EuroGOOS
European Global Ocean Observing System

EuroGOOS Coastal Working Group

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1. Background, Rationale, and Link with EuroGOOS Strategic Priorities

The major interface between humans and the ocean occurs in the coastal seas. Major marine industries thrive in this area while European citizens make daily use of the coastal ocean for tourism, leisure and recreation. Operational oceanography assists both industry and the general public to make decisions about they use and access the coastal ocean. Our community has developed a wide range of products and services for such use cases.

The value chain for marine information comprises observations made at sea, satellite data and ocean forecasts and analysis providing specific products and services for end-users. The Copernicus programme of the EC supports the gathering of satellite data and a core service for marine users (CMEMS) primarily based on ocean forecasts and analysis. The EC emphasises that gathering in-situ data is the responsibility of EU member states. Challenges exist at member state level to sustain ocean observations and there are gaps in data availability for many reasons.

EuroGOOS previously instituted a Coastal Modelling Working Group (COSMO) that focused on specific issues related to coastal modelling. The aim of this working group is to examine the entire value chain from coastal observations, satellite data, ocean forecasts and analysis to products and services for coastal users with a view to examining sustainability of the system, fitness for purpose of the existing system and future steps that the EuroGOOS community can take to secure and improve all elements of the coastal value chain.

The EuroGOOS Coastal working group will build upon significant initiatives already completed or underway that have focused on coastal observing. These include, but are not limited to, the work of the JERICO and JERICO-NEXT EC projects, activities within EuroGOOS working groups, task teams and the five regional operational oceanographic systems now established. A key early priority for the Coastal working group will be to document the existing and planned activity to provide a status of the coastal observing system at the present time.

The aims and objectives of this working group are designed to support four specific areas of the EuroGOOS Strategic Agenda 2020 and the short-term priority areas, namely sustained observations, data matters, product development and communication (see section 3).

2. Aim and Objectives

Sustained observations:

a) Develop an up to date status of Europe's coastal observing system including all relevant projects, programmes and initiatives at EC and national level.
b) Establish the extent to which coastal observations made by ROOS and by platform (TTs) have a sustainable funding horizon.
c) Identify requirements and gaps for developing coastal oceanographic services as part of EOOS including areas that are under-sampled and lobby for funding of gap areas.

d) Assess results from EMODnet checkpoints and fitness for purpose of OSCAR tool (WMO) and EEA database in detailing requirements for coastal ocean observations.
e) Recommend key coastal data/service providers that could become part of the EuroGOOS community. Include and access all EU funded projects and other databases that gives access to coastal data.

Data:

a) Identify data sets that are required for coastal applications but that are not widely available or made public and develop strategies to unlock required data sets. This should include an investigation of physical, chemical and biological datasets collected by regional conventions e.g. HELCOM, OSPAR and international entities such as e.g. ICES where substantial data repositories exist.
b) Explore mechanisms where the operational oceanographic community can submit/archive data with regional conventions and ICES among others.
c) Identify potential data sets for near real time delivery to operational systems
d) Develop and convey to operators of future satellite the data requirements to underpin coastal operational oceanography e.g. high resolution salinity
e) Verify data availability maps produced by AtlantOS , Odyssea, EEA, Mercator and other projects to ensure they are up to date and accurate.
f) Identify gaps in both available data and associated meta data. This should be referenced to the emerging Essential Ocean Variables and the requirements of research, non-research and industry users among others.
g) Harmonize data provided by different operators (format, Spatial and temporal coverage)
h) Investigate data fusion techniques and statistical analysis (including quality)

i) Investigate alternative to ftp for delivery of existing and new data sets.
j) Assess implications of INSPIRE member state geoportals and data sharing principles in an operational oceanography context

(Note: i) and j) could be considered a DATA-MEQ working group activity.)

Ocean models and forecasts:

a) With SAWG outline the future priority research topics in terms of model development.
b) Assess requirements for hydrological forecasts to be coupled with existing models (including coastal forecasting models that link ocean models and hydrological models)
c) Data assimilation: analyse the appropriateness of various coastal data sets for assimilation into operational models (feasibility, availability and usefulness e.g. improvement in model skill).
d) Assess benefits of downscaling as a means of delivering improved solutions for user needs

Products:

a) Jointly develop an inventory of coastal oceanographic products (based on models, satellites and in-situ observations) covering European coastal seas.
b) Gather requirements from both scientific and non-research users from different socio-economic sectors.

c) Jointly assess the fitness for purpose of the current product portfolio and suggest future products that could be co-developed for users.
d) Document/assess the added value that the EuroGOOS ROOSs, Task teams and Working groups can bring to products and information services developed
a) Include statistical analysis of harmonized data if possible and quality flags; (This point would give a better overview of what can be achieved by the available data)
b) Include relevant indicators to different users or at least to MSFD, OSPAR/HELCOM, communities.
e) Include Multi-model ensembles and products that integrate observations, model and satellite data in product catalogue.

