

**WORLD CLIMATE APPLICATIONS  
AND SERVICES PROGRAMME**

**WORLD CLIMATE DATA AND  
MONITORING PROGRAMME**

**REPORT OF THE FIRST SESSION  
OF THE  
CCI MANAGEMENT GROUP**

**(Berlin, Germany, 5-8 March 2002)**

**WCASP - 55  
WCDMP - 48**

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## LIST OF CONTENTS

	<b>Page</b>
1. OPENING OF THE MEETING .....	1
2. REPORT OF THE PRESIDENT OF THE COMMISSION .....	2
3. OPERATIONAL ASPECTS OF THE NEW STRUCTURE AND PRIORITIES FOR THE COMMISSION'S WORK PROGRAMME.....	2
4. REVIEW OF STATUS AND PLANS ..	4
5. RESOLUTIONS OF EC AND PLAN FOR THEIR ACCOMPLISHMENT: CONSIDERATION OF REPORT ON ICTT ON RCC.....	8
6. CONSIDERATIONS ON CAPACITY BUILDING.....	8
7. GUIDE TO CLIMATOLOGICAL PRACTICES PART II .....	8
8. OTHER MATTERS .....	9
9. CLOSURE OF THE MEETING .....	10
ANNEX 1: LIST OF PARTICIPANTS	
ANNEX 2: AGENDA	
ANNEX 3: INDIVIDUAL TERMS OF REFERENCE	
ANNEX 4: TERMS OF REFERENCE	
ANNEX 5: ACTIVITIES AND STATUS IN WCDMP	
ANNEX 6: OPAGS ON CLIMATE DATA AND DATA MANAGEMENT AND ON MONITORING AND ANALYSIS OF CLIMATE VARIABILITY AND CHANGE	
ANNEX 7: ACTIVITIES AND STATUS IN WCASP INCLUDING CLIPS	
ANNEX 8: OPAG ON CLIMATE APPLICATIONS, INFORMATION AND PREDICTION SERVICES	

LIST OF REPORTS PUBLISHED IN THE WCAP/WCASP SERIES

LIST OF REPORTS PUBLISHED IN THE WCDP/WCDMP SERIES

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## **1. OPENING OF THE MEETING**

### **1.1 Organization of the meeting**

The first session of the Commission for Climatology Management Group (MG) was opened at 09h00 on 5 March 2000 by Mr Y. Boodhoo, president of the Commission for Climatology. Mr Boodhoo thanked the Deutscher Wetterdienst (DWD) for hosting the meeting and welcomed all participants (see Annex 1). In his opening remarks, Mr Boodhoo stated that the Commission entrusted to the MG the establishment of priorities for the Commission's work and the completion of the nominations for the various expert teams. In addition, during this meeting, the MG would review its Terms of Reference and those of the Commission and would draft a vision statement for the Commission. He informed the group that the Members represented their Regions and that he intended to ensure that the Regions were involved in the work and the implementation of the output of the Open Programme Area Groups (OPAGs). Mr Boodhoo closed by thanking Mr V. Vent-Schmidt, vice-president of the Commission, for completing the practical arrangements for the meeting.

Mr Vent-Schmidt had provided the information concerning the meeting location and hotel accommodation for this session of the MG. He stated how pleased he was that the DWD could host the meeting and wished the participants well. Mr Vent-Schmidt emphasized Mr Boodhoo's comments concerning the fact that the members also represented the Regions and the OPAGs and it was very important for all members to be fully engaged in all the discussions. Finally, he introduced Dr Gerhard Adrian, Director of the DWD Business Sector, who gave the official welcome.

Dr Adrian welcomed the MG to Berlin and stated that he had just returned from the CAS-XIII meeting and now felt, more than ever, that the work of the Commission was extremely important. He stated that he and the entire DWD were pleased that Mr Vent-Schmidt had been elected vice-president of the Commission and that he fully supported all the efforts of the Commission. He expressed his special interest in the climate change detection, monitoring and the CLIPS projects as they relate to long-term forecasting and climate outlooks.

Mr K. Davidson, Director of the World Climate Programme, welcomed the MG to Berlin on behalf of Professor G.O.P. Obasi, Secretary-General of WMO. He stated that climatology, and the work of the Commission, was an important subject that had gained recognition of governments worldwide. He noted that the emphasis that the Commission has placed on climate data, applications and climate change detection and monitoring had assisted in making WMO the authoritative voice on these climate matters. Concerning the meeting, Mr Davidson reiterated the importance of this meeting to begin the work of the Commission during the inter-sessional period, to establish the priorities of the Commission and complete the nomination process begun at the session of the Commission, held in November 2001. In addition, the initiation of Part 2 of the Guide to Climatological Practice would begin at this meeting along with the establishment of the vision for the Commission. He encouraged all members to be involved in all aspects of the work of the Commission and wished the meeting success.

### **1.2 Adoption of the agenda**

The provisional agenda was adopted with the addition of "Other Matters" as agenda item 8 and is reproduced in Annex 2 of this report.

### **1.3 Working arrangements**

It was agreed that the working hours of the session would be from 09h00 to 12h00 and 13h00 to 17h00, except for 8 March when the meeting would end at 12h00.

## **2. REPORT OF THE PRESIDENT OF THE COMMISSION**

Mr Boodhoo provided the MG with a status report of his activities and his view of the challenges to be faced by the Commission during the next 4 years. He has worked closely with the OPAG chairs and the Secretariat in trying to complete the process of nominating experts and has had discussions concerning the operation of the new structure of the Commission. He has co-ordinated with the presidents of the Regional Associations and with the other presidents of the Technical Commissions concerning CCI matters. He stated that just the previous week he had been in Geneva participating in two meetings, one on the preparations of the WMO 6<sup>th</sup> Long-term Plan and the other concerning the Meeting of Presidents of Technical Commissions. Mr Boodhoo explained to the MG the linking of the Long-term Plan to the budget process and the concept of Zero Nominal Growth (ZNG) in the WMO budget. Considering the ZNG budget for WMO, the establishment of priorities for the Commission was a critical aspect of the work. During the Meeting of Presidents of Technical Commissions, there was considerable discussion about overlapping activities, natural disaster reduction and mitigation, a WMO integrated approach to DBMS and climate as a resource. The latter meaning the exploitation of climate for socio-economic benefits, especially considering renewable energy. Mr Boodhoo stated that agreement had been reached with the presidents of CHy and CAgM about the necessity for forming an ad-hoc expert team comprising experts of the three Commissions to work on methodologies for the collection and archiving of phenological data.

## **3. OPERATIONAL ASPECTS OF THE NEW STRUCTURE AND PRIORITIES FOR THE COMMISSION'S WORK PROGRAMME**

### **Operational Aspects of the New Structure**

The MG reviewed the Terms of Reference (ToR) of CCI (Annex 3). It noted that CCI is a Technical Commission established within the WMO Convention. It further noted that the ToR were refined and adopted within the twelfth intersessional period, and that the CCI programme of work and the associated structure derive from the ToR. The MG noted that CCI is the primary Technical Commission with responsibility for the World Climate Data and Monitoring Programme and the World Climate Applications and Services Programme. It further noted that several aspects of climatology are covered by a variety of WMO Commissions and other international organizations, including inter alia climate observations, research, and seasonal to interannual prediction. The MG stressed the need for CCI to state clear and comprehensive requirements for projects and activities.

The MG reviewed the CCI structure that was adopted by the thirteenth session of CCI, consisting of a president and vice-president; a Management Group; three Open Programme Area Groups (OPAGs) and their associated Implementation and Coordination Teams (ICTs), Expert Teams (ETs), and Rapporteurs; and special groupings of experts. It noted in that regard that an Expert Team on the Guide to Climatological Practices reports directly to the president of CCI, as does an Expert Team on Regional Climate Centres. It also noted that individual experts would be appointed to represent CCI in selected expert teams of other WMO Technical Commissions, and that they will report directly to the Chair of the related Open Programme Area Group. The CCI had authorized the MG and the president of CCI to review and adjust the OPAGs and their terms of reference as needed.

