

WORLD METEOROLOGICAL ORGANIZATION

COMMISSION FOR INSTRUMENTS AND METHODS OF OBSERVATION

**CIMO MANAGEMENT GROUP
Fifth Session**

Geneva, Switzerland

28 – 30 January 2008

FINAL REPORT



EXECUTIVE SUMMARY

The fifth session of the CIMO Management Group (CIMO-MG-5) was held from 28 to 31 January 2008 at the WMO Headquarters in Geneva, Switzerland.

The meeting considered the reports of the CIMO President, OPAG Co-Chairs and CIMO Co-ordinators. The special attention was paid to the problems encountered in the work of individual expert teams, their workplans and deliverables. The Management Group discussed the expert teams' membership, the changes to be made and agreed on the actions that need to be taken related to the planning, coordination and management of the work of the commission, its OPAGs, Expert Teams and Rapporteurs.

The special attention was paid to the CIMO Pilot Project (CIMO-PP). The meeting considered the impact the WIGOS would have on the CIMO activities and prepared several proposals for the CIMO Ad-Hoc Working Group on the CIMO WIGOS Pilot Project (CIMO-WIGOS-PP-1) that held its first session from 31 January to 1 February 2008 at the WMO Headquarters in Geneva.

The final report of the fifth session of the CIMO Management Group (CIMO-MG-5) is available at:

<http://www.wmo.int/pages/prog/www/reports.html>

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GENERAL SUMMARY

1. ORGANIZATION OF THE SESSION

1.1 Opening of the meeting

1.1.1 The fifth session of the CIMO Management Group (CIMO-MG-5) was opened on Monday, 28 January 2008 at 09:30, by the President of CIMO, Dr John Nash. The list of participants is given in Annex I.

1.1.2 The Deputy Secretary-General, Prof. Hong Yang, welcomed the participants to Geneva to the WMO Headquarters and wished them a productive meeting and an enjoyable stay in Geneva. He pointed out the emerging issues that CIMO would have to address as a follow-up of Congress decisions, like strategic planning and the WMO Integrated Global Observing Systems (WIGOS). He stressed that CIMO's role was at the heart of the WIGOS concept and that it was expected to play a significant role in its development. He invited the CIMO-MG to plan its activities carefully and realistically taking into account human resources available to address WIGOS.

1.1.3 The CIMO President recalled that CIMO had achieved a lot of positive results and that it would be confronted with the fact that a number of its experts would be retiring soon. He pointed out the challenge for CIMO to recruit young experts to participate in the CIMO activities to maintain the high-level of output that CIMO had been producing.

1.2 Adoption of the agenda

1.2.1 The meeting adopted the Agenda as reproduced at the beginning of this report.

1.3 Working arrangements

1.3.1 The working hours and tentative timetable for the meeting were agreed upon.

2. EVALUATION OF THE PROGRESS ACHIEVED IN THE WORK PROGRAMMES

2.1 Report of the President

2.1.1 The President reported on his activities since CIMO-XIV. As CIMO President he participated in a number of WMO meetings, such as the Task Team on the Integration of WMO Observing Systems, the Fifteenth Session of Congress and the Fifty-ninth session of the Executive Council.

2.1.2 He introduced the presentation he had made during Congress aimed at showing the roles and outcomes of CIMO, which are well-known by Members at the expert level, but too frequently not known well enough at the management level. The MG agreed that it would be beneficial to develop a vision statement for CIMO. Such a statement would help to motivate and stimulate experts in participating in the activities of CIMO and would also be important in the context of WIGOS. Mr Rainer Dombrowsky volunteered to develop such a statement and circulate it among the MG members for comment and approval by beginning of April. (See Annex VI, Action 1).

2.1.3 In view of a large number of tasks that CIMO is being asked to carry out, the limited human as well as financial resources available and the time that experts have to devote to

international activities, it was recognized that CIMO would have to clearly prioritize its activities to ensure that the most important and urgent ones would receive the attention they require. It was also noted that, in some cases, it was most effective if the activities were first started at a national level and then linked internationally rather than starting them directly at the international level.

2.1.4 The CIMO President also expressed his concern that observations of extreme weather conditions had not yet been addressed properly.

2.2 Report of the OPAG Co-Chairs

2.2.1 The OPAG Co-Chairs reported on the activities of the Expert Teams and Rapporteurs under their responsibility. The MG was pleased that most of the expert teams had completed workplans that were endorsed by the MG and were consistent with the strategy required by WIGOS. It discussed problems encountered, such as workplans that had not been finalized, lack of response of some experts and lack of communication between Expert Team Chairs and the members of their teams which caused some experts to be not aware of their tasks and responsibilities. Specific decisions related to the workplans of the expert teams, their deliverables and membership are reflected under Agenda Items 4.1 and 4.2.

2.2.2 The MG recognized the importance of having active representation of other technical commissions in its expert teams for issues of common interest. This is particularly true for requirements for Automatic Weather Stations to ensure that the developed requirements meet the needs of all technical commissions, to avoid duplication of activities and expert teams between different technical commissions, prevent the development of conflicting requirements and make best use of the newest technologies and techniques available. The MG also recognized the importance of the participation of manufacturers in expert team meetings to ensure that instrumentation is constantly improving according to evolving requirements of NMHSs.

2.2.3 The MG noted how active the Co-Rapporteurs on Training Activities and Training Materials had been and thanked them for their large and important contribution to the work of the OPAG on Capacity Building.

2.3 Report of the Co-ordinators

2.3.1 The Co-ordinators presented reports on WMO activities relevant to their mandates.

2.3.2 Although the Co-ordinator on Disaster Risk Reduction, Ray Canterford, was not able to attend the meeting, the MG was grateful for his contribution and recognized the need to make resources available to meet the challenges he identified in his report. The MG noted the problems that had occurred in Uganda with the lack of real-time information from river-gages. It was also noted that not only the instrumentation, but also the telecommunication infrastructure, needed to be hardened to survive extreme weather.

2.3.3 The Co-ordinator on Cross-Cutting Activities, Eliphaz Bazira, raised a number of issues that were relevant to WIGOS and would need to be taken into account in future planning.

2.3.4 The Co-ordinator on GEO, Alexander Gusev, provided the meeting with a review on the progress of the GEO planning. The presentation also presented the meeting on how Members could benefit from participating in or supporting GEO-related projects.

2.3.5 The Co-ordinator on Quality Management Framework (QMF), Udo Busch, informed the meeting on the work of the Intercommission Task Team on QMF. The MG noted the

development of the working arrangements with ISO and the possibilities of collaboration that would soon be possible for publishing WMO technical standards as joint ISO/WMO technical standards.

3. IMPACT OF THE CONGRESS AND EXECUTIVE COUNCIL DECISIONS ON CIMO ACTIVITIES

3.1 WMO Strategic Planning

3.1.1 Mr Dieter Schiessl, Director of the Weather and Disaster Risk Reduction Services Department and Director of the Strategic Planning Office briefed the MG on the WMO Strategic Planning Process that Fifteenth Congress decided to pursue and on the impact this process would have on the CIMO activities. Congress requested the technical commissions to lead the formulation of scientific and technical aspects of WMO Programmes and activities falling within their respective responsibilities, including providing relevant analysis, assessment and indication of priorities.

3.1.2 The MG noted that the Secretariat has commenced action on the preparation of the next Strategic Plan (SP). The MG agreed that CIMO should contribute to the strategic planning process with other technical commissions. Such contributions should, as appropriate, include proposals on Strategic Thrusts and Expected Results in alignment with overall objectives of the Organization.

3.1.3 The MG recalled the decision of the Executive Council (fifty-eighth session, Geneva, June 2006), to engage in an organization-wide strategic, operational and budget planning process. It noted that the WMO Operating Plan (WMO-OP) converts the strategic directions into specific, measurable deliverables and related summary of activities of the WMO Programmes and their corresponding timelines and key performance targets.

3.1.4 It was also recalled that Fifteenth Congress noted that in the initial phase the development of the WMO-OP focused on the Secretariat programme implementation plans and associated activities, and therefore represents the WMO Secretariat Operating Plan (SOP). Congress also agreed with the Executive Council to expand the SOP into an organization-wide and comprehensive WMO-OP that would incorporate the contributions of the regional associations and technical commissions as well as of the scientific steering committees of the WMO Joint Programmes.

3.1.5 The MG noted that the WMO-OP described how the WMO Programmes and other major activities (e.g. Programme Support Services) would contribute towards accomplishing the Organization's Mission by achieving the Top-level Objectives and the Expected Results put forth in the WMO Strategic Plan. The WMO-OP used the WMO Programmes as main building blocks and each of their deliverables was attributed to a specific Expected Result to which it contributes. A timeline indicates the period of realization of each deliverable.

3.1.6 Recalling that Cg-XV expected to take into account experiences and results to be gleaned from the mid-term (2009) performance evaluation of the SOP, the MG noted that the first comprehensive WMO-OP was planned to be developed for the second biennium (2010-2011) and issued in the 2nd half of 2009 along the line of the Action Plan given in the Annex II. The MG further noted that CIMO was expected to review its internal working structures and mechanisms with a view to orienting them along the result-based strategies of the Organization in the light of the timetable and modality for delivery of their contributions to the WMO-OP.

3.1.7 The MG decided to work in close collaboration with Secretariat to develop the various inputs required from CIMO for the finalization of the WMO-OP. During the meeting an initial

review of the WMO-OP and proposed workplans of the expert teams and rapporteurs indicated that in most cases the plans were already in alignment with the goals and thrusts of the strategic plan. (See Annex VI, Action 2).

3.2 WMO Secretariat Structure

3.2.1 The MG was informed about the new WMO Secretariat Structure and in particular on the structure of the Observing and Information Systems Department, which is providing the support to CIMO.

3.3 Role of CIMO in WIGOS

3.3.1 The meeting was briefed by the CIMO Vice-President, Rainer Dombrowsky, on the first meeting of the Executive Council Working Group on the WMO Integrated Global Observing Systems (WIGOS) and WMO Information System (WIS), Geneva, December 2007. In his presentation he provided an overview of WIGOS, paying special attention to the explanation of basic terminology, WIGOS Concept of the Operations, Pilot and Demonstration Projects, which enabled better understanding of the whole issue by the CIMO-MG. At the end of his presentation, he provided the explanation of the proposed role of CIMO in WIGOS.

3.3.2 MG considered the information and discussed the expected involvement and role of CIMO in the WIGOS. It recognized the role that had been proposed by the EC-WG-WIGOS/WIS to coordinate the development and the maintenance of observing standards for all types of observations carried out within WIGOS, in collaboration with the “owners” of the various systems. To accomplish this, CIMO would need to improve its interactions with other technical commissions and owners of observing systems.

