# WORLD METEOROLOGICAL ORGANIZATION

# COMMISSION FOR BASIC SYSTEMS

## MANAGEMENT GROUP

## SEVENTH SESSION

## GENEVA, 18 – 20 JUNE 2007

# FINAL REPORT

# CONTENT

# AGENDA

**1. ORGANIZATION OF THE SESSION**

1.1 Opening remarks
1.2 Adoption of the agenda
1.3 Working arrangements

**2. IMPACT ON CBS ACTIVITIES AND PRIORITIES OF DECISIONS, GUIDANCE AND REQUIREMENTS FROM CONGRESS, EXECUTIVE COUNCIL, REGIONAL ASSOCIATIONS AND PRESIDENTS OF TECHNICAL COMMISSIONS SESSIONS**

**3. CBS PROGRAMME ALIGNMENT WITH THE WMO STRATEGIC PLAN AND WMO OPERATING PLAN**

**4. CBS WORK PROGRAMME**

**4.1 World Weather Watch Programme**
4.1.1 Integrated Observing Systems
4.1.2 Information Systems and Services, excluding WIS
4.1.3 WMO Information System
4.1.4 Data-Processing and Forecasting System
4.1.5 System Support Activities, including Operational Information Services
**4.2 WMO Space Programme**
**4.3 Public Weather Services programme**

**5. CBS COLLABORATION WITH SPECIFIC INTERNATIONAL PROGRAMMES AND PROJECTS**

- Group on Earth Observations (GEO)
- Disaster Prevention and Mitigation (DPM)
- International Polar Year (IPY)
- Quality Management Framework (QMF)
- World Weather Research Programme (WWRP), including THORPEX

**6. ARRANGEMENTS FOR THE FOURTEENTH SESSION OF THE COMMISSION FOR BASIC SYSTEMS**

**7. TECHNICAL CONFERENCE IN CONJUNCTION WITH CBS-XIV**

**8. OTHER BUSINESS**

**9. CLOSURE OF THE SESSION**

_____

## Executive Summary

The seventh session of the CBS Management Group (MG) was held in Geneva, Switzerland from 18 to 20 June 2007.

The MG particularly addressed issues relevant to CBS that were raised during the last session of Congress, the Executive Council and others proposed by other Technical Commissions or requiring collaboration with other international programmes.

The MG addressed the WMO Integrated Observing Systems project that was just approved by Congress in view of defining how it could best contribute and interact with this new initiative.

The MG ensured the alignment of its activities to the WMO strategic planning initiatives and decided to develop a CBS Operational Planning Framework.

The MG reviewed the activities, which had taken place since its last session and addressed the evolving needs of each of its programmes.

# General Summary of the work of the meeting

## 1. ORGANIZATION OF THE SESSION

### 1.1 Opening remarks

1.1.1 The session of the CBS Management Group (MG) was held in Geneva, Switzerland from 18 to 20 June 2007. The meeting was chaired by the CBS President, Mr A. Gusev. The list of participants is given at the end of this report.

1.1.2 The Deputy Secretary-General, Mr Hong Yan, welcomed the participants to the WMO Headquarters. He emphasized the need to ensure that the CBS goals and activities be aligned with the newly adopted WMO Strategic Plan. He mentioned his desire to see CBS take once again the lead among the Technical Commissions by developing the first Technical Commission Operating Plan. He stressed that due to its nature, which provides the basis for the work of all WMO Programmes, CBS needed to be strongly involved in inter-commission activities, without which the Organization would not be able to achieve its goals. He highlighted in particular the decision from Congress XV to develop the WMO Integrated Observing Systems (WIGOS), which will need proactive leadership from CBS. Finally, he tasked the CBS President to inform the meeting on all the important issues that are relevant to CBS that were identified by Congress and the Executive Council.

1.1.3 The President of the Commission, Mr Gusev, welcomed the participants and mentioned that a number of important events had taken place since CBS-Ext. (06), which the meeting needed to address. This concerned in particular inter-commission relations.

1.1.4 The director of the WWW Department, Dr Hayes, indicated that there is a need for CBS to develop plans which clearly articulate results in a manner which makes the benefit more easily understood among Member leaders and the ministries to which NMHSs belong. This would help them understand and, hopefully, respond more positively to the resource needs of the Commission.

### 1.2 Adoption of the agenda

1.2.1 The agenda was adopted by the participants. It is reproduced at the beginning of this report.

### 1.3 Working arrangements

1.3.1 The meeting agreed upon its working hours.

## 2. IMPACT ON CBS ACTIVITIES AND PRIORITIES OF DECISIONS, GUIDANCE AND REQUIREMENTS FROM CONGRESS, EXECUTIVE COUNCIL, REGIONAL ASSOCIATIONS AND PRESIDENTS OF TECHNICAL COMMISSIONS SESSIONS

2.1 The President of the Commission presented a number of issues emerging from Fifteenth Congress and the Executive Council (EC) which needed to be addressed by CBS. These issues will be discussed in details under the most relevant agenda items.

***Working Methods***

2.2 At the last session of the Executive Council, one member asked if there was a continuing need to hold CBS extra-ordinary sessions. At the EC session, the CBS President, supported by several other members, indicated there is a strong and continuing need to hold CBS sessions every two years because of the cross-cutting work of the Commission and the need to address the impact of rapid advances in science and technology on critical WMO programmes. EC accepted this view. However, the CBS President asked the MG to discuss the question with a goal of further increasing the value of CBS session to WMO Members. The MG reaffirmed that holding extra-ordinary sessions of CBS was needed to plan the future cross-cutting work programme of the Commission and to allow important interaction between OPAGs on critical science and technology issues. However, the MG was of the opinion that the length of the session could be reduced by adhering to better working practices, such as limiting the length of interventions and sticking to the

agreed time-table. The MG recognized that a major limiting factor in further reducing the length of the session was the time necessary to translate and distribute the working documents.

2.3 The meeting was briefed on the ITU radiocommunication sector working methods that are used, in particular, to adopt and approve technical standards by correspondence. The MG considered whether such methods could be of use in the work of CBS.

2.4 The meeting recognized that new methods of working, increasing the effectiveness of CBS would be welcome as they would free more time for the Commission to discuss issues of strategic interest for the Members. The MG also recognized that the ITU methods could provide such a basis for improvement.

2.5 The MG requested the Secretariat develop proposals for increasing the effectiveness of future CBS sessions with the following objectives:

- For the next CBS session: improved session working practices (e.g., limiting the length of interventions and structure/length of documents) and a more focused agenda which would reduce the required meeting length by at least one day
- For the next extraordinary session of CBS: improved or new CBS intra-sessional practices/methods (e.g., review and approval by correspondence of routine items, such as non-controversial technical standards) which would reduce the meeting length by an additional day.

***Action:*** *Develop proposals for improving CBS working methods* ***Responsible:*** *Secretariat*
***Deadline:*** *End of 2007* ***Deliverable:*** *Document*

### *Volunteerism in the Work of CBS*

2.6 The MG recalled the decisions and recommendations of the Congress, Executive Council and CBS relating to volunteerism in the work of Technical Commissions. It stressed the need for the development and implementation of new innovative mechanisms that would provide increased participation of the required specialists in CBS expert teams.

2.7 The MG agreed that, noting the initiative taken by CAeM for preparing the membership of Expert Groups before CAeM-XIII, the WMO Members should be invited to select among several options in the nomination form for the expert, the efforts and time the expert would be able to commit to the activities of the team, as well as details of the qualifications and professional experience of the proposed expert; an example of such a nomination form was used for the designation of experts for the Expert Team on the Assessment of Data Representation Systems (ET-ADRS) [1].

***Action:*** *Preparation of nomination forms* ***Responsible:*** *OPAG-Chairs and Secretariat*
***Deadline:*** *Prior to CBS-XIV* ***Deliverable:*** *Nomination forms*

2.8 The MG agreed that significant contributions of experts to the CBS activities should be recognised through certificates signed by the President of CBS. The chairs of the OPAGs should identify significant contributions made by experts during the four years between full CBS sessions and submit proposals for certificates of recognition to the President of CBS.

