

VOS Report for 2010

(United Kingdom)

a. Programme description:				
Category	No. of ships at 31 Dec 2010	Recruitments in 2010	De-recruitments In 2010	Comments
<i>Selected</i>	206	12	27	Size of selected fleet was further reduced during 2010. Inactive ships are being gradually withdrawn from the fleet and all suitable ships upgraded to VOSClim standards. Ships operate in all ocean regions.
<i>Selected AWS</i>	0	0	0	
<i>VOSClim</i>	106	61	4	Significant number of ships upgraded to VOSClim standard in 2010. Target is to achieve a level of 200 manually reporting VOSClim ships within 3 years
<i>VOSClim AWS</i>	3	1	0	(Excludes two UK VOSClim AWS ships recruited to E-SURFMAR)
<i>Supplementary</i>	0	0	0	
<i>Supplementary AWS</i>	9	3	0	Data from 3 Supplementary AWS recruited in 2010 not yet on GTS. Primarily aimed at ships operating in UK or near continental waters. Plans to roll out a significant number of Supplementary AWS during 2011
<i>Auxiliary</i>	0	0	0	All UK Auxiliary ships were withdrawn from UK Fleet during period 2005 to 2008 (or upgraded to 'Selected' category)
<i>Auxiliary AWS</i>	0	0	0	
<i>Other</i>	19	0	4	Fixed offshore units, mobile rigs and FPSO's on UK Continental Shelf reporting in SHIP code (see also section i)
National VOS Total	343			

National VOS Target	~270
National VOSClim Target	~200

b. Data management:	
<p><i>Total number of ship observations (BBXX) distributed on the GTS in 2010</i> <i>(Note - excludes moored buoy Ship coded observations)</i></p>	<p>75644 – real time observations from manually reporting UK VOS</p> <p>91843 – real time observations from shipborne AWS installed on UK VOS (includes figures for 3 E-SURFMAR shipborne AWS on UK VOS)</p> <p>10643 – real time observations from manually reporting offshore installations</p> <p><i>(see also section I for details of third party ship coded data)</i></p>
<p><i>Frequency of VOS data submitted to the GCC in 2010</i></p>	<p>Delayed mode data submitted to GCC in Edinburgh as soon as received</p>

c. Shipboard Automatic Weather System				
Type	No. of ships at 31 Dec 2010	Manual Input Yes / No	Method of Comms	2011 Planned installations
Minos - GP	5	No	Argos	Minos systems are likely to be decommissioned during 2011 as we rollout new Met Office AWS systems
MINOS GPW	1	No	Argos	“ “ “ “ “
BATOS	5 *	Yes	Inmarsat (Data Reporting Service)	No further Met Office owned BATOS systems planned * Figure includes 3 systems installed on behalf of E-SURFMAR on UK VOS
AVOS	0*	Yes	Inmarsat	* AVOS installed by Met Office on mv OOCL Montreal was transferred to Environment Canada in October 2009 due to vessels change of trading route
MILOS/MAWS	0*	Yes	Iridium	* Vaisala MAWS system in store awaiting testing/installation
MetPod	0*	No	Iridium	1 Prototype system was recovered in 2010

f. Electronic logbooks: (TurboWin, SEAS, OBSJMA)		
Software & version	No. of ships at 31 Dec 2010	Implementation plans

<p>TurboWin Version 4 +</p>	<p>276*</p>	<p>* TurboWin software Version 4 supplied to all ships in UK fleet and dedicated laptops computers loaded with the software currently supplied to 41 ships. Whenever possible and acceptable to shipowner's laptop computers are now being removed and TurboWin software loaded on the ship's own bridge computers. (VOS also encouraged to send their TurboWin observations using ships own email systems)</p> <p>Rollout of latest Version 4.5 is being undertaken on a ship by ship basis (currently 20 ships)</p>
<p>BATOS (Version 3.6 and higher)</p>	<p>5*</p>	<p>In use on active BATOS AWS systems (automatically records measured parameters and also allows visual observations to be manually added). * includes 3 Batos systems funded by E-SURFMAR and deployed on UK VOS</p>

g. Major challenges and difficulties:

