

## **CONSULTANT TYPE I**

### **ACTIVITIES 2011**

1. Maintenance of Virtual antenna:
  - Controlling processing and procedures: correct data download, processing steps, identify failures, recovery of stopped or interrupted processes, control logs files, outputs...
  - Maintenance and management of the Operational dedicated Servers: software and operating system updates, backup of products, general system management...
2. Products generation:
  - Delivery a daily remote sensing real-time service: daily real time remote sensing maps of Sea Surface Temperature, Chlorophyll-a concentration and Thermal fronts for four windows: MARINEMET project window, Cape Vert, Mauritania and Senegal-Gambia. Addressed to general users.
  - Images generation of remote sensing products: generation of images of window project (useful both geographical and geophysical) of Sea surface temperature, chlorophyll-a concentration and thermal fronts. Daily and five days synthesis images (for every day, moving synthesis) and the images used to generate real-time maps. These images allow for data use to scientific users.
3. Update and develop procedures in satellite processing chains:
  - Software and scripts updates related to procure changes, improvements and software updates.
  - Migration IDL procedures to R- cran: Avoid the use of IDL or any commercial tools and migrate to free tools
  - Migration to kubuntu operating system: Change from mandriva linux to kubuntu linux to use the same operating system of SAPOs developments.
4. Web-based portal development:
  - Development of procedures to automate product ingestion in web site.
  - Reorganize web site front-end.
  - Development of web site to ingest ocean modelling products.
  - Data products archive search utilities
5. Remote sensing users from Senegal, Mauritania, The Gambia and Cape Vert support.

### **DELIVERABLES 2011**

- Annual internal report in Spanish, English and in French.
- Weekly report of services and incidences.
- Manual about web site structure.
- Manual of remote sensing images products guide.
- Manual of remote sensing products: theoretical basis of product derivation.

## **CONSULTANT TYPE III**

### **ACTIVITIES 2011**

1. Compilation of the bathymetric information available at the north-western African coast needed for the coastal wave applications:
  - Implementation of the bathymetries and interpolation in regular grids for the three SAPOs using the information of the vectorized nautical charts given by the company PROES.
2. Specific implementation of the coastal wave forecast system (SAPO) for three ports of the north-western African coast (Mauritania, Senegal and Cape Verde):
  - Run SWAN model for the three SAPOs with the final grids bathymetries and the boundary conditions of an specific cycle of WAM Africa.
3. Prepare the wave modelling outputs: waves maps and html table with the data of particularly points.
4. Support to the oceanic models developments and parameterizations:
  - Validate WAM Africa outputs when the model is operational, studying the boundary and wind conditions needed for running the SWAN.
5. Models validation tasks:
  - Validate the SWAN output for the specific cycle of WAM Africa, and compare with the first implementation of the model.
6. Coordination and support to the NMHSs with the modellization tasks.

### **DELIVERABLES 2011**

- Digitalized nautical charts of Mauritania, Senegal and Cape Verde.
- Bathymetries for the ports of Nouakchott, Dakar and Mindelo in a regular grid with a minimum resolution of 200 m.
- Three SAPO systems ready to be implemented at African equipments.
- Wave maps and html tables of the three SAPOs for the web.
- Validation document.
- Annual internal report in English and an abstract in French.