

WORLD METEOROLOGICAL ORGANIZATION

INTERGOVERNMENTAL OCEANOGRAPHIC
COMMISSION (OF UNESCO)

JOINT WMO/IOC TECHNICAL COMMISSION FOR
OCEANOGRAPHY AND MARINE METEOROLOGY (JCOMM)
EXPERT TEAM ON MARINE CLIMATOLOGY

ETMC-I/Doc. 7.3
(29.VI.2004)

FIRST SESSION

ITEM 7.3

GDYNIA, POLAND, 7 TO 10 JULY 2004

Original: ENGLISH

GUIDE TO CLIMATOLOGICAL PRACTICES

(Submitted by the Secretariat)

Summary and Purpose of Document

The Commission for Climatology (CCI) is revising the Guide to Climatological Practices--as the Third Edition. The Team will be informed of the current status of the revision, as well as of actions requested of JCOMM in this regard. This document reviews a requirement for JCOMM input to a revised version of the *WMO Guide to Climatological Practices*, and seeks one or more experts to contribute to this input, as appropriate.

ACTION PROPOSED

The Expert Team on Marine Climatology is invited to advise on the input required to the *Guide to Climatological Practices*, and as appropriate nominate one or more experts to contribute to this input.

Appendix: Draft outline of Part II of the *Guide to Climatological Practices*

DISCUSSION

Introduction

1. The first session of JCOMM (Akureyri, June 2001) agreed with a recommendation from the former CMM Subgroup on Marine Climatology (now a JCOMM Expert Team), that JCOMM should contribute, as required, to the major revision being undertaken by the WMO Commission for Climatology (CCI) of the WMO *Guide to Climatological Practices* (WMO-No. 100) (see para 7.1.12 of the final report of JCOMM-I).

2. Mr Pierre Bessemoulin, chair of CCI OPAG 3, is responsible for coordinating the revision to this guide. The Guide (WMO-No.100) has been reviewed in the past many years and updated Part I is now on the web site:

http://www.wmo.ch/web/wcp/ccl/CClguide/app_sects3ed/appr_sec_rev_2.htm

3. Part II is now under preparation. A draft outline of the full Part II to the guide is given in the Appendix. Responsible authors have already been identified for all the sections in the outline.

4. According to Mr Pierre Bessemoulin, there would still be time to modify the outline/structure of the Guide, provided the modification is relevant and informative. The Expert Team on Marine Climatology is invited to advise on possible modification/addition to the outline of *Guide to Climatological Practices*. If this is the case, the Team is invited to nominate, as appropriate, one or more experts to contribute to the additional input.

Section 2.1.4 in Part II

5. In July 2003, Mr Pierre Bessemoulin proposed that JCOMM should be responsible for the preparation of Chapter 2.1.4 of Part II of the guide, dealing with "Marine measurements". The JCOMM Ship Observations Team, at its second session (London, July 2003), noted and agreed as below:

III/5.2.2 Within the context of this part of the guide, and following a review of its draft contents, the meeting agreed that this chapter on marine measurements should cover observing practices for marine observational data, as well as data management issues. Thus responsibility for its preparation would have to be a shared effort between the SOT and the ETMC, with expertise in both fields being required. The meeting therefore accepted with appreciation the kind offer of Canada to investigate the possibility of nominating an expert to undertake this work on behalf of the panel. (Action: Canada, VOS chair and Secretariat)

6. While Canada was seeking an expert on this task, CCI identified experts to contribute to 2.1.4 and a draft has been prepared by Dr Richard Reynolds and Dr Huai-Min Zhang. Canada recently nominated a possible contributor on this issue. Thus the draft was sent to the expert for her review.

Action proposed

7. The Expert Team on Marine Climatology is invited to advise on possible modification/addition to the outline of *Guide to Climatological Practices*. If this is the case, the Team is invited to as appropriate nominate one or more experts to contribute to the additional input.

Draft outline of Part II to the Guide to Climatological Practices

1. Introduction

2. Selected list of methodologies and techniques

2.1 Network design methods

2.1.1 GSN best practices

2.1.2 Automatic weather stations

2.1.3 Upper Air measurements

2.1.4 Marine measurements

2.1.5 Remote sensing measurements (satellites, radars, lightning detection,...)

2.2 Quality control tests

2.2.1 Completeness of data

2.2.2 Tolerance tests

2.2.3 Consistency tests (cross elements checks, spatial checks, quality indices, flagged data,...)

2.2.4 Procedures for handling wrong data.

2.3 Data handling methods

2.3.1 Supplementing data estimation

2.3.2 Extending data records

2.3.3 Computing normals

2.3.4 Trend analysis

2.3.5 Climate data management systems

2.3.6 Homogenizing data sets

2.3.7 Calculation of CLIMAT mean temperatures

2.4 Statistical techniques and packages

2.4.1 Statistical Packages (replacing INSTAT)

2.4.2 Normalizing data

2.4.3 Frequency analysis

2.4.4 Extreme value analysis

2.4.5 Homogeneity and stationarity tests

2.4.6 Objective analysis

2.4.7 Subjective analysis

2.5 Climate products, including mapping.

2.6 Downscaling methods, including interpolation techniques

2.7 Climate summaries

2.8 Sample publications

The Annexes should include:

A: Terminology and definitions (should not duplicate existing glossaries, and ensure coherence with e.g. the WMO Compendium of definitions)

B: Relevant quotations from WMO technical regulations

C: Proven climate applications by sectors. This was one of our main proposals, which was endorsed, provided it does not duplicate other WMO documents. In that case, cross-references should apply.

D: National Climate programs

E: Relevant WMO publications.