



# **WORLD CLIMATE PROGRAMME**

## **WORLD CLIMATE APPLICATIONS AND SERVICES PROGRAMME**

### **MEETING OF THE RA I TASK TEAM ON REGIONAL CLIMATE CENTRES**

31 January – 4 February 2011  
Geneva, Switzerland

### **FINAL REPORT**

**WORLD METEOROLOGICAL ORGANIZATION**  
February 2011

The **World Climate Programme (WCP)** implemented by WMO in conjunction with other international organizations consists of the following major components:

- World Climate Research Programme (WCRP)
- World Climate Data and Monitoring Programme (WCDMP)
- World Climate Applications and Services Programme (WCASP)
- World Climate Impact Assessment and Response Strategies Programme (WCIRP)

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## EXECUTIVE SUMMARY

Fifteenth Session of Regional Association I (XV- RA I) (1-8 November 2010, Marrakech, Morocco) decided to establish six Regional Climate Centres (RCCs) in RA I, in consideration of the existing capabilities and economic groupings of the Members in the Region, and charged the Regional Working Group on Climate Matters (RA-I WGCM) to support the President of RA I in facilitating the above by keeping under review the climate information needs of the Members in various sub-regions, the capabilities of various institutions in providing such information and the functioning of the RCCs, in close consultation with CCI, CBS and the Secretariat. The Association further decided to establish a Task Team (TT) under RA I WGCM to determine the specific roles of the proposed RCCs in RA I with respect to the NMHSs and to undertake a situational analysis of the aspiring RCCs. The TT was requested to submit its report -including recommendations on the way forward- to the President of RA I by the end of February 2011.

The President of RA I, in consultation with Members, determined that the RA I TT on RCCs from the previous intersessional period should continue this work until the new WGCM is established. At the request of the President of RA I, a meeting of the RA I TT on RCCs was convened during 31 January to 4 February 2011 at WMO Headquarters in Geneva, Switzerland. Representatives of entities identified by XV-RA I to serve as RCC hosts or RCC-Network Nodes were invited to attend the meeting to address the relevant agenda items and assist the team in analysing the situation and determining the way forward.

The meeting was briefed on details of the RCC concept including RCC functions and specific steps of the RCC designation procedure as per WMO Technical Regulations. The meeting also reviewed relevant outcomes and decisions of XV-RA I.

Specific conclusions and recommendations were elaborated during the meeting to initiate and facilitate implementation of a North African RCC-Network, an Economic Community of West African States (ECOWAS) RCC-Network, an Inter-Government Authority for Development (IGAD) RCC and an African RCC. Aspects of RCC – NMHS interaction were addressed on the example of the collaboration between National Meteorological Services Agency (NMA) of Ethiopia and the upcoming IGAD RCC, hosted by IGAD Climate Prediction and Applications Centre (ICPAC). The meeting also considered the situation in Communauté Economique et Monétaire de l'Afrique Centrale (CEMAC) and Southern Africa Development Community (SADC) sub-regions, which requires further analyses and discussions.

This report providing the meeting outcome, its conclusions and recommendations, as requested by XV- RA I, is submitted to the President of RA I for further necessary steps on the way forward for the implementation of RCCs in RA I.

## **1. Introduction**

1.1 Regional Association I (Africa) has been pursuing the establishment of Regional Climate Centres (RCCs), as per recommendations of Executive Council and Commission for Climatology (Resolution 4 (EC-LXI) and Resolution 5 (CCI-XV) respectively) and as per the designation criteria established by WMO. During the previous intersessional period, the RA I Working Group on Climate Related Matters (WGCRM) constituted a Task Team (TT) for consideration of RCC implementation aspects and provision of appropriate recommendations to the president of RA I, consisting of the following members:

1. Mr Y.S. Boodhoo (Mauritius);
2. Mr Alphonse Kanga (Congo);
3. Mr Epiphane Ahlonsou (Benin); and
4. Mr Jolamu Nkhokwe (Malawi).

1.2 The report of the RA I TT on RCCs on the issue of the implementation of RCCs was considered at the recent Fifteenth Session of RA I (November 2010, Marrakech, Morocco; see Annex I for an extract of the report of the session on RCCs, including the Resolution on RCCs). Following detailed discussions on the various aspects of the implementation, the Association decided to establish six RCCs in RA I, in consideration of the existing capabilities and economic groupings of the Members in the Region. The newly established RA I Working Group on Climate Matters and Applications (RA-I WGCMA) has been charged with facilitating the above through RA I TT on RCCs. As it would take some time to establish the new WGCMA, and that the Association had requested the RA I TT on RCCs to submit its report by the end of February 2011, the president of RA I consulted with Members who agreed that the RA I TT on RCCs from the previous intersessional period should continue this work until the new WGCMA is established. It has been agreed that the RA I TT on RCCs will continue its work keeping in view the discussions at the XV-RA I session, undertake a situational analysis and determine the modus of operation in each sub-region, the specific roles of the proposed RCCs and the aspiring RCCs vis-à-vis the NMHSs.

1.3 At the request of the president of RA I, a meeting of the RA I TT on RCCs was convened during 31 January to 4 February 2011 at WMO Headquarters in Geneva, Switzerland. Key representatives of the major entities (viz., Pan-African, North African, ECOWAS and IGAD RCCs) identified by the Association, including their respective administrative heads as well as technical experts, have been invited to attend the agenda items relevant to them, and assist the team in analysing the situation and determining the way forward. Though representations from SADC RCC and CEMAC RCC could not be included in this meeting due to the additional preparatory work needed in these two cases, the RA I TT on RCCs considered the relevant issues through the available sources of information.

