

World Meteorological Organization

CIMO-XIV/Doc. 3

**COMMISSION FOR INSTRUMENTS AND METHODS
OF OBSERVATION**

Submitted by:
Date:

President of CIMO
5.IX.2006

FOURTEENTH SESSION

Geneva, Switzerland
7 to 14 December 2006

Original Language:
Agenda item:

English
3

REPORT BY THE PRESIDENT OF THE COMMISSION

SUMMARY

ISSUES TO BE DISCUSSED:

The issues raised in the report will be discussed under the relevant agenda items.

ADDITIONAL FINANCIAL IMPLICATION:

None

DECISIONS/ACTIONS REQUIRED:

No specific action is required. The draft text, given in the Appendix for inclusion in the general summary of CIMO-XIV, acknowledges the overview report of the president, in particular the action that he has taken in the intersessional period.

CONTENT OF DOCUMENT:

Appendix for inclusion in the final report:

Draft text for inclusion in the general summary CIMO-XIV

Appendix for information:

CIMO-XIV/Rep. 3: Progress/Activity Report

DRAFT TEXT FOR INCLUSION IN THE GENERAL SUMMARY OF CIMO-XIV

3. REPORT BY THE PRESIDENT OF THE COMMISSION (*agenda item 3*)

3.1 The Commission noted with appreciation the report presented by Dr R.P. Canterford (Australia), the acting president of CIMO, on the Commission's activities since the thirteenth session of the Commission for Instruments and Methods of Observation.

3.2 At the thirteenth session, Dr S. K. Srivastava (India) and Dr R.P Canterford (Australia) were elected president and vice-president of the Commission respectively. Shortly after that session, Dr Srivastava resigned as president, and at the request of the Secretary-General, in accordance with the WMO Regulations, Dr Canterford agreed to undertake the position of acting president. Dr J. Nash (United Kingdom) was subsequently elected, by correspondence, as the vice-president.

3.3 The Commission expressed its appreciation for the unprecedented amount of the work done in the intersessional period and thanked the acting president, the vice-president, the co-chairpersons of the OPAGs, members of the expert team and those that provided considerable expertise in undertaking the intercomparison of instruments. The Commission also thanked those Members that hosted meetings and experiments.

3.4 The Commission welcomed the actions taken by the acting president that contributed to the progress of the Commission since its thirteenth session, in particular covering the work of subsidiary bodies of CIMO. The Commission invited its president to pursue his efforts regarding coordination of CIMO activities with the Commission as well as with other Technical Commissions. The Commission expressed support to the president in his efforts to arrange for the Commission to further address issues of utmost importance to the Commission, WMO and NMHSs.

3.5 The other issues raised in the report requiring actions and decisions were dealt with under the relevant agenda items.

World Meteorological Organization

CIMO-XIV/Rep. 3

**COMMISSION FOR INSTRUMENTS AND METHODS
OF OBSERVATION**

Submitted by:

President of CIMO

Date:

5.IX.2006

FOURTEENTH SESSION

Original Language:

English

Geneva, Switzerland
7 to 14 December 2006

Agenda item:

3

REPORT BY THE PRESIDENT OF THE COMMISSION

PROGRESS/ACTIVITY REPORT

SUMMARY

Reference: CIMO-XIV/Doc. 3

CONTENT OF DOCUMENT:

Appendix:

