

UNITED KINGDOM

VOS and VOSClm Report for 2007

a. Programme description:		
Category	No. of ships at 31 Dec 2007	Comments
<i>Selected</i>	373	Size of Selected fleet slightly reduced since 2006. Inactive ships being gradually withdrawn from fleet and priority given to active VOS which can be relied upon to submit regular quality observations.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 AWS ships)
<i>Supplementary</i>	Nil	
<i>Auxiliary</i>	Nil	All Auxiliary ships were withdrawn from UK Fleet during 2005 or upgraded to 'Selected'
<i>Other (specify)</i>	28	Fixed Offshore units, mobile rigs and FPSO's on UK Continental Shelf reporting in SHIP code
Total National VOS Fleet	401	

b. VOS:	
<i>Number of VOS vessels recruited in 2007</i>	22
<i>Number of VOS vessels de-recruited in 2007</i>	28
<i>Target number of ships in the national VOS Fleet</i>	300- 350 (Manual VOS)

c. VOSClm:	
<i>Number of VOSClm vessels at 31 December 2007</i>	62

Number of VOSCLim vessels recruited in 2007	3
Number of VOSCLim de-recruitments in 2007	0
Number of VOSCLim recruitments planned for 2008	~3
Target number of ships to participate in VOSCLim	~80

d. Automated observing systems:				
Type	No. of ships at 31 Dec 2007	Manual Input Yes / No	Method of Comms	2008 Planned installations
Automet	1	No	Inmarsat	<i>[Failed during 2007]</i>
Minos - GP	6	No	Argos	3 additional systems remain to be deployed
MINOS GPW	1			1 Additional GPW to deploy in 2008
BATOS	3 *	Yes	Inmarsat	* Includes 2 systems installed on behalf of E-SURFMAR 2 2 Further BATOS planned for 2008 (one of which will be for E-SURFMAR)
AVOS	1	Yes	Inmarsat	
MILOS/MAWS	-	Yes	Iridium	1 Vaisala MAWS system awaiting installation
Others	-	-	-	Consideration being given to further simple AWS systems

e. Data management:	
Total number of ship observations (BBXX) distributed on the GTS in 2007 <i>(excluding moored buoy Ship coded observations)</i>	68939 (from manually reporting VOS) 47163 (from shipborne AWS) 16804 (from manually reporting offshore installations)
Frequency of VOS data submitted for the GCC in 2007	Data submitted to GCC in Edinburgh as soon as received

f. Electronic logbooks:		
Software & version	No. of ships at 31 Dec 2007	Implementation plans
TurboWin Version 4	261*	<p><i>* TurboWin software has now been supplied to all 373 ships in UK fleet and dedicated laptops computers loaded with the software have been supplied to 65 ships.</i></p> <p>Where acceptable to shipowners it is intended to remove laptop computers and load TurboWin software on the ship's own bridge computers. It is also planned to increase the number of ships that send their TurboWin observations using ships own email systems</p>
BATOS Version 3.6	3	In use on BATOS AWS systems (automatically records measured parameters and also allows visual observations to be manually added)
AVOS	1	In use on AVOS AWS systems (automatically records measured parameters and also allows visual observations to be manually added)

g. Major challenges and difficulties:

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.

An increasing number of UK shipowners are now asking for their registered ITU call signs to be masked. At the end of 2007 approx 40 UK VOS were sending their observations using masked call signs (for a variety of commercial, legal, and security reasons). This inevitably creates difficulties for real time monitoring procedures.

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.

Reductions made to UK Port Met Officer numbers in 2004 had an impact on the frequency of VOS inspections (We now aim to maintain an inspection regime of not less than 6 months for VOS and 3 months for VOSClm ships, subject to ship movements). Work on AWS installations, and increased buoy and float deployment work also have an impact on the workloads faced by PMO's

Sudden changes to container ship schedules, especially when companies are taken over, have had an impact on PMO activities in Southampton and London. Recent appointment of a new Port Met Officer in Southampton will however help to some extent

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 may have an impact on our ability to provide 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.

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:

- 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)
- The Dirkzwager Ship2report system has now been rolled out to all 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
- Consideration is being given to the use of digital humidity/temperature systems to replace the current wet/dry bulb mercury thermometry currently in use on UK ships. It is anticipated that trials of suitable systems will commence in 2008. If possible existing plastic marine screens will be used to house such systems which will ideally be powered from a battery source independent from the ships supply
- Several AWS systems on UK ships during 2007. As a result of such trials it is considered that there is a need to develop a simple modular shipborne AWS system that can be easily installed on board with minimum impact of the ships arrangements or structure. Suitable future AWS systems will be considered in liaison with our E-SURFMAR colleagues
- 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

i. Other comments:

- **The goals and objectives for the UK voluntary fleet must be 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 also increasingly being used for ARGO Float deployments, notably in the Southern Ocean, Indian Ocean and Arabian Sea**
- **In addition to the VOS numbers in this report, the Met Office also has access to data from a further ~20 offshore platforms that host automatic weather stations which provide data every 10 minutes to the Met Office. Because these automatic stations are not owned or operated by the Met Office, they have not been counted in the above figures**