



Our ref.: 02385/2024/1/ESM/WIGOS NFP

20 February 2024

Subject: Update configuration of stations registered in OSCAR/Surface by adding the variable "snow depth", where data is exchanged internationally

Action required: To receive your response, preferably **by 31 March 2024**

Dear WIGOS National Focal Points,

I wish to refer to the decision of the Nineteenth session of the World Meteorological Congress (Cg-19), [Resolution 21](#), on the GBON Implementation, and decisions of the Extraordinary session of the World Meteorological Congress (Cg-Ext 2021), specifically: [Resolution 1](#), on the World Meteorological Organization (WMO) Unified Data Policy, [Resolution 2](#), on the Technical Regulations of the Global Basic Observing Network (GBON), and [Resolution 4](#), on WMO Vision and Strategy for Hydrology recognizing the importance of cryosphere information to the understanding of the Earth system and towards meeting the evolving needs of WMO Members.

The cryosphere has a well-documented role on weather, water, and climate. Furthermore, the Technical Regulations for GBON include snow depth as one of the required variables (see [section 3.2.2.7](#) of the [Manual on the WMO Integrated Global Observing System – WIGOS](#) (WMO-No. 1160)), given its use as input to Numerical Weather Prediction (NWP), as well as for operational forecasts, seasonal forecasts, and climate reanalysis.

As part of the implementation of the Cg-Ext 2021 Resolution on GBON, WMO, in collaboration with the European Centre for Medium-Range Weather Forecasts (ECMWF), have initiated a review of the international exchange of snow depth data, according to the provisions of the [Manual on WIGOS](#) (WMO-No. 1160), in particular [section 2.5.1.1](#), which states that "*For all WIGOS observations they make available internationally, Members shall record and retain the observational metadata specified as mandatory in Appendix 2.4 and in the [WIGOS Metadata Standard](#) (WMO-No. 1192)*" as well as provisions under [section 2.5.3](#). The result of this review is expected to facilitate the implementation and monitoring of GBON requirements for the variable snow depth, globally.

In this sense, in February 2022, ECMWF provided a report indicating that they regularly received snow depth observations from over 4500 stations that were already registered in OSCAR/Surface. Of those, only about 700 stations were including snow depth as one of their registered observed variables. In 2023, WMO worked with the WIGOS National Focal Points of five WMO Members, Iceland, Canada, Portugal, Iran (Islamic Republic of), and Norway, identified by ECMWF as having stations which were missing snow depth as a variable on their configuration in OSCAR/Surface. Following this pilot project, the stations operated by these Members have been updated, accordingly.

The Excel files available [here](#), provide the list of stations which require addressing the discrepancy on the representation of snow depth observations, and this is presented by WMO Member, for easy review. The legend for the information provided is available in the headers of the table.

To: WIGOS National Focal Points

cc: OSCAR/Surface National Focal Points

As a next step, we wish to address this discrepancy with all remaining WMO Members. To this effect, we would like to invite you to work with the Infrastructure Department of the WMO Secretariat to ensure that the existing snow depth observations which are exchanged internationally by your country are accurately reflected in OSCAR/Surface, consistent with the data identified by ECMWF.

To complete this action, you are invited to identify the method by which your country prefers to add the variable snow depth to the stations operated by your country and registered in OSCAR/Surface, which are identified in the Excel files referenced above, specifically:

- (1) Your OSCAR/Surface National Focal Point should examine the registration of snow depth variable of the stations already registered in OSCAR/Surface. Where missing, the OSCAR/Surface National Focal Point is invited to add the missing metadata, e.g., associate the snow depth variable with the station, indicating deployment and the reporting schedule.
- (2) Upon request, the WMO Secretariat is able to add the snow depth variable to stations already registered in OSCAR/Surface, by working with MeteoSwiss, the host and operator of OSCAR/Surface. In this case, the additional information on deployment and the reporting schedule will have to be added, at a later date, by the station Point of Contact.

The WMO Secretariat is committed to give full support in implementing these changes, based on your preferred approach.

Please review the two options proposed above and send your preferred option to Ms Ran ZHANG at cryosphere@wmo.int, preferably by **31 March 2024**. Should you have any questions, please contact us via the same email address.

Thank you for your active engagement with WMO and for your contribution to the implementation of WIGOS activities.

Yours faithfully,



Mr Nir Stav
Director
Infrastructure Department