strictly follow the ESF policy and set of Environment and Social Standards and the Environment, Health and Safety Guidelines particularly with respect to securing environmentally-sustainable construction materials and managing construction wastes.

ESS4 Community Health and Safety

DPWH will design, construct, operate, and decommission the structural elements of the buildings in accordance with national legal requirements, the EHSGs, and other GIIP taking into account the individual and community health and safety, including road safety of the building occupants, clients, visitors and surrounding communities. Strict traffic restrictions will be implemented within the compound and will be publicly announced such as slow speed limit, no blowing of horns. In case there is a need for a large truck or heavy equipment during construction, the construction area will have to be vacated and rendered off limits to non-construction workers, with advance notice, proper signages and close coordination with the building security and administration. Construction vehicles will need to register for each trip, with highly visible and clear warning signs. Traffic management rules will be strictly enforced by traffic marshals and appropriate signages shall be placed in strategic places, inside and around the building's compound including access roads used for entrance and exit. The signages and traffic restrictions should be clearly visible from a distance, easily understandable by building users, children, patients, employees, visitors, drivers of all kinds of vehicles and pedestrians. will be



DPWH has several Bureaus which are mandated, with regular staff who are professionally qualified licensed structural engineers to review and approve the structural design, construction and maintenance of public buildings according to the National Building Code and its Implementing Rules and Regulations. The following DPWH Bureaus are involved in the project: Bureau of Design, Bureau of Construction, and the Bureau of Maintenance which leads the PMO. DPWH will hire and be assisted by several highly qualified professional structural designers and engineers to prepare earthquake and multi-hazard structural designs according to the level of risks, type of building and location. Highly qualified professional construction and supervision consultants will be hired to ensure that the projects conform with the project's structural designs, POM, ESMF, and pertinent international and national rules, regulations and guidelines. Hiring of qualified experts will undergo a competitive selection process to ensure that only the most qualified and certified professional experts and consulting companies with demonstrated and relevant capabilities will be hired by the project. Technical assistance will be provided to DPWH through the University of the Philippines Institute of Civil Engineering (ICE), a prestigious, independent academic institution, with an excellent track record of experience and expertise in the field of earthquake and multi-hazard structural design and construction of private and public infrastructure and civil works in the Philippines and other countries, at par with industry best practice. They will be tasked during project development to conduct a review of the typology of standard designs for earthquake and multi-hazard risks of building under this project. They will also participate in the technical review and monitoring of the project throughout the stages of project design, construction, operation and decommissioning of the buildings.

Labor influx issues are not expected as construction work will require a 10-20 workers on a worksite per an 8 hour shift, most if not all of whom will be from Metro Manila. Screening for GBV determined a low rating for the project given the existence of legal protections (anti-violence against women and children), active regional and national GBV working groups, the site-specific low magnitude nature of the construction activities, and likely reliance on easily sourced urban labor. However, the team recognizes that a precautionary approach is required given that in some areas where construction will not be done during vacation, schoolchildren may be in attendance at the same time as construction activities are occurring. Site-specific community health and safety risks and impacts will form part of the screening criteria and measures will be included in the corresponding ESMP and ECOP to enforce separations, and establish monitoring and supervision protocols for community and workers. Communications measures will also be provided in the Stakeholder Engagement Plan to promote supervision of students and others. The bidding documents for contractors and codes of conduct for workers will include parameters related to managing community health and safety and GBV risks. Schoolchildren and vulnerable groups such as pregnant women, elderly and the physically challenged will also be made aware of potential hazards during construction including public health and safety and GBV. Activities that involve significant disruption to education and health services that are unable to be resolved in-situ and risk harm to youth development or healthcare provision will be identified and excluded during screening.

ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

All subprojects are within government-owned sites. There is potential for temporary economic displacement of canteens or food concessionaires operating inside the buildings that will be retrofitted and this is to be mitigated by establishment of temporary facilities and services including canteens while structures are being reinforced. Such temporary facilities will be put up within the compounds of government agencies.

The eligibility criteria for subproject approval will include avoidance of acquisition of private lots and impacts on houses and other assets. Measures to avoid or mitigate temporary disruption of classes, health services, and food



concessions will be part of overall project construction management. A phased approach to construction will be encouraged to minimize disruptions and ensure availability of mitigation for temporary displacement.

Other types of economic displacement are unlikely to occur as the compounds of public buildings/facilities are fenced off and informal economic activities are not allowed nor encouraged within these compounds.

ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

The Project will be implemented in heavily urbanized Metro Manila areas and limit the construction activities to in-situ existing national government buildings. It is thus expected not to have any material effect on biodiversity or living natural resources.

ESS7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities

The project will be in Metro Manila where Indigenous Peoples as defined in the ESF are not present.

ESS8 Cultural Heritage

The project will not include the renovation of tangible cultural heritage buildings and structures. Chance find procedures will be included in the ESMF. The screening process will make sure that the subject buildings will not impact any tangible or intangible cultural resources. In case there are any construction-related impacts that could affect tangible cultural sites near the subject building's premises, work will be suspended and the DPWH together with the Philippine National Commission on Culture and Arts will be immediately summoned to appraise the situation so that appropriate measures will be immediately put in place. The construction team will ensure that the construction staging area should be located away or outside of any cultural site. In case it was discovered during construction that there are cultural sites that may be affected by the project, these sites will be quickly cordoned off and closely monitored for construction-related impacts including the possible intrusion of workers or construction vehicles. DPWH is bound under the project to follow the protocol on chance finds procedures in the ESMF and the ECOP to avoid any adverse impact on the cultural heritage sites.

ESS9 Financial Intermediaries

The project will not involve financial intermediaries.

C. Legal Operational Policies that Apply

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

Public Disclosure



III. WORLD BANK ENVIRONMENTAL AND SOCIAL DUE DILIGENCE

A. Is a common approach being considered?

No

Financing Partners

None

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

Actions to be completed prior to Bank Board Approval:

Submission of the Environment and Social Commitment Plan (ESCP).

Stakeholder Engagement Plan and DWPH systems and measures assessment that will help manage the temporary disruption of services.

Environmental and Social Management Framework for screening, assessment and management of activities (including traffic management rules and ECOPs mentioned under ESS4)

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

Implementation of various safeguard instruments agreed and prepared during appraisal and an ESMF for use by the project.

Implementation of subproject mitigation and management measures identified during screening.

C. Timing

Tentative target date for preparing the Appraisal Stage ESRS

31-Mar-2020

IV. CONTACT POINTS

World Bank

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Borrower/Client/Recipient

Borrower: Republic of the Philippines

Implementing Agency(ies)

Implementing Agency: Department of Public Works and Highways

V. FOR MORE INFORMATION CONTACT

Public Disclosure



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VI. APPROVAL

Task Team Leader(s):	Artessa Saldivar-Sali
Practice Manager (ENR/Social)	Christophe Crepin Recommended on 08-Nov-2019 at 04:03:51 EST
Safeguards Advisor ESSA	Peter Leonard (SAESSA) Cleared on 15-Nov-2019 at 13:46:13 EST