## **2. Opening of the Meeting**

2.1 The Meeting of the RA I TT-RCCs was opened at 09.00 hours on Monday, 31 January 2011, at WMO Headquarters in Geneva, Switzerland. The meeting was chaired by Mr Y. Boodhoo. On behalf of the Secretary-General, Mr Avinash Tyagi, Director of Climate and Water Department, welcomed the participants and noted the important role assigned to WMO RCCs in the context of the Global Framework for Climate Services (GFCS) implementation. Taking into consideration the outcome of the 15<sup>th</sup> Session of RA I, he explained the aim of the meeting as to facilitate the work of the RA I TT on RCCs in determining the specific roles of the proposed RCCs, undertaking a situational analysis in the aspiring RCCs, recommending a way forward and submitting its report to the president of RA I by the end of February 2011.

2.2 Mr Boodhoo welcomed the participants and encouraged fruitful discussions on the subject. At the invitation of the Chair, all the participants went through a round of self-introductions.

### **3. Organisation of the Meeting**

#### *3.1 Adoption of the agenda*

3.1.1 The agenda was adopted without any changes, as provided in Annex II to this report.

#### *3.2 Working arrangements*

3.2.1 The Meeting agreed on its hours of work and other practical arrangements. The list of participants in the Meeting is provided in Annex III to this report. The meeting noted that two members of the RA I TT on RCCs, namely Mr A. Kanga (Congo) and Mr E. Ahlonsou (Benin) could not attend due to visa problems.

### **4. Review of Background on WMO RCC Designation**

#### *4.1 Guidelines on RCC designation*

4.1.1 Mr Peer Hechler, Seconded Expert at WMO Secretariat, introduced the WMO RCC concept including definitions of WMO RCCs and WMO RCC-Networks, lists of mandatory and highly-recommended RCC functions and the respective RCC designation procedure. Specifically, he explained the role of RCCs in WMO's Global Data Processing and Forecasting System (GDPFS), which requires RCC related commitments vis-à-vis Member countries by RCC hosts, and therefore RCC functions form part of WMO Technical Regulations. Mr Hechler also presented the detailed mandatory functions and respective criteria as outlined in WCASP-No 80 (WMO/TD-No. 1534) on 'How to establish and run a WMO Regional Climate Centre (RCC)'.

4.1.2 During the subsequent discussion, it was stressed that RCCs are implemented on the basis of voluntary offers by WMO Members to host them. WMO Members served by RCCs are expected to support such Centres through WMO collaborative mechanisms and procedures (such as data exchange and knowledge sharing). It was also highlighted that improvement of RCC services, considering their stated purpose to address the climate information needs of multiple countries, might be an attractive proposition for potential sponsors. It was underlined that, while WMO Technical Regulations define and standardize RCC functions, products and services, the responsibility to ensure sustained RCC operations rests with the concerned RCC host.

#### *4.2 Relevant outcome of XV-RA I*

4.2.1 Mr Hechler briefed the Meeting of the relevant outcomes and decisions of XV-RA I on the basis of document 4.2 of XV-RA I (see Annex I). In addition to the interest expressed by Algeria, Egypt and Morocco to host RCCs as stated in paragraph 4.2.21 of the above mentioned document, Libya and Tunisia have also placed on record, during this RA I RCC Task Team meeting, their interest in hosting RCCs.

### **5. Towards a RCC-Network for North Africa**

5.1 Keeping in view the decision during XV-RA I to develop a complementary action plan for the establishment of a North African RCC-Network, the meeting noted the need to make optimal use of the capabilities and interests of the NMHSs in the sub-region encompassing the five countries Morocco, Algeria, Tunisia, Libya and Egypt. In close alignment with the RCC-Network definition and designation procedures, the Meeting noted that each interested country having the required capacity would be expected to function as a node, to undertake a specific RCC mandatory activity for the entire North African sub-region. Keeping this in view, representatives from Algeria, Egypt, Libya, Tunisia and Morocco briefed the Meeting on their respective mandates, history and

activities of their NMHSs giving special attention to climate-related capacities at national and regional levels.

5.2 In order to illustrate the practical aspects involved in planning and implementing an RCC-Network and facilitate discussions on the related aspects in North Africa, Mr Hechler presented the organisation and working arrangements of the RA VI Pilot RCC-Network. Additionally, Mr Tyagi briefed the Meeting in detail on the concept of the GFCS and WMO's related implementation strategy including planned activities to strengthen capacities of NMHSs worldwide to (i) receive, process and apply global and regional climate data and products as provided through the mechanisms of the Climate Services Information System (CSIS) as well as (ii) provide improved climate services at national levels.

5.3 Subsequent discussions on appropriate organisational arrangements for a North African RCC-Network and the way forward, which included a break-out session among the representatives of the North African countries, led to the following conclusions and recommendations:

**Conclusions:**

**CON1** *The Meeting concluded that all five North African countries operationally perform a range of functions relevant to RCCs, but currently at the national scale. Further, all the five countries are considered to have the potential and intent to provide one or more of the RCC functions for the entire North African region.*

**CON2** *It has been agreed that the main focus of a North African RCC-Network should also include collaboration opportunities in order to provide as many as possible highly-recommended RCC functions as defined in the Manual on the GDPFS.*

**CON3** *The Meeting unanimously agreed that the NMHSs of Algeria, Egypt, Libya, Morocco and Tunisia will work together to implement a RCC-Network for North Africa. Each country will participate in this Network and will contribute or lead in the performance of the respective RCC functions for the entire North African region as per details in the table below.*

**CON4** *The Meeting agreed to propose the following distribution of functions for the North African RCC-Network, allowing each of the five countries to implement a Node of the RCC-Network:*

