

# Regional Climate Centres in Africa Consolidated Capacity Needs Assessments

## Preamble

In the light of the enormous challenges climate variability and climate change pose to societies, there is an urgent need to enable African countries to provide the best possible climate services in support of climate risk management and adaptation. Climate relevant processes have strong inter-scale linkages going beyond borders of individual countries. As global-scale information provided by Global Producing Centres<sup>1</sup> (GPC - coarse in terms of resolution and reflected features) is typically not sufficient for national-scale services, the concept of Regional Climate Centres (RCCs) was developed to bridge the gap between information at the global and national scales. Moreover, up-to-date climate services require, among others, appropriate computer power, modelling capacities and special expertise, to which not all African countries currently have adequate access. In this respect, RCCs offer excellent opportunities for networking and pooling the capacities of National Meteorological and Hydrological Services (NMHSs) in the region in order to enable each NMHSs to provide the full suite of climate services to meet national needs.

RCCs are centres of excellence that create regional products, including long-range forecasts, that support regional and national climate activities, and thereby strengthen the capacity of countries in a given region to deliver better climate services to national users. Serving as a backbone for NMHSs' climate activities, RCCs contribute to capacity-building of NMHSs and sustainable development within countries. RCCs further support NMHSs in implementing and maintaining climate services by regionalizing global climate products and introducing innovative regional products, helping to access and apply tools, such as software and models, for regional and national analyses and applications, offering infrastructural support such as archiving services, stimulating the development of a regional research and development agenda, conducting training and promoting resource mobilization.

Therefore, strengthening RCCs, in particular in Africa where most NMHSs do not yet have the necessary infrastructure and expertise to provide the necessary climate services to meet the needs of various sectors at the national level. This consolidated report provides a top level summary<sup>2</sup> outlining key gaps that exist at the continental level to help African Regional Climate Centres<sup>3</sup> improve the development, production, delivery and uptake of their key products and services. It also provides an overview

<sup>1</sup> Designate centres making global seasonal forecasts

<sup>2</sup> Derived from RCC specific Capacity Needs Assessments developed with the support of the WISER Programme, AMCOMET Secretariat and the World Meteorological Organization

<sup>3</sup> AGRHYMET, ACMAD, SADC-CSC, ICPAC and North Africa RCC Networks

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of the climate landscape in the continent and how RCCs are fundamental components to support the achievement of several important climate initiatives designed to improve the provision and use of appropriate climate information to promote planning for sustainable development in Africa. These include:

### **AMCOMET**

Noting the challenges experienced by African NMHSs, the **African Ministerial Conference on Meteorology**<sup>4</sup> (AMCOMET) was established in April, 2010 as a high-level policy mechanism and the intergovernmental authority for the development of meteorology and its applications in Africa and is a body endorsed by the AU Summit of Heads of State and Government. Its mission is to provide political leadership, policy direction and advocacy in the provision of weather, water and climate information and services that meet societal and sector specific needs, including agriculture, health, water resource management and disaster risk reduction to name a few.

**AMCOMET's** key objectives are to help promote security, socio-economic development and poverty eradication on a pan-African level through sound governance of the science of meteorology and its related applications. AMCOMET will consolidate and build on previous achievements to further promote the effective use of weather and climate products and services that meet end-user requirements to help achieve the Sustainable Development Goals. AMCOMET's vision is to create a framework to promote cooperation, security, socio-economic development and poverty eradication on a pan-African level through sound governance of the science of meteorology and its related applications. AMCOMET's mission is to provide political leadership, policy direction and advocacy in the provision of weather, water and climate information and services that meet sector specific needs; i.e. agriculture, health, and disaster risk reduction to name a few.