3.3.3 The meeting also noted that the question of the ownership of the standards was an important matter. Even though it had been envisioned by the EC-WG-WIGOS/WIS that all observing standards relevant to WIGOS could be collectively kept at one location, the Guide on Instruments and Methods of Observation, WMO-No. 8 (CIMO Guide), one could also look into the possibility to reference other guides and standards in the CIMO Guide rather than including all standards in the CIMO Guide.

3.3.4 The meeting noted the importance of the CIMO Pilot Project on WIGOS . Given the constraints of the proposed roadmap it would be necessary to proceed at a high pace in the development of the pilot projects. However, the MG was of the opinion that caution was needed and that the ad-hoc Group would need to be realistic in its proposals, taking into account the scarcity of human resources available to effectively carry out the work and the magnitude of some of the proposed tasks. It was clear that scoping of the proposal would need to be considered by the ad-hoc working group.

3.3.5 The MG recognized that it would be a challenge for CIMO to find appropriate experts to address all the tasks related to WIGOS, for which it was being asked to contribute and requested to provide experts to participate in the other WIGOS Pilot Projects.

3.3.6 The MG proposed that the proposal for revised TORs be developed by the ad-hoc working group and circulated for comments to the MG members. (See Annex VI, Action 3).

3.4 Regional Instrument Centres, Regional Radiation Centres and CIMO Lead Centres for Instrument Development and Testing

3.4.1 Co-Chair of the OPAG on Capacity Building, Mr Nbou, presented a proposal on “Improvement of the quality of climatic and meteorological data in the perspective of a better

integration of the climate in the African sustainable development". The project aims at strengthening the Regional Instrument Centres (RICs) of RA I (Africa) as well as improving the calibration of GCOS stations. It addresses the evaluation of the RICs, the upgrading of their instrumentation, the training of their staff in metrology and calibration, the development of standardization procedures and maintenance plan for the equipment, and the calibration of GCOS stations installed in the RICs countries and neighbouring countries.

3.4.2 The MG welcomed this project. The MG was of the opinion that the complete project was very large and that it might be difficult to address the problem of all African RICs at once, in particular, noting the problems related to the transport of instruments from one country to another in RA I. In order to ensure the best chance of success, the MG recommended focussing the project on one single RIC. This would reduce the cost of the project, make it more manageable and widen the possible sources of financing available, and for example making it eligible for funding through the VCP. After having demonstrated the feasibility of the project in one country, it would be easier to find funding for the whole project.

3.4.3 The MG noted that CIMO had very limited funds and could not provide support to such a project apart from providing technical expertise. The MG was informed of potential sources of funding that might be available in the future through the WMO Resource Mobilization Unit. In view of looking for funding source, the MG requested Mr Nbou to provide a cost estimate for the proposal. (See Annex VI, Action 4).

3.4.4 The meeting discussed how RICs and Regional Radiation Centres (RRCs) could be strengthened to offer required services to their Members. The MG requested the MG-members to provide input to the President by TECO-2008 with the goal of developing a strategy for strengthening RICs and RRCs. (See Annex VI, Action 5). The MG requested the President of CIMO to contact GCOS in view of identifying GCOS plans for RA I (whether GCOS plans to visit RA I GCOS stations) and possible sources of funding for a joint project for strengthening RA I RICs. (See Annex VI, Action 6).

3.4.5 The meeting noted the request from EC-LIX that CIMO developed guidelines for Members on the traceability of measurements to System International (SI) standards. The MG was of the opinion that many such guidelines were already available, for example in the CIMO Guide. The problems with instrument traceability lay more in the need to persuade Members to provide resources for linking their measurements to the necessary reference standards. It was suggested that some evidence of the existing errors in the operational networks might help to persuade Members of the need for action.

3.4.6 The MG noted the request of EC-LIX to identify a Centre(s) of excellence that would serve as the CIMO Lead Centre(s) for Instrument Development and Testing and to develop Terms of Reference (TOR) for such a Centre(s). The MG requested the OPAG Co-Chairs to address that matter in collaboration with the expert teams under their responsibility and to provide proposals for the nomination of such a Centre(s), including TOR, by TECO 2008 to the President. The OPAG Co-Chairs should particularly consider nominating such a Centre(s) in the case that their work relies strongly on the expertise provided by a specific Centre. (See Annex VI, Action 7).

3.4.7 The MG noted the request from Congress to proceed with the establishment of CIMO testbeds to address the standardization of remote sensing observing systems, such as wind profilers, lidars and microwave radiometers, and their integration with *in-situ* observing systems. The MG agreed that this topic would be adequately covered by the COST Action ES0702 "EG-CLIMET" that has been approved and in which at least 2 testbeds would be carried out.

4. ISSUES RELATED TO THE PLANNING, COORDINATION AND MANAGEMENT OF THE WORK OF THE COMMISSION, ITS OPAGS AND EXPERT TEAMS

4.1 Review of the Working Structure of CIMO including its Membership

4.1.1 The MG reviewed the current working structure of CIMO and the Team Membership and agreed that no changes were required at this time. It also agreed that in the current situation of limited financial resources this would imply, in some cases, that only some of the members of an expert team would be invited to meeting(s) of the team. The same being true for meetings of the MG at which only a core group need to be invited to address urgent issues.

4.1.2 The MG was informed by CIMO Co-ordinator for WMO-QMF that he would be changing position inside DWD, Germany, in March 2008 and that he would not be able to serve as a member of CIMO-MG anymore. He informed the MG that Germany would make a proposal for his replacement in the CIMO-MG.

4.1.3 The MG was also informed that Karl-Heinz Klapheck, Chairman of the Expert Team on Surface Technology and Measurement Techniques (A.1), would retire at the end of 2008. The MG agreed that the Vice-Chair of the A.1, Stefan Waas, would become Chair of the Expert Team at that time. The MG was also advised that Alain Heimo, a member of that team, would retire soon. MG requested Bertrand Calpini to advise him on how to complete the task that had been assigned to him as well as on the work remaining to be accomplished, prior to his retirement. (See Annex VI, Action 8). The MG will decide whether there is a need to nominate a replacement for him by TECO-2008. (See Annex VI, Action 9).

4.1.4 The MG expressed its concern about the future availability of David Helms, chairman of the B.1 Expert Team, as he has been extremely busy and that a replacement might need to be found. The MG requested the Vice-President to contact him to clarify the situation and decided that a final decision would be taken at the latest at TECO-2008. (See Annex VI, Action 10).

4.1.5 The MG considered how to rationalize the structure of the OPAG-UPPER AIR taking into account the human and financial resources available. The MG envisaged having a joint meeting of the B.1 and B.2 Expert Teams to increase the synergies between the two teams. The President will consult T. Oakley, chairperson of B.2 Expert Team as well as with the Chair and/or Co-Chair of the B.1 Expert Team on that matter and on the appropriate timing for such a meeting taking into account the plans for the China Intercomparison and report to the Secretariat by mid-February. (See Annex VI, Action 11). The MG agreed that the scope of the Expert Team B.3 was extremely large, possibly even too large. So, the MG recommended having only a reduced meeting of the B.3 Expert Team, focused on weather radar, and requested John Nash and Bertrand Calpini to discuss the matter with the ET Chair, Dirk Engelbart, and to report to the MG by end of March. (See Annex VI, Action 12).

4.1.6 The meeting was informed by the co-chair of OPAG-CB about the problem encountered in contacting the Rapporteur on Regional Implementation Activities, G. Srinivasan, India. The CIMO President offered to try and contact with him as well as the Permanent Representative of India with WMO during his stay in India (February) and to try to fix this problem. (See Annex VI, Action 13).

4.1.7 The co-chair of OPAG-SURFACE expressed his concern about the availability of the representatives of other technical commissions in expert teams under his responsibility. At this stage, it is not possible to reflect adequately their requirements. The MG requested the WMO Secretariat to check the process of nominations of representatives by relevant technical commissions and to ensure that nomination letters would be sent to the other

technical commissions listed in the CIMO expert team membership that had not yet selected a representative prior to any meeting of a full expert team. (See Annex VI, Action 14).

4.2 Review of the Expert Teams' Workplans and their Deliverables

4.2.1 The MG paid special attention to the Expert Team workplans (see Annex II) taking into account the decisions of Cg-XV regarding WIGOS and the CIMO Pilot Project. It agreed that highest attention should be given to all activities and deliverables that were relevant to WIGOS and came to the conclusion that all the planned activities were directly relevant to WIGOS.

4.2.2 The co-chair of the OPAG-SURFACE expressed his concern about the practicality of several tasks and deliverables of this OPAG. The MG recognized that some tasks could not be accomplished within the intersessional period, but could be expected to continue in the next intersessional period. The MG agreed that the meeting of the A.1 Expert Teams was urgently needed before the end of 2008, as many of its tasks were relevant to WIGOS and that it was the Expert Team of the OPAG-SURFACE that needed to meet as a priority.

4.2.3 As for the workplan and deliverables of A.2 Expert Team, the meeting was informed about significant problems in the case of the WMO Combined Intercomparison of Thermometer Screens/Shield in conjunction with Humidity Measuring Instruments taking place in Ghardaia. The MG expressed its concern about the future and success of this Intercomparison. Further attention was paid to this activity under the item 4.4.1. Since the WMO Combined Intercomparison of Thermometer Screens/Shield in conjunction with Humidity Measuring Instruments in arctic environment is a follow-up of this intercomparison, it was recognized that the arctic intercomparison would most likely be delayed.

4.2.4 The CIMO President expressed his concern about availability of experts for the successful work and deliverables of B.1 and B.2 Expert Teams. He stressed that there is no low priority of any task as all of them were important for WIGOS. He suggested combining the meetings of B.1 and B.2 Expert Teams into a joint meeting tentatively planned for late May 2008 or autumn 2008. The MG recognized the need to maintain the Catalogue of upper-air stations and radiosonde types/systems in use and agreed that this would be solved as soon as the B.1 Expert Team workplan would be available. As far as the Task 4 addressing the safety of hydrogen generators is concerned, the MG was of the opinion that the production of a poster on hydrogen danger and a review of the guidance given in the CIMO Guide should belong to the deliverables of that task. (See Annex VI, Action 15). The MG noted that the President and the OPAG-SURFACE Co-Chair, Dr Calpini, would address Task 8 during a visit to Lindenberg, Germany, at the end of February and would inform the OPAG Co-Chair, Russel Stringer of the results. (See Annex VI, Action 16).

4.2.5 The CIMO President informed the meeting about the Radiosonde Intercomparison to take place in 2009 in China. The MG agreed that the B.2 Expert Team would need to have the first meeting of the OPAG-UPPER AIR as a joint meeting with the International Organizing Committee (IOC) for Upper-Air Intercomparison. The MG requested the President to nominate the members of the IOC. (See Annex VI, Action 17). and requested him, in collaboration with T. Oakley, to identify potential participants for the intercomparison. (See Annex VI, Action 18).

