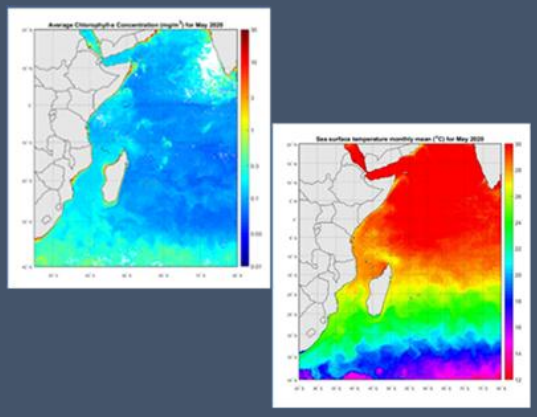
GMES AND AFRICA

COMMISSION DE L'OCÉAN INDIEN

MAURITIUS OCEANOGRAPHY INSTITUTE

# MARINE AND COASTAL MANAGEMENT FOR EAST AFRICA



PROJECT IMPLEMENTATION PERIOD

- End of September 2018 – April 2021

CONSORTIUM PARTNERS

- Tanzania Fisheries Research Institute
- Kenya Marine and Fisheries Research Institute
- L'Institut Halieutique et des Sciences Marines
- Seychelles Meteorological Authority
- Western Indian Ocean Marine Science Association


PROJECT CONTACT

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## "Understanding the Oceanic Component of the Marine and Coastal Management Service for East Africa"


### SUMMARY

The oceanic component of MOI's Marine and Coastal Management Thema for the East Africa Region aims at improving the management of fisheries resources and enabling the stakeholders and users to have a global view of the state of the ocean. This is being done by providing the authorities with an enhanced tool for detection of potential fishing grounds as well as charts and monthly bulletins which include oceanographic variables.


### BACKGROUND

The islands of the South West Indian Ocean and countries along the East Coast of Africa are especially dependent on their marine and coastal resources for their social, economic and ecological value. Fisheries management, better understanding of marine and coastal ecosystems, monitoring and control of illegal fishing, climate change impact monitoring and forecasting of extreme weather events are some of the main concerns. The Marine and Coastal Service for the East Africa region takes into consideration the biological and physical state and dynamics of the ocean, fishing grounds, marine ecosystems for the regional seas, coastal vulnerability, sea state forecasts thereby supporting marine and coastal management activities and adaptation measures.

Through the use of both EO and in situ data, the oceanic component of the theme is generating information and forecasts to help institutions and decision makers observe, understand and anticipate marine environment events.

The overall objective being to promote a more sustainable management of marine and coastal resources by improving decision making process through provision of additional pertinent information to mandated institutions in the East Africa region.

