

Nomination of the Slovak meteorological station as candidate station for the WMO Centennial observing station

The Slovak Hydrometeorological Institute nominated the Hurbanovo meteorological station (WIGOS Station Identifier 0-20000-0-11858), started the observations in 1872, as the candidate for the Centennial observing station in the frame of the WMO recognition Mechanism (<https://public.wmo.int/en/our-mandate/what-we-do/observations/centennial-observing-stations>) as described below. The date of nomination is 31 January 2020.

WMO Recognition Mechanism

Background

In May 2013, the 66th session of the Executive Council requested the Commission for Climatology (CCI), together with the Global Climate Observing System (GCOS) and the Commission for Instruments and Methods of Observations (CIMO), to investigate site certification mechanisms, network criteria and monitoring principles in order to set-up an appropriate mechanism for recognizing centennial observing stations based on a minimum set of objective assessment criteria. In November 2013, two experts, Ingeborg Auer of ZAMG, Austria, and Michel Leroy of Météo-France, France, developed the draft criteria for the recognition centennial observing stations from climatological and instrumentation perspectives.

In a June 2014 scoping meeting, experts from WMO Members, CCI, the Commission for Basic Systems (CBS), CIMO, GCOS, WMO Integrated Observing System (WIGOS) and the Secretariat consolidated the criteria and proposed the mechanism, which the three Commission in questions - CCI, CIMO and CBS - agreed to support.

In June 2015, the Seventeenth World Meteorological Congress requested the Secretary-General to facilitate Members' collaboration with CCI (including the contributions of GCOS, CIMO and CBS) in testing the implementation of this mechanism on a limited number of stations and to submit the conclusions for consideration by the Executive Council (Resolution 35 (Cg-17)). In June 2016, the 68th Executive Council endorsed the mechanism and invited CCI to lead in its implementation in close collaboration with CIMO, CBS and GCOS.

The Advisory Board for Recognition of Long-term Observing Stations reviewed the performance of the WMO recognition mechanism in November 2019 posted under WMO Recognition Mechanism on <https://public.wmo.int/en/our-mandate/what-we-do/observations/centennial-observingstations>).

Recognition criteria

Mandatory criteria:

- a. The observing station was founded at least 100 years ago, observing at least one meteorological element since then, and is in operation as an observing station at the date of nomination;
- b. Periods of inactivity of the observing station shall not exceed 10%;
- c. The minimum historic station metadata for the full duration of the station operation shall contain actual or derived geographical coordinates including elevation, known

- changes of station name and/or station identifier, identified meteorological element(s) and its unit(s), as well as the observing schedule(s);
- d. Any known observing station relocation or change in the measurement technique has not significantly affected the climatological time-series data. Note: Documented data homogenization for the observing stations considered compliant with Criterion d;
 - e. All historic observational data and metadata have been digitally archived, or will be rescued. Members are requested to share their plans for data rescue, if applicable;
 - f. The observing station shall be operated according to WMO observing standards and to the Manual of the WMO Integrated Global Observing System (WMO-No. 1160) and the Guide to Instruments and Methods of Observation (WMO-No.8); Note: explanatory information should be provided for those station that do not meet current WMO observing standards
 - g. The current environment of the observing station has been classified or will be classified according to the siting classification defined in *the Guide to Meteorological Instruments and Methods of Observation* (WMO-No. 8). Members are requested to share the results of the siting classification for the nomination process and any future re-nomination;
 - h. The observed and measured data shall be subject to routine quality control procedures according to the current WMO guidelines and practices. The quality control processes as well as its results shall be well documented;
 - i. Members shall do their utmost to maintain nominated stations according to the above recognition criteria.

Desirable criteria:

- a. Free and unrestricted data access [definition cf. Resolution 40 (Cg-XII) - WMO Policy and Practice for the Exchange of Meteorological and Related Data and Products including Guidelines on Relationships in Commercial Meteorological Activities (*Twelfth World Meteorological Congress: Abridged final report with resolutions* (WMO-No. 827))], should be granted to the data including respective metadata;
- b. Observing station time series data should be subject to quality control;
- c. Observing station time series should be subject to homogeneity testing and homogenization, if applicable. (Note: Important for any centennial observing station is that the distribution of its observed data allows testing homogeneity and that possible breaks in the series are distributed in a way that the time series can be homogenized. A sufficient number of neighboring stations will facilitate the homogenization procedure. It is fundamental to preserve the original data before any further treatment. In case of homogenization the original as well as the homogenized series shall be stored.).

Recognition mechanism

WMO Recognition mechanism for long-term observing stations:

- a. Send out to Members, on a regular basis (e.g. every second year), a permanent invitation to apply for WMO recognition of centennial observing stations as per above criteria;

[Note: The invitation will include the list of recognition criteria to be ticked off and commented on by Members for each nominated observing station. Further, it will include information on the review cycle (e.g. once a year), and it will request nomination of a national focal point including information of his/her official position in the respective organization. Members will be encouraged to include into their applications nominations from observing station operators outside the NMHS.]

- b. Review of nominations received from NMHSs by an Advisory Board for the recognition of long-term observing stations consisting of experts from CCI (lead), CBS, CIMO, GCOS and regional associations, as appropriate;
- c. Recommendations for formal recognition to be tabled at Executive Council sessions;
- d. Stations to be listed in the WIGOS Information Resource (WIR);
- e. WMO to run, and to keep up-to-date, a special website and a brochure on centennial observing stations indicating their particular importance, with reference to the above mentioned station list;
- f. Nominations to be renewed every ten years.

Advisory board for the recognition of long-term observing stations:

The advisory board consists of experts from CCI, CBS, CIMO, GCOS and Regional Associations. The work of the advisory board is coordinated by the WMO Secretariat (responsible officer: Mr Peer Hechler; wcdmp@wmo.int).

Terms of Reference

- Advise of the operational implementation of the WMO recognition mechanism for long-term observing stations
- Analyse self-assessment templates for candidate stations submitted by Members and propose a list of long-term observing stations to be recognised by WMO Executive Council
- Guide the further evolution of the WMO Webpages for long-term observing stations
- Review the implementation of the recognition mechanism bi-annually and provide relevant recommendations to WMO subsidiary bodies.

Current membership

- Mr Zeke Hausfather (Commission for Climatology - CCI)
- Mr Bruce Hartley (Commission for Instruments and Methods of Observation - CIMO)
- Mr Stuart Goldstraw (Commission for Basic Systems - CBS)
- Mr Tim Oakley (Global Climate Observing System - GCOS)
- Ms Carmenmaria Beltrano (National expert, Italy)

Available docs

Self-assessment template for nomination of candidate stations

Download the: WMO centennial observing stations Criteria self-assessment template (other languages in the invitation letter)

WMO letters inviting nominations of candidate