4.2.6 Discussing the workplan and deliverables of B.3 Expert Team, the CIMO President was pleased to inform that many tasks of this team, namely tasks 1-6 and task 13 were closely related to a new COST action ES0702, EG-CLIMET (item 4.4.4) and were relevant to WIGOS. They can largely be addressed within the COST action. On the other hand, he expressed his concern about tasks 7-10 related to radar measurement deliverables which are very ambitious and need more financial support. The MG discussed the possibility to

have a reduced meeting of the team later in 2008. Other option is a side meeting of the ET's members during the radar conference to take place in Finland, July 2008 as many members of the ET are likely to attend the Conference. The MG requested that the CIMO President and Co-chair of OPAG-SURFACE, B. Calpini, discuss the workplan with D. Engelbart in a more detailed way by March 2008 (in particular LUAMI campaign, its precise scope and possible cost to WMO) taking into account the COST action ES0702 and to discuss the possibility of having a meeting of ET members in Finland in conjunction with the Radar Conference. (See Annex VI, Action 19).

4.2.7 During the discussion of the C.1 Expert Team workplan it was noted that Task 1 had been finalized but more detailed information was needed to be available for CIMO Members. Development of web pages designated to RICs would be an option. The MG felt that the workplan of this team needed to be strengthened and requested Russel Stringer to contact J. Gorman and Jitze van der Meulen to contact J. Duvernoy to address those issues. (See Annex VI, Action 20). As RICs and their activities are very important for the success of WIGOS, the MG felt that a large effort for strengthening RICs would be needed to be carried-out under the WIGOS umbrella.

4.2.8 The MG recognized that Intercomparisons never had identifiable funding in WMO budgets and noted that additional funds from WMO would be needed in this intersessional period to fund intercomparisons, so as to encourage other contributors, like manufacturers and Members to partially fund them. The MG agreed that the President should inquire about the possibility of securing such partial funding from WMO regular budget in the future, in particular in view of the relevance of the intercomparisons to WIGOS. (See Annex VI, Action 21).

4.2.9 The MG recognized that there is a need to develop a brochure or a poster to publicize CIMO activities. The Vice-President volunteered to develop it and requested the MG members to send him relevant pictures upon their return that reflect CIMO activities, as for example training workshops and intercomparisons. (See Annex VI, Action 22). The MG welcomed the offer from NOAA to support this activity.

4.2.10 The MG agreed that the OPAG Co-Chairs needed to be in closer contact with the Chairs of the ETs and Rapporteurs under their responsibility to monitor the progress of their work on a regular basis. (See Annex VI, Action 23).

4.3 Review of the Milestone Plan of CIMO Activities and Meetings

4.3.1 The MG reviewed a preliminary schedule of meetings for the ETs and MG in order to accomplish the work in a coordinated and timely fashion (see Annex III). The decisions of the MG are summarized in the previous section and the final timing and arrangements for holding the meetings will be made upon completion of the actions mentioned above. In view of the limited financial resources available to support the work of the Commission, the MG agreed that, at this stage, priority should be given to holding the urgently needed expert team meetings and that, in view of these facts the Training Workshop on Metrology that was planned for this year would likely have to be cancelled.

4.4 Other Pertinent Issues

4.4.1 Intercomparisons

4.4.2.1 The MG was informed about the status of the WMO Field Intercomparisons of Rainfall Intensity Gauges that started officially on 1 October 2007 in Vigna di Valle, Italy. The meeting was pleased that the Intercomparison was progressing and regular teleconference was taking place between the organizers and the IOC.

4.4.2.2 The MG was also informed about the problems encountered with the preparation of the WMO Combined Intercomparison of Thermometer Screens/Shield in conjunction with Humidity Measuring Instruments taking place in Ghardaia, Algeria. In that context, the meeting supported the proposal from the Chair of the International Organizing Committee to send an official letter to Algeria in view of having official information on the expected effective timeline of the intercomparison. The MG requested the OPAG-SURFACE Co-Chair, Jitze van der Meulen to have closer contact with the IOC and WMO Secretariat to follow-up and advise on the situation. (See Annex VI, Action 24).

4.4.2.3 The MG was informed that a Subregional Intercomparison of Pyranometers for South-Eastern Europe took place in Split, Croatia, from 22 July to 6 August 2007 and agreed that the results of this intercomparison should be published as IOM Report after review and approval by the ET A.3 Chair.

4.4.2.4 The MG took into account two proposals for holding pyrhemliometer intercomparisons received from Italy and Croatia. CIMO welcome all initiatives of Members to increase standardization and traceability of measurements. In both cases the MG was of the opinion that it is essential that any proposals for Intercomparison should be considered and evaluated in details by relevant ET, in these cases by A.3 Expert Team. The MG requested the Secretariat to send a letter to Croatia informing them on this decision. (See Annex VI, Action 25).

4.4.2.5 The President reported that a preliminary test of a new InterMet (South Africa) GPS radiosonde design, used operationally in South Africa and Namibia, had been performed for 3 days following the completion of the Upper Air Training Workshop in Windhoek in October 2007. A report would be submitted for consideration by B.2 Expert Team before summer 2008. (See Annex VI, Action 26).

4.4.2.6 Preparations for the Regional Radiosonde Comparison test to be held in China in this intersessional period are expected to include exchange visits between China and the UK under bilateral agreements of these two countries. This will cover an exchange of high level experts. However, preparations for the test in China would be helped if funds to support per diem for two working level experts to visit the UK for about 10 days could be found. This would allow the Chinese experts to be trained in radiosonde comparison techniques.

4.4.2.7 The President hopes to take the opportunity to visit Indian Met department in Delhi to find out if development of a new Indian radiosonde has progressed to the stage that it could benefit from participating in the test planned in China. The IOC will need to identify the resources required from WMO to successfully complete the test, including the processing of the data and report writing following the test. (See Annex VI, Action 27).

4.4.2.8 The President and OPAG-UPPER AIR Co-Chairs will need to establish what is proposed by Germany for the LUAMI test of wind profiler winds quality evaluation. Dr Nash and Dr Calpini will discuss this further with Dr Engelbart during a visit to Lindenberg in late February 2008, and will report back to the MG and Secretariat on what CIMO support is being requested. (See Annex VI, Action 28).

4.4.2.9 Following the recommendation by EC-LIX that intercomparison efforts be extended to testbed observing system evaluations, the MG noted that the COST Action ES0702, EG-CLIMET would be initiated in May 2008, and would include at least two testbed evaluations within Europe in the next intersessional period. These testbeds will be used to identify options for integrating remote sensing measurements with those from other upper air observing systems. Thus resources will be required if CIMO is to collaborate with the Action

in its work, including the workshop activities that will also be benefit for CIMO if relevant experts from other WMO regions can attend the workshops.

4.4.2 CIMO Guide

4.4.2.1 The MG was informed that the English version of the 7th Edition of the CIMO Guide was expected to be available in electronic version by the end of March 2008 and that the other languages would be available at a later, yet unspecified date. The MG expressed its concerns about the time that had been necessary to get a new version published and the conflict this created with the request from the Executive Council to have more frequent updates of the Guide. It was recommended that in the future, all changes should be incorporated in track-change mode in view of easing the publication and translation process. The MG agreed that it was urgent for the CIMO Guide to be translated in all WMO official languages.

4.4.3 IOM Reports

4.4.3.1 The MG was informed about the plan of publications of IOM Reports. A number of reports are expected as deliverables of the Expert Teams.

4.4.4 COST Activities

4.4.5.1 The MG was informed that the COST Action ES0702 “European Ground-based observations for Climate and operational meteorology, EG-CLIMET” had been approved and that its Kick-off meeting was going to take place in May 2008. This will give the opportunity for CIMO to co-operate with COST in testbed experiments associated with integrating *in-situ* and remote sensing observations. It is expected that WMO would be represented at this kick-off meeting.

4.4.5.2 The MG was also informed that another COST Action, ES0604, dealing with Atmospheric Water vapour in the climate system had been initiated.

4.4.5.3 It was advised that Alain Heimo would take over the management of the COST Action 727 “Measuring and forecasting atmospheric icing structures” on his retirement from MeteoSwiss.

4.4.5 TECO & METEOREX 2008

4.4.5.1 The MG was informed about the status of the preparation of TECO and METEOREX-2008 that followed the proposal that had been circulated to the MG members in summer 2007 (see Annex IV). Both events will be held from 27 to 29 November 2008 in St. Petersburg, in the “LenExpo” Exhibition Complex.

4.4.5.2 The first announcement and call for papers was sent in August 2007. Over 150 abstracts were received in response to this call. The selection of these abstracts for oral or poster presentation will be done according to the selection process reproduced in the Annex V to this document. It is planned that the programme of the conference will be finalized and dispatched by the end of May 2008 at the latest. (See Annex VI, Action 29).

4.4.5.3 The Local Organizing Committee has developed a website (<http://www.meteo.imd.ru/>) for both events that is online and will soon provide a list of hotels for the conference.

4.4.6 Väisälä Awards

4.4.6.1 The MG was informed about the submission received for the 2008 Väisälä Awards. These will be reviewed by the same assessors (MM Bazira, Klapheck, van der Meulen and Xu) as was the case for the 2006 awards. The award ceremony is planned to take place in conjunction with TECO-2008.

4.4.7 Instrument Catalogue

4.4.7.1 Bruce Sumner, representative of HMEI, presented a proposal for an instrument catalogue that is combining the information that were separately available until now in the HMEI Catalogue and in the WMO Instrument Catalogue maintained by the Chinese Meteorological Agency as a way to produce WMO Members with a uniform source of product information in an efficient manner for users as well as for manufacturers. The Catalogue would be available on-line, continuously updated and non-HMEI Members would be also able to insert their products in it. The catalogue would include individual product sheets with specifications as well as links to full product specifications on vendor's websites. The new catalogue is expected to be available by TECO-2008. Mr Sumner also informed that ISO is considering standardization on specifications for many meteorological instruments, and that there would possibly be a new structure for product specifications in the near future

4.4.7.2 HMEI proposes that the Instrument catalogue would be built on the dual principles:

- a. To satisfy the users' need to have on-line access to information provided and regularly updated by manufactures (the continuity of the HMEI Product Catalogue); and
- b. To satisfy the users' need to have access to near comparable information on product specification and performance by the inclusion of product information and specifications from the vendors (adopted by HMEI General Assembly, 22 January 2008).

4.4.7.3 The MG thanked Mr Sumner for his presentation and welcomed the HMEI proposal. The MG was of the opinion that comparable information on the similar products was still desirable and that it would be very beneficial if it could include an order of magnitude on the price of the products and their maintenance costs. The MG felt that, in view of the proposal made by HMEI, it would likely not be necessary for WMO to continue producing an independent catalogue. The MG decided that it would make a final decision once the new catalogue would be available, at TECO-2008. (See Annex VI, Action 30). The MG requested the President to inform Mr Sumner on these conclusions. (See Annex VI, Action 31).

