STORIES FROM A CLIMATE CHANGE HERO

Strengthening Climate Information and Early Warning Systems in Cambodia

Mr. Oum Ryna is the Director of Meteorology of the Ministry of Water Resources and Meteorology. He played a key role in the development of the country's meteorological services.

'After I came back from studying in the Soviet Union in 1992, I was the Head of Hydrology and Meteorology Department of the Ministry of Agriculture Forestry and Fisheries, doing climate research and working as forecaster. When the new Ministry of Water Resources and Meteorology was established, I was handed the responsibility of the Meteorology Department.

After the Pol Pot regime, we had no resources whatsoever, let alone for meteorology. The first thing we did, then, was to collect available knowledge and people, and to rebuild with support from different sources. We faced a lot of challenges, because this work is unlike others: it requires a lot of modern equipment. At the time, we only had our eyes.

It was after 2011, when the Government established the Techo Sen Radar, that we started having up-to-date equipment. With this, we improved our forecasting and developed local capacities. We now have automatic weather stations everywhere - in the past we only had a few manual and under-resourced stations.

Like other countries, Cambodia faces the impacts of climate change. This is why the Ministry of Water Resources and Meteorology strives to improve and fulfil our role to inform citizens of climate events such as storms before they happen.

Forecasting is like a cooking-recipe - you need a range of ingredients. We use satellite data from Japan and historical data from an international network in Thailand. We also have a collaboration with the French International Meteorological Office, to gather global data and integrate it with our own. With forecast models provided by the French, we can also bring better forecasting services to our communities. The radar installed in 2011 has a range of 480km and gives data on rain and wind.

Since 2015, we have upgraded our stations in all provinces and we also recently added 35 weather stations built with modern equipment which is fully automatic. These 35 stations don't just give us information to help build our predictive capacities, they also give us data relevant to key sectors, which used by different projects. We can obtain information relevant to the agricultural sector by automatically recording data such as the humidity levels in the soil.

The delivery of information to communities is greatly improving: we now use all means available to reach people before, during and after an event: from television, to radio, our web-page, phone and by using our network of officers in the provinces.'

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-centered 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.
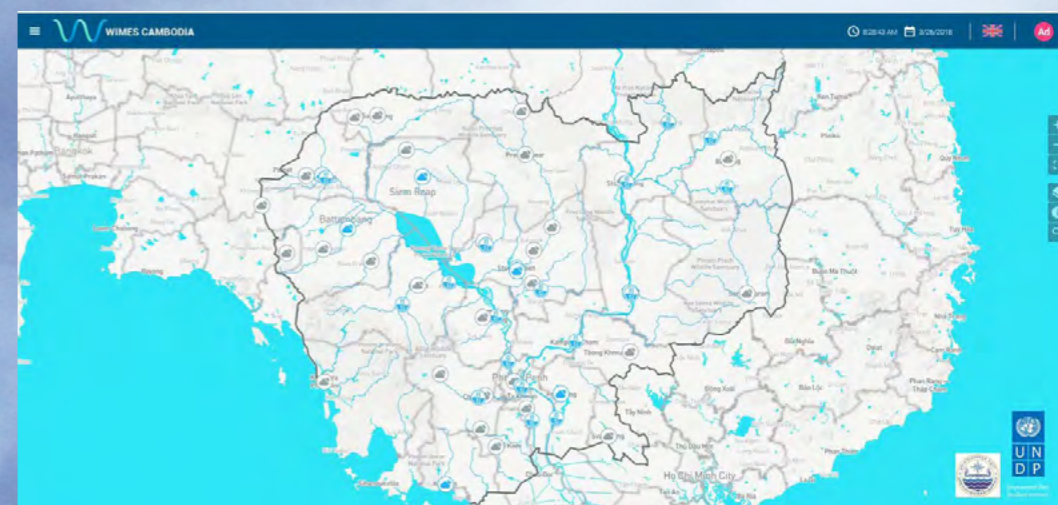
MoWRAM's digital platform (WIMES) aggregates data from over 129 stations. To reach rural populations, weather and climate data is shared via social media, radio and television. (click map)

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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