Activities of CBS Lead Centre for GCOS for the WMO RA VI in the year 2013

Deutscher Wetterdienst (DWD)
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The CBS Lead Centre for GCOS for RA VI was represented by Ms. Christiana Lefebvre at the Forth CBS Lead Centres for GCOS Coordination Meeting in Santiago, Chile from 8-10 October 2013.

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

DWD aims at improving the availability and correctness of CLIMAT reports from all CLIMAT stations included in the Regional Basic Climatological Network (RBCN) world-wide by applying a near realtime quality control.

To increase the availability of CLIMAT reports, about 15 National Meteorological and Hydrological Services (NMHS) accepted DWD's offer to ingest their CLIMAT reports received via e-mail into the GTS. Additionally, countries whose CLIMATs were missing in the course of a month were informed directly by addressing the telecommunication unit or by using the list of the 'National Focal Points for GCOS and related Climatological Data'.

DWD informed the chairs of the CBS Lead Centres for their area of responsibility as well as to Mr Tim Oakley, the GCOS Implementation Project Manager and Mr Kelvin Wong, RTH Focal Point at WMC Melbourne and Chair of the Expert Team on WIS-GTS Operations and Implementation (ET-OI) about missing GSN stations and format problems by distributing the monthly monitoring results of the CLIMAT reports received up to the 20th of a month via e-mail. The procedure has also been extended to include the special case that all GSN stations reported correctly and none was missing. This occurred in North and Central America in May 2013 and had caused that no report for the CBS Lead Centre for GCOS for RA IV was created. Some data centres, such as the National Climate Data Center (NCDC), were also provided with ad hoc information about detected errors e.g. data of another month than indicated.

NMHSs, especially in RA VI, but also world-wide were informed about errors in their CLIMAT reports. They were often thankful for the information and applied - if necessary - changes in the CLIMAT generating software (e.g. Paraguay) and disseminated corrections. On other occasions, the information was ignored or could not be received, because the e-mail address in the list of the 'National Focal Points for GCOS and Related Climatological Data (RBCN)' was invalid or missing, although this very useful list is updated several times a year.

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. Especially the turn of the year causes problems. It is very difficult to detect, if the data are not from the month indicated.

1.1 Availability and correctness of GSN Stations in the RA VI

The number of GSN stations in 2013 was 138. On average 91 percent of the stations were received (Performance Indicator CA) and 79 percent were without format errors (CC). The amount of valid (non-suspect) monthly mean temperatures (CT) was 87 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 (hppt://www.gsnmc.dwd.de). The performance indicators CA, CC, CT and CR for the different countries in RA VI are shown in Table 1. The mean of the performance indicators, the Mean Index 'Ind' (extracted from Table 1) depicts Figure 1.

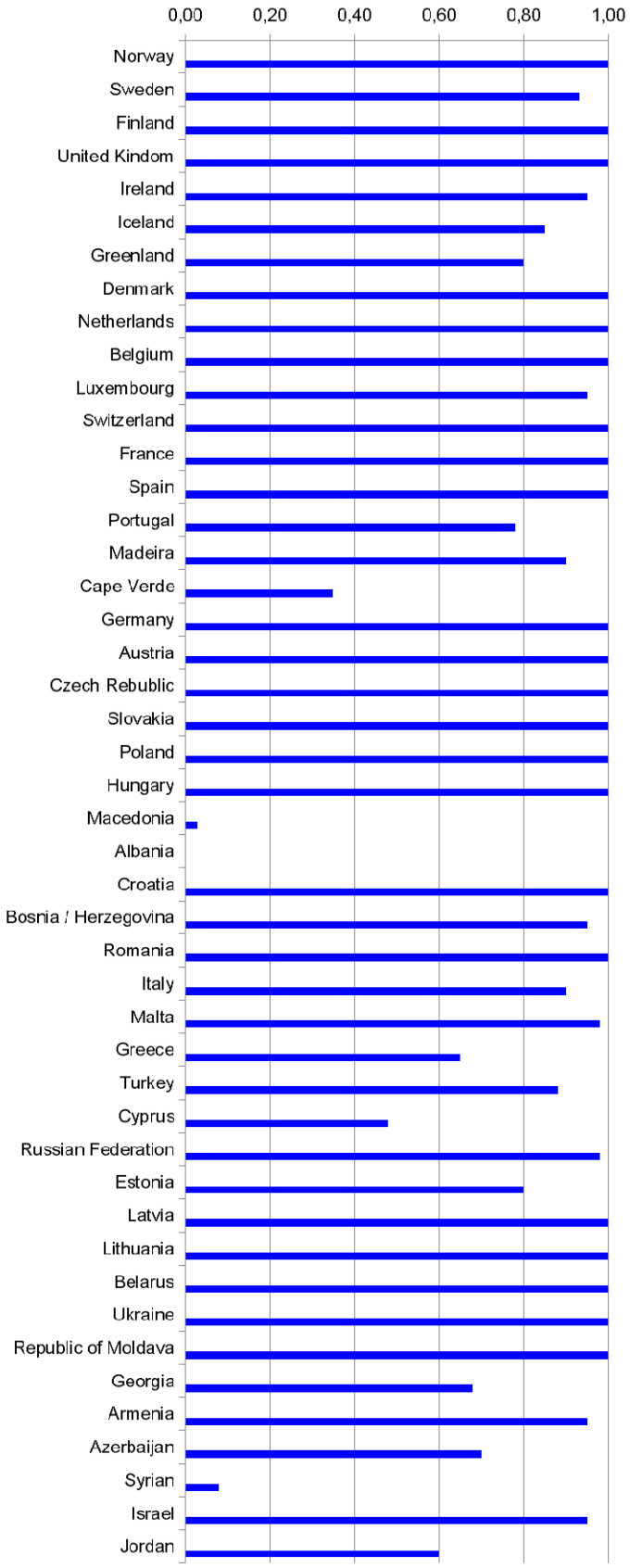
Silent GSN stations were:

