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PARTICIPATION IN THE WORLD METEOROLOGICAL ORGANIZATION VOLUNTARY OBSERVING SHIPS' (VOS) SCHEME

- 1 The Maritime Safety Committee at its sixty-fourth session (5 to 9 December 1994), in response to a request for assistance from the World Meteorological Organization (WMO) on enhancing the recruitment of merchant ships into the WMO Voluntary Observing Ships' (VOS) scheme had approved and circulated MSC/Circ.674 on this matter.
- 2 The Maritime Safety Committee, at its seventy-fourth session (30 May to 8 June 2001), in response to a proposal from the World Meteorological Organization (WMO) for the re-issue of an MSC Circular relating to the WMO Voluntary Observing Ships' (VOS) scheme, noted the brochure attached hereto. It further noted that the recent *Report of the Re-opened Formal Investigation into the Loss of the MV Derbyshire* had underlined the potential value of VOS observations to maritime safety, and also recommended, *inter alia*, that consideration be given to updating and reissuing this MSC Circular and brochure on the VOS.
- 3 In view of this recommendation, and of the continuing critical importance of VOS meteorological reports to the provision of meteorological services to the mariner, including those under the GMDSS, it is essential that the total number of VOS be at least maintained, and if possible expanded. Participation in the WMO VOS scheme is entirely voluntary and there are no charges incurred for the ship, shipowner or ship operator for participating in the WMO VOS scheme, or for the equipment needed for transmission of VOS weather reports.
- 4 Member Governments are invited to bring the attached revised brochure to the attention of shipowners, ship operators, ship managers, masters and crews and to encourage them to support WMO and their national Meteorological Services by offering their ships as VOSs. Ships which pass through or operate in the data-sparse areas, shown by the lack of dots in the chartlet of ship data coverage attached to the brochure, are particularly urged to volunteer as VOSs.
- 5 This circular revokes MSC/Circ.674.

ANNEX

THE WMO VOLUNTARY OBSERVING SHIPS (VOS) SCHEME

1 Background

The international scheme by which ships plying the various oceans and seas of the world are recruited by national Meteorological Services for taking and transmitting meteorological observations is called the *WMO Voluntary Observing Ships' (VOS) scheme*. The forerunner of the scheme dates back as far as 1853, the year in which delegates of ten maritime countries came together at a conference in Brussels, on the initiative of Matthew F. Maury, then director of the United States Navy Hydrographic Office, to discuss his proposal for the establishment of a uniform system for the collection of meteorological and oceanographic data from the oceans and the use of these data for the benefit of shipping in return.

The conference accepted his proposal and adopted a standard form of ships' log and a set of standard instructions for the necessary observations.

From the very beginning, ships' meteorological observations were recognized as being essential for the provision of safety-related meteorological services for ships at sea, as well as for climatological purposes.

2 The situation today

At the present time, the contribution which VOS meteorological reports make to operational meteorology, to marine meteorological services, weather routing services and to global climate studies is unique and irreplaceable. During the past few decades, the increasing recognition of the role of the oceans in the global climate system has placed even greater emphasis on the importance of marine meteorological and oceanographical observing systems.

One of the major continuing problems facing meteorology is the scarcity of data from vast areas of the world's oceans (the so-called data sparse areas) in support of basic weather forecasting, the provision of marine meteorological and oceanographic services, and climate analysis and research.

While the new generation of meteorological satellites will help substantially to overcome these problems, data from more conventional platforms, in particular the voluntary observing ships, will remain essential for the foreseeable future, to provide ground truthing for the satellite observations, to provide important information which the satellites cannot observe, to provide an essential contribution to the data input for the numerical weather prediction (NWP) models which are the basis of most present-day forecasts and warnings, and to provide real-time reports which can be used immediately in services for the mariner. In addition to their use in NWP, reports from ships at sea are also used operationally, even more directly, in the preparation of forecasts and warnings, including those for the GMDSS, and issued specifically for the mariner.

Thus without VOS observations, reliable, timely services for mariners could not be provided.

3 The VOS Fleet Size

A peak in total VOS was reached in 1984/85 when about 7700 ships worldwide were on the WMO VOS Fleet List. Since when there has been an irregular but marked decline and in 1999 the Fleet strength was about 6900 ships. As might be expected, real-time reports from the VOS are heavily concentrated along the major shipping routes, primarily in the North Atlantic and North Pacific Oceans. The attached chart shows details of the geographical distribution of ships weather reports for December 2000 and the most striking feature is the large data-void areas in all southern hemisphere oceans. While this situation certainly reflects the relatively small numbers of ships sailing in these waters, it also makes it more essential that ships sailing in these areas should be part of the VOS and thus contribute to the global observing programme and consequent enhancement of the forecast and warning services to the mariner.

Of course, as VOS reports are part of a global data capture programme, their reports are of value from all the oceans and seas of the world, and even the relatively well-frequented North Atlantic and North Pacific Oceans require more observational data.

4 What are the charges to be part of the VOS scheme?

THERE ARE NO CHARGES TO THE SHIP OR TO THE SHIP OPERATOR. The tested marine meteorological instruments necessary to undertake weather observing at sea are supplied free of charge to the ship, installed by professionals from the national Meteorological Service, usually a trained Port Met Officer, who will provide advice on the technique of observing at sea, explain the use of the WMO SHIP code and offer guidance on the transmission of the observations from the ship to shore using the ships satcom or terrestrial communications equipment. **THERE ARE NO CHARGES TO THE SHIP FOR THE TRANSMISSION OF VOS WEATHER REPORTS.** After recruitment into the VOS, the meteorological instruments will be regularly serviced, without charge to the ship or shipowner, by an official of either the “recruiting national Meteorological Service” or from the worldwide network of WMO Members who operate the VOS.

5 How can you become involved?

If an Administration:

- (i) Be aware that ships' meteorological reports can make a significant contribution to safety of life and navigation through better quality forecasts and warnings.
- (ii) Ensure that your ship operators are aware of the WMO VOS scheme and encourage their participation.

If a Ship Operator:

- (i) Contact your national Meteorological Service, or a local Port Meteorological Office, and nominate your ship(s) for recruitment into the WMO VOS scheme.

**REMEMBER: HELP IMPROVE THE QUALITY OF FORECASTS AND
WARNINGS AND CONTRIBUTE TO THE ENHANCEMENT OF SAFETY AT SEA**

BECOME INVOLVED WITH THE VOS

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