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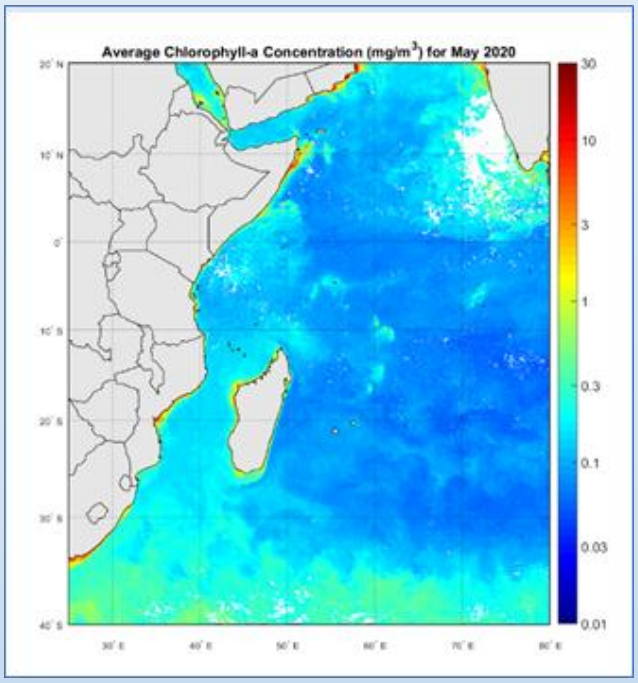
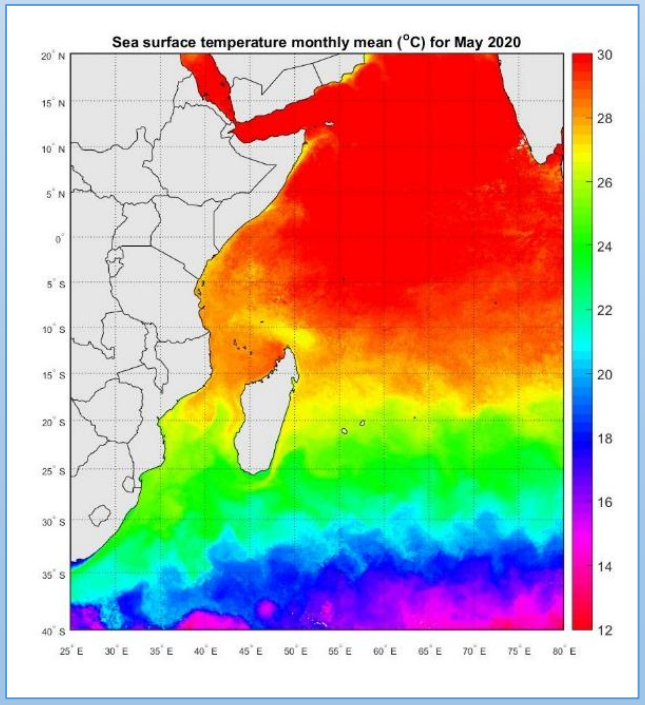



Picture 1: Average Chlorophyll Concentration - May 2020




Picture 2: Sea Surface Temperature monthly mean – May 2020

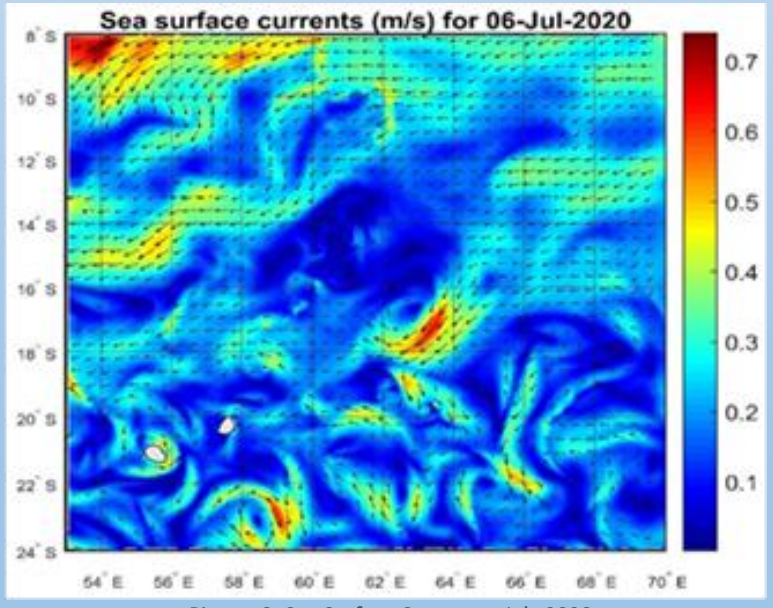
The oceanic component involves the consolidation of three applications, namely (1) Application1 - Monitoring and forecasting of Physical and Biological Oceanography variables, (2) Application 2 - Fishing Zones Monitoring and Protection, and (3) Application 6 - 3 Days Marine Weather Forecast.

Charts for the detection of Potential Fishing Zones (PFZs) have been produced with forecasted geostrophic current with the aim to predict the direction of movement of the temperature front.

The monthly bulletins consist of charts depicting mean monthly analysis of Chl-a concentration and Sea surface temperature together with their respective anomalies with data from 2003-2020 as reference for the climatology.

The frequency for producing the PFZ advisory is three times weekly. This information is of prime importance to the fishers' community as this can reduce their fuel cost and the time to search for fish.

Dissemination of PFZ advisories is envisaged through web based Graphical User Interface (GUI) and mobile apps.




Picture 3: Sea Surface Currents – July 2020