

Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM)

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**Regional Coastal and Marine Resources Management Centre
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Outline

- Status of access to products and training, as well as new needs and requirements
- Status of data and products utilization, as well as new requirements
- Training (including activities organized in the inter-sessional period, and identified new requirements)
- Recommendations to WMO (RA I Management Group, D/AFLCP, etc), EUMETSAT, AMCOMET)

Introduction

- The report for this session will cover operational services on Ocean weather, Coastal ecosystems/habitat mapping, oil slick detection and shoreline vulnerability assessment
- The marine operational services are based on the MESA programme, and though the services are focussed in Western Africa and the Indian Ocean, they are common to all coastal states of Africa
- The report is an outlook on present activities and future expectations in line with GMES and Africa programme

Status of access of EO data on MESA & PUMA station

- University of Ghana and Mauritius Oceanography Institute are primarily responsible for supporting the dissemination of marine products via EUMETCast.
- The main marine products for beneficiary institutions are categorised as:
 - Satellite products
 - MODIS SST, KD490, PAR and Chlor a
 - Modelled products
 - Sea surface Height (SSH)
 - Significant Wave Height (SWH)
 - Sea Surface Temperature (SST)
 - Sea Surface Salinity (SAL)
 - Sea Surface Currents (SSC)
 - Potential fishing Zone maps (PFZ)

Data reception challenges

- Challenges to data reception are mainly at the client end, rather than EUMETSat
- Where updates of software or schedule of dissemination are concerned, the provider informs beneficiaries who are always kept posted online about changes and system configurations.
- Client level data reception challenges encountered include
 - Problems with antenna alignment
 - Interference affecting data reception
 - Power interruptions
- The solution for some institutions is to download data via internet
- This affects updates sent by EUMETSat to institutions with reception challenges
- The Regional Coastal and Marine Resources Management Centre has also created a Help Desk and assists needs of beneficiaries within its capability

Status of products utilization by beneficiaries

- Reports from users indicate beneficiaries are making use of marine products in their routine tasks
- The main product of Potential Fishing Zone (PFZ) maps via MESA stations are being used by fisheries managers
- Ocean state products are disseminated to artisanal fishermen, especially in Western Africa via SMS messaging
- Following recommendation of maintaining single voice on forecasts from previous session, MESA partners were advised to liaise with the Met. Services on this matter. To facilitate further, Ghana Met Agency will co-ordinate with all Met services in West Africa on this matter.

Trainings carried out under MESA

- MESA provided opportunity for training beneficiaries on marine products development and utilization - mainly ocean conditions and PFZ maps forecasting & utilization
- The training sessions were of various forms and since the last RAIDEG session, training organized for Western African countries include:
 - Face-to-face Regional Training-of-Trainer session
 - 2-week internship each for participants from 7 countries
 - One week on-site training on use of MESA and PUMA stations for 14 West African countries
 - Local level training by each of the 14 countries on utilization of the MESA products for resource management

Data needs/requirements

- Data needs are for the purpose of leveraging ongoing high interest in use of EO data for resources management
- The expectation is to build competence in the use of Sentinel suite of data across sectors
- In this regard the following is an outlook on data needs:
 - SAR imageries (Sentinel 1 A/B) for oil slick detection
- Underlisted will need further discussion as to their feasibility:
 - TerraSAR-X: high resolution (1.25 m) wind and wave heights: provided by ESA
 - TanDEM-X: high resolution (3m) DEM: provided by ESA
 - SPOT-5 archive missions and SPOT 6 & 7 current imagery

Training needs and recommendations for new training modules

- Training on Sentinel 1, 2 & 3 data processing and products retrievals
- Processing of Sentinel data for marine products will require development of appropriate modules at Basic, Intermediate and Advanced levels
- Aspects of these are foreseen in implementation of GMES and Africa project
- Competence in producing critical mass of researchers and scientists to be self-sufficient will require introduction of open source programme tools in training modules

Recommendations to WMO (RA I Management Group, D/AFLCP, and Space Programme, ETR, etc), EUMETSAT, AMCOMET

- RICs which will implement GMES and Africa marine programme should endeavour to have a programme between practitioners in Meteorological services and Marine Institutions to strengthen their collaboration within the continent
- UNESCO Bilko software continue to serve as useful autodidactic tool for EO training. Efforts are needed to support development of additional modules using Sentinel data for continent-wide training