

# PHILIPPINES / LAND BANK OF THE PHILIPPINES



GREEN  
CLIMATE  
FUND

GLOBAL  
PROGRAMMING  
CONFERENCE

Project title				
Multi-Hazard Impact-Based Forecasting and Early Warning System (MH-IBF-EWS) for the Philippines				
Result areas	Sector	Total financing, USD	GCF financing, USD	Financial instrument
<b>Adaptation:</b> Increased resilience of most vulnerable people and communities including women and girls	Public	20,191,349.96 (USD)	9,999,042.27 (USD)	Grant
<b>Description of specific climate change problem and how the project will address it</b>	The Philippines due to climate change, experiences increasingly intense tropical cyclones with accompanying extreme rainfall and wind causing flood, landslide & storm surge, and extreme temperature causing drought, all resulting to casualties of people & living creatures, significant damage to property and infrastructure, and adverse socio-economic consequences for people, business and industry over a period of time. Although the present forecast warnings seemed accurate, there was a disconnect & insufficiency of impact information on the present warning system and the public's understanding of their potential impacts. This project will address the problem by having a people-centered multi-hazard impact-based forecasting and early warning systems (MH-IBF-EWS) for a more proactive and inclusive climate risk management. It will provide an Enhanced Climate Risk Information that can be utilized in the development of policies and planning processes at national and local levels to promote climate resilience and improved adaptive capacity.			

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Alignment with key country priorities and stakeholders engaged	<p>The project aligns with the country strategies and priorities on:</p> <ul style="list-style-type: none"> <li>• <b>Forecasting, early warning and disaster risk communication</b> and <b>Knowledge and Capacity Development</b> under the National Climate Change Action Plan (2011-2028) and National Framework Strategy on Climate Change (2010-2022).</li> <li>• Implementation of <b>low-emission</b> development to attain intended NDCs under the Paris Agreement. The path towards a low-emission development will require climate resilience and improved adaptive capacity."</li> </ul> <p>The stakeholders engaged are: 1.) LANDBANK (as DAE), 2.) DOST-PAGASA (as Executing Entity), 3.) CCC (as NDA), 4.) concerned LGU Units , DILG, OCD, DENR-EMB &amp; WFP (as Co-Executing Entities) and 5.) NEDA (as End-User)</p>			



**Project title:**

Multi-Hazard Impact-Based Forecasting and Early Warning System (MH-IBF-EWS) for the Philippines

**Activities**

**For Output 1. Generation of science-based multi-hazard and climate risk information**

- 1.1. Assess, install and expand observation networks in selected project sites
- 1.2. Establish threshold values that will cause flooding, storm surge and landslide
- 1.3. Generate probabilistic hazard maps for severe wind, storm surge, flood and landslide in the project sites
- 1.4. Generate national probabilistic weather forecasts for heavy rainfall and severe wind using numerical weather predictions (NWP) at the national level.
- 1.5. Generate localized flood, landslide, storm surge model forecasts and national severe wind model forecasts
- 1.6. Build exposure database at the barangay level in project sites
- 1.7. Update/develop vulnerability and fragility curves for structures/buildings for severe wind, storm surge, flood and landslide
- 1.8. Develop a tool /methodology to undertake risk analysis incorporating hazard, exposure and vulnerability and assess socio-economic and gender vulnerability to identify potential impacts from extreme weather events in the project sites



**Project title:**

Multi-Hazard Impact-Based Forecasting and Early Warning System (MH-IBF-EWS) for the Philippines

**Activities**  
*(continued)*

**For Output 2. Established people-centered MH-IBF-EWS supported by a knowledge and decision support system.**

- 2.1. Develop the impact-based forecasting and early warning system for each hazard
- 2.2. Develop/update early warning protocols from hazard to impact-based using collaborative approaches for the project sites
- 2.3. Develop and adopt national policy framework on MH-IBF-EWS to guide the implementation of national government, local government units and all stakeholders nationwide
- 2.4: Testing and validation of impact and response tables of the project sites
- 2.5. Develop a knowledge and decision support system to support the implementation of a people-centered MH-IBF-EWS
- 2.6: Conduct simulations to test the MH-IBF-EWS and calibrate the knowledge and decision support system on a regular basis



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Multi-Hazard Impact-Based Forecasting and Early Warning System (MH-IBF-EWS) for the Philippines

Activities  
(continued)

**For Output 3. Improved national and local capacities in implementing people-centered MH-IBF-EWS and forecast-based early actions and financing (FbA)**

- 3.1: Conduct gap assessment on MH-IBF-EWS for key national and local end-users
- 3.2: Build gender-sensitive institutional and technical capacities to implement MH-IBF-EWS
- 3.3: Develop localized and people-centered impact and response tables for each hazard for the four project sites with active participation of stakeholders
- 3.4: Develop Early Action Protocols (EAPs) applicable to project sites including shock-responsive social protection with active participation of stakeholders
- 3.5: Formulate a communications plan, develop knowledge products and information, education and communication (IEC) materials on MH-IBF-EWS including FbA and conduct advocacy and outreach starting in project sites
- 3.6 Expanding the use of MH-IBF-EWS nationwide using scenarios



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Activities  
(continued)

**For Output 4. Mainstreamed climate risk information and MH-IBF-EWS in development policy and planning, investment programming and resilience planning at national and local levels and institutionalized a people-centered MH-IBF-EWS in the Philippines.**

- 4.1. Enhance existing manuals and guidebooks integrating MH-IBF-EWS and FbA in national and local resilience planning processes
- 4.2. Strengthen national inter-agency operational coordination mechanisms at the national level to implement MH-IBF-EWS
- 4.3: Develop multi-stakeholder partnerships at the national and local levels with all stakeholders for FbA and social protection



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Expected  
outcomes

1. Generation of science-based Multi-Hazard and Climate Risk Information
2. Establishment of people-centered MH-IBF-EWS supported by a knowledge and decision support system
3. Improved national and local capacities in implementing people-centered MH-IBF-EWS and forecast-based early actions and financing (FbA)
4. Mainstreamed climate risk information and MH-IBF-EWS in development policy and planning, investment programming and resilience planning at national and local levels and institutionalized a people-centered MH-IBF-EWS.





**Project title:** Multi-Hazard Impact-Based Forecasting and Early Warning System (MH-IBF-EWS) for the Philippines

**Paradigm shift  
potential**

From traditional hazard-based forecasts and warnings, the project will innovate to an integrated multi-hazard impact-based forecasting and early warning system (MH-IBF-EWS) to enable at-risk communities, national and local authorities, humanitarian agencies and the general public to take early actions during the “window of anticipation” or “lead time” before the hazard event occurs.

At the local level, MH-IBF-EWS will require translating hazard forecasts and warnings into location- and sector-specific impacts, providing tailored climate risk information directly to vulnerable communities and stakeholders, and generating the corresponding actions and protocols that can be taken before, during and after the event. Improving people’s understanding of potential impacts of extreme weather events is essential in making EWS more effective, emphasizing the expanded role of last-mile communities, particularly communities at-risk, local authorities, NGOs and humanitarian agencies on the ground, so no one is left behind.