

## WMO STRATEGY TO IMPROVE SATELLITE SYSTEM UTILIZATION

*(Submitted by the WMO)*

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### Summary and purpose of document

This document informs CGMS of the further development of the Strategy to Improve Satellite System Utilization.

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### ACTION PROPOSED:

CGMS to note the WMO Strategy to Improve Satellite System Utilization, provide comments, and take action as appropriate.

**Appendix:** Preliminary Guidelines for the Strategy to Improve Satellite System Utilization.

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## DISCUSSION

1. CGMS-XXVII was informed that CBS Ext. 98 strongly endorsed the Strategy to Improve Satellite System Utilization.
2. The third session of the CBS OPAG IOS Expert Team met in Lannion, France, 3-7 July 2000 and noted the need to develop an implementation plan for the CBS endorsed Strategy to Improve Satellite System Utilization. The session agreed that it should be guided by the results of its two previous sessions. Furthermore, it was of the opinion that the form for an implementation plan could best be met through the preparation of guidelines for the strategy.
3. The session recalled that it should be guided by three cornerstones, i.e., data access, system use and education and training.
4. After in depth consideration of each of the three cornerstones (data access, system use and education and training), the session prepared a set of preliminary guidelines for the Strategy to Improve Satellite System Utilization as contained in the Appendix. The preliminary guidelines should be used as part of a rolling review of the Strategy to Improve Satellite System Utilization. The rolling review process will be initiated by the issuance of a biennial questionnaire (See WMO WP-8). An analysis of the questionnaire will provide one input to the guidelines for the Strategy to Improve Satellite System Utilization. The questionnaire will be analyzed with regard to each cornerstone in seeking problem areas and solutions that will enable increased utilization of the satellite system.

## **PRELIMINARY GUIDELINES FOR THE STRATEGY TO IMPROVE SATELLITE SYSTEM UTILIZATION**

The following preliminary guidelines should be used as part of a rolling review of the Strategy to Improve Satellite System Utilization. The rolling review process will be initiated by the issuance of a biennial questionnaire. An analysis of the questionnaire will provide one input to the guideline for the Strategy to Improve Satellite System Utilization. The Strategy is based on three cornerstones: data access, data use and education and training. The questionnaire will be analyzed with regard to each cornerstone in seeking problem areas and solutions that will enable increased utilization of the satellite system.

With regard to education and training, the Virtual Laboratory (VL) concept provides for the need for two streams of learning skills (basic and specialist) and a virtual resource library.

- A VL for Basic Skills should cover the core subject material needed by personnel who would be expected to use meteorological satellite data and products as part of their normal daily activities as stated in WMO Publication No. 258. However, these forecasters would not be specialists in the field of satellite meteorology;
- A VL for Specialist Skills should focus on personnel whose main tasks included the development, testing, implementation and maintenance of new satellite techniques, data and products. Many NHMSs would only have a small number of specialists working in this area. A VL for Specialized Skills would focus on those already in or moving into a specialist meteorological satellite role;
- The virtual resource library links materials and information available through the “centres of excellence”, the satellite operators and the science working groups. The virtual resource library would provide background theory, examples of use, libraries of code, possible implementation details and a mechanism for interactions with the scientific working groups and satellite operators.

With regard to data access improvements resulting from the acquisition of equipment through aid projects:

- The final user should have an autonomous capability for maintaining technical equipment (at least a first/second level capability). This could be achieved with multi-year maintenance plans that should be part of the project from the beginning;
- A suitable quantity of spare parts should be provided along with the equipment installation. The spare parts should be appropriately managed and stored;
- A parallel training programme for technicians, besides the training for use and data management, should be part of any project of equipment provision. This training programme should focus not only on the ability of repairing a specific system, but should teach the philosophy of maintenance as an essential tool for preserving the investments made by the donors or by the local users in order to maximize equipment life;
- It is important to implement aid projects whose goal is to improve the utilization of satellite data and facilities by using the following key milestones:
  - Identification of the project, bearing in mind user needs (e.g. responses to questionnaire);
  - Funding of project;
  - Implementation and monitoring of project;

- Post project monitoring and feed-back.

With regard to data and product utilization,

- The future development of Web-based tutorials and computer based modules which deal with improved utilization of satellite data is recommended. The material should be developed in the light of experiences gained in the forthcoming training events at the RMTC in Nanjing and APSATS-II.

In addition to the above milestones, it is important to ensure that there is a strong connection and coordination with activities related to education and training.

Low cost user stations should allow access to data from both GEO and LEO satellites and include processing capability targeted at operational meteorology and environmental applications.