

Activities of CBS Lead Centre for GCOS for the WMO RA VI in the year 2014

Deutscher Wetterdienst (DWD)
Hamburg, Germany, 13.03.2015

1. Availability, completeness and correctness of CLIMAT reports in ASCII Format FM71

DWD continued to apply a near real-time quality control regarding availability and correctness of CLIMAT data not only to the GSN stations, but to all CLIMAT stations included in the Regional Basic Climatological Network (RBCN).

To increase the availability of CLIMAT data, DWD ingests CLIMAT reports into the GTS received via e-mail from about 15 National Meteorological and Hydrological Services (NMHS) that are not or not well connected to the GTS. Most of these NMHSs use an automatic procedure by sending an e-mail to DWD's Regional Telecommunication Hub (RTH). From others the data are ingested by DWD staff, who also inserted observations supplied by the CBS Lead Centre hosted by JMA, and by Tim Oakley. Countries whose CLIMATs are missing in the course of a month are informed directly by addressing the appropriate telecommunication unit or the focal point for GCOS and related climatological data. Two countries, Albania and Syrian Arab Republic, which is affected by a civil war, did not disseminate CLIMAT reports.

On a routine basis, the chairs of the CBS Lead Centres as well as Mr Tim Oakley, the GCOS Implementation Project Manager, were informed about missing GSN stations and format problems by distributing the monthly monitoring results of the CLIMAT reports received by the 20th of a month. In addition to this monthly information, the CBS Lead Centres were provided with ad hoc information about detected errors especially in the case where data of another month than the indicated one were disseminated. In some cases of missing data or severe errors, DWD also approached the relevant CBS Lead Centres and requested that they contact one of the NMHSs of their area of responsibility.

In the case of missing or incorrect CLIMAT reports, DWD approached the relevant CBS Lead Centres and asked that they contact one of the NMHSs of their area of responsibility or inform the relevant NMHSs directly by using the e-mail addresses included in the list of the 'National Focal Points for GCOS and Related Climatological Data (RBCN)'. The quality of this list improved as there were fewer NMHSs, which could not be reached due to invalid or missing e-mail addresses. In general the NMHSs are grateful for the information and corrections issued. Occasionally, however, the information was ignored. Therefore, CLIMAT reports from some GSN station remain missing (e.g. Greenland for March and December).

The most severe and regularly occurring errors still concern the month-year indicator which may lead to an incorrect storage, an overwriting of correct data of a previous month or to a loss of the data.

1.1 Availability and correctness of GSN Stations in the RA VI

The number of GSN stations in 2014 remained at 138. On average 88 percent of the stations were received (Performance Indicator CA) and 84 percent were without format errors (CC). In the course of the year, the number of received stations changed between 76 % in December and 91 % in January, April, June, July, September and November. The amount of valid (non-suspect) monthly mean temperatures (CT) was 84 percent and of valid (non-suspect) monthly precipitation totals (CR) was 83 percent. This information is based on the performance indicator published on the GSNMC website (<http://www.gsnmc.dwd.de>). The performance indicators CA, CC, CT and CR for the different countries in RA VI are shown in Table 1.

Silent GSN stations are:

Albania:	13615 Tirana since September 2010
Cyprus:	17600 Paphos since January 2010
Greece:	16723 Samos since September 2013
	16734 Methoni since November 2012
Macedonia:	13577 Lazaropole since March 2012
Portugal:	08506 Horta since at least January 2009
Syrian:	40001 Kamishli since July 2012
	40022 Latakia since November 2013
	40061 Palmyra since March 2013

Estonia's GSN station 26242 Tartu-Toravere, which did not report from November 2013 to February 2014 and in April 2014 did restart providing CLIMATs in May 2014.

