

VOS Report for 2011

(EUMETNET)

a. Programme description:				
Category	No. of ships at 31 Dec 2011	Recruitments in 2011	De-recruitments In 2011	Comments
<i>Selected</i>				
<i>Selected AWS</i>	10	2	0	Continuation of the installation of BATOS AWS (integrated) stations funded by the E-SURFMAR programme
<i>VOSclim</i>				
<i>VOSclim AWS</i>				
<i>Supplementary</i>				
<i>Supplementary AWS</i>	15	6	4	BAROS (autonomous) AWS. Most of them provide hourly air pressure data only. Two measure Ta, U and Wind in addition.
<i>Auxiliary</i>				
<i>Auxiliary AWS</i>				
<i>Other</i>				
National VOS Total	25			

National VOS Target	45
National VOSclim Target	13

b. Data management:	
<i>Total number of ship observations (BBXX) distributed on the GTS in 2011</i>	110,673
<i>Frequency of VOS data submitted to the GCC in Yea0r</i>	Unknown – Should be done through the EUMETNET member who installed the station

g. Major challenges and difficulties:

The funding of ship borne AWS presented in the tables here above (E-SURFMAR fleet), is only a part of the programme VOS duties. E-SURFMAR is actually coordinating the activities of about 52% of active VOS in the world and EUMETNET ships report about 54% of the whole observations. During the 2002-2011 period, the number of air pressure observations reported by European AWS stations passed from about 400 to more than 1600 per day. This of pressure observations reported by conventional VOS slightly increased from 790 to 830 per day but the number of observations performed into the EUCOS area of interest decreased from 400 to 320 during the same period.

One of the main objective of E-SURFMAR – as for the other components of EUCOS – consists in optimising the ground observing system to improve short range forecasts over Europe. The sea level pressure is a key parameter for E-SURFMAR. It appears the quality of pressure measurements reported by conventional VOS is worse than this of AWS in average. This problem must be carefully considered and reduced as much as possible.

The maintenance of the E-SURFMAR S-AWS fleet is not an easy work in the Mediterranean Sea due to many changes in ship's use. Some are sold or deconstructed, others are temporarily decommissioned or sent on other routes. Happily, the Mediterranean Oceanographic Operational Network helps E-SURFMAR in the S-AWS installations.

h. Research / development / testing:

A call for tender for the procurement of common shipborne AWS to E-SURFMAR members is still under preparation. Its issue should occur in 2012. Three prototypes should be tested at the beginning of 2013 before ordering series.

In 2010-2011, Meteo-France successfully tested two multi-sensors (Vaisala WXT520 and Gill MetPak-II) during one year each on a BaRos+ AWS. Comparisons, performed between observations got from these sensors and those got by a BaTos system showed a very good agreement..

E-SURFMAR activities also include:

- the development and use of data compression techniques to save communication costs. In 2011, KNMI started the deployment of the E- SURFMAR “half compression” technique on their VOS. Cost per message is divided per two at least;
- the use of normalized GTS identifiers (MASK) to facilitate the monitoring and the management of the E-SURFMAR fleets;
- the development and the use of a metadata database available online. The E-SURFMAR database contains all Pub 47 metadata made available by VOS operators in the world (not only European ones). Every day, the metadata are extracted from the database and made available on a FTP site (CSV and XML formats);
- the development and use of day-to-day monitoring tools.

i. Other comments:

Nil