5. ANY OTHER BUSINESS

5.1 No other issues were submitted for discussion to the meeting.

6. CLOSURE OF THE SESSION

6.1 The session closed on Wednesday, 30 January 2008 at 17:45 hours

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ANNEX II

**Action plan for expanding the Secretariat Operating Plan (SOP)
into a comprehensive WMO-Operating Plan (WMO-OP)**

Step 1: The TCs (and RAs / ^{1/})

- Align the existing workplans to the ERs
- Taking account of the Deliverables of the corresponding programmes formulate “outcome-focused” Deliverables,
- Define corresponding timelines and “SMART”^{2/} Key Performance Targets;
- Establish baselines and targets for the Key Performance Targets;
- Review the subsidiary structure and the relating working mechanisms in the light of RBM;

When: 1st half of 2008

Who: Secretariat supporting the TC (and RA) Management/Advisory Groups/Committees, which will act for their parent body ^{3/}

Step 2: Based on the M&E Plan, TCs (and RAs) develop their working mechanisms for monitoring and performance evaluation taking into account the reporting milestones decided by Cg and EC.

When: 2nd half of 2008, following the approval of the M&E Plan by EC-LX;

Who: Secretariat supporting the TCs, (RAs,) their Management/Advisory Groups/Committees, or designated Expert Teams, as appropriate

Step 3: Taking account of the decisions of EC-LXI (2009) resulting from the mid-term performance review, the Secretariat will revise the SOP 2008-2011, incorporate the contributions of the TCs and RAs (developed in Steps 1 and 2), and publish the comprehensive WMO-OP (2010-2011).

When: 2nd half of 2009

Who: Secretariat

¹ A corresponding action plan needs to be coordinated for the steering committees of the Joint Programmes

² Specific, measurable, achievable, reliable and time-bound

³ No TC or RA sessions are scheduled during the 1st half of 2008

ANNEX III

WORKPLANS OF EXPERT TEAMS AND RAPORTEURS

A.1 Expert Team workplan:

No.	Task description	Person responsible	Action	Deadline	Deliverables	Deadline
1	Standardization in instrumentation and observations					
1a	Identify siting, performance, classifications and metadata standards for systems and sensors	Wei Li contributions: K. Klapheck	In collaboration with CBS-ETs: 1. Define a list of keywords for WMO Metadata core profile 2. Define metadata catalogues for stations , sensors, data handling	Jul 2008	Report to CIMO XV Catalogues	Jul 2010
1b	Recommend standard observing methods for automatic measurement of clouds, present weather etc	H. Bloemink Contributions: Wei Li	1. Review and list methods in use 2. Analyze methods and recommend standards	Jul 2008	Report to CIMO XV Update for CIMO-Guide	Jul 2010
1c	Review algorithms in AWOSs and make proposal for their standardization	B. Hartley Contributions: K. Klapheck	1. Review and list algorithms in use 2. Analyze algorithms and recommend standards	Jul 2008	IOM report	Jul 2010
1d	Develop standards for the interoperability of instruments' hardware and software	St. Waas contributions: K. Klapheck	1. Review standards in use in met. instrumentation 2. Recommend and give reasons for new standards 3. Collaborate with HMEI	Jul 2008	Report to CIMO XV, HMEI	Jul 2010
2	Automatization of surface observations					
2a	Develop guidelines and procedures for the transition from manual to automatic weather stations	M. Molyneux Contributions: Wei Li	1. Review existing material 2. Search and describe new procedures	Jul 2008	Update for CIMO-Guide	Jul 2010

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2b	Instrument Development Inquiry - Report on progress in new surface technologies and techniques	J. van der Meulen Contributions: S. Waas	1. Review IDI and instrum. catalogue 2. In coop. with HMEI look for new techniques 3. Update IDI in complement to instrum. catalogues	Jul 2008	IOM report	Jul 2010
3	Surface measurements in extreme weather conditions					
3a	Describe requirements on instruments on meteorological icing	A. Heimo	1. Analyze and describe the problem 2. Investigate into tests experiences etc of icing 3. Recommend best practices	Jul 2008	report to CIMO XV	Jul 2010
3b	Specify measurement practices for different extreme climates	M. Novitsky	1. Review practices of measurement 2. Analyze and recommend best practices	Jul 2008	report to CIMO XV	Jul 2010
3c	Find sensor techniques for the measurement of extreme values of wind and precipitation	see No. 2b contributions: S. Waas Wei Li	1. In coop. with HMEI investigate about appropriate sensors 2. Prompting HMEI to instrument adaptations	Jul 2008	report to CIMO XV	Jul 2010
4	Miscellaneous tasks					
4a	In cooperation with CBS: Report on calibration requirements for satellite sensing of surface variables	N. N.	1. List variables to be considered 2. Discuss requirements on surface datasets 3. Show Examples of calibration	Jul 2008		Jul 2010
4b	Review uncertainty requirements and operational instrument performance	Klapheck	1. Review existing CIMO table 2. Actualize specifications	Jul 2008	Update for CIMO-Guide	Jul 2010

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A.2 Expert Team workplan:

Project Leader: PL Site Manager: SM Laboratory Intercomparaison: LI Field Intercomparaison: FI data Analysis: DA

No.	Task description	Person responsible	Action	Deadline for action	Deliverables	Deadline for deliverables
1.	<p>WMO field intercomparison of rainfall intensity gauges (Vigna di Valle, Italy)</p> <p>IOC : M. Leroy, E. Lanzinger, B. Baker, L. Lanza, L. Stagi, E. Vuerich, F. Malaspina, C. Monesi, I. Ruedi</p>	<p>E. Lanzinger, (PL) E. Vuerich (SM-FI)</p> <p>L. Stagi (SM-LI)</p> <p>F. Malaspina C. Monesi E. Vuerich (SM-FI) IOC</p> <p>E. Vuerich, C. Monesi IOC</p> <p>IOC (individual tasks to be defined later)</p>	<ol style="list-style-type: none"> Official start of the intercomparison Coordinate activities related to the organization and conduction of the intercomparison Prepare report of the calibration phase for the first set of instruments. Implementation of QC procedures. Data analysis On site meeting for all participants Oversee the evaluation of the intercomparison results Prepare report with the results of the intercomparison Peer-review the intercomparison results (report) before publication Update recommended standard calibration procedures, recommendations, etc. according to results of intercomparison 	<p>01/10/07 → Dec 08</p> <p>Feb 08</p> <p>Feb 08 → Dec 08</p> <p>May 08 Monthly phone meetings Dec 08</p> <p>Dec 08</p> <p>Mar 09</p>	<ul style="list-style-type: none"> Regular report on the status of the intercomparison and its results (i.e. for EC, CIMO-MG and CIMO sessions) Report of the calibration phase Report of intercomparison IOM Report of Intercomparison results Updated relevant CIMO guide chapters 	<p>Feb 08</p> <p>Jan 09</p> <p>Feb 09</p> <p>Jun 09</p>
2.	<p>WMO combined intercomparison of thermometer screens /shields in conjunction with humidity measurements (Ghardaia, Algeria)</p> <p>IOC : M. Leroy, I. Zahumensky, R. Nitu, B. Baker, D. Bousri (formerly Ms Bensemane), A. Salmi</p>	<p>I. Zahumensky M. Leroy D. Bousri(PL) A. Salmi (Local SM) D. Bousri</p> <p>D. Bousri</p> <p>M. Lacombe (SM-LI) IOC</p> <p>D. Bousri</p>	<ol style="list-style-type: none"> Coordinate activities related to the organization and conduction of the intercomparison Setup of instruments and follow-up of instruments Preliminary acquisition for testing acquisition system and QC procedures Beginning of intercomparison End of Intercomparison Delivery of the instruments back to the laboratory of Météo-France. Calibration of instruments. Oversee the evaluation of the intercomparison results Prepare report with the results of the intercomparisons 	<p>→ Dec 08 ?</p> <p>→ Dec 08</p> <p>→ Feb 08 ?</p> <p>Mar 08 ? Dec 08 ? Jan 09 ?</p> <p>Mar 09 ?</p>	<ul style="list-style-type: none"> Regular report on the status of the intercomparison and its results (i.e. for EC, CIMO-MG and CIMO sessions) Report of intercomparison IOM Report of Intercomparison results Updated relevant CIMO guide chapters 	<p>Mar 09</p> <p>May 09</p> <p>End 09</p>

No.	Task description	Person responsible	Action	Deadline for action	Deliverables	Deadline for deliverables
		IOC IOC (individual tasks to be defined later)	10. Peer-review the intercomparison results (report) before publication 11. Update recommended standard calibration procedures, recommendations, etc. according to results of intercomparison	Mar 09 Apr 09 End 09		
3	<p>WMO combined intercomparison of thermometer screens /shields in conjunction with humidity measurements in arctic environment (Iqaluat, Baffin Island, Canada)</p> <p>IOC : M. Leroy, I. Zahumensky, R. Nitu, B. Baker, D. Bousri, ...</p>	IOC, R. Nitu	<p>1. Define and agree on organization of intercomparison, namely: main objective, place, date, duration, costs, conditions for participation, data acquisition, processing and analysis methodology, publication of results, intercomparison rules, responsibility of the host(s) and responsibilities of participants</p> <p>2. Prepare implementation plan</p> <p>3. Call for participants</p> <p>4. Identify instruments for intercomparisons</p> <p>5. Site preparation</p> <p>6. Delivery of instruments to Canada</p> <p>7. Installation on site</p> <p>8. Start of the Intercomparison</p> <p>9. Coordinate activities related to the organization and conduction of the intercomparison</p> <p>10. End of intercomparison</p> <p>11. Prepare report with the results of the intercomparison</p> <p>12. Peer-review the intercomparison results (report) before publication</p> <p>11. Update recommended standard calibration procedures, recommendations, etc. according to results of intercomparison</p>	<p>Jun 08</p> <p>Jun 08 Jun 08 End 08</p> <p>Summer 08 09</p> <p>Feb 10 Jul 10 Oct 10</p> <p>Sept 11 Dec 11</p> <p>Jan 12</p> <p>Mid 12</p>	<ul style="list-style-type: none"> • Preliminary plan of intercomparison for assessing effective feasibility • Implementation plan • List of participating instruments • • • Regular report on the status of the intercomparison and its results (i.e. for EC, CIMO-MG and CIMO sessions) • Report of intercomparison • IOM Report of Intercomparison results • Updated relevant CIMO guide chapters 	<p>Jun 08</p> <p>Jun 08 Jan 09</p> <p>Jan 12 Mar 12 Mid 12</p>
4	<p>Assessment of methods of observation of solid precipitation</p>		In consultation with CCI, Antarctic WG, WCRP-CLIC, WCP, CHy, CAgM, CBS and GCOS, assess the methods of measurement and observation of solid precipitation, snowfall and snow depth at	To be discussed with R. Nitu		