The discussions clarified several issues. The adjustment of OPAGs refers to all aspects of their associated teams and rapporteurs, but does not include the right to abolish the entire structure. The term "Open" means that anyone within CCI has the opportunity to provide input to the work of any team, which aims to ensure a high degree of interchange of ideas and information across the entire Commission. Teams must have members with relevant expertise, but must also allow for capacity building opportunities. Individuals may be selected for more than one team or rapporteurship. Teams are to accomplish specific tasks within specified periods; they will be initiated according to the priorities of the CCI; and, they will use, to a great extent, correspondence to accomplish their work. Rapporteurs are linked into relevant OPAGs and may be linked into specific expert teams. Global coverage and the ability to address regional requirements are to be fostered.

Chairs of the OPAGs will maintain direct communication with the Leads of the related ICT, ETs and rapporteurs. The Chairs discussed their need for the establishment of electronic bulletin boards. How this would be accomplished was left open for the OPAG Chairs to consider. They noted that the Chair of the OPAG on Climate Applications, Information and Prediction Services had requested the OPAG's Lead experts to draft two documents for exchange among the CCI Members: "Requirements" - what a particular ET needs to do its work -, and "Opportunities" - what an ET could produce if the requirements were satisfied.

The ToRs of the MG (Annex 4) were reviewed in detail with all members agreeing with the ToRs approved by CCI-XIII.

### **Priorities for the Commission's Work Programme**

Concerning the Priorities for the Commission, Mr Davidson reminded the MG that CCI-XIII and EC had placed high priority on the Commission completing the various climate reports, climate statements and the biennial review. He further stated that planning had begun for a meeting to begin the next biennial review, which would be more complicated than those of the past since it would cover the period since mid 1996 (the previous review). Finally the MG reviewed the Provisional Report of CCI-XIII and recommended the following priorities for the major 18 activities extracted from the Provisional Report. Each activity was rated as A, B or C, with A being the highest (note that nothing was rated as C).

		Rating
1	Complete Guide to Climatological Practices and commence Part 2;	A
2	Develop guidance on data homogenization (for both long time series and for merging satellite and in-situ data);	B
3	Develop guidance on the use of satellite data requirements for climate applications;	B
4	Develop guidance on how climate services can assist in mitigating the effects of natural disasters;	A
5	Develop and verify climate indices for monitoring climate;	B
6	Develop a poster and guidance on renewable energy sources and methods;	A+
7	Complete climate reports, Annual Statements and Biennial Reviews;	A+
8	Develop a routine status report on climate data needs, and data rescue needs;	B A
9	Expand the CLIPS forums and training;	B
10	Expand the showcase projects, especially in health related aspects;	B
11	Develop guidance on urban climatology;	B
12	Arrange a conference on Decision Processes in Climate Applications;	B

13	Implement the new CDMS for developing countries;	A
14	Revitalize TRUCE to better define the urban climate and how it has changed;	B
15	Establish the RCC's;	A+
16	Develop a system for long-range (climate) forecast verification;	A
17	Improve and complete the WEB pages for the WCP;	B
18	Expand work with CHy, especially related to WCP-Water.	B

#### 4. REVIEW OF STATUS AND PLANS

##### 4.1 Status and Plans for WCDMP

The MG reviewed the status and plans for WCDMP (Annex 5). It noted the principle that the CCI, in consultation with the Secretariat, will determine the content and participation needed to achieve the CCI priorities. It noted, however, that inter-agency coordination would be needed in a number of activities before the work programmes could be undertaken. In that regard, it noted the progress made in the Programme and the plans for activities within the current year. The MG made a number of decisions with respect to the priorities of the Commission.

The MG recognized the high priority given to the Global Climate System Review (GCSR) series by the CCI, and considered ways to complete the Seventh GCSR within the current year. It noted that the Congress and the Executive Council have recognized the reports in the series as important contributions of the WMO, and had urged that the Seventh GCSR be completed as soon as possible. The MG noted that the previous Reports had been well received throughout the climate community and had formed a significant body of knowledge for many Members. It noted, however, the extensive activity and expertise needed to produce such a report, and the considerable intellectual and monetary resources that are required. It further noted that several assessment and reporting activities had been initiated by Members over the period since the series had begun, and concluded that the need for, and value added by, a single synthesis report of global coverage should be given appropriate review. However, in recognition of the standing requirement by Congress, EC and CCI, the MG decided to proceed with the Seventh GCSR in parallel with the requirement review. The MG concluded that both activities fall within the WCDMP and the associated OPAG on Monitoring and Analysis of Climate Variability and Change, but that they had not been adequately provided for in the existing ToRs of that OPAG's expert teams. Consequently, the president of CCI established an ad hoc expert team to prepare the Seventh GCSR, which will report directly to the president. (The ToRs and membership will be established by the president of CCI in consultation with the Secretariat.)

The MG took note of an imminent workshop to evaluate and document the Climate Database Management Systems that have passed the self-evaluation criteria. It concluded that this activity will provide the information Members require in considering their future climate database system needs. It requested that this and future WMO activities in this regard promote the awareness of the collaborative activities to address the need for an integrated database management system as envisioned by the presidents of Technical Commissions. The need for meetings in the Russian Federation, and in other Eastern European countries, covering Data Rescue, CDMS and CLIPS, was emphasized by Dr Sterin.

##### 4.1.1 Report of OPAG Chairs

Mr R. Masika reported on the status of membership and leadership of the expert teams within

the OPAG on Climate Data and Data Management. He reviewed the steps he had taken to determine appropriate candidates and to initiate correspondence. He noted that responsive two-way communication is essential in this phase and will remain so throughout the operation of the teams, and described some successful means he had employed to stimulate response.

Mr T. Peterson reported on the status of membership and leadership of the expert teams within the OPAG on Monitoring and Analysis of Climate Variability and Change. He noted the need to engage experts in activities that match well the high priority activities in the experts' own work programmes. He also stressed the principle of not duplicating existing scientific efforts. In describing his results in establishing team memberships, he noted the experience of similar activities during the twelfth intersessional period of CCI. He concurred with the president of CCI that this OPAG should provide input on indices for various climate publications, but stressed his view that it should not have the lead. The president created an ad hoc ET to be responsible for the 7 GCSR while taking into consideration the manner in which CCI would accomplish the preparation of the other publications in the OPAG's topic area.

The tentative memberships of each of the OPAGs' expert teams and implementation and coordination teams are shown in Annex 6. The Secretariat will ensure that each nominee receives the approval of the respective Permanent Representative.

## **4.2 Status and Plans for WCASP/CLIPS**

The meeting was informed of the current status and plans of the activities for the World Climate Applications and Services Programme (WCASP) including the CLIPS Project (Annex 7). Since the approval of the new structure of CCI by CCI-XIII, one of the main activities, in collaboration with the OPAG Chair and Co-Chairs, has been establishment of the Expert Teams for the OPAG on Climate Applications, Information and Prediction Services. This activity had so far been implemented satisfactorily as pointed out in the report of the OPAG Chair.

The meeting was further informed that the CLIPS Focal Point training workshops and Curriculum development programmes have been under consideration. These activities are to continue with the next CLIPS Focal Point Training Workshop for Eastern and Southern Africa, planned for July/August 2002. Nominations of Focal Points will be requested from those countries that have not yet made their nominations. The Curriculum development will continue, including involvement of experts from developing countries. The curriculum modules will be posted on the CLIPS web site, which is currently under construction. The meeting was further informed that the CLIPS Project Office has participated in regional activities including the Climate Outlook Forums. Members have requested financial support for hosting meetings/workshops and support of experts' participation in meetings. These activities will continue depending on availability of funds. However the meeting strongly recommended the need to hold CLIPS Focal Point Training workshops for RA III and RA VI.

