
Marinemet
April 19, 2016

Backgrounds

- **The terms of reference of MARINEMET** were approved at the Second Conference of Directors (Niamey, 2008). The **project outline** was approved in August 2010.
- **Participants:** Cape Vert, Gambia, Mauritania and Senegal, Spain (AEMET, Puertos del Estado and the University of Las Palmas). **Coordinated by WMO.**
- Funded by the Spain trust fund in WMO.
- **Objectives:**
  - To improve the skills in marine meteorology and oceanography of NMHS participants.
  - To provide the NMHS with **specific tools to improve products** and support services to maritime security an fisheries management.
  - To **strengthen the Regional Specialized Meteorological Centre** in Dakar.

Expected results

- **Improved surveillance:**
  - Installation of 6 tide-gauges (sea level stations) and 10 automatic weather stations (AWS)
  - Validation and near real-time quality control of the observations compared remotely to the in-situ available data.
  - Generation of basic products related to sea level.
- **Development of numerical prediction models:**
  - Development and operation of pre-operational and operational experimental models to predict maritime weather.
  - Continuous assessment in near real-time of the experimental and pre-operational models versus in-situ data and satellite observations.
- **Transfer of technology and knowledge:**
  - Acquisition of 6 personal computers to run the models, .
  - Training activities: training plan oriented to the participating Meteorological Services for meteorologists, forecasters and users

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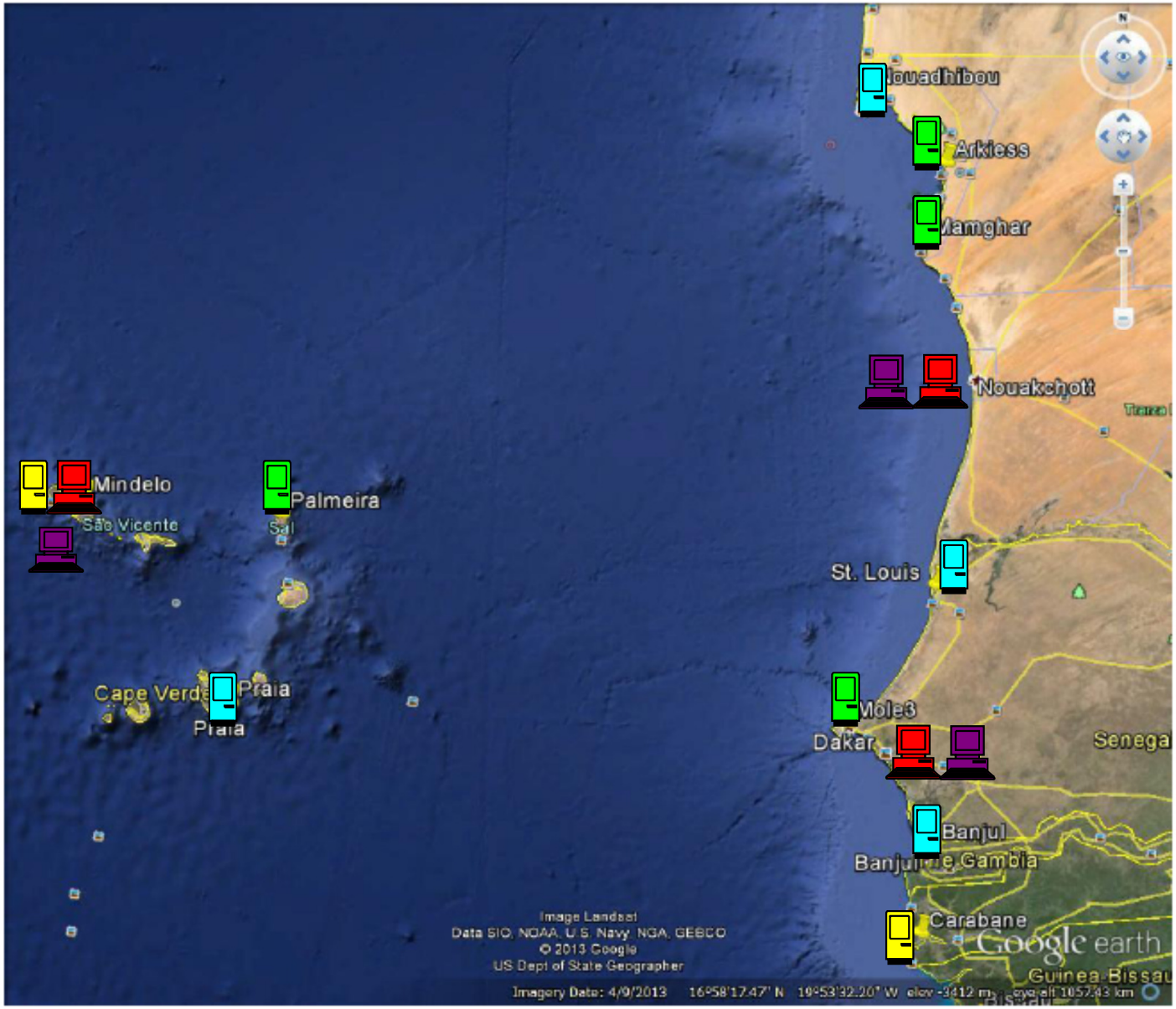
What has been done?

