

Report on EuroGOOS Coastal Modelling WG in 2013

P. Oddo, -Istituto Nazionale di Geofisica e Vulcanologia (INGV). Italy O.K.Leth, -Danish Meteorological Institute (DMI), Denmark

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WG participants

P. Oddo	-Istituto Nazionale di Geofisica e Vulcanologia (INGV). Italy	
O.K.Leth	-Danish Meteorological Institute (DMI), Denmark	
P. De Mey	- Laboratories d'Etudes en Géophysique et Océanographie Spatiales	
	(LEGOS), France	
L. Tedesco	- Finnish Environment Institute (SYKE), Finland	
S. Dobricic	-Euro-Mediterranean Centre for Climate Change (CMCC). Italy	
J. Siddorn	- Met Office (UK-MetO). United Kingdom	
R. Benshila	-Laboratoire d'Oceanographie et du Climat (LOCEAN IPSL). France/	
L. Bertino	- Nansen Environmental and Remote Sensing Center, Mohn-Sverdrup	
	Center . Norway.	
G. Korotaev	- Marine Hydrophysical Institute (MHI). Ukraine	
J Tintoré	-Mediterranean Institute for Advanced Studies (IMEDEA) and SOCIB.	
	Spain	
F. Dumas	-Institut francais de recherché pour l'exploitation de la mer. (IFREMER).	
	France	
C. Dufau	-Collecte Localisation Satellites (CLS). France.	
L. Axell	⁻ Swedish Metereological and Hydrological Institute (SMHI). Sweden.	
T. Neumann	Baltic Sea Research Institute Warnemünde (Germany)	
J. Holt	National Oceanographic Centre (Unite Kingdom)	
E. Deleersnijder Université catholique de Louvain (Belgium)		
E. Stanev	Helmhots-Zentrum Geesthacht (Germany)	

Goals and Objectives:

According to the ToR the goals and objectives of the Coastal Modelling WG are:

- 1. maintain a link between international efforts (with particular attention to the GODAE OceanView Coastal Ocean and Shelf Seas Task Team) and ongoing coastal modelling activities in Europe;
- 2. maintain a continuous link between global/regional and coastal ocean operational activities at European Level, identifying the requirements to fill the gap between the different scales for a proper downscaling;
- 3. monitor research activities associated with coastal and shelf seas at European Level;
- 4. promote actions aimed at coordinating research associated with coastal and shelf seas activities;
- 5. identify coastal modelling requirements in terms of numeric and codes;
- 6. address the issue of data assimilation in coastal areas;
- 7. identify common protocols in coastal ocean model nesting and define a strategy for future works;
- 8. address the issue of model validations and routine observations in coastal areas;
- 9. create a roundtable of recognized experts from different coastal ocean disciplines (physical and biogeochemical numerical modelling, data assimilation, remote and in-situ observations, validation and operational activities);

Main Achievements during the first year

In the framework of EuroGOOS a Working Group on the Shelf Seas and Coastal Modelling has been established in 2012.

The round table of experts (WG members) has been created.

The first WG meeting have been organized in Bologna (17 Dec 2012). During the meeting the ToR have been revised, WG priorities and future steps defined. The round table of experts in the different coastal modelling disciplines identified the necessity to draft a *shared document* (SD) on the relevant processes that can serve for the characterization of the "Coastal Ocean State" and how they are modelled or parameterized.

Main Achievements during the last year

During 2013 the Coastal Modelling WG has been represented and actively participated to the discussion at:

- the SAWG Meeting (Cork April 2013);
- EuroGOOS Executive Directors Board meeting (Copenhagen Oct 2013);
- Coastal Ocean and Shelf Seas-Task Team (COSS-TT) meeting (Lecce Jan 2013)

The WG members started to draft the SD. The rationale behind this action is to collect info about local/regional actual practices in the different Institutions comprehending the largest number of cases to ensure generality of the research outcomes

Some test areas have been selected (listed in the Appendix-A) with the corresponding sub-set of processes typical of each area. Physical and relevant processes common to all the coastal areas considered have been identified.

Plan for the next year

- 1. Organization of the second meeting;
- 2. Participation to COSS-TT in Puerto Rico;
- 3. Finalize the SD.
- 4. Review ToR

Challenges and problems

The WG has been established in 2012, however the first months have been dedicated to the identification of the experts for relevant disciplines of coastal ocean modelling. The WG met for the first time on Dec 2012.

It is very challenging to excite WG members for an active participation.

Appendix-A

European Regions

- 1. The Northern Adriatic Sea
- 2. The German Bight
- 3. Spitzberg
- 4. Skagerrak/Kattegat
- 5. English Channel/Le Manche
- 6. Irish Sea
- 7. Shelf area south of Crimea
- 8. North-Western shelf of the Black Sea
- 9. Bosporus Strait mouth
- 10. Baltic Sea



Figure 1

Common Processes/events Dynamics

- 1. River Runoff
- 2. Tide and related processes (mixing)
- 3. Geometry (horizontal, i.e. straits channels) Vertical slope bathymetry.