### **Climate for Development in Africa Initiative**

The **Climate for Development in Africa Program** (ClimDev-Africa<sup>5</sup>) was designed as a joint initiative of the African Development Bank<sup>6</sup> (AfDB), the Commission of the

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<sup>4</sup> [www.amcomet.org](http://www.amcomet.org)

<sup>5</sup> <http://www.climdev-africa.org/>

<sup>6</sup> <https://www.afdb.org/en/>

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African Union (AUC) and the United Nations Economic Commission for Africa<sup>7</sup> (UNECA). The Program has been endorsed at regional meetings of African Heads of State and Government and by Africa's Ministers of Finance, Planning, Economic Development and the Environment. Its purpose is to explore actions required in overcoming climate information gaps, for analyses leading to adequate policies and decision-making at all levels.

The AfDB at the request of the AUC and the UNECA has established the ClimDev-Africa Special Fund (CDSF) to contribute to sustainable development and, in particular, poverty reduction by preparing and implementing climate-resilient development programs that mainstream climate change information at all levels in Africa. The objective of the CDSF is to strengthen the institutional capacities of national and sub-regional bodies to formulate and implement effective climate-sensitive policies. Hence, the CDSF supports operations in the following three main areas:

- Generation and wide dissemination of reliable and high quality climate information in Africa;
- Capacity enhancement of policy makers and policy support institutions to integrate climate change information into development programs; and
- Implementation of pilot adaptation practices that demonstrate the value of mainstreaming climate information into development.

### **African Climate Policy Centre**

As an integral part of the Climate for Development in Africa programme, the **African Climate Policy Centre**<sup>8</sup> (ACPC) is a hub for demand-led knowledge generation on climate change in Africa. The ACPC serves Regional Economic Communities, governments and communities across Africa. ACPC works with stakeholders and partners to address the need for improved climate information for Africa and strengthen the use of such information for decision making, by improving analytical capacity, knowledge management and dissemination activities. The current work programme of the ACPC includes activities in the following areas:

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<sup>7</sup> <http://www.uneca.org>

<sup>8</sup> <http://www.uneca.org/pages/about-acpc>

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- Knowledge generation, sharing and networking that consist of research, knowledge management and peer learning, and outreach activities;
- Advocacy and consensus building; and
- Advisory services and technical cooperation, which comprise capacity mobilization, capacity building and technical assistance.

### **Climate Change and Development in Africa**

The **Climate Change and Development in Africa** (CCDA) conference series was conceived as an annual forum to enable linkages between climate science and development policy by promoting transparent discussions between key stakeholders in the climate and development community. CCDA seeks to mainstream climate information in decision making and strengthen capacities focusing on climate sensitive sectors such as agriculture, food security, energy and transport.

CCDA achieves its objective by bringing together researchers, policy makers and development practitioners, climate scientists, user groups and other stakeholders to understand contemporary climate change issues and contribute towards the identification and elaboration of appropriate responses, including providing support for policy responses, mitigation, adaptation and technological innovations, among others.

### **Africa Group of Negotiators**

The **Africa Group of Negotiators**<sup>9</sup> (AGN) is an alliance of technical negotiators of every African country. The AGN represents the region in the international climate change negotiations with a common and unified voice. The group position on climate change is voiced under the leadership of the AU Assembly, the Committee of African Heads of State and Government on Climate Change<sup>10</sup> (CAHOSCC), and the African Ministerial Conference on the Environment<sup>11</sup> (AMCEN).

<sup>9</sup> <http://www.climdev-africa.org/agn>

<sup>10</sup> <https://www.africaportal.org/topic/committee-african-heads-state-and-government-climate-change-cahoscc>

<sup>11</sup> [http://www.unep.org/roa/amcen/About\\_AMCEN/](http://www.unep.org/roa/amcen/About_AMCEN/)

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The AGN is supported by UNECA and its ClimDev-Africa partners in the United Nations Framework Convention on Climate Change (UNFCCC) negotiations process through technical advisory services, research and communications. UNECA hosts the AGN every year for a workshop where representatives of governments assemble to agree on common positions in various negotiation tracks of the UNFCCC process.