***Action:*** *Proposals for certificates of recognition* ***Responsible:*** *Secretariat, in collaboration with President and OPAG-Chairs* ***Deadline:*** *Prior to CBS-XIV* ***Deliverable:*** *Certificates of recognition*

2.9 Noting the increasing difficulty in securing expertise and support for activities within all the OPAGs, CBS-Ext.(06) recommended the establishment of a Trust Fund for the CBS OPAG Expert Teams. The Trust Fund should be used to support those activities that are not covered by the regular budget and should target a set of activities, for example those related to the development of metadata, the Severe Weather Forecasting Demonstration Project and WIGOS. The Trust Fund should help in facilitating external expertise/consultancy. The MG felt that the secondment of experts by the NMHSs should also be encouraged, in particular since some countries may experience administrative difficulties in participating in the Trust Fund. The MG requested the

[1] See http://www.wmo.int/pages/prog/www/ISS/Questionnaires/ET-ADRS_NomCandidateExperts-April2007.doc

Secretariat to draft a project for the establishment of the Trust Fund, including its governance, and to submit it to the MG.

***Action:*** *Project for the establishment of the Trust Fund* ***Responsible:*** *Secretariat*
***Deadline:*** *End 2007* ***Deliverable:*** *Document*

***Impact of the Zero Nominal Growth (ZNG) to the Work of CBS***

2.10 The MG noted with concern the impact of the ZNG to the WWW Programme and to the activities and deliverables of the CBS OPAGs and Expert Teams. It encouraged the Secretariat to address the budgetary constraints on a priority basis according to the WMO Strategic Plan and to continue its efforts to obtain extra-budgetary resources to supplement the regular budget.

## 3. CBS PROGRAMME ALIGNMENT WITH THE WMO STRATEGIC PLAN AND WMO OPERATING PLAN

3.1 The MG was briefed about the new WMO strategic planning approach and about the different documents that describe this plan. It noted that the Strategic Plan and the Operating Plan represent new documents and concepts and that, because of methodology uncertainties, only a Secretariat Operating Plan (SOP) would be developed for the first biennium of the 15th Financial Period.

3.2 The MG recognized that it would be valuable to develop explicit planning guidance for CBS but felt that it might be difficult to develop a CBS operating plan quickly since it relied on its Members, who have duties in their home countries, to carry out the work. It further noted that, because the Operating Plan structure does not provide resources, it would be more appropriate to describe it as a ***framework*** document. Such a document would identify targets that CBS aims at and give an indication of the resources that would be needed from Members to achieve these goals. The MG agreed that such a document would not commit Members but identify targets that, in turn, could provide a basis for resource allocation decisions within the Secretariat and Member countries.

3.3 The MG decided to set up a small team comprised of the President, Vice-president and of the OPAG Chairs that would work by correspondence and develop a document presenting a CBS operational planning framework document for 2010-2011 that would be presented to CBS-XIV. The MG also requested the OPAGs to develop the main ideas for this framework under their areas of responsibilities. The MG requested the Secretariat to work with the Strategic Planning office to obtain the necessary guidance for the document.

***Action:*** *Develop CBS Operational Planning Framework document* ***Responsible:*** *President, Vice-President and OPAG-Chairs* ***Deadline:*** *CBS-XIV* ***Deliverable:*** *Document*

3.4 The MG was of the opinion that it would need additional guidance to address the Congress request to monitor and report on an annual basis on the progress of the alignment of CBS activities with the Strategic Plan.

3.5 The MG recommended that the Top-Level Objectives and Expected Results listed in the next version of the WMO Strategic Plan (2012-2015) should be more outcome-focused and measurable than those listed in the present version of the WMO Strategic Plan (2008-2011). It asked the Secretariat to coordinate and submit relevant CBS strategic planning input provided by the MG and possibly by CBS-XIV to the strategic planning team in time to be considered for its December 2008 initial draft strategic Plan (2012-2015)

***Action:*** *Coordinate and submit consolidated CBS input* ***Responsible:*** *Secretariat*
***Deadline****: July 2008* ***Deliverable:*** *Document*

## 4. CBS WORK PROGRAMME

### 4.1 World Weather Watch Programme

#### 4.1.1 Integrated Observing Systems

***Summary of Key Points Presented***

4.1.1.1 The MG was informed on the activities carried out within OPAG-IOS since the MG-6 session including deliberations of the following meetings:

- The second session of the CBS OPAG-IOS-Expert Team on Evolution of the GOS (ET-EGOS), Geneva, 10-14 July 2006;
- The joint session of the OPAG-IOS ET-SAT and ET-SUP, Geneva 4-8 September 2006
- The fourth session of the Implementation/Coordination Team on Integrated Observing System (ICT-IOS), Geneva, 11-15 September 2006;
- RA III Regional Training Seminar on CLIMAT and CLIMAT TEMP Reporting, Buenos Aires 25-27 December 2006.

4.1.1.2 The MG noted that proposals and recommendations developed during the above meetings had been reviewed and approved by the CBS-Ext.(06) and formed a basis for the separate document on the IOS submitted to the Fifteenth Congress. The MG was also informed in details on the status of implementation of specific decisions by CBS-Ext.(06), and noted the progress that had been achieved as well as the heavy workload of the expert teams.

4.1.1.3 The MG noted with great satisfaction that Congress supported proposals of CBS in the context of the operations and development of the future composite GOS which aimed to contribute markedly to alleviating deficiencies in the surface and upper-air data coverage. The MG took into account comments by the Congress on the implementation of the Voluntary Observing Ships (VOS) programme being an essential component of the GOS and the need to work more closely with ICAO and the aviation industry to ensure that AMDAR software and sensors, such as the humidity sensor once it has been successfully proven, become a part of manufacturing process of the aircraft.

4.1.1.4 The MG noted in particular the Congress' statement on the fundamental mission of the GOS in providing, through coordinated efforts of Members, timely, reliable and consistent meteorological data to meet the national, regional and global requirements and welcomed the adoption by Cg-XV of the special resolution on the GOS.

4.1.1.5 The MG noted that along with the tasks specified by Congress in resolutions on the WWW and GOS, OPAG-IOS activities should include the following additional aspects:

- The GOS, being one component of the WWW System, will contribute to achievement of the WMO Strategic Plan 2008-2011 with its major contributions focused on the following Expected Results:
  - I: Enhanced capabilities of Members to produce better weather forecasts and warnings;
  - IV: Integration of WMO observing systems;
  - V: Development and implementation of the new WMO Information System;
  - VI: Enhanced capabilities of Members in multi-hazard early warning and disaster prevention and preparedness;
  - IX: Enhanced capabilities of Members in developing countries, particularly Least Developed Countries, to fulfil their mandates;
- CBS should continue to take a leading role for WMO in GEOSS through contribution of its systems (e.g. WIS) and, in particular, to collaborate with GEOSS to ensure that the surface-based and space-based components of the WWW GOS and the WIS are recognized and strengthened as core systems within GEOSS;
- Recognizing the substance and significance of the GOS, that CBS through OPAG-IOS should take a leading role in the technical development and planning of integrated observing systems with a view to a cost-effective and flexible system of systems that can meet in an optimal way the requirements of all WMO Programmes;

4.1.1.6 The MG noted the benefit of engaging Regional Associations more coherently in improving the implementation and operation of the GOS and acknowledged the key role of regional rapporteurs and especially the working groups on Planning and Implementation of the WWW in this regard.

***Decisions***

4.1.1.7 In accordance with the guidance given by the 15th Congress and following the discussions during the meeting, the MG agreed on the following:

- OPAG-IOS to give all possible support to the implementation of the Congress resolution on the GOS through planning and implementation of specific actions in the work programmes of its expert teams and rapporteurs;
- OPAG-IOS, through its ET-EGOS in coordination with OPAG-ISS, to consider new ways of measuring the effectiveness of the GOS; the experience gained in this respect by certain countries should be taken into account;
- OPAG-IOS to participate and continue to support studies of observation targeting strategies based on the THORPEX, AMMA and IPY results;
- OPAG-IOS, through its ET-EGOS, ET-SUP, ET-SAT, ET-AWS and rapporteurs, following the guidance given in the Implementation Plan (Framework) for Evolution of Space and Surface-Based Sub-systems of the GOS (IP-EGOS), to pursue, especially in developing countries a wider use of observing systems (e.g., satellite, AMDAR) that were less dependent on infrastructure, expertise and funding;
- OPAG-IOS, through its ET-AWS and ET-EGOS, to promote the use of automatic weather observing systems that enable cost effective real-time measurements, compatible with data from conventional systems, of quality and reliability suitable to all climate conditions;
- OPAG-IOS, through its ET-EGOS, to establish coordination with national points of contact responsible for reporting progress and plans in their country related to IP-EGOS;
- OPAG-IOS, through its ET-EGOS, ET-SUP, ET-SAT, ET-AWS and rapporteurs, in coordination with WG PIW to promote implementation/evolution of the GOS in the Regions through sustainable functioning of RBSNs/RBCNs and keeping under continuous review related regional requirements.

