

WORLD METEOROLOGICAL ORGANIZATION



**EXECUTIVE COUNCIL WORKING GROUP
ON
CLIMATE AND RELATED WEATHER, WATER
AND ENVIRONMENTAL MATTERS**

Second session

Geneva, 11-13 February 2009

REPORT

**EXECUTIVE COUNCIL WORKING GROUP ON CLIMATE
AND RELATED WEATHER, WATER AND ENVIRONMENTAL MATTERS**

SECOND SESSION

GENEVA, 11-13 February 2009

1. ORGANIZATION OF THE SESSION

1.1 Opening of the session

The second session of the EC Working Group on Climate and related Weather, Water and Environmental Matters (EC-WG-CWE) was opened at the WMO Headquarters, Geneva, at 9:30 a.m., on Wednesday 11 February 2009.

Professor Hong Yan, Deputy Secretary-General welcomed the participants to the WMO Secretariat. He noted that since last year, the UN system has undergone very rapid changes and progress in the global climate and climate change related activities. One of those areas is UN Delivering as One, which has grown to a major area of activity. He expressed pleasure that within the initiative, climate knowledge as the foundation for development of an effective response to the climate change challenge was recognized, and WMO, along with UNESCO would jointly convene this cross cutting area that includes science, assessment, monitoring and early warning

Professor Hong Yan added that the discussions at COP14 of the UNFCCC, in Poznan, advanced international cooperation on a future climate change regime and brought progress on key issues toward COP15. He emphasized that the year 2009 would be a hallmark for WMO's climate-related activities mainly due to the World Climate Conference-3, which will be a major event for the WMO community. He informed the session that the UN General Assembly, in its 63rd session in November 2008, referred to WCC-3 in a Resolution on Sustainable development: protection of global climate for present and future generations of mankind. He expressed hope that the expected outcomes and legacy of the conference in the form of Global Framework to support adaptation would remain for generations to come.

Dr Noorian, the First Vice-President of WMO and chairman of the EC-WG-CWE, welcomed the members (particularly the new members), to the second session of the Group. He noted that progress has been made after EC-LX session, especially refocusing on the Climate Agenda and the WMO initiative to support adaptation. He remarked that a number of developments such as the release of IPCC Fourth Assessment Report (AR4), negotiations on a post Kyoto regime for climate change and global challenges such as food as well as energy security, have given new momentum and added to the pace of climate activities.

He expressed hope that the World Climate Conference-3 would highlight the key role of science and climate knowledge and provide a unique opportunity for WMO to contribute to the global efforts on climate activities.

Dr Noorian also put on record his gratitude for services rendered by Dr Nyenzi, the outgoing director of Climate Prediction and Adaptation Branch, during his association with the work of the Group.

The full list of participants in the session is listed in Annex 1.

1.2 Adoption of the agenda

The session adopted the agenda and set the working hours of the meeting. The annotated agenda is attached as Annex 2.

2. REVIEW OF ACTIVITIES ARISING FROM THE FIRST EC-WG-CWE MEETING AND EC-LX SESSION

The EC-WG-CWE reviewed actions arising from the decisions taken at its first meeting and EC-LX. The session further noted that the Steering Committee on Climate Activities has been established within the Secretariat to serve as an internal coordination mechanism to deal with climate related issues including interaction with other UN agencies and follow up relevant decisions made by EC and other constituent bodies.

3. REVIEW OF MAJOR WEATHER, CLIMATE AND WATER RELATED EVENTS AND THEIR OUTCOMES

The Group was briefed on a number of major events which have taken place in 2008. A brief account of those events is as follows:

3.1 World Modeling Summit for Climate Prediction

The session noted that World Modeling Summit for Climate Prediction Summit was jointly organized by the World Climate Research Programme (WCRP), the World Weather Research Programme (WWRP) and the International Geosphere-Biosphere Programme (IGBP) and brought together, for the first time, a diverse set of experts from the weather, climate and environment community. The objective of the Summit was to develop a strategy which revolutionizes the prediction of the climate to better address global climate change, especially at regional scale. The Summit identified four major priority areas:

- (1) Developing models that represent realistically all aspects of the climate system;
- (2) Confronting these models with observations to evaluate their adequacy, accuracy and shortcomings;
- (3) Obtaining computational capabilities that are three to four orders of magnitude greater than the best capabilities available today; and
- (4) Establishing a world climate modeling project that will focus on the 'seamless (seasonal to decadal) prediction approach' which unifies weather and climate science so that the insights and constraint of one can be brought to bear on the other.