### **Africa Climate Research for Development**

The Africa **Climate Research for Development**<sup>12</sup> (CR4D) initiative was launched to strengthen links between climate science research and climate information needs in support development planning in Africa. CR4D is an African-led initiative supported by partnership between African Climate Policy Center (ACPC) of United Nations Economic Commission for Africa (UNECA), African Ministerial Conference on Meteorology (AMCOMET), World Meteorological Organization (WMO) and Global Framework for Climate Services (GFCS). The initiative's primary goal is to create a multi-institutional and multi-stakeholder collaborative platform that mobilizes expertise and resources to facilitate use-inspired climate science research that informs climate change policy and sustainable development planning in Africa. The Oversight Board of the initiative, comprised ClimDev-Africa and AMCOMET, provides strategic direction and serves as custodian of the CR4D agenda. The Africa Climate Policy Centre serves as the Secretariat of CR4D.

### **Understanding current climate variability and future change are essential to achieving the Sustainable Development Goals**

Hydro-meteorological hazards such as drought, flood, windstorms, tropical cyclones and sea level rise occur most pervasively and account for most of the people affected by disasters. The direct impact of climate variability and change on urban populations, including slum dwellers, includes flooding from sea level rise; food, water and public health insecurity; destroyed infrastructure; and loss of hydro-power. This generally resulted in economic losses due to industrial closures and reduced demand for goods and services, the decline in government tax receipts, and consequently, cuts in public sector funding for priorities such as infrastructure and public health.

<sup>12</sup> <http://www.climdev-africa.org/cr4d/>

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Our inability to anticipate when climatic extremes will occur is a disincentive to investment, adoption of innovation and the success of other development interventions. Climatic uncertainty necessitates short planning horizons and risk management strategies that buffer against climatic extremes, often at the expense of inefficient resource use, reduced average productivity, and profitability, and accelerated resource degradation.

Climatic extremes, such as drought and flooding, impact human lives, health, livelihoods, assets, and infrastructure, while their unpredictability is an impediment to Africa development even in years when climate conditions are favourable, in some areas, climatic uncertainty can, in part, be reduced through skilful seasonal forecasts, supporting investment options in favourable years.

While developed countries have mitigated many of the impacts of their variable climates through massive investment in infrastructure, there is still a need for Africa to invest intensively in physical infrastructure for transport, energy and water supply is widely recognized. Efforts to close the gap between what will be available and what is needed drives current efforts in climate science to provide climate information services for reducing the impact of variability.

The report below is a consolidation of recent reviews of African Regional Climate Centres that are targeted to be designated as WMO-Regional Climate Centres inter-alia:

- African Centre for Meteorological Applications for Development (ACMAD)
- AGRiculture, HYdrology and METeorology (AGRHYMET)
- Inter-Governmental Authority on Development Climate Prediction and Applications Centre (ICPAC)
- Climate Application and Prediction Centre for Central Africa (CAPC-CA)
- Southern Africa Development Community-Climate Services Centre (SADC-CSC)

The analyses of the Capacity Needs Assessment (CNA) findings have shown that there are common challenges in all the centres but also specific issues to each

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centre. The summaries of the key gaps and proposed priority recommendations for each Regional Climate Centre are detailed below.

## 1. African Centre of Meteorological Applications for Development (ACMAD)

ACMAD was established in 1987 by the Conference of Ministers of the United Nations Economic Commission for Africa on behalf of the Member States of the United Nations Economic Commission for Africa (UNECA) and the World Meteorological Organization (WMO). UNECA was the sponsoring institution and provided administrative and financial support to ACMAD. In 2000, UNECA formally abrogated its responsibility with regards to its support of ACMAD and since then ACMAD has been operating without a defined governance structure and with adhoc assistance from WMO and development partners. ACMAD is headed by a Director General, who reports to the Board of Governors (BoG). It is noted that ACMAD's statute has not been updated since 1987 and so, the BoG has remained unchanged since then. This creates a credibility challenge especially when there is no sponsoring institution. ACMAD is currently exploring solutions for a parent organization.

