

WMO standard climatological  
products:

# World Weather Records

WMO-DGM

8 November 2021

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# Outline

## ***Structure of the talk:***

- ***Description, history and importance of WWR***
- ***WMO collection mechanism for WWR***
- ***WMO Guidelines for the submission of the World Weather Records 2011+***
- ***Useful references***

# Description, history and importance of WWR

World Weather Records (WWR) is a publication of worldwide monthly and annual means of **observational station data**. They constitute one of the very few routine global collection mechanisms for climate data (others are: CLIMAT, CLINO)

Data were supplied by National Meteorological Services and basically include monthly and annual means of:

- |                       |                       |
|-----------------------|-----------------------|
| - Station pressure    | - Mean temperature    |
| - Sea level pressure  | - Maximum temperature |
| - Total precipitation | - Minimum temperature |

And also Monthly means of **Relative Humidity**.

It was Initiated by a resolution at the 1923 International Meteorological Organization (IMO) Conference. To provide long and homogenous series of observations in the form of monthly means of pressure, temperature and precipitation.

Period of record data through 1920 were included in the 1st Series of WWR. Since that time, WWRs have been collected for each decade until the 10th Series of WWR covering 2001-2010.

With the last decades' outstanding technological capabilities and the need for annual updates to World Weather Records, **EC 64 in 2012, through Resolution 14**, decided to improve the current practice which is based on a 10-year cycle for the computation and submission of WWRs by migrating to an annual cycle in updating and submitting WWRs;

# Description, history and importance of WWR

World Weather Records data are the foundation for understanding global and regional climate variability and change. In fact, a significant percentage of station data in global datasets come from World Weather Records, which greatly enhances climate analyses.

## Benefits of Annual Updates to World Weather Records

- Data can be efficiently and consistently incorporated into climate monitoring activities to provide perspectives on the State of the Earth's climate.
- Climate assessments including IPCC reports will benefit greatly from timely access to temperature, precipitation, and pressure observations.
- Up-to-date information will aid climate change planning and adaptation activities.
- Data will be available to support the climate needs of public and private decision makers.
- Member States will be able to establish routine procedures to support annual updates that will not require lengthy reallocation of personnel resources as is currently required for decadal updates.
- An important part of efforts to enhance climate observations and monitoring within the Global Framework for Climate Services.

# WMO collection mechanism for WWR

A WMO call for WWR submission is issued each year in late spring  
WMO Call will provide detailed guidance on the WWR submission process including stations, parameters and formats. **Submissions (EXCEL or ASCII) to be sent to respective LC for GCOS**

Ref.: 09732/2020-S/CS/CMP/WWR-2020

**WMO OMM**  
World Meteorological Organization  
Organisation météorologique mondiale  
Organización Meteorológica Mundial  
Всемирная метеорологическая организация  
المنظمة العالمية للأرصاد الجوية  
世界气象组织

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Our ref.: 09732/2020/S/CS/CMP/WWR-2020  
Annex: 1 (available in English only)  
Subject: Collection of data for publication in World Weather Records 2018 and 2019  
Action required: Submission of data as soon as possible **but not later than 31 July 2020**

Dear Sir/Madam,

I wish to inform you that arrangements have been made for the collection of the World Weather Records (WWR). As you may recall, the Seventeenth World Meteorological Congress (Cg-17) noted the successful implementation of the new approach for the annual submission of WWR and urged Members to submit their data in a timely manner as described by [Resolution 14 \(EC-64\)](#) – Submission of World Weather Records on an annual basis (*Executive Council: Abridged Final Report of the sixty-fourth session* (WMO-No. 1092)).

