



# Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 16-Nov-2019 | Report No: PIDC27747

**BASIC INFORMATION****A. Basic Project Data**

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

**PROJECT FINANCING DATA (US\$, Millions)****SUMMARY**

<b>Total Project Cost</b>	300.00
<b>Total Financing</b>	300.00
<b>of which IBRD/IDA</b>	300.00
<b>Financing Gap</b>	0.00

**DETAILS****World Bank Group Financing**

International Bank for Reconstruction and Development (IBRD)	300.00
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Environmental and Social Risk Classification  
Substantial

Concept Review Decision  
Track II-The review did authorize the preparation to continue



Other Decision (as needed)

## **B. Introduction and Context**

### **Country Context**

1. The Philippines is a dynamic economy in the East Asia and Pacific region. With increasing urbanization, a growing middle-income class, and a large and young population, the Philippines has nearly doubled GDP per capita over the past two decades (from US\$1,607 in 2000 to US\$2,753 in 2016). Having sustained an average annual growth of 6.3 percent between 2010-2017 from an average of 4.5 percent between 2000-2009, the country is poised to cross the threshold from lower-middle income country (MIC) status with a gross national income per capita of US\$3,660 in 2017, to upper-MIC status within the next three years.
2. Notwithstanding the country's impressive gains, the Philippines continues to face a uniquely complex range of development challenges, one of the most significant of which is its exposure to adverse natural events, placing the country near the top of global vulnerability rankings. The country's high exposure to natural hazards is a principal threat to economic growth and inclusion: at least 74 percent of Filipinos are vulnerable to the impacts of natural hazards, which have killed 70,000 people, caused an estimated US\$23 billion in damages, and adversely affected 120 million since 1990<sup>1</sup>.
3. Metro Manila (or the National Capital Region, NCR) -- the seat of government and the country's population, economic, and cultural center -- is especially vulnerable to risks from a major earthquake. Metro Manila's population is approximately 12.9 million (2015 census), while Greater Metro Manila's population estimated at 21 million. Rapid urbanization has resulted in an extremely dense agglomeration of vulnerable infrastructure, buildings, and housing, at high levels of seismic risk. The Greater Metro Manila Area (GMMA) Risk Assessment study estimated that a magnitude 7.2 earthquake on the West Valley Fault (a probable maximum scenario, so-called 'The Big One'), would result in an estimated 48,000 fatalities, US\$48 billion in economic losses, with catastrophic impact on government continuity and service provision.<sup>2</sup>

### **Sectoral and Institutional Context**

4. In addition to frequent earthquakes and volcanic eruptions, an average of 20 typhoons make landfall every year in the Philippines. Located along the "Pacific Ring of Fire," at least 60% of the total land area of the country is exposed to multiple hazards. Threats from natural disasters in the Philippines have been increasing and, over the last decade, typhoons making landfall have become stronger and more devastating. In 2013, Typhoon Yolanda (Haiyan), the strongest storm ever recorded at landfall, caused over 6,000 reported fatalities and damaged 1.1 million homes in nine regions. The extensive damage also resulted in 2.3 million Filipinos falling below the poverty line, particularly in highly affected areas. Climate change is also exacerbating the impact of weather-related events, while unregulated urban expansion has aggravated flood risk.<sup>3</sup>
5. To address GMMA's vulnerability to potential seismic events, the President of the Philippines issued Executive Order No. 52 (EO 52) on May 8, 2018, creating the Program Management Office for the Earthquake Resilience of the Greater Metro Manila Area (PMO-ERG), attached to the Office of the President. EO 52 recognizes the extreme risk from

<sup>1</sup> GFDRR (Global Facility for Disaster Reduction and Recovery), and World Bank. 2016. "Country Profile: Philippines," World Bank, Washington DC, <https://www.gfdr.org/sites/default/files/publication/PHILIPPINES2016.pdf>

<sup>2</sup> PHIVOLCS, and Geoscience Australia. 2014. Greater Metro Manila Area Risk Assessment Program.

