

Need for better forecasting to mitigate repeat of Idai devastation

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A better system for forecasting severe weather events in Africa is needed to reduce the impact of storms such as Cyclone Idai, say researchers.

Not only do forecasters in Africa need training in spotting the formation of tropical storms and tracking their path, there needs to be a more robust way of anticipating the impacts of these events – so the public and disaster relief organisations can be put on rapid alert.

Douglas Parker, Professor of Meteorology at the University of Leeds, is part of a major international collaboration being led by the university with the aim of improving [weather](#) forecasting across Africa.

He said: "Understanding and forecasting [severe weather events](#) is one of the hardest tasks that forecasters face.

"Storms such as Cyclone Idai are the result of fundamental physics happening in the atmosphere above the tropics, and that science contains many uncertainties.

"Forecasters in Africa are being asked to do one of the toughest jobs in forecasting, but they often lack the techniques and computing capacity to deliver timely and effective forecasts to the right audiences.

"A general distrust of weather forecasts may mean that individuals or organisations do not react to warnings. We are working to build

confidence between forecasters and users, by working with local meteorologists, and the people who may need to take action."

Professor Parker said while many cyclones in the Indian Ocean follow an unpredictable track, Idai was well [forecast](#) by the computer models.

International agencies had issued warnings of severe impacts in Mozambique a few days before Cyclone Idai made landfall off the coast of Mozambique towards the end of last week. It then tracked westwards to Malawi and Zimbabwe causing devastation in its path.

He said: "One of the reasons this cyclone has had such a big impact is that it has moved slowly over land and then back over the ocean. As it did so, it was picking up moisture and that caused the heavy rains and flooding."

African Science for Weather Information and Forecasting Techniques (African SWIFT) is a £7.9 million project is being funded through the Global Challenges Research Fund, part of the UK aid budget, which brings the best research brains to bear down on the big intractable problems facing the world – including building resilience to climate change.

The project started in 2017 and is bringing together 25 UK scientists and 45 academics from Africa to undertake fundamental research into tropical weather systems, and the way the public can be alerted to protect themselves if a severe event is predicted.

Professor Parker said: "Timely and accurate weather forecasts have the potential to save many lives in Africa, and to protect property.

"Computer models and [satellite data](#) are available which can provide useful warnings from hours to days ahead of an event. But accurate

forecasts are only going to help people if they are communicated effectively, to people and groups with the capacity to take action."

The scientists are working with the Met Office and with several African forecast agencies to develop new computer models and new satellite methods that will improve the accuracy of forecasts.

They are also bringing forecasters together with users to develop better ways of building confidence in the forecasts.

Provided by University of Leeds

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