

**REPORT BY THE DBCP ACTION GROUPS TO THE  
THIRTY-FIRST SESSION OF THE DBCP**  
(Geneva, Switzerland, 19-23 October 2015)

**1) Summary**

<b>Name of Action Group</b>	<b>Operational Service of the Network of European Meteorological Services, EUMETNET (E-SURFMAR)</b>
<b>Date of report</b>	31 August 2015
<b>Overview and main requirements addressed</b>	The EUMETNET operational service E-SURFMAR is an optional programme involving 19 out of the 31 EUMETNET members, who fund the activity on a GNI basis. Its main objectives are to coordinate, optimise and progressively integrate the European meteorological services activities for surface observations over the sea – including drifting and moored buoys, and voluntary observing ships. E-SURFMAR is responsible for coordination of buoy activities carried out by the European meteorological services, and the programme supports a Data Buoy Manager (DBM) to manage these activities. The DBM is supported and advised by the E-SURFMAR Expert Team-Data Buoy (ET-DB). E-SURFMAR ET-DB is an action group of the DBCP.
<b>Area of interest</b>	Ocean areas potentially affecting NWP over European countries. This covers the North Atlantic Ocean (north of 10°N), the Mediterranean Sea and a part of the Arctic. In 2015, E-SURFMAR started to extend its activities in the South Atlantic in the frame of AtlantOS project.
<b>Type of platform and variables measured</b>	<u>Drifting buoys</u> : air pressure, SST <u>Moored buoys</u> : air pressure, wind, air temperature, SST, waves (directional spectra), relative humidity.
<b>Targeted horizontal resolution</b>	250 km x 250 km, >100 drifting buoys, 4 moored buoys for satellite calibration/validation.
<b>Chairperson/Managers</b>	E-SURFMAR Operational Service Manager: Mr Pierre Blouch, Météo-France Chairperson, Expert Team-Data Buoy (ET-DB): Mr Jon Turton, UK Met Office
<b>Coordinator</b>	E-SURFMAR Data buoy Manager: Mr Gilbert Emzivat, Météo-France
<b>Participants</b>	Belgium, Croatia, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxemburg, The Netherlands, Norway, Portugal, Serbia, Spain, Sweden, Switzerland, and the United Kingdom.
<b>Data centre(s)</b>	Météo-France as JCOMM/SOC DFO/OS (Canada) as RNODC/DB NOAA/AOML for DBCP/GDP
<b>Website</b>	<a href="http://www.eumetnet.eu/">http://www.eumetnet.eu/</a> , <a href="http://esurfmar.meteo.fr">http://esurfmar.meteo.fr</a> (restricted working area web site for E-SURFMAR participants)
<b>Meetings</b>	ET-DB meets once a year. ET-DB12 Rome 28-29 May 2015
<b>Current status (mid-2015)</b>	133 E-SURFMAR drifting buoys in operation (91 Iridium including 4 AtlantOS and 42 Iridium upgrades) + 69 others reporting AP. 4 E-SURFMAR supported moored buoys in operation, plus a further 30 others operated by members.

<b>Summary of plans for 2016</b>	Maintain a network of 100 drifting buoys in North Atlantic, a network of 15 drifting buoys in South Atlantic, and the 4 reference moored buoys in operation.
----------------------------------	--

## 2 Deployment plans for 2016

The drifting buoys will be deployed from various locations (Canada, Iceland, France, Norway, UK, USA...) in the Atlantic Ocean. Drifters from GDP are regularly upgraded with barometers and deployed in the North Atlantic Ocean by vessels plying from North America to Iceland, from North America to Europe and from Europe to North America. Within the allocated budget, more than 100 buoys (including 30 upgrades) will be deployed in the E-SURFMAR area of interest in the coming twelve months.

E-SURFMAR will set up a permanent network of 15 SVP-B in the South Atlantic in the frame of AtlantOS project. Drifters are deployed in the South Atlantic by vessels plying from France to South Africa.

E-SURFMAR will continue to deploy buoys in the Arctic Ocean in collaboration with IABP.

The 4 E-SURFMAR moored buoys K5 (59.1N – 11.5 W), M6 (53.1N – 15.9W), Cabo Silleiro (42.1N – 9.4W) and Lion (42.1N – 4.7E) are operated by United Kingdom, Ireland, France and Spain, respectively. At present, Cabo Silleiro and K5 are equipped to report directional wave spectra. Spectra data from K5 are disseminated on GTS by the Met Office

## 3 Data management

### 3.1 Distribution of the data

#### 3.1.1 Data policy

ESURFMAR encourages free and open access to data, in the spirit of WMO data exchange policy defined in WMO Congress Resolution 40 (Cg-XII). All basic meteorological and oceanographic data are coded in the appropriate WMO code forms and disseminated on the WMO Global Telecommunication System (GTS)

#### 3.1.2 Real-time data exchange

All the data are put on the GTS as quickly as possible.

