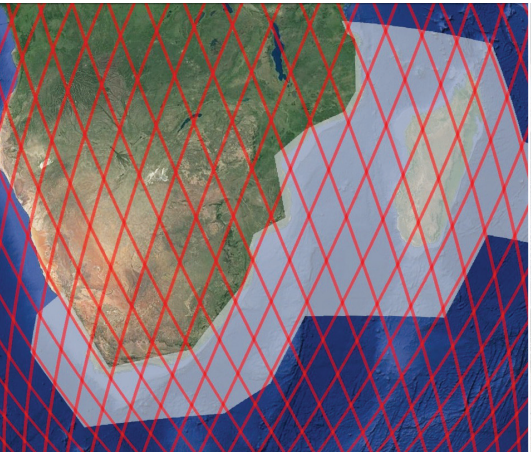
Coastal Risk Information Service (C-RISe)



About the project:

C-RISe is a three-year project funded by the UK Space Agency through the International Partnership programme, which will work with local partners to deliver a Coastal Risk Information Service to South Africa, Mozambique and Madagascar, providing satellite-derived information about sea level, wind and waves to support coastal vulnerability assessment and hazard management efforts.

It is well established that global sea level is increasing, and that large-scale weather patterns are changing. However, even within the Indian Ocean, these changes are not geographically uniform, nor steady in time, with short-term variability on a range of time scales. Mozambique, Madagascar and South Africa have significant coastal populations whose lives and economic security are highly vulnerable to the consequences of climate variability and change. In particular, Mozambique and Madagascar are highly exposed to the surges associated with cyclones, and have economically important coastal ecosystems that are sensitive to climate change.

National Oceanography Centre
NATURAL ENVIRONMENT RESEARCH COUNCIL

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The C-RISe team will apply an innovative satellite altimeter data processing technique, developed by the NOC, to deliver satellite observations through a web-based data portal. Satellite oceanographers and sea level experts at the NOC will provide training and support for local data validation, using NOC tidal software. Supported by the NOC, African coastal and marine scientists will use the data with other information sources, using free and open-source software tools such as the UNESCO-Bilko software (hosted at the NOC) to quantify coastal hazards and incorporate the information into on-going development and disaster prevention initiatives. Ultimately, the goal is to enable local stakeholders to use this information to reduce the social and economic impact of coastal inundation and increasingly variable weather patterns. Building on examples selected in collaboration with local partners, the project will also develop a set of tutorials showing how altimetry data may be used with other data and information to provide decision support in different contexts.

Project Consortium, UK:

Satellite Oceanographic Consultants Ltd (lead partner), National Oceanography Centre (technical/scientific lead), Bilko Development Ltd (software)

International Partners:

Madagascar: Centre National de Recherches Océanographiques (CNRO), Institut Halieutique et des Sciences Marines (IH.SM), Direction Générale de la Météorologie (DGM), WWF Madagascar, Conservation International
Mozambique: Instituto Nacional de Hidrografia e Navegação (INAHINA), Universidade Eduardo Mondlane
South Africa: Council for Scientific and Industrial Research (CSIR)

Map: Data SIO, NOAA, US Navy, GEBCO Image Landsat / Copernicus, Google

NOC contacts:
Paolo Cipollini – cipo@noc.ac.uk
(technical lead – left),
Val Byfield – val.byfield@noc.ac.uk
(training, user support)
Christine Sams – chrams@noc.ac.uk
(general project information)