MDG 14: Toxic algal blooms

Keywords: Harmful algal blooms, Poisoning, Human health, Ocean colour, SST, Currents

Primary actors

Madagascar: CNRO (Jean-Paul Toussaint)
UK: NOC (Amani Becker)

Stakeholders / End Users

CNRO (National Oceanographic Research Institute), IHSM, Public Health, Fisheries

Introduction / Statement of the Problem

Toxic algal blooms occur annually between Diego and Toliara. They begin in November and can continue to April/May. They have implications for human health in that they cause poisoning through consumption of fish.

Case study description

- Blooms are understood to occur during the hot season, but the period of the blooms has extended in recent years.
- This may be due to an overall rise in sea temperatures, or a shift in the timing of higher sea temperatures (whilst algae are tolerant of a wide range of temperatures, blooms only occur within certain ranges).
- C-RISe data will be used to better understand recent changes in sea surface temperatures (SST) and currents.
- Satellite images (ocean colour – Chla) will be used to identify changing patterns of algal blooms.
- CNRO has in situ measurement data for currents, chlorophyll, temperature and salinity.
- Output for C-RISe will be a report on the use of satellite data to better understand algal blooms at this location.
- A report will be provided to public health and fisheries at the affected locations.

Expected Impacts

Long Term Primary Impact: After end of Project (> 2020)
This is part of an ongoing research programme, which will continue beyond the duration of the Use Case. Thus any impacts beneficial to the wider coastal population of Madagasacar will be in the long term. By increasing understanding of the pattern of algal blooms it is hoped that the risk to human health can be reduced.

Secondary Impact: CRISE Case study report March 2019, CNRO research activity in this area will continue into subsequent years.
There is a short term impact to CNRO in that they will gain experience in accessing and working with satellite data.

SDG 14.2, 14.3