Since its establishment as the pan-African multifunctional Regional Climate Centre (RCC), ACMAD as an institution is mandated to provide weather and climate information for the promotion of sustainable development in Africa. It has been formally designated as a WMO Regional Climate Centre in 2015. However, ACMAD continues to face challenges with regards to capacity needs in a number of areas, which need to be strengthened for its continued and effective provision and delivery of climate services as expected by a WMO Multifunction RCC especially in the implementation of the Regional framework. See **Table 1** for the key gaps and proposed priority recommendations for ACMAD.

## 2. AGRHYMET (AGriculture, HYdrology and METeorology)

AGRHYMET (AGriculture, HYdrology and METeorology) is a specialized institution of Permanent Inter-States Committee for Drought Control in the Sahel (CILSS) whose Members States are: Benin, Burkina Faso, Cape Verde, Chad, Côte d'Ivoire, Gambia, Guinea, Guinea Bissau, Mali, Mauritania, Niger, Senegal and Togo. AGRHYMET is mandated to train and inform on Sahelian food security, desertification and water control and management in order to:

- Contribute in achieving food security and increased agricultural production in the CILSS Member States and ECOWAS

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- Help improve natural resources management in the Sahelian region and West Africa, and
- Provide training and information for development agents and their partners in the fields of agro-ecology including: agro-climatology, hydrology and soil protection.

The Sixteenth Session of WMO Regional Association I (RAI-Africa) held in Praia, from 3-9 February 2015, through its Resolution 7 (RA I-16), proposed to take all necessary steps for AGRHYMET to host the ECOWAS RCC, as part of the WMO Operational Plan and take steps to be a WMO designated RCC. The proposal would be to propose AGRHYMET as the ECOWAS RCC to AMCOMET for initial endorsement by African Ministers responsible for meteorology and to the CILSS Policy organs for approval and implementation. In parallel, take the necessary steps to be a WMO Designated Regional Climate Centre in the Region. See **Table 2** for the key gaps and proposed priority recommendations for Agrhymet.

### **3. Capacity Needs Assessment of IGAD Climate Prediction and Applications Centre (ICPAC)**

The Climate Prediction and Applications Centre (ICPAC) is a specialized institution of Inter-Governmental Authority on Development (IGAD) whose objectives are: to improve the technical capacity of producers and users of climatic information; to develop an improved, proactive, timely, broad-based system of information and product dissemination and feedback and to expand the knowledge base within the sub-region in order to facilitate informed decision making, through a clearer understanding of climatic and climate-related processes. IGAD Member States are: Djibouti, Ethiopia, Eritrea, Kenya, Somalia, the Sudan, South Sudan and Uganda.

AMCOMET, with the support of WMO, has carried out a Capacity Needs Assessment (CNA) in ICPAC to:

- Review and consolidate the various assessments performed at ICPAC;
- Identify ICPAC's key products, services and the needs of their key users;
- Prepare, plan and undertake a complementary Capacity Needs Assessment (CNA);

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- Analyse the findings of the capacity needs assessment and outline key gaps that exist to help ICPAC improve its development, production, delivery and uptake of key products and services, and
- Formulate recommendations on how to adequately address the key gaps identified.

The outcomes of the Capacity Needs Assessment would guide the action plan towards the designation of ICPAC as a WMO regional Climate Centre in IGAD Region. See **Table 3** for the key gaps and proposed priority recommendations for ICPAC.

#### **4. Establishment of a Climate Application and Prediction Centre for Central Africa**

At the At the Eighth Ordinary Session of the Assembly of the African Union in 2007, strong concerns were expressed as to the vulnerability of Africa's socio-economic sectors and production systems in the face of climate variability and change. Many stressed the need to improve tools for analysing climate change data in order to provide credible information and incorporate climate adaptation measures into decision making processes.