The meeting further noted the progress made with the showcase projects on Heat/Health Warning Systems and recommended that, with the experience already obtained from the two cities, guidance material be prepared to enable WMO Members to put in place appropriate measures for mitigating heat-related impacts.

### **4.2.1 Report of OPAG Chairs**

The Chair of OPAG on Climate Applications, Information and Prediction Services briefed the meeting about the progress which has been made in constituting its ICT and Expert Teams. One of the two Co-Chairs is yet to be identified. A request for concurrence for the Lead on the ET on CLIPS Operations including Product Generation had not yet been processed because of late identification of the lead. The meeting was also informed of the work and plans the team leaders had started to develop for their teams. Most of the ETs had plans to start their work by correspondence and requirements for the OPAG expert team meetings will be examined as the teams progress with their work. The OPAG Chair further informed the meeting that some problems had been encountered in the

process of constituting the teams. These included late or non-response from some of the team leaders, some members appearing in more than one team and the non-concurrence of some team members. He recommended the need to involve CLIPS Focal Points on expert teams whenever possible.

The OPAG Chair presented to the meeting the proposed core team members for all the Expert Teams. The meeting discussed these members and the final agreed list is given in Annex 8. Most of the team members need to accept the responsibility and to confirm availability to carry out the work, following concurrence from their respective Permanent Representatives. The meeting emphasized that additional Expert Team members can be added in the teams by the leaders whenever necessary. It also expressed the fact that there may be a need to have more than one rapporteur on issues related to Climate and Agrometeorology, and Climate and Hydrology.

### **4.3 Crosscutting Issues**

#### **4.3.1 Joint Mechanism with AOPC and WCRP**

The MG discussed the best way to approach the AOPC joint sponsorship recommendation that arose from CCI-XIII. The members agreed that it would be best if the president of CCI discussed this directly with the Chair of the JSC and the Chair of the GCOS steering group. The MG felt that further clarification was needed as to how the AOPC would handle the added responsibilities of the regional and national network issues that have traditionally been co-ordinated by CCI and to actually define what was meant by joint sponsorship. The latter was important especially because of financial implications with AOPC and CCI. The president stated that he would take the next opportunity to discuss this with the chairs. In the meantime, since the Chair of OPAG 2, Mr T. Peterson, was a member of the AOPC, it was decided to have him serve as the CCI representative until discussions and decisions concerning co-sponsorship could be concluded.

#### **4.3.2 Inter-Commission Work**

##### **(i) Participation in CBS OPAGS**

It was noted that CCI had expressed interest in the work being undertaken by several of the ETs of CBS and decided that it would be appropriate for CCI to be represented at various meetings of CBS. Specifically, CCI should be represented by the following:

ICT on Integrated Observing Systems	V. Vent-Schmidt
ET on Observational Data Requirements	V. Vent-Schmidt
ET on Satellite Systems and Products	W. Benesch
ET on Requirements from Automatic Weather Stations	E. Rudel
ET on Integrated Data Management	A. Besprozvannykh
ITT on Future WMO Information Systems	J. Shortridge
ET to Develop a Verification System on Long-range Forecasts	S. Mason
ET on Ensemble Prediction Systems	A. Mokssit
ET on the Infrastructure for Long-range Forecasting	P. Tibajuka
ICT on Public Weather Services	I. Valeroso
ET on Media Issues	S. Muchemi

##### **(ii) Joint Expert Team on Phenological Data**

The meeting noted the importance of phenological data and the state in which these data are archived in various NMHSs and other related institutions for climate prediction and impacts. The MG recommended the setting up of an ad-hoc expert team on archiving of data related to phenology. This team would comprise of representatives from CHy and CAgM with the following ToR:

1. To identify the need for data related to phenology;
2. To develop guidance for the collection, quality control and archiving of such data;
3. To provide input on the usefulness and verification of the utilisation of phenological parameters on the prediction of the climate, climatic extremes and variability;
4. To generate a database of phenological methods and practices;
5. To submit six-monthly reports to the president of the Commission for Climatology.

(iii) CLIMAG

The president of CCI informed the MG of the Climag (Climate and Agriculture) activities that are currently underway in S.E. Asia and in South America. This project is an overarching effort to benefit agriculture with climate information and predictions. He urged the Commission to get more involved in these activities. Specifically, the president of CCI will offer CCI assistance to the president of CAgM.

(iv) Others, following recommendations from the 2002 Meeting of Presidents of Technical Commissions

The president informed the MG of three specific issues that had been discussed at the Meeting of Presidents of Technical Commissions:

1. Establishment of an ad-hoc Expert Team on Phenological Data, with CCI having the lead;
2. The integrated approach to Data Base Management Systems currently underway, with CBS having the lead; and
3. An increased effort would be made by all the Commissions to mitigate the effects of natural disasters.

The president of CCI informed the MG that he had written to the presidents of regional associations informing them that the following would be the liaisons between each regional association and CCI:

- |        |  |
|--------|--|
| RA I   | Mr R.S. Masika (Kenya)   |
| RA II  | Dr Li Weijing (China) and Dr M. Sugi (Japan)                       |
| RA III | Mrs M. Araneda (Chile)   |
| RA IV  | Dr T.C. Peterson (USA)   |
| RA V   | Mr N. Plummer (Australia)  |
| RA VI  | Mr V. Vent-Schmidt (Germany) and Mr A. Sterin (Russian Federation) |

#### 4.4 Planning and scheduling of meetings and workshops under CCI projects

The current scheduled of meetings related to WCASP including CLIPS and to WCDMP was presented for information and comments. The MG was informed that the schedule of these meetings had been prepared as an indication only of the activities that the programme is likely to be involved in either directly or indirectly during the period 2002-2004. There are other meetings where funding has been requested to support participation of experts or to support the host countries. Meetings of expert teams will be included in the schedule as the need arises.

##### ***WCASP including CLIPS***

The CLIPS Office will be directly involved in the organization of the Inter-commission Task Team Meeting, planned to be held in Geneva from 25-28 March 2002, and the CLIPS Focal Points Training Workshop for Eastern and Southern Africa being planned for around July/August 2002. Some of the meetings are being co-sponsored with other organizations and institutions. For these other meetings, the CLIPS Office will be required to participate by sending representatives. The MG noted the need to hold CLIPS Training workshops for RA III and RA VI in the near future. However it was recommended to prioritize these meetings and that involvement in these meetings should be in line

with the availability of funds. An updated list of these meetings is attached in Annex 7.

**WCDMP**

The current schedule of meetings (Annex 5) was adopted with changes as indicated within the annex.

## **5. RESOLUTIONS OF EC AND PLAN FOR THEIR ACCOMPLISHMENT: CONSIDERATION OF REPORT ON ICTT ON RCC**

### **Regional Climate Centres**

The MG was briefed on the report of the First Meeting of the Inter-Commission Task Team (ICTT) which was held in Geneva from 30 April to 3 May 2001. It took note of the various issues mentioned in the report and recognized the contribution made so far by the CCI representative in the ICTT, Mr J.M. Nicholls. The meeting emphasized the need for the CCI representative to be clear on the position of CCI on the issue of RCCs. The meeting was further informed that membership of the ICTT has been increased to include regional representatives and a member of CHy.

The meeting was informed that the Second Session of the ICTT will be held in Geneva from 25-28 March 2002. The objective of this meeting is to deliberate further on issues related to definition of products and criteria for establishment of RCCs and to prepare a report and recommendations for submission to EC-LIV, which is scheduled to meet from 11-21 June 2002. The meeting emphasized that the next session of ICTT should concentrate on the procedures and defining the criteria of establishing the RCCs. Emphasis was put on ensuring use of the existing centres while considering setting up of centres and easy exchange of operational data and information of these RCCs. The president of CCI and the MG agreed that the ICTT should move rapidly in recommending the way forward in establishing these centres and the mechanisms for doing this should be concluded.

