

**WORLD METEOROLOGICAL ORGANIZATION**

**COMMISSION FOR BASIC SYSTEMS**

**ADVISORY WORKING GROUP**

**TWENTY- THIRD MEETING**

**FINAL REPORT**



**BUENOS AIRES, 22 - 26 NOVEMBER 1999**

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## GENERAL SUMMARY OF THE WORK OF THE MEETING

### **1. ORGANIZATION OF THE MEETING** (Agenda item 1)

#### 1.1 Opening of the meeting (agenda item 1.1)

1.1.1 The twenty-third meeting of the Advisory Working Group (AWG) of the Commission for Basic Systems (CBS) was held at the kind invitation of the Argentina National Meteorological Service in its Headquarters, Buenos Aires, 22-26 November 1999. The meeting was opened at 10 a.m. on Monday, 22 November, by the president of CBS, Mr S. Mildner. The list of participants is given in the annex at the end of this report.

1.1.2 In his opening remarks, Mr Mildner thanked Com. Ramon Sonzini, Director, Servicio Meteorologico Nacional, for hosting this meeting of the Advisory Working Group and providing such excellent facilities. He also congratulated Com. Sonzini on his election as third Vice-President of WMO at thirteenth Congress.

1.1.3 Mr D. Schiessl welcomed the participants on behalf of the Secretary-General of WMO. He outlined the overall objectives of the meeting and summarised why the meeting had been moved up from 2000 to late 1999.

1.1.4 In welcoming the participants to Buenos Aires, Com. Sonzini explained the arrangements made to support the work of the Group. He assured the meeting that he and his staff would do everything possible to ensure the success of the meeting. He hoped that the group would have a fruitful meeting and that all the participants would have a very pleasant and memorable stay in Buenos Aires.

#### 1.2 Adoption of the agenda (agenda item 1.2)

1.2.1 The AWG adopted the agenda for the meeting, which is reproduced at the beginning of this report.

#### 1.3 Working arrangements for the meeting (agenda item 1.3)

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

### **2. REPORT OF THE PRESIDENT OF THE COMMISSION** (agenda item 2)

2.1 The president presented his report on the activities of the Commission since the last meeting of the AWG in January 1999. He reported on several meetings in which he represented CBS. In particular he noted the Initial Planning Meeting on Infrastructure Needs for Seasonal to Interannual Climate Predictions (April 1999), Congress and Executive Council, the AMDAR Panel (October 1999) and the Meeting of the Presidents of the Technical Commissions (October 1999). He is also a member of the newly established GCOS Steering Committee but could not participate in the constituting session (February 1999) due to a conflict of dates.

2.2 He also highlighted a few key issues. He pointed out that the interaction between CBS and the other Technical Commissions was among the most important. Infrastructure needs for seasonal and interannual forecasts provided a good opportunity for increased collaborative activities between the World Weather Watch (WWW) and climate communities. This topic was discussed at the meeting of the presidents of the Technical Commissions where the president of the Commission for Atmospheric Science (CAS) agreed to take the lead in organizing a conference on the principal scientific issues concerning seasonal and interannual forecasting. Mr Mildner also noted that the recent creation of the Joint WMO IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM) demonstrated how joint ventures could contribute to the resolution of crosscutting issues. He also

reported that the presidents considered issues relating to the future of WMO and the need to adjust the WMO working structure and organization.

2.3 The president discussed the implementation of the new working structure of the Commission and his efforts to ensure that all members are able to participate. He pointed out that he had issued two circular letters to all members of CBS to keep them informed and aware of the rationale for and experience with the new structure. He was pleased to note that the use of the Internet had made it possible to make the results of meetings widely and very quickly known and encouraged the Secretariat to continue to expand the use of this important resource.

### **3. REVIEW OF DECISIONS OF THIRTEENTH CONGRESS AND FIFTY-FIRST EXECUTIVE COUNCIL RELEVANT TO CBS (agenda item 3)**

3.1 The outcome of the discussions at Cg-XIII and EC-LI relevant to CBS were reviewed with particular emphasis on decisions impacting the future work programme of the Commission. The AWG noted that the thirteenth WMO Congress, despite its extremely busy agenda, devoted a fair amount of time to World Weather Watch and the other Programmes under CBS' s responsibility. Congress reconfirmed the crucial importance of WWW in support of the day-to-day operations of the National Meteorological and Hydrological Services (NMHS), for research and for many other programme activities.

