

# Strengthening of Myanmar's Multi-Hazard Early Warning System

Myanmar's Department of Meteorology and Hydrology (DMH) is the government agency mandated to observe, analyze, predict, and provide warning services for weather- and climate-related hazards, including hazards of geologic and oceanic origins, to contribute to the safety and socio-economic benefit and welfare of communities through, among others, protection of lives and properties, reduction of the impact of natural hazards, and sustainable resource management and development. Donor support has contributed significantly to improving DMH provision of these services. With recent political and economic changes, manifested in the country's opening up to the west, inflow of external support could overwhelm DMH, in the absence of a framework for coherent, integrated, efficient, and effective engagement with donors.

This project, supported by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) through the Trust Fund for Tsunami, Disaster and Climate Preparedness, shall assist DMH in developing a capacity building program framework for addressing capacity gaps, as well as fill immediate capacity gaps in earthquake monitoring and tsunami warning, and decision-support tools for disaster risk management.

## Objectives

### 1) Synergy in donor assistance for DMH capacity building

RIMES shall assist DMH in developing a capacity building program framework to streamline donor assistance for DMH provision of meteorological, climatological, hydrological, agro-meteorological, seismological, and tsunami and other ocean services.



### 2) A National Earthquake and Data Center (NEDC) that meets UNESCO/IOC standards for national tsunami warning centers



RIMES shall assist DMH in a) VSat telemetry of Patheingyi and Hpa-an seismic stations; b) NEDC access to CISM and CTBTO seismic data; c) integration of data streams from different seismic data acquisition systems; d) operational dedicated SeisComp3, with trained NEDC personnel; e) operational dedicated GTS clients server at NEDC, with trained personnel; f) operational Tide Tool, with trained NEDC personnel; g) NEDC exercises on earthquake and tsunami evaluations at different earthquake scenarios, and on SOP-based generation and dissemination of warning information.

### 3) Reduced disaster risks through users' increased uptake of warning information

RIMES shall assist DMH and the Ministry of Agriculture and Irrigation (MOAI) in the development of tools to support users of weather and climate information: an updated agro-ecological zone map for Myanmar, crop-weather calendars, agro-meteorological bulletins, expert system for translating weather and climate information into potential impacts and management options, and pilot Climate Risk Management Field Schools. Upgrade of the country's agro-meteorological network shall support these initiatives. RIMES shall also assist DMH in developing a web-based geospatial database, for disaster risk management applications, with application demonstration in earthquake risk assessment, using U.S. Geological Survey's ShakeCast, an online tool for rapid assessment of earthquake risks.



## Approach

Active engagement with and participation of partner institutions

Capacity building through technology transfer, training, and demonstrations

DMH to drive the process, RIMES to facilitate

## Beneficiaries

- Department of Meteorology and Hydrology
- Ministry of Agriculture and Irrigation
- Relief and Resettlement Department
- General Administration Department
- Farming communities at the pilot sites