Germany
March 2014

Summary of Operational and Planned Oceanographic Observation Programs

Moorings
BSH operates 11 current meters (RCMs) in the German Bight (also 6 thermistor chains and 10 SeaCats). MARNET consists of 10 automatic oceanographic stations in the North and Baltic Seas. Ocean temperature, Salinity and oxygen are measured as well as atmospheric parameters. These sites report temperature information in BATHY code, thus are reported in XBT summaries. 5 stations operating 19 March 2014.

XCTD/XBT/TSG
AX3 completed 1988-2013. AX11 during 1990–2013. Full history of these high and low density lines can be seen at:
Baltic cruises and SOOP SST/SSS (with ship hull mounted thermometers)

Sea Level
9 MSL stations posted at PSMSL 2013  http://www.psmsl.org/data/obtaining/
See also http://www.ioc-sealevelmonitoring.org/index.php for near real-time data

There are many tide gauges along the German North Sea and Baltic Sea coasts. They are primarily used by the BSH for water level and storm surge predictions but are not operated by the BSH.

ESEAS – Participant includes Tsunami stations at Kiel and Warnemunde 2. See other components at  http://www.eseas.org/

Surface Drifters
DWD: 2 Met per year, FGGY type, no winds. Expected to continue without change.

Waves
Waverider –Buoys. German Bight and North Sea. See also WaMos
http://www.oceanwaves.de

ARG0
141 active March 18. To see latest status of floats go to:
http://wo.jcommops.org/cgi-bin/WebObjects/Argo.woa/wa/default
and select Monitoring and Countries.4 German Med Argo floats active January 21
http://nettuno.ogs.trieste.it/sire/medargo/trajectories.php
**Time Series**
AX3 Hydrography (see XCTD/XBT/TSG above)

5 German Bight/Western Baltic yearly cruises – CTD ADCP, Chem, Bio, Towfish

North Sea and Baltic – See Coastal below

GoodHope project to monitor the line from Cape Town to German Antarctic Base Neumayer. With South Africa, France, Spain, Russia and USA.

OceanSITES see [http://www.oceansites.org/network/index.html](http://www.oceansites.org/network/index.html) for details of the following: TENATSO Cape Verde; Weddell Sea Proper and WS/Greenwich Meridian; Labrador Sea Export; Azores Front/Madeira Abyssal Plain; and Vema Channel

**Bio/Chemistry**
Heligoland – Zooplankton, Sylt (Wadden Sea) 2 stations,
Buesum Mole (FTZ) – phytoplankton and nutrient dynamics (Wadden Sea)

FerryBox project measurements: Oxygen, ph, chlorophyll, fluorescence, ammonium, nitrate/nitrite, phosphate, silicate and main algal classes. Cuxhaven to Harwich route.

Marnet stations obtain oxygen, radioactivity and nutrients

[http://datras.ices.dk/Data_products/Submission_Status.aspx](http://datras.ices.dk/Data_products/Submission_Status.aspx)

**VOS**
111 VOS ships, 16 are also VOSClim operating mid March
Coastal
Manual and Automated network of coastal stations, lighthouses, lightships etc. SST, SSS, currents, Oxygen, SL, Met, nutrients and radiology. BLMP is a German contribution to the GOOS coastal program.