## **6. CONSIDERATIONS ON CAPACITY BUILDING**

### **6.1 Public Climate Services**

The MG discussed the concern of Members about providing public services from its climate services. It was determined that this would best be handled by the Commission, with the involvement of the ET on Public Weather Services under CBS. The CCI participant could provide an input to the president as to how best to proceed to benefit the Members.

### **6.2 Vision Statement for CCI**

The president of CCI stated that the MG had been requested by CCI-XIII to develop a vision statement for the Commission. Following a review of the definition of vision statements, the WMO vision and those of several other organizations, the MG decided on the following statement:

**The vision of the CCI is to stimulate, understand and co-ordinate international technical activity to obtain and apply climate information and knowledge in support of sustainable social-economic development and environmental protection.**

The president of CCI will decide how best to circulate this to all CCI members for their consideration.

## **7. GUIDE TO CLIMATOLOGICAL PRACTICES PART II**

### **7.1 Consideration of previous proposals**

The MG reviewed the status of Part 1 of the Guide, and stated the critical need to complete this

part. It was noted that 4 of the 5 chapters had now been completed and that the lead author of Chapter 5 has promised to submit it by summer 2002. Once this is received, Part 1 will be completed. Mr Peterson agreed to contact the Director of NCDC to see if this could be arranged.

## 7.2 Part 2 of the guide to Climatological Practices

The MG was informed that Part 2 of the Guide would be completed by an Expert Team reporting directly to the president. This team would be led by Mr P. Bessemoulin (France), assisted by Dr E. Nieplová (Slovakia) and Prof. N. Kobysheva (Russian Federation). It was further agreed by the OPAG chairs that each of the expert teams should have one member designated to assist and provide input into Part 2 of the guide. The OPAG chairs would request the ET leads to designate one member to assist in the preparation of the Guide. Dr Sterin stated the importance of this document and informed that he would assist in arranging for a Russian translation once Part 2 was completed.

Mr Bessemoulin provided an overview of his concept of the Part 2 of the guide and how best it could be accomplished. Finally, the topics to be covered in Part 2 were reviewed and agreed upon and are listed below:

### Part 2

1. Introduction
2. Selected List of Methodologies and Techniques
  - 2.1 Network design methods
    - 2.1.1 GSN best practices
    - 2.1.2 Automatic Weather Stations
    - 2.1.3 Radiosondes
    - 2.1.4 Remotely Sensed Data
  - 2.2 Quality control tests
    - 2.2.1 Description of types of errors to be tested for
    - 2.2.2 Completeness of data
    - 2.2.3 Tolerance tests
    - 2.2.4 Consistency tests
  - 2.3 Data handling methods
    - 2.3.1 Supplementing data-estimation
    - 2.3.2 Procedures for handling suspicious data
    - 2.3.3 Extending data records
    - 2.3.4 Computing "normals"
    - 2.3.5 Trend analysis
    - 2.3.6 Climate data management systems
    - 2.3.7 Homogenizing data sets
  - 2.4 Statistical techniques
    - 2.4.1 Statistical software systems
    - 2.4.2 Normalizing data
    - 2.4.3 Frequency analysis
    - 2.4.4 Extreme value analysis
    - 2.4.5 Homogeneity and stationarity tests
    - 2.4.6 Objective analysis
    - 2.4.7 Downscaling methods

## 8. OTHER MATTERS

8.1 Mr Davidson provided a report on the Consultative Meeting on High-Level Policy on Satellite Matters. He noted that over 40 representatives of satellite agencies from around the world attended the meeting. The purpose of the meeting was to engage WMO in the use and benefits of satellite data and products. This particular meeting had the added task of reviewing the use of data and products from research satellites. CCI has, to this point, made limited use of, and not clearly stated its

requirements for, satellite data within WMO, and thus has not been involved in the process of defining requirements and challenging the satellite operators to meet the commission's requirements. Therefore, the general requirements for satellite data and products for climatology have fallen to GCOS and WCRP. It was clear from the discussions at this meeting that CCI needed to begin defining requirements for operational climatology. The participants were assured that CCI was, based on its new working structure, going to have a renewed and dramatically increased demand for satellite data and products. The group requested CCI to:

- define the role of CCI in the integrated observing systems;
- draft a statement of requirements (parameter based) that specifies the accuracy, spatial and temporal resolution, but not define the requirements based on satellite instrument. The requirement should be based on CCI's need to produce a product or to complete an analysis or data set;
- state the obvious - that satellite and remotely sensed data to be of high value to operational climatology, it must be able to be reprocessed using the same calibration techniques and same algorithms on all of the data.

8.2 Mr Vent-Schmidt stressed the complexity of the issue of satellite data requirements, noting that it depended entirely on what question needed to be answered. Mr R. Masika, OPAG Chair, agreed to instruct the Rapporteur on the Use of Remote Sensing Systems to address this issue as a matter of urgency. The MG also decided to have all ETs state the data requirements related to their topic areas.

8.3 The Secretariat reviewed the actions and funding for the upcoming CAgM and the conference preceding the session itself. The MG decided to begin the process of defining a theme for the CCI-XIV session and conference to precede it. After much discussion, it was decided by the president, following the recommendation of the MG, that the theme for the conference will be:

**"CLIMATE - A resource for social and economic development".**

## **9. CLOSURE OF THE MEETING**

The meeting was closed by Mr Boodhoo at 12h00 on Friday, 8 March 2002.

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## ANNEX 1

### LIST OF PARTICIPANTS

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## **ANNEX 2**

### **AGENDA**

#### **1. OPENING OF THE MEETING**

- 1.1 Organization of the meeting
- 1.2 Adoption of the agenda
- 1.3 Working arrangements

#### **2. REPORT OF THE PRESIDENT OF THE COMMISSION**

#### **3. OPERATIONAL ASPECTS OF THE NEW STRUCTURE AND PRIORITIES FOR THE COMMISSION'S WORK PROGRAMME (CWP)**

#### **4. REVIEW OF STATUS AND PLANS**

- 4.1 Status and Plans for WCDMP
  - 4.1.1 Report of OPAG 1 Chair
  - 4.1.2 Report of OPAG 2 Chair
- 4.2 Status and Plans for WCASP
  - 4.2.1 Report of OPAG 3 Chair
- 4.3 Crosscutting Issues
  - 4.3.1 Joint Mechanism with AOPC and WCRP
  - 4.3.2 Inter-Commission Work
    - (i) Participation in CBS OPAGS
    - (ii) Joint Expert Team on Phenological Data
    - (iii) CLIMAG
    - (iv) Others, following recommendations from the 2002 Meeting of Presidents of Technical Commissions
- 4.4 Planning and scheduling of meetings and workshops under CCI projects

#### **5. RESOLUTIONS OF EC AND PLAN FOR THEIR ACCOMPLISHMENT: CONSIDERATION OF REPORT ON ICTT ON RCC**

#### **6. CONSIDERATIONS ON CAPACITY BUILDING**

- 6.1 Public Climate Services
- 6.2 Vision Statement for CCI

#### **7. GUIDE TO CLIMATOLOGICAL PRACTICES PART II**

- 7.1 Consideration of previous proposals

#### **8. OTHER MATTERS**

#### **9. CLOSURE OF THE MEETING**

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## **ANNEX 3**

### **Individual terms of reference**

#### **Commission for Climatology (CCI)**

The Commission shall be responsible for promoting and facilitating activities relating to climate and its relationship with human well-being, human activities, natural ecosystems and sustainable development, including:

- (a) Coordination and consolidation of general requirements for observations, data collection, supply and exchange for all components of the WCP and its associated activities;
- (b) Identification of best practices in the collection, quality control, archiving, access to and further management of climate data, including near-real-time data, proxy data, remote sensing data and metadata;
- (c) Analysis and monitoring of climate, its spatial and temporal variations and the issue of climate data and products in support of research, applications and impact assessments;
- (d) Development of statistical and other objective methods for analysing climate data;
- (e) Evaluation and review of operational climate predictions;
- (f) Preparation of authoritative statements on climate;
- (g) Identification, development and improvement of services, applications and supporting research concerning the influences of climate and weather;
- (h) Identification of priority areas relating to the climates of natural and managed ecosystems, and for alleviating problems arising from human effects on local and regional climate;
- (i) Capacity building and technology transfer;
- (j) Effective presentation of climatological information to users and the assessment of cost-benefit information;
- (k) Provision of advice on issues relating to the access and availability of climatological data and services;

The Commission recognizes that it has special responsibilities to advise and guide the World Climate Applications and Services Programme, and the World Climate Data and Monitoring Programme, while providing support to many activities under the framework of the Climate Agenda.

