MDG 4: Wave, Wind and Current Climatology for Madagascar Region

Keywords: Climatology, ocean waves, ocean winds, ocean currents

Primary actors

Madagascar: DGM (Luc Randriamarolaza)
UK: SatOC (Ellis Ash)

Stakeholders / End Users

DGM (Meteorological Office), CFIM (Maritime Information Fusion Centre), CNRO (National Oceanographic Research Institute), IHSM, Port operations and development

Introduction / Statement of the Problem

Wind, wave and currents information is important for planning navigation and port developments. Climatologies that include monthly averages and extremes as well as information on inter-annual variability can be developed from archive data on winds, significant wave height and currents, derived from satellite altimetry and other sensor types.

Case study description

The case study will involve the following activities:

- Identify sites for which statistical analyses and climate summaries are needed, and build list with co-ordinates and requirements. ICZM/BNCCC for East coast locations where pilot sea defences are being built. CFIM, CNRO and IHSM to recommend areas. All locations for Use Cases.
- Cross validation of satellite data against other available data (mostly models, any in-situ?).
- Carry out initial analysis and identify climate consistent areas for generalised descriptions.
- Standardised wave and wind climatological summaries.
- Feeds into IHSM Marine Atlas and to CFIM.

Expected Impacts

Long Term Primary Impact: 2019 onwards
Improved planning for infrastructure and operations. Leading to improved safety of coastal and offshore activities.

Secondary Impact: To be reported on Case Study Completion at March 2019
Development of capability at DGM to access and analyse relevant satellite data sources, improved knowledge of regional winds, waves and currents.

SDG 9.A, 13.1, 13.3