The Nairobi Declaration by The First Conference of Ministers Responsible for Meteorology in Africa, held in Nairobi (Kenya) in April 2010 agreed to *"establish with the support of WMO and partners a sub-regional structure for climate monitoring and adaptation to climate change for sustainable development in Central Africa"*. It is within this background that AMCOMET with the support of WMO started the process of establishing the RCC by engaging Consultant. Eventually the proposal was forwarded to the policy organs of ECCAS. It was agreed that the RCC be established and hosted by Cameroon.

The establishment of the Climate Application and Prediction Centre for Central Africa (CAPC-CA) comes in response to the difficulties which the individual National Meteorological and Hydrological Services (NMHSs) in the area face in fulfilling their mission and providing national users with high-quality climate services. The Climate Application and Prediction Centre for Central Africa has the distinctive feature of being a WMO-RCC in the making. Consequently, its structure must be consistent with the organizational framework of WMO RCCs.

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AMCOMET, with the support of WMO, has prepared a Strategic Plan for the Establishment of the Climate Application and Prediction Centre for Central Africa. See **Table 4** for the key gaps and proposed priority recommendations for the CAPC-CA.

## 5. Capacity Needs Assessment of SADC Climate Services Centre (SADC-CSC)

The Southern Africa Development Community Climate Services Centre (SADC-CSC) provides operational, regional climate services for monitoring and predicting all facets of seasonal climate conditions including extreme variations for the countries in Southern Africa.

Following the strong recommendations made by SADC Member States, Meteorology Sectorial Committee on Meteorology (SCOM) and Meteorological Association of Southern Africa (MASA) that SADC-CSC be strengthened both in human resources and infrastructure, the SADC-CSC Strategic Plan recommends that efforts be concentrated at building the capacity of CSC so that it can effectively and efficiently implement all the responsibilities of a WMO RCC. See **Table 5** for the key gaps and proposed priority recommendations for the SADC-CSC.

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**Table 1: African Center of Meteorological Applications for Development (ACMAD)**

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
1.	Governance	<ol style="list-style-type: none"> <li>1. Statutes and Board of Governors unchanged since 1987</li> <li>2. No host / sponsoring Institution</li> </ol>	<ol style="list-style-type: none"> <li>1. Collaborative action be taken by the Board of Governors (BoG) in collaboration with the Director General of ACMAD, WMO and AMCOMET to find a sponsorship organisation for ACMAD</li> <li>2. To review the ACMAD Constitution based on lessons learnt and to reflect the current and establish an adequate governance structure</li> <li>3. ACMAD to implement its Strategic Development Plan taking into account the recommendations from the Capacity Needs Assessment referred to in this document, including a structured implementation of the Global Framework for Climate Services in Africa</li> </ol>	<ul style="list-style-type: none"> <li>• ACMAD BoG</li> <li>• UNECA</li> <li>• AU</li> <li>• AMCOMET</li> <li>• WMO</li> <li>• Development Partners</li> </ul>	<ol style="list-style-type: none"> <li>1. Lack of strong support by AU and UNECA</li> <li>2. Uncertainty in the Membership and effectiveness of current BoG</li> <li>3. Lack of Financial and Human Resources</li> <li>4. Low ratification of the ACMAD Constitution by Member countries</li> </ol>						2m