3.2 The AWG noted that both Cg-XIII and EC-LI commented on the new CBS structure and on the revised working mechanisms. Most of the comments were favourable and supportive. It was recognised that CBS had embarked on a learning process, the success of which will be evaluated by the next CBS session. Executive Council requested the president to provide a progress report on the implementation of the new structure after the next session of the Commission has been held.

3.3 The AWG noted that the Basic Systems support for programmes other than the WWW and inter-programme coordination had been an issue for many years and had been clearly recognised through the revisions in the Commission's terms of reference in 1995. There was some concern that recognition of how the Basic Systems could contribute to the implementation of Programmes outside of the WWW needed improvement. The AWG noted that at EC-LI, Members realised that the relationship between the WMO structure and the programme structure as defined in the Long Term Plan needed to be addressed. If the WMO structure is modified then the structure of the Programmes must also be adjusted. The AWG felt that the place of CBS in the WMO structure in the long-term needed to be examined at a high level, particularly taking into account the efforts of CBS in restructuring its working mechanisms.

### **4. PROGRESS OF THE CBS WORK PROGRAMME, INCLUDING REPORTS BY THE OPAG CHAIRS (agenda item 4)**

4.1 The chairs of each of the four Open Programme Area Groups (Integrated Observations, Data Processing and Forecasting Systems, Information Systems and Services and Public Weather Services), reported on the progress in implementing the work programmes of their respective areas of responsibility.

#### Open Programme Area Group on Integrated Observing Systems

4.2 The chair of the OPAG-IOA briefed the meeting on the status of activities under his area and noted that, in general, work is progressing well. The AWG noted with appreciation the excellent work carried out by the expert teams through correspondence and during the three meetings that had been held. It noted another meeting would be held in the week following the AWG meeting. Two issues addressed by the expert teams were of particular interest to the AWG: applicability of regional-scale impact studies to global issues and approaches to improving the utilization of satellite data and products.

4.3 The AWG discussed the fact that the expert team on observational requirements and redesign of the GOS had noted the results of regional-scale studies might not be readily extendable to broader global domains. The AWG agreed with this assessment but noted that by definition the GOS is a global system and regional studies should also consider and evaluate possible global impacts. The AWG recognised that these studies were mainly undertaken under national or sub-regional programmes and CBS must take steps to validate their global applicability.

4.4 The AWG expressed concern over the poor reliability of GPS-based radiosondes. It noted that CIMO is studying this issue in the near future and encouraged continued contact with the manufacturers to find a solution to this problem as quickly as possible. The CBS president will liaise with the president of CIMO concerning the outcome of the various activities.

4.5 There was considerable discussion on the recommendations of the expert team on systems utilization and products. The team's proposal concerning a virtual laboratory for training in satellite meteorology was of particular interest. The AWG felt that the extent of coordination of the relevant activities of CBS, EC Panel on Education and Training, and Regional Associations was not sufficiently clear and needed to be formally established.

4.6 As a consequence the AWG agreed that the virtual laboratory proposal should be reformulated as a conceptual plan that can be presented to and adjusted by the Regional Associations to meet their specific requirements. The EC Panel on Education and Training should be involved so that the proposed plan could be harmonised with the WMO ETR Programme. The group agreed that once reformulated, the plan should be sent by the president to the EC Panel on Education and Training and the Regional Associations for comment.

#### Open Programme Area Group on Data Processing and Forecasting Systems

4.7 The chair of the OPAG-DPFS briefed the meeting on the status of activities under her area and noted that, in general, she was pleased with the progress to date and was especially pleased with the amount of work that had been able to be accomplished through correspondence. The AWG agreed that an impressive amount of work had been accomplished via correspondence and the two expert and one ICT meetings that took place and congratulated the team members on their excellent work.

4.8 The AWG considered the results of the expert team to develop a verification system for long-range forecasts and, for the most part agreed with its recommendations. However, it felt that the proposed mechanism for verification of long-range forecasts needed further consideration. The group agreed that a standard verification system for long-range forecasting does not currently exist and supported further experimental activities to explore possible approaches. It noted that these experiments must be done in close cooperation with, and participation by, CAS and CCI.