I invite you therefore to prepare the data for stations from your country published in the World Meteorological Organization's (WMO) Observing Systems Capability Analysis and Review Tool for surface-based observations (OSCAR/Surface, see: <https://oscar.wmo.int/surface>). The data should cover 2018 and 2019 and, **if not submitted yet**, please also provide the corresponding data for the periods 1991-2000, 2001-2010 and for the years 2011, 2012, 2013, 2014, 2015, 2016 and 2017. I would like to emphasize that our databases show big data gaps in most parts of the world for the periods/years mentioned above.

It is requested that data be digitized and provided in either EXCEL or text format, following the attached updated draft *Guidelines for the Submission of the World Weather Records 2011+* (WMO-No. 1186), (draft version 3.0 of May 2020). Updates comprise a revised (logical) sequence of climatic elements (Section II.1), related template adjustments including the accommodation of WIGOS Station Identifiers (Section II.2) and a revision of the WWR collection mechanism (Annex 1). Updated EXCEL and text file templates are available here: <https://community.wmo.int/world-weather-records-wwr>.

Ref.: 06677/2021-S/CS/CMP/WWR2020

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Our ref.: 06677/2021/S/CS/CMP/WWR2020  
Subject: Postponement into 2022 of the annual collection of data for publication in World Weather Records

30 March 2021

Dear Sir/Madam,

I wish to inform you that the collection of World Weather Records (WWR) 2020 will be postponed into 2022 and a separate WMO call will be issued in 2022 for the joint collection of 2020 and 2021 World Weather Records. The postponement has been proposed to allow focusing resources on the collection of the new Climatological Standard Normals 1991-2020, which is expected to start in October 2021 (a separate WMO call will be issued in due time).

Should you require further clarification, please do not hesitate to contact the WMO Climate Monitoring and Policy Services Division (Mr Omar Baddour and Mr Peer Hechler at the following email address: [wcdmp@wmo.int](mailto:wcdmp@wmo.int)).

I wish to thank you for your continued support to the WMO activities.

Yours faithfully,



Dr Elena Manaenkova  
for the Secretary-General

## WMO collection mechanism for WWR

Prepare the data for stations from your country published in OSCAR/Surface

It is requested that data be digitized and provided in either EXCEL or text format

Data to be sent to the respective Lead Centre for the Global Climate Observing System (GCOS) for format check :

**Lead Centre for GCOS Africa: DGM - National Meteorological Service of Morocco : [cbs.lead.centre.4gcos@gmail.com](mailto:cbs.lead.centre.4gcos@gmail.com)**

Lead Centres to forward data to the World Data Center for Meteorology at NOAA/NCEI

Annual updates of WWR collected under this scheme and quality-controlled thereafter are accessible through the World Data Center for Meteorology. (direct link : <https://www.ncei.noaa.gov/data/world-weather-records/>)