No.	Task description	Person responsible	Action	Deadline for action	Deliverables	Deadline for deliverables
		Rodica NITU	automatic unattended stations used in cold climates (polar and alpine):		<ul style="list-style-type: none"> • Report on needs and compatibility of standards and requirements 	
		Rodica NITU	1. Document the needs and assess the compatibility of measurement standards and requirements of WMO Technical Commissions for the measurement of solid precipitation, snowfall and snow depth at automatic unattended stations		<ul style="list-style-type: none"> • National summaries 	
		Rodica NITU	2. Prepare national summaries of methods, issues and challenges of automated solid precipitation measurement in cold climate countries; Information needed includes, for example, instruments used, shielding configuration, measurement interval, processing algorithms, wind adjustment procedure (if applicable), height of wind measurement, etc		<ul style="list-style-type: none"> • Provide report for needs of such a intercomparison 	
		Rodica NITU	3. Assess need for intercomparison of methods and equipment for automated snowfall/snow depth/precipitation measurements in cold climate regions, on both global and regional basis and develop an intercomparison plan(s) during the IPY period (March 2007-March 2009)		<ul style="list-style-type: none"> • Prepare publication of the 3 items above as an IOM Report 	

5	Prioritization and preparation of proposals for instrument intercomparisons	ET	<ol style="list-style-type: none"> 1. Review instrument intercomparison proposals taking into account available funding and suggestions/requests from expert teams and technical commissions, such as: <ol style="list-style-type: none"> a) Present Weather instrument intercomparison in tropical environment b) Laser ceilometers for future operational upper-air networks c) Assessment of sea-level sensors d) Intercomparison of hydrological gauges e) Other proposals as received. 		<ul style="list-style-type: none"> • Ranking list of proposed intercomparison 	
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Special note about WMO combined intercomparison of thermometer screens /shields in conjunction with humidity measurements (Ghardaia, Algeria) :

- Many delays were introduced due to difficulties with Algerian customs. One screen was destroyed by custom !
- Grounding problems on site, not yet solved.
- Only one part of instruments (analog ones) are installed in Ghardaïa. Instruments with numerical output were installed during week 4, 2008.
- Data from all instruments are not yet available. The intercomparison has not yet begun.
- For hygrometers, the initial calibration performed in Trappes (end 2006) is no longer valid, but it is impossible to think to send back the sensor in Trappes for a new calibration before the official start of the intercomparison (customs). A local calibration could be performed with a portable system from Trappes, if one volunteer to go to Algeria is found.
- Very few information from Algeria, no planning dates obtained.
- The Deputy Director of ONM (Office National de Météorologie) has been changed in mid-2007, few official contacts.
- An official letter from ET Chairman and WMO is prepared to ask the status of preparation.

A.3 Expert Team workplan

No.	Task description	Person responsible	Action	Deadline for action	Deliverables	Deadline for deliverables
1	Facilitate further activities related to meteorological radiation measurements:					
1 a)	IPC-XI, 2010, WRC, Switzerland	W. Finsterle	1. Assist in the preparations and participate in the IPC-XI 2. Analyze results of IPC-XI	Dec. 2010	<ul style="list-style-type: none"> Guidelines for IPC-XI Published results of the IPC-XI 	Dec. 2010
1 b)	RPCs, 2006-2010, either in conjunction with IPC-XI or at RPCs concerned	W. Finsterle	1. Initiate RPCs 2. Assist in the preparations and participate in the RPCs 3. Analyze results of RPCs		<ul style="list-style-type: none"> Guidelines for RPC comparisons Published results of the RPC comparisons At least one RPC 	
1 c)	Coordinate the dissemination of World Radiometric Reference (WRR) factors to regional and national radiation standards	W. Finsterle	1. Disseminate radiometric factors to regional and national radiation standards		<ul style="list-style-type: none"> Instrument and Observing Methods (IOM) Report to Members 	
1 d)	Statistical basis for the WRR factors	W. Finsterle	1. Identify the role of the WRR method in developing factors. 2. Devise a more robust statistical method for deriving WRR factors		<ul style="list-style-type: none"> Report to Members Propose update of CIMO-Guide 	
1 e)	Cryogenic radiometers for solar measurements	W.Finsterle	1. Assist in investigation of cryogenic radiometers for solar measurements.		<ul style="list-style-type: none"> Report to Members 	
1 f)	Liaise with the World Climate Research Programme on matters related to Baseline Surface Radiation Network and inform Members of developments	B.Forgan K.Behrens	1. Identify the role of CIMO in further development of BSRN 2. Liaise with WCRP on identified matters		<ul style="list-style-type: none"> Report to BSRN on ET activities Report to Members on BSRN 	
1 g)	Liaise with the CAS SAG Ozone on the operational practice associated with total ozone measurements	B.McArthur	1. Collaborate with CAS on matters related to practices associated with total ozone measurements		<ul style="list-style-type: none"> Report to Members Proposal for update of the CIMO-Guide 	
1 h)	Liaise with the CAS SAG UV on operational practice associated with UV measurements	B.McArthur	1. Promote the need for the intercomparison of UV calibration centers to the CAS SAG UV 2. Collaborate with CAS on matters related to practices associated with UV measurements		<ul style="list-style-type: none"> Report to CAS SAG UV Proposal for update of the CIMO-Guide 	
1 i)	Liaise with the CAS SAG Aerosol	B.Forgan	1. Collaborate with CAS on matters		<ul style="list-style-type: none"> Report to Members 	

No.	Task description	Person responsible	Action	Deadline for action	Deliverables	Deadline for deliverables
	Measurements		related to practices associated with aerosol Measurements		<ul style="list-style-type: none"> Proposal for update of the CIMO-Guide 	
1 j)	Update the CIMO Guide	B.Forgan B.McArthur W.Finsterle	1. Develop proposals for update of Chapters 7, 8, 16, 17 of the CIMO Guide		<ul style="list-style-type: none"> Updated Ch 7, 8, 16, 17 of the CIMO Guide 	
1 k)	Develop further the establishment of the World Infrared Standard Group (WISG) of radiometers	B.Forgan (J.Groebner)	1. Collaborate with PMOD/WRC/IRC on the development of the WISG of radiometers		<ul style="list-style-type: none"> At least one absolute radiometer traceable to SI developed and operational 	
1 l)	Coordinate the dissemination of pyrgeometer calibration coefficients	B.Forgan (J.Groebner)	1. Calibration of the pyrgeometers at the IRC		<ul style="list-style-type: none"> Calibration certificates to users 	
1 m)	Provide technical/scientific guidance to the IRC Davos	B.Forgan (I.Redá J. Gorman)	1. Perform the scientific evaluation of the IRC		<ul style="list-style-type: none"> Report to IRC and Members 	
1 n)	Initiate activities so that radiation measurements in all national radiation networks are of a high quality	B.Forgan W.Finsterle	<ol style="list-style-type: none"> Develop methodology for assessing the quality of radiation data Review the quality of radiation measurements in national networks Assist NRC in improving the quality of radiation measurements Develop proposal for training courses in radiation measurements 		<ul style="list-style-type: none"> Survey on quality of radiation measurements IOM Report on the quality of radiation measurements Methods distributed to NRCs on specific radiation issues Syllabus and lecture notes for training in radiation measurements 	
1 o)	To determine the status of the traceability of radiation measurements to SI	B.Forgan W.Finsterle B.McArthur	1. Assessment of the traceability of radiation measurements to SI		<ul style="list-style-type: none"> Report to Members 	
1 p)	To examine the transfer of WISG to network measurements of infrared irradiance	B.Forgan (J.Groebner, I. Redá, J.Gorman)	1. Survey on how field pyrgeometers are calibrated		<ul style="list-style-type: none"> Report to Members 	

**B.1 Expert Team workplan:
Not finalized yet**

B.2 Expert Team workplan:

No.	Task description	Person responsible	Action	Deadline for action	Deliverables	Deadline for deliverables
1.	Radiosonde Intercomparison – CHINA	Feng Li, J. Nash, & T. Oakley	13. Define and agree on the organisation of the intercomparison, namely: main objective, place, date, duration, conditions for participation, data acquisition, processing and analysis methodology, publication of results, intercomparison rules, responsibility of the host(s) and responsibility of participants.	Q1 2008	<ul style="list-style-type: none"> Implementation Plan 	Q1 2008
		Feng Li	14. Provide description of proposed intercomparison site and facility (location, environmental and climatological conditions, etc...)	Q2 2008	Description of intercomparison site	Q1 2008
		IOC	15. Identify type of instruments and participants for the intercomparison.	Q4 2008	List of participating instruments	Q4 2008
		Feng Li, J. Nash, & T. Oakley	16. Overall supervision and coordination of the field intercomparison.	2009	Draft final report	2010
		Feng Li, J. Nash, & T. Oakley	17. Evaluation of the results and preparation of the final report (maybe merge with 4 if same person is responsible)	2010	<ul style="list-style-type: none"> Published results of the intercomparison 	2010
		IOC	18. Review and approval of final report	2010	<ul style="list-style-type: none"> Deliver Data to relevant Centres 	2010
		Proj. Leader	19. Provide data of intercomparison to International Data Centre	2010	<ul style="list-style-type: none"> Document providing recommendations and CIMO guide revision proposal 	2010
		J. Nash, & T. Oakley	20. Provide recommendations for user community (e.g. update of CIMO guide)			
2.	Radiosonde Intercomparison – NAMIBIA	J. Nash, R.	1. Produce specification of	Sept. 07	<ul style="list-style-type: none"> Guidelines (trial spec. 	Dec. 2007

No.	Task description	Person responsible	Action	Deadline for action	Deliverables	Deadline for deliverables
	(INTERMET System test)	Smout & C. Gaffard	intercomparison (Trial Spec.) 2. Overall supervision and coordination of the field intercomparison 3. Evaluation of the results and preparation of the final report.	Oct. 07	& planning) for conducting national radiosonde tests • Published results of the intercomparison	Mar. 2008
3	Radiosonde & Remote Sensing Intercomparison – National Plans/Work	C. Bower & All Members	1. Provide information to the Expert Team on national results or planned tests of Radiosonde & Remote Sensing Intercomparisons.	Ongoing	• Report and/or presentation to Expert team	Expert team meetings
4	Ground Based Remote Sensing Intercomparisons (TESTBED) with insitu and remote sensing UA measurements, in collaboration with ET-RSUT&T.	C. Gaffard H. Klein Baltink F. Berger A. Ivanov	1. Prepare proposals for WMO involvement in 'TESTBED' experiments. 2. Monitor, review and document testing on Regional and National levels. 3. Assess need to, and develop, update for relevant part of CIMO guide, as necessary	Q1 2008 2010 2010	• Presentation/Document at 1 st meeting • Summary reports on results and tests • Document providing revision proposal	Q1 2008 2010 2010
5	AMDAR measurements Intercomparison of water vapour sensor.	T. Oakley C. Bower AMDAR Panel	1. Prepare proposals for WMO involvement in intercomparison tests. 2. Request AMDAR to provide data 3. Monitor, review and document testing on Regional and National levels.	Q1 2008 Q2 2008 2010	• Presentation/Document at 1 st meeting • Summary reports on results and tests	Q1 2008 2010