4.1.1.8 The MG was informed that Mr Rainer Dombrowsky was elected vice-president of CIMO and resigned from the position as Chair of ET-AWS, effective 1 February 2007. The MG appreciated his contributions to the International community through his Chairmanship of the Expert Team. The MG endorsed the proposal that Dr Igor Zahumensky should assume responsibilities of the Chair of ET-AWS. The MG agreed to fill the vacant position in the membership based on the proposal of the chairperson.

***WMO Integrated Observing Systems (WIGOS)***

4.1.1.9 The MG reviewed PINK 7.4(3) from Cg XV which gives direction to WMO to pursue the integrated observations initiative as Expected Result 4 of the WMO Strategic Plan. It was noted that this is a complex initiative. It was further noted that there is a critical link between the WIS programme, for which CBS is the lead, and the proposed WIGOS programme, which will be steered and monitored by an EC Working Group on WIS-WIGOS. In this regard, the meeting noted that the ICG-WIS will report to the EC WG-WIGOS/WIS. The purpose of the MG discussion was to determine the role CBS should play, identify proposed tasks and leads for CBS to support the EC WG-WIGOS/WIS, which plans its first meeting before the end of 2007.

4.1.1.10 The MG Members stressed the complexity of the initiative and noted that the approved WMO Budget does not include explicit allocation to address the WIGOS initiative. The MG stressed that it would be challenging to make progress. The MG further noted that the Congress document provides only general guidance on WIGOS “what, when and by whom”.

4.1.1.11 After an extended discussion, the MG agreed that CBS should move proactively to support the EC WG-WIGOS/WIS with CBS input for the planned meeting, taking into consideration the existing Commission work programme. The MG decided to form a CBS Task Team composed of the CBS President, Vice President, the OPAG IOS and ISS Chairs and the Director of the World Weather Watch Department. The objective of the Task Team will be to prepare input the CBS President can submit as input to the EC WG-WIGOS/WIS. The MG agreed the input would include:

- CBS assessment of the WIGOS concepts as described in the reports prepared by Dr Jim Rasmussen and B. Gen. Massimo Capaldo on this initiative; Assessment should include review of definition, such as definition of integration and potential impact of the integration on the WMO structure, particularly WWW;
- CBS recommendations drawn from existing relevant plans and documents, such as the WMO’s submission to GEOSS plan and the WIS Implementation Plan;

- A proposal developed jointly with CAS for a pilot project to unify access to GOS-GAW information in a system of systems architecture – include proposed scope, levels of integration and timetable;
- A proposed outline for the WIGOS Implementation Plan;
- Following the presentation on the Flash Flood Guidance System (FFGS), the MG agreed that this would constitute a cross-cutting pilot project on WIGOS. It comprises both surface and space based GOS as well as the hydrological networks with a significant input needed from CIMO. Collaboration on this project is also expected from other WMO programmes, such as AREP, WCRP and DPFS;
- A WIS document/briefing describing WIS as the foundation for WIGOS data management, access and distribution – include key WIS milestones and resource shortfalls.

***Action:*** *Develop Input for EC WG-WIGOS-WIS* ***Responsible:*** *President, Vice-President, OPAG-IOS and –ISS Chairs, D/WWW* ***Deadline:*** *October 2007* ***Deliverable:*** *Document*

4.1.1.12 The MG requested Secretariat to make available studies and reports related to WIGOS to assist the MG to prepare strategy of addressing this issue.

***Action:*** *Provide available documents to MG members* ***Responsible:*** *Secretariat* ***Deadline:*** *Mid-July 2007* ***Deliverable:*** *Send documents to TT*

***AMDAR***

4.1.1.13 The MG was informed about current AMDAR activities regarding the planned migration of the programme to the WWW as part of the WIGOS initiative, and a need to reflect this change in the secretariat support for the programme.

4.1.1.14 After some discussion, a consensus emerged along the following lines:

- The AMDAR data already are an integral part of the global observing system being complementary to other existing systems. Further integration is needed in order to allow optimal use of all existing sub-systems in the framework of an operational, integrated, global observing system. For this to happen, the AMDAR system should provide compatible profiles of wind, temperature and humidity data. In this regard, the MG was concerned with less than convincing performance of the newly developed WVSS-II water vapour sensor in current flight tests, particularly in the higher troposphere and lower stratosphere.
- The full benefit of this observing system is closely related to the integration of a viable humidity sensor into the system. Only then can Members start to consider reducing the dependence on expensive radiosonde soundings for some aspects of their operation. If trace gases are also included, this would greatly add to the system value. This widening of the scope for AMDAR, however, would require substantial investments and efforts that go beyond the means of the current AMDAR panel and probably even the NMHSs' community and must be carefully studied before making a decision to include trace gases in AMDAR..
- The potential benefits to aviation from AMDAR data should also be taken into account in considering potential contributions to the programme, in particular when it comes to the potential efficiency gains for air traffic, and its environmental impact.
- The MG expressed concern with the transition of AMDAR programme to WWW because the proposed transition does not include transfer of supporting funding or staff. It indicated that a new full-time position within the Secretariat for AMDAR issues can not be supported without additional resources – and noted the decreasing rate of contribution to the AMDAR Trust Fund.
- The MG also noted that unlike other GOS observing systems/components, AMDAR system is not owned by Members.
- The MG noted that the importance of AMDAR was explicitly recognized by GEO in its work plan and suggested that Members who are also GEO members might consider raising profile of AMDAR at the next GEO session.

The MG tasked the Secretariat to develop a communication to convey the above issues to the AMDAR panel and other potentially involved bodies and Members.

***Action:*** *Develop Communication to AMDAR panel* ***Responsible:*** *Secretariat*
***Deadline:*** *September 2007* ***Deliverable:*** *Written communication*

### 4.1.2 Information Systems and Services, excluding WIS

***Data Management, including Data Representation & Codes and Migration to Table Driven Code Forms***

4.1.2.1 The MG noted the continued requirements to update Data Representation forms and Codes (GRIB 2, BUFR/CREX tables) to meet new data exchange requirements. A Meeting of the Expert Team on Data Representation and Codes was held in the EUMETSAT Headquarters in Darmstadt, from 23 to 27 April 2007. A meeting of the Expert Team on Data Representation and Codes should take place in first half 2008, as well as a meeting of the Expert Team on Migration to TDCF.

4.1.2.2 Cg-XV noted the slow implementation of the migration to TDCF, which began on 2 November 2005 (less than 10 % of the Countries are producing some traditional type observations in BUFR). The Migration Guidance Document requested by CBS-Ext.(06) to increase the awareness of the benefit of the migration by the NMHSs was being prepared. The MG felt it important to analyse and highlight the positive aspects of the migration, to review the framework for the migration to TDCF based on the actual requirements, experience gained and current technology development, and in the light of a CBS policy on data representation systems, to draft guidance for the development of the national migration plans. After the first series of seminars on TDCF organised in all the Regions, a new series of training seminars, with more focus on the migration process itself, similar to the one just delivered for RA VI, should be organised for other regions, depending on their stage of development in that field. Priority should be given in 2008 for training activities for South-East RA II and North-West RA V, as requested by some countries in these Regions. Later, training should be considered for Russian speaking Countries in RA VI and II, for RA III and IV, for RA V and finally for RA I.

***Action:*** *Review of migration plans* ***Responsible:*** *ET-MTDCF* ***Deadline:*** *CBS-XIV*
***Deliverable:*** *Document*

4.1.2.3 The MG noted that Cg-XV strongly supported the initiative of CBS to assess Data Representation Systems and agreed on the establishment of the Expert Team on the Assessment of Data Representation Systems (ET-ADRS) and its membership as given in the annex to CBS/MG-VII/Doc. 4.1.2. Since the designation of a few other experts was still expected, the MG invited the chair and co-chair of the OPAG-ISS to finalize the membership and to designate a chairman. The associate members should be invited to keep abreast of and contribute to the work of the ET at least by correspondence. The MG emphasized that the deliverables for the ET-ADRS were the assessment of Data Representation systems and relevant recommendations. The ET should also aim at developing a proposal for a CBS policy on data representation systems; the objectives should be reached through a limited number of meetings, with a view to submitting proposals to CBS-XIV. Noting that there were no new resources identified for supporting this new expert team, the MG invited Members concerned to consider facilitating the work of the team, especially by providing financial support for the participation of their own expert(s).