4.9 The meeting noted that quality control of precipitation data is difficult because of lack of standardization in reporting procedures. For example: some NMHSs report zero values, some do not; some report 6-hourly values, some 12-hourly and some daily. The AWG agreed that the ET to review and fine-tune methods used in the standardized data quality monitoring of lead centres and the exchange of results should further clarify the problem. The AWG recognised that standardization must be addressed by the OPAG-IO as well since it might require adjustments to observing practices in many countries. The two OPAGs should propose options for resolution and prepare submissions for consideration by CBS.

4.10 The group considered the plans for cooperation between WMO and the Comprehensive Test Ban Treaty Organization (CTBTO) in light of recent international developments concerning the treaty. It noted that a draft Memorandum of Agreement between WMO and CTBTO is being prepared and recommended that the question of how to proceed with steps toward possible adoption be referred to Executive Council for its consideration.

4.11 The AWG considered the results of the recent meeting of the ICT on data processing and forecasting systems and congratulated the team on the large amount of work accomplished. It recommended that the proposal on infrastructure for seasonal and interannual climate forecasts be finalised and distributed to the other Commissions and relevant institutes for their comment with a view towards development of a status report on the issue for consideration by the next session of CBS.

4.12 During its deliberations on the OPAG-DPFS the AWG noted with interest proposals for innovative approaches of implementation suggested by Com. Sonzini. He pointed out the shortcomings of implementation in the RBSN in many areas and felt that different approaches toward implementation were needed to improve translation of global CBS plans to regional implementation. He suggested that implementation of the WWW through Regional or Sub-Regional offices might be an effective approach.

4.13 The AWG also discussed verification of NWP products in areas outside of the area of responsibility of the originating centre. It noted that demonstration projects could be useful but would depend upon infrastructure that might not be available in all areas of interest. Fellowships to allow experts from developing countries to validate these products at the originating centre were also considered to be a promising approach.

#### Open Programme Area Group on Information Systems and Services

4.14 The chair of the OPAG-ISS briefed the meeting on the status of activities under his area of responsibility. He felt that work was progressing well despite the difficulty of integrating the work of the many teams working under the auspices of this OPAG. The AWG was pleased with the excellent work carried out by the teams and congratulated them on their efforts. It was quite impressed that the OPAG had managed to hold nine meetings over the past ten months.

4.15 The chair described the concept for the future MTN as envisioned by the ET for the improved MTN Project and Dr Love described the vision for future WMO information systems put forward by the inter-programme task team. The two groups identified complementary approaches to satisfy requirements for routine dissemination of data and products that the AWG felt needed further evaluation. The group agreed that it was premature to initiate a CBS-sponsored pilot of the Unidata Internet Data Distribution (IDD) system and tasked the ET on data communication systems and techniques to investigate options for routine dissemination of data and products to many users (e.g. Unidata IDD, multicasting, and the proposed Eumetnet EUMIN project). The ET should evaluate the feasibility and applicability of these systems to WMO requirements, keeping in mind the requirements of WMO users outside of NMSs.

4.16 The AWG agreed that development of metadata standards needed to provide a common view of data applicable to WMO and related international programmes was a pressing issue. It recommended that papers on this topic be solicited for the CBS Technical Conference on WMO Information Systems and Services discussed under agenda item 7.

4.17 The AWG noted that the ET on quantity monitoring of the WWW had developed a proposal that was being circulated among members of the OPAG for comment. The group recommended that the proposal be brought to the attention of all CBS members. The question raised by the expert team on the relationship between the proposal and the Annual Global Monitoring (AGM) should be particularly noted.

#### Open Programme Area Group on Public Weather Services

4.18 The chair of the OPAG-PWS briefed the meeting on the status of activities under his area of responsibility. He noted that it was difficult to assess the extent of the work accomplished to date because only one team had met before the AWG meeting (another was being held during the same time the AWG was meeting).

4.19 The AWG considered the recommendations of the ET on media issues and congratulated it on the work accomplished. The AWG discussed two topics in considerable detail: the proposal for a centralized web site to provide access to warnings and the role of the Public Weather Services Programme in verification and coordination with other verification activities.