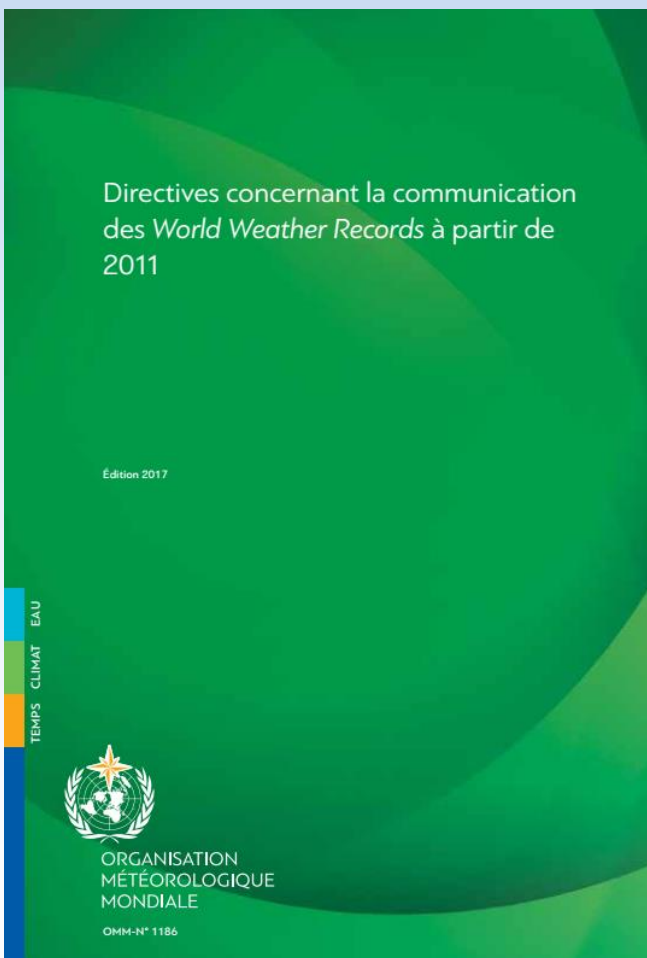


# WMO collection mechanism for WWR

<i>Region</i>	<i>Member States/ Territories</i>	<i>Collection mechanism</i>	<i>Alternative</i>
RA I	All Members of RA I	CBS Lead Centre for GCOS Africa, Morocco (DMN*); <a href="mailto:cbs.lead.centre.4gcoss@gmail.com">cbs.lead.centre.4gcoss@gmail.com</a>	WMO, Geneva; <a href="mailto:wcdmp@wmo.int">wcdmp@wmo.int</a>
RA II	All Members of RA II	CBS Lead Centre for GCOS Asia, Japan (JMA*); <a href="mailto:climatemonitor@met.kishou.go.jp">climatemonitor@met.kishou.go.jp</a>	WMO, Geneva; <a href="mailto:wcdmp@wmo.int">wcdmp@wmo.int</a>
RA III	All Members of RA III	CBS Lead Centre for GCOS South America, Chile (DMC*); <a href="mailto:gtorres@meteochile.cl">gtorres@meteochile.cl</a>	WMO, Geneva; <a href="mailto:wcdmp@wmo.int">wcdmp@wmo.int</a>
RA IV	All countries of RA IV	CBS Lead Centre for GCOS North and Central America and the Caribbean, United States (NCEI*); <a href="mailto:gcoss.ncdc@noaa.gov">gcoss.ncdc@noaa.gov</a>	WMO, Geneva; <a href="mailto:wcdmp@wmo.int">wcdmp@wmo.int</a>
RA V	All Members of RA V	CBS Lead Centre for GCOS South West Pacific, Australia, (BOM*); <a href="mailto:GCOS_Lead_Centre_RAV@bom.gov.au">GCOS_Lead_Centre_RAV@bom.gov.au</a>	WMO, Geneva; <a href="mailto:wcdmp@wmo.int">wcdmp@wmo.int</a>
RA VI	All Members of RA VI	CBS Lead Centre for GCOS Europe, Germany (DWD*); <a href="mailto:christiana.lefebvre@dwd.de">christiana.lefebvre@dwd.de</a>	WMO, Geneva; <a href="mailto:wcdmp@wmo.int">wcdmp@wmo.int</a>

\* BOM: Bureau of Meteorology; DMC: Dirección Meteorológica de Chile; DMN: National Meteorological Office of Morocco; DWD: Deutscher Wetterdienst; JMA: Japan Meteorological Agency; NCEI: National Centers for Environmental Information.

# WMO Guidelines for the submission of the World Weather Records 2011+



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Please note that there is an update of this publication which is available at the link below and which includes some differences to the 2017 edition.



Each WMO Member should submit the WWRs data in either Excel or text file format.

There are generally two record types in these formats:

(a) **Station header records** documenting basic station characteristics

(b) **Yearly data records** with monthly and annual data for a particular year

All necessary document about WWR are available at the WMO Website given at the bottom of this slide.

# WMO Guidelines for the submission of the World Weather Records 2011+

## Option 1: Excel File

An example of a properly formatted Excel submission is given in **ANNEX II** of the publication and an electronic template is provided to WMO Members.