The processing chain at Météo-France producing GTS reports from Iridium SBD data was consolidated. This chain is able to produce FM13-SHIP, FM18-BUOY or FM94-BUFR messages. The distribution of BUFR messages allows to transmit the data of the drifters having a resolution of 0.01K for SST. New OMM template for drifting buoys (TM315009) is used by “Centre de Meteorologie Marine” (CMM) at Meteo-France since th 1<sup>st</sup> of June 2015.

All the operating drifters are now using Iridium. This improves the data timeliness (see Annex). In June 2015, the number of daily observations transmitted onto the GTS was close to 3,000. The target (90%) for the percentage of data received within 50 minutes continue to be met. This results from efforts made during recent years to have all buoys reporting through Iridium.

The mean lifetime (for Air Pressure) of the SVP-B drifters increased to 368 days (357 days last year). Seventy three buoys failed to report air pressure measurements (108 last year).

The availability of moored buoy data depends on the number of buoys operating. More than 80 hourly observations per day from July to December 2014, falling down to 65 in January 2015 due to M6 's breakdown and then increasing to 85 then 75 due to Lion 's and K5 's bad transmissions , have been reported from E-SURFMAR buoys to the GTS.

### 3.1.3 Delayed mode data exchange

The raw data from drifters are archived at CMM.

Data inserted onto the GTS are routinely archived by various centres (for drifting buoys DFO/OS, AOML/GDP, Coriolis..., Meteorological Services for drifting and moored buoys).

Archived data from drifters are also used to produce surface currents deduced from the buoys movement on a weekly basis

The metadata collection system at JCOMMOPS is used for drifting buoys.

E-SURFMAR members are invited to compile Moored Buoy Metadata in line with the metadata variables defined on the DBCP website (<http://www.icommops.org/dbcp/data/metadata.html>).

## 3.2 Data quality

The web page giving access to the Quality Control (QC) tools was maintained. The transmission delays onto the GTS are monitored (see <http://www.meteo.shom.fr/qctools>). Monthly statistics and 16-day graphs are available for all surface marine observations through the same interface. Buoys reporting in BUFR are monitored as those reporting through BUOY or SHIP alphanumeric messages. The blacklists, automatically issued for air pressure every day, are used to identify and correct potential problems.

For drifters the Air Pressure (AP) differences from the French model outputs, the target of 1% of Gross Errors was achieved. The RMS of AP differences (about 0.5 hPa) still has a seasonal variation, being higher in winter than in summer.

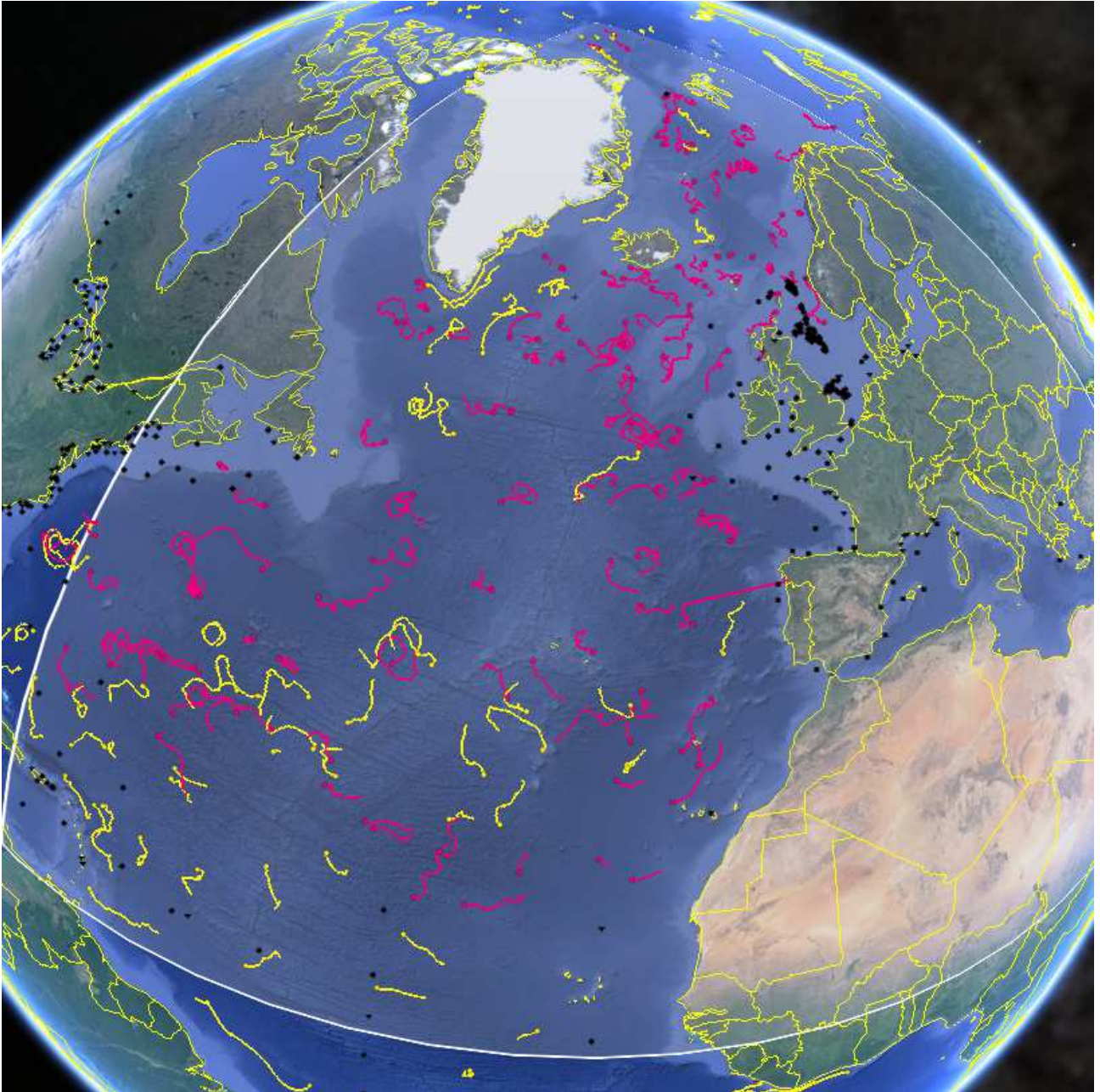
For moored buoys the Air Pressure (AP) differences with the French the target of 0.5% of Gross Errors was achieved. The RMS of AP differences was about 0.6 hPa.