4.20 There was agreement within the AWG that use of a centralized web site to improve access to information on national severe weather warnings and tropical cyclone advisories, while having merit, presented many serious difficulties. Many issues regarding warnings would need to be resolved before such centralized access could be implemented. There are few internationally agreed standards that apply to warnings: they are issued in many different languages, through different mechanisms in different formats and there is no standard way to expire or terminate warnings. The AWG agreed that these issues must be carefully considered by the ICT on PWS to determine the feasibility and advisability of implementing such a service.

4.21 Concerning verification, the AWG recommended that PWS concentrate first on product development and service evaluation. It was important to help Members further develop skill in serving their public and in evaluating the perception that the public has of their service. In this regard, PWS should ensure there is an appropriate balance between the attention given to local and national media versus international media. The group felt that the meeting of the expert team on media issues (20-24 June, Orlando) seemed to over emphasise issues concerning international media.

4.22 The AWG felt that it should be stressed that the fundamental purpose of the PWS programme is to strengthen the capability and enhance the visibility of NMSs and everything the programme does should be measured against its contribution to meeting those goals. It also felt that PWS is a relatively young programme and should, at first, concentrate on issues that can be addressed most efficiently. As the programme matures it can tackle progressively more difficult or controversial issues.

4.23 Recognising the sensitivity of issues concerning dissemination of warnings by international media, the AWG modified the first item of the terms of reference of the expert team on media issues to read as follows:

- To consider the issue of consistency between information disseminated by international media and the official information issued by NMSs with a view toward establishing appropriate mechanisms to deal with possible inconsistencies.

## **5. REVIEW OF THE NEW CBS WORKING ARRANGEMENTS (agenda item 5)**

### **5.1 Information flow**

5.1.1 The meeting considered the flow of information between the Commission and its members and evaluated procedures to inform members of the OPAGs of the activities of the various teams. It was pleased with the initiatives undertaken by the Secretariat to improve information flow through expansion and reorganization of the CBS pages of the WMO web server. However, it agreed that efforts must continue to be made to reach those members without Internet access.

5.1.2 The AWG noted that the flow of information concerning the activities of the OPAGs to the OPAG members has, to date, been handled almost entirely by the Secretariat. It felt that the OPAG chairs should send an annual summary of the accomplishments and recommendations of the teams to their OPAG members and take other actions as opportunities arise.

5.1.3 The group was concerned that it was difficult to assess the effectiveness of the information flow. Limited feedback had been received on the recommendations of the expert teams. The group recognised that the low response rate could have a variety of causes and developed a number of recommendations to encourage comments from all CBS members.

- a) The requirement and mechanisms for feedback should be better advertised during sessions of CBS.
- b) The Secretariat should continue to announce the results of meetings and encourage comments and should remind CBS members that the team and OPAG chairs welcome informal comments from all members. This might be facilitated if members were more clearly encouraged to send their comments to the chairs concerned rather than to the Secretariat.
- c) The Secretary-General should send a questionnaire to all CBS members to help to assess the effectiveness of the current information flow mechanisms.

## 5.2 Liaison with Regional Associations and other Technical Commissions

5.2.1 The AWG considered the composition of the expert and implementation/coordination teams and the regional and national distribution of their members. It noted that the membership of the ICTs was not complete because nominations had not yet been received from all Regions. The AWG was disappointed to note that nominations of experts for capacity building had been received from only half of the chairs of the Regional working groups on the implementation of the WWW. It asked the Secretariat to remind the chairs who had not responded of the importance of their input.

5.2.2 The group was pleased that the CBS president's invitation to the presidents of the other Technical Commissions to nominate experts to represent their Commissions in the work of the CBS expert teams had been well received. Experts representing the other Commissions had become members of a number of teams and had already contributed to the work of those groups.