***Action:*** *Establishment of ET-ADRS* ***Responsible:*** *OPAG-ISS chair and co-chair*
***Deadline:*** *15 July 2007* ***Deliverable:*** *Finalisation of membership of ET-ADRS and designation of chair*

4.1.2.4 The MG agreed to the establishment of a conjoint Expert Team between CAeM and CBS that will specifically address the requirements of aeronautical meteorology, including ICAO, for Data Representation systems, including issues of the migration of OPMET data to new forms of Data Representation (CAeM-CBS/ET-ODR). The conjoint ET will be co-chaired by a representative of CAeM and CBS respectively. It requested the Expert Team on Assessment of Data Representation Systems (ET-ADRS) to contribute to the work of the CAeM-CBS/ET-ODR within its terms of references, and requested the chairman of the ET-ADRS to represent CBS in CAeM-CBS/ET-ODR; it invited CAeM to designate a CAeM representative (preferably member of the CAeM-CBS/ET-ODR) in the ET-ADRS. The MG agreed that, the development of the general strategy and policy for aeronautical meteorology data representation systems was actually part of the mandate of the ET-ADRS, and that this initial step of the CAeM-CBS/ET-ODR activities could be merged with the ET-ADRS activities; once a policy on data representation systems developed

by the ET-ADRS is adopted by CBS, the details of the migration of OPMET data to new forms of data representation should be further studied by the CAeM-CBS/ET-ODR.

***Action:*** *Invite CAeM to nominate a representative in ET-ADRS* ***Responsible:*** *Secretariat*
***Deadline:*** *15 July 007* ***Deliverable:*** *Written correspondence*

4.1.2.5 The Inter-Programme Expert Team on Metadata Implementation (IPET-MI) agreed on an action plan. A “virtual meeting" will be held at the end of July 2007 (week 23-27 July). Some of the issues (e.g. features, service metadata and tools) should be further discussed in meetings of 2-3 people to be held in October and November. For other key topics (e.g. registries and documentation), small teams will continue working by correspondence. A meeting of the IPET-MI should be held in spring 2008 to agree on the final standard that will be based on the output of the smaller meetings and the work that follows from them.

4.1.2.6 CBS-Ext.(06) agreed that the responsibility for editing each of the part of the Guide on WWW data management should lie with the CBS OPAGs and expert teams with key knowledge on each topic, under the coordination of the OPAG on ISS assisted by the Secretariat, and it asked the OPAGs to contribute to updating the Guide accordingly. OPAGs and ETs are urged to send their contribution to the Rapporteur on the guide to WWW data management and the Secretariat.

4.1.2.7 As regards the Integrated WWW Monitoring (IWM), the MG noted that WMO Members are invited for the 2007 Annual Global Monitoring (AGM) to start monitoring surface and upper-air observations from fixed stations presented in table-driven code forms (TDCF) (BUFR, CREX) in addition to Traditional Alphanumerical Codes (TAC). WMO Members operating an RTH are also invited to consider participating in the pre-operational phase of the Integrated WWW Monitoring (IWM).

***WIS-GTS Communication Techniques, Structure and Operation, including Radio Frequency matters***

4.1.2.8 The MG noted the decisions and guidance from Congress regarding WIS-GTS services, operation and implementation.

4.1.2.9 The ET-CTS, under the Co-chairship on WIS-GTS Data Communication Structure, will pursue the development of the data communication structure and organization for the WIS-GTS, with particular focus on the smooth evolution, consolidation and improvement of the GTS for time-critical and operation-critical data, including multicast and broadcast components, especially satellite-based, and its required extension to meet operational requirements of all WMO Programmes, especially in the framework of the development of the WMO Integrated Observing System.

4.1.2.10 The ET-CTS, under the Co-chairship on Enhanced use of Data Communication Techniques (EUDCT), will pursue the development/update of recommended data-communication procedures and the guidance material for the use of the Internet (including VPN) with particular attention to operational and security risks, and for the use of adequate information and communication technology for NMHSs of developing countries. The new emerging advanced data-communication network services, called MPLS (Multi-Protocol Label Switching) are superseding Frame Relay networks in some areas of the World and provide the capacity of any-to-any connectivity. The MG was informed that the implementation of MPLS had just been completed on the RA VI RMDCN and IMTN (Cloud II), and it expressed its appreciation to ECMWF for having managed very effectively this important migration. The ET-CTS will consider the full implications of the introduction of MPLS, and review the exchange and routeing mechanisms for messages and files on the GTS in the light of the new capabilities of any- to-any connectivity, with a view to WIS and with a view to improving exchange of high priority data and products in support of a virtual all hazards network within the WIS-GTS.

4.1.2.11 The ET-CTS meeting is planned in 2Q 2008 to finalize proposals; much preparatory work should be carried out by correspondence.

4.1.2.12 The MG noted that the current provider’s contract of “cloud I” of the IMTN would terminate at the end of 2007, and expressed its full support for holding in Sept./October 2007 an implementation coordination meeting for the IMTN “cloud I” centres to facilitate the transition towards new contractual arrangements. CBS Ext.(06) also invited the Secretariat to organize an implementation-coordination meeting for the IMTN “cloud II” African centres, which is planned for

the 1Q 2008. The ET-OI will review and further develop GTS operational procedures, including file naming and further improvement of operational procedures related to high priority data and products, including early warning messages and related information (e.g. Tsunami), in coordination with the ET-CTS. It will also coordinate implementation and planning of techniques, procedures and systems for the MTN and MTN centres, including towards the core communication component of WIS. It will further coordinate implementation and procedures of the Integrated WWW Monitoring (IWM). A meeting of the ET-OI jointly with an Implementation-Coordination Meeting on the GTS-WIS MTN is planned for 2Q 2008.

4.1.2.13 The MG expressed its appreciation for the preparatory work to the forthcoming World Radiocommunication Conference (WRC-07, Oct-Nov. 2007) carried out by the SG-RFC, including the WMO position document submitted to ITU-R and distributed to WMO Members for coordination and action with their national authorities. It also took due note of the Cg-XIV Resolution on Radio Frequencies, which has been communicated to ITU.

4.1.2.14 The MG noted and supported the schedule of meetings of the teams and related events that are planned to take place before the CBS fourteenth session (2008), as included in CBS/MG-VII/Doc. 4.1.2, to undertake the tasks and provide deliverables as identified by CBS Ext. (06).

### 4.1.3 WMO Information System

4.1.3.1 The MG noted the decisions and guidance from Congress on WIS, including the three fundamental types of services and the two parallel parts for the WIS implementation and associated priorities emphasized by Congress. Congress confirmed the leading role of CBS in the further development of the WIS. It re-affirmed that WIS was serving all WMO Programmes and confirmed the critical role of the Intercommission Coordination Group on the WMO Information System (ICG-WIS) as a coordination mechanism spanning across WMO Programmes and technical commissions, as well as across global and regional levels. Congress recognized that the Regional Working Groups on Planning and Implementation of the WWW should take a leading role in the regional WIS development and planning.

4.1.3.2 The MG noted with much interest the activities in the development of the VGISC (Europe) that are carried out by the Members concerned, i.e. France, Germany and the United Kingdom with the active partnership of ECMWF and EUMETSAT. It expressed its high appreciation for the efforts and investment made in support of WIS development and implementation, and invited the Secretary-General to raise the visibility of this endeavour. It also noted that CMA, JMA, KMA, WMC/RTH Melbourne and Washington, as well as NCAR (Boulder, USA) and NODC (Obninsk, Russia) have actively joined development actions and plans for the implementation of WIS centres functions and services. A full time WIS project manager has been established in the Secretariat, initially for one year with the important contribution from BoM that is considerably assisting in the coordination of the implementation of the WIS. A consultant has been hired to develop a comprehensive assessment of the requirements of WMO Programmes for WIS services, which will be considered by the forthcoming ICG-WIS meeting.

4.1.3.3 The MG noted that Executive Council established an “Executive Council Working Group on the WMO Integrated Global Observing System (WIGOS) and the WMO Information System (WIS)”. The Group mandate focuses on WIGOS but includes in its terms of reference the monitoring and refinement of WIS development and implementation planning to allow for an integrated WMO end-to-end system of systems. The Intercommission Coordination Group on WIS (ICG-WIS) is requested to report to the working group to ensure the coordination of the respective WIGOS and WIS development and Implementation Plan, especially as regards WIS meeting WIGOS data collection, exchange and access requirements. The MG agreed that this decision did not change the mandate of CBS, and especially the OPAG-ISS, related to WIS development support, and would raise the visibility of WIS, with a likely positive impact on the resources made available for the further WIS development and implementation. It invited the CBS president, as well as the ICG-WIS Chair, to emphasize and document to the EC/WG WIGOS-WIS the objectives and important planning milestones for the WIS implementation, including resources required in order to fulfil the data management and exchange requirements for serving WIGOS.