## 4) Instrument practices

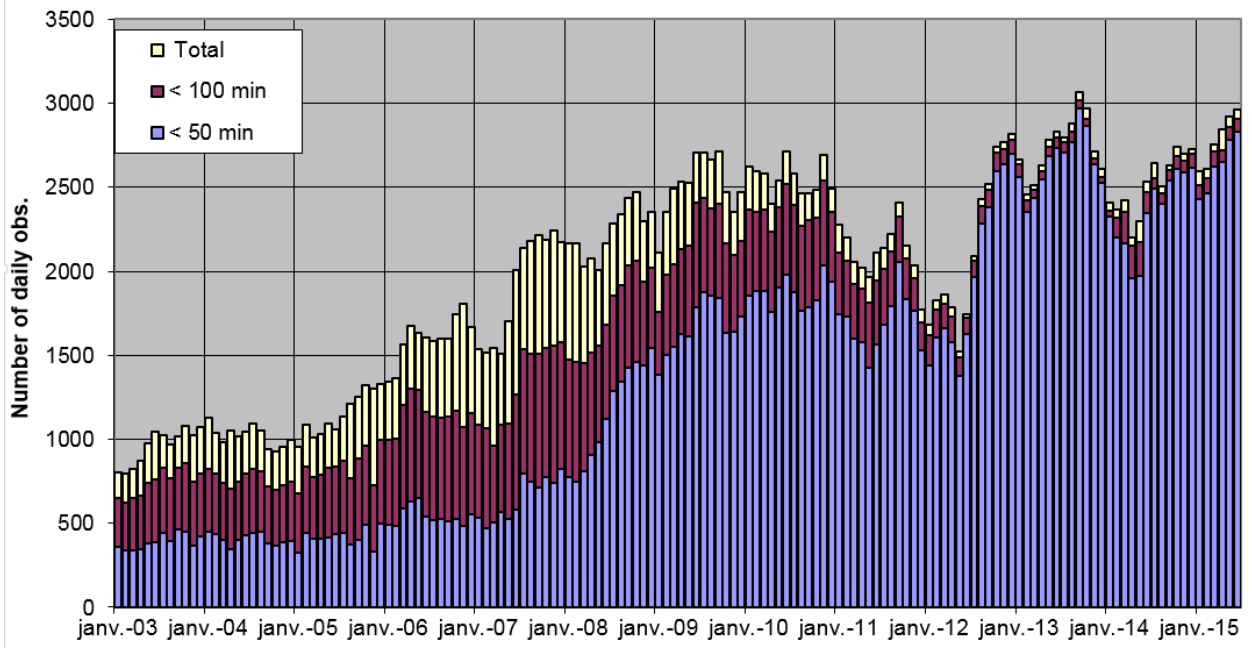
ESURFMAR drifting buoys use recommended DBCP formats.

---

## Annex



Drifting buoy trajectories and moored buoy positions  
(June 2015)



Drifting buoys data availability