
COMMISSION FOR BASIC SYSTEMS
OPEN PROGRAMME AREA GROUP
ON INTEGRATED OBSERVING SYSTEMS

EXPERT TEAM ON OBSERVATIONAL DATA REQUIREMENTS
AND REDESIGN OF THE GLOBAL OBSERVING SYSTEM

ITEM: 5

REDUCED SESSION

Original: ENGLISH

OXFORD, ENGLAND, 1 – 5 JULY 2002

**REVIEW OF RECOMMENDATIONS FOR EVOLUTION OF
SURFACE- AND SPACE-BASED COMPONENTS OF THE GLOBAL OBSERVING SYSTEM**

Review of the status of the update of the Manual and Guide for the Global Observing System

(Submitted by the Secretariat)

Summary and purpose of Document

The document outlines the work carried out by the Task Team on Regulatory Material which met in November 2001 to review and update the Manual on the Global Observing System (GOS). The document also describes subsequent work to update the manual including a Secretariat review of the draft Manual for the GOS and input by WMO Members.

ACTION PROPOSED:

The Expert Team may wish to comment on the work carried out to update the Manual on the GOS and suggest further action that may be required by CBS.

Appendix : Draft Manual for the GOS

DISCUSSION

1. The meeting of the Task Team on Regulatory Material was held in Geneva at the WMO Headquarters from 26 to 30 November 2001. Membership of the Task Team was composed of Dr A. Vasiliev (Russian Federation), Dr P. Ryder (UK), and Mr H. Daan (Netherlands). Dr A. Karpov, Acting Chief, Observing Systems Division represented the WMO Secretariat. Dr Ryder was elected chairman of the meeting.

REVIEW OF THE REVISED MANUAL ON THE GOS

2. The meeting discussed its purpose and the desired output. It agreed that the main purpose was to ensure that proposals to CBS would be consistent. The meeting also considered the procedure to be followed in the submission of proposals to the Commission for Basic Systems (CBS). It stressed that proposals should be submitted by Rapporteurs under their individual responsibilities. The report of the Task Team should confirm to CBS that the consistency of the proposals had been examined and approved.

General

3. In reviewing and updating the Manual on the GOS, the meeting kept in mind the following criteria:
 - (a) The original text of the Manual should be retained as far as possible to avoid re-opening of discussions at CBS or in other fora;
 - (b) No parts of the manual should be deleted unless the material was erroneous, outdated, irrelevant or was not part of the regulatory material and could be located elsewhere. In the latter case appropriate cross-referencing would be provided;
 - (c) Additional new material should be included where considered necessary;
 - (d) Like or related material should be co-located, where appropriate, under a recognisable heading or sub-heading (e.g., Networks);
 - (e) All proposals should relate to the first draft revisions prepared in 1999 by WMO Consultants.
4. The meeting requested that the proposed amendments to the Manual should be acted upon by the Secretariat in consultation with the Rapporteur. In light of this, the meeting advised, in particular, that :
 - (a) An up-to-date list of observational requirements should be maintained on the WEB, accessible through the WMO Home Page.
 - (b) Requirements on emergency response and on volcano eruptions should be dealt within Part II as special requirements.
 - (c) In Part VI, Sections 3 and 4 be deleted, as the contents of these sections are addressed in a more adequate manner in the Guide on Instruments and Methods of Observations.

Updating the Manual on the GOS - Surface-based Observations

5. In supporting the proposals by the Rapporteur, the meeting made a number of additional suggestions for improvements including that :
 - (a) All material on Networks in Part II and III be combined in a Network section in Part III, before the current section 2.1.
 - (b) In Part III, the paragraphs on GCOS and GAW should be taken out of subsection 2.9 and be assigned separate subsections after "climatological stations".

Updating the manual on the GOS - Space-based Observations.

6. The meeting reviewed a draft revision of Part IV of the Manual on the GOS. In this it was aided by Dr D.E. Hinsman, Senior Scientific Officer, WMO, Satellite Activities. The draft revision was largely accepted, but it was agreed that the section on the role of Experimental Satellites should be expanded in light of the outcome of the meeting of the Expert Team on Observational Data Requirements and Redesign of the GOS, held at the end of January 2002.

Improvement in the utility of WMO Publication No. 9

7. The Rapporteur on the Improvement of Volume A presented the latest draft of his report which contained numerous proposals to improve the content and usefulness of Volume A. The meeting also had a presentation on the WWW Operational Information Service by Mr P. Kerhervé, Scientific Officer, Telecommunications and Monitoring Division of WMO.

8. The meeting discussed the desirability of a limitation of the spacing of instruments at an observing site with a view to the definition of geographical latitude and longitude in Volume A. It concluded that such a limitation might raise contradictions with respect to the requirements representative of a site for the environment. The meeting recognised that a clear definition of the location to which the coordinates refer is necessary; this definition could be given in the Introduction to Volume A.

9. The meeting concluded that only very few references to Volume A are made in the Technical Regulations and its Annexes, including the Manuals. Most of the contents of the Volume are defined in the Introduction to the Volume itself. As a consequence, the decisions to be made by CBS are very limited and the final recommendation for CBS could be accordingly concise.