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## ANNEX 4

### Terms of Reference

#### Commission for Climatology (CCI) Management Group

THE COMMISSION FOR CLIMATOLOGY,

**DECIDES:**

To establish the CCI Management Group with the following terms of reference:

- (a) Advise the president on all matters related to the work of the Commission;
  - (b) Keep under review the internal structure and working methods of the Commission and make necessary adjustments to the working structure in the intersessional period;
  - (c) Ensure the overall integration of the programme areas and coordinate strategic planning issues;
  - (d) Monitor the implementation of the WCASP and WCDMP in relation to the WMO Long-term Plans and advise the president on appropriate actions;
  - (e) Review and decide upon priorities and schedules for the activation of OPAG teams and rapporteurs taking into account the requirements expressed at the session of the Commission, and assess and evaluate the progress achieved and provide continuing guidance on timescales for their work and outputs;
  - (f) Advise the president of the Commission on matters related to cooperation with other technical commissions and support to other WMO and related programmes;
  - (g) Advise the president of the Commission on requirements arising between its sessions for new appointments of OPAG chairpersons and co-chairpersons, the establishment or activation of teams and rapporteurs, and the designation of team leaders;
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## ANNEX 5

### Activities and Status in WCDMP

Activity	Place and Date	Background	Programme responsibilities	Involvement of CCI (to be determined by MGM2002)
<b>Work Meeting to prepare 7<sup>th</sup> Global Climate System Review</b>	TBD, 02, 03	<ul style="list-style-type: none"> <li>* Cg-XIII appreciation</li> <li>* CCI-XIII " ... urged early commencement of preparation for 7<sup>th</sup> GCSR</li> <li>* Very considerable undertaking</li> </ul>	<ul style="list-style-type: none"> <li>* Advise on members, work programme, venue, dates</li> <li>* Prepare documents</li> <li>* Arrange date and place</li> <li>* Arrange invitations via PRs</li> <li>* Arrange consultant contract</li> <li>* Arrange travel of work meeting participants and C/WCD</li>   <li>* Coordinate follow-through with appointed experts and consultant, session reports, to publication and distribution of 7GCSR</li> </ul>	MGM2002: 7GCSR is a priority "A+". Ad hoc team to be established; reporting directly to P/CCI; ToR to be defined by VP/CCI; members to be defined by VP/CCI
<b>Roving Seminar on Climate Data Management</b>	TBD, 02, 03  RA VI (Roving seminar in the NIS : September/October 2002)  MGM2002: Agreed to probable region; dates TBD	<ul style="list-style-type: none"> <li>* Roving Seminars were done in RA III, IV , and V in 99</li> <li>* Content predominantly CLICOM 3.1</li> <li>* Preliminary plan: RA VI in 02; RAs II and V in 03</li>   <li>* Seminars also done with Drought Preparedness Project: RA I</li> <li>* Content was applications oriented</li> </ul>	<ul style="list-style-type: none"> <li>* Advise on objectives, topics and speakers, formats</li> <li>* Prepare documents</li> <li>* Arrange locations and dates</li> <li>* Arrange invitations via PRs</li> <li>* Arrange for leader(s)</li> <li>* Arrange travel of participants and WCD Officer</li> </ul>	May want to advise on shifting content to focus on the CDMS needs and uses in support of the other WCDMP Projects: OPAG CDDM topics (i.e., Observing systems and networks, DARE, Homogenization & Metadata, CDMS, Remote sensing); ACVC topics (i.e., CSM, Dataset catalogues, CCD, 7GCSR and Annual Statements); and of the WCASP/OPAG CAIPS  MGM2002: agreed. Provision of guidance materials is a Priority "A" on several topics.

Activity	Place and Date	Background	Programme responsibilities	Involvement of CCI (to be determined by MGM2002)
<b>ICT on Climate Data Management</b>	TBD 02 (Nairobi?)  Suggestion : Oct 2002, Nairobi Objective : CDMS and DARE implementation plans for RA I  MGM2002: Agreed to general focus, but not focussed on RA I alone; location TBD; date TBD dependent upon implementable results of ETs	* Formed by CCI XIII * Annex to Res 1, para 10: "...each ICT will have at least 1 meeting during an intersessional period."	* Advise on objectives, members, work programme * Prepare documents * Arrange locations and dates * Arrange invitations via PRs * Arrange for * Arrange travel of participants and WCD Officer	Need to task and plan for DARE and CDMS implementation; in DARE, consideration of failing CLICOM archival media and of recovery of colonial data; in CDMS, consideration of CLICOM replacement strategy and mechanisms  Also need to implement AOPC linkage; expanded Statements of Guidance on Climate Data Requirements  MGM2002: Agreed
<b>ICT Datasets and Climate System Monitoring</b>	TBD 02 (Asheville?)  MGM2002: location TBD; date TBD dependent upon implementable results of ETs	* Formed by CCI XIII * Annex to Res 1, para 10: "...each ICT will have at least 1 meeting during an intersessional period."	* Advise on objectives, members, work programme * Prepare documents * Arrange locations and dates * Arrange invitations via PRs * Arrange for * Arrange travel of participants and WCD Officer	Need to task and plan for 7GCSR and Annual Statements, updating of dataset catalogues, CCD reporting and analysis, expanded Statements of Guidance on Climate Data Requirements, climate analysis and monitoring input to natural disaster prevention  MGM2002: Establishing Ad Hoc Team for 7GCSR
<b>ET CCD, MI</b>	TBD 02 (RA III)	Regional Workshop	Standard	MGM2002: To be considered; pending authorization by P/CCI
<b>ET CCD, MI</b>	TBD 03	ET work on Climate Indices	Standard	MGM2002: No comment
<b>Expert meeting on CDMS</b>	Geneva, 8-12 April 02 (Change Date)  MGM2002: Agreed to changed dates: 27May- 1June 02	Evaluate and document the CDMS systems that have passed the self-test criteria	* Advise on members, work programme, venue, dates * Prepare documents * Arrange date and place * Arrange invitations via PRs * Arrange consultants' travel * Arrange travel of work meeting participants  * Coordinate follow-through with appointed experts and consultant, session reports	MGM2002: Future CDMS is a priority "A". P/CCI requested that meeting promote awareness of Presidents of Technical Commissions' joint effort toward an integrated DBMS