Albania:	13615 Tirana since September 2010
Cyprus:	17600 Paphos since January 2010
Estonia:	26242 Tartu-Toravere since November 2013
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

Tab. 1: Performance indicators for the different countries in RA VI.

Country	Number of Stations	CA	CC	CT	CR	Ind
Norway	10	1,0	1,0	1,0	1,0	1,00
Sweden	4	1,0	1,0	1,0	0,7	0,93
Finland	3	1,0	1,0	1,0	1,0	1,00
United Kindom	6	1,0	1,0	1,0	1,0	1,00
Ireland	2	1,0	0,9	1,0	0,9	0,95
Iceland	4	1,0	0,8	0,8	0,8	0,85
Greenland	5	1,0	0,9	0,8	0,5	0,80
Denmark	2	1,0	1,0	1,0	1,0	1,00
Netherlands	1	1,0	1,0	1,0	1,0	1,00
Belgium	1	1,0	1,0	1,0	1,0	1,00
Luxembourg	1	1,0	0,8	1,0	1,0	0,95
Switzerland	2	1,0	1,0	1,0	1,0	1,00
France	6	1,0	1,0	1,0	1,0	1,00
Spain	6	1,0	1,0	1,0	1,0	1,00
Portugal	3	1,0	0,7	0,7	0,7	0,78
Madeira	1	1,0	0,7	1,0	0,9	0,90
Cape Verde	1	1,0	0,0	0,2	0,2	0,35
Germany	4	1,0	1,0	1,0	1,0	1,00
Austria	3	1,0	1,0	1,0	1,0	1,00
Czech Rebublic	1	1,0	1,0	1,0	1,0	1,00
Slovakia	1	1,0	1,0	1,0	1,0	1,00
Poland	2	1,0	1,0	1,0	1,0	1,00
Hungary	1	1,0	1,0	1,0	1,0	1,00
Macedonia	1	0,1	0,0	0,0	0,0	0,03
Albania	1	0,0	0,0	0,0	0,0	0,00
Croatia	1	1,0	1,0	1,0	1,0	1,00
Bosnia / Herzegovina	1	1,0	0,8	1,0	1,0	0,95
Romania	3	1,0	1,0	1,0	1,0	1,00
Italy	5	0,9	0,7	1,0	1,0	0,90
Malta	1	1,0	1,0	1,0	0,9	0,98
Greece	4	1,0	0,4	0,6	0,6	0,65
Turkey	7	0,9	0,9	0,9	0,8	0,88
Cyprus	2	0,5	0,5	0,5	0,4	0,48
Russian Federation	25	1,0	0,9	1,0	1,0	0,98
Estonia	1	0,8	0,8	0,8	0,8	0,80
Latvia	1	1,0	1,0	1,0	1,0	1,00
Lithuania	1	1,0	1,0	1,0	1,0	1,00
Belarus	1	1,0	1,0	1,0	1,0	1,00
Ukraine	5	1,0	1,0	1,0	1,0	1,00
Republic of Moldava	1	1,0	1,0	1,0	1,0	1,00
Georgia	1	1,0	0,0	0,9	0,8	0,68
Armenia	1	1,0	0,9	1,0	0,9	0,95
Azerbaijan	1	1,0	0,2	0,8	0,8	0,70
Syrian	3	0,1	0,0	0,1	0,1	0,08
Israel	1	1,0	1,0	1,0	0,8	0,95
Jordan	2	0,6	0,4	0,7	0,7	0,60

Fig. 1: Mean Index ‘Ind’ for the countries in RA VI



1.2 Availability CLIMAT stations in BUFR

The number of NMHSs disseminating the CLIMAT in ASCII (FM71) and BUFR format increased to about 30. Some countries provide a more complete content in BUFR than in FM71. Norway e.g. transmits only section 1 in ASCII format but all four sections in the BUFR forms.

2.1 Availability of GUAN Stations

In 2013, the number of GUAN stations in RA VI remained at 24. The monitoring results of the radiosoundings since August 2013 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 had no soundings at 12 UTC.
On average only 9 soundings per month were operated in 40265 Mafraq, Jordan.

3. Collection of World Weather Records

Following EC-64, Res. 14**,** the CBS Lead Centre for GCOS for RA VI supported the WMO Secretariat in collecting the World Weather Records (WWR) for the periods 1991-2000, 2001-2010 and the years 2011 and 2012. DWD converted data, which were provided in incorrect format and requested missing data.
Twenty-two out of 45 countries provided WWR up to the end of 2013, one in January 2014. Following a request addressed to the National Focal Points for GCOS and related Climatological Data in January 2014 there was no response received from 13 NMHSs. Five said that they had not received the request by WMO and four said they were reminded by our e-mail.

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