Interaction between the Manual and Volume A.

10. The meeting noted in particular the proposal to designate focal points, within each National Meteorological Service, who would have the responsibility to notify the WMO Secretariat promptly of any changes in observational stations for inclusion in Volume A. Noting also that CBS had already endorsed this proposal, the meeting accordingly advised a provision to this effect in the draft revised Manual on the GOS.

Action Plan

11. The meeting discussed the future action plan taking into account the CBS/OPAG/IOS calendar of activities in 2002. It agreed on the following:

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| 15 Feb. 2002 | - Completion of first final draft of revised Manual. |
| 15 Feb.-15 Mar. 2002 | - Review of first final draft of revised Manual by the Task Team. |
| 31 March 2002 | - Completion of final draft revision of Manual on the GOS.
Completion of final report on improvements to Volume A. |
| Early April 2002 | - Final draft revisions of the Manual and the final report on Volume A to be posted on WMO Web site for review by CBS/OPAG/IOS members. |

Proposals to CBS

12. The meeting invited CBS to consider, as a matter of urgency, the need to revise the Guide to the GOS.

PRESENT STATUS OF REVIEW AND UPDATING OF THE MANUAL ON THE GOS

13. With the help of a consultant, the Secretariat prepared a revised draft of the Manual, taking into account the views and suggestions of the November Meeting of the Task Team on Regulatory Material. After further review by the Task Team, a final draft of the revised and

updated Manual was posted on the Web in mid-April 2002, with an invitation for comments by members of CBS. Proposals for additions or amendments were requested by June 2002.

14. A brief summary of comments received will be provided to the meeting by the Secretariat.
15. Copies of the final draft of the manual sent to CBS will also be available at the meeting.

WMO SECRETARIAT REVIEW

16. The updating process for the Manual and Guide for the GOS has been accomplished through a three phase approach: the use of expert consultants, a CBS Task Team and review by WMO Members. The first step was the use of two expert consultants. Both the Guide and Manual were evaluated for the need to be updated, as well as the surface- and spaced-based sections. While both consultants reviewed all sections, each had a primary focus. As a guiding principle in developing recommended updates, it was agreed that both the Guide and Manual should be updated. Since major changes had occurred to the GOS, especially with regard to observational requirements, it was agreed that both the Manual and Guide needed to be updated simultaneously to provide consistent and clear descriptions of GOS processes. In particular, CBS has agreed upon the Rolling Review of Requirements (RRR) process. The RRR process is being used by the Expert Team on Observational Data Requirements and Redesign of the GOS to propose future configurations for the GOS. In so doing, a more precise methodology has been accepted to describe an observational data requirement in terms of horizontal, vertical and temporal resolution, accuracy, and timeliness. Although not included in the draft contained in Appendix A, proposed changes to the Guide for the GOS were prepared that would describe the RRR process. It was expected, [and anticipated] that appropriate reference to the RRR process would be included in the draft for the Manual. Unfortunately, this is neither reflected in the draft Manual nor is an update to the Guide proposed risking the complete loss of the description of the RRR in either publication.

17. As part of the review by WMO Members in phase three, several recommendations have been made to the draft Manual. The changes have been incorporated in Appendix A using the Microsoft Word "Track change" function. Many of the suggested changes relate to the expansion of the space-based component of the GOS to include appropriate R&D satellite missions. The decision to expand the GOS was made by the WMO Executive Council at its 53rd session where it requested CBS to make appropriate changes to the Guide and Manual for the GOS.

18. One particular inconsistency in the draft Manual is the inclusion of observational data requirements for two specific application areas: environmental emergency response and volcanic activities. Since neither are presently included in the list of application areas being reviewed by the Expert Team on Observational Data Requirements and Redesign of the GOS, their presence in the Manual is unbalanced. Either the observational data requirements for all application areas should be included or none should be. Furthermore, the section on volcanic activity does not contain a description of observational data requirements but rather a description of the information to be contained in a warning message. If it is decided to retain the section on emergency response activities, then the detailed observational requirements should be included in the list of applications being reviewed by the Expert Team.

19. Part II - Requirements for Observational Data will need to be strengthened to refer to the RRR process and its principles. Inclusion of the full description of the RRR process should remain in the Guide for the GOS but it must be updated parallel to the update for the Manual. Additionally, any section within the Manual referring to the description of an observational network should be made to be consistent with the methodology followed in the RRR process. For example, paragraph 2.3.2.8 refers to a minimum station spacing of 250 km for land surface stations while the minimum horizontal resolution is a function of application and geophysical parameter to be measured and is much more stringent for Nowcasting than Global NWP. Minimum horizontal resolution for some parameters is 50 km. Thus, any text describing minimum network spacing will need to be consistent with the RRR process methodology.

20. For the rationale presented above, especially in view of the specific request by EC to update both the Guide and Manual for the GOS taking into consideration the expansion of the

space-based component of the GOS, it is strongly urged that activities be undertaken to ensure a simultaneous update of the Guide and Manual for the GOS.