- **Weather and oceanographic observation equipment installed:**
  - ✓ 10 automatic weather stations (air temperature, relative humidity, atmospheric pressure, wind speed and direction, precipitation, solar radiation and sunshine hours).
  - ✓ 6 tide gauges (sea level and wave conditions).

- **Computer equipment adquired**
  - ✓ 2 PCs in each of the 4 NMHS for the display and storage of the data from tide gauges and automatic weather stations..
  - ✓ 8 PCs have been acquired: 4 are installed in the NMHS y 4 are on standby.

Acquired equipment



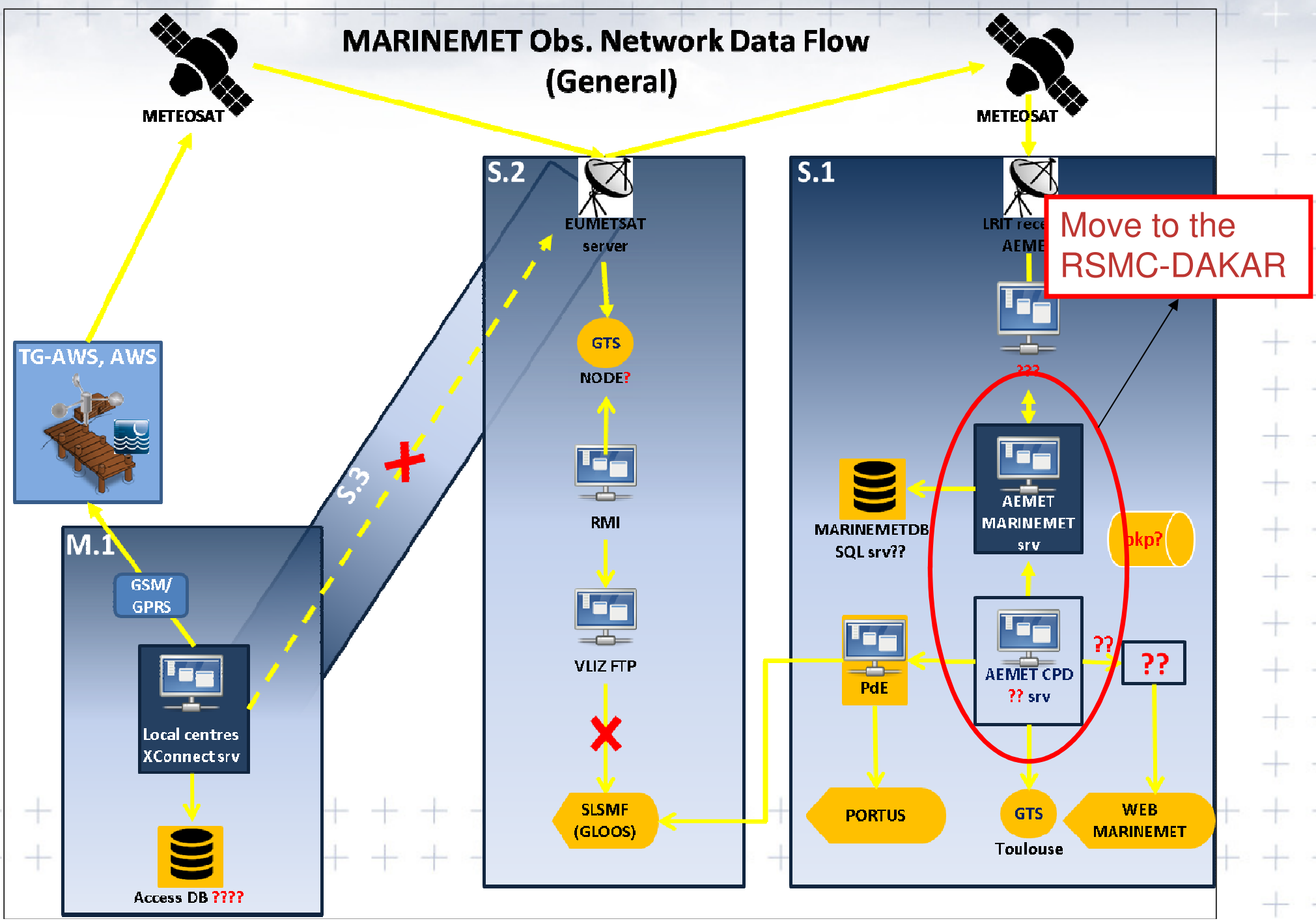
AWS

AWS + Tide gauge

AWS + Miros tide gauge

Forecasting post
(deep waters+SAPO)