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
2.	Human Resource Gaps	<ol style="list-style-type: none"> <li>1. The staffing situation of ACMAD is critically low even for current activities.</li> <li>2. Update of ACMAD organizational, operational and staffing structure to take into account the RCC mandate and implementation of GFCS at the Regional Level</li> </ol>	<ol style="list-style-type: none"> <li>1. It will be necessary to re-organize the internal structures of ACMAD to reflect its role as a pan-African Multifunctional RCC</li> <li>2. In respect to the RCC responsibilities the following experts are needed in the short term: <ul style="list-style-type: none"> <li>▪ Seasonal Forecasting Expert</li> <li>▪ Communication specialist</li> <li>▪ Disaster Risk Manager</li> <li>▪ Agriculturalist/Food Security analyst</li> <li>▪ Database Manager Expert</li> </ul> </li> <li>3. A complete review of Human Resource requirements, including a work load analysis at ACMAD is necessary.</li> <li>4. Urge ACMAD Member Countries to second</li> </ol>	<ul style="list-style-type: none"> <li>• ACMAD DG</li> <li>• AMCOMET</li> <li>• WMO</li> <li>• Development Partners</li> <li>• ACMAD Member States</li> </ul>	<ol style="list-style-type: none"> <li>1. Required experts may not be available in the Region.</li> <li>1. Resources to support seconded experts may not be available.</li> </ol>						10m

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
			<p>experts</p> <ul style="list-style-type: none"> <li>▪ Identify experts (MSc and Ph.D.) in Africa who could be attached to more advanced centres for specialized training and thereafter work at ACMAD</li> <li>▪ Potential twinning arrangements with developed countries</li> </ul>								
3.	Research and Development (R&D) needs.	Due to lack of adequate qualified experts, ACMAD has little or no research activities	<ol style="list-style-type: none"> <li>1. ACMAD to explore partnerships with relevant stakeholders to acquire necessary infrastructure to carry-out research activities</li> <li>2. ACMAD to establish links and collaboration with NMHSs, Universities and Research institutions in and outside Africa, in collaboration with the Climate Research for Development in Africa (CR4D) Initiative of ClimDev and AMCOMET</li> </ol>	<ul style="list-style-type: none"> <li>• ACMAD DG</li> <li>• AMCOMET</li> <li>• WMO</li> <li>• Development Partners</li> </ul>	<ol style="list-style-type: none"> <li>1. Lack of qualified experts</li> <li>2. Non availability of adequate data.</li> <li>3. Non availability of broadband internet to transmit large volumes of research data required for modelling.</li> </ol>						

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
4.	Infrastructure Gaps/Needs.	<p>1. ACMAD has serious gaps in infrastructure and operational tools. Some of these are:</p> <ul style="list-style-type: none"> <li>• Inadequate office space;</li> <li>• Unstable power electricity supply</li> <li>• Old IT and computing equipment</li> <li>• Inadequate and low speed internet and other communication systems</li> </ul>	<p>1. ACMAD to initiate the process of acquiring land and putting up buildings for adequate office space to improve working conditions and efficiency of staff</p> <p>2. Urgent need for ACMAD to acquire high performance computing (HPC) platforms including Climate Database Management Systems (CDMS) and other relevant operational tools</p> <p>3. To urgently acquire a power back-up system due to frequent electricity interruptions and acquisition of a broadband high-speed internet</p>	<ul style="list-style-type: none"> <li>• ACMADDG</li> <li>• Development Partners</li> <li>• ACMAD Member States</li> <li>• Host Country</li> <li>• Regional Economic Communities</li> <li>• UNECA</li> <li>• WMO</li> <li>• AMCOMET</li> </ul>	<p>1. Willingness of Host Country to donate land.</p> <p>2. Non Availability of funds for construction</p> <p>3. Possible National protocols on availability and use of broad band high-speed internet.</p>						20m

