



Royal Netherlands  
Meteorological Institute  
Ministry of Transport, Public Works  
and Water Management



## **Raising Risk Awareness** | Using climate science to inform post disaster Policy & practice in developing countries

*The World Climate Research Programme recently identified climate extremes as one of its 'grand challenges' and particularly the pressing need to understand these extremes to ultimately improve the attribution and prediction of extreme weather events. This coupled with the fact that such events are not selective and often hit those countries that are least well equipped to deal with their impacts and set these countries back years in terms of development has been the motivation behind a new partnership between World Weather Attribution (WWA) Initiative and the Climate & Development Knowledge Network (CDKN). The **Raising Risk Awareness** project seeks to assess the contribution of climate change to the occurrence of extreme weather events in developing countries in East Africa and South East Asia, and identify how such information could help to bridge the science-communications-policy gap, and enable these countries and communities to become more climate resilient.*

### **Background**

In a warming world, it is increasingly important for policy development, decision-making and investments at the national and local scale to take into account changing patterns of climate extremes. The basic physics of how the climate system works and the broad impact of increasing greenhouse gas emissions on the climate system are generally well understood and well covered in the literature. However there is still much to be learned about how a changing climate will affect the frequency and severity of extreme weather events in particular locations. As a result, those who are not aware of such climate change signals and do not integrate this information into decision-making, and risk building back communities that are not resilient to future extreme weather events. Conversely, those who point to climate change without a robust underlying analysis may overplay the connection, and in doing so risk undermining political capital, weakening public debate, and mal-adapting.

### **The Science**

Climate attribution science is rapidly advancing and there is increasing capacity to estimate the change in probability of specific types of extreme events in a warming world. The significance of attributing the role of climate change in an extreme event comes from situating that hazard in the context of longer term climate change projections for a country or region, and thus creating a robust narrative for decision-makers and the public around the degree to which a disaster of this type will represent the 'new normal'. Such systematic and rapid scientific analysis is the focus of the World Weather Attribution (WWA) Initiative. With a robust evidence base and the right protocols in place it is now possible to run real-time extreme weather event attribution within days of an event striking.

While attribution typically addresses the 'extreme' in the climate system, the impact of an extreme weather event also depends on vulnerability and exposure. Indeed the vulnerability and exposure of people and locations can sometimes be more important than climate change in determining future trends in risk. Though this project will not seek to attribute impacts of such events, it will situate the analysis in the existing vulnerability and exposure context, to further the strengthen the evidence base to inform decision-making

These scientific advances notwithstanding, climate science is often not communicated in a way that can be easily understood by laypeople or used by decision-makers. It is imperative the science is clearly



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communicated to inform the media, and to support decision-making by communities, planners, and policy-makers, especially during the window of opportunity in the aftermath of disaster when important decisions are being taken on rebuilding efforts including around climate resilience and risk reductions measures.

### **Developing countries**

Developing countries are some of the most vulnerable to extreme weather events, but lack timely and robust evidence to understand current and future threats from such hazards and thus to prepare for and respond to their impacts. A range of developing country stakeholders are demanding information about the role of climate change in individual extreme weather events, as evidenced by the following:

- A growing number of projects seeking to understand climate variability and how to integrate changing risk into development and resilience strategies such as Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED), Future Climate for Africa (FCFA) and Partners for Resilience;
- Climate attribution questions are amongst those most commonly asked of the International Federation of Red Cross and the International Research Institute (IFRC-IRI) help desk during major disasters; and
- A rising number of requests for extreme weather attribution information coming from governments, NGOs, and media in the wake of extreme weather events.

### **The Project**

Raising Risk Awareness project seeks to assess the contribution of climate change to the occurrence of extreme weather events in developing countries and identify how such information could help to bridge the science-communications-policy gap, and enable these countries and communities to become more climate resilient. This project will initially be piloted in East Africa and South East Asia – two disaster prone regions of the world

The project will be delivered through a partnership between WWA Initiative and CDKN, bringing together climate science, development, policy, planning and communications expertise across a range of academic, research, government, non-government and civil society organisations from developed and developing countries. This is the first time this type of analysis is being piloted specifically to inform developing country efforts in the aftermath of an extreme weather event. As such engaging southern partners will be vital to the successful delivery of this project and critical for building local attribution capacity, addressing knowledge gaps and ensuring climate information is communicated effectively to key audiences..

The Raising Risk Awareness project will run until March 2017 and will generate a suite of tools and knowledge products, and run a series of national and regional events to help civil society, communities, practitioners, media and decision-makers better understand the current and future nature of extreme weather events and potential response measures.