

**SUMMARY REPORT OF THE EXPERT MEETING FOR
THE PREPARATION OF THE SEVENTH GLOBAL
CLIMATE SYSTEM REVIEW (7GCSR)
(Geneva, 16-19 September 2002)**

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1. ORGANIZATION OF THE MEETING

1.1 Opening remarks

On behalf of the WMO Secretariat, the Director of the World Climate Programme Department, Mr K. Davidson, opened the meeting at 09h30, 16 September, and welcomed the participants (see Annex 1). Mr Davidson noted the importance of the Global Climate System Review series, particularly the Seventh Review. He explained the historical background of the series and the fact that the Reviews provide summaries of the climatic variations in each period, and the historical perspectives. Mr Davidson thanked the participants for their commitment to this important task.

On behalf of the Commission for Climatology (CCI), the President of CCI, Mr Y. Boodhoo, also welcomed the team. Mr Boodhoo stressed the importance that the CCI and the WMO place on the Review series. He noted that Permanent Representatives refer to the Reviews in preparing information to help their governments on climate issues. He stressed the critical need to complete and distribute the 7GCSR before the 14th World Meteorological Congress (May 2003).

1.2 Election of the Chairperson

Mr A. Klein Tank was elected Chairman of the meeting.

1.3 Adoption of the Agenda

The provisional agenda was reviewed and adopted with several changes (see Annex 2).

2. PREVIOUS EDITIONS OF THE GLOBAL CLIMATE SYSTEM REVIEW

2.1 History, Contents and Purpose

The Chief of the World Climate Data and Monitoring Programme Department, Mr P. Llansó, summarized the history and the evolution from the first Review through the 6th Review. He noted the ways the Reviews covered the summary and chronology of climatic events, and the special topic information that introduced concepts and defined terms for the readers (see Annex 3).

2.2 Guidance on content and structure, also noting the Report of the 1996 Expert's Meeting

- Mr Llansó reviewed the major decisions and agreements reached by the team that prepared the 6th GCSR. The major issues that had affected the production of the Review were the standardization of graphics formats; the 'peer' reviewing process; and the cost. The Team was informed of the agreements that had been reached concerning details on standard displays of maps and time series plots, on chapter contents and responsibilities, and on the schedule for production of the 6th Review.

3. CHAPTER RESPONSIBILITIES AND CONTENTS OF THE 7GCSR

3.1 Contents

The team agreed that the table of contents of the 6GCSR provided a good sequence to provide the information, and decided to include most of the same chapters. It welcomed the President's approval that maximum use be made of existing global climate assessment information, noting the need to provide authoritative information within the short time available for preparation of the 7GCSR. The team agreed that the period of coverage would be June 1996 through December 2001.

3.2 Review of materials provided by participants

The following participants presented materials, noted their relevance to the chapters that had been agreed to already, and proposed chapter sub-topics and special focus topics, which were reflected in the final determinations and are shown in item 3.3:

Mr J. Lawrimore presented on the Climate Assessments prepared under the leadership of the National Climatic Data Center-Asheville and the Climate Prediction Center (NOAA) for the period 1996-2001;

Mr E. Palacios presented the '97-'98 ENSO monitoring analysis completed for a number of South American countries;

Mr H. Satoda described information available from various reports, particularly regarding updating Chapters 2, 6, 7, and 11 in 6GCSR;

Mr A. Watkins showed products and described analyses particularly within the Southwest Pacific area;

Mr D. Parker presented the climate assessment information contained in issues of Weather, with particular emphasis on presentation of temperature and precipitation information relevant to Chapter 3;

Mr A. Mokssit described the work of the CCI Expert Team on Climate Change Detection, Monitoring and Indices, and reported on the workshops that had been conducted in Africa, the Caribbean, and the Asia/Pacific regions;

Mr P. Llansó described the topic of Atmospheric Angular Momentum and its relevance to the topics and objectives of the 7GCSR;

Mr A. Klein Tank presented the European Climate Assessment, noting in particular the use of standardized Climate Change Detection indices and the associated ability to view standardized analyses of trends across continents;

Mr W. Grabs, Chief of the Water Resources Division, noted the need for strengthened linkage between climate and water resource issues and communities.

The Team reached the following consensus on the Table of Contents:

- Keep Droughts and Floods as separate chapters, but provide an introduction on the hydrologic cycle that links them
- Drop the chapter on Oceans, but keep and enhance the coupled atmosphere/ocean information in Chapter 2
- Re-name Chapter 2 "The Global Ocean-Atmosphere System"

- Delete “Record Warmth” from title of Chapter 3
- Keep “North American Monsoon” sub-topic in Monsoon chapter
- Address “Storm Surges” as a sub-topic or special focus topic in Storms chapter, and include trend information where available
- Add a special topic piece on Climate in Cryosphere (CLIC) project of WCRP
- Keep Biological Systems chapter if a Co-ordinating Lead Author is found, and address primary production index and phenological climate information
- Keep Chapter 11

3.3 Additional materials needed

The Team concluded the following special focus topics should be prepared:

Chapter 2: update on CLIVAR; TOGA/TAO monitoring array; Impacts of ENSO, with regional information from E. Palacios

Chapter 3: GCOS Monitoring Principles; CCD indices, global, and regional (Africa) results

Chapter 4: Hydrological cycle

Chapter 5: Yangtze Flooding

Chapter 6: N.A. Monsoon

Chapter 7: Storm surges; US Hazards Assessment; Hurricane Mitch

Chapter 8: CLIC

Chapter 9: Phenological climate information

The final Table of Contents is contained in Annex 4.