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
5.	Communications Strategy	<p>ACMAD is lacking a coherent communications strategy and outreach programme to support the provision of climate information to the Member States and stakeholders.</p> <p>The current ACMAD RCC website requires improvement in design and content especially from the user perspective.</p>	<ol style="list-style-type: none"> <li>1. Recruitment of a communications / Public Relations Officer to manage media contacts and communicate with national and regional stakeholders;</li> <li>2. Development of web-based platform to ensure that information is accessible and understandable to all users;</li> <li>3. Development of a comprehensive Communications and Outreach Programme Strategy</li> <li>4. Organize seminars / workshops for the User community including Policy Makers</li> </ol>	<ul style="list-style-type: none"> <li>• ACMAD DG</li> <li>• Development Partners</li> <li>• WMO</li> </ul>	<ol style="list-style-type: none"> <li>1. Possible limitations due to national legislature on communication</li> <li>2. Member countries may not have communication systems to effectively receive all ACMAD products.</li> </ol>						
6.	<b>Financial Resources</b>	Following the withdrawal of UNECA from the sponsorship, ACMAD depends on funds available from the assessed contributions by	ACMAD to develop a Resource Mobilization Strategy that would address sustainability of the Centre from Member States assessed	<ul style="list-style-type: none"> <li>• ACMAD DG</li> <li>• Development Partners</li> <li>• WMO</li> </ul>	Lack of resources from the ACMAD Member countries and also from Development						<b>5m</b>



	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
		<p>Member States. However these funds are not sufficient to support ACMAD operations and functions.</p> <p>Programme activities at ACMAD are funded by Development Partners through projects.</p> <p>The ACMAD Member Countries are expected pay assessed contributions. However few countries pay and such payment is well below the needs of ACMAD</p>	<p>contributions.</p> <p>Resource Mobilization Strategy should articulate ACMADs value proposition and how its expertise can be leveraged to attract mutually beneficial partnerships to support the institution's development and meet its mandate.</p>		Partners.						
7.	<b>Ongoing Projects</b>	<p>1. <b>MESA project:</b> ACMAD is the continental implementation centre on Monitoring of Environment for Security in Africa (MESA) project Continental Climate Services for Disaster Risks Reduction (DRR)</p>									

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
		2. <b>ISACIP Project:</b> The Institutional Support to African Climate Institutions Project (ISACIP) is an African Development Bank (AfDB) funded project designed to strengthen the capacities of African regional climate centres									

**Table 2: Implementation Plan towards Designation of AGRHYMET to be ECOWAS-RCC**

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
1.	Governance	<p>1. AGRHYMET sponsoring institution is the Permanent Inter-States Committee for Drought Control in the Sahel (CILSS) whose Membership is a sub-set of ECOWAS.</p> <p>2. Membership to AGRHYMET is limited to Members of CILSS.</p>	<p>1. Establish AGRHYMET as an ECOWAS RCC with a clear policy and mandate to coordinate climate information systems and services at the sub-regional level.</p> <p>2. Arrangement should be put in place to allow ECOWAS countries who are not Members of CILSS to join the AGRHYMET so that they can be members of the ECOWAS-RCC</p> <p>3. Since ACMAD and ECOWAS are hosted in the same city, an arrangement be agreed upon to clearly define their respective operational mandates especially in ECOWAS sub-region.</p> <p>4. Implement the</p>	<ul style="list-style-type: none"> <li>• ECOWAS</li> <li>• CILSS Member States through the NMHSs</li> <li>• CILSS and ECOWAS Council of Ministers</li> <li>• WMO</li> <li>• AMCOMET</li> <li>• ACMAD</li> <li>• Development Partners.</li> </ul>	<ul style="list-style-type: none"> <li>• Approval of CILSS to establish AGRHYMET as ECOWAS RCC</li> <li>• Political process of admitting non-CILSS Members to AGRHYMET may take a long time.</li> <li>• Possible conflict of responsibilities between AGRHYMET and ACMAD.</li> </ul>						2m