<sup>3</sup> GFDRR (Global Facility for Disaster Reduction and Recovery), and World Bank. 2016. "Country Profile: Philippines," World Bank, Washington DC, <https://www.gfdr.org/sites/default/files/publication/PHILIPPINES2016.pdf>



a potentially catastrophic earthquake in the GMMA, defines institutional roles and responsibilities within a whole-of-government strategy to strengthen the country's resilience to earthquakes, and to ensure public safety and government continuity. The PMO-ERG's primary mandate is to steer the operationalization of the 'Two-pronged Strategy Toward an Earthquake-Resilient GMMA', adopted via the Directives of the 20th Cabinet Meeting (2017). The PMO-ERG also has the mandate to review and monitor the earthquake resilience plans and investment programs of government agencies.

6. In line with the Directives of the 20th Cabinet Meeting, DPWH commenced a program for retrofitting/strengthening public buildings in Metro Manila (focusing on national government administration buildings, schools, and health facilities), starting with a rapid vulnerability assessment (completed for the National Capital Region). DPWH's assessment indicates an estimated cost of PhP43 billion (approximately US\$820 million) for retrofitting works to strengthen approximately 2,300 vulnerable buildings.

7. In accordance with EO 52, the Secretary of Public Works issued Department Order No. 75 (s. 2019), creating the DPWH Earthquake Resiliency Program Management Office (DPWH ER-PMO) with the following mandate:

- a. Ensuring that vulnerability and risk assessment of all critical public buildings and infrastructure are conducted;
- b. Fast-tracking the implementation of urgent interventions to ensure resilient buildings and infrastructure;
- c. Aligning the Department's programs with Oplan Metro Yakal Plus (Metro Manila's Earthquake Contingency Plan, see below); and
- d. Ensuring that EO 52's Key Result Area on Transport and Mobility is implemented.

8. Oplan Metro Yakal Plus institutionalized a system of earthquake preparedness and response of different national agencies' units and personnel by defining roles and providing guidelines on actions that will be carried out prior to and immediately after the occurrence of a major earthquake in Metro Manila. Under Oplan Metro Yakal Plus, DPWH is the lead agency for Engineering, Reconstruction, and Rehabilitation with the responsibility to:

- a. Clear debris and obstructions and restore vital access roads, bridges and lifelines;
- b. Conduct rapid damage assessment and needs analysis;
- c. Assist in the restoration of vital lifelines (e.g. power supply, communication, and water supply);
- d. Assist in providing the Search and Rescue Sector with equipment for search and rescue operations; and
- e. Reconstruct/rehabilitate damaged structures and facilities.

#### Relationship to CPF

9. The project directly aligns with the Philippine Development Plan (PDP), as well as the draft Country Partnership Framework (CPF 2020-2025), currently under preparation. The project addresses an issue that the CPF has identified as fundamental for sustainable development in the Philippines: *CPF Focus Area #3: Promoting Peace and Building Resilience*. According to the PDP and the CPF Focus Area #3: *Ending poverty in the Philippines cannot be achieved without reversing the low human development outcomes and high poverty rates in conflict-affected and disaster-prone areas, [...]. This calls for intensified effort to address the country's dual vulnerabilities – conflict and risks associated with climate change, environment, and disaster. The PDP highlights the goals of strengthening the implementation of climate change adaptation and disaster risk reduction across sectors, particularly at local level and strengthening institutional response to disasters. As one of the world's most vulnerable countries to climate change impacts, the Philippines can aspire to become a leading global example of proactive climate change adaptation and disaster resilience measures.*

#### **C. 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.



#### Key Results (From PCN)

- Number of buildings/facilities with improved seismic performance
- Occupants (staff, teachers, students and other users) in strengthened/reconstructed buildings are more prepared for disasters
- Number of project beneficiaries in service areas<sup>4</sup> covered by strengthened/reconstructed buildings and facilities
- The Department of Public Works and Highways can efficiently mobilize people and equipment in response to a disaster