Raw data controller
(tide gauge and AWS)


MARINEMET Obs. Network Data Flow
(General)
METEOSAT
METEOSAT
S.2
EUMETSAT
server
GTS
NODE?
RMI
VLIZ FTP
SLSMF
(GLOOS)
S.1
LRIT rece
AEME
???
Move to the
RSMC-DAKAR
AEMET
MARINEMET
srv
MARINEMETDB
SQL srv??
bkp?
AEMET CPD
?? srv
??
??
PdE
PORTUS
GTS
Toulouse
WEB
MARINEMET
TG-AWS, AWS
S.3
M.1
GSM/
GPRS
Local centres
XConnect srv
Access DB ????

What has been done?

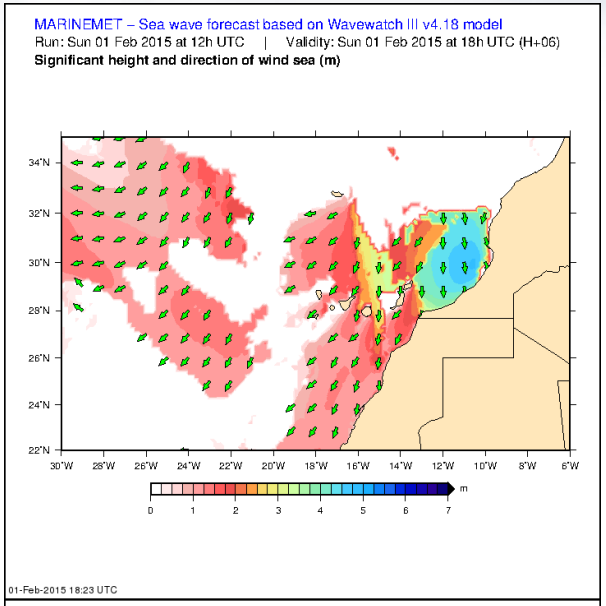
- **Developped and implemented numerical prediction models:**
  - ✓ **WaveWatch III oceanic scale model:** covering Atlantic basin (1º resolution and 2.5' resolution for the surroungings of the archipielagos).
  - ✓ **Port scale model**: 4072 SWAN model or SAPO (Swell Prediction Autonomous System) with a resolution of 500 m.
  - ✓ Both are implemented in Dakar, Nouakchott and Mindelo.

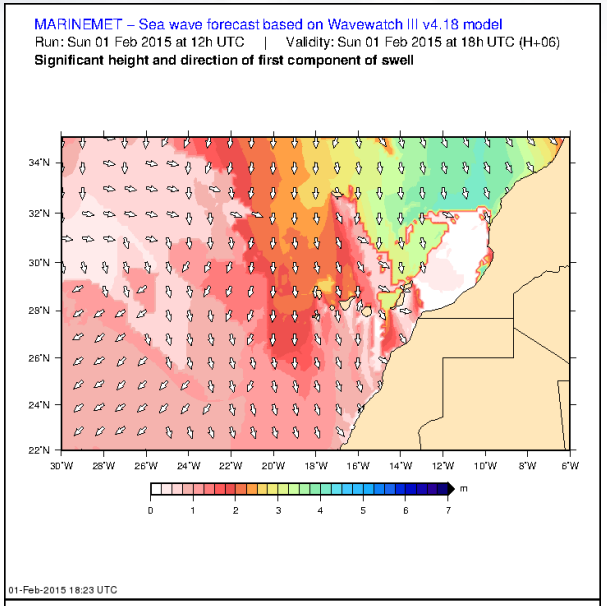
- **Developped and implemented a web visualization tools:**

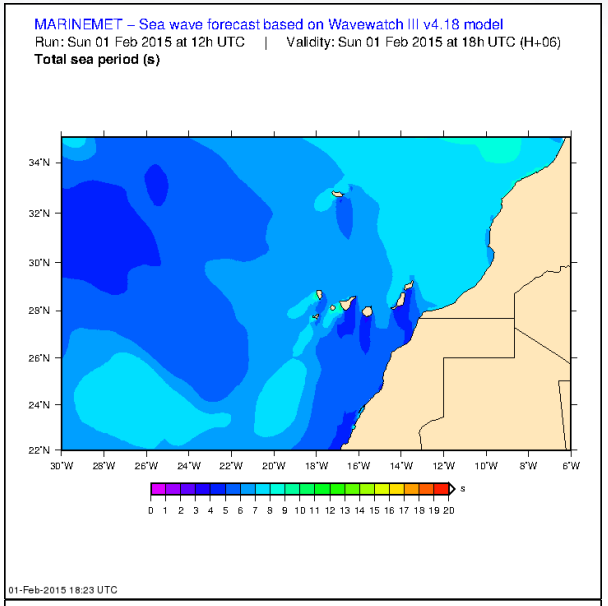
What has been done?