## 5.3 Effectiveness of the teams

5.3.1 The AWG agreed that the relationship between the expert and implementation/coordination teams was particularly important and should be further elaborated. The group decided that ICTs should coordinate implementation of decisions of CBS and should also evaluate proposals developed by related expert teams and provide feedback to the teams concerned. The expert teams should develop proposals, circulate the proposals for comment and consider all of the feedback received when preparing its recommendations for consideration by the Commission. The AWG felt it was important to remind the teams that proposals agreed at a meeting are not final. Expert teams should continue to refine their ideas through correspondence as feedback is received from other members of the OPAG. It also noted that the role of ICTs is not limited to implementation of decisions handed down by CBS. The ICTs are encouraged to contribute their conceptual ideas as proposals are being developed.

5.3.2 The meeting noted that there had been some confusion, particularly outside of CBS, about the role of the teams vis-à-vis Regulations 42 and 43, which are attached as an annex to this paragraph. It recommended that a disclaimer reminding readers of the role of the teams under the regulations be included in the final reports of the expert team meetings.

5.3.3 The meeting understood that the large number of current teams and consequent meetings had been very difficult for both Members and the Secretariat to support. The group noted that CBS-Ext.(98) had expected most of the work of the teams would be done by correspondence and short meetings would normally suffice for vetting the working results and coordinating the input of the rest of CBS. However, with the experience gained to date the AWG recognized that expectation had, for the most part, not been realised. In shorter meetings it is usually not possible to have the report of the meeting reviewed during the deliberations and this was seen as a serious shortcoming. The AWG agreed that the duration of the meetings must reflect the topics and material to be discussed. Given scarce financial resources it is better to reduce the number of meetings rather than to try to squeeze them into unrealistically short times.

5.3.4 The AWG reiterated the importance of attaining the optimal membership of the various teams and discussed mechanisms to attain that goal. It was grateful for the feedback received from Members

on this issue. The group recognized that while the most important qualification for expert team members is their expertise, it also recognized that the teams must be able to consider the requirements of all Members. Thus, appropriate representation must be carefully considered while selecting the membership of the teams. The meeting noted that it was particularly difficult to ensure balance of inter-Commission teams since CBS could not determine the experts selected by the presidents of the other Technical Commissions.

## **6. THE YEAR 2000 PROBLEM (agenda item 6)**

6.1 The Secretariat informed the AWG of the Y2K preparedness of WMO Members based on the latest information available. As of mid November, 51 Members had reported their preparations were complete and their essential operational systems were Y2K compliant. An additional 37 Members had reported their preparations were on schedule and should be completed within a few weeks. 51 Members had reported they were continuing to work on the problem and hoped to finish all preparations in time. Eight Members had informed the Secretariat that they were aware of the problem but did not have the resources or expertise to pursue remedial actions. The remaining 38 Members had not reported their status to WMO.

6.2 The meeting noted that the Russian Federation had requested significant financial assistance to support its Y2K activities and, while donors had pledged support, there had been some difficulty in transferring the funds to the Russian Meteorological Service. Mr Gusev reported that the first payment had not arrived at his service until 11 October 1999. Luckily, the supplier of the systems had continued its work so most deadlines could still be met. He presented a comprehensive report on the status of his service's preparations and informed the meeting that only one centre (Kursk) was not expected to be ready in time. However, that centre has made arrangements to operate manually until the automatic systems have been upgraded by mid January 2000. The AWG expressed some concern that the work depended upon very tight deadlines if all systems were to be made compliant in time. Nonetheless, Mr Gusev reported that his NMHS was confident the deadlines would be met.

6.3 As the critical date of 1 January 2000 approaches, most Members are making progress in securing their mission-critical operations against possible failures. Although much progress has been made there was still the possibility of outages in meteorological systems for a number of reasons, which are only partly controlled by the NMHSs. Following discussions at EC-LI, an ad hoc meeting on the Year 2000 Problem was held 12-15 July 1999 in Reading, UK and an International WMO Y2K Monitoring and Contingency Plan was developed. The plan, which has been distributed to all Members, defines responsibilities of WMO Y2K Situation Centres and recommends actions that should be undertaken by Members in the few days immediately before and after 1 January 2000.

6.4 The AWG was pleased to note that, in addition to its role as a Situation Centre, RTH Moscow would make the observations it collected available over the Internet via FTP as a backup to the GTS. The group requested that the full details of these arrangements be provided to the other Situation Centres by 15 December 1999.