Activity	Place and Date	Background	Programme responsibilities	Involvement of CCI (to be determined by MGM2002)
<b>Expert meeting on CDMS Development</b>	TBD 03 (Place : Geneva) Objective: CDMS evaluation and installation and training plans for the CDMS systems  MGM2002: Agreed	Planning needed on installation and training for the CDMS systems, and on migration of archives from failed CLICOM media.	<ul style="list-style-type: none"> <li>* Advise on members, work programme, venue, dates</li> <li>* Prepare documents</li> <li>* Arrange date and place</li> <li>* Arrange invitations via PRs</li> <li>* Arrange consultants' travel</li> <li>* Arrange travel of work meeting participants</li>   <li>* Coordinate follow-through with appointed experts and consultant, session reports</li> </ul>	MGM2002: P/CCI requested that meeting consider ways to implement Presidents of Technical Commissions' joint effort toward an integrated DBMS
<b>ICT CDMS sub meeting: DARE</b>	TBD 03			MGM2002: DARE is a priority "A". Need a survey of all Members. ETs 1.2 and 1.3
<b>ET 2.3 sub meeting: Climate Indices</b>		ET on Climate Change Detection, Monitoring, and Indices (in coordination with CLIVAR)		MGM2002: Priority "B"
<b>ICT CDMS sub meeting: CLICOM Implementation</b>	TBD 02 (RA II)  MGM2002: Agreed, but place and dates TBD			MGM2002: Implementation activities should concentrate solely on CDMS, not CLICOM
<b>ICT CDMS sub meeting: CLICOM Implementation</b>	TBD 03 (RA I)			MGM2002: Same comment as above
<b>3<sup>rd</sup> International Conference on Experiences with AWSs (ICEAWS)</b>	Torremolinos Malagas, Spain February, 03	<ul style="list-style-type: none"> <li>* WCP and WWW have given small support in past</li> <li>* Focus is in climate issues of AWSs</li> </ul>	<ul style="list-style-type: none"> <li>* Arrange WMO co-sponsorship</li> <li>* Advise on objectives, date and place, topics and speakers, formats</li> <li>* Provide block grant to organizers</li> <li>* WCD Officer to participate for WMO</li> </ul>	MGM2002: Approved proposed level of support
<b>ISDR IATF Working Group 3 -- Quantification of Risk and Vulnerability Assessment</b>	TBD: one or two meetings per year (Meetings have been in Geneva)	<ul style="list-style-type: none"> <li>* C/WCD is WMO representative in the WG</li> <li>* DSG is WMO rep on the IATF</li> <li>* DC/CAP is Chair of WG 1</li> </ul>	<ul style="list-style-type: none"> <li>* Participate in WG, promoting and catalyzing WMO climate information input</li> <li>* Explain and promote CCI positions to WG3 and WG3 positions to CCI</li> <li>* Coordinate adoption of appropriate standards and programmes within WMO</li> </ul>	MGM2002: No comment

(TBD = To be decided)

## ANNEX 6

### OPAG ON CLIMATE DATA AND DATA MANAGEMENT

Chair: R. Masika (Kenya)  
Co-chair: N. Plummer (Australia)

#### 1.1 IMPLEMENTATION/COORDINATION TEAM FOR CLIMATE DATA MANAGEMENT

Lead: R.S. Masika (Kenya)  
RA I: J. Ukeje (Nigeria)  
RA II: S. Zhou (China)  
RA III: E. Rangel-Mantilla (Colombia)  
RA IV: R. Vose (USA)  
RA V: T. Acebes (Philippines)  
RA VI: R. Tolasz (Czech Republic)  
Additional Expert: A. Besprozvannykh (Russian Federation)

#### 1.2 EXPERT TEAM ON OBSERVING REQUIREMENTS AND STANDARDS FOR CLIMATE

Lead: N. Plummer (Australia)  
Experts: A. Bockari (Sierra Leone)  
H. Isobe (Japan)  
H.A. Enriquez Davila (Ecuador)  
T. Allsopp (Canada)  
P. Štastný (Slovakia)

#### 1.3 EXPERT TEAM ON THE RESCUE, PRESERVATION AND DIGITIZATION OF CLIMATE RECORDS

Lead: L.S. Tan (Malaysia)  
Experts: J.M. Kimani (Kenya)  
A. Hossain (Bangladesh)  
S. Burton (Barbados)\*  
A. van Engelen (Netherlands)  
Additional Expert: F. Rahimzadeh (Iran)\*

#### 1.4 EXPERT TEAM ON METADATA FOR CLIMATE APPLICATIONS

Lead: J. Arnfield (USA)  
Experts: A. Saci (Algeria)\*  
G. Wang (China)  
J. Carrasco Cerda (Chile)\*  
Additional Experts: J. Wieringa (Netherlands)\*  
I. Auer (Austria)

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\* Concurrence of the Permanent Representative being sought.

**1.5 RAPPORTEURS ON REGIONAL ASPECTS OF DATA AND DATA MANAGEMENT**

E. Mpeta (Tanzania)  
D. Stuber (France)

**1.6 EXPERT TEAM ON NATIONAL NETWORKS AND OBSERVATIONS IN SUPPORT OF CLIMATE APPLICATIONS (Optional as of now)**

Lead: R. Heino (Finland)  
Experts: A. Nkansah (Ghana)  
E. Gutiérrez Marco (Spain)

**1.7 RAPPORTEUR ON THE USE OF DATA FROM REMOTE SENSING SYSTEMS**

R. Ullrich (Germany)\*

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## **OPAG ON MONITORING AND ANALYSIS OF CLIMATE VARIABILITY AND CHANGE**

Chair: T. Peterson (USA)  
Co-chairs: P. Zhai (China), A. Mokssit (Morocco)

### **2.1 IMPLEMENTATION AND COORDINATION TEAM**

Lead: T. Peterson (USA)  
RA I: M.L. Saah (Cameroon)  
RA II: H. Koide (Japan)  
RA III: H. A. Enriquez Davila (Ecuador)  
RA IV: J. Lawrimore (USA)  
RA V: D. Collins (Australia)  
RA VI: G. Gruza (Russian Federation)  
Additional Expert: A. Klein Tank (Netherlands)

### **2.2 EXPERT TEAM ON DATA SET CATALOGUES**

Lead: T. Owen (USA)  
Experts: F. Tilya (United Republic of Tanzania)  
A. Penney (New Zealand)  
S. Roesner (Germany)\*  
B. Trewin (Australia)

### **2.3 EXPERT TEAM ON CLIMATE CHANGE DETECTION, MONITORING AND INDICES**

Lead: A. Mokssit (Morocco) **CCI**  
Experts: P. Jones (UK) **CCI**  
C. Folland (UK) **CLIVAR**  
D. Karoly (Australia) **CLIVAR**  
S. Sensoy (Turkey) **CCI**

*[CLIVAR to nominate two more]*

Additional Expert: L. Molion (Brazil)\*

### **2.4 RAPORTEURS ON REGIONAL ASPECTS OF CLIMATE VARIABILITY AND CHANGE, INCLUDING CLIMATE SYSTEM MONITORING**

L. Maitrepierre (New Caledonia)\*

E. Ranokova (Russian Federation)

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### **AD HOC TEAM ON 7<sup>TH</sup> GLOBAL CLIMATE SYSTEM REVIEW**

(Reporting directly to P/CCI; Terms of Reference and membership to be defined by VP/CCI)

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## ANNEX 7

### Activities and Status in WCASP including CLIPS

<b>2002</b>				
<b>Activity</b>	<b>Place and Date</b>	<b>Background</b>	<b>Programme responsibilities</b>	<b>Involvement of CCI (to be determined by MGM2002)</b>
<b>The Ninth GHACOF (IGAD Countries)</b>	Eldoret, Kenya, 18-23 February 2002	Follow-up on Climate Outlook Forums is part of the CLIPS activities. Gives an opportunity to assess the way Climate information is delivered by producers and received by the users.	Participation of C/CPO.	MG guidance on future involvement of COF will be required
<b>Document: Guidelines to Assess Health Impacts of Climate Change</b>	Work in progress. Planning meeting: Geneva (WHO), 20-22 March 02	* WHO requested WMO participation in 2000 * Initial meeting Victoria (P. Scholefield)	* Advise topics * Arrange author * Arrange travel	
<b>ICTT Second Session</b>	Geneva, Switzerland, 25-28 March 2002	EC-LIII re-established ICTT and is required to submit its report to EC-LIV.	<ul style="list-style-type: none"> <li>• Making all arrangements for the meeting and participants;</li> <li>• Prepare documentation.</li> </ul>	CCI activity
<b>PRESANOR 01</b>	Algiers, Algeria, 14-18 April 2002	Climate Outlook Forum for Countries in Northern Africa Region.	<ul style="list-style-type: none"> <li>• Participation of C/CPO;</li> <li>• Provide funds to support participation of one invited expert.</li> </ul>	MG guidance on future involvement of COF will be required
<b>Third Symposium on Climate and Applications in Portuguese speaking countries</b>	Lisbon, Portugal, 17-20 April 2002	WMO has been requested to send a representative.	<ul style="list-style-type: none"> <li>• Participation in the meeting;</li> <li>• Funds requested from WMO to support five participants from developing countries.</li> </ul>	MG is requested to note support provided to help unscheduled meetings
<b>Preparing for El Niño: Advancing Regional Plans and Interregional Communication</b>	Palisades, New York April 29-May 2, 2002,	Meeting organized by IRI. C/CPO has been invited to attend.	10.1	MG is requested to note involvement in unscheduled activities

