NOOS annual report 2014

Member report – Ifremer

September 2014

Country	France
Institution	Ifremer (French Research Institute for Exploration of the Sea)
Observations **Status and new initiatives**	***Status:*** • Smatch compact buoys measuring surface temperature and salinity • Large MAREL buoys monitoring bottom and surface temperature, salinity, dissolved oxygen, fluorescence and turbidity • Network of voluntary observing fishing vessels equipped with sensors, measuring temperature, salinity and turbidity on the water column (RECOPESCA sensors) • 2 Brittany Ferries vessels equipped with surface water data acquisition systems (FerryBox), measuring surface temperature, salinity, oxygen, fluorescence and turbidity • Coastal profilers measuring temperature and salinity (Arvor-C profiler) • Scan fish (undulating towed vehicle) providing temperature, salinity and fluorescence profiles • Satellite remote sensing data: sea surface temperature and ocean color ***New Initiatives:*** • Deployments of coastal profilers with multi-captors measuring temperature salinity, oxygen, turbidity and fluorescence.
Modelling **Status and new initiatives**	***Status:*** Operational, 4 day forecast, centered on French coasts: • Baroclinic 3D circulation model (Ifremer MARS model) , 2 500 m resolution for English Channel and Bay of Biscay, 1 200 m resolution for Mediterranean Sea, 1 hour temporal resolution • Barotropic 2D circulation model (Ifremer MARS model) using 3 nested grid, 250 m of resolution, 15 mn temporal resolution • Sea state: global model, and regional models, up to 200 m resolution, 1 hour temporal resolution • Turbidity model (Ifremer MARS model), 4 km resolution, 1 hour temporal resolution • Biogeochemical model (Ifremer ECO-MARS model), 4 km resolution, 1 day temporal resolution ***New initiatives :*** Pre-operational: • Very high resolution 3D models (up to 50 m) for research purpose (larval dispersion, toxic blooms dispersion, microplastics…), on Previmer website with login/pwd • New version and new extension for biogeochemical models • Improving coherence between global and regional/coastal scale thanks to spectral nudging ***Under development:*** • Development and validation of two-way high resolution nested models, 500 m resolution, 1 hour temporal resolution • Decade historical hindcasts • Data assimilation (on going PhD)
Dissemination **Status and new initiatives**	***Status:*** Real time observations and forecasts and hindcasts available on website www.previmer.org • Sea level, surges • Currents • Salinity

	• Temperature • Sea state • Biological parameters • Turbidity Observations portal : http://www.ifremer.fr/co-en/allEulerianNetworks FTP/OpenDap access to numerical data filling Digital Data Access Form http://www.previmer.org/en/produits/data_access Quarterly analysis newsletter: http://www.previmer.org/en/newsletter All these data are also available through the Coriolis WWW (http://www.coriolis.eu.org/Data-Services-Products/View-Download) either via http, ftp, GoogleEarth or OpenDap. These observations are also distributed to MyOcean FP7 project through the In Situ TAC (Thematic Assembly Center: http://www.coriolis.eu.org/Data-Services-Products/MyOcean-In-Situ-TAC) and used by other operational systems around the NOOS and IBI-ROOS area. ***New initiatives :*** • Development of advanced derived products for end users • New product 2014: sea-states hindcast database HOMERE (1994-2012) http://www.previmer.org/en/produits/hindcast_sea_states_homere • Collaboration with BSH to enhance the MyOcean-INS Tac service
Relevant national projects	RECOPESCA: project consisting in fitting out a sample of voluntary fishing vessels with sensors recording data on fishing effort (and at mid-terms catches) and physical parameters such as temperature, salinity and turbidity. MAREL: development of automatic measurement stations for the main water quality parameters APOSTROPHE: forecasting of phytoplankton blooms for oyster farms GIRAC: water quality information tool for users
Relevant International projects	LOREA: operational oceanography and coastal local downstream services on oil spills, water quality, safety, in pilot areas EASYCO: hydrodynamic and biogeochemistry forecasting over Atlantic Ocean http://www.project-easy.info/ MEDESS-4MS (Mediterranean Decision Support System for Marine Safety): project dedicated to the maritime risks prevention and strengthening of maritime safety related to oil spill pollution in the Mediterranean http://www.medess4ms.eu/ ENSURF (Ensemble SURge Forecast): multi-model application for sea level forecast that makes use of several storm surge or circulation models and near-real time tide gauge data http://ensurfibi.puertos.es/ Marine Strategy Framework Directive SeaDataNet: Marine Data Management Infrastructure for the management of large and diverse sets of data deriving from in situ and remote observation of the seas and oceans http://www.seadatanet.org/ EuroARGO European "infrastructure" for Argo http://www.euro-argo.eu/ MyOcean : EU-FP7 project for the GMES-Marine Core Service http://www.myocean.eu.org/
Additional information	Ices Working Group for Operational Oceanographic Products for Fisheries and the Environment: http://www.wgoofe.org/