

# **The CMEMS Ocean Monitoring Indicator portfolio for the Atlantic Iberian Biscay Irish (IBI) waters: Essential variables operationally monitored today and future plans.**

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The increase of computational resources along with the proliferation of observational networks and modelling products have led to a vast increment of data, that are routinely produced by operational oceanographic services. However, a massive offer of data often entails a difficulty of interpretation along with a blurred perception of the panoramic picture of the marine environment.

In order to transform ocean data into tailored oceanographic information, the Copernicus Marine Environment Monitoring Service (CMEMS) produces Ocean Monitoring Indicators (OMIs). The development of OMIs aims to summarize data by delivering simplified, research-based information about relevant oceanographic processes, which is easily interpretable by end-users. Under the current climate change scenario, OMIs not only provide a conceptual framework to unveil the evolution of the ocean state and health but also facilitate policy-making, informed decisions and an effective coastal management.

The CMEMS Iberian-Biscay-Ireland Monitoring and Forecasting Center (IBI-MFC) currently provides a variety of OMIs oriented to monitor the main oceanographic processes taking place in this regional domain. Among the OMIs currently delivered by IBI-MFC, it is worth mentioning the coastal upwelling index focused on the African-Iberian coast, the indicator of Mediterranean Outflow Water variability and diverse indicators of extreme events of temperature or wave height. Currently, IBI-MFC efforts are concentrated on designing bloom phenology indicators derived from chlorophyll anomaly timeseries for the IBI regional seas.

The present work aims to provide a general overview of the IBI-MFC OMIs currently operationally provided and some details on the routine OMI update strategy, as well as main conclusions derived from them. Finally, ongoing developments of novel upcoming OMIs for the IBI region are also introduced.