

## **EDUCATION AND TRAINING STRATEGY**

*(Submitted by the WMO)*

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### **Summary and purpose of document**

The purpose of the document is to inform CGMS of its activities related to education and training.

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### **ACTION PROPOSED:**

CGMS Members to discuss an overarching approach for education and training.

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## DISCUSSION

1. The Thirteenth WMO Congress noted with pleasure the large impact already resulting from the implementation of the WMO Strategy for Education and Training in Satellite Matters. The Strategy has been especially successful in RA I through the efforts of EUMETSAT and its plans to hold two training events per year. Throughout all WMO Regions, more than 300 participants have benefited from WMO and satellite operator sponsored training events in satellite meteorology and hydrology, a 50% increase since Twelfth Congress.

2. Congress recognized the importance of training in the area of the use of satellite data and products and it provided sufficient financial resources in order that at least one satellite training event should be conducted in four WMO Regions during the next financial period. Congress recalled that pivotal to the success of the WMO Strategy for Education and Training in Satellite Matters was the cosponsorship of a specialised RMTA by a satellite operator. It noted that EUMETSAT was cosponsoring the RMTCs in Nairobi and Niamey, while the USA was cosponsoring the RMTCs in Barbados and Costa Rica. It also recalled that the Japan Meteorological Agency (JMA), the Australian Bureau of Meteorology (BOM) and WMO cosponsored the Asia Pacific Satellite Applications Training Seminar (APSATS) in November 1996 in Melbourne, Australia. JMA indicated a willingness to continue supporting similar training seminars and actively participate in the seminar by sending lecturers as well as providing training materials.

3. Congress also suggested that WMO discuss with the satellite operators the need to develop an **overarching approach for education and training**. Such an approach should take into account future needs in response to new and emerging satellite systems, data and products as well as emerging concepts for education and training such as the "virtual laboratory".

4. The CBS Open Programme Area Group on Integrated Observing Systems (OPAG IOS) Expert Team Meeting on Satellite Systems Utilization and Products held in Locarno, Switzerland 2-4 June 1999 discussed a concept that had the potential to provide the capability to leverage the science communities and emerging communications technologies to improve the utilization of satellite data. The "virtual laboratory" concept that is being demonstrated in the Costa Rica and Barbados RMTCs have focused on using personal computers (PCs), case data sets, and Internet to show the invaluable use of digital satellite imagery. The meeting discussed the role of such a "virtual laboratory" within the framework of both the WMO Strategy for Education and Training in Satellite Matters and the improvement in the utilization of satellite systems. It agreed that the "virtual laboratory" had great potential to improve the utilization of satellite data while optimizing the resources dedicated for education and training. It felt it important to strive to achieve harmonization/standardization of training methodologies across WMO Regions and suggested that the next Expert Team Meeting to be held in Melbourne (October 1999) address this issue as a matter of urgency and as its primary focus. It also noted the need for the availability of training data in near-real-time. In noting the great success of the International TOVS Working Group (ITWG) and the CGMS Winds Workshops in focusing the science communities on a specific application area's issues and problems, the meeting suggested the development of science teams and workshops that would deal with the application areas of satellite meteorology in NWP, quantitative precipitation estimates and ocean and land surface properties.

5. The OPAG IOS Expert Team Meeting in Melbourne, Australia, 25-29 October 1999 will discuss the development of the "Virtual Laboratory" concept as it relates to improving the utilization of satellite systems' data, products and services. As part of the discussion, the meeting will review the progress in the use of a "Virtual Laboratory" at the RMTCs in Barbados and Costa Rica. It will be briefed on ongoing coordination between the satellite operators to include their cosponsorship activities at regional RMTCs, e.g. EUMETSAT activities at the RMTCs in Nairobi and Niamey. It will also be briefed on the status in the development of Satellite Application Facilities (SAFs) by EUMETSAT.

6. At WMO's Thirteenth Congress, the People's Republic of China, as a satellite operator of the FY-1 and FY-2 series, offered to co-sponsor the RMTC in Nanjing as a specialized centre of excellence for education and training in satellite matters for WMO Members in RA II and RA V. The OPAG IOS Expert Team Meeting to be held in Melbourne, Australia, 25-29 October 1999 will be briefed on details of China's plans to implement the co-sponsorship of the RMTC in Nanjing. The meeting will also provide recommendations and guidance to assist WMO Members in the exploitation of this new RA II and RA V centre of excellence.