6.5 The AWG was concerned that many Members had not reported on the status of their compliance to WMO. Although it believed that many of these centres were probably not automated and thus should not suffer system failures it felt that further steps could be taken. It recommended that the WMO Y2K monitoring and contingency plan be distributed to all members of the CBS address list and to other international organizations as appropriate. It also recommended that the Secretary-General issue a circular letter to Members informing them again of administrative and coordination actions that should be undertaken over the transition to 2000. The letter should also contain a reminder of contact information for the Y2K Situation Centres. The meeting felt that information on contact points in the Secretariat over the transition might be useful but, if included, should be accompanied by explanatory text to remind Members that the Secretariat is not an operational agency.

6.6 The group suggested that the Secretariat collect media briefs on Y2K from major centres that had prepared them. The Secretariat should also be prepared to provide information to the media if requested.

## **7. TECHNICAL CONFERENCE ON INFORMATION SYSTEMS AND SERVICES** (agenda item 7)

7.1 The AWG considered a proposal to hold a technical conference on information systems and services and agreed the conference should be held in conjunction with CBS-XII. The conference should be held 27 to 28 November immediately before the Commission session and should be officially called the CBS Technical Conference on WMO Information Systems and Services. The group suggested four session themes as described below for the conference committee to consider and further develop as necessary.

- a) Requirements for information Systems and Services  
Requirements of all WMO Programmes and Members should be presented along with information on whether or not these requirements are currently being met. A wide range of viewpoints, technical capabilities, and programmes should be represented with particular attention to the gap between the least and most developed Members. Both short-term and long-term requirements should be covered.
- b) Evolution of the Global Telecommunication System  
The current status and future plans of the GTS should be covered. Papers should be solicited on the current status and plans for evolution of the system over the next several years. The session should include discussion of managed networks, implementation of TCP/IP and other communications developments relevant to the GTS.
- c) Other Information Systems  
The current status and future outlook of information and telecommunications systems and standards that might be applicable to WMO requirements should be covered. Papers should be solicited on information systems currently available or planned as well as the evolution of the Internet and related software systems over the next several years. It should include papers on forecast growth of Internet connectivity, capacity and utilization as well as developments of software and standards relevant to WMO. Papers on development of standard metadata needed to describe data sets should also be invited.
- d) Visions for the Future  
Papers will be solicited with proposals for a long-term strategic view of the WMO Information System.

7.2 The conference will be headed by a conference director and organized by a six-member conference committee assisted by the Secretariat. The AWG recommended that the chair of the OPAG-ISS, Mr Hoffmann (Germany), serve as the conference director. It suggested other members of the committee be Dr G. Love (Australia) and the four session chairs.

7.3 The AWG felt that it would not be possible to produce a conference statement for a two-day conference on such a broad range of topics. As an alternative, it recommended that the session chairs synthesise the results of their sessions for presentation to CBS. Some sessions might reach consensus and produce recommendations while other sessions might produce a summary of the viewpoints presented.

7.4 The AWG considered arrangements for organizing the conference and agreed on the following activities and schedule.

- 1) The Secretariat, assisted by the conference committee, should draft and issue a call for papers before 1 January 2000. The call for papers should be directed to a wide audience including

Members, all members of CBS, members of other Technical Commissions, representatives of related international programmes, the environmental research community and the private sector. The conference and call for papers should also be announced via the WMO Bulletin and the WMO web site.

- 2) Abstracts of papers (in English) should be received by 1 April 2000.
- 3) The conference committee should review the abstracts and select papers to be presented at the conference by 1 July 2000.
- 4) Final papers should be provided to WMO Secretariat by 1 October 2000 and published on a conference web site created on the WMO server. Contributors could provide papers in any of the four official WMO languages. The papers would be posted on the conference web site in the language in which they are received.

7.5 Interpretation should be provided for the conference in at least four languages.

## **8. ARRANGEMENTS FOR THE TWELFTH SESSION OF CBS (agenda item 8)**

8.1 The AWG considered the possible venue for CBS-XII. In the absence official invitations to hold the session elsewhere, the Commission session will be held in the WMO Secretariat in Geneva from 29 November to 8 December 2000.