Annex 7, p.2

<p><b>Fourth Training workshop on CLIPS</b></p>	<p>Oklahoma, USA, May 2002</p>	<p>This is the fourth training workshop in the series of workshops organised by CIMMS at the University of Oklahoma, USA in collaboration with the CLIPS Project Office to enhance the capability of NMSs in provision of Climate information to end users.</p>	<p>10.2 Provide funds to support the attendance of some of the participants in the workshop.</p>	<p>MG is to note involvement in Capacity building activities.</p>
<p><b>The Asian Climate Training (ACT) Workshop on Climate Information Applications</b></p>	<p>Bangkok, Thailand, 6-17 May 2002 (attend for only one week)</p>	<p>CLIPS office has been invited to participate in this training workshop.</p>	<p>Participation of a CLIPS Office or a representative</p>	<p>MG is to note involvement in Capacity building activities.</p>
<p><b>Climate Variability and Change and their Health Effects in the Caribbean: Conference and Workshop</b></p>	<p>Barbados, 21-25 May 02</p>	<ul style="list-style-type: none"> <li>* Cg-XIII: " give increased attention to human health issues for Small Island Developing States"</li> <li>* Series initiated in Samoa and Auckland, July and December 2000</li> <li>* Planning initiated early 2001</li> <li>* WMO co-sponsoring</li> <li>* PAHO/WHO/WMO with UNEP and others</li> </ul>	<ul style="list-style-type: none"> <li>* On organizing committees</li> <li>* Objectives, date and place, topics and speakers, formats</li> <li>* Arranged invitations via PRs of selected Caribbean countries</li> <li>* Arranged Barbados PR participation on local organizing committee</li> <li>* Arranged publicity</li> <li>* Arranging travel of 7 workshop participants and C/WCA</li> <li>* Providing one presentation</li> </ul>	
<p><b>World Renewable Energy Conference VII</b></p>	<p>Cologne, Germany 25 June- 5 July 02</p>	<ul style="list-style-type: none"> <li>* WREC invited SG to speak</li> </ul>	<ul style="list-style-type: none"> <li>* Scientific paper prepared</li> <li>* Considering arranging additional paper input for WREC</li> </ul>	

Annex 7, p.3

<p><b>Training Workshop for CLIPS Focal Points for Eastern and Southern Africa</b></p>	<p>TBD, August/September 2002</p>	<ul style="list-style-type: none"> <li>• CCI-XIII recommended continuation of FP Training workshops;</li> <li>• CLIPS training workshops for Focal Points have been conducted in RA V and West Africa in RA I. Funds are available for the next workshop in RA I.</li> </ul>	<ul style="list-style-type: none"> <li>• Arrange date and place;</li> <li>• Arrange invitations via PRs;</li> <li>• Arrange consultant contract;</li> <li>• Arrange travel of meeting participants and C/CPO;</li> <li>• Prepare final workshop report.</li> </ul>	<p>MG is to note involvement in Capacity building activities.</p>
<p><b>Climate outlook Forum for the SADC Countries</b></p>	<p>TBD, September 2002</p>	<p>Part of the CLIPS Project Office support activities.</p>	<p>Participation of the CLIPS office or a representative.</p>	
<p><b>Joint International Congress of Biometeorology/American Meteorological Society</b></p>	<p>Kansas City, 28 Oct-1 Nov 02</p>	<ul style="list-style-type: none"> <li>* Invited by ISB last year</li> <li>* WMO/ISB general MOU</li> <li>* Kalkstein organizing climate and health sessions</li> <li>* WMO&amp; WHO focal points agreed to arrange a session on climate and diseases</li> </ul>	<ul style="list-style-type: none"> <li>* On organizing committee</li> <li>* Objectives, topics and speakers, formats</li> <li>* Arranging WMO co-sponsorship</li> <li>* Arranging invitations for speakers</li> <li>* Arranging travel of 2 speakers and C/WCA</li> </ul>	
<p><b>ICT WCASP</b></p>	<p>TBD 2002</p>	<ul style="list-style-type: none"> <li>• Formed by CCI -XIII;</li> <li>• Annex to Res. 1, para 10:</li> <li>• "...each ICT will have at least 1 meeting during an inter-session period".</li> </ul>	<ul style="list-style-type: none"> <li>• Advise on objectives, members, work programme;</li> <li>• Prepare documents;</li> <li>• Make all arrangements for the meeting.</li> </ul>	<p>Need to advise in planning for the implementation of the activities of different ET under the relevant OPAG</p>
<p><b>ET Meetings to be decided by the ICT</b></p>	<p>1 TBD 2002</p>	<p>CCI-XIII has established Expert Teams. In principle these teams are supposed to implement their activities through correspondence. However some of them will need to meet at least ones during the inter-session period. The ICT will identify which of these teams will need to meet at what dates.</p>	<p>Make all the arrangements for the planned meetings.</p>	<p>Give guidance on the schedule for the ICT meetings and on the ICT how to help plan the implementation of the activities of the Expert Teams</p>

## Annex 7, p.4

<b>2003</b>				
<b>Activity</b>	<b>Place and Date</b>	<b>Background</b>	<b>Programme responsibilities</b>	<b>Involvement of CCI (to be determined by MGM2002)</b>
<b>ICT WCASP</b>	Geneva, Switzerland, February 2003	ICT established by CCI has to meet as appropriate and as necessary during the inter-session period to review the progress of the Expert Teams.	<ul style="list-style-type: none"> <li>• Advise on members, work programmes, venue, dates;</li> <li>• Prepare documents;</li> <li>• Arrange date and place;</li> <li>• Arrange invitations via PRs;</li> <li>• Arrange consultants' travel;</li> <li>• Arrange travel of work meeting participants.</li> </ul>	
<b>Climate Outlook Forum for IGAD Countries</b>	TBD, February 2003	Part of CLIPS activities.	<ul style="list-style-type: none"> <li>• Participate in the meeting;</li> <li>• Fund part of participant's expenses.</li> </ul>	
<b>Climate Outlook Forum, Mercosur (COF for South American countries)</b>	TBD, March 2003	Part of CLIPS activities.	<ul style="list-style-type: none"> <li>• Participate in the meeting;</li> <li>• Fund part of participant's expenses.</li> </ul>	
<b>CLIPS Virtual Forum for RA I</b>	TBD, May 2003	Use of virtual Forums for Climate outlook dissemination was highly recommended at the Regional Review Meeting on Climate Outlook Forums held in Pretoria in October 2002. It is planned that a meeting be held for RA I to review the implementation of this recommendation in RA I.	<ul style="list-style-type: none"> <li>• Make all meeting arrangements and preparations;</li> <li>• Funding the cost of the meeting.</li> </ul>	
<b>ET meetings as decided by the ICT WCASP</b>	TBD, 2003			
<b>ICT WCASP meeting</b>	TBD, July 2003			

