

VOS and VOSClm Report for 2008

(United Kingdom)

a. Programme description:		
Category	No. of ships at 31 Dec 2008	Comments
<i>Selected</i>	368	Size of Selected fleet only slightly reduced since 2007. Inactive ships being gradually withdrawn from fleet and priority given to active VOS which can be relied upon to submit regular quality observations. Ships operate in all ocean regions. (Figure includes 12 AWS ships)
<i>Supplementary</i>	Nil	
<i>Auxiliary</i>	Nil	All UK Auxiliary ships were withdrawn from UK Fleet during 2005 or upgraded to 'Selected'
<i>Other (specify)</i>	25	Fixed Offshore units, mobile rigs and FPSO's on UK Continental Shelf reporting in SHIP code (see also section i)
Total National VOS Fleet	393	

b. VOS:	
<i>Number of VOS vessels recruited in 2008</i>	19
<i>Number of VOS vessels de-recruited in 2008</i>	30
<i>Target number of ships in the national VOS Fleet</i>	~ 200 Fully Active manual VOS and ~ 50 shipborne AWS

c. VOSClm:	
<i>Number of VOSClm vessels at 31 December 2008</i>	61
<i>Number of VOSClm vessels recruited in 2008</i>	1
<i>Number of VOSClm de-recruitments in 2008</i>	2

Number of VOSCLim recruitments planned for 2009	0
Target number of ships to participate in VOSCLim	~60 [Depending on VOSCLim discussions at SOT V]

d. Automated observing systems:				
Type	No. of ships at 31 Dec 2008	Manual Input Yes / No	Method of Comms	2009 Planned installations
Minos - GP	5	No	Argos	3 additional systems remain to be deployed
MINOS GPW	1	No	Argos	1 Additional GPW to deploy in 2009
BATOS	3 *	Yes	Inmarsat (Data Reporting Service)	- installation of 1 further BATOS due to be completed early 2009 * Includes 2 systems installed on behalf of E-SURFMAR (E-SURFMAR currently planning to install 3 further BATS systems on UK recruited VOS)
AVOS	1	Yes	Inmarsat	
MILOS/MAWS	-	Yes	Iridium	1 Vaisala MAWS system on test and due to be installed in 2009
MetPod	1	No	Iridium	Prototype system under test. Further system planned for 2009
Metocean Deck Drifters	2	No	Iridium	Additional 2 deck drifters under consideration
Automet	0	No	Inmarsat	[AWS failed during 2007- Possible redeployment in 2009]

e. Data management:

<p>Total number of ship observations (BBXX) distributed on the GTS in 2008 (excluding moored buoy Ship coded observations)</p>	<p>78272 – from manually reporting UK VOS 51457 – from Met Office shipborne AWS on UK VOS 4825 – for E-SURFMAR shipborne AWS on UK VOS 12211 – from manually reporting offshore installations (see also section i)</p>
<p>Frequency of VOS data submitted to the GCC in 2008</p>	<p>Data submitted to GCC in Edinburgh as soon as received</p>

f. Electronic logbooks:		
Software & version	No. of ships at 31 Dec 2008	Implementation/upgrade plans
<p>TurboWin Version 4</p>	<p>286*</p>	<p>*TurboWin software has now been supplied to all ships in UK fleet and dedicated laptops computers loaded with the software currently supplied to 61 ships.</p> <p>Whenever possible and acceptable to shipowners 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>Some ships still use earlier version of TurboWin software e.g. when upgrading to version 4.0 is prevented by ships own IT security restrictions</p>
<p>BATOS Version 3.6</p>	<p>3</p>	<p>In use on active BATOS AWS systems (automatically records measured parameters and also allows visual observations to be manually added). One further system to be activated in 2009</p>
<p>AVOS</p>	<p>1</p>	<p>In use on AVOS AWS systems (automatically records measured parameters and also allows visual observations to be manually added)</p>
<p>MetPod</p>	<p>1</p>	<p>Additional test system planned in 2009</p>

g. Major challenges and difficulties:

- An increasing number of UK shipowners are now asking for their registered ITU call signs to be masked. At the end of 2008 a total of 37 UK VOS were sending their observations using masked call signs (for a variety of commercial, legal, and security reasons). In addition the 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 as many as 150 ships in the UK fleet that we are 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. Failure to routinely visit recruited ships has implications for the quality of the observations and for the ongoing training of the observing officers.
- The EU restrictions on the export and sale of mercury will present a major challenge over the next couple of years, as all UK VOS are currently provided with Mercury in Glass air and sea thermometers. This is likely to provide impetus for moving to digital or AWS systems
- Up to 300 ship coded messages each month are being rejected by our observations handling software each month due to a variety of coding or transmission errors. Where these involve UK ships we follow these problems up with the ships concerned. However there are no resources available to deal with non UK transmission error problems
- 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.
- 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.
- Stocks of Precision Aneroid Barometers currently on board UK VOS are starting to decline. As these barometers are now several years old consideration will need to be given to replacing them with new digital devices (subject to budgetary constraints)

h. Research / development / testing:

- Trials of 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 cost effective and easy to retrofit on existing ships. The system should ideally be independent of the ship's systems as far as possible, and should require minimum technical involvement whilst in service.
- Following on from these trials a prototype MetPod AWS system was successfully trialled on a ferry in 2008. The system can be easily installed on board with minimum impact on the ship's arrangements or structure, and measures pressure, air temp., humidity, wind speed and direction. Other variables can be added if required, and it also has the facility to provide a bridge display readout if required. Further refinement of this system is being considered. In addition the Met Office is also involved in the work being undertaken by the E-SURFMAR Task Team on AWS on the development of a draft specification for future AWS systems that could be used when going to tender.
- In addition to the AWS trials we have also been trialing the use of '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.
- The increased use of AWS will help with the pressing need to replace the wet/dry bulb mercury thermometry and marine screens currently in use on UK ships.
- The Met Office will continue to assist KNMI with its ongoing efforts to enhance the TurboWin logbook software and hope to assist with trials of the new web based version they are developing.
- The Dirkzwager Ship2report system is now in use by UK PMOs. Although this system still needs some improvement it is proving to be a valuable tool for tracking ships that need to be withdrawn or which need to be visited to resolve quality issues.
- One UK VOS has been set up to send its observations using the half compressed system via Inmarsat (to assist with E-SURFMAR trials of this system).

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, as the UK Contribution to the Southern Ocean Buoy Programme, and on behalf of the Global Drifter Programme. UK VOS are occasionally also used for ARGO Float deployments
- In addition to the VOS observation numbers in this report, the Met Office also has access to third party data from a further ~37 offshore platforms that host automatic weather stations – which amounted to approx 260000 observations in 2008. Because these automatic stations are not owned or operated by the Met Office, they have not been counted in the above figures