8.2 The meeting considered the agenda, working arrangements, establishment of sub-committees and ad hoc groups, and other issues pertinent to the next session of the Commission. It agreed that the agenda should be organized around the new OPAG structure, with related topics considered under the session dedicated to the appropriate OPAG. The OPAG chairs would report on the status of their work programmes and, for each team, list its membership and its accomplishments in light of its terms of reference. The chairs should note tasks that have been completed (and teams disbanded), tasks (and teams) that should continue, and new initiatives the chairs recommend for consideration at the session.

8.3 The AWG considered the expected submissions of regulatory material for the session and noted they included major submissions for the Manuals on the GOS, GTS and Codes. It recommended that editing groups review the submissions well in advance of the session. It expected that small ad hoc groups would also be established during the session to review and edit the submissions as necessary.

8.4 The AWG decided that the session should establish the usual committees: Credentials Committee, Nomination Committee, a rapporteur on previous resolutions of the Commission, and one Working Committee. It is expected that two co-chairs would head the Working Committee. The Working Committee would cover the reports of the OPAGs and related topics as well as the submission of regulatory material. The Committee of the Whole would cover the future work programme of the OPAGs, establishment and membership of expert and implementation/coordination team, the Long-term Plan, and other items as decided.

8.4.1 The group considered the mechanism how best to select chairs of the OPAGs and establishment and composition of the teams. It noted that the expert teams and their membership would be decided during the sessions of the full Commission rather than by the AWG so that all viewpoints could be heard. The group recognised this would only be possible if substantial preparatory work were performed well in advance of the session. It agreed on tasks and milestones to be carried out before the session of the Commission as described below.

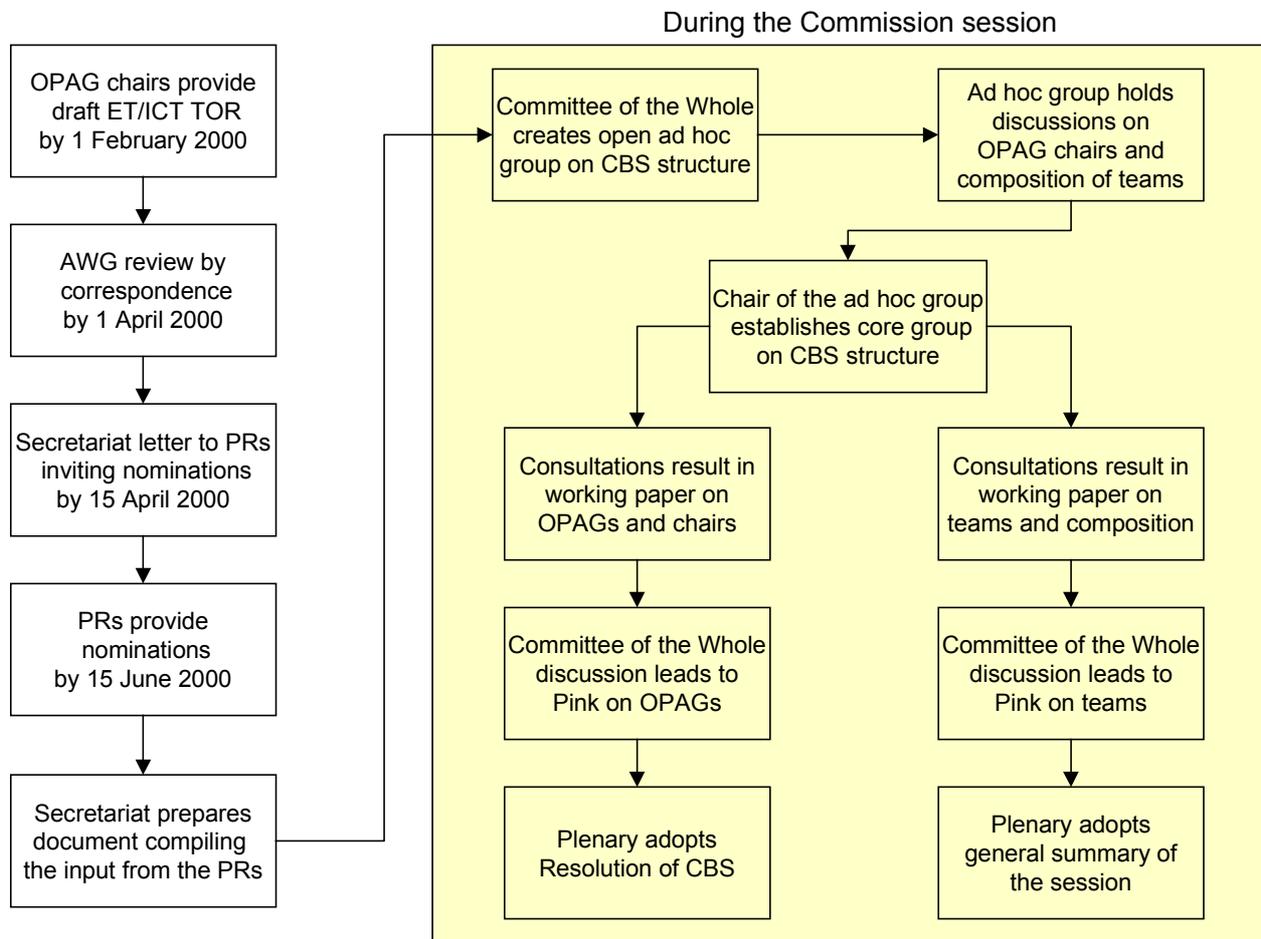
- a) OPAG chairs are to review the current status of their work plans and emerging issues and suggest teams to be established by CBS-XII along with the tasks and broad terms of reference

