

Climatological Standard Normals: 1991-2020

- Recommendation for EC-73
- **July 2021:** call for submission of Climatological Standard Normals 1991-2020
- **October 2021 - March 2022 - December 2022:** Collection Periods
- **Spring 2023:** Provisional Publication

Questions and Remarks from ET-DRC and other experts

1. which parameters will be included in the publication, will it be principal and secondary parameters (ET-DRC, María de los Milagros)

If we refer to the last WMO call for Normals and with the WMO GUIDELINES ON THE CALCULATION OF CLIMATE NORMALS **WMO- No.1203, 2017 Edition**, we could have nearly 100 parameters broken down as follows

Principal climatological surface parameters. These are defined in Calculation of Monthly and Annual 30-year Standard Normals (**WMO- No.1203, 1989 Edition**). **8 parameters.**

Secondary climatological surface parameters. These are parameters not included in (a) above, but which are reported in standard CLIMAT messages. **18 parameters.**

Other climatological surface parameters. These are parameters that are not routinely exchanged using the standard CLIMAT message but may still be of interest for national or regional purposes. **60 parameters.**

See the [Excel template for the 1981-2010 Climatological Standard Normals collection](#)

I have not been able to find the CLINO 1961-1990 on-line. It seems that there is a CD-ROM but the links provided on the WMO Web site (https://library.wmo.int/index.php?lvl=notice_display&id=7784), and, https://www.wmo.int/pages/prog/wcp/wcdmp/GCDS_1.php do not give answers. (ET-DRC, Denis STUBER)

2. Be careful to regularly update the reference values (Standard Normals) if any change in the observation methods or in the environment (ET-DRC, Jose A Guijarro).
 - ➔ Collaborate with INFCOM on operational arrangements for the collection, quality control and publication of the Climatological Standard Normals
 - ➔ In the annex, it is said that the publication Standard Normals are subject to data quality considerations.
 - ➔ 1.3.1.2 Each Member should establish normals (including climatological standard normals) and **periodically revise them as appropriate**, (WMO- No 1238).

3. Roßkamp Elke (DWD, GSN Monitoring Centre), and Denis Stuber came to the conclusion that there is not a clear statements in WMO documents on the period to use for the CLIMAT message. Should there be a recommendation for the period to apply on Normals in the CLIMAT messages for this EC decision? (ET-DRC, Markus Ziese)
 - ➔ “Not relevant to this current computation effort, although it arguably needs to be a focus for SERCOM in the near future. (**William Wright**)”
 - ➔ “Better to concentrate on CLINO” (**WMO, Omar Baddour**)

4. Who is the target of consultations? be more specific about "climate data managers"? (ET-DRC, Rachid Sebbari)
 - ➔ “A series of online Regional Association consultations will be arranged by the Secretariat to promote the calculation of Climatological Standard Normals 1991-2020 and to facilitate the exchange of information **among climate data managers** in order to underpin the Normals’ calculation and WMO collection processes”

5. To specify from which observation the Normals need to be submitted: RBSN, RBCN, other in situ obs, or including gridded datasets (ET-DRC, Urip Haryoko)
 - ➔ For as many stations as possible from your country, including stations registered in the Observing Systems Capability Analysis and Review tool for surface-based observations (OSCAR/Surface), and in particular for stations that (i) constitute the Regional Basic Climatological Networks (RBCNs), (ii) report monthly CLIMAT messages, and (iii) contribute to the World Weather Records collection. (**WMO Secretariat for the Climatological Standard Normals 1981-2010, August 2018**)

6. Regarding “provisional”. I might be wrong, but since it is a term already used for the calculation of means for any period, it could generate some confusion to providers. Perhaps "temporary/transitory" ? (ET-DRC, Reinaldo Silveira)
 - ➔ **Provisional Climatological normals:** Averages of climatological data inside the standard period normals (e.g. 1961-1990) computed with less than 30 years but **at least with 10 years**. In that case provisional monthly or annual normals should be identified by a “**provisional**” indicator. (**WMO TD 341 “Calculation of monthly and annual 30-year standard normals**)

7. I could not find information on the data structures and formats to be used to ensure consistent data is supplied by all NMHS (ET-DRC, Bruce Bannerman)
 - ➔ Excel template for the 1981-2010 Climatological Standard Normals collection (https://www.wmo.int/pages/prog/wcp/wcdmp/GCDS_1.php)

8. Question about estimation, interpolation for missing data? (ET-DRC, Bruce Bannerman)

➔ There is a lack of WMO guidelines for this area. References in mathematics and statistics?

9. So it may be worth considering sending out a link to WMO No 1203 along with this initial request (ET-DRC, William Wright)

➔ Could we add the reference in the justification of the draft decision? (**WMO Guidelines on the Calculation of Climate Normals, WMO-No. 1203, 2017 Edition**)

“Justification:

- Resolution 16 (Cg-17) – Report of the sixteenth session of the Commission for Climatology
- Resolution 81 (Cg-18) – WMO mandatory publications and distribution policy for the eighteenth financial period
- Technical Regulations, Basic Documents No. 2, Volume I – General Meteorological Standards and Recommended Practices (WMO-No. 49), WMO 2019
- Manual on HQ-GDMFC (WMO-No. 1238)”

10. I presume that a template will be provided at a later date to NMHSs to assist them with their calculations. Apart from individual NMHSs, this should be made available to CDMS developers at the earliest opportunity, so that it can be hard-wired into their software. (ET-DRC, William Wright)

➔ Excel template for the 1981-2010 Climatological Standard Normals collection (https://www.wmo.int/pages/prog/wcp/wcdmp/GCDS_1.php)

11. Noting the requirements for a minimum number of years' data in WMO No 1203, could we not take the opportunity to request that Members prioritise data rescue/digitisation, and associated quality control, of at the least the years required to compute the 1991-2020 and 1961-90 Normals? . (ET-DRC, William Wright).

➔ During the Regional Association consultations?

12. No justification to mention the Technical Regulation, WMO-No. 49, Edition 2019 (ET-DRC, Denis STUBER)

➔ The 2019 Edition of the Technical Regulation does not specify any recommendation on Normals unlike the 2011 Edition. Recommendations are now specify in the “Manual on the High-quality Global Data Management Framework for Climate, WMO-No. 1238”.

13. Replace the acronym HQ-GDMFC by the full terms (ET-DRC, Denis STUBER)

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- ~~— Manual on HQ-GDMFC (WMO-No. 1238)“~~
- Manual on the High-quality Global Data Management Framework for Climate, WMO-No. 1238, 2019 Edition
- WMO Guidelines on the Calculation of Climate Normals, WMO-No. 1203, 2017 Edition