

# STORIES FROM A CLIMATE CHANGE HERO

## Strengthening Climate Information and Early Warning Systems in Cambodia

As a researcher and lecturer in droughts and environmental economics, Mr. Nyda Chhinh is in a unique space to have a broad understanding of the Cambodian climate.



The future of Cambodia's research lies in people like Mr. Nyda Chhinh. Following his undergraduate mining engineering degree at the Institute of Technology of Cambodia, he began a position in the Ministry of Environment. This then led to more study; Mr. Chhinh spent over 6 years in Australia completing both his masters and PhD in Adelaide as well as a course on environmental governance before returning to Cambodia to pass on his knowledge. In 2007, Mr. Chhinh took up a position as a lecturer at the Royal University of Phnom Penh, teaching a range of subjects including environmental ethics, statistics, research design and geographical information systems (GIS). As Mr. Chhinh explains, the latter of these is a niche field yet his educational background and research made him a prime candidate for these subjects.

Mr. Chhinh recently worked with [United Nations Development Programme](#) (UNDP) under the UNDP-supported '[Strengthening Climate Information and Early Warning Systems in Cambodia](#)' project to develop a drought monitoring report for the country of Cambodia. This report looks at historical perspectives of drought within the country, as well as proposing new contextualized sets of indicators and future ways forward.

When asked why this research is so important, Mr. Chhinh identified the length and inequality of droughts: "We have to put it into context. First, drought is very slow onset, it is so slow that we cannot say 'now we have drought' or that it has stopped. When we have floods, everyone faces it



*Mr. Chhinh working in the field in Cambodia. Photo credit: Mr. Nyda Chhinh*

regardless of whether you are rich, poor or an animal. But when there is a drought, rich people can pump the water - they may just complain they have to pay for more petrol."

Mr. Chhinh emphasizes the importance of improving indicators and using data to improve predictions of when a drought is likely to occur, so that both community members and authorities can better prepare. He did, however, also describe how traditional trends in droughts and floods have varied.

"The traditional observations are not really working anymore. I think there are at least 3 different factors contributing to this kind of change. Climate change is one of the global phenomena, but there is also land use and land cover change... [the third is] development [such as infrastructure] in the local community, which is different than in the past so people have changed their practices. For example, before they might start their crops in July, now due to irrigation they can start in May. They don't expect rain in July but because of land use change there is a flood."

Mr. Chhinh described his passion for research: "I think my favourite part of research when I can think of something new - a very interesting discovery, the new knowledge. Usually when you do research, you use data, you get new knowledge. You are looking for precious stones, something that the new knowledge is showing little bit by little. It's very delightful."

# 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.)

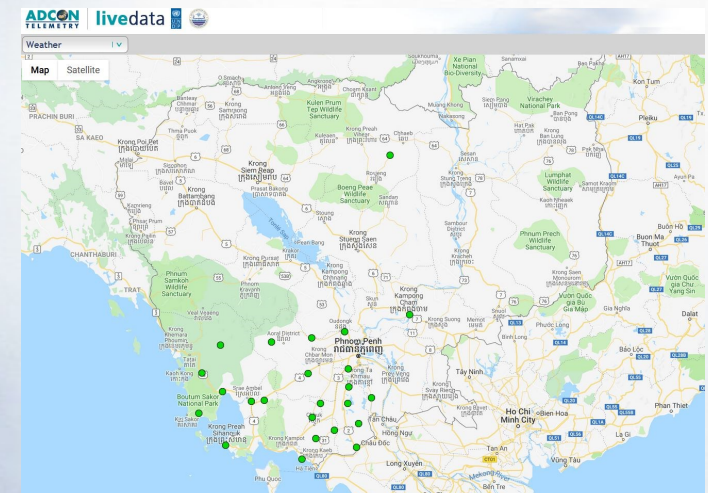
Cambodia's geographical exposure and the lack of adaptive capacity make it particularly vulnerable to the impacts of climate change. With over 80% of the population dependent on subsistence farming, rural populations are particularly exposed.

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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