	<b>Mandatory functions</b>				<b>Highly recommended functions</b>
	<b>LRF</b>	<b>Climate Monitoring</b>	<b>Data Services</b>	<b>Training</b>	
<b>Lead</b>	Morocco	Algeria	Libya	Egypt and Tunisia	Morocco
<b>Co- Lead</b>	Egypt	Tunisia	Morocco	Algeria	Algeria, Egypt, Libya, Tunisia

**CON5** *In order to demonstrate implementation of the North African RCC-Network, it is proposed to establish a suitable joint project amongst all the five countries under the overall coordination of Mr A. Mokssit (Morocco). The project will comprise preparations for, and conduct of, the demonstration phase as defined in the WMO RCC designation process.*

**CON6** *A project plan will be outlined within the next 2 months (February – March 2011). It will contain a clear description of timelines, responsibilities, modes of collaboration and communication as well as work packages in order to implement all mandatory RCC functions for the region as well as highly-recommended functions. In this respect all the five countries agreed to meet/communicate regularly to facilitate the preparation and conduct of the project. In order to facilitate this process it was proposed to consider using opportunities of the Regional Climate Outlook Forum (RCOF) mechanism as well as relevant projects being implemented already or to be implemented in the region.*

## **Recommendations:**

**REC1** *The RA I TT on RCCs recommends that the RA I President invites Mr A. Mokssit, Permanent Representative (PR) of Morocco with WMO, to present the project proposal of a North African RCC-Network, as a coordinator and on behalf of all the participating countries, on the lines as agreed above among the participating countries, by the 31<sup>st</sup> of March 2011. The project proposal would include, among all other technical details, a written commitment from the PRs concerned to participate in the project and taking the responsibilities described in the project document for the entire North African region, extending beyond their respective national borders.*

## **6. Towards an African RCC**

6.1 The Meeting noted that XV-RA I, considering the pan-African nature of the African Centre of Meteorological Applications for Development (ACMAD), assigned it the coordinating role among all RCCs in RA I and called it the African-RCC. The Association also agreed that the African-RCC would meet the needs of climate information for the Members in sub-regions for which RCC mechanisms are yet to be clearly identified (e.g., Central Africa). The Meeting recognized the obvious overlap of the domains of responsibility of the African RCC and the sub-regional RCCs, but agreed that it would be rather advantageous as it provides multiple sources of information to Members.

6.2 Mr Mohamed Kadi, Secretary-General of ACMAD participating on behalf of the Director-General, introduced ACMAD's mandate, history and service suite in general and its capacities w.r.t. RCC functions in detail.

6.3 Subsequent discussions on the prospects for, and the way forward to implement, an African RCC at ACMAD led to the following conclusions and recommendations:

### **Conclusions:**

**CON7** *The Meeting clarified that two different aspects are involved in the decisions made during XV-RA I with regard to ACMAD: one concerns the formal designation of ACMAD as an African RCC and the other requests ACMAD to fulfil a co-ordinating role among all RCCs in RA I. Whilst the first decision requires to follow the formal designation procedure for WMO RCCs, the second decision is not part of the formal designation procedure. The Meeting felt that co-ordinating activities -such as sharing of experiences- can immediately be started for the benefit of an accelerated and smooth implementation of RA I RCCs.*

**CON8** *The Meeting concluded that ACMAD already performs most of the mandatory RCC functions operationally. Open issues to be tackled concern (i) the development of a RA I-wide regional data set, which is updated on a monthly basis and which includes quality control procedures following respective CCI guidance, and (ii) the extension of ACMAD's RCC-relevant operational LRF activities for temperature as well as precipitation to cover the entire RA I.*

**CON9** *The Meeting recognized that ACMAD is already in a position to start the demonstration phase to function as the African RCC and that the open issues as listed above can be resolved during this demonstration phase.*

### **Recommendations:**

**REC2** *In order to start the demonstration phase for an African RCC, the Meeting recommended that ACMAD formally expresses its intent to be designated as an African RCC in writing to the RA I President through the PR of Niger (referring to the related decisions of XV-RA I*

and following the RCC designation steps as adopted by WMO EC in 2009). This communication should include a starting date for the demonstration phase not later than 31 March 2011.

**REC3** The Meeting furthermore recommended that ACMAD, once the demonstration phase started, informs the President of RA I and the WMO Secretary-General of this activity, provides appropriate visibility to the respective RCC services on their Web Site and facilitates effective use of the RCC-products by all RA I NMHSs.

**REC4** The Meeting encouraged ACMAD to take as many as possible highly-recommended RCC functions on board even during the demonstration phase, considering that it already performs relevant activities in the domains of non-operational data services, coordination functions, research and development as well as training and capacity building.

## 7. Towards an ECOWAS RCC

7.1 The Meeting noted that XV-RA I urged Agrometeorological and Hydrometeorological (AGRHYMET) Regional Centre to consider serving as ECOWAS-RCC with support from ACMAD, and to enhance the RCC operations in terms of hydrological and agricultural applications.

7.2 Mr. Seydou Traore presented AGRHYMET's mandate, history and service suite in general and its capacities w.r.t. RCC functions for the Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel (CILSS) and ECOWAS regions in detail. The representatives from AGRHYMET also clarified that their mandate, originally limited to CILSS, has now been extended to the ECOWAS domain, clearing their way for taking on the commitment to function as the ECOWAS RCC.

