

**WMO OMM**

World Meteorological Organization  
Organisation météorologique mondiale  
Organización Meteorológica Mundial  
Всемирная метеорологическая организация  
المنظمة العالمية للأرصاد الجوية  
世界气象组织

**Secrétariat**

7 bis, avenue de la Paix – Case postale 2300  
CH 1211 Genève 2 – Suisse  
Tél.: +41 (0) 22 730 81 11  
Fax: +41 (0) 22 730 81 81  
wmo@wmo.int – public.wmo.int

Ref.: 07122/2023-19 I/ESM

Our ref.: 07122/2023/I/ESM

5 May 2023

Annex: 1 (available in English only)

Subject: Status of, and statement of support for TurboWin (electronic logbook software used by the Ship Observations Team (SOT))

Action required: Request critically-needed support from the NMHSs that participate in the Ship Observations Team for the long-term sustainability of TurboWin

Dear Sir/Madam,

As you are aware, long-term ocean observations allow us to better understand climate change and variability and improve our forecasting of climate, weather, ocean status, environmental hazards, and their impacts. Meteorological observations made onboard ships and fixed sea stations are a substantial component of the World Weather Watch, providing high-quality observations. The observations are critical components of the Global Ocean Observing System (GOOS) and climate research and are essential for the safety of life at sea. Such data is increasingly important for supporting the Early Warnings for All initiative.

With centuries-old history, Voluntary Observing Ships (VOS) have significantly contributed to improving weather forecasts, climate studies, safety at sea, research, and validation of satellite data. VOS, part of the Ship Observations Team (SOT), operates under the WMO and IOC/UNESCO umbrella and provides real-time, efficient, and reliable data disseminated primarily using the TurboWin electronic logbook software. More than a thousand ships from several countries are currently providing their observations through the TurboWin.

TurboWin is a user-friendly, free to use and open-source electronic logbook software developed and maintained by the Royal Netherlands Meteorological Institute (KNMI) and co-funded, in recent years, by the European network of National Meteorological Services (EUMETNET) through its Surface Marine Programme (E-SurfMar) and endorsed by the SOT. TurboWin is about 20 years old and does not adhere to current technology standards. A new software version must be developed and requires a significant investment that cannot be managed within existing regular contributions.

WMO requests NMHSs who are members of the SOT to make financial and in-kind contributions to the long-term sustainability of the TurboWin, which is used as the primary electronic logbook software to collect and distribute observations made from ships. Furthermore, this is an optimum opportunity to explore the adoption of TurboWin for the collection and dissemination of ocean observations in polar regions, in recognition of the critical role that these observations play for global and regional weather and climate prediction, as well as the range of activities that many NMHSs support in these regions, e.g. ice services, support to navigation, etc.

To: Permanent Representatives of Members with WMO

cc: Mr Philippe Steeghs, Manager Research and Development Observation- and Data Technology, KNMI  
Mr Klemen Bergant, Executive Director, EUMETNET  
Mr Olivier Desprez de Gésincourt, Programme Manager, E-SurfMar  
Mr Darin Figsurskey, Chairperson of the Ship Observations Team  
Mr Joel Cabrie, Chairperson of the Voluntary Observing Ships Panel

It is critical that those NMHSs which participate in the SOT and its panels, actively join the TurboWin Partner Board to coordinate future TurboWin requirements, aligned with evolving needs, and to ensure the long-term sustainability of TurboWin through shared responsibility, including funding of the software's maintenance and development, and incorporate current technologies and data management practices.

We look forward to your continued and active participation in ocean observing activities and the SOT.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Zhang', with a stylized flourish at the end.

Dr Wenjian Zhang  
for the Secretary-General

## STATEMENT IN SUPPORT OF TURBOWIN

### A. SUMMARY

TurboWin is a user-friendly free to use and open-source electronic logbook software developed and maintained by the Royal Netherlands Meteorological Institute (KNMI) and co-funded by the European network of National Meteorological Services (EUMETNET) in recent years through its Surface Marine Programme (E-SurfMar). The TurboWin software helps to code, log, and transmit meteorological observations from observing ships. It includes built-in quality checks, help files, graphical displays, etc. TurboWin has become the standard for global Voluntary Observing Ships (VOS) programmes. More than a thousand ships from several countries are currently providing their observations through the TurboWin. However, many recruiting NMHSs do not contribute financially to software maintenance or development.

A TurboWin Partner Board meets every six months to provide a roadmap for new features to be implemented and to prioritize goals. All requests concerning changes to the content or functionality of TurboWin are discussed and decided by the partner board. The partner board includes active E-SurfMar participants and other Ship Observations Team (SOT) partners.

TurboWin is currently maintained primarily by a single developer at KNMI. It also needs to be upgraded to adhere to the current technology standards. Maintenance and development of TurboWin need to transition to a community-based approach to ensure internationally coordinated requirements and long-term sustainability of the software vital for receipt of the millions of observations collected by ships worldwide. The community-based approach also needs to include support in terms of funding from National Meteorological and Hydrological Services (NMHSs) that benefit from TurboWin.

### B. RECOMMENDATION

It is critical that NMHSs that participate in SOT and its panels actively join in the TurboWin Partner Board to coordinate TurboWin requirements and ensure the long-term sustainability of TurboWin through shared responsibility, including funding, of the software's maintenance and development. Interested Members are requested to contact Ms Champika Gallage at [cgallage@WMO.int](mailto:cgallage@WMO.int).

### C. BACKGROUND

TurboWin was developed at KNMI and in recent years co-funded by the EUMETNET members participating in the E-SurfMar Programme. The software was also endorsed by the SOT. Meteorological observations made on board ships and fixed sea stations are a substantial component of the World Weather Watch, providing high-quality accurate observations. The fixed sea stations and VOS programme are key components of the GOOS (Global Ocean Observing System) and climate research.

TurboWin has become the standard system for use by global voluntary observing ship programmes. The software is used for logging and encoding observations and assists with the transmission on board ships and fixed sea stations. The TurboWin software assists the observer with many menus, pictures, photos, forms, help pages, output options, automated calculations, etc. This is a user-friendly system with over 200 built-in quality checks. It contains observation-checking routines which are applied to the observations before they are transmitted.

TurboWin is currently maintained primarily by a single developer at KNMI. The KNMI developer is expected to maintain TurboWin through 2025. By 2026, the maintenance and development of TurboWin will need to have transitioned to a community-based approach.

The TurboWin Partner Board will actively coordinate in 2023 to develop requirements for future generations of TurboWin software to be used by NMHSs, industry, and academia. The software will support VOS, ships of opportunity, research efforts, and industry for the safety of life at sea, enhancing the Blue Economy, and to better understand our global oceans and climate. The requirements and the business plan to implement the requirements will be shared by the TurboWin Partner Board representatives with NMHS funding portfolios for support.

Continued support for TurboWin will ensure internationally coordinated requirements and long-term sustainability of the software vital for receipt of the millions of observations collected by ships around the world. The community-based approach also needs to include support in terms of funding from NMHSs that benefit from TurboWin. WMO thanks KNMI and EUMETNET E-SurfMar for their global leadership with respect to TurboWin and looking forward to the support from NMHSs to ensure TurboWin's long-term sustainability.

---