# RRA: Climate Attribution for Extreme Weather Events in Ethiopia and Kenya


## Authors

**Suzanne Carter,**
*SouthSouthNorth*
*(suzanne@southsouthnorth.org)*


## Aim of the project

The **Raising Risk Awareness** (RRA) project aimed to inform policy decisions by using the latest climate science to understand the role of climate change in the occurrence of extreme events, such as droughts, in four developing countries. The project worked toward bridging the communication gap between the users (media, communicators and policy-makers) and the producers (scientists) to better understand future climate risks associated with extreme events.

## Dates

January 2016–June 2017

## Countries

Ethiopia and Kenya

Participants at a Raising Risk Awareness workshop, hosted at the Climate Change Directorate campus in Nairobi, Kenya. *(Source: C. Mathieson, 2016)*

## Aim of co-production:

The co-production focused on developing a pilot study and joint academic paper for Kenya and Ethiopia. Key stakeholders jointly identified a suitable case study for piloting the extreme event attribution methods in each country. One of the goals of extreme event attribution is to ascertain whether the increased or reduced likelihood of an extreme event, such as drought, is due to climate change. The co-production approach was strongest within the climate data analysis. This enabled learning about extreme event attribution building skills within the country to undertake future attribution analyses. The project engaged with researchers, government officials, civil society and the media to raise awareness about extreme event attribution.

## Context:

The project was conducted at national level, working with the national meteorological service and national universities. The pilot studies defined a specific area, covering multiple sub-national jurisdictions. Co-production was needed to define a useful pilot study and to ensure the transfer of technical capacities to enable local institutions to undertake an extreme event attribution analysis.

## Who was involved and what were their roles?

The World Weather Attribution (WWA) initiative is an effort led by Climate Central with the **Red Cross Red Crescent Climate Centre**, the **University of Oxford**, the University of Melbourne and the Royal Netherlands Meteorological Institute that collectively undertake extreme event attribution analyses all over the globe. The Climate and Development Knowledge Network (CDKN) collaborated with WWA, using existing CDKN and Red Cross networks, comprising decision-makers, the media and other stakeholders in the two countries to kick start collaboration.

WWA scientists led the co-production of pilot studies in collaboration with five climate scientists in Ethiopia and Kenya, who acted as project champions, ensuring mutual participation in the co-production process and building local capacity to undertake future studies. CDKN led the process of formalising partnerships (Memorandum of Understanding) between the project team and the national meteorological service.

Oxford University hosted two separate week-long learning exchanges between the project team scientists and scientists from Ethiopia and Kenya respectively in order to co-produce the pilot studies.

## How was co-production done?

### Identify key actors and build partnerships; build common ground

In the initial scoping visit, the project team had meetings with a wide range of stakeholders to test interest and demand. After the visit, the national meteorological services and the ministry responsible for their oversight were engaged about possible pilot studies that might be suitable. The pilot studies for the two droughts were agreed through a series of virtual conversations, ensuring the expressed interests of local decision-makers were met. If the project team had suggested a study without consultation it is possible that a heat wave, which is easier to analyse, may have been chosen.

## What was co-produced?

- **Analysis and academic papers**: Analysis and academic papers of two drought events in Kenya and Ethiopia, co-owned by local scientists, were jointly produced.
- **A policy brief**: In Kenya, a policy brief was co-produced with the project scientists and the local Red Cross to ensure that the information was relevant and easily accessible.
- **Communications products**: Videos, animations, infographics, an image library and pilot study analyses were provided for media and journalists, with translation into local languages, as requested in early consultations.

## Benefits of the co-production approach

- Co-production increased the level of engagement of local scientists by making them part of the pilot study process and ensuring skills and technical capacities were built. For policy-makers, the co-production process piqued their interest but due to the pilot study results the recommendations that could be made were not specific enough for them to apply.
- Working with both meteorological agencies and academics in-country contributed to the success of the approach by: (i) creating stronger links between these actors; and, (ii) by sharing the knowledge of how to do attribution studies across institutions. Co-production led to joint ownership and authorship of the pilot studies, allowing for greater knowledge sharing and access to data.
- Co-production created the space for the project team and decision-makers to guide the direction of the research and ensure that the chosen pilot study (drought) was relevant to their decision context. Unfortunately, the results were not specific enough to take action.

