



FATHUM: Forecast for Anticipatory Humanitarian Action



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Aim of the project

The aim of the **Forecast for Anticipatory Humanitarian Action** (FATHUM) project is to undertake research to support the implementation and scale-up of Forecast-based Financing (FbF) locally, nationally and internationally. Forecast-based Financing comprises a set of initiatives, undertaken by the **Red Cross Red Crescent movement** and other humanitarian agencies, which makes funding available for early action on the basis of early action protocols or standard operating procedures developed by teams of humanitarians and weather forecasters. FATHUM researchers are linking together research on forecast predictability and skill, complex drivers of risk, multi-actor perspectives on successful implementation and financing mechanisms to catalyse and facilitate the scale-up of Forecast-based Financing for effective, appropriate and impactful action before a disaster.



Dates

December 2016–November 2021



Countries

Uganda, Mozambique
and South Africa



Mapping flood hazards in Mozambique (Source: D Decremer, 2019)

Aim of co-production:

Co-production activities in FATHUM included designing and conducting research to ensure that project outputs would lead to actions within the humanitarian community. FATHUM research is produced with cross-disciplinary and cross-continent connection and reflection. Researchers work together with practitioners to talk through the implications of research as results emerge so that outputs can be co-designed in the most relevant and useable format.

Context:

Within the FATHUM project, co-production is defined as full collaboration in all aspects of the research, from defining topics, co-designing and co-implementing research and encouraging interdisciplinary reflections on research outcomes to publicising and applying the research results.

In order to analyse forecasts and select and assess worthwhile actions, humanitarian practitioners needed to involve the research community. In addition, it was critical for scientists to collaborate with humanitarian practitioners on an ongoing basis to ensure that the research being carried out, and associated deliverables, best met the emerging and dynamic needs of the FbF community.

Who was involved and what were their roles?

The **Red Cross Red Crescent Climate Centre** has acted as an intermediary, helping explain research priorities to scientists and translate research results into language that is clear for disaster managers. The Climate Centre and the German Red Cross have also supported the convening of an interdisciplinary group of partners in the global and regional Dialogue Platforms on FbF. The university researchers have also acted as intermediaries between the humanitarians and the producers of global climate data, such as the **European Centre for Medium Range Weather Forecasts** (ECMWF). The researchers will provide an overview of the data that is available, and feed back to the global data producers the requests and ideas of the interdisciplinary consortium for upstream changes to forecast development.

One of the four Work Packages involves a social anthropologist whose role is to document different perspectives on the FbF initiative from international donors through to local Red Cross volunteers. In addition, researchers in a different Work Package have undertaken fieldwork at community level to best understand how Forecast-based Financing can work in different contexts.

How was co-production done?

Identify key actors and build partnerships; build common ground; co-explore need

At the design stage, FATHUM research questions were co-produced between university partners with interdisciplinary expertise, the Red Cross Red Crescent Climate Centre, the **Overseas Development Institute** and the **World Food Programme** (WFP). These partners were all involved in the initial Dialogue Platforms for Forecast-based Financing, and had engaged with national Red Cross Red Crescent societies and climate service providers such as the ECMWF, which is now implementing the Copernicus Climate Change Service.

Co-develop solutions

The **University of Reading**, as the Principal Investigator of the grant, has led on co-production activities. Geographical distance means that most engagements during the year happen on Skype and email. Annual project meetings and smaller meet-ups

What was co-produced?



- **Research within four Work Packages:** FATHUM research is produced with cross-disciplinary (and cross-continent) connection and reflection. Research included:
 - how far in advance flooding can be forecasted;
 - the relevance of the local context for enhancing or discouraging the effectiveness of FbF;
 - multi-stakeholder definitions and criteria for success in FbF; and
 - the political economy of scaling up FbF.



Benefits of the co-production approach

- The constant collaboration has allowed the project to evolve to produce research deliverables that are most needed by the different implementations of FbF carried out by Red Cross Red Crescent societies on the ground, avoiding researching outdated questions.
- The most useful and valued co-production in terms of the climate services knowledge value chain are the 'take-home messages' of the research work.
- After the research is produced, the co-production process of workshoping the results in terms of their relevance for disaster management has helped ensure they are fully applied.
- There is already evidence of collaboration on new projects and grants among the partners.
- The co-production process has played an important role in informing improved climate services that are more relevant for the needs of FbF.

across different Work Packages have provided time for people to collaborate face-to-face. This process was largely dictated by geographical distance; meeting more regularly in person may have built better relationships to ease co-production but this was simply not feasible in terms of time or budget.

Co-production is prompted by effective communication, which enables the identification of points of interaction across different Work Packages. Initially, the challenge at the beginning of the project was to come up with a process for engaging that did not overwhelm. The plan was for the Work Package leaders to have regular virtual meetings, allowing them oversight of all the ongoing activities within each Work Package. Regular summary emails were sent to the whole team, but it was not clear who was reading them. Subsequently, a regular time for a monthly call for everyone was scheduled. Depending on internet connection, most people are able to join. The monthly FATHUM calls allow everyone to be updated on progress, and to identify synergies across the project and with external work, prompting co-production of research outputs that are relevant across different organisations. These calls have developed organically in structure, but, in general, have worked well, with team members going on to share relevant outcomes with people and organisations flagged during these calls.

Co-deliver solutions

Initial engagement with the humanitarian community suggested that there may be over-optimism about the potential of seasonal rainfall forecasts to be used for flood forecast-based action. FATHUM researchers addressed this by co-designing and implementing research that showed the limitations of using such forecasts in this way (Coughlan de Perez et al., 2017) and developing more decision-relevant seasonal river flow forecasts (Emerton et al., 2018).

The Mozambique Red Cross is using FATHUM research on cyclone wind speeds and flood risk in its Early Action Protocol, which has been approved for forecast-based funding by the International Federation of Red Cross and Red Crescent Societies. Other countries that are developing their protocols have also started to consult the result of forecast analysis done by FATHUM researchers, including Kenya, Uganda, and Ethiopia.

During Cyclones Idai and Kenneth, which affected Mozambique in 2019, FATHUM researchers worked with the UK Department for International Development, now the Foreign, Commonwealth and Development Office (FCDO), and other partners to deliver flood hazard and exposure briefings. It was the first time this information

had been provided in an operational context and the approach taken evolved based on feedback from FCDO about what information was required by decision-makers during the events.

Based on questions and discussions with FATHUM researchers, the team co-produced an operational guidance document for practitioners, called 'What can go wrong with FbF?'. This features guidance and advice to help humanitarian avoid potential pitfalls in this work, based on learning so far.

Lessons to learn from:

Including practitioners as co-investigators: The grant is still in progress, so it is difficult to evaluate what has worked. FbF only emerged in 2013. Prior to that there was very little engagement between humanitarian practitioners and academics on large research projects about Early Warning Early Action. As a result, the approach of including practitioners as co-investigators within an interdisciplinary project team has been a step in the right direction.

Cross organisation connection and reflection: Certainly, there is now a growing academic community around FbF which, in many ways, pivots around research being carried out by the FATHUM team. The critical component for FbF research is to ensure that there is cross-disciplinary and cross-continent connection and reflection, and that researchers are working together with practitioners to talk through the implications of research as results emerge so that outputs can be co-designed in the most relevant and useable format. This is often achieved by establishing personal connections, which ideally needs to be done at an early stage within the project.

REFERENCES

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SHEAR (Rebecca Emerton and Andrea Ficchi) working with operational forecasters at ECMWF on the flood emergency report on cyclone Kenneth (Source: H. Cloke, 2019)