A **single Excel file** should contain **all stations** for a given country, with a **single station on each tab**.

The **first section** of each tab must be a **station header record**, which should contain the most recent information for the station. A second header record line has been added to accommodate the new WIGOS Station Identifier.

### World Weather Records Data Sheet, Single Station (All Elements)

[Scroll to Detailed Column Description Instructions](#)

#### Station Header Records

Blank	WMO Number	Latitude	Longitude	Country Name (English)	Station Name (English)	Station Height Whole Meters	Barometer Height Meters, to tenths
	85629	34° 58' 01" S	071° 13' 59" W	CHILE	CURICO	225	224.9
Blank	WIGOS Station Identifier						
	0-20000-0-85629						

#### Yearly Data Record

##### (2) Mean Station Pressure (tenths of hPa, decimal implied, example 10228 means 1022.8)

Blank	WMO Number	Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
	85629	2011	10228	10218	10123	10111	10031	9998	10000	10056	10124	10166	10206	10284	10129
	85629	2012	10207	10205	10127	10094	10076	10020	9997	10044	10124	10161	10200	10266	10127
	85629	2013	10238	10209	10190	10101	10070	10008	10004	10040	10101	10158	10227	10247	10133

##### (3) Mean Sea Level Pressure (tenths of hPa, decimal implied, example 10269 means 1026.9)

Blank	WMO Number	Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
	85629	2011	10269	10258	10162	10149	10067	10034	10036	10092	10161	10204	10245	10325	10167
	85629	2012	10247	10245	10165	10132	10113	10056	10033	10080	10161	10199	10240	10307	10165
	85629	2013	10279	10249	10229	10139	10107	10044	10040	10076	10138	10196	10267	10287	10171

##### (4) Mean Daily Air Temperature (tenths of degree Celsius, decimal implied, example -54 means -5.4 C)

# WMO Guidelines for the submission of the World Weather Records 2011+

## Option 1: Excel File

An example of a properly formatted Excel submission is given in **ANNEX II** of the publication and an electronic template is provided to WMO Members.

The **next yearly data record section** contains data for each climatic element for that station. Leave the element section blank if the station does not report that element.

### World Weather Records Data Sheet, Single Station (All Elements)

[Scroll to Detailed Column Description Instructions](#)

#### Station Header Records

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	#	83
Blank		A WMO Number					B *	C Latitude D D M M S S N/S					D Longitude D D D M M S S E/W					E Country Name (English)															F Station Name (English)															G Station Height Whole Meters		H Barometer Height Meters, to tenths																																
		85629					1	34 58 01 S					071 13 59 W					CHILE															CURICO															225		224   9																																
		L																																																																																
Blank		WIGOS Station Identifier																																																																																
		0-20000-0-85629																																																																																

#### Yearly Data Record

##### (2) Mean Station Pressure (tenths of hPa, decimal implied, example 10228 means 1022.8)

Blank	WMO Number	Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
85629	2	2011	10228	10218	10123	10111	10031	9998	10000	10056	10124	10166	10206	10284	10129
85629	2	2012	10207	10205	10127	10094	10076	10020	9997	10044	10124	10161	10200	10266	10127
85629	2	2013	10238	10209	10190	10101	10070	10008	10004	10040	10101	10158	10227	10247	10133

##### (3) Mean Sea Level Pressure (tenths of hPa, decimal implied, example 10269 means 1026.9)

Blank	WMO Number	Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
85629	3	2011	10269	10258	10162	10149	10067	10034	10036	10092	10161	10204	10245	10325	10167
85629	3	2012	10247	10245	10165	10132	10113	10056	10033	10080	10161	10199	10240	10307	10165
85629	3	2013	10279	10249	10229	10139	10107	10044	10040	10076	10138	10196	10267	10287	10171