4.1.3.4 The MG emphasized the tasks and deliverables that are critical for the WIS development and implementation in compliance with the time frame agreed upon by Congress are the following:

- develop specifications for the GISC/DCPC/NC interfaces, including a unified user interface for WIS components;
  ***Responsible:*** *OPAG-ISS (ET-WISC) with ICG-WIS collaboration & coordination, VGISC Partners contribution and consultant/seconded expert support, facilitated by the Secretariat*
- develop the specifications of WIS functions for GISCs and DCPCs to be used for the statement of compliance and for demonstrations of capabilities in the framework of the procedures for the designation of Global Information System Centres (GISC) and the Data Collection or Production Centres (DCPC), as supported by Congress;
  ***Responsible:*** *OPAG-ISS (ET-WISC) with ICG-WIS collaboration & coordination and consultant/seconded expert support, facilitated by the Secretariat*
- practices, procedures and guidelines for the metadata generation and exchange including finalization of the metadata profile references and relevant implementation tools;
  ***Responsible:*** *OPAG-ISS (IPET-MI) under ICG-WIS coordination and consultant/seconded expert support, facilitated by the Secretariat*
- development of regulatory documentation (Manual on WIS) including organization and recommended practices and procedures and guidance material for implementation as well as the need for a WIS guide for NCs;
  ***Responsible:*** *OPAG-ISS (ET-WISC, ET-CTS) with ICG-WIS collaboration & coordination and consultant/seconded expert support, facilitated by the Secretariat*
- development of scheme and practices for security, authentication and authorization procedures for WIS services;
  ***Responsible:*** *OPAG-ISS (ET-WISC, ET-CTS) with ICG-WIS collaboration & coordination and consultant/seconded expert support, facilitated by the Secretariat*

It underscored that important resources, essentially in the form of consultancy services supported by the current limited regular budget resources, the WIS Trust Fund and possible expert secondment are needed to carry out these tasks.

4.1.3.5 The MG noted the need to develop a coordinated building capacity and action plan in developing countries to enable them to participate in WIS, including involvement in pilot demonstration projects taking account of the realistic capabilities, opportunities and constraints for the participation of the NMHSs of the developing countries. It was informed that RA I had established a WIS working Group for promoting Region I involvement and participation in WIS. The MG welcomed and strongly supported the initiative of supporting, through technical cooperation funds, the participation of key experts from the RA I group in the forthcoming ICG-WIS session (Reading, UK, 3-6 September 2007), as well as of Chairs of the Regional Working Groups on Planning and Implementation of the WWW, to foster the regional WIS development and planning.

***Responsible:*** *ICG-WIS with contribution from OPAG-ISS, ET-WISC, ET-CTS, IPET-MI chairs, and the Secretariat identifying funding and as facilitator*

4.1.3.6 In view of the critical importance of the WIS development and implementation as a key component of all WMO Programmes and the WIGOS initiative, the MG encouraged the Secretary General to:

- Find additional staff resources within the Secretariat to support and facilitate WIS development and implementation, taking into account the cross-cutting nature of WIS contributing to all WMO programmes;
- Urge Members to pursue and expand their support and contribution through the secondment of experts, the provision of extra budgetary resources (e.g. to WIS Trust fund) and the active support and contribution to the OPAG-ISS ETs activities.

### 4.1.4 Data-Processing and Forecasting System including Emergency Response Activities

4.1.4.1 The MG expressed the high importance of this area of the World Weather Watch Programme and adopted the report of the Chair of the OPAG on DPFS, including the Structure and Terms of Reference of the OPAG as recommended at CBS-Ext.(06), and the following areas of activities:

- Forecasting standards and recommended practices
- Ensemble prediction systems, products and applications

- Severe weather forecasting, and the Severe Weather Forecasting Demonstration Project
- NWP Strategy for improving severe weather forecasting in developing countries
- Long-Range Forecasting, including collaboration with Commission for Climatology related to RCCs
- Forecast verification
- Emergency Response Activities

4.1.4.2 The MG acknowledged the successful implementation of the Severe Weather Forecasting Demonstration Project (SWFDP), and that the project is a solid basis upon which to implement a broader NWP strategy for improving severe weather forecasting in developing countries. Already, collaboration between DPFS and PWS has enlarged the scope of benefits of the project from improving the forecasting process in the participating NMHSs to improving the effectiveness of the severe weather forecast programmes in these countries. The SWFDP is one of 9 projects recognized by the WMO Disaster Risk Reduction Programme.

4.1.4.3 The MG encouraged the OPAG to maintain close linkages with the Commission for Atmospheric Sciences, in particular in relation to developments in NWP technologies and verification, THORPEX-TIGGE, Nowcasting, and other relevant areas.

### 4.1.5 System Support Activities, including Operational Information Services

4.1.5.1 CG-XV emphasized that addressing identified WWW deficiencies would improve meteorological services with regard to safety, climate monitoring, disaster reduction, and poverty alleviation. Congress requested the Commission for Basic Systems and regional associations to continue identifying gaps in the implementation and operation of the WWW, and defining guidelines for the allocation of priorities in the support of the implementation of WWW systems and services. The MG invited the OPAGs to review the guidelines for the allocation of priorities for technical cooperation support as given in paragraphs 6.6.2 to 6.6.6 of the report of CBS-Ext.(06) and to submit updated guidelines to CBS-XIV.

4.1.5.2 The sixth session of the MG (Geneva, April 2006) requested the Secretariat to prepare a new edition of the CBS software registry. In 2006, the Secretariat sent a letter to the WMO Members inviting them to review the list of software packages that they offer to other WMO Members, and to provide the relevant information to be included in the new edition. Eight countries (Bolivia, Cyprus, Hong-Kong – China, Ireland, Japan, Switzerland, UK and USA) offered in total 45 software packages. The new edition is available in the WMO server from http://www.wmo.int/pages/prog/www/cbs-software-exchange/introduction.html. The MG agreed on the following action to ensure that the CBS software registry is kept updated and its use benefits to the implementation of the WWW:

a) The Secretariat should invite the WMO Members to review the list of software packages included in the CBS software registry, for example every two years;
b) The OPAGs and their teams should highlight the software packages, that could be used to contribute to the implementation of the WWW in their domain of interest, should foster their possible use, and in a more general way should contribute to the development and better use of the registry.

4.1.5.3 Cg-XV reaffirmed that an important goal was to facilitate a rapid access to the information through interactive on-line access services. Cg-XV welcomed the initiative to establish WMO Country Profile Database to enhance the ability of the whole WMO Secretariat to follow the status of and development needs of the Members, and urged the Secretary-General to take immediate action to operationalize such a database and gather there all of the information collected by individual WMO Programmes/Departments. The MG recommended to develop the project for the interactive on-line access services for the OIS and the project for the WMO Country Profile Database in an integrated and co-ordinated manner with a view to avoiding the duplication of efforts. The MG reaffirmed the need to present the operational information in XML format.

## 4.2 WMO Space Programme

4.2.1 The MG was provided an update of WMO Space Programme's recent achievements, on-going activities and near-term plans along four main areas:

- expanding the space-based GOS;
- enhancing access;
- enhancing use; and
- training.

4.2.2 The MG agreed that there were several major accomplishments including the Global Space-based Inter-calibration System (GSICS), the Regional ATOVS Retransmission Service (RARS), Regional Specialized Satellite Centres (RSSC) and the High Profile Training Event (HPTE). With regard to GSICS, its goal was to ensure comparability of satellite measurements provided at different times by different instruments and programmes, and to tie these measurements to absolute references and SI standards. GSICS was expected to increase the benefit from space-based observations of the GOS by allowing the merging of different data sets, and enabling recalibration of archived data. The RARS objective was to collect and deliver polar-orbiting sounding data for regional and global NWP in accordance with a timeliness requirement of less than 30 minutes. The global RARS network currently includes three regional RARS based in Europe, Asia-Pacific and South America respectively. The goal for a global network of RSSC-CMs would be the sustained and operational provision of high-quality products for the Essential Climate Variables (ECV) on a global scale in response to the GCOS Implementation Plan. The global network would take advantage of existing facilities and could include virtual centres, each of them having several or many physically distinct components. Finally, the HPTE was held during 16-27 October 2006. The two-week event featured regional face-to-face training activities carried out in the CoEs in Melbourne, Australia and Nanjing, China with support from the other VL CoEs. A survey at the end of the HPTE indicated that more than 2,000 participants from more than 120 WMO Member countries received lectures. The MG strongly suggested that WMO adopt the concepts demonstrated during the HPTE as an organization-wide paradigm for education and training. An outline of the WMO Space Programme Implementation Plan for 2008-2011 has been developed that contains a draft description of activities that would be carried out within the WMO Space Programme, depending on the available human and financial resources, as a contribution to fulfilling the strategic goals of the WMO Strategic Plan. The MG noted that the Implementation Plan included “space weather” as it related to the satellite systems in the space-based component of the GOS.

