United Nations Development Programme

Strengthening Climate Information and Early Warning Systems in Cambodia

Empowered lives. Resilient nations.

PROJECT BRIEF

Automatic Weather Station and Automatic Hydro Stations in Kampong Speu Province

The increasing impacts of climate change in Cambodia present an enormous challenge to attaining the Sustainable Development Goals. Early warning systems can be used as an entry point for risk-informed development, ultimately saving lives, supporting sustainability and building community.

QUICK FACTS

Duration: 2016-2020
Implementing partner: Ministry of Water Resources and Meteorology (MOWRAM)
Funding Source: Least Developed Country Fund, Global Environment Facility
Location: Nationwide

Project Budget (2016): US$ 4,910,285
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Project Updates:
https://twitter.com/i/events/962517019592503297

IMPACTS OF CLIMATE CHANGE IN CAMBODIA

In Cambodia, climate change-induced events have caused loss of life and livelihoods and inflicted enormous economic damage. Damage caused by Typhoon Ketsana in 2009 resulted in a loss of US$130 million. Flooding in 2011 affected 683,498 hectares of agricultural land, causing an estimated $451 million in damages and $174 million in losses across various sectors of the economy.

Cambodia is facing mounting development challenges due to climate change. Longer dry seasons and shorter, more intense rainy seasons are resulting in increased frequency and severity of disasters, including floods and droughts.

Recovery from such events stretches limited public resources and forces shifts in development priorities. At the same time, climate change is impacting agricultural production, affecting household level income and putting pressure on food security.

THE ROLE OF EARLY WARNING SYSTEMS

The purpose of an early warning system is to monitor climate and environmental data on a real-time basis, detect adverse trends and make reliable predictions of possible impacts in the form of early warning information. An effective early warning system would enable timely response to natural hazards and extreme weather events. However, the same information is also important for risk-informed development planning.

PROJECT OBJECTIVES

The project is supporting the Royal Government of Cambodia to bridge existing gaps in institutional capacity, inter-ministerial coordination and infrastructure through three complementary outcomes:

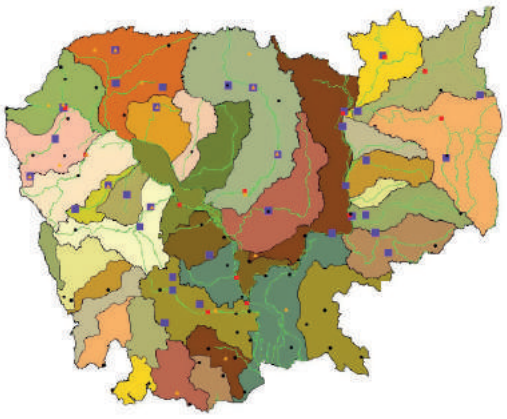
1. Increased institutional capacity to assimilate and forecast weather, hydrological, climate and environmental information
2. Enhanced availability of climate and weather information for national, sectoral and sub-national planning as well as for transboundary communication in the region
3. Strengthened institutional capacity to operate and maintain EWS and climate information infrastructure, both software and hardware, in order to monitor weather

RESULTS

- Installation of 24 Automatic Weather Stations (AWS), establishment of telemetry and data quality & control systems for centralized access by all climate information/early warning agencies
- Installation of 29 Automatic Hydrological Stations (AHS), establishment of telemetry and data quality & control systems for centralized access by all climate information/early warning agencies
- Training-of-trainers programmes for MOWRAM staff to build capacity in operations and maintenance (O&M) of equipment
- Training-of-trainers programmes for MOWRAM forecasters to combine regional/global information and data from monitoring stations in data quality control, archiving and modeling/forecasting climate, flood and water resource information (on daily to seasonal, as well as medium to long-term timescales)
- Capacity-building for planning/line ministry staff at the national and sub-national levels to use climate information in climate-resilient planning
- Establishment of a central repository for weather, climate and environmental data to enhance historical records of trends and related impacts
- Creation of a sustainable financing plan for the long-term O&M of equipment, including private and public financing arrangements
- Initiation of customized weather and climate information for targeted stakeholders to meet short-term and long-term planning needs
- Introduction of standard operating procedures for effective and timely early warning and climate information dissemination
- Regular exchange of climate and weather information with border countries on transboundary issues, as well as best practices and lessons learned related to building climate change resilience and adaptive capacity
- Implementing EWS1294, a phone-based early warning system across the country.

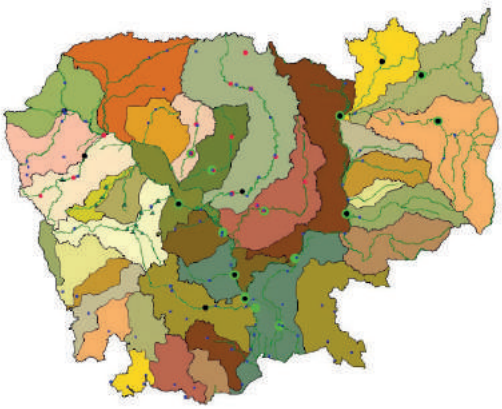
WHERE WE WORK

AWS and rainfall stations



- AWS-UNDP stations
- river network
- Other AWS stations in Cambodia installed by other development partners *(source: MOWRAM)*

AHS water level stations



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