

Title: Ocean Radar Data used to improve Current Forecasting for the Port of Rotterdam

Since October 2015 a pair of WERA ocean radar systems is operational at the Dutch coast to monitor the currents at the entrance of the Port of Rotterdam situated at the mouth of the river Rhine. The radars are to be an integrated part of an improved hydrodynamic operational forecasting system which is under development for navigation to this port. This operational forecasting requires the highest availability and accuracy from the radar data. The system was configured with these aspects in mind. Furthermore, there is a strong focus on the on-line quality control procedures. The configuration and concept of on-line quality procedures will be presented and data and statistics are shown. The acquired current data from the radars is presently compared to other data sources and model results. These analyses show the level of complexity of the currents in the estuary and how much of that can be seen on the surface. Some of the results will be shown.

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Theme: Regional ocean monitoring efforts

Title: SOCIB, a regional ocean observing and forecasting infrastructure contributing to a long term sustained EOOS

"SOCIB is a marine research infrastructure, a multi-platform ocean observing and forecasting system that is leading a new era of ocean observation, a key grand challenge our society is facing today. SOCIB's observing capacity is composed of a variety of cutting edge multi-disciplinary monitoring platforms (e.g. surface drifters, profiling drifters, moorings, coastal stations, satellites, research vessel, high-frequency radar, autonomous underwater gliders, sea turtles) all continuously recording and transmitting data in near-real-time to SOCIB Data Center, in charge of making to make them publicly available for scientists and society.

Systematic and sustained ocean observations monitoring essential variables are vital to establish the ocean state and variability and to understand the ocean's role in climate variability facilitating climate prediction and scenario development and contributing to testing and improving climate models. Ocean observations are also essential to preserve ocean's health and to respond to real time society needs at regional and local scale, to guarantee the sustainability of natural resources and the preservation and science-based management of the marine and coastal environment. Clear examples of topics of particular relevance to the Balearic Islands are the sustainability of Bluefin tuna fisheries, the preservation of the shorelines and/or the development of downstream services and products to enhance safety in beaches and at sea.

SOCIB and similar infrastructures worldwide, because of their scientific excellence, critical mass, multidisciplinary, integrated and targeted approach, open data policy and sustained funding, are establishing new research ecosystems that facilitate mission-oriented innovation. More specifically, SOCIB contributes to state of the art science, implements new technologies, responds to society needs and challenges and develops new products. Through all this, and with well-focused outreach and science-society engagement, SOCIB team contributes to bridge the science-policy gap. SOCIB is establishing new ways of international partnership to reach high level goals & grand challenges that are leading to major science breakthroughs, innovations in ocean observation and forecasting, and new ways of more efficient and science based coastal and ocean management to guarantee healthy oceans for a sustainable planet of our future generations.

SOCIB is therefore fully aligned with SDG's and the recent UN initiative declaring the oceans as the new frontier and 2021-2030 the Decade of Ocean Science for Sustainable Development to mobilize the scientific community, policy-makers, business and civil society around a programme of joint research and technological innovation. More specifically, SOCIB efforts are in synergy with different international initiatives and programmes (EMODnet, EuroGOOS, CMEMS, Euro-Argo ERIC, Global HFR Network, JCOOM) and aligned with european joint projects (JERICO-NEXT, Medseacheckpoint, ODIP2, CMEMS-SE INCREASE, CMEMS-INSTAC-phase2, CMEMS-User Uptake IBISAR), favoring the networking and the coordination to improve efficiency. The vision of scientific excellence with impact on society together with the implementation of integrated regional observing systems can provide useful guidelines for connecting the pieces of the n-dimensional ocean puzzle and for potentially guiding the evolving European Ocean Observing System (EOOS)."

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Theme: Ocean observation gaps and requirements, and solutions to tackle the challenges

Title: Stress testing the EU monitoring capacity for the Blue economy

"In 2013 EMODnet started to develop a marine observations assessment framework, so-called "EMODnet Checkpoint" to establish how well the European marine monitoring data meets the requirements of the sustainable blue economy. In this poster only the Mediterranean and Black Sea results are shown but all the regional seas have been activated.

Checkpoints have developed an innovative monitoring assessment framework that considers "Use Cases" or "Challenges" to evaluate the fitness for use of monitoring data sets (observational and modelling). In other words, the quality of the Challenge products will inform on how monitoring data set are "fit for use".