- Report by the president of the Commission

REPORT BY THE PRESIDENT OF THE COMMISSION

The New Working Structure

1. The thirteenth session of the Commission for Instruments and Methods of Observation (CIMO-XIII) established a new working structure in accordance with the Thirteenth WMO Congress recommendations and the fifty-third session of the Executive Council. CIMO-XIII also determined that it would assist quicker response to the rapid advances in technologies in instrumentation and the parallel reduction in resources and the number of experts available to undertake in-depth studies for CIMO.
2. The working structure adopted at CIMO-XIII included three Open Programme Area Groups (OPAGs): Surface Observation Technology, Upper-air Observation Technology and Capacity Building. Each of these OPAGs established expert teams to undertake the high priority tasks assigned during CIMO-XIII. The CIMO Management Group (CIMO-MG) was also established on the authority of CIMO-XIII, consisting of the president, the vice-president, and the co-chairpersons of the OPAGs. Expert teams were encouraged to utilize e-mail consultation wherever possible to avoid the need for unnecessary meetings. In addition, members of the CIMO MG were selected to act as focal points to provide rapid input to the newer cross cutting programmes and activities within WMO, such as GEOSS and NDPM, with the terms of reference determined by the president.
3. During the intersessional period the president monitored the new working structure. The president and the CIMO-MG members considered that the new working structure had indeed been very successful, with a large number of tasks being undertaken by a greater number of experts assigned to the expert teams. In future, a new Rapporteur on Climate Observations should be assigned to coordinate the important CIMO input to the climate activities. In addition, a CIMO Coordinator on Quality Management Framework (QMF) would be included in the CIMO-MG in the new intersessional period (along with the GEOSS and NDPM coordinators). The proposed slightly modified structure is detailed in agenda Item 10.
4. The dedication and continuous availability of the CIMO-MG members and instrument experts during the four years since CIMO-XIII allowed a great deal of effective work to be undertaken. This work is extremely valuable for all Members of WMO in the cost effective operation of high quality instruments through their surface and upper-air networks.

Implementation of the Instrument and Methods of Observation Programme

5. The valuable work that had been undertaken by the expert teams (ETs), under the direction of the OPAG co-chairpersons and the dedication and continuous availability of the majority of CIMO-MG members and instrument experts during the four years since CIMO-XIII allowed a great deal of effective work to be undertaken.
6. The major achievements during the intersessional period were:
 - (a) A major intercomparison of high quality radiosonde technology, in Mauritius, leading to significantly improved upper-air instruments and a wider range of choice for NHMSs leading to higher quality observations and more competitive consumable costs;
 - (b) Completion of a major three-way laboratory intercomparison for rainfall intensity instruments commonly use by Members with significant results;
 - (c) Capacity building through two Technical Conferences on Meteorological and Environmental Instruments and Methods of Observation (TECO-2005 and TECO-2006) and the Exhibition of Meteorological Instruments, Related Equipment, and Services (METEOREX-2005);
 - (d) Capacity building through several training workshops and technology transfer via the strengthening of the Regional Instrument Centres (RICs). An additional two RA VI RICs - Bratislava, Slovakia and Ljubljana, Slovenia - have increased the number to 15;

- (e) Publication of the Instrument Catalogue and instrument development reports;
- (f) Enhanced collaboration with manufacturers through the Hydro-Meteorological Equipment Industry Association (HMEI);
- (g) Establishment and effective implementation of an improved working structure;
- (h) More effective intercommission and cross-cutting WMO Programme collaboration;
- (i) Completion of the Seventh Edition of the WMO *Guide to Meteorological Instruments and Methods of Observation* (WMO-No. 8) (CIMO Guide) by 42 experts from 17 countries;
- (j) Completion of the Tenth International Pyrheliometer Comparison (IPC-X) and the conjoint Regional Pyrheliometer Comparisons (RPCs) with participation of two World Radiation Centres (WRCs), 16 Regional Radiation Centres (RRCs), 23 National Radiation Centres (NRCs) and 11 International Institutions;
- (k) Input to the Global Earth Observing System of Systems (GEOSS) work plans;
- (l) Collaboration with the Natural Disaster Prevention and Mitigation Programme;
- (m) Lead support for the WMO QMF through the Intercommission Task Team;
- (n) Publication of 17 Instruments and Observing Methods (IOM) reports, including essential training material;
- (o) Promotion of the traceability of measurements to the International System of Units (SI); and
- (p) Increased availability of essential instrument, training and other information through a special web portal.

Missions of the president

7. The president participated in all the major meetings and conferences, including the Management Group meetings and TECO and METEOREX conferences, all meetings of the Executive Council and several Meetings of the Presidents of Technical Commissions.

Achievements

Surface Observation Technology

8. An exhaustive WMO Laboratory Intercomparison of Rainfall Intensity (RI) Gauges was undertaken in the recognized laboratories of the Royal Netherlands Meteorological Institute, Météo-France and University of Genova, from 15 September 2004 to 15 September 2005. The generous support for the intercomparison by these laboratories is of great benefit to Member countries. The outcome of the successful intercomparison showed unique and valuable results that Members should be recognizing, for both tipping bucket and weighing rain gauges.

