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| WEATHER CLIMATE WATER | **World Meteorological Organization****COMMISSION FOR WEATHER, CLIMATE, WATER AND RELATED ENVIRONMENTAL SERVICES AND APPLICATIONS****Second Session**17 to 21 October 2022, Geneva | **SERCOM-2/INF. 5.5(5)** |
| Submitted by:Chair of SC-CLI 29.IX.2022 |

## WMO COLLECTION OF 1991–2020 CLIMATOLOGICAL STANDARD NORMALS (CLINO)

### Definition and importance of CLINO

Climatological Standard Normals are averages of climatological data computed for the following consecutive periods of 30 years: 1 January 1981–31 December 2010, 1 January 1991–31 December 2020, and so forth ([*WMO Technical Regulations, Volume 1: General Meteorological Standards and Recommended Practices*](https://library.wmo.int/index.php?lvl=notice_display&id=14073#.Yw9JbHZBwuU) (WMO-No. 49)).

Climate normals are used for two principle purposes. They are widely used, implicitly or explicitly, as a characterization of the average conditions most likely to be experienced in a given location, thereby providing authoritative input to many national and international standards and regulations. They are also used as a benchmark against which recent or current weather or climate conditions can be compared.

The publication of a consolidated global CLINO data set assembled from Members’ submissions represents a fundamental flagship product of WMO and its predecessor International Meteorological Organization (IMO) since almost 100 years. Graded as WMO mandatory publication, CLINO underpin many national, regional and global climate and weather applications as well as national and international norms and statistics.

### WMO activities to facilitate the collection of CLINO 1991–2020

A WMO call for submission of CLINO 1991–2020 including detailed format specifications and collection process had been issued in August 2021. The deadline for submissions was 31 March 2022. A second call for submission was issued in May 2022, thereby extending the deadline to 31 December 2022.

Two series of online regional consultations for all WMO Regional Associations had been arranged by the Secretariat in June 2021 and June 2022 to promote the calculation of CLINO 1991–2020 and to facilitate the exchange of information among National Meteorological and Hydrological Services (NMHSs) in order to underpin the normals’ calculation and WMO collection processes. More than 700 experts from more than 100 Members attended these consultations.

Made aware of a slow response rate by Members (45 out of 193 Members submitted CLINO 1991–2020 by 4 April 2022), EC-75 decided to accelerate WMO collection of CLINO 1991–2020. [EC-75/Doc 3.2(2)](https://meetings.wmo.int/EC-75/_layouts/15/WopiFrame.aspx?sourcedoc=/EC-75/English/2.%20PROVISIONAL%20REPORT%20(Approved%20documents)/EC-75-d03-2(2)-CLIMATOLOGICAL-STANDARD-NORMALS-approved_en.docx&action=default) lists several measures to further promote among Members the timely calculation and WMO collection of CLINO 1991–2020, which includes engagement of WMO Regional Associations and Technical Commissions.

### Deadline and publication date

31 December 2022 is the definite deadline for Members’ CLINO submissions. The publication of CLINO 1991–2020 as WMO mandatory publication is planned for the second half of 2023, following final global quality control and data set consolidation throughout January to June 2023. A final CLINO collection assessment report will be delivered to the World Meteorological Congress at its nineteenth session (Cg-19).

### Status of Member submissions as of 26 September 2022

### 74 out of 193 Members submitted CLINO 1991–2020 by 26 September 2022.

### This raises the concern of meeting the deadline for completing the CLINO collection in 2022. An urgent collective action involving Members, WMO Secretariat, Technical Commissions and Regional Associations is needed to accelerate Members’ data submission and collection.

### Implications of non-delivery

Missing CLINO 1991–2020 will seriously hamper the quality of Members’ and WMO’s products and services. Operational monitoring and prediction products, such as El Niño-Southern Oscillation (ENSO) monitoring, CLIMAT messages, State of Climate reports, seasonal forecasts etc. will suffer from a non-delivery of updated CLINO. These products will lose their modern relevance for various application sectors as a result of the changing climate.

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