Country	Number of Stations	CA	CC	CT	CR
Norway	10	1,0	1,0	1,0	1,0
Sweden	4	0,3	0,3	0,3	0,8
Finland	3	1,0	1,0	1,0	1,0
United Kindom	6	1,0	1,0	1,0	1,0
Ireland	2	1,0	1,0	1,0	1,0
Iceland	4	1,0	0,8	0,8	1,0
Greenland	5	0,9	0,7	0,7	0,4
Denmark	2	0,9	0,8	0,9	0,9
Netherlands	1	0,8	0,8	0,9	0,9
Belgium	1	0,9	0,9	0,9	0,9
Luxembourg	1	1,0	1,0	1,0	1,0
Switzerland	2	1,0	1,0	1,0	1,0
France	6	1,0	1,0	1,0	1,0
Spain	6	1,0	1,0	1,0	1,0
Portugal	3	0,9	0,6	0,7	0,6
Madeira	1	1,0	0,4	1,0	1,0
Cape Verde	1	1,0	0,0	0,1	0,1
Germany	4	1,0	1,0	1,0	1,0
Austria	3	1,0	1,0	1,0	1,0
Czech Republic	1	1,0	1,0	1,0	1,0
Slovakia	1	1,0	1,0	1,0	1,0
Poland	2	1,0	0,8	0,9	1,0
Hungary	1	1,0	1,0	1,0	1,0
Macedonia	1	0,1	0,0	0,0	0,0
Albania	1	0,0	0,0	0,0	0,0
Croatia	1	1,0	1,0	1,0	1,0
Bosnia / Herzegovina	1	1,0	0,7	1,0	0,9
Romania	3	1,0	1,0	1,0	1,0
Italy	5	1,0	0,7	1,0	0,9
Malta	1	1,0	1,0	1,0	0,8
Greece	4	1,0	0,5	0,6	0,6
Turkey	7	1,0	0,9	1,0	0,8
Cyprus	2	0,5	0,4	0,5	0,4
Russian Federation	25	1,0	0,9	1,0	1,0
Estonia	1	0,8	0,8	0,9	0,9
Latvia	1	0,8	0,7	0,8	0,8
Lithuania	1	1,0	1,0	1,0	1,0
Belarus	1	1,0	1,0	1,0	1,0
Ukraine	5	1,0	1,0	1,0	1,0
Republic of Moldava	1	1,0	1,0	1,0	1,0
Georgia	1	0,9	0,0	0,8	0,9
Armenia	1	1,0	0,8	1,0	0,9
Azerbaijan	1	0,9	0,0	0,9	0,8
Syrian	3	0,0	0,0	0,0	0,0
Israel	1	1,0	1,0	1,0	1,0

Jordan	2	0,7	0,4	0,8	0,8
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Tab. 1: Performance indicators for the different countries in RA VI

1.2 Availability of CLIMAT stations in BUFR

The number of NMHSs generating and disseminating the CLIMAT in BUFR format increased to 67 (see annex 1).

2.1 Availability of GUAN Stations

The number of GUAN stations in RA VI remained at 24 and all stations worked. The monitoring results of the radio soundings for 2014 showed that 19 stations performed two soundings a day. The stations 08508 Lajes, Azores, 15614 Sofia, Bulgaria and 17607 Athalassa, Cyprus continued to not start soundings at 00 UTC while 37789 Yerevan, Armenia and 40265 Mafraq, Jordan, had no soundings at 12 UTC. Most of the stations performed two soundings a day. The smallest number of soundings was recorded at Mafraq with only 111 soundings in the course of the year.

3. Collection of World Weather Records

Following EC-64, Res. 14, DWD's CBS Lead Centre for GCOS supported the WMO Secretariat in collecting the World Weather Records (WWR) for RA VI. WWR for 2013 were received from 17 countries. Five of these countries provided also the WWR for the period 1991-2012. The content of the supplies was checked. In some cases missing station notes were requested, but not always received. Two NMHSs pointed to problems in preparing the WWR in the requested format and promised to send all data in 2015. The WWR were forwarded to NCDC.

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Annex 1:

Countries providing the CLIMAT in BUFR format:

AUSTRALIA
AUSTRALIA (ADDITIONAL ISLANDS)
AUSTRIA
BELARUS
BENIN
BURKINA FASO
CAMEROON
CHAD
COMOROS
CONGO
COTE D'IVOIRE
CROATIA
DEMOCRATIC REPUBLIC OF THE CONGO
DETACHED ISLANDS
EQUATORIAL GUINEA
FRANCE
FRENCH GUIANA
FRENCH POLYNESIA (AUSTRAL ISLANDS)
FRENCH POLYNESIA (MARQUESAS ISLANDS)
FRENCH POLYNESIA (SOCIETY ISLANDS)
FRENCH POLYNESIA (TUAMOTU ISLANDS AND GAMBIER ISLANDS)
GABON
GERMANY
GIBRALTAR
GUADELOUPE, ST MARTIN, ST BARTHELEMY (AND OTHER FR)
HONG KONG, CHINA
HUNGARY
INDONESIA
IRELAND
ISLANDS
ISRAEL
JAPAN
LATVIA
LITHUANIA
MADEIRA
MALI
MARTINIQUE
MAURITANIA
NEW CALEDONIA
NEW ZEALAND
OCEAN ISLANDS
PAKISTAN
POLAND
PORTUGAL
SAUDI ARABIA
SENEGAL
SERBIA
SINGAPORE
SLOVAKIA
SPAIN
SPAIN (CANARY ISLANDS)
SPAIN (CEUTA AND MELILLA)
STATIONS OPERATED BY AUSTRALIA
STATIONS OPERATED BY CHILE
STATIONS OPERATED BY CHINA
STATIONS OPERATED BY INDIA
STATIONS OPERATED BY ITALY
STATIONS OPERATED BY JAPAN

STATIONS OPERATED BY THE REPUBLIC OF KOREA
STATIONS OPERATED BY THE RUSSIAN FEDERATION
STATIONS OPERATED BY THE U.S.A.
STATIONS OPERATED BY THE U.S.A. (UNIVERSITY OF WIS
STATIONS OPERATED BY THE UNITED KINGDOM
SWEDEN
TUNISIA
TURKEY
UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELA