

About 3% of Asia's land area is classified as low elevation coastal zone, yet it is home to 13% of the region's population. Of the top 10 countries in the world with the largest population counts in low elevation coastal zones, 8 are in Asia and, among them, Bangladesh, China and Vietnam are the most vulnerable countries exposed to multiple coastal hazards.

Early warning is a key element of disaster risk reduction in all time scales. National Meteorological and Hydrological Services (NMHSs) are mandated to observe, understand, and predict the weather and climate of the country, and provide meteorological, hydrological, and related services to contribute to the safety and socio-economic benefit and welfare of their communities and the safety of life and property through reduction of the impact of natural hazards.

In realizing the vulnerability and associated risks of hydro-meteorological disasters in Bangladesh, Vietnam and China, Asian Disaster Preparedness Center (ADPC), with financial support from the Ministry of Foreign Affairs (MoFA) of Royal Norwegian Government, has taken up this project to minimize the disaster risk through proper implementation of end-to-end early warning systems in Bangladesh, Vietnam and China.

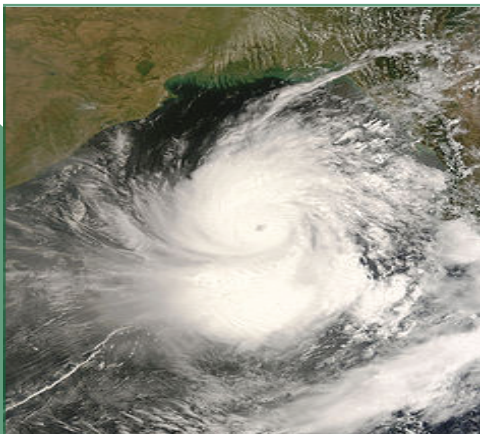
## Objectives

This project aims to strengthen institutional systems for end-to-end early warning of hydro-meteorological hazards, which occur in short, medium, long and climate timescale in Bangladesh, China, and Vietnam.

## Methodology

The objectives of the project are achieved in performing the following activities;

- Establishing multi-stakeholder forums for early warning through which the NMHS could deliver early warning information to relevant sectors, evaluate potential impacts and accordingly prepare response plans & sector specific adaptation measures, get feedback from the users on relevance of information on decisions to reduce disaster risks, and improve the early warning system with the user feedback.
- Developing user-relevant early warning tools and early warnings for short range (such as cyclones, storm surges, heavy rainfall events, severe thunderstorms, hailstorms, floods, etc.), medium range (dry & wet spells, etc.), long range or seasonal (excess & deficit rainfall, prolonged droughts, etc) weather forecasting and climate projection (downscaling of future climate projections for indicating probable temperature & rainfall trends, extreme weather events, etc.) for reducing disaster risks.
- Enhancing institutional capacities for the application of early warnings, seasonal climate outlooks and future projection information products in decision-making.



## Timeframe

Two and a half years time span from July 2009 to December 2011.

## Benefits

The benefits can be listed as follows;

- Institutionalizing early warning multi-stakeholder national forums, which include decision makers, planners, technical experts, etc. to regularly review and improve early warning system performance for an end-to-end multi-hazard (short, medium, long and climate timescale) and people-centred warning system.
- Developing user-relevant early warning tools and early warning information products for short, medium, long and climate timescales for local level application to reduce disaster risks.
- Building institutional capacities for the application of early warning information products, seasonal outlooks and future climate projections in decision-making.

## Technical partners

Asian Disaster Preparedness Center (ADPC),  
Bjerknes Centre for Climate Research (BCCR) of  
Bergen, Norway.

## Participating organizations

Asian Disaster Preparedness Centre (ADPC) is collaborating with Bangladesh Meteorological Department (BMD), Flood Forecasting and Warning Centre (FFWC) of Bangladesh Water Development Board (BWDB), China Meteorological Administration (CMA) and National Centre for Hydro-Meteorological Forecasting (NCHMF) of Vietnam.

## Financial Assistance

Ministry of Foreign Affairs (MoFA)  
of Royal Norwegian Government

## Contact

Should you have any questions on the project, please contact:

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