

EuroGOOS Conference 2014

Statements

Earth's climate is facing severe changes – the carbon dioxide levels are higher than ever, the melt of the ice sheets at Greenland and Antarctica are accelerating, and we experience more and unprecedented extreme weather conditions leading to large loss of life and damage to property. These changes also affect the physical and biogeochemical conditions of the ocean with the risk of shifting the marine ecosystem across the tipping point of irreversible change in species composition.

The effects of climate change on the ocean will have an impact on all economic activities at sea that include shipping, fishery, energy, land-ocean interactions, coastal protection, sustainable environmental and ecosystem management, tourism and security. Therefore, there is a demand for timely delivery of high quality operational oceanographic services and products to support planning over short and long time scales, as they are fundamental for safe performance of marine and maritime activities. Moreover, there is a critical need to inform society, ocean governance and decision-making to support a future sustainable knowledge-based maritime economy.

User needs for regular, near real-time and quality-assured services require an operational approach across a wide range of societal benefit areas. This has triggered a new wave of marine knowledge innovation in order to fill the gaps and improve the quality and resolution of the services, e.g., seamless forecasting, an operational ecosystem approach and operational marine climate services.

This challenge requires close communication and cooperation between industry, marine science and operational oceanography service providers to address user requirements, scientific challenges and the development of products and services. Recent surveys reveal important gaps in knowledge and data about the state of the oceans and regional seas, coupled physical-biogeochemical processes, seabed resources, marine life and risks to habitats and ecosystems. This calls for coordinated investments in basic marine research, establishing sustained in-situ European Ocean Observing System (EOOS) including an open and free data exchange via the existing ROOS Data Portals and EMODnet initiative, developments of very high resolution qualified coupled physical-biogeochemical models, and a sustained European Operational Oceanographic Service (Copernicus Marine Service) including national uptake initiatives.

Over the past 20 years, EuroGOOS members have contributed to development of:

- Ocean forecasting via national and EU supported research,
- Improved use of new real-time observation technologies,
- Open and free real-time exchange of ocean observations and model forecast products,
- The Copernicus Marine Service and integration of European operational Oceanography,
- Numerous new operational oceanographic products and services.

EuroGOOS is therefore well-suited and prepared to play an active role in the future development of operational oceanography and marine services in Europe with particular focus to:

1. **Identify European priorities for operational Oceanography;** main focus will be to define research priorities and work with key European initiatives such as Copernicus, EMODnet and Marine Research Infrastructures. As part of this activity EuroGOOS will also work intensively to link with the research community, industry, users and EU policies.
2. **Promotion of operational oceanography;** especially through networking, publications, conferences, EuroGOOS webpage, social media and increased engagement with various organizations such as GOOS Regional Alliances, GEO, European Marine Board and JPI-Oceans.
3. **Foster Cooperation;** EuroGOOS will actively engage in close cooperation with key organizations on a global, European and regional scale to stimulate cross-fertilization between operational oceanography, marine research and technological innovation that will bring mutual benefits to all the communities.
4. **Coordinate co-production of knowledge:** to promote cost effective creation of operational observation and model based products and services through sharing of expertise and capabilities meeting the requirements of the users. EuroGOOS will aim to make best use of all its members capability to co-produce the knowledge and evidence for assessment of Good Environmental Status required by the Marine Strategy Framework Directive.
5. **Sustained Ocean Observations;** EuroGOOS will take a leading role to ensure coordination of the European contribution to sustained marine observational system through the promotion and rationalization of a European Ocean Observing System (EOOS). In this context, EuroGOOS will work closely with European Marine Board, EU Copernicus Marine Service, EMODNET, EU Marine Research Infrastructures, JPI Oceans, EEA, ESA, EUMETSAT as well as the climate community.

EuroGOOS AISBL is ready to support the European marine and maritime community by focussing on the above five initiatives. It will use established networks with the scientific and user communities, and service providers, as well as links to industry and the public sector (global, EU, regional and national partners and authorities) to support interdisciplinary and collaborative cooperation focused on challenges of development and provision of high quality operational oceanographic products and services in the future.

Presentations at the 7th EuroGOOS Conference have demonstrated an impressive high performance level within marine science and service provision by the EuroGOOS members, showing Europe to be extremely well positioned to take a global lead in the field of operational oceanography.