4.2.3 The MG noted that during 2007 the WMO Space Programme Office will support a Joint Meeting for ET-SUP/ET-SAT on 3-7 September 2007 and will participate in ET-EGOS-3, 9-13 July. Additionally, the WMO Space Programme Office will attend CGMS-XXXV and CEOS-21 in November 2007.

4.2.4 The MG noted with concern the impact to the WMO Space Programme during 2008 through 2011 within Zero Nominal Growth (ZNG) and encouraged the Secretariat to continue its efforts to obtain extra-budgetary resources to supplement the regular budget.

### 4.3 Public Weather Services programme

4.3.1 The Chair of the OPAG on Public Weather Services, Mr Gerald Fleming, presented his report on activities within the OPAG. The ICT had met just two weeks before the meeting of the MG, in Muscat, Oman. The report highlighted some major issues relevant to the OPAG, including:

- A decision to initiate a PWS Pilot Project, focusing on “Learning through Doing”;
- The extra responsibilities for Outreach and Public Education devolved onto ET/COM, now ET/COPE;
- The allocation of all responsibilities relating to the WWIS and SWIC to ET/DPM;
- A plan to hold a Symposium on PWS, probably in the coming December;
- The possibility of the Task Force on Social and Economic Applications of PWS being constituted as an Expert Team within the OPAG;
- That the ICT of the OPAG on PWS were happy with the current name and structural arrangements, reflecting the place of Public Weather Services as a fundamental part of NMHSs;
- The decision to establish a network of national PWS focal points.

4.3.2 The Co-Chair of the OPAG, Mr Mnikeli Ndabambi, gave some details on aspects of the Severe Weather Forecasting Demonstration Project (SWFDP, organised under the OPAG on DPFS), in which he is involved as Chair of the Regional Sub-Project Management Team for South-Eastern Africa. The Chair also noted some work (guidelines and a workshop) related to the use of probabilistic weather information which was also relevant to DPFS.

4.3.3 The Chair of the OPAG noted, in relation to the WMO Strategic Plan (Section 3 above), that the OPAG on Public Weather Services has developed its own strategic approach to guide the work of the OPAG and the PWS Programme; that this approach was in line with the over-arching WMO Strategic Plan, and that the PWS strategic approach had been endorsed by both CBS (Ext) and Congress. A workplan had been developed deriving from this approach. He also noted the central role of both the OPAG and Programme in supporting the Service Delivery principle as one of the central thrusts of the WMO SP.

4.3.4 In the ensuing discussion, it was noted that there was also engagement between the OPAG on PWS and THORPEX, and that this merited a mention. It was suggested that the Education and Training Department might contribute to the proposed Pilot Project. The cross-cutting nature of PWS activity was emphasised, together with the suggestion that this might lead to joint Expert Team meetings, e.g. with Working Groups of CAS (relating to Air Quality) or with other OPAGs within CBS.

## 5. CBS COLLABORATION WITH SPECIFIC INTERNATIONAL PROGRAMMES AND PROJECTS

5.1 The Chair of the OPAG on DPFS recalled that the Chairs of all the OPAGs in CBS had held an informal meeting in Seoul in November 2006 to examine the mechanisms for cooperation across OPAGs; the following had been agreed:

1) That joint meetings of Expert Teams (both within OPAGs and across OPAGs) might be held as appropriate;
2) That experts from one ET might be invited to attend meetings of another where this was relevant; however the invitations and responses should be channelled through the OPAG Chairs;
3) That the OPAG Chairs would provide short (one-page) reports of ET meetings to MG.

***Action:*** *Provide one-page executive summary report of each ET meeting to the MG*
***Responsible:*** *OPAG Chairs* ***Deadline:*** *Shortly after ET meetings* ***Deliverable:*** *Report*

5.2 The meeting discussed additional ways of improving the collaboration of CBS with other technical commission. In this context it noted that having joint expert teams reporting to 2 commissions needed to be carefully addressed.

### *Group on Earth Observations (GEO)*

5.3 The MG noted the decisions and guidance from Congress, in particular 'to endorse GEOSS and its 10-Year Implementation Plan; to provide full support for the GEO process and resulting GEOSS; to support its implementation to the maximum extent possible within WMO's mandate; and to make available all essential data as defined in WMO Resolution 40 (Cg-XII) through the GEO interoperable arrangements to serve the needs of the global community.'

5.4 The CBS MG endorsed continued CBS contribution to GEOSS as in the strategic interest of WMO and GEO. However, the MG indicated that cost of participation should be carefully controlled to avoid impacting important WMO initiatives -- it further stated that focus should be on existing CBS tasks which have clear benefit to WMO and can also benefit GEOSS.

5.5 The MG had difficulties in identifying any specific impact by GEO on CBS programme and activities to-date.

5.6 The MG discussed several issues potentially impacting Member support for CBS initiatives supporting GEOSS. These include: understanding the strategic benefit of GEOSS to WMO and the GEOSS development and implementation strategy; and, the GEOSS practice of branding WMO Member products as GEO products. The MG asked the CBS President and Secretariat to develop appropriate communication to the GEO Secretariat covering the following CBS concerns:

a) Need by WMO Members to better understand the benefit to NMHSs;

b) Need to better understand the development and implementation strategy;

c) GEO Branding of WMO Member products.

The MG suggested a letter to the GEO Secretariat signed by the WMO Secretary General.

***Action:*** *Communicate CBS view to GEO Secretariat* ***Responsible:*** *Secretariat*
***Deadline:*** *1 October 2007* ***Deliverable:*** *Written correspondence*

***Disaster Prevention and Mitigation (DPM)***

5.7 The DPM Coordinator, Dr Sue Barrell, briefed the meeting about her activities and the DPM Programme developments that had taken place in the last year. The MG greatly appreciated that she had been very active and had highlighted the contributions of CBS in DPM matters at many occasions.

5.8 As a result of the recommendations of the EC Advisory Group, Congress in May 2007 agreed to change the name of the DPM programme to the Disaster Risk Reduction (DRR) Programme. Hence, the MG agreed to change the title of the designation of its Coordinator accordingly.

***International Polar Year (IPY)***

5.9 The MG was informed on status of development of the International Polar Year 2007-2008 (IPY) that started on 1 March 2007. The Group noted substantial progress made by WMO/ICSU Joint Committee for IPY and its three Sub-Committees on Observations including the Space Task Group, on Data Policy and Management, and on Education, Outreach and Communications as well as the IPY International Programme Office (IPO) which actively worked to prepare the implementation stage of IPY. It also noted that the WMO Inter-commission Task Group (ITG) on IPY and technical commissions had addressed the IPY preparation at their sessions and developed relevant actions to facilitate the effective IPY implementation.

5.10 The MG stressed that after successful preparation of IPY the area of IPY activities for all technical commissions and for CBS, in particular should focus on two main issues, namely – promoting of easy access to IPY data and securing of an IPY legacy. As regards access to IPY data the Group felt that it would be highly desirable to establish more close communications between Intercommission Coordination Group on WMO Information System (ICG-WIS) and IPY Subcommittee on Data Policy and Management (SCDPM) to show the WIS advantages in process of collection and distribution of data obtained within IPY projects. Taking into account the intention of IPY community to establish a multidisciplinary Arctic Observing Network (AON) as part of IPY legacy and that some funding was provided for this purpose, the Group expressed the opinion that it would be appropriate if part of this funding will be secured for establishment of a WIS Data Collection or Production Centre that could provide necessary facilities for collection and distribution of data from new observing capabilities established within AON.

5.11 Considering the issue of IPY legacy, the MG recognized the need of close cooperation between CBS ET-EGOS responsible for design of future GOS and IPY bodies dealing with the legacy of new observing systems established during IPY. It is especially important because the assessment of observational data collected from new IPY sources may give information on the impact of new systems on existing ones and this should be taken into account in preparation of design for future GOS in polar regions. Bearing in mind that ET-EGOS has plans to organise in 2008 a workshop on design of GOS and there is a similar initiative for a workshop on IPY legacy, the Group felt that this matter should be considered on the basis of cooperation between responsible bodies to mutual benefit.