for the teams. Their proposals should include a general description of the duties and required expertise for team members to ensure the best experts are selected and are given the time needed to carry out their work. First drafts from the OPAG chairs are due 1 February 2000.

- b) The Secretariat is to invite PRs to nominate experts to be members of the proposed teams with a copy to the chairs of the Regional working groups on the WWW. Letters should be despatched by 15 April 2000 with a request for replies after EC-LII.

8.5 The AWG recommended that an ad hoc group on the CBS structure be established during the session to discuss this important and sensitive issue. The group would have open membership and discussions. The AWG felt it would be necessary for the chair of the ad hoc group to appoint a core group to summarise the discussions and prepare a working paper proposing the OPAG terms of reference and chairs. The group would also prepare a working paper proposing the membership and chairs of all of the teams. The AWG suggested the core group should consist of the president and vice-president of the Commission plus a member from each Region. It was expected that the current OPAG chairs would be consulted concerning the proposed membership of the appropriate teams.

8.6 A summary of the proposed selection process is illustrated in Figure 1.



**Figure 1 - Procedure to select OPAG chairs and teams**

8.7 The AWG agreed that the Comprehensive Test Ban Treaty Organization should be invited to CBS-XII to coordinate further arrangements for the exchange of data collected by its monitoring network and WMO and delivery of GDPS products to support its work.

**9. ANY OTHER BUSINESS** (agenda item 9)

9.1 The Secretariat briefed the meeting on the survey distributed to evaluate changes in the volume of data and products exchanged on the GTS around the adoption of Resolution 40 and the reasons for significant changes. The AWG looked forward to receiving further information on the results when they become available.

9.2 The group considered possible candidates for the CBS Award and agreed that two people had significantly contributed to the work of the Commission over a long period. The AWG felt that their outstanding contributions and dedication to CBS were deserving of recognition and recommended they be honoured through presentation of this prestigious award. The President will approach the Secretary-General with a formal proposal.

**10. CLOSURE OF THE MEETING** (agenda item 10)

10.1 The meeting closed on 26 November 1999.

**LIST OF PARTICIPANTS**

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**Annex to Paragraph 5.3.2**  
**WMO General Regulations 42 and 43**

**Regulation 42**

Recommendations of working groups shall have no status within the Organization until they have been approved by the responsible constituent body. In the case of joint working groups the recommendations must be concurred with by the presidents of the constituent bodies concerned before being submitted to the designated constituent body.

**Regulation 43**

In the case of a recommendation made by a working group between sessions of the responsible constituent body, either in a session of a working group or by correspondence, the president of the body may, as an exceptional measure, approve the recommendation on behalf of the constituent body when the matter is, in his opinion, urgent, and does not appear to imply new obligations for Members. He may then submit this recommendation for adoption by the Executive Council or to the President of the Organization for action in accordance with Regulation 9(5).