Communication:

a) Web interface to display oceanographic products for Europe's coastal seas.
b) Identify communication priorities for coastal operational oceanography to include targets and tools to reach the identified target audiences.
f) Concretize the link with other big players and national bodies through dissemination activities of proposed products

Proposed Outputs of the working group:

- Workshop on sustainability of existing coastal ocean observing systems and associated report(s)
- Coastal oceanographic service(s) requirements report
- Targeted list for future members of EuroGOOS
- Inventory of target new data sets required for coastal services
- Updated data availability maps for European coastal seas.
- Inventory of coastal oceanographic products from EuroGOOS members
- Report on future oceanographic products for coastal applications
- Design and deploy web interface for oceanographic products
- Communication plan for coastal oceanographic value chain.
- Review paper on requirements include data gaps and proposed roadmap

3. Composition and Operation

The working group is composed of a chair, with potentially a co-chair or a vice-chair, and members. Chair is supported by a dedicated officer at the EuroGOOS office.

3.1 Chair's nomination process, mandate, responsibilities

Chair must be a representative of a EuroGOOS member organization[1]. A chair can be supported by a vice-chair. In this case, the mandate and role and responsibilities are the same as for the chair. Vice-

[1] http://eurogoos.eu/about-eurogoos/members

chair takes on the role of chair if the chair is unable to act. The chair is nominated by the EuroGOOS Executive Directors Board and approved by the EuroGOOS General Assembly. The chair's mandate is for three years, renewable once, upon re-election for a two-year term.

Chair is responsible for:

- Oversight of the working group;
- Alignment of the working group's work with its terms of reference and with the EuroGOOS strategy;
- Developing the working group yearly implementation plan in line with the above;
- Reporting to the EuroGOOS General Assembly and EuroGOOS Executive Directors Board (including both at physical meetings and in writing);
- Regularly reviewing the membership of the working group (e.g. once a year);
- Regularly liaise with the EuroGOOS office to follow up on the working group's alignment with the other EuroGOOS activities (at least monthly);
- Represent the working group at external meetings.

3.2 Members nomination and selection process, mandates, responsibilities

Members are selected based on a call for nominations to the EuroGOOS members. If there is not enough expertise within the EuroGOOS member organizations, working group members can be selected through an external call for expression of interest.

Members are selected based from the pool of nominations by the chair and the EuroGOOS office, keeping in mind the spread and representativeness in expertise, geographical representation and the gender balance on the group.

Members do not have an established mandate unless the activity is terminated. However, membership is reviewed by the chair and the EuroGOOS office on a regular basis and can be terminated if the member does not fulfil the below responsibilities.

Members' responsibilities are to:

- Participate in the working group activities;
- Deliver outputs as required, orally or in writing, in a timely manner;
- Represent the activity at external meetings, upon agreement with the chair and the EuroGOOS office;
- Attend working group meetings;
- Follow-up on the developments related to the working group's activity, to ensure the working group's work is timely and topical.

4. Mode of Operation

The terms of reference for the working group are developed by the EuroGOOS office in liaison with the chair and submitted first to the EuroGOOS Directors Board and then to the EuroGOOS General Assembly for approval.

Once approved at the EuroGOOS General Assembly, the working group chair and the EuroGOOS office launch a call for member nominations (see item 3.2).

When the membership of the working group is established, the working group is regarded as operational. In most cases, a physical kick-off meeting will be organized to agree the terms of reference with all the members and develop the first annual implementation plan. EuroGOOS office oversees the communication related to the working group activities. To this end, the working group implementation plan should be cognisant of the EuroGOOS communication strategy.

The group operates based on its terms of reference and annual implementation plans. Its activities are reviewed at the EuroGOOS Executive Directors Board meetings (three times a year) and the EuroGOOS General Assembly (annually).

5. Deliverables

The working group may have a role as a forum, providing a platform for exchange of expertise and generation of strategic advice in the area of the working group's consideration. It can also be of a more operational nature, organizing regular meetings, establishing interfaces with communities outside of those of the working group, delivering strategic publications and reports. A list of envisaged deliverables is prepared at the working group kick-off meeting and is updated as the activity develops.