

DWD activities as CBS Lead Centre for GCOS for the WMO RA VI in the year 2009

Deutscher Wetterdienst (DWD)
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Change of responsibility in the CBS Lead Centre for GCOS for the WMO RA VI

In July 2009, Mrs. Christiana Lefebvre became the successor of Tobias Fuchs as focal point of the DWD Lead Centre, which is responsible for WMO RA VI except some countries in East Europe.

Summary of DWD Lead Centre activities and results in 2009

- DWD aims in improving the reception and quality of CLIMAT messages not only from GSN stations. DWD routinely check availability, timeliness and quality of CLIMAT data and contacts focal points world-wide using the GCOS focal point list of the WMO WWW in case of missing or incorrect CLIMAT reports or other data centres in case of missing CLIMAT reports.
- During 2009, DWD staff contacted about 40 countries on all continents to acquire missing or to correct erroneous GTS CLIMAT bulletins. In general, there was a very good co-operation with the focal points of the contacted countries. Often replies were received within one day. A very close contact developed especially to Albania, Moldavia, Macedonia, Namibia, Mexico and Cuba. A repeated contact to the focal point of Switzerland, Bolivia, Chile and St. Helena helped to overcome their format problems. A contact to Poland could be made due to the support of the GCOS Secretariat to find a new focal point. But some countries did not reply or follow up DWD e-mails in 2009 concerning missing or erroneous data. These countries include: Ireland, Turkey, Azerbaijan, Mongolia, Nepal, Morocco, Colombia, Nicaragua.
- The most urgent CLIMAT format problems have those countries, which does not reply or react on hints of the DWD Lead Centre. Most of them show problems with the month-year indicator. Saudi Arabia e.g. writes always the recent month as month-year id instead of that of the previous month, for which the data are reported. Mongolia disseminates bulletins containing the monthly climate data and those with data for decades. The bulletins for the decades start with the bulletin header CS as well and are to differ from the monthly values only by the missing sections 3 and 4. Bulletins from Indonesia contain always 'X' instead of '/' for a missing element and have lots of random errors.
- DWD also performs a quality control of the content of the CLIMAT reports by checking different meteorological elements. It was worked out, that in some cases the provided data were not from the indicated month. E.g. Saudi Arabia sends in the same bulletin stations with correct data and stations with the data of the previous month, for which obviously no recent data are available. The CLIMAT reports of the Central African Republic for June 2009 contained actually the data from March 2009 and those from Sudan for July 2009 were from February 2009. The countries were contacted and especially Sudan sent the correct CLIMAT reports for several months via e-mail, which were inserted to GTS by RTH Offenbach. DWD detected errors in the vapour pressure of the US CLIMAT reports, informed the focal point and the since then the vapour pressure is reported correctly.
- DWD gave advice to the USA and Chile concerning the correct form of the bulletin header.
- DWD Lead Centre informed promptly the chairs of the CBS Lead Centres via e-mail, when there were severe problems detected in CLIMAT receipt of a month.
- DWD helps to overcome GTS problems by inserting CLIMAT reports received via e-mail or airmail into the GTS at the RTH in Offenbach. DWD ingested CLIMAT reports from: Kyrgyzstan, Moldova, Bosnia, Slovakia, Macedonia, Albania, New Zealand, Mauritius, St. Helena, Sri Lanka, Seychelles, Chile, Philippines, Malawi, Mozambique, Hong-Kong, Malaysia, Salvador, Benin, South-Africa, Malta, Costa Rica.
- In September 2009, the DWD Lead Centre invited the e-mail sending countries to use an automatic procedure for the ingestion of the CLIMAT reports into GTS by e-mail. For this, the sending e-mail address first has to be recorded in a white-list at DWD. The e-mails containing the

monthly CLIMAT report have to be preceded by the string 'HEADING:' in front of the telecommunication header of the bulletin. The following countries switched to this automatic system: South Africa, Malta, Bosnia, Seychelles, St. Helena, Chile and from Antarctica the Neumayer station.

- In general, there were no severe problems concerning availability and quality of the GSN stations in RA VI. From all European GSN stations only one station, 08506 Horta (Azores) did not report. DWD got in contact with focal points of European NMHSs to re-activate or substitute silent GSN stations. E.g. The Swedish station 02287 reported under the erroneous WMO station id 02288. The Russian station 22602 only reported in January 2009 after being contacted.
- DWD got in contact with different European NMHSs not having at least one GSN station in their country to support the nomination of stations as GSN stations in order to close gaps in the spatial distribution of GSN stations. This happened in co-operation with the GCOS Secretariat. In the area of responsibility there are only Bulgaria and Slovenia without a GSN station, because a suitable one was not suggested.
- Due to efforts of the DWD CBS Lead Centre, the GCOS Secretariat and the GTS-RTHs the relay of CLIMAT Reports via GTS could be improved.
- DWD Lead Centre started to evaluate the receptions of Table Driven Code Forms (BUFR-format), which are up to now disseminated from the following countries: Japan, Algeria, Israel, France and Czech Republic. Comparing CLIMAT reports in BUFR format with those in FM 71 format, some differences and country specific systematic errors were detected. E.g. In Algeria there are the following problems: the maximum and minimum temperatures are mixed up, the precipitation is not given in 0.1 mm and as date (day) for the extreme temperatures appears also 0 and 41 and not only 1 to 31.
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- There are the following problems with GUAN stations: 05808 Lajes (Azores) had no ascent at 00 UTC. Continued contact to the GCOS focal point in Portugal in 2009 was not successful. 37789 Yerevan (Armenia) had only a very small number of ascents at 0 UTC and none at 12 UTC.

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