- The Economic downturn and shipping recession during 2009/10 had a marked impact on the number of observations available from manually reporting UK VOS. However the situation improved during 2010 and many container ships that were previously laid up are now back in service
- At the end of 2010 a total of 40 manually reporting UK VOS were sending their observations using masked call signs (for a variety of commercial, legal, and security reasons). In addition 13 automated systems currently active in the UK fleet also transmit using masked call signs.
- A large percentage of the UK Voluntary Fleet is trading on a worldwide basis and, as a consequence, it is often difficult to ensure routine inspection of these ships without the assistance of overseas PMO's. Each year there can be over 100 ships in the UK fleet that we have been unable to inspect for this reason; annual Muster letters or emails are sent to each of these ships to determine the condition of their instruments and to request the download of TurboWin log files. Failure to routinely visit recruited ships has implications for the quality of the observations and for the ongoing training of the observing officers.
- Observations sent via Goonhilly Land Earth Station are monitored on a monthly basis for transmission and coding errors. Where these involve UK ships they are followed up with the ships concerned. Details are also promulgated internationally via the JCOMMOPS mailing lists
- Met Office requirements for the encryption of data held on laptop computers have had an impact on our ability to loan such computers to ships in future. As a consequence we will in future only aim to recruit ships that are willing to load the TurboWin software on the ships own bridge computers. Existing loaned laptops will be withdrawn
- Data Protection concerns have been expressed by some ships officers about the use of their personal data recorded in the TurboWin program. This could have implications for VOS award schemes
- Tracking down non active observing ships and recovering their equipment can be a time consuming task and some equipment has had to be written off when ships have gone to scrap without giving prior notice. The Dirkzwager Ship2Report system helped with tracking these ships during 2010
- Stocks of Precision Aneroid Barometers currently on board UK VOS are starting to decline. As these barometers are now obsolete they will be gradually withdrawn from use on manually reporting VOS and replaced by new digital devices (subject to budgetary constraints).

h. Research / development / testing:

- EU restrictions on the export and sale of mercury will present a major challenge over the next couple of years. Investigations into the use of alternative digital thermometry are in hand and the phased withdrawal of mercury in glass thermometers is likely to start in 2010. To some extent this issue will also be resolved by our plans to increase the use of shipborne AWS
- Trials of shipborne AWS systems undertaken by the Met Office in 2007/8 identified a need to develop a new modular design of basic AWS system that is independent of the ships systems and which would require minimum technical involvement whilst in service. This work was progressed within the E-SURFMAR Task Team on AWS in 2010 and recommendations and specifications for a future autonomous shipborne AWS system were developed. A tender is expected to be placed in 2011.
- At the end of 2010 the Met Office started to roll out a new prototype autonomous shipborne AWS system that has been developed by our marine team based at Southampton National Oceanography Centre. It is planned to progressively roll out these new systems to suitable ships primarily on coastal vessels and ferries or near European trading routes. The data from these systems will be inserted on the GTS from Spring 2011
- In addition we have continued to use 'deck drifters' on a couple of our VOS. These are essentially SVP-B type drifting buoys with the drogues removed and the air temperature sensor disabled, so that they only report hourly pressure values via Iridium. These systems have proved to be a reliable and simple method of providing pressure data on ships operating both internationally and in coastal UK waters
- The Met Office continues to assist KNMI with its ongoing efforts to enhance the TurboWin logbook software and intends to provide input the next release in 2011. We have also been trialling the new web based version of the software – TurboWeb – on a research ship. The system works well and observations are ingested into the KNMI server before being inserted on the GTS
- The Dirkzwager Ship2report system is in use by all UK PMOs. This system has proven to be a valuable tool for tracking ships that need to be withdrawn or which need to be visited to resolve quality issues
- In 2010 we introduced a new system of work for our PMOs whereby each PMO takes responsibility for a set number of shipping companies and ships. Monitoring and other feedback is being provided on a more regular basis and the activity of our ships is increasing as a consequence. In effect these procedures bring into effect the concept of remote inspections for ships that cannot be physically visited by a PMO. All manually reporting UK VOS are requested to endeavour to return not less than 350 observations per year. Ships which fail to achieve this level are likely to be withdrawn from the fleet in future

i. Other comments:

- The goals and objectives for the UK voluntary fleet are also considered within the wider context of the Eumetnet Surface Marine Programme (E-SURFMAR) which aims to optimise the surface-marine observations from VOS, moored and drifting buoys. Closer cooperation and integration with other European VOS networks will hopefully reduce unnecessary duplication of effort, and permit objectives to be delivered in the most cost-efficient manner
- Drifting buoys are routinely deployed from UK observing ships on behalf of the E-SURFMAR Programme, and also for the UK contribution Global Drifter Programme in the Southern Oceans. UK VOS are occasionally also used for ARGO Float deployments
- In addition to the VOS observation numbers in this report, the Met Office also had access to third party data in 2010 from a further ~40 offshore platforms that host automatic weather stations – which amounted to approx 250000 observations. Because these automatic stations are not owned or operated by the Met Office, they have not been counted in the above figures. The volume of such data is likely to increase significantly in 2011 due to new guidelines for meteorological data availability offshore