The Group recalled that EC-LX approved the formation of the "EC Task Team on Research Aspects of an Enhanced Climate, Weather, Water and Environmental Prediction Framework", to be called the "Research Task Team" (EC RTT). The charge of the Task Team can be concisely stated as follows:

Propose a strategy, in the form of a report, to EC-LXI meeting in June 2009 that strengthens prediction research and related scientific assessments in support of enhanced climate, weather, water and environmental services in the next decade.

(Progress report of EC-RTT is discussed in item 7.)

3.2 Review of WCRP

On the recent review of the World Climate Research Programme (WCRP), Dr A. Busalacchi, chairman of the Joint Steering Committee made a presentation entitled 'Moving Towards Future Horizons'. He remarked that WCRP has earned renown for excellence over its lifetime of almost 30 years and that this excellence provided a strong foundation for the future. He briefed the session on the recommendations of review meeting which WCRP and ICSU had reached in 2008. Among a number of issues, he emphasized on:

- Societal needs of the research that will underpin mitigation strategies and climate adaptation;
- societal and policy relevance that will sustain the Programme in the long run and make the necessary resources easier to acquire;
- Implementation plan for activities emerging from the Strategic Framework in 2005 as well as the observations of accelerated climate change.

The Group noted that WCRP has multiple mechanisms for partnerships, moving from basic research to applied research. It coordinates international efforts in bottom up approach and provides interface. Nevertheless, it was noted that the user groups should be defined more clearly. The session noted that in line with its long term plans WCRP input to WCC-3 would be furthering seamless research on seasonal/interannual to decadal timescale prediction through centennial prediction timescale, with an emphasis on supporting the transition from basic research to the applications domain. It further took note that presently the accuracy for decadal prediction does not meet the needs for policy advice and further research efforts are being made to address this. The Group was informed that the upcoming JSC meeting will focus on implementation of the WCRP plan in two phases, namely, from now to 2013 and post 2013 period.

The Group took note, with appreciation, of WMO CCI, WCRP, IPY Workshop on CLIPS in Polar Regions, held at St Petersburg, Russian Federation, from 8 to 11 September 2008 and proposed that the recommendations of the workshop on research be taken up for consideration by JSC-WCRP.

3.3 WMO's Participation at COP14, Poznan, Poland

The Group noted that WMO has participated in the fourteenth session of the Conference of Parties (COP-14) to the UNFCCC, held in Poznan, Poland, in December 2008. Among a number of activities, WMO organized an informal meeting for representatives from NMHSs. The main objectives of the meeting were to share information and introduce the Position Paper that was prepared by WMO for COP14. The EC Working Group noted that follow-up action should be taken on items identified in the informal meeting with delegates from NMHS's.

The Group was informed that WMO had also organized three side events on "*Global observations for climate prediction and adaptation*" jointly with ESA; "*Supporting In-Country Programming on Adaptation*" jointly with UNDP and seven other UN agencies; and "World Climate Conference-3" jointly with Government of Switzerland. An exhibition booth was operated during the conference with support from the National Meteorological and Hydrological Agency of Poland. The WMO Secretary General attended the conference during the second week and participated in the Round Table discussions organized by the Chief Executive Board (CEB) where eight heads/deputy heads of UN organizations participated. The Round Table was chaired by the United Nations Secretary General. The Secretary General also addressed a press conference.

3.4 Commission for Hydrology session

The ECWG-CWE took note that the Thirteenth session of the Commission for Hydrology was held from 4 to 10 November 2008 in Geneva. The Commission decided to adopt the following four thematic areas as a priority for the work of the Commission during the next intersessional period:

1. Quality Management Framework – Hydrology (QMF-Hydrology)
2. Water Resources Assessment
3. Hydrological Forecasting and Prediction
4. Water, Climate and Risk Management

The Group was informed that the CHy established the Advisory Working Group of CHy, acting also as the Steering Committee for the Hydrological Operational Multipurpose System (HOMS) and decided to continue the existing Open Panels of CHy Experts (OPACHE) and update them to cover the above theme areas.