7.3 Subsequent discussions on the prospects for, and the way forward to implement, an ECOWAS RCC led to the following conclusions and recommendations:

### Conclusions:

**CON10** The Meeting took note of AGRHYMET's interest in providing RCC services as well as of the already existing collaborative arrangements between AGRHYMET and ACMAD. After a careful consideration of the complementary strengths and capabilities of the two organizations both of which are located in Niamey, Niger, the Meeting concluded that AGRHYMET and ACMAD could jointly fulfil all the required mandatory RCC functions for the ECOWAS region through an RCC-Network approach.

**CON11** Taking into account existing capacities and expertise, the Meeting proposed the following distribution of functions among AGRHYMET and ACMAD, for the ECOWAS RCC-Network

	<b>Mandatory functions</b>			
	<b>LRF</b>	<b>Climate Monitoring</b>	<b>Data Services</b>	<b>Training</b>
<b>Node Lead</b>	ACMAD	AGRHYMET	AGRHYMET	AGRHYMET

**CON12** The Meeting noted AGRHYMET's offer to act as the ECOWAS RCC-Network Coordinating Focal Point.

**CON13** The meeting noted the strength of AGRHYMET in the provision of sector-specific application services, taking into account their respective mandate and long experience. The Meeting therefore concluded that AGRHYMET already serves some of the RCC highly-recommended functions.

## **Recommendations:**

**REC5**        *The Meeting urged AGRHYMET and ACMAD to formally confirm mutual agreement on the distribution of functions as described above including the issue of the ECOWAS RCC-Network co-ordinator and submit an appropriate note to the Chair of the RA I RCC Task Team with copy to the WMO Secretariat by the 16 February 2011.*

**REC6**        *Subject to agreement of ACMAD on AGRHYMET's role as the ECOWAS RCC-Network co-ordinator, the Task Team recommended that the RA I President invites the Director-General of AGRHYMET to present a detailed ECOWAS RCC-Network implementation plan on the lines as agreed above by 30 April 2011. The implementation plan would include, among all other technical details, a written commitment from both the organizations to participate in the ECOWAS RCC-Network and taking their respective responsibilities to fulfil the requirements for the mandatory functions.*

## **8. Towards an IGAD RCC**

8.1        The Meeting noted that XV-RA I decided to establish the IGAD RCC at ICPAC.

8.2        Prof. Laban Ogallo, Director of ICPAC and Mr. Philip Omondi presented ICPAC's mandate, history and service suite in general and its capacities w.r.t. RCC functions for the IGAD region in detail. Prof. Ogallo informed the Meeting that ICPAC serves not only the six member countries of IGAD, but also four additional countries in the Greater Horn of Africa sub-region. Prof. Ogallo underlined the need to ensure that climate information is received and applied at local levels.

8.3        Subsequent discussions on the prospects for, and the way forward to implement, an IGAD RCC led to the following conclusions and recommendations:

### **Conclusions:**

**CON14**        *The Meeting concluded that ICPAC already performs most of the mandatory RCC functions operationally. Open issues to be tackled concern (i) the further development of a regional data set in terms of introduction of a Database Management System including automated quality control; (ii) further stimulation of the regional data exchange to increase the number of stations in the data base; (iii) provision of respective on-line access to the data base; (iv) further strengthening of ICPAC's computational infrastructure; and (v) implementation of a RCC-related WebPortal.*

**CON15**        *The Meeting agreed that special climatic circumstances of countries within the region of its responsibility be adequately taken into account by ICPAC while implementing the IGAD RCC, to facilitate effective utilization of RCC products at the national level.*

**CON16**        *The Meeting recognized that ICPAC is already in a position to start the demonstration phase to function as the IGAD RCC, and that the open issues as listed above can be tackled during this demonstration phase.*

### **Recommendations:**

**REC7**        *In order to start the demonstration phase for IGAD RCC, the Meeting recommended that ICPAC formally expresses its intent to be designated as an IGAD RCC in writing to the RA I President through the PR of Kenya (referring to the related decisions of XV-RA I and following the RCC designation steps as adopted by WMO EC in 2009), with copy to WMO Secretary-General. This communication should include a starting date for the demonstration phase, not later than 31 March 2011.*

**REC8**        *The Meeting furthermore recommended that ICPAC, once the demonstration phase is started, informs the President of RA I and the WMO Secretary-General of this activity, provides*

*appropriate visibility to the respective RCC services on their Web Site and facilitates effective use of the RCC-products by all IGAD NMHSs as well as the other NMHSs under its responsibility.*

**REC9** *The Meeting encouraged ICPAC to take as many as possible highly-recommended RCC functions on board, considering that ICPAC already performs activities in the domains of climate prediction and climate projection, coordination functions, training and capacity building as well as research and development.*

**REC10** *Keeping in view the proposal for a Showcase for RCC-NMHS interaction to be implemented in close liaison between ICPAC and Ethiopia, the Meeting urged ICPAC to extend full cooperation and support to the development and implementation of the Showcase (see following section 9 of the report).*

## **9. Showcase on WMO RCC – NMHS interaction in the Greater Horn of Africa sub-region**

9.1 The Meeting recognized the perceived gaps between regional activities and national expectations, which is an important issue to be addressed while planning the implementation of RCCs. Further, it is also crucial to find ways to enhance national uptake of RCC products through an interactive dialogue between the RCC host and the NMHSs. To provide a typical setting to such an interaction and learn from the associated perspectives, and to facilitate the TT to develop an appropriate modus of operation, the Meeting noted that the President of RA I had identified Ethiopia for a potential case study.

