WORLD METEOROLOGICAL ORGANIZATION — ORGANISATION MÉTÉOROLOGIQUE MONDIALE

WORLD WEATHER WATCH

Instruments and Methods of Observation Programme

Commission for Instruments and Methods of Observation

CIMO Newsletter

http://www.wmo.ch/web/www/CIMO/newsletters.html
Tel.: (+41 22) 730 8409 - Fax: (+41 22) 730 8021

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The CIMO Newsletter is intended as a complementary means of keeping informed all CIMO members and getting them involved in the work of the Commission, by reporting regularly on its activities as well as on other related organizational matters, meetings, publications, etc.
Readers are encouraged to provide their comments.

FOURTEENTH WORLD METEOROLOGICAL CONGRESS

The World Meteorological Organization (WMO) held its Fourteenth Congress at the International Conference Centre of Geneva (CICG) from 5 to 24 May 2003, under the chairmanship of Dr John W. Zillman, President of WMO.

Congress expressed satisfaction with the achievements of the IMOP Programme and noted that there had been definite progress in improving the quality and reliability of instruments through calibrations and intercomparisons, specifically with respect to GPS-based radiosondes, rain gauges and pyrheliometers. Congress recognized an increased need for intercomparison of instruments measuring short-wave and long-wave radiation and welcomed the offer of Switzerland to operate the World Infrared Radiometer Calibration Center at the Physicalisch-Meteorologisches Observatorium in Davos (PMOD) as from 2004. It was noted that intercomparisons were essential for ensuring the long-term quality and homogeneity of data, and agreed that those activities should continue.

Congress underscored the importance of capacity building and training in the field of instruments and methods of observation. It encouraged Members to arrange for required training through national and regional training programmes and urged Members as well as the private industry to sponsor IMOP training events. In this regard, Congress noted with appreciation the offer of India to hold training courses at the Regional Meteorological Training Centre in Pune, for surface, radiation and calibration practices.

Congress underlined the role that the Regional Instrument Centres (RICs) played in capacity building, such as the active support towards the organization of training workshops, noted with appreciation the efforts of CIMO to enhance services provided by RICs and requested CIMO to explore the possibility of strengthening cooperation among RICs through the establishment of mutual relationships between RICs in developed and in developing countries.

With respect to the collaboration with manufacturers, namely through the Hydro-Meteorological Equipment Industry (HMEI) Association, Congress encouraged CIMO to explore, in collaboration with

the HMEI, the possibility of establishing a mechanism for joint procurement, in order to achieve a reduction in the cost of consumables, in particular radiosondes.

Congress appreciated that CIMO had implemented a new working structure in view of its further growing tasks and responsibilities. It noted that the new working structure was aimed at increasing efficiency, flexibility and responsiveness in carrying out CIMO tasks while strengthening the participation of experts from developing countries.

Appointment of the Secretary-General

The Fourteenth World Meteorological Congress appointed Mr Michel Jarraud as the next Secretary-General of WMO for a period of four years starting 1 January 2004.

Election of Officers

Congress elected Mr Alexander I. Bedritsky (Russian Federation) as the new WMO President. Mr Ali-Mohammad Noorian (Islamic Republic of Iran), Mr Tyrone W. Sutherland (British Caribbean Territories) and Comodoro Miguel Angel Rabiolo (Argentina), were elected as First, Second and Third Vice-Presidents, respectively.

CIMO OFFICERS

Dr S.K. Srivastava relinquished his position as president of the Commission for Instruments and Methods of Observation, effective on 24 May 2003, following his election as member of the Executive Council.

In accordance with Regulation 12 of WMO General regulations, Dr Ray P. Canterford, vice-president of CIMO, was invited to assume the responsibility of acting president of the Commission, which he accepted. As regards the now vacant seat of vice-president of CIMO, an election by correspondence will be arranged in accordance with the provisions of Regulation 15.