The president of CCI noted some items of common interest such as water, climate and risk management; climate change detection; data homogenization of long term time series; data rescue; implementation of new Climate Data Management and dealing with uncertainties in its future work programme. The Group took note that CCI and CHy have opened a dialogue, and that the CCI Management Group in March 2009 will, inter alia, explore and discuss details of an arrangement to replace WCP-Water.

The Group noted that based on the results of recent CHy session; there were also opportunities for a number of the activities under WWRP and WCRP to contribute to a joint Technical Commissions' project on hydrological forecasting. It further proposed that WMO initiate actions to examine the possibility of further interaction and partnership with other UN bodies, namely IOC of UNESCO.

3.5 World Water Forum 5

The Group was informed that the World Water Forum, an initiative of the World Water Council, was the main international event on water, which seeks to enable multi-stakeholder participation and dialogue to influence water policy making at a global level, in pursuit of sustainable development. It noted that the 5th World Water Forum will be held in Istanbul, Turkey in 16-22 March 2009.

The World Meteorological Organization (WMO) and the International Association for Hydrological Sciences (IAHS) have been identified to jointly coordinate sessions at the WWF-5 on "Data for all". The sessions under this Topic aim at stressing the need for adequate data and information, highlighting the existing frameworks and monitoring regimes used to collect and compile water-related data and review their current state; demonstrate the potential of new and future technology to improve access to and management of data and information; and promote cooperation for collection, dissemination and exchange of water-related data and information. WMO; jointly with UNEP, is also the Theme leader of the topic "Global Change and Risk Management" and will be organizing one session on "Managing Water Related Risks in Changing Climate".

3.6 International Symposium on Climate Change and Food Security in South Asia

The session noted that WMO along with FAO, ESCAP, Ohio University and the Government of Bangladesh had organized an International Symposium on Climate Change and Food Security in South Asia, in Bangladesh, in August 2008.

The Symposium identified the following key recommendations, knowledge gaps and opportunities for the design of programmes aimed at minimizing short- and long-term vulnerability of the region to climate change:

- Create a climate change and food security network in South Asia and a South Asia Climate Outlook Forum;
- Stimulate multi-disciplinary research in climate change and food security in South Asia and identify effective mitigation and adaptation options, including carbon sequestration in different ecosystems;
- Initiate and strengthen cooperation among academic and research institutions, international organizations, and NGOs to provide opportunities for strengthening institutions, human resource development and capacity building;
- Develop innovative financial mechanisms to scale up technical and financial support for adaptation efforts;
- Promote mitigation and adaptation options through payments for co-system services such as carbon trading;
- Strengthen regional institutional and policy mechanisms to promote and facilitate implementation of location-specific adaptation and mitigation practices;

Taking into consideration that FAO had organized a high level meeting in Rome, in September 2008 on climate change and food security, the Group suggested that WMO initiate actions to probe into requirements of other UN bodies, namely FAO, and place the experience of its Members at the disposal of UN partners.

The Group noted that WCC-3 would produce similar outcomes on food and agriculture with a focus on adaptation to climate change.

Noting the relevance of ClimDev project to food security in Africa, the session noted that it would be noteworthy to enhance exchange of information on this initiative. The Secretariat made a presentation under item (9) on ClimDev Africa.

3.7 GCOS Activities and Issues

The session was briefed by the Chairman of the GCOS Steering Committee on GCOS activities including the 2007-2008 Annual Report to its sponsors and the outcome of the 16th session of GCOS Steering Committee, (Geneva, October 2008) which included 37 specific actions. It noted that the chairman of GCOS Steering Committee reported to the 29th session of the UNFCCC SBSTA at COP14 and placed emphasis on seven GCOS related issues:

- Support for GTOS and CEOS initiatives on GCOS Implementation,
- Preparation of a comprehensive Progress Report to SBSTA-30 on implementation of GCOS in support of the UNFCCC,
- National coordination arrangements for GCOS,
- The importance of improved national climate observing networks for adaptation,
- Initiatives for strengthening climate observations in developing countries,
- Progress on 'Carbon Tracking' relative to the needs of UNFCCC,
- Progress towards closer alignment of GCOS and Climate Societal Benefit Areas of GEOSS.