9.2 Mr Gebremedhin Kidane Asefa, PR of Ethiopia and Mr Kinfe Hailemariam presented the mandate, history and service suite of the Ethiopian NMHS as well as their RCC-related requirements and their contributions to ICPAC's regional climate activities. RCC-related requirements of the National Meteorological Services Agency (NMA) of Ethiopia comprise, among others, (i) appropriate attention of the climatic characteristics of the northern area of the Greater Horn of Africa (GHA) region in RCC-related products and services and (ii) capacity building to enable NMHSs to receive and apply regional climate information for national climate services. NMA's contributions to ICPAC's regional activities comprise provision of national data and products and participation in GHACOF events.

9.3 The Meeting considered the experiences of the services being provided by ICPAC as a regional institution as well as the national perspectives in Ethiopia. Taking into account the respective mandates as well as the requirements for an efficient mechanism for effective use of RCC products by NMHSs, the Meeting agreed to work towards a draft concept outline on RCC – NMHS interaction for further development and implementation by ICPAC and Ethiopia as a Showcase project.

9.4 The Meeting discussed the issue in detail and agreed on the following conclusions and recommendations:

### **Conclusions:**

**CON17** *The Meeting noted the capacities of NMA of Ethiopia to provide a wide range of climate products at the national level, which closely match the typical RCC products. However, NMA's mandate is essentially national.*

**CON18** *The Meeting recognised the specific climatic characteristics of Ethiopia, which differ from the common climate characteristics of the other parts of the Greater Horn of Africa region, and hence requires special attention in terms of climate services. The Meeting agreed that these aspects need to be taken into account when implementing the IGAD RCC.*

**CON19** *The Meeting reviewed actions proposed in the context of GFCS implementation, which focus on capacity development of NMHSs worldwide and agreed on the need to specifically*

*develop and strengthen capacities of NMHSs to convert regional and global climate products and information into national climate services.*

**CON20** *The Meeting appreciated the enthusiastic offers expressed by ICPAC and NMA of Ethiopia to work closely together within the framework of the IGAD RCC in order to develop and showcase a model interface between WMO RCCs and NMHSs, which could be replicated in other parts of the world.*

**Recommendations:**

**REC11** *The Meeting invited NMA of Ethiopia to draft a proposal for a showcase project on a WMO RCC-NMHS interface based on the desirable linkages between NMA Ethiopia and the upcoming IGAD RCC as well as optimal utilization of IGAD RCC products by NMA, and submit it to the RA I TT on RCCs by 31 of March 2011 in close co-ordination with ICPAC and WMO Secretariat.*

**10. Towards RCC development in Central Africa and Southern Africa**

10.1 The Meeting reviewed the current prospects of initiating RCC implementation in the CEMAC and SADC regions, which could not be represented for the related discussions. Mr Alioune Ndiaye of WMO Regional Office for Africa as well as Mr Tommaso Abrate and Mr Datus Rutashobya of Climate and Water Department of WMO Secretariat respectively briefed the Task Team on relevant aspects in the sub-regions.

10.2 Based on the available inputs and an overall appraisal of the situation, the Task Team agreed on the following conclusions and recommendations:

**Conclusions**

**CON21** *The Meeting concluded that further consultations are needed to identify an appropriate institution which could serve as a nucleus for the development of a CEMAC RCC. Until such time, ACMAD as the African RCC would meet the needs of climate information for the Members in Central Africa, as already decided by XV-RA I.*

**CON22** *The Meeting took note of the recommendation of the SADC Council of Ministers to assess SADC DMC's (now renamed as SADC Climate Service Centre, SADC-CSC) capacity requirements and to proceed to recruit staff in order to implement ClimDev Africa and also carry out the WMO RCC functions. The Task Team agreed to take advantage of the current encouraging developments and to make concerted efforts to facilitate SADC RCC to be hosted by SADC-CSC.*

**Recommendations**

**REC12** *The Meeting recommended organising a meeting at SADC-CSC premises as soon as possible and before the next SADC Council of Ministers to specifically analyse the situation for implementing a SADC RCC. The outcome of the meeting is expected to be a situational analysis and a set of specific recommendations to facilitate the implementation of a SADC RCC at SADC-CSC. This outcome should be brought to the attention of the SADC Council of Ministers for further decisions. Accordingly, the Meeting recommended that the President of RA I invites SADC to convene a meeting with participation from SADC including SADC-CSC, WMO Secretariat, the RA I RCC Task Team, MASA and ACMAD.*

**11. Review and Synthesis**

11.1 The Task Team finally reviewed the outcome of the entire meeting and agreed on the following overarching recommendations:

**REC13** *The Meeting invited ACMAD and ICPAC to develop RCC implementation plans for the African- and IGAD RCCs, respectively. Such implementation plans should be elaborated within the first 3 months of the African and IGAD RCC demonstration phases following the general structure of the RA VI RCC-Network implementation plan (cf. <http://www.rccra6.org>, button: documents). WMO Secretariat will facilitate this process by providing a respective template, which will also be distributed to all other RCC applicants.*

**REC14** *The Meeting noted the suggestions made by AGRHYMET to consider the definition of either an RCC on applications or the definition of application-related RCC functions. The Team furthermore took note of similar requests voiced during the set-up of the RA VI RCC-Network (cf. RA VI Training Seminar on Capacity Building in Climate-related Matters, WCDMP-63, WMO/TD 1386 of WMO, 2007). Accordingly, the Team invited the CCI-CBS Joint Expert Team on Regional Climate Centres to consider this issue, taking into account the evolution of the GFCS and the strengths of institutions such as AGRHYMET in providing sector-specific regional climate services.*

**REC15** *The Meeting has recommended, that WMO Secretary-General informs all Members concerned as well as Presidents of CCI and CBS and GPCs, of the start of a RCC demonstration phase upon receipt of notification by the respective RCC candidates.*

