

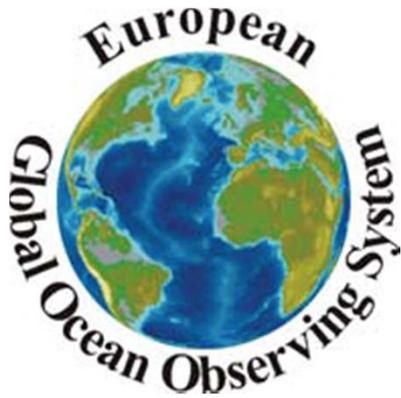
E-SAWG Report 2012



N. Pinardi and J.A. Johannessen

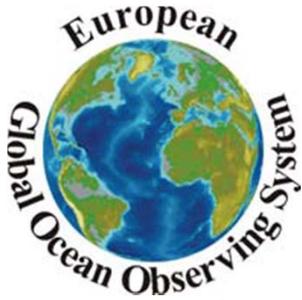
Hamburg, Germany

22 November 2012



Terms of References (as of Nov. 2005)

- Rationalizing the range of models
- Assembling test-bed data sets
- Exploitation of remote sensing
- Developing monitoring strategy
- Generic aspects of coupling numerical models
- Extending forecasts towards biological/ecological state variables
- Dissemination: training, visualisation, analysis
- Access to high power computing
- Optimum design of observational networks
- Liaison with existing European & International agencies.



The E-SAWG brief review

- March 2009: Pinardi and Johannessen drafted a preliminary white paper
- September 2009: first meeting organized by Pinardi and Johannessen
- Outcome from OceanObs'09
- Since 2010 no meetings and specific workshops!! (the membership is not finalized)
- Outcome/achievements from MyOcean 1/2
- Frequent discussion on R&D activities and needs via MyOcean1/2 R&D and within the ROOSes.
- Dedicated R&D calls regarding R&D in support to OO limited in FP7



The E-SAWG 'mission'

- **M1:** Continuously identify the S&T problems that operational oceanography should address and relate them to 3 main 'drivers': society, science and technology
- **M2:** Maintain a 2-way feedback between operational science and ocean dynamical studies;
- **M3:** Enhance the connection between environmental and climate change research and operational oceanography.
- **M4:** Develop new applications that will benefit from the Marine Core Service products
- **M5:** Develop educational programs for operational oceanography, strengthening the combination of Science and Engineering

The Seven S&T issues

- design and upgrade a *global* and *pan-European* observing system, satellite and in situ, with innovative sensors and components, to serve the real time needs of operational oceanography and its applications; **partly achieved with MyO and ROOSes, but.....**
- improve deterministic physical models and assimilation methods for open ocean and shelf seas (coupling of different physical processes, 2-way nesting, atmospheric forcing and coupling, multivariate statistics and 4Dvar, etc.); **partly achieved with MyO, but**
- extend the forecasting capabilities to marine biogeochemical components and marine ecosystems at the appropriate spatial and temporal scales. **partly done in MyO, but**
- quantify and reduce uncertainties on the ocean state variables (with a transition from deterministic to ensemble predictions);
- understand how to use calibrated/validated operational models for climate change scenarios and develop the 'what if scenario' methodology, **reanalyses in MyO**
- develop the information system for the observations, models and the new services
- develop educational and training tools and activities



Preliminary outcome from MyOcean Science Day 2012
(coordinated by Eric Dombrovsky and Emil Stanev)

- R&D is more and more multidisciplinary and needs cross-cutting involvement.
- Challenge to connect R&D in MyOcean with complementary R&D in the scientific community
- OSSE is needed to document the critical value of a sustained Obs. Sys.
- Cross-cutting R&D group might be established in MyO2.



Action Plan 2013

- Finalize the membership of SAWG
- Revisit ToR – need to update
- Provide a updated and refined white paper on R&D needs in regards in Op. Ocean taking into account the outcome from MyO Science Day 2012 meeting, link with GODAE, and R&D issues addressed in the dedicated MyOcean special issue in OS
- Aim for 1 dedicated meeting/workshop in 2013 eventually back-to-back with an other relevant event, perhaps the MyO annual meeting in April 2013.