##### (4) Mean Daily Air Temperature (tenths of degree Celsius, decimal implied, example -54 means -5.4 C)

# WMO Guidelines for the submission of the World Weather Records 2011+

## Option 1: Excel File

ANNEX, p. 5

### (a) Station Header Records

Station header records contain 15 fields documenting basic station characteristics. These characteristics should represent the most recent location of the station. Stated in tabular form, the contents include the following:

FIELD	COLUMNS	CONTENTS	NOTES
	1-2		Leave these columns blank
1A	3-7	WMO number	5-digit with leading 0 if applicable, right-justified. Leave null if new station with only WIGOS Station Identifier.
2B	8-8	Element Designator Code	1 = Station header record
3C	9-10	Degrees of latitude (0-90)	Right-justified
4C	11-12	Minutes of latitude (0-59)	Right-justified
5C	13-14	Seconds of latitude (if available, 0-59)	Right-justified
6C	15-15	Hemisphere of latitude	N (Northern) or S (South)
7D	16-18	Degrees of longitude (0-180)	Right-justified
8D	19-20	Minutes of longitude (0-59)	Right-justified
9D	21-22	Seconds of longitude (if available, 0-59)	Right-justified

Ref.: 09732/2020-1.7 S/CMP

← Station header records  
(15 fields)

### (b) Yearly Data Records

Each yearly data record contains monthly and annual data for a particular year. These records contain 17 fields documenting the WMO number (if applicable), element type, year, monthly data values, and the annual value. Stated in tabular form, the contents include the following:

FIELD	COLUMNS	CONTENTS	NOTES
	1-2		Leave these columns blank
1A	3-7	WMO number	5-digit with leading 0 if applicable, right-justified. Leave null if new station with only WIGOS Station Identifier.
2B	8-8	Element Designator Code	2 = mean station pressure in tenths of hpa. 3 = mean sea level pressure in tenths of hpa. 4 = mean daily air temperature in tenths of a °C. 5 = total precipitation in tenths of a mm. 6 = mean daily maximum air temperature in tenths of a °C. 7 = mean daily minimum air temperature in tenths of a °C. 8 = mean of the daily relative humidity in whole percent.
3I	9-12	Year	4-digits
4J	13-13	Average Value Designator Code	Blank = Yearly data record

Ref.: 09732/2020-1.7 S/CMP

Yearly data records →  
(17 fields)

# WMO Guidelines for the submission of the World Weather Records 2011+

## Option 1: Excel File

ANNEX, p. 5

### (a) Station Header Records

Station header records contain 15 fields documenting basic station characteristics. These characteristics should represent the most recent location of the station. Stated in tabular form, the contents include the following:

Ref.: 09732/2020-1.7 Sm

FIELD	COLUMNS	CONTENTS	NOTES
	1-2		Leave these columns blank
1A	3-7	WMO number	5-digit with leading 0 if applicable, right-justified. Leave null if new station with only WIGOS Station

## Changes in Element codes

This document provides guidance on how to format data for submission to the current edition of WWR. As in the previous edition, the database will contain six climatic elements:

(code 2) Monthly mean station pressure

(code 3) Monthly mean sea level pressure

(code 4) Monthly mean air temperature

(code 5) Total precipitation in tenths of a mm Monthly mean maximum temperature

(code 6) Mean daily maximum air temperature in tenths of a °C Monthly mean minimum temperature

(code 7) Mean daily minimum air temperature in tenths of a °C Total monthly precipitation

*As practiced in recent years, monthly means of daily relative humidity can be submitted too:*

(code 8) Monthly mean relative humidity.



