

WORLD METEOROLOGICAL ORGANIZATION

JOINT WMO/IOC TECHNICAL COMMISSION FOR
OCEANOGRAPHY AND MARINE METEOROLOGY
(JCOMM)

EXPERT TEAM ON MARINE CLIMATOLOGY

SECOND SESSION

GENEVA, SWITZERLAND, 26 TO 27 MARCH 2007

**INTERGOVERNMENTAL
OCEANOGRAPHIC
COMMISSION (OF UNESCO)**

ETMC-II/Doc. 3.5.1
(28.II.2007)

ITEM 3.5.1

Original: ENGLISH

DATA QUALITY AND EXCHANGE

Report of the Global Collecting Centres (GCCs)

(Submitted by the GCC United Kingdom and GCC Germany)

Summary and purpose of document

This document contains the report of the Global Collecting Centres (GCCs) of the United Kingdom and Germany. The Team is invited to review the operation/activities of the GCCs, identify any deficiencies and consider possible further improvements of the data exchange system.

ACTION PROPOSED

The Expert Team on Marine Climatology is invited to:

- (a) Review the operation/activities of the Global Collecting Centres;
 - (b) Identify any deficiencies and consider possible further improvements of the data exchange system.
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Appendix: A. GCC Annual Report 2006

DISCUSSION

Introduction

The Global Collecting Centres (GCCs) for the Marine Climatological Summaries Scheme have been established by Recommendation 11 (CMM-XI, Lisbon, Portugal, April 1993). Germany and the United Kingdom have been operating the GCCs. The current activities of the GCCs will be reported through the GCC Annual Report (see Appendix A).

GCC Report

Summary

The 2006 GCC Annual Report marks the 13th year of GCC operation. 2006 was an average year, with just under 1 million observations received to include contributions received from sixteen respective Members. Problems regarding duplicate data and on-land positions have been decreasing, with only 282 & 194 observations respectively received in 2006 (making up a very small percentage of 958 thousand observations). The majority of data is also recently received data, 55% of observations in 2006 were from the past two years (2005 & 2006) though data were received from as far back as 1993.

Although initially the VOSclim data was slow to reach the GCCs, observations from the VOSclim project have been increasing over the past three years, and nine CMs now have recruited ships. In 2006, the GCCs received around 84 thousand observations from VOSclim recruited ships, making up 9% of the total number of observations received (2005: 4%, 2004: 4% and 2003: 1%). However, not all observations from the VOSclim recruited ships are being submitted with the extra VOSclim elements and some VOSclim data are being received from ships not registered with the VOSclim project. Most observations are now received in IMMT-3 format (64% of observations in 2006), and VOSclim observations have proved to be of better quality with significantly less duplicated obs and all obs received with flags attached.

Highlights & Issues

- Both respective GCCs now transfer the quarterly exchange data via FTP. This enables easy access to the data rather than sending large files via email, or in slow-time via CD-ROM.
- The IMMT-3 format and MQCS-V were ratified at the Second Session of JCOMM (JCOMM-II, Halifax, Nova Scotia, Canada, September 2005) for implementation in January 2007.
- The software package created by the GCCs to help contributing members (MQCforCM) was developed during 2006, and distributed to all members who had requested a copy of previous versions of the software. Version 3 allows the IMMT-3 format to be used, and checks data using MQCS-V. It also includes the option to separate duplicate observations into a separate dataset, if required.
- During the First Session of the Expert Team on Marine Climatology (ETMC-I, Gdynia, Poland, 7-10 July 2004), the use of Marine Climatological Summary charts was discussed, and a questionnaire was produced by the GCCs and Professor Mirosław Mietus. This was distributed by the WMO Secretariat in September 2005. Professor Mietus collated the replies and provided a summary of these replies to the ETMC Chairperson Scott Woodruff in September 2006.
- One problem that is becoming a significant issue is the use of masked callsigns by ships in real-time. This will have a large impact on international data archives, as the real-time and delayed-mode observations will not be easily identified as being from the same source. Also, without a callsign it is impossible to tie-up the metadata with the observation to enable analysis of data.
- The German GCC website has been updated, and its new URL is <http://www.dwd.de/gcc>.
- The United Kingdom GCC has created a GCC website, and can be located at the following address: <http://www.metoffice.gov.uk/research/interproj/gcc/index.html>.

Looking to the future

The Global Collecting Centres (GCCs) believe there should be a review of the roles and responsibilities of the GCCs and Responsible Members (RM). Every quarter, each RM now receives a global data set, not just the data within their respective area(s) of responsibility, so there may be eight different versions of the same observation (due to individual RM quality control) that a Contributing Member could request. Additionally, each area does not produce and publish the Marine Climatological Summaries charts, as stated on the WMO marine meteorological programme website (<http://www-dev.wmo.int/web/aom/marprog/marprog.html>). Also, due to the distributed nature of the data storage, there needs to be one common source established, or a technical solution (i.e., a website) to provide a single source of data to the user.

The end-to-end data management should be more streamlined, with less duplication of data and effort. Further, the JCOMM VOS data flow needs to be more joined up, with different members in specific roles to create an overall service.

Action Proposed

Discuss the responsibilities / activities of the Global Collecting Centres (GCCs) and Responsible Members (RMs). The main points being:

- Increase the autonomy of the GCCs so not only do they receive and process observations, but also they can actively help Contributing Members to enable them to submit their data;
- The GCCs will make available every quarterly exchange via FTP so any CM can download the global data received within the past three months. However, the GCCs will also continue to separate the VOSCLIM data accordingly to send to the VOSCLIM DAC;
- In addition to the Minimum Quality Control Standards (MQCS), the marine meteorological community should work towards an internationally agreed Higher-level of Quality Control (HQC);
- Consider the benefits of not only processing and storing ship meteorological data, but also other forms of oceanographic measurements. Alternatively, instead of processing and storing other data types, this group should consider the best method(s) of tying all the data streams together (through an end-to-end data management system);
- Consider the work between the ICOADS and the GCCs to create an amalgamation of the IMMT & IMMA codes, or software to convert this data from one format to the other.
- Establish a Task Team on the definition of the role and functions of RMs, as well as their number, concerning:
 - archival and distribution of marine meteorological data;
 - generation of marine climatological products.

APPENDIX

Global Collecting Centres for Marine Climatological Data Annual Report 2006