The ECWG-CWE noted that GCOS contributed to systematic observation, knowledge generation and user-oriented services in addition to climate change assessment and policy development. It recommended that, among a number of other issues, the outcome of WCC-3 could emphasize observation and research and facilitate support for the further strengthening of the key components of GCOS (GOS, GAW, GUAN, GOOS and GTOS in particular). The Group agreed that the threat of deteriorating observation network and the need to fill the existing gaps which needs investment for improvement should be highlighted. It recommended continuing WMO support for the work of the GCOS Steering Committee, Panels and Secretariat in advising the GCOS co-sponsors (WMO, IOC, UNEP or ICSU) on strategy for the accelerated implementation of GCOS.

The Group noted that the hydrological community had yet to fully recognize the paradigm that the water and climate community was evolving as a key user of hydrological information as a component of global modeling.

The Group especially highlighted the need for strengthening hydrological observations. It also supported the development of soil moisture as an ECV and encouraged coordinated soil moisture observations, both in-situ and space-based. The Group noticed that in terms of coordination at national level, GCOS Steering Committee had made a strong recommendation to the GCOS sponsors and emphasized a more harmonized action.

3.8 29th Session of IPCC

The Group noted that the 29th Session of IPCC took place in Geneva from 31 August 2008 to 4 September 2008 and commemorated the 20th anniversary of the Panel. It was informed that the Panel had produced a Technical Paper on Climate Change and Water. It further noted that the IPCC has enhanced AR4 outreach and policy advice and held consultations on «the future of IPCC», in early 2008. The 29th Session of the IPCC elected a new Bureau and made preparation of the IPCC Workplan for the period of 2008-2014. The Group took note that according to agreed workplan, the Panel will conduct the next Assessment in 2013-2014, while maintaining present WG structure. The Group also noted that the IPCC will issue a Special Report on renewable energies in 2010 and a possible Special Report on climate change and extreme events.

The AR5 is to be finalized in 2014, with a target date of early 2013 for the release of the first Working Group report. The 30th session of the IPCC will take place from 21 to 23 April 2009 in Antalya, Turkey.

The 29th Session also considered reports on preparation of IPCC activities for the Fifth Assessment cycle (AR5), advice on the strengthening of the IPCC Secretariat, in order to better carry out its duties during the Fifth Assessment period, current situation with regards to development of new scenarios, in particular the identification of benchmark scenarios (or representative concentration pathways), and a Special Report on managing risks of extreme events to advance climate change adaptation.

On the issue of extreme events, the session was informed that the Joint CCI/CLIVAR/JCOMM Expert Team had organized a Workshop on 'Extremes in a Changing Climate' and is developing a guidance document which will include current methods to assess return period of climate extremes in a changing climate.

The session noted that participation of GCOS as an observer in the IPCC sessions, has been approved by the Bureau and still has to be endorsed by the next Plenary, according to IPCC policy. The Group took note of action 25 of GCOS Steering Committee which emphasized that IPCC AR5 should identify climate observing needs. It recommended that IPCC be invited to address the issue of identifying observing needs in addition to research requirements, as part of future assessments. To that end, IPCC will be invited to participate in the review of the

GCOS-92 Implementation Plan to help identify observation needs for the AR5 and beyond. The Group proposed that IGBP's involvement in that process would be productive as well.

4. PROGRESS IN THE NEW COORDINATION MECHANISM 'UN DELIVERING AS ONE'

The EC-WG-CWE was briefed on WMO's involvement in the new UN system-wide coherent approach on climate change activities which has brought new level of coordination among UN agencies. It noted that WCC-3 would provide a unique forum for the UN System to focus on climate knowledge base. To this end it recommended that the Executive Council move forward on the 'knowledge-base' theme within the initiative of UN Delivering as One and take advantage of the opportunity given to WMO and UNESCO to show that:

- WMO is naturally structured to support climate knowledge through support for the observation and research roles of GCOS and WCRP respectively, within the UN system;
- WMO and UNESCO are in a unique position to promote the climate knowledge initiative and to call on other agencies and sectoral organizations to work with them on the application of climate information and services in the various impact and adaptation sectors.
- WCC-3 will provide an important Forum to endorse and support the generation and application of climate knowledge and to transmit the outcome of this initiative to COP-15.

