

Early Warning System

WB-P514745

THRIVE - Technology-driven, Human-centered climate and disaster Resilience through Innovation for Vulnerable Empowerment Project

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Quick Facts

Countries	Philippines
Financial Institutions	World Bank (WB)
Status	Proposed
Bank Risk Rating	A
Voting Date	2027-07-15
Borrower	Government of Philippines - Department of Finance; Department of Science and Technology;
Sectors	Climate and Environment, Communications, Law and Government
Investment Type(s)	Loan
Investment Amount (USD)	$ 274.62 million
Project Cost (USD)	$ 274.62 million

Project Description

According to the Bank’s website, the objective of this project is to strengthen the country’s capacity for monitoring of natural hazards and improve risk information and early warning systems to better prepare for disaster and climate risks.

The project will be implemented and coordinated by the Department of Science and Technology (DOST) Central Office (CO), which is the co-chair for National Disaster Risk Reduction and Management Council (NDRRMC) Prevention and Mitigation Pillar and hosts the scientific service agencies that underpin early warning - the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) for hydrometeorology, and the Philippine Institute of Volcanology and Seismology (PHIVOLCS) for geophysical hazards. DOST, also hosts the Advance Science and Technology Agency (ASTI) which is responsible for data infrastructure and Artificial Intelligence (AI).

Components 1 and 2 finance priority hardware and infrastructure to expand and modernize geophysical and hydrometeorological monitoring networks. Building on these upgrades, Component 3 supports an integrated and interoperable risk information and early warning platform--aligned with DOST's GATES initiative - to integrate hazard, exposure, and impact information and to manage targeted, timely dissemination.

Enhanced data integration will be combined with the integration of Artificial Intelligence capabilities to improve early warning and decision support services offered by DOST. Complementary capacity building will strengthen last-mile delivery through standardized protocols, inclusive risk communication, and drills. Together, these elements ensure that the project will provide more reliable and actionable warnings, reducing loss of life and economic disruption.

Early Warning System Project Analysis

The environmental risk is assessed to be **Substantial**. While the anticipated environmental risks are expected to be moderate with site-specific, temporary, and reversible impacts, the environmental risk rating is Substantial due to: 1) the limited E&S capacity of DOST in implementing WB/IFI's E&S standards; 2) nationwide project implementation with multiple entities responsible for the implementation; 3) undetermined subprojects location that may be in ecologically sensitive areas. The risk classification will be further assessed and confirmed during project preparation. The environmental risks and impacts are primarily associated with the expansion, rehabilitation or modernization of geophysical and hydrometeorological monitoring equipment and supporting infrastructures across multiple locations nationwide under component 1 and 2, as well as the development of new data center under component 3. Key environmental risks include: (i) localized construction-related impacts, such as temporary noise, dust, soil disturbance, minor vegetation clearance, erosion, and construction waste generation; (ii) pollution risks related to the handling and storage of fuels, oils, and construction materials; (iii) generation and management of hazardous waste, including potential asbestos materials during infrastructure rehabilitation and electronic waste (e.g., decommissioned equipment, batteries, and electronic components); (iv) potential impacts on environmentally sensitive areas, should some installations be located in or near protected areas, or other sensitive habitats; (v) Occupational and Community Health and Safety (OHS/CHS) risks from the construction activities; and (vi) Resources efficiency risks related to energy and cooling requirements for the operation of the data center.

The project faces **substantial** social risks, including the potential exclusion of and impacts on marginalized and indigenous communities, possible needs on land acquisition and resettlement, risks to labor rights and occupational safety, and possible threats to data privacy. The project's possible coverage of BARMM area may increase the identified risk, especially on safety issue. Central to these risks is the limited experience for effective environmental and social (ES) management across implementing agencies, which may impede the proper identification, mitigation, and monitoring of social impacts. At this stage, it remains uncertain whether the project will involve any "associated facilities." In particular, it is not yet clear if the construction of access roads will be required during the building and deployment of stations. This aspect will be thoroughly screened during project implementation.

Investment Description

- World Bank (WB)

Total Project Cost: US$ 274.62 million
IBRD Commitment: US$ 274.62 million

Contact Information

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ACCESS TO INFORMATION

To submit an information request for project information, you will have to create an account to access the Access to Information request form. You can learn more about this process at: https://www.worldbank.org/en/access-to-information/request-submission

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Bank Documents

- Concept Environmental and Social Review Summary (ESRS) - THRIVE - Technology-driven Human-centered c
- Concept Project Information Document (PID)