**REC16** *In view of the decision of XV- RA I to mandate ACMAD to co-ordinate all the RCCs in RA I, the Meeting urged all RCC candidates in RA I to regularly interact with ACMAD about their RCC-related activities.*

**REC17** *The Meeting agreed to provide the meeting outcome, its conclusions and recommendations as the main part of its report to the RA I President as requested by RAI -XV. The Meeting urged the President to ensure that the new RA I Task Team on RCCs is established under the RA I WGCM as decided by XV-RA I, and offered to continue to assist on RCC matters until the new Task Team is established.*

## **12. Any other business**

12.1 No further items were raised by the participants.

## **13. Closing**

13.1 In closing, Mr Boodhoo thanked all participants for their enthusiasm and proactive attitude in discussing the issue and agreeing on a way forward. He expressed his satisfaction with the meeting outcomes, which serve as main element of the report to the RA I President and thanked the WMO Secretariat for their support to facilitate the meeting. WMO Secretariat thanked the Chair for his support and help to ensure a successful conduct of the meeting.

The meeting was closed by its chairperson on Friday, 4 February 2011 at 1 p.m.

## List of Annexes

- All presentations can be accessed via <ftp://ftp.wmo.int/In-box/To-clw/CLPA/WCAS/RA-I-RCC-TT/>
- Further information material on WMO Regional Climate Centres, including WCASP-No 80 (WMO/TD-No. 1534) on 'How to establish and run a WMO Regional Climate Centre (RCC)' can be accessed through <http://www.wmo.int/pages/prog/wcp/wcasp/RCCs.html#Functions>

<i>Annex I</i>	<i>RCC-relevant extracts from XV-RA I Doc. 4.2</i>
<i>Annex II</i>	<i>Agenda</i>
<i>Annex III</i>	<i>List of Participants</i>

**World Meteorological Organization**

**XV-RA I/APP\_WP 4.2**

**REGIONAL ASSOCIATION I  
(AFRICA)**

Submitted by: Mr A. Mokssit,  
Chair plenary B

**FIFTEENTH SESSION**  
Marrakech, Morocco  
1 to 8 November 2010

Date: 03.XI.2010  
Original Language: English  
Agenda Item: 4.2

## **Expected Result 2**

### **ENHANCED CAPABILITIES OF MEMBERS TO PROVIDE BETTER CLIMATE PREDICTIONS AND ASSESSMENTS**

#### **Strategic Thrust 1: Science and Technology Development and Implementation**

#### **Report to plenary on item 4.2**

**REFERENCE:**

XV-RA I/B/WP 4.2

**APPENDICES:**

- A. Draft text for inclusion in the general summary of XV-RA I
- B. Draft Resolution 4.2/1 (XV-RA I) – Implementation of Climate Watch System
- C. Draft Resolution 4.2/2 (XV-RA I) – Establishment of a Regional Climate Centres

**APPROVED**

## DRAFT TEXT FOR INCLUSION IN THE GENERAL SUMMARY OF XV-RA I

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### Regional Climate Centres (RCCs)

**4.2.17** The Association reaffirmed its intent to establish RCCs to serve the climate information needs of RA I Members. In this context, the Association recognized that all Members of the Region should be served by the full set of mandatory functions of at least one RCC, particularly those Members that do not have the capacity on their own to interpret the global information provided by the GPCs. The Association noted that the RCCs would be providing high quality regional products, including the long-range forecasts that strengthen regional and national climate information and thereby support the Members in the region to deliver better climate services. The Association noted the definitions and designation criteria of Regional Climate Centres (RCCs) as specified in the recent amendments to the Manual on the Global Data Processing and Forecasting System (GDPFS) (WMO No 485), Volume 1 (Global Aspects), as approved by EC-LXI. The Association urged the Secretary General to organise special workshops in the region to bring greater understanding in the functioning and role of RCCs.

**4.2.18** The Association recognized and emphasised the natural role of NMSs in developing and delivering the climate services within their jurisdiction and simultaneously participating in the regional activities of the RCCs on a voluntary basis. The Association also recognised the uniqueness of the institutional arrangement related to climate matters in each Member country, but emphasized the need for ensuring to continue the crucial role that NMSs have already been playing in delivering a range of climate services based on historical climate data and seasonal predictions. The Association resolved to work through the AMCOMET in ensuring that NMSs in the Region continue to play the key role in providing climate services in the countries to support climate change adaptation and mitigation.

**4.2.19** The Association appreciated the efforts of the the RA I Working Group on Climate-related Matters and its Task Team on RCCs (TT-RCCs) in assessing the existing as well as potential needs of and capabilities in the Region to develop an implementation plan for the establishment of RCCs in the Region. The Association considered the recommendation of the TT-RCCs . The Association also recalled the need for establishing a Regional Climate Centre in Central African sub-region expressed at the First Conference of Ministers Responsible for Meteorology in Africa held in April 2010 in Nairobi. Accordingly, the Association expressed the need to establish one RCC in each of the Regional Economic Communities (RECs) and name these centres accordingly: the IGAD-RCC, the ECOWAS-RCC, the SADC-RCC, the North Africa (NA-RCC), and the CEMAC-RCC. Considering the pan-African nature of the ACMAD, the Association assigned it the coordinating role among all RCCs in RA-1 and called it the African-RCC. The Association urged the Members in each sub-region, the regional inter-governmental bodies and candidate institutions to work out the modalities for the establishment of an RCC in the respective sub-regions and to ensure their sustained operation. The Association requested the Secretary-General to support the Region in these efforts.