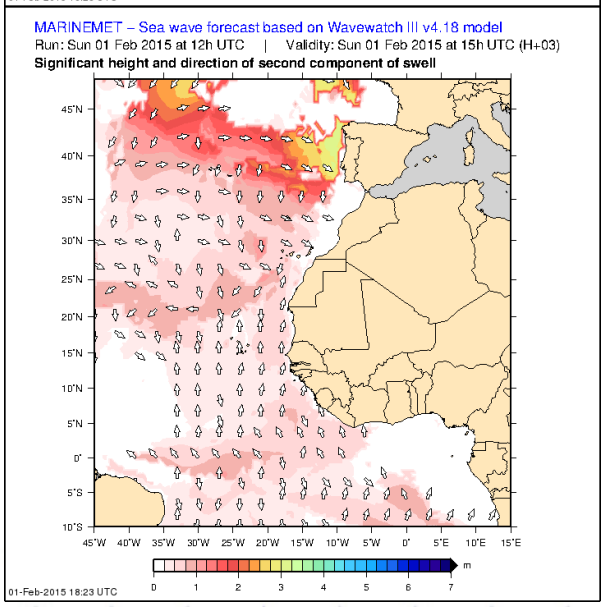
- **Training:**
  - ✓ **Training courses in marine meteorology:** in MeteoFrance and Metoffice.
  - ✓ **Specialised course in marine meteorology.**
  - ✓ **Courses in-situ on maintenance and management of observation equipment.**
  - ✓ **Training on the application that generates the SAPO models.**

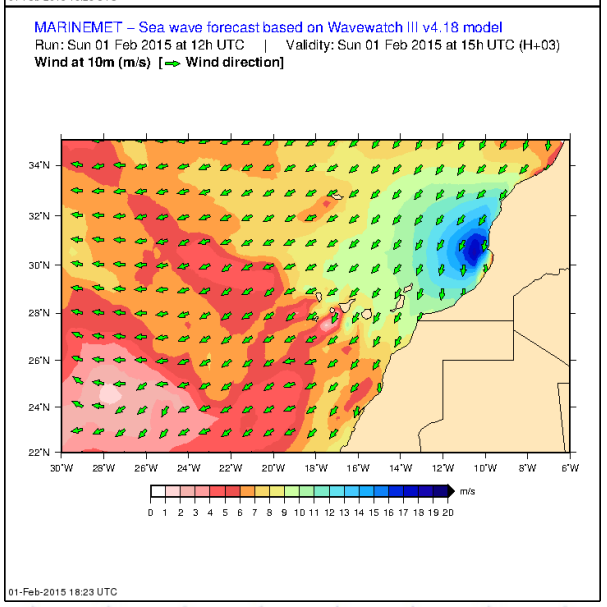
Deep sea water modelling products

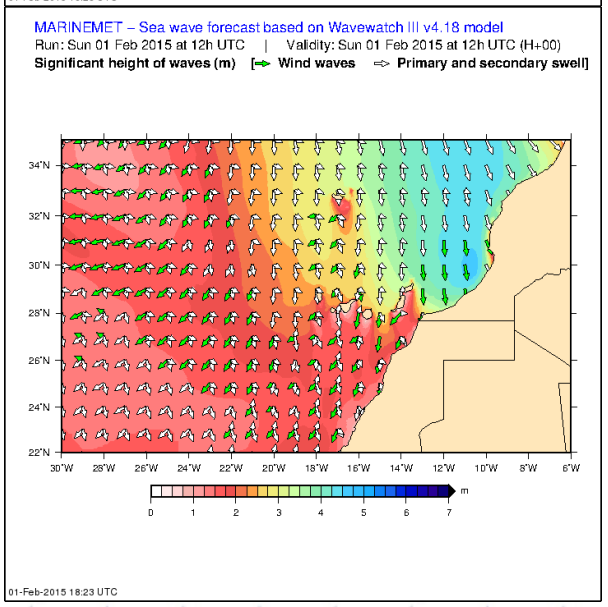












Harbour application of ocean modelling (SAPOS)