

## WMO candidate centennial observing station self-assessment template

Important notes:

- **Please send the filled-in template (one template for one observing station) to [wcdmp@wmo.int](mailto:wcdmp@wmo.int)**
- Station operators are encouraged to **provide sufficient information in the 'References/Remarks' column** to facilitate the assessment by the Advisory Board. Station operators are encouraged to attach additional documentation and photos to be made available publicly, however, this additional information is not core to the assessment.
- Information in the self-assessment template **MUST BE TYPED** (handwritten information cannot be processed). A WORD version of the template can be downloaded from <https://public.wmo.int/en/our-mandate/what-we-do/observations/centennial-observing-stations> -> WMO Recognition Mechanism -> WMO letters inviting nominations
- Station operators are invited to **consider filling the template in English language** in order to accelerate the recognition assessment.
- The correctness of the information provided in the template is under **the sole responsibility of the station/network operator**. The Advisory Board performs its assessment based on the completed template considering additional global information. The information provided by the station operator in the template **will be made available publicly** for user review.

### 1. Current station information

<b>Station name</b>	Hurbanovo	
<b>Start of observations (year)</b>	1872	
<b>WIGOS Station Identifier</b> and other current station identifiers, where available	0-20000-0-11858 (in the SHMI climatological database: 11858, in the SHMI precipitation database: 19040)	
<b>Station latitude and longitude<sup>1</sup></b>	Lat.: 47 ° 52 ' 21 '' Long.: 18 ° 11 ' 35 ''	
<b>Station elevation<sup>1</sup> (meter above MSL)</b>	115 m (terrain below the temperature screen)	
<b>Country/Place</b>	Slovakia	
<b>WMO Region</b>	RA VI	
<b>Institution</b>	Slovak Hydrometeorological Institute, Jeséniova 17, 833 15 Bratislava (SHMI)	
<b>Name of contact person</b>	Katarína Mikulová	<b>Email address</b> katarina.mikulova@shmu.sk

<sup>1</sup> Cf. Guide to Instruments and Methods of Observation (WMO-No. 8) – *Coordinates of the station*

## 2. Mandatory criteria

Criteria	Compliance (Yes/No)	References / Remark
(1) 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.	Yes	<p>Observations in 1872 were starting with air temperature, humidity, cloudiness, wind and air pressure regular measurement and observation. Later the measurements were extended:  <a href="http://www.shmu.sk/File/projekty/Hurbanovo_2020/2_Station_Hurbanovo_Meteorological_elements.pdf">http://www.shmu.sk/File/projekty/Hurbanovo_2020/2_Station_Hurbanovo_Meteorological_elements.pdf</a></p> <p>Data in electronic database KMIS are available in the period 01.01.1872 -31.01.2020:  <a href="http://www.shmu.sk/File/projekty/Hurbanovo_2020/3_Hurbanovo_actual_stored_data_in_database_KMIS.pdf">http://www.shmu.sk/File/projekty/Hurbanovo_2020/3_Hurbanovo_actual_stored_data_in_database_KMIS.pdf</a></p> <p>Current meteorological data are available on SHMI web page:  <a href="http://www.shmu.sk/en/?page=1&amp;id=meteo_apocasia_sk">http://www.shmu.sk/en/?page=1&amp;id=meteo_apocasia_sk</a></p>
(2) Periods of inactivity of the observing station shall not exceed 10 %.	Yes	<p>The longest break in observation was the period March - December 1888. The rest of data gaps was rare and occasional more in document:  <a href="http://www.shmu.sk/File/projekty/Hurbanovo_2020/1_Station_Hurbanovo_description_and_history_2020.pdf">http://www.shmu.sk/File/projekty/Hurbanovo_2020/1_Station_Hurbanovo_description_and_history_2020.pdf</a></p>
(3) The minimum historic station metadata for the full duration of 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).	Yes	<p>The historic station metadata are in the ISMAK – internal information system for Meteorology and Climatology (<a href="http://webapp.shmu.sk/ismak/index.php?atklogout=1">http://webapp.shmu.sk/ismak/index.php?atklogout=1</a>) available for internal users only.</p> <p>The basic station metadata are in SHMI web page: <a href="http://www.shmu.sk/en/?page=2403">http://www.shmu.sk/en/?page=2403</a></p>
(4) Any known observing station relocation or change in the measurement technique have not significantly	Yes	<p>The relocation of the station was within distance of 300 m in the area of the Observatory. From September 1900 the station is in the same place till now. More detailed information are on:</p>