# WMO Guidelines for the submission of the World Weather Records 2011+

## Option 2: Text file submission

An example of a properly formatted Excel submission is given in ANNEX III and an electronic template is provided to Members. (WWR WMO site)

A single text file should contain one station metadata and data.

```
WMO Number: 85629
Station Name: CURICO GENERAL FREIRE
Country Name: CHILE
Latitude (DD MM SS N/S): 34 58 00 S
Longitude (DDD MM SS E/W): 071 14 00 W
Station Height (whole meters): 228
Barometer Height (meters, to tenths): 228.0
WIGOS Station Identifier (WSI): 0-20000-0-85629
```

### (2) Mean Station Pressure (precision to tenths of hPa)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ANNUAL
2011	989.0	986.9	989.1	989.8	990.0	993.8	993.2	992.9	993.5	991.6	989.9	988.3	990.7
2012	988.3	988.5	988.7	990.7	990.5	991.5	990.7	991.3	990.9	991.6	988.6	986.3	989.8
2013	985.2		987.3	988.3	989.5	991.4	991.2	991.9	992.9	990.1	989.1	987.8	989.3

### (3) Mean Sea Level Pressure (precision to tenths of hPa)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ANNUAL
2011	1015.1	1012.9	1015.4	1016.5	1016.9	1021.2		1020.2	1020.6	1018.4	1016.3	1014.4	1017.4
2012	1014.3	1014.6	1015.0	1017.5	1017.7	1018.8	1017.9	1018.5	1017.8	1018.5	1015.0	1012.3	1016.5
2013	1011.0	1012.3	1013.6	1015.1	1016.7	1019.0	1018.6	1019.2	1020.0	1016.7	1015.3	1013.7	1015.9

### (4) Mean Daily Air Temperature (precision to tenths of degrees Celsius)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ANNUAL
2011	19.4	19.3	16.7	13.6	12.0	-7.2	7.7	8.2	9.8	12.8	15.9	18.8	13.5
2012	19.9	18.6	16.4	12.7	9.6	8.3	9.3	8.8	11.7	12.5	14.9	19.7	13.5
2013	20.5	19.1	16.1	12.2	7.9	-5.4	6.5	8.6	9.7	14.0	17.3	19.9	13.1

# WMO Guidelines for the submission of the World Weather Records 2011+

## Option 2: Text file submission

An example of a printout and an electronic file

A single text file should contain

FIELD	COLUMNS	CONTENTS	NOTES
1	1-4	Year	4-digits
2	6-11	January	If a value is missing, then leave the field blank.
3	13-18	February	
4	20-25	March	
5	27-32	April	
6	34-39	May	All values should be right-justified.
7	41-46	June	
8	48-53	July	Decimal points should be explicitly noted except for relative humidity (which is rounded to whole percent).
9	55-60	August	
10	62-67	September	If there is no value after the decimal, the last character should be "0" (e.g., 1014 hpa should be "1014.0").
11	69-74	October	
12	76-81	November	If the temperature is negative, the 1 <sup>st</sup> value of the field should be "-" (e.g., -13).
13	83-88	December	
14	90-95	Annual	If precipitation is zero, the field should be "0". If there was trace precipitation, the field should be "T".

WMO Number:  
 Station Name:  
 Country Name:  
 Latitude (DD MM SS N/S):  
 Longitude (DDD MM SS E/W):  
 Station Height (whole meter)  
 Barometer Height (meters, t  
 WIGOS Station Identifier (W

(2) Mean Station Pressure (

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ANNUAL
2011	989.0	986.9	989.1	989.8	990.0	993.8	993.2	992.9	993.5	991.6	989.9	988.3	990.7
2012	988.3	988.5	988.7	990.7	990.5	991.5	990.7	991.3	990.9	991.6	988.6	986.3	989.8
2013	985.2		987.3	988.3	989.5	991.4	991.2	991.9	992.9	990.1	989.1	987.8	989.3

(3) Mean Sea Level Pressure (precision to tenths of hPa)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ANNUAL
2011	1015.1	1012.9	1015.4	1016.5	1016.9	1021.2		1020.2	1020.6	1018.4	1016.3	1014.4	1017.4
2012	1014.3	1014.6	1015.0	1017.5	1017.7	1018.8	1017.9	1018.5	1017.8	1018.5	1015.0	1012.3	1016.5
2013	1011.0	1012.3	1013.6	1015.1	1016.7	1019.0	1018.6	1019.2	1020.0	1016.7	1015.3	1013.7	1015.9

