

CLIMATE CHANGE STORIES

Strengthening Climate Information and Early Warning Systems in Cambodia

Mr. Tong Seng is a veteran forecaster at the Ministry of Water Resources and Meteorology; he is excited about seeing more Cambodians engage with weather information.



Checking the weather station systems: Photo credit: UNDP Cambodia/Manuth Buth/MOWRAM.

Mr. Tong Seng began his career with the Ministry of Water Resources and Meteorology over 30 years ago. “I have been working in the Department of Hydrology since 2004 – almost 15 years. Before that I worked for the Department of Meteorology since 1990.” His passion for forecasting developed from studying meteorology and hydrology at the Royal University of Agriculture.

As a flood forecaster, Mr. Seng plays an integral role in early warning systems. Data is obtained using a variety of methods including manual collection by on-the-ground personnel alongside data from [Automatic Weather and Hydrology Stations \(AWS and AHS\)](#) installed by the [United Nations Development Programme](#) (UNDP) and other donors. However, for a forecaster it is not simply a case of checking data on a computer periodically. Mr. Seng describes how their department works in teams, who rotate through the responsibility of turning up in the office daily (even during holidays and weekends) to analyse the data and disseminate information and warnings.

“We use the data to calculate whether there is a flood coming and provide a bulletin every day on the flood forecast. If there is a critical event, such as the river rising quickly, we give the information to the Minister [of MOWRAM], and they issue the alert.”

Having personally noticed changes in the climate over his lifetime, Mr. Seng knows the importance of climate information. Seeing the general population of Cambodia beginning to understand the importance of meteorology and hydrology is a highlight of his career. “The information we provide is for everyone, even the people in the city. Everyone is interested – now they think, if there is a lot of rainfall, ‘Is there a typhoon or a tropical storm?’ or, if there is no rainfall, they think, ‘Maybe this is a drought’ – they did not think this before. More people have been reached now – we distribute information on Facebook, a lot more people have phones so now they can receive information that way too. This makes me very happy... People can use the information to manage their property and their lives, so that they are protected from disasters. It is preventative approach, because disasters always happen.”

Working together to build the country's forecasting capacities

Project Brief

Duration: 2016-2020

Project Budget: USD \$4,910,285

Implementing Partner:

Ministry of Water Resources and Meteorology

Funding: GEF-Least Developed Country Fund

Location: Cambodia, nation-wide

Population to Benefit: Over 15 million (est.)

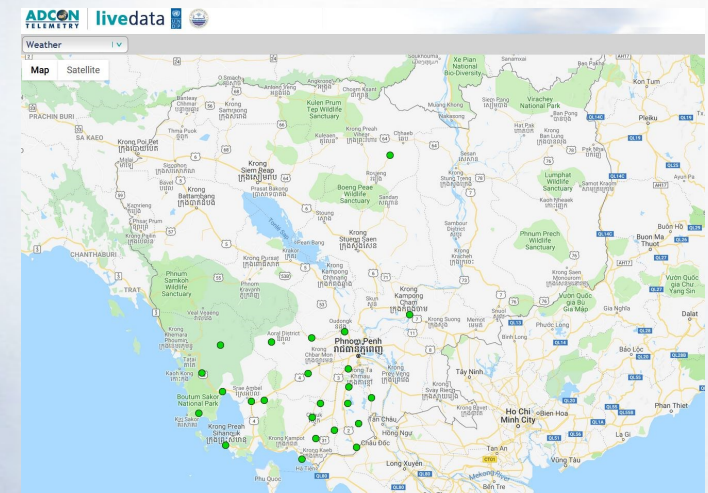
Cambodia's geographical exposure and the lack of adaptive capacity make it particularly vulnerable to the impacts of climate change. With over 80% of the population dependent on subsistence farming, rural populations are particularly exposed.

Floods in 2013 affected 1.7 million people, with an estimated loss of US\$ 356 million. In 2016, floods affected 2.5 million people. These events are precursors of the impacts of the changing climate. Climate information is essential to prepare farmers.

With support from UNDP and funding from the GEF-Least Developed Countries Fund, the project '[Strengthening Climate Information and Early Warning Systems](#)' is supporting the [Ministry of Water Resources and Meteorology \(MoWRAM\)](#) to increase Cambodia's institutional capacity, to assimilate and forecast weather, hydrological and climate information, and to improve communities' access to reliable information and early warning systems.

Under the project, 24 automatic weather stations and 29 hydrological stations for surface and ground water have been installed across the country, integrating technology and placing communities at the heart of a people-centred early warning system.

Information from the stations will be key to generating early warning messages, both for planning and for disaster preparedness and emergency response.



Globally, 45 countries are developing and strengthening early warning systems, with 189 new end-to-end early warning systems established in 26 countries. With UNDP support, nearly 21 million people have improved access to reliable climate information and early warning systems.

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