<p>affected the climatological time-series data. <i>Note: Documented data homogenization for the observing station is considered compliant with criterion 4.</i></p>		<p><a href="http://www.shmu.sk/File/projekty/Hurbanovo_2020/5_Hurbanovo_map_of_station_changes.pdf">http://www.shmu.sk/File/projekty/Hurbanovo_2020/5_Hurbanovo_map_of_station_changes.pdf</a></p>
<p>(5) 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.</p>	<p>Yes</p>	<p>The historic observation data of the period 1872 - 1950 were rescued and stored in the electronic database KMIS of the SHMI and the data rescue activities were presented in some conferences (<a href="http://www.shmu.sk/en/?page=2406">http://www.shmu.sk/en/?page=2406</a>). The KMIS database contains all data from Hurbanovo for the period 1872 till now:  <a href="http://www.shmu.sk/File/projekty/Hurbanovo_2020/1_KMIS_Hurbanovo_1872.pdf">http://www.shmu.sk/File/projekty/Hurbanovo_2020/1_KMIS_Hurbanovo_1872.pdf</a> and  <a href="http://www.shmu.sk/File/projekty/Hurbanovo_2020/3_Hurbanovo_actual_stored_data_in_database_KMIS.pdf">http://www.shmu.sk/File/projekty/Hurbanovo_2020/3_Hurbanovo_actual_stored_data_in_database_KMIS.pdf</a>  Historic metadata are stored in in the ISMAK – internal information system for Meteorology and Climatology (<a href="http://webapp.shmu.sk/ismak/index.php?atklogout=1">http://webapp.shmu.sk/ismak/index.php?atklogout=1</a>) available for internal users only and now are available on: <a href="http://www.shmu.sk/en/?page=2403">http://www.shmu.sk/en/?page=2403</a></p>
<p>(6) The observing station shall be operated according to WMO observing standards according to the Manual on the WMO Integrated Global Observing System (WMO-No. 1160) and the Guide to Instruments and Methods of Observation (WMO-No. 8).   <i>N.B.: Explanatory information should be provided for those stations that do not meet current WMO observing standards.</i></p>	<p>Yes</p>	<p>The station observations are in the accordance with the WMO regulations, manuals and guides, the list of used Guides is on:  <a href="http://www.shmu.sk/File/projekty/Hurbanovo_2020/4_List_of_related_documentation_Climate_Monitoring.pdf">http://www.shmu.sk/File/projekty/Hurbanovo_2020/4_List_of_related_documentation_Climate_Monitoring.pdf</a>  and some of examples are on: <a href="http://www.shmu.sk/en/?page=2405">http://www.shmu.sk/en/?page=2405</a>. SHMI has a certified quality management system according to ISO 9001:2015 for monitoring of indicators characterizing the state of air in the territory of the Slovak Republic. Hurbanovo station is in the annex of this certificate:  <a href="http://www.shmu.sk/File/projekty/Hurbanovo_2020/1_Certificate_of_Quality_Management_System_of_SHMI.pdf">http://www.shmu.sk/File/projekty/Hurbanovo_2020/1_Certificate_of_Quality_Management_System_of_SHMI.pdf</a>  The temperature measurement was provided with height of thermometers bulb over terrain: 130 cm (1872 – 1880), 110 cm (1881 – 1900) and 165 cm (1901 – till now)</p>
<p>(7) The current environment of the observing station has been classified or will be classified according to the</p>	<p>Yes</p>	<p>The siting classification from the year 2019 was made separately for air temperature and humidity, precipitation, wind and sunshine duration measurements and finally the global classification was</p>

<p>siting classification defined in the Guide to 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.</p>		<p>determined. This classification is available on <a href="http://www.shmu.sk/en/?page=2403">http://www.shmu.sk/en/?page=2403</a>, where we can find also the radiation horizon from Hurbanovo station. Maps, station position plan and station layout are on: <a href="http://www.shmu.sk/en/?page=2402">http://www.shmu.sk/en/?page=2402</a>. Some photos (both historical and actual) are available on: <a href="http://www.shmu.sk/en/?page=2404">http://www.shmu.sk/en/?page=2404</a>.</p>
<p>(8) The observed and measured data shall be subject to routine quality control procedures according to current WMO guidelines and practices. The quality control processes as well as its results shall be well documented.</p>	<p>Yes</p>	<p>The routine quality control consists of manual and automatic control. The quality control processes are documented in guidelines of SHMI (compatible with the WMO guidelines and practices) on: <a href="http://www.shmu.sk/en/?page=2405">http://www.shmu.sk/en/?page=2405</a>.</p>
<p>(9) Members shall do their utmost to maintain nominated stations according to the above recognition criteria.</p>	<p>Yes</p>	<p>The station is in the list of basic reference stations of SHMI, where the classical meteorological measurements and observations will be retained.</p>

### 3. Desirable criteria

Criteria	Compliance (Yes/No)	References / Remarks
(a) <b>Free and unrestricted data access</b> [definition cf. Resolution 40 (Cg-XII)] <b>should be granted to the data including respective metadata</b>	Yes	Data and metadata for non-commercial research and education are available in the EUROPEAN CLIMATE ASSESSMENT & DATASET (ECA&D), in the stations list the Hurbanovo station is with no 227: <a href="http://www.ecad.eu">http://www.ecad.eu</a>
(b) <b>Observing station time series data should be subject to quality control.</b>	Yes	The quality control of time series data from 1872 was performed within the activities of Data Rescue: <a href="http://www.shmu.sk/en/?page=2406">http://www.shmu.sk/en/?page=2406</a>
(c) <b>Observing station time series should be subject to homogeneity testing and homogenization, if applicable.</b>	Yes	The homogeneity tests were applied for monthly and daily data in the frame of CARPATCLIM project: ( <a href="http://www.carpatclim-eu.org/pages/home/">http://www.carpatclim-eu.org/pages/home/</a> ).