Annex 7, p.5

<p><b>Fifth International Conference on Urban Climate</b></p>	<p>Lodz, Poland, 1-5 September 03</p>	<p>* WMO co-sponsorship of series * WMO "... willing to consider co-sponsorship ..." * D/WCP is contact</p>	<p>* On organizing committee * Objectives, topics and speakers, formats * Arrange invitations for speakers * Arrange travel of 2 speakers and C/WCA * Arrange publication and distribution of Proceedings, if conference provides funding</p>	
<p><b>Climate Outlook Forum for SADC countries</b></p>	<p>TBD, September 2003</p>	<p>Part of CLIPS activities.</p>	<ul style="list-style-type: none"> <li>• Participate in the meeting;</li> <li>• Fund part of participant's expenses.</li> </ul>	
<p><b>Showcase Project: HHWS, Casablanca</b></p>		<p>* VCP Request from Morocco * Exchange of communications between Kalkstein and Morocco * Canada informally agreed to consider funding</p>	<p>* Drafted VCP Request * Ascertained Canada's willingness * Arrange funding details with TCO and FIN, with principals * Advise on contents of programme plan and meetings * Arrange meeting(s), travel * Arrange publication of report(s)</p>	
<p><b>Conference on Improving Health in a Changing Climate and Environment</b></p>	<p>Mexico or Brazil, TBD 03</p>	<p>* Proposed by Univ Arizona's Institute for Study of Planet Earth in 1999 * WMO co-sponsoring * Planning meetings in 00 and 01 * WMO/WHO/UNEP and others</p>	<p>* On organizing committees * Objectives, date and place, topics and speakers, formats * Arrange 2-3 participants and 1-2 speakers via PRs of selected countries * Arrange local PR participation on local organizing committee * Arrange translation, printing, distribution of Conf report</p>	

(TBD = To be decided)

## ANNEX 8

### OPAG on Climate Applications, Information and Prediction Services

Chair: M. Harrison (UK)  
Co-chairs: P. Bessemoulin (France), M. Donoso (Costa Rica)

#### 3.1 Implementation/Coordination Team for WCASP including CLIPS

Lead: M. Harrison (UK)  
RA I: S. Baya (Mali)  
RA II: C-K. Park (D.P.R. of Korea)  
RA III: G. Berri (Argentina)  
RA IV: R. Perez Suarez (Cuba)  
RA V: A.K. Chan (Malaysia)  
RA VI: P. Hechler (Germany)  
Experts: V. Razuvayev (Russian Federation), R. Livezey (USA),  
B. Garanganga (Zimbabwe)\*

#### 3.2 Expert Team on Research Needs for Intraseasonal, Seasonal and Interannual Prediction, including the application of these predictions

Lead: W. Landman (South Africa)  
Experts: D. Gauntlett (Australia)  
T. Downing (USA/UK)\*  
A. Navarro (Italy)\*  
J. Slingo (UK)\*  
S. Agrawala (India)\*  
Y. Resnyanskii (Russian Federation)  
Y. Wang (China)  
E. Jaime (Peru)\*  
K. Takano (Japan)

#### 3.3 Expert Team on CLIPS Operations including Product Generation, with emphasis on Countries in Need

Lead: P.F. Tibaijuka (Tanzania)\*  
Experts: W.L. Chang (Hong Kong)  
J. Pahalad (Australia)  
A. Jose (Phillippines)  
O. Baddour (Morocco)\*  
K. Masamvu (Zimbabwe)\*  
H. Lu (China)  
J. Quintana (Chile)\*

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\* Concurrence of the Permanent Representative being sought.

### **3.4 Expert Team on Verification**

Lead: S. Mason (UK)  
Experts: D. Wilks (USA)\*  
D. Krantz (USA)\*  
D. Stephenson (UK)\*  
H. Meinke (Australia)  
W. Baethgen (Uruguay)\*  
S. Mbainayel (Chad)\*  
R. Angas (Brunei)  
B. Sherstyukov (Russian Federation)  
S. Kusunoki (Japan) (To provide link with CBS)

### **3.5 Expert Team on Capacity Building**

Lead: J-P. Ceron (France)  
Experts: L. Paz Castro (Cuba)  
N. Cruz (Philippines)  
T. Ososkova (Uzbekistan)  
N. Ward (UK)  
P. Lamb (USA)\*  
J. Nkhokwe (Malawi)\*  
E. Montealegre (Colombia)\*  
Y. Tourre (France)

### **3.6 Expert Team on End User Liaison**

Lead: J. Helminen (Finland)  
Experts: M. Dilley (USA)\*  
M. Hamnett (USA)\*  
P. Hayman (Australia)  
K. Kishore (Thailand)\*  
R. Vilfand (Russian Federation)  
P. Luganda (Uganda)\*  
M. Campos (Costa Rica)\*  
H. Hordij (Argentina)\*

### **3.7 Expert Team on Operational Heat/Health Warnings**

Lead: L. Kalkstein (USA)  
Experts: T. Cegnar (Slovenia)  
A. Ouldbba (Morocco)  
J. Tan (China)  
P. Michelozzi (Italy)\*  
S. Lahiri (India)\*  
E. O'Lenic (USA)\*  
D. Ristic(Canada)

### **3.8 Expert Team on Health-related Climate Indices and their Use in Early Warning Systems**

Lead: G. Jendritzky (Germany)  
Experts: Y. Kuleshov (Australia)  
M. Thomson (UK)  
S. Kovats (UK)  
S. Nikulina (Uzbekistan)  
T. McMichael (Australia)  
L. Mbenza (Democratic Republic of the Congo)\*

A.I. Marrouf (Canada)\*

### **3.9 Expert Team on Training on Urban Climatology**

Lead: M. Plantico (USA)  
Experts: K. Gallo (USA)\*  
T. Oke (Canada)\*  
E. Jauregui (Mexico)\*  
J. Nganga (Kenya)\*  
T. Ichinose (Japan)\*  
M.J. Alcoforado (Portugal)  
B. Padmanabhamurty (India)\*

### **3.10 Rapporteur(s) on Use of Climate Indices in Various Applications Areas**

E. Akent'yeva (Russian Federation)  
M. Egaña (Chile)\*  
R. Heim (USA)\*  
E. Khlebnikova (Russian Federation)

### **3.11 Rapporteur for Climate and Agrometeorology**

I. Tarakidzwa (Zimbabwe)

### **3.12 Rapporteur for Climate and Hydrology**

S. Wang (China)\*  
O. Umpierrez (Venezuela)\*  
Representative from GEWEX  
Representative from WCP-Water

### **3.13 Expert Team on Climate Services for Energy**

Lead: M. Guda (Netherlands Antilles)  
Experts: H. Dobesch (Austria)\*  
I. Galindo (Mexico)\*  
D. Wratt (New Zealand)  
P. Ivanov (Bulgaria)  
M. Sayed (Egypt)

### **3.14 Rapporteurs on Regional Aspects of Climate Services**

P. Yaka (Burkina Faso)\*  
M. Ueno (Japan)  
G. Torres (Chile)\*  
R. Casseus (Haiti)  
A. Jose (Philippines)  
Y. Tourre (France)

## **4. Expert Teams reporting directly to the president and/or Management Group**

### **4.1 Expert Team on the Guide to Climatological Practices**

Lead: P. Bessemoulin (France)  
Experts: E. Nieplova (Slovakia)  
N. Kobysheva (Russian Federation)

**4.2 Expert members of the Intercommission Task Team on Regional Climate Centres**

Expert: J.M. Nicholls (UK)

**4.3 Ad Hoc Team on 7GCSR**

Expert: J.M. Nicholls (UK)

**5. Experts reporting to the appropriate C-OPAG**

**5.1 CCI Experts serving on teams of other technical commissions**

Experts: (To be decided)

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