

NOOS annual report 2013

Member report - BSH

September 2013

Country	Germany
Institution	Bundesamt für Seeschifffahrt und Hydrographie
Observations Status and new initiatives	<p><i>Status:</i></p> <ul style="list-style-type: none"> • MARNET (<i>Marine Environmental Monitoring Network in the North Sea and Baltic Sea</i>) running with 12 platform stations (thereof 6 in the North Sea including FINO-platforms) Real time measurements, e.g. temperature, salinity, current, water level, air temperature, wind, air pressure, radioactivity, oxygen, , pH • 10 stations for waves (thereof 5 in the North Sea) • several monitoring cruises per year to collect physical, chemical, and biological data • remote sensing data (e.g. SST, ice, water colour) • Due to general maintenance Fehmarn-Belt-buoy is out of work until summer 2014 <p><i>New Initiatives:</i></p> <ul style="list-style-type: none"> • FINO-Research platforms: all three platforms (FINO1, FINO3 (both North Sea), FINO2 (Baltic Sea)) are equipped with radar gauges from RADAC (NL). Time series of about 5 months are now available • RAVE research initiative – accompanying research for the development of German's first offshore wind farm in the southern German Bight. Only environmental data are publicly available • Weather permitting the NSB2 will be back on its position end of September 2013. First tests for Immarsat-data-transmission on the NSB2.
Modelling Status and new initiatives	<p><i>Status:</i></p> <p>operational (version 4):</p> <ul style="list-style-type: none"> • baroclinic 3dim. circulation model (BSHcmod) using 3 nested grids (6 nm, 3 nm, 0.5 nm), 3 day forecasts, 1 x daily • baroclinic 3dim. circulation model (HBM), Elbe estuary, 90m resolution, 2 day forecast, 1 x daily • barotropic 2dim. storm surge model (BSHsmod) using 2 nested grids (6 nm, 3 nm), 4 x daily, 5 day forecasts <p>Eulerian and Lagrangian dispersion models (BSHdmod & SeatrackWeb) for different substances</p> <p><i>New initiatives :</i></p> <p>pre-operational:</p> <ul style="list-style-type: none"> • new version V32 (V4 in 10/2013) of circulation model HBM (HIROMB-BOOS-Model) developed in the EU-funded project MyOcean & MyOcean-2 (60h-forecast, twice a day) • local model for river Elbe based on Untrim-code using an unstructured grid with variable resolution • multi-model-ensemble for temperature, salinity, transport, currents and sea level developed in MyOcean-2, data available from BSH ftp site <p>under development:</p> <ul style="list-style-type: none"> • new model for simplified ice dynamics • biogeochemical model for North Sea and Baltic with 2 nested grids and data assimilation of satellite based Chl-a data • high resolution fully coupled circulation and wave model (with German Weather Service, DWD)
Dissemination Status and new initiatives	<p><i>Status:</i></p> <p>available at internet (www.bsh.de)</p> <p>Real Time Observations and forecasts:</p> <ul style="list-style-type: none"> • Tides • Water levels, storm surges

	<ul style="list-style-type: none"> • Currents • Sea state • Water temperatures (weekly SST), heat content • Salinity • Oxygen • Ice • Remote sensing • 'Baden & Meer' • Prediction models (Drift forecasts) • Radioactivity • Climate <p>Additionally:</p> <ul style="list-style-type: none"> • Marine physical data <ul style="list-style-type: none"> • measured water levels and wave data on ftp server (<i>for NOOS members</i>) • computed water levels and wave data on ftp server(<i>for NOOS members</i>) • computed transports in North Sea and North Sea/Baltic transition area on ftp server (<i>for NOOS members</i>) • results of the BOOS/NOOS-RC-data centre (<i>still pw-protected</i>): <ul style="list-style-type: none"> • compilation of all available S and T data ftp://ftp.bsh.de/outgoing/rcbono/ ftp://ftp.bsh.de/outgoing/rcnws/ • Marine chemical data • DOD (German Oceanographic Data Centre) – see www.bsh.de/Marine_data/DOD • MARNET monitoring network <ul style="list-style-type: none"> • Data base for RT- and NRT-oceanographic data (national and international) • data on ftp server (<i>for NOOS members, and EU-wide</i>) • SOOP: Sections AX3 and AX11 (Atlantic Ocean) now published in Internet http://www.bsh.de/en/Marine_data/Observations/Observation_systems_and_programmes/SOOP/index.jsp • Multi-model-ensemble for SST&SSS: ftp://ftp.bsh.de/outgoing/opmodel/my_ocean/MME/ • MURSYS reporting system • NOOS homepage (using the TYPO3 content management system – hosted by DMI) <ul style="list-style-type: none"> • Computed transport forecasts for the North Sea on NOOS-homepage (results of Version 4 of the BSH-circulation model) • Computed forecasts of currents in the North Sea on NOOS-homepage <p>NWS-Data Portal including RT- and NRT-data from the NWS http://nwsportal.bsh.de/nwsportal (graphics and figures free, download pw-protected) new: some historical data; composite north sea cruises (1998-2012)</p>
Relevant national projects	<p>FINO: Research platforms North Sea and Baltic Sea (research to determining the effects on the marine flora and fauna). Data base access for Meteorology and Oceanography via: fino.bsh.de</p> <p>DeMARINE-2: National GMES-project</p> <p>KLIWAS – "Impacts of climate change on navigation and waterways – options to adapt"</p> <p>RAVE: Research Activities at "Alpha-Ventus" (accompanying/secondary research for off-shore wind park "Alpha Ventus")</p> <p>MDI-DE(Marine data infrastructure) National marine data infrastructure to combine all national environmental data as a basis for the MSD</p>
Relevant International projects	<p>SeaDataNet II: a standardised distributed system for managing the large and diverse data sets collected by the oceanographic fleets and the new automatic observation systems.</p> <p>MyOcean-2: EU-FP7 project for the GMES-Marine Core Service</p> <p>EuroARGO: European contribution to a global ocean observatory</p> <p>IOC – IODE (Committee on International Oceanographic Data Exchange)</p> <p>Geo-Seas: EU-FP7 project: Pan-European infrastructure for management of marine and ocean geological and geophysical data</p>

	<p>Regional centre is established for T/S-Profile data of the Baltic and the North Sea.</p> <p>Involvement in EMODNET(European Marine Observation and Data Network):</p> <ul style="list-style-type: none">• EMODNET-chemistry• EMODNET-hydrography• EMODNET-physical• EMODNET-geology
Additional information	<p><i>the BSH-Spatial Data Infrastructure</i>; incl. oceanographic, naut. hydrographic, shipping, environmental data.</p> <p>see: http://www.geoseaportal.de</p>