5. REVIEW OF THE WCP AND CLIMATE AGENDA

The Group took note of document 5 entitled 'Review of WCP and Climate Agenda' prepared by the Secretariat. It noted that the document provided a useful overview and historical background and inputs for the strategic reorientation and evolution of the WCP as well as the Climate Agenda. The document had been made available for e-discussion before the meeting. After a presentation by the Secretariat, the Group elaborated on the existing gaps in providing user-driven climate information, and key elements of the new WMO initiative to support adaptation to climate variability and climate change.

The Group recalled the historical significance of the WCP as well as the Climate Agenda and noted that WMO was the only leading Organization which implemented them at a time when no other major Organization had developed a strong interest in climate related issues. It noted that WCP was enormously successful, since its operation triggered global attention on GHGs and contributed to the establishment of IPCC, UNFCCC, CLIPS initiative, global climate monitoring system, RCOFs and so on.

The Group considered that the re-orientation of WCP/Climate Agenda should primarily aim at establishing national climate services (which are in many cases located within NMSs) with an emphasis on user interaction. The Group further noted that WCP fostered the effective application of climate knowledge and information for the benefit of society and the provision of climate services by NMHSs, mainly in the areas of climate and health, urban climatology, climate and energy, climate and tourism and Climate Information and Prediction Services (CLIPS) project. The Group noted that expected outcomes of WCC-3 in the form of Global Framework for Climate Services would refocus on the WCP components of WCDMP and WCASP: the climate service delivery where the elements of CLIPS would form the building blocks.

The Group noted that the proposed Global Framework for Climate Services (described in doc. 8) could replace the two service-oriented components of the WCP but it needed to leave open the way for UNEP to reconstitute the WCIRP as part of the new WCP, if so desired.

The Group believed that IACCA's failure, among other factors, was due to lack of sufficient secretariat resources and budget support provided by WMO and other partner agencies and the hiatus that resulted from delays in proceeding with early planning for a third World Climate Conference in the late 1990s. The Group recommended not to revitalize IACCA and that WMO should concentrate on the 'UN- Delivering as One' initiative to coordinate climate issues.

Noting the ideas expressed during the session and realizing the interdependence of various elements, the Group suggested deferring final decision on the future of the WCP and the Climate Agenda until after the WCC-3. The Group, however, clarified that its report to the EC-LXI should foreshadow the likelihood that the Climate Agenda would finally be retired and replaced by the Global Framework for Climate Services, the new initiative that would be considered by EC at its session in 2010 as an expected outcome of the WCC-3. The Executive Council could then take a final view and forward the proposal to Cg-XVI for its consideration and approval in 2011.

6. UPDATE ON PREPARATIONS FOR WCC-3 (For Information Only)

The Group took note of the core objectives of WCC-3, agreed by International Organizing Committee of the Conference (WIOC):

- Enhance understanding and responding to the risks to and opportunities for socio-economic development posed by climate variability and change;
- Improve climate information for the development of natural resources, protection of lives, livelihoods and property;
- Provide user-defined climate and climate-relevant information (including products that integrate climate with socio-economic or environmental information) at global, regional, national, local and sectoral levels in a timely, understandable and easily available manner in order to strengthen the adaptive capacity of communities vulnerable to climate variability and change ;
- Promote the confident and frequent use of climate and climate-relevant information for economic efficiency, social well-being and development of policies for sustainable development.

The session was briefed on latest arrangements and developments toward organization of WCC-3 by the Secretariat of the Conference. Recognizing the overall focus of WCC-3 on climate services, the Group stressed the critical contributions of an integrated system of climate, weather, water and environmental prediction models towards this objective, as further discussed under Section 7 of this report.

It also suggested that the Secretariat of the Conference of WCC-3 should make white papers available on the web for community outreach. It further took note that since WCC-3 was intended to be a conference of the Heads of States, giving emphasis towards 'climate information' would provide a more attractive focus than 'climate prediction' which is a more technical and scientific subject.

The Group believed that time for inviting Heads of States is running out and the Secretariat should make use of every opportunity to accomplish this difficult task. To this end, it suggested that the Secretariat consider disseminating such invitations through the United Nations Secretary General or assign a high official dignitary to serve as special envoy of the Conference to promote participation of the Heads of States or officials of high rank. In the

meantime, the session expressed its appreciation to the Swiss Government which was taking actions to issue invitations to other Governments.