No.	Task description	Person responsible	Action	Deadline for action	Deliverables	Deadline for deliverables
			3. Assess need to, and develop, update for relevant part of CIMO guide, as necessary	2010	<ul style="list-style-type: none"> • Document providing revision proposal 	2010
6	Wind Profiler Intercomparisons (Quality Assessment), in collaboration with ET-RSUT&T.	T. Oakley B. Heo	1. Prepare proposals for WMO involvement in intercomparison tests. 2. Monitor, review and document testing on Regional and National levels. 3. Assess need to, and develop, update for relevant part of CIMO guide, as necessary	Q1 2008 2010 2010	<ul style="list-style-type: none"> • Presentation/Document at 1st meeting • Summary reports on results and tests • Document providing revision proposal 	Q1 2008 2010 2010

B.3 Expert Team workplan:

No.	Task description	Persons responsible	Action	Deadline for action	Deliverables	Deadline deliverables
1	Review latest developments in the field of remote sensing technology and report to Members;	D. Engelbart / S. Gutman (with contrib. from all experts)	Preparation of a Report summarizing the current status and latest developments	Mar 2008	Report	May 2008
2	Review current Wind Profiler Network operational activities, identifying strengths, weaknesses and operational costs. Identify best practices including siting and calibration and quality control, noting the need for close collaboration with users, such as the data assimilation community. Provide improved guidance material for the members;	K. Akaeda / S. de Haan (supp. by S. de Haan)	Preparation of guidance material with particular reference to the Final Report of the EUMETNET programme WINPROF-II (T. Oakley – ET UASI)	Nov 2008	Updated technical note (Report)	Sep 2009
3	Work with ET-UASI to design and conduct an intercomparison to evaluate Profiler wind quality;	D. Engelbart / T. Oakley	LUAMI-2008 campaign at Lindenberg Observatory for development / testing of wind profiler quality and QC procedures	Dec 2008	Preliminary Report on results of LUAMI-2008	Dec 2008
4	Monitor implementation of Microwave Radiometers as operational systems and report on progress, specifically quality of temperature measurements in the planetary boundary layer;	A. Koldaev / K. Akaeda ?	Supply of a survey on MW radiometers and its capabilities with particular emphasis on PBL performance (detection of inversions)	May 2009	Report on suitability and operational aspects for MW radiometry	Sep 2009
5	Monitor implementation of GPS Water Vapour Networks as operational systems and report on progress. Evaluate quality of data in suitable intercomparison including radiosonde and microwave radiometer. Develop operational guidelines and recommend suitable operational data exchange protocols;	S. de Haan	Evaluation of GPS WV network performance	May 2009	Report	Nov 2009

6	Evaluate and report on the potential of the Raman water vapour lidar as an operational upper-air observing system for the troposphere;	D. Engelbart	Preparation and realization of the LUAMI-2008 campaign	Sep 2009	IOM-Report on the capabilities of Raman lidar and its suitability for operational application	Dec 2009
7	Facilitate activities associated with improving the quality of weather radar operations, including signal and data processing, by initiating a series of intercomparison workshops exercising radar algorithms on common data sets;	P. Joe M. Kitchen K. Akaeda	Preparation and realization of workshops on the use of weather radar and related signal-processing algorithms	Dec 2007	Summary and syllable of the workshops	May 2008
8	Establish a Web accessible and modifiable comprehensive data-base of the global weather radar locations and characteristics	O. Sireci / P. Joe M. Dahoui	Preparation of the web-based data base	May 2009	Data base on the global characteristics operational weather radar	May 2009
9	Provide guidance on weather radar siting and operation with respect to wind turbines and radiofrequency interference	P. Joe / M. Kitchen / O. Sireci	Evaluation of special investigations and experiences with respect to radiofrequency interference and wind turbine interference. Preparation of guidance material	May 2009	Report on recommendations for weather radar siting and operation	Sep 2009
10	Review current weather radar network data exchange methods and make recommendations on the preferred method to be adopted by WMO for international exchange, noting OPERA's BUFR implementation and its limitations;	M. Kitchen / S. Gutman / Paul Joe / K. Akaeda / Bai Li / Seung-Sook Shin	Review of experience from regional weather radar networks with respect to data exchange	Sep 2008	Summary of recommendations from all networks	Dec 2008
11	Respond to requests from relevant CBS ETs to review and report on evaluation of calibration requirements for satellite remote sensing methods in line with the development in the WMO Integrated GOS;	S. Gutman M. Dahoui (D. Engelbart)	Review and evaluate requirements for calibration of satellite remote sensing requirements, and respond to requests for comments from CBS ET's. Preparation / Evaluation of MetOP/IASI intercomparisons using integrated remote sensing and radiosondes	Mar 2008 Dec 2007	Report on requirements for calibration of satellite remote sensing methods. Report on results of the intercomparison campaign	May 2008

12	Review current operational light-ning detection networks, and report on strengths and weaknesses, including coverage, accuracy, reliability and cost effectiveness. (Undertake Moroccan intercomparison of existing systems and make recommendations for enlargement of the networks to poorly covered areas, such as Africa; DELAYED)	M. Dahoui /	Preparation and realization of intercomparisons of existing lightning detection networks	Sep 2008	Report on a review of current operational networks	Dec 2008
13	Working with ET-UASI to initiate a series of pilot projects and testbed studies to establish the principles for the optimal mix of sensing systems to improve both temporal and spatial capabilities for future operational upper air networks, noting the need for close collaboration with users, specifically the data assimilation and NWP communities;	S. Gutman / D. Engelbart Bai Li / Seung-Sook Shin A. Koldaev	Realization of pilot projects and testbed studies (e.g. LUAMI-2008) in collaboration with ET-UASI (T. Oakley) Realization of pilot projects in polar regions(A. Koldaev)	Aug 2009 June 2009	Summary of results from the projects and testbed studies Description of the implemented system and summary of results	Nov 2009 May 2010
14	Review and update existing training material and support OPAG-CB in the production of suitable training workshops, reference material and guidelines for all operational aspects of remote-sensing systems.	O. Sireci	Workshops and training courses in collaboration with OPAG-CB	Dec 2007	Syllabus and updated training material	Dec 2007
15	ISO – Preparation Ceilometer	D. Engelbart	Preparation of an ISO guideline on Laser ceilometers	Apr 2009	Guideline for using ceilometer (visibility lidar)	Dec 2009

C.1 Expert Team workplan:

No.	Task description	Person responsible	Action	Deadline for action	Deliverables
1	Design and sourcing of a set of transfer standard meteorological instruments suitable for international transport and use in a variety of RICs.	J.Gorman	Assemble an RIC inter-comparison kit for humidity, temperature and pressure	September 2007 Done	An RIC inter-comparison kit suitable for use in developed and developing RICs
2	Generation of a set of robust procedures and work instructions for the RIC inter-comparison kits.	J.Duvernoy	Write inter-comparison procedures	March 2008	A set of robust procedures and work instructions for RIC inter-comparisons that ensure traceability and are suitable for RICs at all levels.
3	User trail of inter-comparison kit in a developing RIC and feedback to ET.	M. El Sayed, J. Duvernoy	Trail of inter-comparison kit, feedback re necessary changes to kit or procedures	January 2009 Kit sent to Meteo Fr. Nov 2007	A set of procedures and work instructions for RIC inter-comparisons.
4	RA metrology training survey to be updated and translated into other languages.	J. Duvernoy, M. El Sayed	RA metrology training needs survey updated and translated to French, Arabic,	May 2009	A concise training needs survey in a variety of languages
5	Training needs survey to be disseminated to RICs	K. Rancourt	Disseminate RA metrology training survey	October 2009	Training need survey disseminated to all RICs
6	Results of training needs survey fed back to the ET and CIMO	J. Duvernoy, J. Gorman, K. Rancourt	Training needs survey analysed and Recommendations referred to CIMO.	February 2010	Clear understanding of the current and ongoing training needs of the various RICs.

C.2 Rapporteur workplan:

No.	Task description	Person responsible	Action	Deadline for action	Deliverables	Deadline for deliverables
1a	Develop training material and conduct training/capacity building activities	B.Y. Lee	Conduct training course on automatic weather station in Hong Kong, China	Late 2007 or early 2008	Training report, and training material on CD published as IOM Report	2008
1b		B.Y. Lee	(Tentative) Conduct training course on weather radar in Hong Kong, China	2009 or 2010	Training report, and training material on CD published as IOM Report	2009 or 2010
2	Develop training material for technicians on maintenance and use of instruments	B.Y. Lee E. Buyukbas	The action will be consequent upon the conduct and completion of activities 1a and 1b above			
3	Cooperate in organization of relevant workshops/seminars co-sponsored by WMO	E. Buyukbas B.Y. Lee	As the case may be, and subject to own capability and available resources			
4	Cooperate with RMTCs/RICs/RRCs in promoting training courses	E. Buyukbas B.Y. Lee	Inform RMTCs/RICs/RRCs on CIMO training activities	Dec. 2007	Report to CIMO MG	May 2010
5	Arrange for publication of training material under IOM Report series	E. Buyukbas B.Y. Lee	Consequent upon the conduct and completion of activities	May 2010	Training material to be published under IOM Report series	2010
6	Update the training material for Automated Weather Observing Systems	E. Buyukbas B.Y. Lee	Review the existing training document and re-prepare with necessary corrections, modifications and additions	Oct. 2007	Training Material on CD published as IOM Report	Dec. 2007
7	Update the training material for Weather Radars	E. Buyukbas B.Y. Lee	Review the existing training document and re-prepare with necessary corrections, modifications and additions	July 2007	Training Material on CD published as IOM Report	Sep. 2007
8	Develop training material for upper-air observing systems (radiosonde observations)	E. Buyukbas B.Y. Lee	Prepare a training material how to operate and maintain the upper-air observing systems	Sep. 2007	Training Material on CD published as IOM Report	Nov. 2007
9	Conduct international training workshop for developing countries on weather radars	E. Buyukbas	Organize an international training course on weather radars in Turkey, particularly for the trainees from developing countries	June 2007	Training report on CD	Aug. 2007
10	Conduct international training workshop for developing countries on upper-air observing systems	E. Buyukbas	Organize an international training course on upper-air observing systems, particularly for the trainees from developing countries	June 2007	Training report on CD	Aug. 2007