***Quality Management Framework (QMF)***

5.12 The MG was informed about the decisions of Congress concerning the WMO QMF and about the development of the ISO/WMO working arrangement.

5.13 The MG recognized that the submission of standards to ISO that would be based on the CBS standards might require a considerable amount of work, if they needed to be modified. The MG requested its Rapporteur on QMF to prepare, as a first step, a list of all the available CBS technical documents and then to collaborate with the OPAG Chairs and the Secretariat to develop a sublist of these documents, or parts thereof, that would benefit Members if they were considered for submission as joint ISO/WMO standards and to submit this sublist to the MG for review.

***Action:*** *Identify standards* ***Responsible:*** *CBS Rapporteur on QMF and OPAG-Chairs*
***Deadline:*** *April 2008* ***Deliverable:*** *Document*

5.14 The MG agreed that joint WMO-ISO standards would greatly facilitate the integration of different observing systems into an integrated WMO Global Observing System.

***World Weather Research Programme (WWRP), including THORPEX***

5.15 The Director of the Atmospheric Research Department, Dr Len Barrie, briefed the meeting on the CAS activities and structures. He indicated the wish of CAS to closely collaborate with CBS and CIMO and suggested that such interaction should take place at the MG level, possibly by holding joint MG sessions. The meeting recognized the need to closely interact with CAS, in particular at the ET level. It also recognized that interaction at the MG level for the strategic aspects of the programmes would be beneficial, but felt that joint MG session might not be appropriate at this stage.

5.16 The MG welcomed the recognition by CAS and AREP that near-real time (NRT) delivery of GAW variables should be done through the GTS part of WIS and that other data management components of GAW should be clearly linked to WIS. It endorsed the idea of a GAW/WIS pilot project under oversight of CBS and CAS to expedite NRT delivery of aerosols and ozone as part of Cg-XV request to develop WIGOS. The MG indicated its willingness to provide support for CAS activities, in particular since CAS and CBS might be involved together in one of the first WIGOS pilot projects.

5.17 Dr Barrie proposed that the CBS MG would review the draft GAW Strategic Plan, in particular since the two Commissions have close links in the field of solar radiation. The CBS MG agreed to review the draft GAW Strategic Plan and recognized it could provide incentive for the development of its own strategic planning.

5.18 The MG was informed that WWRP and GAW intended to jointly create a WMO Sand and Dust Storm Warning System, aimed at coordinating observations and research forecast modelling of sand and dust storms while forging strong links with users including operational forecasters. Through WWW DPFS representation on an inter-programme ad-hoc group including agriculture meteorology, aviation meteorology, the ground work for moving operational research tools into NWP forecast operational products has been laid. CBS MG notes this development and requested that progress be reported at its next meeting.

5.19 The MG was informed that SERA working group of THORPEX was established as a working group of WWRP. There are close links between this working group and the OPAG-PWS.

***Flash Flood Guidance System (FFGS)***

5.20 Dr Tyagi, Director of the Hydrology and Water Resources Department, gave an overview of the Flash Flood Guidance System document submitted by the President of the Commission for Hydrology (CHy). He summarized a FFGS initiative in Central America and proposed a partnership between CBS and CHy on this project because of its cross-cutting nature. He requested, specifically, that appropriate CBS experts review and provide feedback and suggestions on the FFGS Prospectus attached to CBS-MG-VII/Doc. 5(7) and he further proposed a CBS-CHy partnership on this and other projects of mutual interest. CBS MG discussed Dr Tyagi's proposal and noted several potential linkages and endorsed a CBS-CHy partnership on this project.

5.21 At the request of the OPAG DPFS Chair, a short briefing of the CBS Severe Weather Forecasting Demonstration Project (SWFDP) was provided by the Secretariat. The MG noted the potential for incorporation of flash-flood guidance into the plan for this project, and encouraged the CBS-CHy partnership to include this and other regionally focused disaster risk reduction initiatives in the plan for the partnership.

5.22 The MG noted that collaboration between CBS and CHy on these activities could provide a model for further development on the WIGOS initiative.

5.23 The CBS President made the following requests:

- OPAG IOS and ISS provide feedback requested by the CHy President.

- The CBS DRR Rapporteur work with the CHy President to develop a proposal for the partnership proposed. The proposal should include collaboration on the CHy FFGS Central America project and the CBS SWFDP.

***Action:*** *Provide feedback on FFGS project* ***Responsible:*** *OPAG-IOS, OPAG-ISS and OPAG-DPFS chairs* ***Deadline:*** *30 Sept. 2007* ***Deliverable:*** *Comments*

***Action:*** *Develop partnership proposal* ***Responsible:*** *DRR Coordinator* ***Deadline:*** *End of 2007* ***Deliverable:*** *Document*

5.24 The CBS MG reaffirmed SWFDP as a high-priority CBS DRR initiative and encouraged the Secretariat to develop a strategy for increasing the resources so that this important regionally focused initiative can be expanded or exported to support NHMSs of developing countries in other regions.

## 6. ARRANGEMENTS FOR THE FOURTEENTH SESSION OF THE COMMISSION FOR BASIC SYSTEMS

6.1 The MG agreed on the provisional agenda for the CBS-XIV to be held in November 2008. This agenda is attached to this document as annex to this paragraph. As noted in paragraph 2.5, the MG asked the Secretariat to coordinate recommendations for changes to this provisional agenda to improve focus on key issues, with an overall objective of reducing the length of the CBS session by at least one day.

6.2 The MG was informed that Croatia was potentially interested to hold the Fourteenth Session of CBS. The MG requested the Secretariat to follow-up on this matter and indicated that it would fully support holding the next CBS session in Croatia.

6.3 In view of reducing the cost of CBS sessions, the MG requested the Secretariat to consider reducing the length and content of some of the documents presented to the session, since it would reduce the necessary translation and interpretation resources needed. The MG further suggested to set the date of the session in a way that would optimize the matter of the translation of the documents and help shorten the total length of the session.

6.4 The MG noted that CBS sessions usually endorsed without changes amendments to the Manuals. It agreed to test the direct adoption of recommendations for amendments between CBS sessions with a view to saving time during the CBS sessions and reducing the delays in the approval of the amendments. It agreed to implement a pilot project for the amendments related to the Manual on Codes and invited the Secretariat to draft the procedures for the pilot project and submit them to the President and Vice-president of CBS, and to the chair and co-chair of the OPAG-ISS, with a view to a possible test prior to CBS-XIV.

***Action:*** *Pilot project for direct adoption of amendments to the Manuals* ***Responsible:*** *Secretariat* ***Deadline:*** *CBS-XIV* ***Deliverable:*** *Document*

## 7. TECHNICAL CONFERENCE IN CONJUNCTION WITH CBS-XIV

7.1 The MG discussed possible topics for the Technical Conference to be held in conjunctions with CBS-XIV. A possible topic would be “Contribution of CBS to Disaster Risk Reduction”. The MG members agreed to consider this idea and possibly to propose new ideas to the Secretariat by 1 October 2007. The MG agreed that the length of the Technical Conference should in principle not exceed 2 days.

***Action:*** *Proposal for Technical Conference* ***Responsible:*** *MG members* ***Deadline:*** *1 October 2007* ***Deliverable:*** *Suggestions*

## 8. OTHER BUSINESS

8.1 The MG felt that the new WMO web-site did not provide user-friendly access to the information that the Commissions needed to carry out their work and requested Secretariat to provide a feedback to the website development team.

***Action:*** *Feedback on new WMO website* ***Responsible:*** *Secretariat* ***Deadline:*** *1 Sept. 2007* ***Deliverable:*** *Written Communication*

8.2 The MG expressed its deepest thanks to Jack Hayes for the strong support he had given to the Commission during his tenure as Director of the World Weather Watch Department.