9. The Tenth International Pyrheliometer Comparison (IPC-X) and the conjoint RPCs were held at the WRC, Davos, Switzerland, from 26 September to 14 October 2005. The primary focus of IPC-X was the calibration of standard pyrheliometers of all WMO RRCs, and as such 89 were calibrated during 11 days of favorable weather conditions. National Standard Pyrheliometers were also compared against the World Standard Group (WSG) of radiometers. Experts working at RRCs were trained in a workshop on how to prepare, carry out, and evaluate the results of a RPC.

10. Progress was also made on the establishment of the World Infrared Radiometer Calibration Centre, assessment of its technical/scientific capabilities and provision of guidance for its future

operational use. Further development of the WSG of absolute infrared radiometers was examined by the relevant expert team and is reported under agenda item 4.3.

11. The WMO Field Intercomparison of Rainfall Intensity Gauges and the WMO Combined Intercomparison of Thermometer Screens/Shields with Humidity Measuring Instruments are planned for 2007-08.

Upper-air Observation Technology

12. The WMO Intercomparison of High Quality (HQ) Radiosonde Systems, Vacoas, Mauritius, 2-25 February 2005, concentrated on the analysis of results and recommendations towards further improving radiosonde performance. The intercomparison was intended to identify any significant flaws in the new radiosonde designs, so that these could be rectified before their use became widespread in the operational radiosonde networks. Based on the analysis, a proposal was made for the combination of best performing radiosondes as part of working references for radiosonde tests. The final report was published on the CIMO/IMOP Website in January 2006.

13. Members should note the results of the report, in particular the improved accuracy of HQ radiosonde systems, the alternative (to inclusion of a pressure sensor) satisfactory geopotential height derived from GPS radiosondes, and the best combination of HQ radiosondes for reference purposes.

Capacity Building and Regional Instrument Centres

14. After a field evaluation of RICs, options for improving their functionality, recommendations for their Terms of Reference review, and a strategy for strengthening their services through continuous evaluation will be considered in agenda item 6.2. To assist this goal, a WMO Training Workshop on Metrology for the Regional Instrument Centres was successfully held in Trappes, France during 2005 where 20 participants from 13 RICs were trained in basic metrology principles, measurement techniques and calibration of standard instruments.

15. Two successful technical conferences (TECO-2005 and TECO-2006) and an associated METEOREX-2005 exhibition were held in the intersessional period. These conferences accomplished a great deal of technology transfer and capacity building. All papers, including posters, were published on a CD-ROM as well as the CIMO/IMOP Website.

16. Three training workshops on upper-air observations and three training workshops on metrology and calibrations had been a success in the intersessional period. A schedule of training workshops would be proposed to the Commission for the next intersessional period. The aim of the training was to improve the knowledge and skills of operational personnel in producing high quality upper-air and surface observations.

17. The 2005 version of the World Meteorological Instrument Catalogue was produced in collaboration with the China Meteorological Agency with preliminary steps taken to also collaborate with the HMEI in future versions of the catalogue.

18. Significant effort was dedicated to the preparation of technical reports and guidance on instruments and methods of observing practices to Members. Since CIMO-XIII, 18 technical reports have been published under the Instruments and Observing Methods (IOM) report series and are available in CD-ROMs as well as on the CIMO/IMOP Website. Similarly, the update of the CIMO Guide was undertaken by 42 experts from 18 countries, working on the update since 2002. The preliminary release of the Seventh Edition of the CIMO Guide has been made available for comment in an electronic version on the IMOP/CIMO website and on CD ROMs distributed to Members.