The Group considered that any brochure, public material and papers developed for the Conference should use simple and easily understandable terminology to ensure wider attention to provide a credible vision, purpose and intended outcome of the WCC-3. Furthermore, the session was informed that a book would be published by an independent publisher ahead of the Conference to depict success stories in the area of weather and climate. The Group advised that it should be made clear that the production of this book is independent of the Conference.

The Group also discussed the desired outcome of the Conference (item 8). It endorsed the Global Framework for Climate Services as the potential outcome.

7. REPORT ON THE PROGRESS MADE BY THE EXECUTIVE COUNCIL TASK TEAM ON RESEARCH ASPECTS OF AN ENHANCED CLIMATE, WEATHER, WATER AND ENVIRONMENTAL PREDICTION FRAMEWORK (EC RESEARCH TASK TEAM EC-RTT)

The session was briefed by Dr Béland, president of CAS and representative of EC Research Task Team (EC-RTT) on the outcome of the meeting of the Task Team. The Team was mandated to propose a strategy in the form of a report that strengthens prediction research and related scientific assessments in support of enhanced climate, weather, water and environmental services in the next decade to EC-LXI in June 2009. The Group noted that the report of the Task Team should include a strategy and recommendations for effective actions and mechanisms to maximize the impact of research on the development of an end-to-end service delivery and capacity building system by WMO and its Members as well as provide an assessment of ways for better coordination of the advisory role of Technical Commissions (e.g. CAS) and other bodies supported by WMO (e.g. JSC-WCRP) on prediction research.

The first meeting of EC-RTT took place from 30 to 31 October 2008 in Geneva to develop a report outline, discuss content and organize writing assignments. The second meeting was held in Geneva, on 9 and 10 February 2009 to discuss the recommendations of the final report to be presented to EC-LXI. The Group was informed that the Task Team was preparing a strategy in the form of a report to EC-LXI to strengthen prediction research and related scientific assessments in support of enhanced climate, weather, water and environmental services in the coming decade. The Team has proposed that the strategy should take into account recommendations of:

- (i) The World Modeling Summit on Climate Prediction;
- (ii) The white paper developed by the weather and climate research communities of WWRP, WCRP, and IGBP on the socioeconomic and environmental benefits of a revolution in weather, climate and earth-system prediction; and
- (iii) The white paper developed by the climate and weather research community on a seamless approach to weather/climate prediction and services delivery.

The ECWG-CWE noted that the work of the Task Team would lead to better coordination in weather-climate and water research domain and provide improved products for decision-making.

The Group noted that it will be beneficial for the Task Team to take into account hydrological research being carried out in a variety of fora that aligns with their activities. It noted that such activity should avoid duplication, as research in hydrology essentially falls within the mandate of UNESCO. The Group was informed that CHy would consider research issues

as they affect the operations of NMHSs over both short and long term time scales, including extreme events. To this end it noted that the CHy AWG will meet 16-20 February 2009 to scope out its work plan. The president of CHy advised that while the work of the research community contained much promise for improved operations, in order to avoid damage to operational credibility the user community should be informed of the state of the science.

The Group noted that the user demands are important drivers of WMO research activities. It further took note that with respect to food security (which has appeared as an emerging global issue); seamless approach could play an important role in planning agricultural practices for high value crops.

The Group requested the Secretariat to ensure that the recommendations of the EC Research Task Team be presented to the WCC-3 as part of the Overall Framework (ref. item 8(i)), given that the successful implementation of the outcomes of WCC-3 will rely upon a unified approach to weather, climate, water and related environmental predictions.

8. WMO INITIATIVE TO SUPPORT ADAPTATION

Presentation on the Global Framework for Climate Services, the proposed outcome of WCC-3 was made. It was noted that EC-LX in 2008, had endorsed the concept of a WMO initiative to support adaptation to climate variability and change, and had requested the Secretariat to further develop the concept. Further, WMO has been recognized as a provider of climate inputs for adaptation and a contributor to the UN 'delivering as one' initiative. Given these factors, the conceptual document on adaptation has evolved into a possible outcome of the upcoming World Climate Conference-3 (WCC-3), under the present title 'the Global Framework for Climate Services'. The document has been developed in its present form under the guidance of the WIOC high-level subcommittee (HLSC). It is expected that once the initiative is endorsed by WCC-3, an implementation plan would be developed. Consultation with partners will be undertaken before the conference to develop an ownership in advance of the event. The WCC-3 interlinkages committee will help with this outreach effort.