**4.2.20** Accordingly the Members in each sub-region are requested to establish their RCCs and by the end of 2012, ensure that they demonstrate the mandatory capabilities as laid down in GDPFS manuals, including:

- i) Interpretation and assessment of relevant LRF products from GPCs and their verification;
- ii) Generating regional and sub-regional tailored products, including seasonal outlooks;
- iii) Performance of climate diagnostics at regional scales;
- iv) Implementation of regional climate watch;
- v) Providing climate database and archiving services at the request of NMHSs;
- vi) Coordinating training for interpretation and use of RCC products; and
- vii) Providing on-line access to RCC products.

Based on the recommendations of the TT-RCCs and that the ACMAD and ICPAC have submitted their expression of interest, the Association approved the establishment of African-RCC and IGAD-RCC at ACMAD and ICPAC respectively.

**4.2.21** The Association urged AGRHYMET to consider serving as the ECOWAS-RCC with support from ACMAD, and to enhance the RCC operations in terms of hydrological and agricultural applications. The Association agreed that another key regional institution, SADC-CSC, may also be encouraged to be developed as a multi-functional SADC-RCC, as and when it is ready with an appropriate proposal. The Association also appreciated the strong interest by Algeria, Egypt and Morocco, all from North Africa, to host RCCs as part of their NMHS activities. The Association suggested further consultations, facilitated by the president, to make optimal use of such enthusiastic offers by NMHSs, and come up with a complementary plan of action for a RCC-network for North Africa. For Central Africa sub-region, the Association invited Members to identify a regional institution to serve as regional centre. Till such time ACMAD as the African-RCC would meet the needs of climate information for the Members in the sub-region.

**4.2.22** The Association, charged the Regional Working Group on Climate Matters (RA-I WGCM) to support the President of RA I in facilitating the above by keeping under review the climate information needs of the Members in various sub-regions, the capabilities of various institutions in providing such information and the functioning of the RCCs, in close consultation with CCI, CBS and the Secretariat. The Association approved the establishment of the RA-I WGCM under resolution in Doc 5.1. The Association also decided to establish a Task Team under the WGCM to determine the specific roles of the proposed RCCs at ACMAD, ICPAC, and SADC-CSC vis a vis the NMSs and undertake a situational analysis in the aspiring RCCs. The Association requested the TT to submit its report to the President by the end of February 2011 and recommend the way forward.

**4.2.23** The Association recognized the need for the existing regional institutions, already performing a range of regional climate functions, to enhance their infrastructure and human resources to meet the operational requirements of RCCs. In this context, the Association appreciated the ongoing activities, with the support of the Korean Meteorological Administration (KMA) through the Korean International Cooperation Agency (KOICA) and the World Bank, for enhancing the capacity of ICPAC and the associated countries in the Greater Horn of Africa (GHA) in providing climate products at regional and national levels, respectively.

**4.2.24** The Association urged all GPCs, particularly the GPC-Pretoria of the South African Weather Service which is the only designated GPC in RA I, to reinforce and sustain their contributions to the development of RCCs and also the RCOF operations. Taking into account the above-noted considerations, the Association adopted Resolution 4.2/2 (XV-RA I) on Establishment of Regional Climate Centres.

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## DRAFT RESOLUTION

### Res. 4.2/2 (XV-RA I) - ESTABLISHMENT OF REGIONAL CLIMATE CENTRES

#### REGIONAL ASSOCIATION I,

##### Noting:

- (1) The *Abridged Final Report with Resolutions of the Fifteenth World Meteorological Congress* (WMO-No. 1026),
- (2) The *Abridged Final Report with Resolutions of the Fifteenth Session of the Commission for Basic Systems* (WMO-No. 1040),
- (3) The *Abridged Final Report with Resolutions of the Sixty-first Session of the Executive Council* (WMO-No. 1042),
- (4) The *Abridged Final Report with Resolutions of the Sixty-second Session of the Executive Council* (WMO-No. 1059),
- (5) The Proceedings of the Fifteenth Session of the Commission for Climatology (Antalya, Turkey, 19-24 February 2010),

##### Recognizing:

- (1) The enhanced worldwide attention to climate change, the associated vulnerabilities in the Region and the need to support decision-making for adaptation to climate change and variability with more detailed regional climate information,
- (2) The endorsement by the sixty-first session of the WMO Executive Council (EC-LXI, 2009) of the amendment to the Manual on the Global Data-Processing and Forecasting System (Volume 1, Global Aspects), embedding the process for formal WMO designation of Regional Climate Centres (RCCs) and RCC-Networks in WMO Technical Regulations,

##### Decides:

- (1) To keep under review the needs and gap analysis for the establishment of RCCs in RA I, through continued assessment of the Region's requirements and capabilities vis-à-vis the mandatory and highly recommended RCC functions and to mandate the RA I Working Group on Climate Services [*to be established*] under the guidance of the president of RA I to coordinate this process;
- (2) To develop and implement RCCs in RA I, with the guidance and support provided from time to time by the presidents of RA I, CCI, CBS and the Secretary-General;
- (3) To keep the RA I RCC operational activities flexible, allowing them to evolve based on Members' requirements and in compliance with WMO regulations;
- (4) To seek formal WMO designation of the RA I RCCs, through the process described in the Manual on the GDPFS and to mandate the president of RA I to initiate this process, after satisfactory evaluation of the fulfilment of the Members requirements as well as capability to fulfil the mandatory functions and demonstration of this capability for at least two years to CCI and CBS;
- (5) To regularly review RA I Member's requirements for climate information, products and services, and to ensure a 'state-of-the-art' service provision to Members to meet their priority needs;

