

The “Sub-regional Mediterranean Sea indicators” tool in support to the sustainable management of the ocean

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In line with international initiatives (e.g. UN Decade of Ocean Science for Sustainable Development, UN SDG 14, OceanObs'19), one of the main objectives of the Balearic Islands Coastal Observing and Forecasting System (SOCIB) is to respond to science and society needs providing reliable oceanographic data and added-value ocean products. In particular, SOCIB is developing a comprehensive set of multivariate indicators in the Mediterranean Sea at sub-regional scale from past to present, with a specific interest on the Balearic Islands region and its adjacent basins (North-western Mediterranean Sea, Alboran Sea and Algerian sub-basin). Two categories of ocean indicators are currently processed: (1) surface ocean variables from satellite products, and (2) vertically integrated quantities from in situ observational platforms (gliders, profiling floats). These indicators are an integral part of an operational product that provides continuous information about the ocean state and variability at sub-regional scale from daily (events) to interannual/decadal (climate) scales. They allow to detect specific events in real time (e.g. marine heat wave, extreme river discharge, mesoscale eddy, deep convection). Long-term variations of the physical and biogeochemical components of the ocean, in response to climate change, are also addressed as well as sub-regional differences. An interactive and user-friendly interface has been implemented to monitor, visualize and communicate ocean information that is relevant for a wide range of sectors, applications and end-users, and contributes to respond to the societal and environmental challenges.