It was noted that, as understanding of the climate system grows and society becomes more aware, there will be increasing demands for climate information, products and services. While there have been considerable advances in research, technology, knowledge, methods and tools, and reasonable success in projects such as CLIPS, and through Regional Climate Outlook Forums (RCOFs) in certain parts of the world, many challenges remain to be addressed. The existing components of the framework need to be strengthened. Improvements are needed in skill and service delivery. In particular, efforts must be made to ensure that the users can effectively assimilate this information and use it in decision-making for adaptation and for sustainable development.

Building on the established (but not yet 'completed') foundations of Observations and Monitoring, and Climate Research, two new components of the framework are proposed. The first would be a Network for Climate Services (NCS) to put in place and strengthen operational capacity to deliver climate services throughout the world. The elements of the NCS have only partially been developed around the world. Being well-developed at global level, they require considerable development at regional level, and increased capacity at national levels, particularly in developing countries. The second major thrust is User Interface Mechanisms (UIM) (a working title at present). The UIM is partly shaped, and requires extensive work. UN agencies, regional development institutions, the private sector, NGOs, etc, are already engaged within their own mandates, and must play a strong role in the User Interface Mechanisms. At present, however, there is no real mechanism to understand what users really need in terms of climate information, nor is there a sufficient mechanism to help the users get the most from what information is already available. It was noted that the needs of user communities are very complex.

WMO's major contribution in support of adaptation to climate variability and change is in three components; Observations and Monitoring; Climate Research; and the NCS. While partnership is essential for these components (particularly with various 'implementing' agencies), interaction with user sectors, and with the policy and decision-making community will require the support of various financing and development agencies.

The EC-WG-CWE endorsed the concept of the Framework as sound, and felt it was the right approach as the possible outcome of the upcoming WCC-3. There were a number of recommendations to improve the Concept Note, as follows:

- (a) The Concept Note should describe the various ways through which the information will be provided for user needs including for example, through a WMO 'portal', which would raise WMO's visibility in the adaptation efforts (the PCMDI web site is a good example of data and information sharing). It was noted, however, that in some countries, a commercial value is placed on data or products, which will require formal agreements.
- (b) The possible role for WMO RCCs to engage in adaptation studies, should this be the wish of the countries in the region, should be added. It was noted that in some countries, climate service provision and adaptation are dealt by the same organizations or institutions. As such, WMO RCCs may not be required to engage in adaptation studies, although they will be strongly urged to work in collaboration with relevant adaptation and development centres.
- (c) The Concept Note and its language should be simplified where possible.
- (d) The section on the NCS should be much stronger – perhaps under the title World Climate Services System, and it could provide a clearer description of the role of the NMHSs. This could include a mention of the possible development over the next years, as countries increase their focus on climate change and adaptation, of National Climate Centres/Services (which may, or may not, be established within existing NMHSs). Following these discussion, the Group agreed that the word 'system' overall reflected the intent of the network.
- (e) It was noted that from a WMO perspective, it would be logical to put the elements of foundations (observation, monitoring, research) first in the Concept Note, but the Group recognized the needs of partnering agencies to see the new components from WCC-3 as the first focus (particularly the area in which they will show increased leadership).
- (f) With respect to the foundations (observation, monitoring, research), the document should clearly indicate that these are not 'complete' – there are gaps in our present capabilities for Observations and Monitoring, and for Climate Research. These must be addressed as part of the framework implementation.
- (g) Reference should be made (briefly) to the contributions of the WCDMP (e.g. CLICOM) and the WCASP including CLIPS, as this Framework, in part, is the global extension of CLIPS, which has demonstrated its value for the past 10 years of field testing. It was noted that the CLIPS project has a sunset date of 2015.
- (h) The component on research needs to be strengthened, to include not only the new efforts for seamless prediction, but to include a plan to put in place globally, and effectively, the existing prediction elements. Add in the major refocusing of WCRP to fill the gaps.