## 9. CLOSURE OF THE SESSION

9.1 The meeting was closed on Wednesday, 20 June 2007, at 16:24 hours.

# LIST OF PARTICIPANTS

| | | |
|---|---|---|
| **CBS president** | **Mr Alexander Gusev**<br>Federal Service for Hydrometeorology and Environmental Monitoring<br>Novovagankovsky Street 12<br>123242 MOSCOW<br>Russian Federation | Tel: +(7 495) 205 4813<br>Fax: +(7 495) 255 2414<br>Email: gusev@mecom.ru |
| **CBS vice-president** | **Prof. Geerd-Ruediger Hoffmann**<br>Deutscher Wetterdienst<br>P.O. Box 10 04 65<br>63004 OFFENBACH<br>Germany | Tel: +(49 69) 8062 2824<br>Fax: +(49 69) 8062 5217<br>Email: geerd-ruediger.hoffmann@dwd.de |
| **Chair, OPAG-IOS** | **Dr James Purdom**<br>Cooperative Institute for Research in the Atmosphere (CIRA)<br>Colorado State University<br>FORT COLLINS, CO 80523-1375<br>United States | Tel: +(1 970) 491 8510<br>Fax: +(1 970) 491 8241<br>Email: purdom@cira.colostate.edu |
| **Co-chair, OPAG-IOS and Coordinator DPM** | **Dr Sue Barrell**<br>Bureau of Meteorology<br>G.P.O. Box 1289K<br>MELBOURNE, VIC 3001<br>Australia | Tel: +(61 3) 9669 4222<br>Fax: +(61 3) 9669 4168<br>Email: s.barrell@bom.gov.au |
| **Chair, OPAG-ISS** | **Mr Peiliang Shi**<br>China Meteorological Administration<br>Meteorological Information Centre<br>46 Zhongguancun Nandajie<br>BEIJING 100081<br>China | Tel: +(86 10) 6840 7074<br>Fax: +(86 10) 6217 3225<br>Email: shipl@cma.gov.cn |
| **Co-chair, OPAG-ISS** | **Dr Stephen Foreman**<br>Met Office<br>FitzRoy Road<br>EXETER<br>Devon EX1 3PB<br>United Kingdom | Tel: +(44 1392) 886 289<br>Fax: +(44 1392) 885 681<br>Email: steve.foreman@metoffice.gov.uk |
| **Chair, OPAG-DPFS** | **Mr Bernard Strauss**<br>Météo-France<br>42, avenue Gaspard Coriolis<br>F-31057 TOULOUSE Cédex 1<br>France | Tel: +(33 5) 6107 8200<br>Fax: +(33 5) 6107 8209<br>Email: bernard.strauss@meteo.fr |
| **Representative of Co-chair, OPAG-DPFS** | **Dr Masashi Nagata**<br>Japan Meteorological Agency<br>1-3-4 Ote-machi, Chiyoda-ku<br>TOKYO 100-8122<br>Japan | Tel: +(81 3) 3212 8341<br>Fax: +(81 3) 3211 8407<br>Email: mnagata@met.kishou.go.jp |
| **Chair, OPAG-PWS** | **Mr Gerald Fleming**<br>Met Eireann<br>The Irish Meteorological Service<br>30 Parkview<br>WEXFORD<br>Ireland | Tel: +(353) 534 1536<br>Fax: +(353) 534 5721<br>Email: gfleming@eircom.net |

| | | |
|---|---|---|
| **Co-chair, OPAG-PWS** | **Mr Mnikeli Ndabambi**<br>South African Weather Service<br>Department of Environment Affairs<br>Private Bag X097<br>PRETORIA 0001<br>South Africa | Tel: +(271 2) 367 6033<br>Fax: +(271 2) 367 6042 ; 367 6043<br>Email: mnikeli@weathersa.co.za |
| **Co-coordinator, GEOSS** | **Mr Michel Jean**<br>Canadian Meteorological Centre<br>Environment Canada<br>2121 TransCanada Highway<br>DORVAL, Quebec<br>Canada H9P 1J3 | Tel: +(1 514) 286 1600<br>Fax: +(1 514) 421 4600<br>Email: michel.jean@ec.gc.ca |

| **WMO Secretariat** | |
|---|---|
| **World Meteorological Organization**<br>**7 bis Avenue de la Paix**<br>**Case postale No. 2300**<br>**CH-1211 Geneva 2**<br>**Switzerland** | **WWW website:**<br>**www.wmo.int/web/www/www.html**<br><br>**WWW Fax: (41 22) 730 8021** |
| **Dr Jack Hayes**<br>Director, World Weather Watch Department. | Tel: (41 22) 730 8567<br>E-mail: jhayes@wmo.int |
| **Mr Peter Chen**<br>Chief, Data-Processing and Forecasting System Division, WWW Dept. | Tel: (41 22) 730 8231<br>Email: pchen@wmo.int |
| **Mr Richard Francis**<br>WMO Space Programme Office | Tel: (41 22) 730 8217<br>Email: rfrancis@wmo.int |
| **Dr Donald Hinsman**<br>Director, WMO Space Programme Office | Tel: (41 22) 730 8285<br>Email: dhinsman@wmo.int |
| **Dr Alexander Karpov**<br>Chief, Observing System Division, WWW Dept. | Tel: (41 22) 730 8222<br>Email: akarpov@wmo.int |
| **Mr Pierre Kerhervé**<br>Senior Scientific Officer, Information Systems and Services, WWW Dept. | Tel: (41 22) 730 8218<br>Email: pkerherve@wmo.int |
| **Mr Jérôme Lafeuille**<br>WMO Space Programme Office | Tel: (41 22) 730 8228<br>Email: jlafeuille@wmo.int |
| **Mr Joel Martellet**<br>Scientific Officer, Data-Processing and Forecasting System Division, WWW Dept. | Tel: (41 22) 730 8313<br>Email: jmartellet@wmo.int |
| **Mr Jean-Michel Rainer**<br>Chief, Information Systems and Services, WWW Dept. | Tel: (41 22) 730 8219<br>Email: jmrainer@wmo.int |
| **Dr Miroslav Ondras**<br>Senior Scientific Officer, Observing System Division, WWW Dept. | Tel: (41 22) 730 8409<br>Email: mondras@wmo.int |
| **Mr Herbert Puempel**<br>Chief, Aeronautical Meteorology Unit | Tel: (41 22) 730 8283<br>Email: hpuempel@wmo.int |
| **Dr Isabelle Rüedi**<br>Programme Coordinator, WWW Dept. | Tel: (41 22) 730 8278<br>Email: iruedi@wmo.int |
| **Dr Eduard Sarukhanian**<br>Special Advisor to the SG on the International Polar Year | Tel: (41 22) 730 8420<br>Email: esarukhanian@wmo.int |
| **Mr Dieter Schiessl**<br>Director, Cross-Cutting Coordination. | Tel: (41 22) 730 8369<br>E-mail: dschiessl@wmo.int |

| | |
|---|---|
| **Mr Avinash Tyagi**<br>Director, Hydrology and Water Resources Department | Tel: (41 22) 730 8355<br>E-mail: atyagi@wmo.int |

# Annex to paragraph 6.1:
# Draft Provisional Agenda for CBS-XIV

**1. OPENING OF THE SESSION**

**2. ORGANIZATION OF THE SESSION**

- 2.1 Consideration of the report on credentials
- 2.2 Adoption of the agenda
- 2.3 Establishment of committees
- 2.4 Other organizational questions

**3. REPORT BY THE PRESIDENT OF THE COMMISSION**

**4. REVIEW OF DECISIONS OF CONGRESS AND THE EXECUTIVE COUNCIL RELATED TO THE COMMISSION**

**5. STATUS OF WORLD WEATHER WATCH IMPLEMENTATION AND OPERATION**

**6. WORLD WEATHER WATCH PROGRAMME AND SUPPORT FUNCTIONS, INCLUDING THE REPORTS BY THE CHAIRS OF THE OPEN PROGRAMME AREA GROUPS**

- 6.1 Integrated Observing Systems (IOS)
- 6.2 Information Systems and Services (ISS)
- 6.3 Data-Processing and Forecasting System (DPFS), including Emergency Response Activities
- 6.4 Operational Information Service (OIS)
- 6.5 System support activities, including technical cooperation

**7. WMO SPACE PROGRAMME**

**8. PUBLIC WEATHER SERVICES, INCLUDING THE REPORT BY THE CHAIR OF THE OPEN PROGRAMME AREA GROUP**

**9. WMO INFORMATION SYSTEM**

**10. WMO INTEGRATED GLOBAL OBSERVING SYSTEM**

**11. OTHER CROSS-CUTTING ACTIVITIES**

- 11.1 Group on Earth Observations
- 11.2 Disaster Risk Reduction
- 11.3 Quality Management Framework
- 11.4 THORPEX
- 11.5 IPY

**12. CBS PROGRAMME AND PLANNING**

- 12.1 Long-Term Planning Relevant to the Commission
- 12.2 Future Work Programme
- 12.3 Review of Previous Resolutions and Recommendations of the Commission and Relevant Resolutions of the Executive Council
- 12.4 Working Methods and Adoption of Non-Controversial Standards between Sessions
- 12.5 Date and Place of the Extraordinary Session 2010

**13. ELECTION OF OFFICERS**

**14. OTHER BUSINESS**

**15. CLOSURE OF THE SESSION**

_____