**Urges:**

- (1) The Secretary-General to ensure that the Members are regularly updated on the latest designation criteria for the establishment and designation of WMO RCCs;
- (2) RCC candidates to undertake a self-appraisal prior to submitting their proposals, to determine their capabilities to fulfil the requirements of RCC designation criteria by WMO, develop implementation plans and submit these to the concerned subsidiary body of RA I for their assessment and advice;
- (3) RCCs to submit activity reports on an annual basis to the RA I Working Group on Climate Services, and to undertake recommended remedial actions, to ensure fulfilment of WMO designation criteria;
- (4) RCCs to actively support the further development and operation of Regional Climate Outlook Forums (RCOFs) in the Region;
- (5) All Global Producing Centres of Long-range Forecasts (GPCs) to support the efforts of and collaborate with the RA I RCCs;
- (6) All RA I Members to support RA I RCC activities, use the products and provide feedback to RCCs and GPCs on their effectiveness for further improvement and tailoring to user needs;

**Requests:**

- (1) The presidents of CCI and CBS and the Secretary-General to provide the necessary support to ensure the success of RCC establishment in RA I, and effective collaboration with the RCCs in other Regions;
- (2) The president of RA I to consult with CCI, CBS and the WMO Secretariat in the effective implementation of RCCs and in determining the eligibility of new RCC proponents.

**RA I RCC Task Team Meeting**

Geneva, Switzerland,  
31 January-4 February 2011

Agenda item : 2

ENGLISH ONLY

**AGENDA**

**Monday, 31 January – Tuesday, 1 February**

- 1. OPENING**
- 2. ORGANIZATION OF THE MEETING**
  - 2.1 Adoption of the agenda
  - 2.2 Working arrangements
- 3. REVIEW OF BACKGROUND ON WMO RCC DESIGNATION**
  - 3.1 Guidelines on WMO RCC designation
  - 3.2 Relevant Outcome of XV-RA I
- 4. TOWARDS A RCC-NETWORK FOR NORTH AFRICA**
  - 4.1 Detailed consideration of WMO RCC mandatory functions
  - 4.2 Discussion of Members' contributions to the RCC mandatory functions and analysis of gaps (if any)
  - 4.3 Discussion on prospects of a North African WMO RCC-Network and options for appropriate organisational arrangements
  - 4.4 Discussion of Members' contributions to the RCC highly recommended functions
  - 4.5 Identification of remaining work and deadlines to elaborate the WMO RCC-Network implementation plan for North Africa
  - 4.6 Conclusions and recommendations

**Wednesday, 2 February**

*Short recap of 3.1/3.2*

- 5. TOWARDS AN AFRICAN RCC**
  - 5.1 Discussion of ACMAD's capabilities vis-à-vis RCC mandatory functions relative to RA I Region and analysis of gaps (if any)
  - 5.2 Discussion of ACMAD's capabilities vis-à-vis RCC highly recommended functions
  - 5.3 Identification of remaining work and deadlines to elaborate the African RCC implementation plan
  - 5.4 Conclusions and recommendations
- 6. TOWARDS AN ECOWAS RCC**
  - 6.1 Discussion of AGRHYMET's capabilities vis-à-vis RCC mandatory functions relative to ECOWAS sub-region and analysis of gaps (if any)
  - 6.2 Discussion on a potential structure and organisation of an ECOWAS RCC

- 6.3 Discussion of AGRHYMET's capabilities vis-à-vis RCC highly recommended functions relative to ECOWAS sub-region
- 6.4 Discussion of ACMAD's contributions to ECOWAS RCC operations and the associated collaborative arrangements between ACMAD and AGRHYMET
- 6.5 Identification of remaining work and deadlines to elaborate the ECOWAS RCC implementation plan
- 6.6 Conclusions and recommendations

### **Thursday, 3 February**

*Short recap of 3.1/3.2*

#### **7. TOWARDS AN IGAD RCC**

- 7.1 Discussion of ICPAC's capabilities vis-à-vis RCC mandatory functions and analysis of gaps (if any)
- 7.2 Discussion of ICPAC's capabilities vis-à-vis RCC highly recommended functions
- 7.3 Identification of remaining work and deadlines to elaborate the IGAD RCC implementation plan
- 7.4 Conclusions and recommendations

#### **8. SHOWCASE ON WMO RCC – NMHS INTERACTION IN THE GREATER HORN OF AFRICA SUB-REGION**

- 8.1 Detailed consideration of NMA of Ethiopia's RCC-related requirements as well as capabilities to contribute to RCC operations with national data and products
- 8.2 Discussion of ICPAC's and NMA of Ethiopia's RCC-related interfaces (data and product perspective) and analysis of gaps (if any)
- 8.3 Discussion on a model interface between a WMO RCC and a NMHS on the example of ICPAC and NMA of Ethiopia
- 8.4 Scoping a showcase: Identification of remaining work and deadlines to elaborate a model interface between ICPAC and NMA of Ethiopia
- 8.5 Conclusions and recommendations

### **Friday, 4 February**

#### **9. MEETING OF THE RA I RCC TASK TEAM**

- 9.1 Review of conclusions and recommendations regarding the North Africa RCC-Network, the African RCC, the ECOWAS RCC, the IGAD RCC and the showcase on WMO RCC-NMHS interaction in the Greater Horn of Africa sub-region
- 9.2 Discussion on the status and implementation of CEMAC RCC and SADC RCC
- 9.3 Conclusions and recommendations for the Task Team's report to the RA I President
- 9.4 Identification of remaining work and deadlines regarding the provision of the Task Team's report to the RA I President

#### **10. ANY OTHER BUSINESS (AOB)**

#### **11. CLOSING**

**MEETING OF THE RA I TASK TEAM  
ON REGIONAL CLIMATE CENTRES (RA I TT-RCC)**

Geneva, Switzerland  
31 January – 4 February 2011

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