Met Office

Case Study

Strengthening weather and climate services: a cost-benefit analysis forecast

Rwanda Meteorology Agency

Challenge

Weather and climate impact all areas of society and can have significant social and economic consequences, particularly in countries which are heavily reliant on rain-fed agriculture. In Rwanda, 80% of the workforce is part of the agricultural industry. The topography of Rwanda is, however, challenging for agriculture. Known as 'the land of a thousand hills', steep slopes are often unstable especially when de-forested and under cultivation, unless they are effectively terraced. Due to the effect of severe weather-related events such as landslides, droughts and floods, the Rwandan government has recognised that more work needs to be done to strengthen weather and climate services. Approval was granted by the government's Climate Change Fund (FONERWA) for a project to address this need. The 'strengthening Meteo Rwanda's weather and climate services to support development' project is led by Meteo Rwanda (the Rwanda Meteorology Agency) and supported by the Met Office through a package of technical assistance.

Met Office

Case Study

Solution

The aim of Meteo Rwanda's FONERWA project is to improve the range of weather and climate information available and to promote its understanding and application in order to inform decision making at all levels in Rwanda. To enable Meteo Rwanda and its stakeholders to better understand the socio-economic value of improved weather and climate services, the Met Office commissioned New Economics Foundation (NEF) Consulting to carry out a Cost Benefit Analysis (CBA) forecast. This focussed on the impacts related to droughts and landslides, and found that for every 1 Rwandan Franc (RWF) invested by the project in improving Meteo Rwanda services, the value created would be at least 4.1 RWF. The socio-economic benefits would include, for example, safer evacuations and the prevention of loss of life in areas susceptible to landslides, as well as the avoidance of crop losses for farmers.

Benefits

NEF Consulting's CBA has led to greater awareness within Meteo Rwanda of the benefit to society of improving weather and climate services. This information can in turn be used to inform policymakers of the socio-economic benefits of investing in Meteo Rwanda. In the future, further analysis related to other severe weather-related events and the use of weather and climate information by different sectors of society, would provide a more detailed CBA. NEF Consulting has provided recommendations to Meteo Rwanda regarding data that could be collected in the future which would further improve the accuracy of their initial analysis.

> *"This cost benefit analysis clearly shows that investment in weather and climate services is to the benefit of the country, with a conservative estimate of a return of over 4 Rwandan Franc for every 1 Rwandan Franc invested. With climate change likely to affect the rainfall and temperature in Rwanda, these services are essential to short, medium and long term decision making across the country and all sectors."*
>
> **Dr Desire Kagabo**
> Chairman of Meteo Rwanda's Board of Directors

NEF CONSULTING

Rwanda Meteorology Agency

Supporting SUSTAINABLE DEVELOPMENT GOALS

To find out more

+44 1392 885 680

www.metoffice.gov.uk/international-development

internationaldevelopment@metoffice.gov.uk

@metofficeww

Find us on LinkedIn