(4) Mean Daily Air Temperature (precision to tenths of degrees Celsius)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ANNUAL
2011	19.4	19.3	16.7	13.6	12.0	-7.2	7.7	8.2	9.8	12.8	15.9	18.8	13.5
2012	19.9	18.6	16.4	12.7	9.6	8.3	9.3	8.8	11.7	12.5	14.9	19.7	13.5
2013	20.5	19.1	16.1	12.2	7.9	-5.4	6.5	8.6	9.7	14.0	17.3	19.9	13.1

# WMO Guidelines for the submission of the World Weather Records 2011+

## World Weather Records Data Sheet, Single Station (All Elements)

[Scroll to Detailed Column Description Instructions](#)

### Station Header Records

Blank	WMO Number	Latitude D D M M S S N/S	Longitude D D D M M S S E/W	Country Name (English)	Station Name (English)	Station Height Whole Meters	Barometer Height Meters, to tenths
	85629	1 34 58 01 S	071 13 59 W	CHILE	CURICO	225	224.9
Blank	WIGOS Station Identifier						
	0-20000-0-85629						

### Yearly Data Record

#### (2) Mean Station Pressure (tenths of hPa, decimal implied, example 10228 means 1022.8)

Blank	WMO Number	Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
	85629	2011	10228	10218	10123	10111	10031	9998	10000	10056	10124	10166	10206	10284	10129
	85629	2012	10207	10205	10127	10094	10076	10020	9997	10044	10124	10161	10200	10266	10127
	85629	2013	10238	10209	10190	10101	10070	10008	10004	10040	10101	10158	10227	10247	10133

#### (3) Mean Sea Level Pressure (tenths of hPa, decimal implied, example 10269 means 1026.9)

Blank	WMO Number	Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
	85629	2011	10269	10258	10162	10149	10067	10034	10036	10092	10161	10204	10245	10325	10167
	85629	2012	10247	10245	10165	10132	10113	10056	10033	10080	10161	10199	10240	10307	10165
	85629	2013	10279	10249	10229	10139	10107	10044	10040	10076	10138	10196	10267	10287	10171

#### (4) Mean Daily Air Temperature (tenths of degree Celsius, decimal implied, example -54 means -5.4 C)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ANNUAL
2011	989.0	986.9	989.1	989.8	990.0	993.8	993.2	992.9	993.5	991.6	989.9	988.3	990.7
2012	988.3	988.5	988.7	990.7	990.5	991.5	990.7	991.3	990.9	991.6	988.6	986.3	989.8
2013	985.2		987.3	988.3	989.5	991.4	991.2	991.9	992.9	990.1	989.1	987.8	989.3

#### (3) Mean Sea Level Pressure (precision to tenths of hPa)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ANNUAL
2011	1015.1	1012.9	1015.4	1016.5	1016.9	1021.2		1020.2	1020.6	1018.4	1016.3	1014.4	1017.4
2012	1014.3	1014.6	1015.0	1017.5	1017.7	1018.8	1017.9	1018.5	1017.8	1018.5	1015.0	1012.3	1016.5
2013	1011.0	1012.3	1013.6	1015.1	1016.7	1019.0	1018.6	1019.2	1020.0	1016.7	1015.3	1013.7	1015.9

#### (4) Mean Daily Air Temperature (precision to tenths of degrees Celsius)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ANNUAL
2011	19.4	19.3	16.7	13.6	12.0	-7.2	7.7	8.2	9.8	12.8	15.9	18.8	13.5
2012	19.9	18.6	16.4	12.7	9.6	8.3	9.3	8.8	11.7	12.5	14.9	19.7	13.5
2013	20.5	19.1	16.1	12.2	7.9	-5.4	6.5	8.6	9.7	14.0	17.3	19.9	13.1

## II.3 History Metadata (Station Notes)

Each WMO Member should submit one file containing all of the metadata (station notes) for all of the stations in their country. There is no required format for this information, but there is some preferred content to make the greatest possible use of the submitted climatic data. Critical content includes the times of observation, the formulas used in computing means, and the types of instrumentation. To the extent possible, this information should be specific to each climatic element.