FIFTY-FIFTH SESSION OF THE EXECUTIVE COUNCIL

The Executive Council of the World Meteorological Organization held its fifty-fifth session, under the chairmanship of the newly elected President of WMO, Dr A. Bedritsky, from 26 to 28 May 2003, at WMO Headquarters, following the closure of the Fourteenth Congress.

The Council recognized that the output of the Instruments and Methods of Observation Programme (IMOP) fell somewhat short of the targets set up on the WMO Fifth Long-Term Plan, specifically concerning the technical and training support, in instrument maintenance and calibration, needed by developing countries. It also noted that progress was slower than planned in certain specific areas of instrument development and standardization of procedures and practices. **The Council, therefore, urged Members to assign appropriate experts to the various expert teams established by CIMO-XIII.** The Council also recommended that this expertise might have to be found outside of the National Meteorological and Hydrological Services.

Instrument Development and Automation

The Council noted that the automation of some manual, visual and subjective observations appeared not to be possible in the foreseeable future. It emphasized, however, that possible alternative methods should be explored for replacing some traditional observations, which could then be phased-out, taking full benefit from technological developments. The Council urged CIMO to consider possible means of minimizing the impact of continuous improvement of instruments on their cost, taking into account the difficulties experienced by developing countries.

Intercomparisons

The Council emphasized the importance of the WMO intercomparisons carried out in various fields of surface and upper-air measurements and thanked all Members which hosted the trials. The Council invited CIMO to continue strengthening the work of the Commission related to the improvement of the quality of observations through further intercomparisons, in particular the International and Regional Pyrheliometer Comparisons, the International Rainfall Intensity Measurement Intercomparison, the Thermometer Screen and Shields Intercomparison, the International Hygrometer Intercomparison and the International Radiosonde Intercomparison.

CIMO *Guide*

The Council recognized the importance of publications, prepared by instrument experts and issued under the Instruments and Observing Methods Report Series, containing the results of intercomparisons and other specific studies as well as status reports in various fields of instruments. It also noted that work had started on a substantial revision of the CIMO *Guide* with a view of publishing it in an electronic version by early 2005. In that regard, the Council urged Members, and in particular IMOP experts, to actively support this important activity.

Instrument Catalogue

The Council noted the usefulness of the Instrument Catalogue, of which a second edition had been produced by the China Meteorological Administration (CMA), under the auspices of CIMO, for assisting Members in selecting the most suitable instruments for application within their operational networks. The second edition of the Instrument Catalogue was distributed to Members at the beginning of June 2003.

The Eighteenth *Professor Dr Vilho Vaisala Award*

The Selection Committee of the Executive Council recommended that the eighteenth *Professor Dr Vilho Vaisala Award* be granted to Messrs U. Baltensperger, M. Gysel and E. Weingartner (all from Switzerland) for their paper entitled *Hygroscopicity of Aerosol Particles at Low Temperatures, New Low-Temperature H-TDMA Instrument: Setup and First Applications*. The paper was published in Environmental Science and Technology, Vol. 36, No. 1, 2002. The proposal of the Selection Committee was approved by the Council.

CIMO STRUCTURE

Based on the decision of CIMO-XIII and follow-up by CIMO-MG1 the Expert Teams have been established and activated. This is an exciting development for CIMO that should involve many more

experts from more NMHS, helping to progress a number of outstanding tasks. Details can be found on the CIMO/IMOP website.

TRAINING WORKSHOP ON UPPER-AIR OBSERVATIONS

The Training Workshop on Upper-air Observations for RA I (Africa) English speaking countries was hosted by the Botswana Meteorological Service, in Gaborone, from 7 to 11 April 2003. The Training Workshop was aimed at improving the knowledge and skills of senior operational personnel in-charge of the national upper-air networks. It had both theoretical and practical lessons. The theory was conducted in the training premises of the Botswana Productivity Center and the field practice was performed at the Upper-air station near the Gaborone airport. The Botswana Meteorological Service provided with the necessary infrastructure for the successful outcome of the Workshop, complemented by two additional ground receiving and processing stations, and some consumables, provided by the UK Met Office and Vaisala Oyj, for the practical demonstrations at the Upper-air station. Thirty-four trainees from 20 countries participated at the Workshop.