### Co-develop solutions

The co-production approach was strongest in producing the pilot study analyses, which involved five champions from meteorological services and academia. Setting up clear Memorandums of Understanding worked well. Partners knew who was responsible for what and what financial resources were available for the project. As a result, the project successfully built the capacity of five local scientists to undertake extreme event attribution studies in the future. One scientist has undertaken an analysis of a flood in Kenya since the project finished.

### Co-deliver solutions

Project workshops were held to deepen collaboration and share results from the pilot studies. Workshops were designed to be highly participatory with many group activities and opportunities for local experiences to be shared; for example: a poster session in Ethiopia for local scientists, and serious games, such as the Red Cross Red Crescent Climate Centre's game, Climate Attribution Under Loss and Damage: Risking, Observing, Negotiating (CAULDRON). Scientists primarily attended these workshops, although smaller numbers of other stakeholders also participated and provided useful perspectives.

The project also engaged with key decision-makers and the media about extreme event attribution. A breakfast briefing with the media in Kenya in the scoping phase was particularly successful in raising awareness about the project and eliciting feedback on the types of outputs that would be most useful to the media. This informed the communications products produced (videos, animations, infographics and image library). Collaboration between the Kenyan scientists and the Kenyan Red Cross led to a policy briefing for decision-makers and the media.

## Lessons to learn from:

- **Trust and cooperation are foundations of joint delivery**: Co-production led to trust between the partners and the setting up of the relationships required for good cooperation, learning and joint delivery.
- **Delays can reduce impact**: The pilot studies were delayed with knock-on impact on the communication of results. This meant that there was less scope and opportunity for policy influence than was originally intended.

- **Incentivise collaboration**: Incentives for collaboration and joint ownership included joint academic publications with local scientists. However, more could have been done to help ensure continuation. Sustainability rested on the interest of the local scientists to continue investigating the role of climate change in extreme event attribution studies. Involving more local scientists could have helped to further ensure the sustainability of the work past the short project life cycle.
- **Trusted communicators**: Policy engagement and media interaction were best conducted via local champions or organisations (e.g. Red Cross), as these messages are not necessarily trusted if from foreigners, especially in Ethiopia.
- **Start with technical collaboration**: Due to the technical nature of the work, co-production between scientists was deemed the most appropriate starting point, but it is hoped that this could change over time once extreme event attribution is better understood locally.

## REFERENCES


International Center for Humanitarian Affairs (2017) 'Raising risk awareness: Using climate science for disaster risk management', Policy Brief #1. Kenya: International Center for Humanitarian Affairs. (https://cdkn.org/wp-content/uploads/2017/08/2016-2017-Kenya-drought-policy-brief-1.pdf).

Philip, S., Kew, S.F., Van Oldenborgh, G.J., Otto, F., O' Keefe, S., Haustein, K., King, A., Zegeye, A., Eshetu, Z., Hailemariam, K., Singh, R., Jjemba, E., Funk, C., and Cullen, H. (2017) 'The drought in Ethiopia, 2015'. London: Climate and Development Knowledge Network and World Weather Attribution Initiative. (https://cdkn.org/wp-content/uploads/2017/06/Ethiopia-drought-science-summary.pdf).

Uhe, P., Phillip, S., Kew, S.F., Shah, K., Kimutai, J., Otto, F., Van Oldenborgh, G.J., Singh, R., Arrighi, J. and Cullen, H. (2017) 'The drought in Kenya, 2016–2017'. London: Climate and Development Knowledge Network and World Weather Attribution Initiative. (https://cdkn.org/wp-content/uploads/2017/06/The-drought-in-Kenya-2016-2017.pdf).