Furthermore, it is extremely helpful if historical changes are explicitly documented for all types of metadata, including observation times, averaging formulas, instrumentation types, and (changes in) basic parameters such as location and elevation.

An example of station notes is given in Annex IV.

## II.3 History Metadata (Station Notes)

### **URUGUAY** (13 stations)

#### **General:**

CLINO values correspond to the period 1951–1980 for precipitation and 1946–1980 for other elements. Rain gauges and thermometers were located 1.5 metres above the ground.

#### **Pressure and temperature:**

The monthly pressure and temperature values were both computed from the equation:

$$1/10(00+03+06+09+12+15+18+21 \text{ hours GMT} + \text{Mean max} + \text{Mean min})$$

#### **Precipitation:**

The daily values were measured at 0900 hours GMT.



WMO 1186 : Guidelines for the submission of the World Weather Records 2011+ :

[https://library.wmo.int/index.php?lvl=notice\\_display&id=19886](https://library.wmo.int/index.php?lvl=notice_display&id=19886)

WMO Website including above Guidelines, EXCEL file and Text file templates for download :

<https://community.wmo.int/world-weather-records-wwr>

World Data Center for Meteorology Website including data access :

<https://www.ncdc.noaa.gov/wdcmet/data-accesssearch-viewer-tools/world-weather-records-wwr-clearinghouse>

Guide to Climatological Practices (WMO-No. 100)

[Guide to Climatological Practices \(wmo.int\)](https://www.wmo.int/publications/guide-to-climatological-practices)

Web tool for the generation of WWR data (**Will be available during December 2021**) :

<https://dgm-meteo.shinyapps.io/wmo-clino/>

# Calendar for activity 4 : Next Steps

“Support climatologists for the development of standard climatological products”

	sept-21	oct-21	nov-21	déc-21	janv-22	févr-22	mars-22	avr-22	mai-22	juin-22	juil-22	août-22	sept-22	oct-22	nov-22	déc-22
Opening ceremony		Workshops	CLINO	NCMP	WWR											
Individual meeting			x	x	x	x	x	x	x	x	x	x	x	x	x	

Date prévisionnel	Actions	Observations
<b>Novembre (4,5 et 8)</b>	<ul style="list-style-type: none"> <li>Atelier sur la gestion, le partage et l'échange de données climatiques</li> </ul>	-Deux groupes francophones -Un groupe anglophone
<b>Décembre</b>	<ul style="list-style-type: none"> <li>Atelier 1 (CLINO)</li> </ul>	-Un groupe francophone -Un groupe anglophone
<b>Janvier (Semaine du 10)</b>	<ul style="list-style-type: none"> <li>Atelier 2 (WWR)</li> </ul>	-Un groupe francophone -Un groupe anglophone
<b>Février (1<sup>ère</sup> semaine)</b>	<ul style="list-style-type: none"> <li>Atelier 3 (MCNP)</li> </ul>	-Un groupe francophone -Un groupe anglophone
<b>Mars-Avril-Mai...</b>	Après chaque atelier et durant les 3 mois qui suivent une interactivité personnalisée avec chaque Pays est prévue pour faire le suivi de l'élaboration des produits climatologiques	- Réunions individuelles
<b>Fin 2022</b>	Atelier pour dresser l'état des lieux et établir le bilan	-Un groupe francophone -Un groupe anglophone