- (i) It was also pointed out that at the last EC (EC-LX, 2008); the WMO Initiative in support of adaptation was in parallel to another initiative on research and prediction. The Group considered that these two initiatives be brought together within the Global Framework, and that WCC-3 be presented with an inclusive, outcome. The Group agreed and urged further development of the research component of the present Concept Note.
- (j) The Concept Note should recognize the work of a small number of climate change adaptation research centres that have been established in various parts of the world to focus on finding adaptation solutions, for example, OURANOS in Canada and ESS/C in the USA. They can function as intermediaries between producers and users. Participants recommended that the Global Framework recognize the role for such centers, and that a few operational examples should be highlighted in the document, along with a description of the establishment by UNEP of a global network for adaptation. The example should cover what they have accomplished, identify the challenges faced and those overcome (best practices, lessons learned).
- (k) The Group agreed to support the title of 'Global Framework for Climate Services', but to recommend use of the title 'World Climate Services System', for the NCS.

9. ANY OTHER BUSINESS

The session was briefed on ClimDev Project in Africa. The Group noted that ClimDev Africa offers a great opportunity for NMHSs to play an active role in the project. To that end, it recommended that WMO looks for every opportunity that ClimDev initiative provides to further enhance support for the observations and development efforts of NMHSs. It further requested that WMO should approach other partners to urge them to participate in the implementation of ClimDev.

10. CLOSURE OF THE SESSION

The second session of the EC-WG-CWE closed at 13:15 on 13 February 2009.

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LIST OF PARTICIPANTS

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ANNOTATED AGENDA

1. ORGANIZATION OF THE SESSION

1.1 Opening of the session

The second session of the EC Working Group on Climate and related Weather, Water and Environmental Matters (EC-WG-CWE) will open at the WMO Headquarters, Geneva, at 9:30 a.m., on Wednesday 11 February 2009.

1.2 Adoption of the agenda

The provisional agenda will be submitted to the EC-WG-CWE for approval at the opening of the session and may be amended at any time in the course of the session.

1.3 Working arrangements

The session will run from 9:30 to 12:30 in the morning and 14:00 to 17:00 in the afternoon. The meeting will be conducted in English.

2. REVIEW OF ACTIVITIES ARISING FROM THE FIRST EC-WG-CWE MEETING AND EC-LX SESSION

The EC-WG-CWE will review actions arising from its first meeting and EC-LX.

3. REVIEW OF MAJOR WEATHER, CLIMATE AND WATER RELATED EVENTS AND THEIR OUTCOMES

The Group will be briefed on a number of major events, such as world Modeling Summit on Climate Prediction, IPCC Plenary and AR5 process, COP-14 and World Water Forum that WMO has been represented. It will also take note of their outcomes.

4. PROGRESS IN THE NEW COORDINATION MECHANISM 'UN DELIVERING AS ONE'

The working group will take note of WMO's involvement in the new UN system-wide coherence on climate change activities which brings new coordination mechanism among UN agencies. The Group then will explore future directions based on emerging mechanisms.

5. REVIEW OF THE WCP AND CLIMATE AGENDA

The working group will be informed of discussions that have taken place on the future of Climate Agenda at the Steering Committee on Climate Activities.

6. UPDATE ON PREPARATIONS FOR WCC-3 (For Information Only)

The meeting will be briefed on latest arrangements and developments toward convening WCC-3.

7. REPORT ON THE PROGRESS MADE BY THE EXECUTIVE COUNCIL TASK TEAM ON RESEARCH ASPECTS OF AN ENHANCED CLIMATE, WEATHER, WATER AND ENVIRONMENTAL PREDICTION FRAMEWORK (EC RESEARCH TASK TEAM EC-RTT)

A report of the EC Research Task Team (RTT) will be made by the chair of RTT or his representative.

8. WMO INITIATIVE TO SUPPORT ADAPTATION

Following the confirmation of EC-LX the Group will review the latest version of WMO Initiative to support adaptation.

9. ANY OTHER BUSINESS

Any other item(s) that members consider to be worthy of discussion will be taken up under this agenda item.

10. CLOSURE OF THE SESSION

The second session of the EC-WG-CWE is scheduled to close in the afternoon on Friday 13 February 2009.

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