#### D. Concept Description

##### **Component 1: Improving Multi-hazard Resilience of Public Buildings and Facilities (~ US\$ 250 million)**

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:

- a. Risk-informed selection and prioritization of public buildings/facilities to be intervened, and optimization of retrofitting and rehabilitation engineering solutions for prevalent building typologies in Metro Manila;
- b. Structural retrofitting, functional (including universal access and gender considerations) and/or energy efficiency improvements in selected buildings/facilities;
- c. Replacement (reconstruction *in situ*) of selected buildings/facilities in cases where retrofitting is not feasible/cost-effective; and
- d. Communications/awareness raising and disaster preparedness activities for facility-based disaster risk management.

##### **Component 2: Improving Emergency Preparedness and Response (~ US\$ 35 million)**

The objective of this component is to improve the effectiveness and capacity of the DPWH to prepare for and respond to disasters in line with its mandate<sup>5</sup>. This component is proposed to support investments in:

- a. Quick response communication and information systems;
- b. Emergency response equipment for transport and mobility restoration;
- c. Capacity building for emergency preparedness and response, and;
- d. Training in Quick Response Asset management.

##### **Component 3. Strengthening Infrastructure Planning and Delivery (~ US\$ 10 million)**

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:

- a. Medium-term infrastructure and service planning for resilient public buildings and facilities
- b. Disaster Management Information System
- c. Capacity building in retrofitting technology and construction methods for contractors.

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<sup>4</sup> Based on area-based population exposure from Philippine Institute of Volcanology and Seismology - Rapid Earthquake Damage Assessment System.

<sup>5</sup> Oplan Metro Yakal Plus, the national Incident Command System (ICS), the EO 52 Key Result Area on Transport and Mobility, and the DPWH Contingency Plan



#### Component 4: Project Management (~US\$ 5 million)

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. The component will support the DPWH-ER-PMO to allow for streamlined project implementation and build capacity for *financial management, procurement, contract administration, construction management, implementation of environmental and social safeguards, and monitoring & evaluation of project outcomes*.

#### Component 5: Contingent Emergency Response Component (CERC) (zero allocation)

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).

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No
Summary of Screening of Environmental and Social Risks and Impacts	

There are moderate environmental risks associated with the structural and non-structural retrofitting (multi-hazard improvement measures and functional improvement), and potential replacement (reconstruction) of on the order of 500 national government buildings to be selected after applying the eligibility criteria and prioritization framework approximately 2,300 existing structures delivering public basic services in Metro Manila. 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.

There are substantial social risks associated with project activities, as the buildings targeted under the project have social significance (e.g. schools, health facilities) and therefore the potential of the works to disrupt education and healthcare and temporarily interrupt youth development or provision of care needs to be carefully managed. The civil works will be carried out in phases, but not all construction can be carried out during school vacation periods. Additionally, the scale of the retrofitting/upgrading works will not be known until the building-specific assessments are carried out, hence the extent of works and impact is difficult to assess at concept stage. While no land acquisition is anticipated, there will be potential temporary economic livelihood impacts.



## CONTACT POINT

### World Bank

Artessa Saldivar-Sali  
Senior Municipal Engineer

### Borrower/Client/Recipient

Republic of the Philippines

### Implementing Agencies

Department of Public Works and Highways  
Emil Sadain  
Undersecretary  
sadain.emil@dpwh.gov.ph

## FOR MORE INFORMATION CONTACT

The World Bank  
1818 H Street, NW  
Washington, D.C. 20433  
Telephone: (202) 473-1000  
Web: <http://www.worldbank.org/projects>

## APPROVAL

Task Team Leader(s):	Artessa Saldivar-Sali
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### Approved By

Environmental and Social Standards Advisor:		
Practice Manager/Manager:		
Country Director:		