No.	Task description	Person responsible	Action	Deadline for action	Deliverables	Deadline for deliverables
11	Conduct international training workshop for developing countries on Automated Weather Observing Systems	E. Buyukbas	Organize an international training course on Automated Weather Observing Systems, particularly for the trainees from developing countries	Sep. 2007	Training report on CD	Nov. 2007
12	Conduct national training workshop on operation of Automated Weather Observing Systems	E. Buyukbas	Organize training course for the trainees from Turkish State Meteorological Service and the other institutions	Apr. 2007	Training report on CD	June 2007
13	Conduct national training workshop on operation and maintenance of Automated Weather Observing Systems	E. Buyukbas	Organize training course for the trainees from Turkish State Meteorological Service and the other institutions	May 2007	Training report on CD	July 2007
14	Conduct national training workshop on maintenance of Weather Radars	E. Buyukbas	Organize training course for technicians of Turkish State Meteorological Service	May 2007	Training report on CD	July 2007
15	Conduct national training workshop on operation and maintenance of Upper-air observing systems	E. Buyukbas	Organize training course for technicians of Turkish State Meteorological Service	June 2007	Training report on CD	July 2007
16	Conduct national training workshop on operation of Automated Weather Observing Systems at the airports	E. Buyukbas	Organize training course for the trainees from Turkish State Meteorological Service and the other institutions	Sep. 2007	Training report on CD	Nov. 2007
17	Conduct national training workshop on operation and maintenance of Automated Weather Observing Systems at the airports	E. Buyukbas	Organize training course for the trainees from Turkish State Meteorological Service and the other institutions	Oct. 2007	Training report on CD	Dec. 2007
18	Develop computer-aided learning strategy and explore establishment of Virtual Training Lab in one of the RICs and RRCs, in collaboration with other ETs	B.Y. Lee E. Buyukbas	Conduct a survey to learn the capabilities of RICs (and/or RRCs) and prepare a computer based training tool for a Virtual Training Lab.	Dec. 2008	Survey report and training proposal	2008/2009

No.	Task description	Person responsible	Action	Deadline for action	Deliverables	Deadline for deliverables
19a	Assist in implementation of CIMO training/capacity building events	E. Buyukbas B.Y. Lee	Make a survey to determine the needs of training of the members, particularly developing countries and prepare training proposals to meet the requirements in collaboration with other ETs and HMEI	Apr. 2008	Survey report and training proposal	July 2008
19b	Assist in implementation of CIMO training/capacity building events	E. Buyukbas B.Y. Lee	Make a survey to determine qualified trainers from members and prepare a proposal for the contribution of them in training activities	Apr. 2008	Survey report and training proposal	July 2008
20	Develop further the training components within CIMO/IMOP web portal	B.Y. Lee E. Buyukbas	Search for the relevant training material to be included in the portal.	Dec. 2007	A couple of computer-aided, introductory modules on instruments and methods of observation, largely for the layman published as IOM Report	May 2010
21	Cooperate with manufacturers, RICs and RRCs in promoting attachments/on-the-job training for developing countries	B.Y. Lee E. Buyukbas	Investigate possibilities for attachments/on-the-job training.	Dec.2007	Report attachments/on-the-job training	May 2010

Notes:

- Activities 1a and 1b will be supported by own resources of Hong Kong, China.
- The publication of materials will be done in cooperation with WMO/CIMO secretariat.
- Training workshops will be continued in Turkey every year. It is planned that each workshop will be organized as one week, in general. Trainees from neighbour countries and developing countries (25 countries) shall be invited. Partial financial contribution of WMO will be requested.
- The publication of materials will be done in cooperation of WMO secretariat.
- On-the-job trainings will be realized in collaboration with HMEI as appropriate.
- Trainings will be focused on the maintenance, calibration and technical service issues of the instruments for the technicians.
- Cooperation will be done with the other ETs, manufacturers, RICs and RRCs during the performing the tasks as appropriate.
- The working plan will be updated time to time.

C.3 Rapporteur workplan:

No.	Task description	Person responsible	Action	Deadline for action	Deliverables	Deadline for deliverables
I. CIMO Guide						
	Update of the CIMO Guide	Rapporteur	1. Compile a list of potential experts;	January 07	Updated CIMO Guide	Once a year
			2. Invite CIMO OPAGs & -ETs and a broader CIMO community to make proposals for updates;	Every January		
			3. Identify chapters/areas to be updated, revised or completely rewritten;	Every February		
			4. Identify from already received proposals those not addressed in the 7 th Edition of the Guide;	March 2007		
			5. Identify experts to address the needed updates in coordination with the CIMO-MG and OPAG-CB;	Every March		
			6. Distribute tasks for updates to experts;	Every April		
			7. Coordinate the work of experts;	May to September		
			8. Arrange for the final approval of the work done by experts (according to the CIMO-MG guidelines for CIMO Guide updates).	September to October		
			9. Submit proposals for updates to Secretariat	Every November		
II. Web Portal						
	Update of the Web Portal	Rapporteur	1. Compile a list of potential experts;	January 07	Updated Web Portal	Every 6 months
			2. Invite CIMO OPAGs & -ETs and a broader CIMO community to make proposals for updates;	Every January and July		
			3. Identify areas for updates;	Every May and November		
			4. Update the Web Portal in coordination with the Secretariat and OPAG-CB	Every June and December		

C.4 Rapporteur workplan:

No.	Task description	Person responsible	Action	Deadline	Deliverables	Deadline
1	Liaise with the Regions (regional rapporteurs, regional centres) in assisting CIMO expert teams in implementing of instrument and methods of observations in the Regions					
1a	Liaise with Rapporteurs on regional aspects of instrument development, related training and capacity building	Rapporteur	Contact regional rapporteurs to find out the major issues related to implementation of IMOP	Jul 2007	List of issues provided to CIMO-MG	Aug 2007
1b	Liaise with Rapporteurs on regional aspects of instrument development, related training and capacity building	Rapporteur	Address the regional issues related to implementation of IMOP according to a demand from rapporteurs	Jul 2009	Report to CIMO-MG	Jul 2010
1c	Liaise with Rapporteurs on solar radiation	Rapporteur	Contact regional rapporteurs to find out the major issues related to implementation of IMOP	Jul 2007	List of issues provided to CIMO-MG	Aug 2007
1d	Liaise with Rapporteurs on solar radiation	Rapporteur	Address the regional issues related to implementation of IMOP according to a demand from rapporteurs	Jul 2009	Report to CIMO-MG	Jul 2010
1e	Liaise with Regional Instrument Centres (RICs)	Rapporteur	Contact RICs to find out the major issues related to implementation of IMOP	Jul 2007	List of issues provided to CIMO-MG	Aug 2007
1f	Liaise with Regional Instrument Centres (RICs)	Rapporteur	Address the regional issues related to implementation of IMOP according to a demand from rapporteurs	Jul 2009	Report to CIMO-MG	Jul 2010
1g	Liaise with Regional Radiation Centres (RRCs)	Rapporteur	Contact RRCs to find out the major issues related to implementation of IMOP	Jul 2007	List of issues provided to CIMO-MG	Aug 2007
1h	Liaise with Regional Radiation Centres (RRCs)	Rapporteur	Address the regional issues related to implementation of IMOP according to a demand from rapporteurs	Jul 2009	Report to CIMO-MG	Jul 2010

C.5 Rapporteur workplan:

No.	Task description	Person responsible	Action	Deadline for action	Deliverables	Deadline for deliverables
1	Requirements for climate observations	Rapporteur	1. Identify emerging requirements for climate observations, in collaboration with CCI & GCOS, taking into account the results of the Rolling Requirement Review, Statement of Guidance and the GCOS Adequacy Reports and Implementation Plan	Q4 2008	List of emerging requirements for climate observations	Q1 2009
2	Development of observing practices for climate monitoring	Rapporteur	1. Liaise with CCI to assess need for development of observing practices for climate monitoring and draft relevant proposals	Q4 2008	Provide list of observing practices needing to be developed to CIMO-MG	Q1 2009
3	Revision of the CIMO Guide (in collaboration with Rapporteur on CIMO Guide)	Rapporteur	1. Review and assess need to update practices published in the CIMO guide addressing climate observations and need to add new practices 2. Draft revised part of the CIMO guide	Q2 2008 2009	List of parts needing to be revised Provide document with revised text (in track changes)	Q3 2008 2009
4	Provide guidance on instrumentation in harsh climatological locations	Rapporteur	1. Review available guidance material on the selection and use of instruments in harsh climatological conditions and locations 2. Provide updates to existing guidance and develop new guidance on subject that are not properly covered yet.	2008	List of existing guidance material, including their assessment Document containing revised and new guidance	2009
5	Identification of possible Testbed for Climate Observations	Rapporteur	1. Develop proposal for possible testbed for climate observations	2008	Document	2009

CIMO-MG-5, ANNEX IV

**ANNEX IV
PLANS FOR CIMO ACTIVITIES AND MEETINGS**

MILESTONE PLAN OF CIMO ACTIVITIES		2008				2009				2010				2011					
		Quarter				Quarter				Quarter				Quarter					
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
A. OPAG-Surface																			
1	ET on Surface Technology and Measurement Techniques	M		M															
2	ET on Surface-based Instrument Intercomparisons & Calibration Methods	M	Regular Teleconf.																
3	ET on Meteorological Radiation & Atm. Composition Measurements	M					M												
B OPAG- Upper Air																			
1	ET on Upgrading the Global Radiosonde Network	M			M														
2	ET on Upper-air Systems Intercomparisons	M	M					M											
3	ET on Remote Sensing Upper-air Technology and Techniques	M	If funds available		M														
C OPAG- Capacity Building																			
1	Rap on Training Activities and Training Materials																		
2	ET on RICs, QMS and Commercial Instruments Initiatives	M				M													
3	Rap on CIMO Guide and Inf. Dissemination																		
Training and Capacity Building Events																			
1	U/A Training Workshop for RA II	W						W											
2	U/A Training Workshop for RA V	W							W										
3	Training Workshop on Metrology for RA V (orig. RA II)	W	CANCELED																
4	Training Workshop on Metrology for RA II (orig. RA V)	W								W									
5	Training Workshop on Radiation																		
6	Training Workshop on Metrology for RA I - French speaking	W						W											
7	TECO	C			C								C						
Intercomparisons																			
1	IOC on Surface-based Intercomparisons	M						M											
2	IOC on Upper-air Systems Intercomparisons							M											
3	Intercomparisons of solid precipitation measurements												I	I	I	I			
4	Regional Radiosonde Intercomparisons for RA-II							I											
5	IPC-XI, RPCs, WRC Davos	I									M								
6	Field Intercomparisons of Thermometer Screens & Humidity Instruments	I	I	I	I	I													
6	Field Intercomparisons of RI Gauges	I	I	I	I														
Other Meetings																			
1	CIMO-MG Meeting	M	M		M						M								
2	CIMO-XV Session	S											S						
	= done or already committed							A1	= Training component with meeting of A1										
	= planned and funded under P&B 2004-2007							= Planned and not fully funded											
	= planned but not funded or only partly funded																		
	= funded under ETR Programme																		
	= co-funded with other Programmes																		

ANNEX V
PROPOSAL FOR TECO-2008

(St. Petersburg, Russian Federation, 27-29 November 2008)

A. The main conference theme:

“To promote and facilitate international standardisation and compatibility of meteorological observing systems used by Members within the WMO Integrated Global Observing Systems to improve quality of products and services of Members.”

