

NOOS annual report 2014
Member report – Germany, BSH
 August 2014

Country	Germany - BSH
Institution	Bundesamt für Seeschifffahrt und Hydrographie (Federal Maritime and Hydrographic Agency)
Observations Status and new initiatives	<p>Status:</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, radioaktivität, 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 2015 • 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 <p>New Initiatives:</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 17 months are now available
Modelling Status and new initiatives	<p>Status:</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>New initiatives :</p> <p>pre-operational:</p> <ul style="list-style-type: none"> • new version V4 (V5 in 10/2014) 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 • biogeochemical model for North Sea and Baltic with 2 nested grids • high resolution coupled (by file exchange) circulation and wave model (with German Weather Service, DWD) <p>multi-model-ensemble for temperature, salinity, transport, currents and sea level developed in MyOcean-2, data available from BSH ftp site</p> <p>Under development:</p> <ul style="list-style-type: none"> • new model for simplified ice dynamics • biogeochemical model for North Sea and Baltic with data assimilation of satellite based Chl-a data • high resolution fully coupled (by OASIS coupling software) circulation and wave model (with German Weather Service, DWD)

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Dissemination Status and new initiatives	<p>Status: available at internet (www.bsh.de) 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) <ul style="list-style-type: none"> • 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>): compilation of all available S and T data ftp://ftp.bsh.de/outgoing/rcnws/ • Marine chemical data • DOD (German Oceanographic Data Centre) – see www.bsh.de/Marine_data/DOD <ul style="list-style-type: none"> • MARNET monitoring network • 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 (until 2012) • Multi-model-ensemble for SST&SSS: <ul style="list-style-type: none"> • ftp://ftp.bsh.de/outgoing/opmodel/my_ocean/MME/ • http://www.noos.cc/index.php?id=mme • http://boos.org/index.php?id=mme • MURSYS reporting system (until 2013) • 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://nwportal.bsh.de/nwportal (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 DeMARINE-2: National GMES-project KLIWAS – "Impacts of climate change on navigation and waterways – options to adapt" RAVE: Research Activities at "Alpha-Ventus" (accompanying/secondary research for off-shore wind park "Alpha Ventus") MDI-DE(Marine data infrastructure) National marine data infrastructure to combine all national environmental data as a basis for the MSD</p>

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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>