

Germany

May 2010

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Summary of operational and planned GOOS participation

Observations

Comments

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>

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. 8 operational early April 2010

http://www.bsh.de/en/Marine_data/Observations/MARNET_monitoring_network/aktuell.jsp

For sensor equipment go to above site

FINO-1 is a Research Platform. <http://www.fino-offshore.de/>

Weddell Sea: see <http://www.oceansites.org/network/index.html>

XCTD/XBT/TSG

AX3 completed 43 times 2000-2010. Latest section February 2010.
AX11 completed 146 times during 2000 – 2010 period. Completed
7 sections in 2009. 2 sections completed thus far in 2010 (March).
Full history of these high and low density lines can be seen at:

http://www.bsh.de/en/Marine_data/Observations/Observation_systems_and_programmes/SOOP/index.jsp

http://www.meds-sdmm.dfo-mpo.gc.ca/meds/Databases/OCEAN/Realtime_e.htm

Baltic cruises and SOOP SST/SSS (with ship hull mounted
thermometers)

ARGO

142 active May1 2010. 16 Med ARGO floats active May 2010 include 1
German Nemo float.

http://nettuno.ogs.trieste.it/sire/medargo/all/table_out_all.php

Sea Level

1 GLOSS MSL and FAST station – Cuxhaven. April 2010

data posted at the Hawaii FAST center. 2006 MSL data posted at PSMSL

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.

7 GPS positioned stations including Cuxhaven
<http://www.sonel.org/stations/cgps/survey/survey.cgps.html>

ESEAS – Participant, 6 stations <http://www.e seas.org/>

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

ESTOC(with Spain) redeployed November 2007 but removed April 2008. CIS redeployed July 2007 but moved off site October 2007 as did PAP in August after deployment June 2007. See updates at: www.soc.soton.ac.uk/animate

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> for details of the following:

TENATSO Cape Verde
Weddell Sea Proper and WS/Greenwich Meridian
Labrador Sea Export
Azores Front/Madeira Abyssal Plain
Vema Channel

Latest and next Repeat Hydrographic sections (standard WOCE sampling).

A1W/AR7W, 2009 and 2011

A2, 2009 (western part), 2010-13

A12, 2008 and 2011 with Netherlands

SR4, Antarctic Peninsula to Kapp Norvegia and edge of Weddell Gyre. 2008 and 2011 with Netherlands

http://www.go-ship.org/RefSecs/Table&Meas_May2010b.pdf

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

North Sea International Bottom Trawl Survey participant 1966-2009, 4045 hauls obtained. Also Baltic International Trawl Survey participant, 1991-2009 with 2376 hauls obtained.
http://datras.ices.dk/Data_products/Submission_Status.aspx

Carbon

A2, Completed 2000 and 2003, Koltermann
A12, Completed 1998, 2003 and 2005, Fahrbach

Leubeck-Helsinki, 150/yr; Liverpool-Halifax, 2 per 5 weeks;
Las Palmas-Las Palmas, 1/year – 2007/ 2008 RV Poseiden/ Merion.
Polar Oceans and Atlantic transects to Antarctica (with Netherlands).
Porcupine Abyssal Plain (PAP) 2003-, continuous
K1, near Bravo 56N-52W, continuous
Central Irminger Sea, 2003-
RV Islandia/CV 17.5N-24.3W, 2007- monthly
S. Africa/S.America via Weddell Sea 2008 and 2010, Polarstern
<http://www.ioccp.org/>
http://www.clivar.org/carbon_hydro/hydro_table.php

Sea Ice

Ice observers along the German coast, not part of MARNET.

VOS

1247 ships operating 5/6/2010, 466 on GTS, potential 2074 ships
40 VOSclim ships active May 2010.
<http://www.ncdc.noaa.gov/oa/climate/vosclim/vosclim.html>

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 (see 2002 German National report to I-GOOS for details)