3.4 Structure

The team concluded that the structure should be similar to the 6GCSR. It should contain core global information, and regional information. The team agreed there should be an Executive Summary, composed of the highlights plus summarizing text and diagrams, and that references should note where the relevant detailed information is contained within the main chapters. The team concluded that each sub-topic title should be descriptive, i.e., “Australia - the end of a very long drought”.

The team also made the following decisions:

- It was agreed that whilst literal duplication of the content of the Annual Statement and Biennial Reviews must be avoided, some overlapping of content will be natural. It was agreed there is a need for both, and many incidents of praise for the Biennial Review were noted.
- It was agreed that existing, peer-reviewed text and graphics should be used for core portions of most graphics.
- It was agreed that a wide geographic survey will continue to be reflected in the Review.
- It was agreed that the Chair must work closely with designers and publishers on layout, text cutting/adding, colour, selection of photographs, etc.

3.5 Lead responsibilities

Lead responsibilities for contents of all chapters are shown in Annex 5. The Chair will assemble the document contents and Chapter 1 – Executive Summary. In addition, the team made the following decisions:

- The Foreword will be written by WMO Secretariat/Secretary-General.
- The Executive Summary will incorporate the half-page texts and graphics that will be provided by each Chapter Co-ordinating Lead Author, and the highlights charts from the respective WMO Statement(s) on the Status of the Global Climate.
- It was noted that Co-ordinating Lead Authors may seek additional material. However, it was stressed that the content and deadlines for each chapter remains the responsibility of the respective Co-ordinating Lead Author.

3.6 Review process

The team agreed that the review process should include the CCI OPAG Chairs and Co-Chairs and the CCI President and Vice-President. It should also include Directors of relevant WMO scientific and technical Programmes. It recommended that, in consideration of the very short time available, the CCI President be requested to review the entire document, and that the remaining reviewers be asked to review those topics directly related to their responsible areas within WMO/CCI Programmes.

The team agreed that web sites and ftp sites should be established to enable the in-draft chapters to be informally reviewed by Team members, to enable discontinuities and inconsistencies in format or content to be addressed quickly. It agreed that Contributing Authors should communicate promptly and directly with their respective chapters' Co-ordinating Lead Authors on all issues, and that the Co-ordinating Lead Authors should communicate directly with the Chair. Content review issues will go back to the Co-ordinating Lead Authors, and layout issues will go back to the Chair.

The team agreed to the following process for their internal exchanging of drafts and contributions:

- Each Chapter Co-ordinating Lead Author (CLA) will post his drafts to a chapter web site and ftp site
- The chapter web/ftp site will be established by the CLA, or, at the request of the CLA will be established at KNMI
- The CLA will inform the other members of the team of the web/ftp site's address, through e-mail; and,
- The CLA will inform the Chair and the Secretariat
- The World Climate Data and Monitoring Programme Division will establish a web portal-page, with a link to each Chapter's web site
- Each CLA will ftp to the Chair all figures for the chapters
- The chapter drafts should be in the following formats if possible, with sufficient instructions so that the Chair and the publishing office can assemble the text and graphics correctly:
 - Single column text with minimal formatting
 - Graphics in .eps format
- It is desirable, but optional, to also include a separate, combined document of the chapter, with the graphics placed where the author wants them in the body of the text
- The additional inputs to chapters' regional sections must be sent to the CLAs by 04 October 2002

The Secretariat will ensure the appropriate internal review is performed. It noted that all review must be completed by 8 January 2003.

4. **Further information on publication**

Mr C. Reynolds, Chief of Publications, described the WMO standards for preparation of documents that should be followed to the extent possible, to ensure the highest quality publication (see Annex 6).

5. **Timescales**

The team agreed to the following schedule:

- Regional inputs submitted to Chapter Co-ordinating Lead Authors by 4 October 2002
- Chapters drafted and delivered to Chair by 18 October 2002
- Document assembled and delivered to Secretariat by 30 November 2002
- Layout distributed to Chair for review by 8 January 2003
- 7GCSR being printed by 30 January 2003
- 7GCSR distributed by 14 March 2003

6. **Other Business**

The team worked in sub-teams and independently to develop each chapter's framework, assemble material, and identify additional topics and authors that should be contacted. The Chair noted that the excellent Secretariat facilities enabled the members to make considerable progress on their individual tasks. They used the Internet and ftp extensively to acquire analyses and articles, graphics, and text, and to contact additional experts to request inputs or advice.

The team members reported on the status of work at the end of the meeting. All CLAs reported that they had made significant progress. Some had assembled all the graphics they intend to use, and most of the text. All CLAs expressed confidence that they can complete their chapters within the deadline.

The consensus of the team was that the climate-related information in the chapters on Monsoons, Biological Systems, and on Oceans can be adequately covered in one or more of the other chapters. The Chair agreed that if experts volunteer to be the CLA(s) for any of those three chapters by 27 September 2002, those chapters will be included in the 7GCSR.

7. **Closure**

The meeting concluded at 12h00, 19 September 2002.