Three lecturers from the UK Met Office and one from USA NWS Training Centre as well as two representatives from the HMEI Association and two Botswana NMS' staff members prepared and delivered lectures and conducted practical lessons according to the Programme. The theory covered topics, such as basic introduction to radiosonde soundings and all preparatory activities prior to the launching of radiosondes. The practical work dealt with all activities during and after the radiosonde launch. Four RS80, two RS90 and three RS92 radiosondes were launched during the demonstrations. Review of the presently used technology was complemented by information on possible future systems, such as wind profilers, RASS, GPS total water vapour, and radiometers.

The Workshop also addressed the operational problems experienced in RA I through country reports presented by the participants. Two Vaisala experts, representing the HMEI, provided with suggestions on how to solve pertinent problems and on how to best optimize the equipment performance under the particular conditions of the countries concerned. The complete review of operational problems was prepared by Mr Bazira, co-chairman of CIMO OPAG on Capacity Building and chairman of the CIMO Expert Team on Training Activities and Training Materials.

The fruitful dialog set-up between lecturers and participants led to a better understanding of the needs and requirements in terms of operation, maintenance and procurement of instruments as well as training relevant to upper-air observations under the particular conditions of countries in RA I. This will assist CIMO in the planning of future training events and WMO in providing better assistance to African countries in general. Considering the high cost of consumables (one balloon ascent cost approx. 150 US$), high resolution sounding data should be archived to support other than standard users and thus draw more benefit from the investment. However, at present, this is not possible in most African countries as the archiving option has been neglected by donors (often contracted through VCP). In order to reduce the cost of consumables it was suggested that NMSs place orders to purchase a larger number of radiosondes and balloons than is the current practice so as to benefit from discount strategies proposed by manufacturers who apply discounts on orders of not less than one-year supplies. Sub-regional approach was suggested through sub-regional groupings. Also, a WMO Trust Fund scheme may be considered, if a number of NMSs would place governmental funds into the Trust Fund. The cost of consumables may thus be negotiated further down.

The participants showed a great deal of dedication, enthusiasm and will to learn and to know more about equipment and methods used in Upper-air observations for the benefit of their own country, the

Region and the whole meteorological community. The objective of the Training Workshop being achieved, it is therefore expected that participants will be able to share their newly acquired knowledge with their own colleagues and thus benefit the national upper-air networks overall.

A set of the guidance and training material was also provided to participants on a CD to assist them in the follow-up training at national level. Thanks to a productive dialogue between participants and lecturers in reviewing the effectiveness and contents of the Workshop, the training materials will be further improved. All training materials as well as other outcomes from the Workshop, such as Review of the operational problems, lessons learnt and procurement strategies, will be soon available at http://www.wmo.ch/web/www/IMOP/meetings.html.

A similar Training Workshop is planned in November 2003 in Casablanca, Morocco, for French speaking countries of RA I.

CIMO/IMOP WEBSITE

The presentation of the IMOP/CIMO website has been recently updated to reflect the outcome of CIMO-XIII, CIMO-MG1, Cg-XIV and EC-LV. The website proposes links to Meetings and Conferences, IMOP Publications, Reports, etc.

The Newsletter will be issued at least twice a year and will be distributed by e-mail to CIMO members and affiliates, including the Hydro-Meteorological Equipment Industry Association (HMEI) and the International Bureau of Weights and Measures (BIPM)*, provided that the e-mail addresses are known to the Secretariat.*

The contents of the Newsletter may be forwarded to other persons interested in contributing to the work of CIMO or in receiving information, by e-mail, on the activities of CIMO.

Information on the work of CIMO can be found at the IMOP/CIMO home page available through the World Weather Watch website ***www.wmo.ch/web/www/www.html***

Contact persons at WMO Secretariat:
IMOP/CIMO: Dr. Miroslav Ondráš, Observing Systems Division (ondras_m@gateway.wmo.ch)
WWW web: Ms Sary Vargas, Web Editor (vargas_s@gateway.wmo.ch)