B. Sessions & Topics:

1. Session 1: “Working towards the WMO Integrated Global Observing Systems”;
2. Session 2: “Use and Implementation of the Automatic Weather Observing Systems (AWOS) in all climate weather and conditions.”

C. Keynote Speakers:

1. Session 1: Mr John Nash, UK, President of CIMO;
2. Session 2: Mr Rainer Dombrowsky, Vice-president of CIMO.

D. Sessions’ Co-chairpersons:

1. Session 1: Mr Bertrand Calpini will serve as a chair and will be assisted by 3 co-chairpersons to be selected among the members of the CIMO-MG and chairpersons of the CIMO ETs;
2. Session 2: Mr Jitze van der Meulen will serve as a chair and will be assisted by 3 co-chairpersons to be selected among the members of the CIMO-MG and chairpersons of the CIMO ETs.

E. Evaluation of Abstracts of Papers and posters:

1. Abstracts proposed for **Session 1** will be evaluated by Mr Calpini and Mr Stringer;
2. Abstracts proposed for **Session 2** will be evaluated by Mr van der Meulen and Mr Nbou;
3. The maximum number of papers for individual sessions will be 20 (according to the attached Working Plan) and will be selected according to the below criteria;
4. There is no limitation for the number of posters;
5. The proposal for papers that will not be selected may be presented as posters, if the author agrees;
6. Two assessors will allocate 3 marks for every proposed paper of a particular session in the following way:
 - i. Mark 1: Proposed as paper (Total of “Marks 1” should not exceed 20, which is the maximum number of papers for individual sessions);
 - ii. Mark 2: Not decided;
 - iii. Mark 3: Rejected as paper;
7. Selection of papers will be done according to the below table. **A proposal that receives “Mark 1” from both assessors is selected as a paper.** A proposal that receives Mark 3 from any of the assessors is out and may be selected as poster only. A paper that receives Mark 2 from any assessor would be a subject for further evaluation. A further evaluation will be done by the president of CIMO taking into account other criteria, such as number of proposals for papers from a particular author, diversity of subjects, regional distribution, etc.

Combination of Marks allocated by two assessors		Decision
1	1	Proposal accepted as paper
1	2	Subject for further evaluation (decision to be made by the president)
1	3	Proposal rejected as paper (could be a poster, if author agrees)
2	2	Subject for further evaluation (decision to be made by the president)
2	3	Proposal rejected as paper (could be a poster, if author agrees)
3	3	Proposal rejected as paper (could be a poster, if author agrees)

TECO-2008 Working Plan

Date	Programme	Lectures	Time (min)	
			Others	Breaks
Thursday, 27.11.2008				
10.00 - 10.30	Opening		30	
SESSION 1: Working towards the WMO Integrated Global Observing Systems				
10.30 - 11.00	Keynote lecture	30		
11.00 - 11.20	Lecture 1	20		
11.20 - 11.40	Lecture 2	20		
11.40 - 12.00	Lecture 3	20		
12.00 - 12.20	Lecture 4	20		
12.20 - 12.40	Lecture 5	20		
12.40 - 14.30	BREAK			110
14.30 - 14.50	Lecture 6	20		
14.50 - 15.10	Lecture 7	20		
15.10 - 15.30	Lecture 8	20		
15.30 - 15.50	BREAK			20
15.50 - 16.20	Posters presentations		30	
16.20 - 16.40	Lecture 9	20		
16.40 - 17.00	Lecture 10	20		
17.00 - 17.20	Lecture 11	20		
17.20 - 17.40	Lecture 12	20		
Friday, 28.11.2008				
09.00 - 09.20	Lecture 13	20		
09.20 - 09.40	Lecture 14	20		
09.40 - 10.00	Lecture 15	20		
10.00 - 10.20	Lecture 16	20		
10.20 - 10.40	Lecture 17	20		
10.40 - 11.00	BREAK			20
11.00 - 11.20	Lecture 18	20		
11.20 - 11.40	Lecture 19	20		
11.40 - 12.00	Lecture 20	20		
SESSION 2: Use and Implementation of the AWS in all climate weather and conditions				
12.00 - 12.30	Keynote lecture	30		
12.30 - 14.30	BREAK			120
14.30 - 14.50	Lecture 1	20		
14.50 - 15.10	Lecture 2	20		
15.10 - 15.30	Lecture 3	20		
15.30 - 15.50	BREAK			20
15.50 - 16.20	Posters presentations		30	
16.20 - 16.40	Lecture 4	20		
16.40 - 17.00	Lecture 5	20		
17.00 - 17.20	Lecture 6	20		
17.20 - 17.40	Lecture 7	20		
Saturday, 29.11.2008				
09.00 - 09.20	Lecture 8	20		
09.20 - 09.40	Lecture 9	20		
09.40 - 10.00	Lecture 10	20		
10.00 - 10.20	Lecture 11	20		

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10-20 - 10.40	Lecture 12	20		
10.40 - 11.00	BREAK		20	
11.00 - 11.20	Lecture 13	20		
11.20 - 11.40	Lecture 14	20		
11.40 - 12.00	Lecture 15	20		
12.00 - 12.20	Lecture 16	20		
12.20 - 14.30	BREAK		130	
14.30 - 14.50	Lecture 17	20		
14.50 - 15.10	Lecture 18	20		
15.10 - 15.30	BREAK		20	
15.30 - 15.50	Lecture 19	20		
15.50 - 16.20	Lecture 20	20		
16.20 - 17.20	Round Table		60	
	TIME (min)	860	150	460

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ANNEX VI
ACTION SHEET

Action No.	Item No.	Action required	Responsible	Deadline	Status/remarks
1	2.1.2	To develop CIMO's vision statement and sent it to the CIMO-MG members for comments and approval	CIMO Vice-President	1 April 2008	
2	3.1.7	To work in close collaboration with the WMO Secretariat to develop inputs required from CIMO for the finalization of the WMO-OP and Strategic Plan	All MG Members	Upon request from Secretariat	
3	3.3.6	To distribute the proposal for revised TORs developed by the CIMO Ad-Hoc Working Group on the CIMO WIGOS Pilot Project to the MG members for comments	CIMO Vice-President	February 2008 For replies: March 2008	
4	3.4.3	To provide a cost estimate for his proposal on strengthening RIC(s) of RA-I	M. Nbou		
5	3.4.4	To provide proposals on how RICs and RRCs could be strengthened	All MG Members	Nov./TECO-2008	
6	3.4.4	To contact GCOS in view of identifying GCOS plans for RA I (visit of GCOS stations and possible funding source for joint project on strengthening RICs in RA I)	President		
7	3.4.6	To elaborate and provide proposals (including TORs) for the nomination of Centre(s) of excellence that will serve as the CIMO Lead Centre(s) for Instrument Development and Testing	All OPAG Co-Chairs	Nov./TECO-2008	
8	4.1.3	To advise A. Heimo on how to complete the task that was assigned to him as well as on the work remaining to be accomplished, prior to his retirement	B. Calpini	February 2008	
9	4.1.3	To decide on need to nominate a replacement for A. Heimo in ET-A.1	MG	Nov./TECO-2008	
10	4.1.4	To contact Chair of ET-B1 to clarify his availability to chair team Final decision	Vice-President MG	February 2008 Nov./TECO-2008	

Action No.	Item No.	Action required	Responsible	Deadline	Status/remarks
11	4.1.5	To consult Chairs of ET B1 and B2 on timing of ET Mtgs and possibility of having a joint session to increase synergies	President	Mid-February	
12	4.1.5	To consult ET-B3 Chair on possibility to have only a reduced session of ET-B3 focussed on weather radar	President B. Calpini	March 2008	
13	4.1.6	To contact the Rapporteur on Regional Implementation Activities, G. Srinivasan, India as well as the Permanent Representative of India to solve communication problem with Rapporteur	President	February 2008	
14	4.1.7	To request nomination of experts from other TCs prior to ET meetings of full ETs	Secretariat	Before each ET meeting	
15	4.2.4	To prepare a poster on hydrogen danger addressing the safety of hydrogen generators and to review of the guidance given in the CIMO Guide	ET-B1	2009	
16	4.2.4	Task 8 of ET B1	President B. Calpini	mid-March 2008	
17	4.2.5	To nominate IOC for UA Intercomparisons	President	March 2008	
18	4.2.5	To identify potential participants for the China Radiosonde Intercomparison (2009)	President (with T. Oakley)	April 2008 (?)	
19	4.2.6	To address ET B.3 workplan with D. Engelbart, and possibility of having a meeting of ET members in Finland in conjunction with the Radar Conference	President B. Calpini	March 2008	
20	4.2.7	To contact J. Gorman and J. Duvernoy, to strengthen ET C1 workplan	R. Stringer J. van der Meulen		
21	4.2.8	To inquire the possibility of securing funding of planned intercomparison from WMO regular budget in the future	President		
22	4.2.9	To send the Vice-President pictures reflecting CIMO activities suitable for development of a brochure or a poster to publicize CIMO activities	All MG Members	March 2008	

Action No.	Item No.	Action required	Responsible	Deadline	Status/remarks
23	4.2.10	To be in closer contact with the Chairs of the ETs and Rapporteurs under their responsibility to monitor the progress of their work	All OPAG Co-Chairs	Continuous	
24	4.4.2.2	To be in close contact with the IOC Surface Chair and WMO Secretariat to follow-up and advise on how to proceed with Algeria intercomparison	J. van der Meulen		
25	4.4.2.4	To send a letter to Croatia informing them about the need to elaborate a more detailed proposal for the planned pyrhelimeters intercomparison	Secretariat	February 2008	
26	4.4.2.5	To submit report of a preliminary test of a new InterMet (South Africa) GPS radiosonde design performed in conjunction with the Upper Air Training Workshop, Windhoek, October 2007 for evaluation by ET-B2	President	June 2008	
27	4.4.2.7	To identify the resources required from WMO to successfully complete the test of a new Indian radiosonde including the processing of the data and preparation of the test report	IOC- Upper-Air	May 2008	
28	4.4.2.8	To establish the scope of LUAMI test of wind profiler winds quality evaluation and support needed by CIMO/WMO and to report to the CIMO-MG and WMO Secretariat	President B. Calpini	March 2008	
29	4.4.5.2	To finalize and dispatch the TECO-2008 programme	Secretariat	May 2008	
30	4.4.7.3	Take final decision on future of instrument catalogue	MG	Nov./TECO-2008	
31	4.4.7.3	To inform HMEI on CIMO MG deliberation related to instrument catalogue	President	March 2008	