Meeting milestones

19. The following major intercomparisons, training workshops, meetings and conferences were held in order to meet task milestones:

3-7 July 2006, Geneva (Switzerland)

CIMO Management Group, Third Session

8-12 May 2006, Buenos Aires (Argentina)

WMO Training Workshop on Upper-air Observations for RA III (South America)

22-26 April 2006, Cairo (Egypt)

WMO Training Workshop on Metrology for RA I (Africa) English-speaking Countries

12-13 April 2006, Bratislava (Slovakia)

WMO Training Workshop on Metrology for RA VI (Central and Eastern Europe)

10-11 April 2006, Ljubljana (Slovenia)

WMO Training Workshop on Metrology for RA VI (South-Eastern Europe)

4-7 April 2006, Geneva (Switzerland)

CIMO Expert Team on Regional Instrument Centres, Quality Management Systems and Commercial Instrument Initiatives (Reduced meeting)

6-10 February 2006, Davos (Switzerland)

CIMO Expert Team on Meteorological Radiation and Atmospheric Composition Measurements, First Session

5-9 December 2005, Geneva (Switzerland)

Joint CIMO Expert Team on Surface-based Instrument Intercomparisons and Calibration Methods, Second Session; and International Organizing Committee (IOC) on Surface-based Intercomparisons, Second Session

28-30 November 2005, Geneva (Switzerland)

Joint CIMO Expert Team on Upper-Air Systems Intercomparisons, Second Session; and International Organizing Committee (IOC) on Upper-Air Systems Intercomparisons, Second Session

26-28 October 2005, Shanghai (China)

The 3rd China International Exhibition on Technology and Equipment of Meteorology Science and Hydrology

26-28 October 2005, Shanghai (China)

The 4th China International Forum and Exhibition on Lightning Protection Technology and Equipment

17-21 October 2005, Trappes (France)

WMO Training Workshop on Metrology for the Regional Instrument Centres

From 26 September 2005 to 14 October 2005, Davos (Switzerland)

The tenth International and Regional Pyrheliometer comparison

13 September 2005 De Bilt (Netherlands)

Extraordinary meeting of the laboratories involved in the WMO Laboratory Intercomparison of Rainfall Intensity Gauges

From 15 September 2004 to 15 September 2005 (France/Italy/Netherlands)

WMO Laboratory Intercomparison of Rainfall Intensity Gauges

2-3 May 2005, Bucharest (Romania)

CIMO Management Group, Second Session

4-7 May 2005, Bucharest (Romania)

TECO-2005

4-6 May 2005, Bucharest (Romania)

METEOREX 2005

14-17 March 2005, Geneva (Switzerland)

Expert Team on Remote Sensing Upper-air Technology and Techniques, First Session

13-16 October 2004, Geneva (Switzerland)

ET on Surface Technology and Measurement Techniques, First Session

17-20 March 2004, Geneva (Switzerland)

Joint CIMO Expert Team on Upper-air Systems Intercomparisons, First Session; and International Organizing Committee (IOC) on Upper-air Systems Intercomparisons, First Session

1-5 December 2003, Casablanca (Morocco)

Training Workshop on Upper-air Observations for RA I (French-speaking countries)

24-28 November 2003, Trappes (France)

Joint CIMO Expert Team on Surface-based Instrument Intercomparisons and Calibration Methods; and International Organizing Committee (IOC) on Surface-based Intercomparisons

3-7 November 2003, Geneva (Switzerland)

CIMO Expert Team on Upgrading the Global Radiosonde Network, First session

7-11 April 2003, Gaborone (Botswana)

Training Workshop on Upper-air Observations for RA I (English-speaking countries)

13-15 February 2003, Los Angeles, CA. (USA)

CIMO Management Group, First Session

20. All the above activities are reported in detail at the WMO IMOP Web site. During the intersessional period the completion of reports was timely for use by Members, and announced in the regular CIMO newsletters.

Acknowledgements

21. There had been a great deal of work by members of the Commission, especially members participating in Expert Teams. The president thanked these members and the vice-president and chairpersons of the OPAGs, ETs and those that provided considerable expertise in undertaking the intercomparison of instruments. He thanked those Members that hosted meetings and experiments. He also thanked the Secretary-General of WMO and in particular the outstanding support of the relatively small Secretariat assigned to CIMO. He advised the session that he was not standing for the role of president for the next intersessional period due to his changed role in his NMHS. However, if the Commission desired, he would take on a Management Group role (agenda item 10) to support the new president and to assist in the transition of the Management Group leadership.