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
			AGRHYMET Strategic Plan taking into consideration the Capacity Needs Assessment Report referred to in this document.								
2.	Climate Services	<ol style="list-style-type: none"> <li>1. AGRHYMET does not have a Climate Services Department.</li> <li>2. There is a serious deterioration of the region climate observation networks</li> </ol>	<ol style="list-style-type: none"> <li>1. Create a climate prediction department namely, "<b>Climate Prediction and Services Department</b>" responsible in performing all WMO RCC mandatory functions;</li> <li>2. Rehabilitate the Climate Observation Networks.</li> </ol>	<ul style="list-style-type: none"> <li>• AGRHYMET</li> <li>• WMO</li> <li>• Development Partners</li> </ul>							<b>5m</b>
3.	Operational Tools	AGRHYMET is well equipped for its current mandate. There is adequate office space, conference rooms and laboratories.	Additional tools specifically for climate services activities will be required. Such tools will include: adequate computing capacity to handle large volumes of climate data, broadband internet capable of receiving and exchanging climate	<ul style="list-style-type: none"> <li>• AGRHYMET</li> <li>• CILSS</li> <li>• ECOWAS</li> <li>• WMO</li> <li>• Development Partners.</li> </ul>							<b>10m</b>

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
			models with other centres especially from more developed centres. 2. It will be necessary to enhance the capacities of participating NMHSs in computing and communication facilities including faster broadband internet.								
4.	Human Resource Capacity	Current Staff in AGRHYMET are fully engaged with the ongoing programmes that may not be available to support RCC activities on full time basis.	<p>AGRHYMET will need additional experts for the RCC activities especially during the demonstration phase. The areas that require experts are :</p> <ol style="list-style-type: none"> <li>Long Range Forecast (LRF)</li> <li>Climate Monitoring and Prediction</li> <li>Dynamical Climate Modelling</li> <li>Climate Change</li> <li>Provision of differentiated climate information to health sector</li> <li>Provision of</li> </ol>	<ul style="list-style-type: none"> <li>AGRHYMET</li> <li>CILSS/ECOWAS Members States through respective NMHSs.</li> </ul>	<p>Possible lack of experts within CILSS/ECOWAS Member states.</p> <p>Lack of funds to support additional staff for the RCC responsibilities.</p>						<b>10m</b>

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
			<p>differentiated climate information to energy sector</p> <p>g. Communication of climate information</p>								
5.	Financial Needs/Gaps	<p>1. AGRHYMET primary source of funding is from the assessed contributions of the Member States which constitutes their recurrent budget for supporting core staff and essential services. This is about 10% of the needs.</p> <p>2. Most of the technical operations are funded by Development Partners through projects.</p> <p>3. RCC activities will require additional funds.</p>	<p>1. With the joining of non-CILSS countries to the Membership of AGRHMET, the annual assessed contributions may be reviewed appropriately.</p> <p>2. Extra-Budgetary resources from Development Partners will be required to support the RCC Activities.</p> <p>3. A comprehensive Resource Mobilization Strategy for the self-sustainability of AGRHYMET as the ECOWAS RCC to be developed.</p> <p>4. Resource Mobilization Strategy should articulate ACMADs</p>	<ul style="list-style-type: none"> <li>• CILSS/ECOWAS Member States,</li> <li>• Development Partners.</li> </ul>	<ul style="list-style-type: none"> <li>• Possible lack of contributions from members.</li> <li>• Inadequate funds from Development Partners.</li> </ul>						<b>5m</b>

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
			value proposition and how its expertise can be leveraged to attract mutually beneficial partnerships to support the institution's development and meet its mandate.								
6.	User needs and Communication Strategy	Through a Survey, the Users have shown that: a. There is increased demand for Climate services information especially seasonal forecasts b. There exists Low capacity to interpret the provided climate services, c. The need for user "Tailored" Climate services and information.	<ol style="list-style-type: none"> <li>To enhance engagement between climate scientists and user community through: Climate Outlook Forums, Workshop and Seminars among others</li> <li>To develop a comprehensive RCC Website accessible and easy to understand by Users.</li> <li>To develop a Communications Strategy that would address the issue of dissemination of climate products and services in a timely and well</li> </ol>	<ul style="list-style-type: none"> <li>AGRHYMET</li> <li>WMO</li> <li>GFCS</li> <li>AMCOMET</li> </ul>	User needs and Communication Strategy						

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
			<p>understood by the users.</p> <p>4. To have regular consultations with users and stake holders as a way of understanding the user needs and to educate the users on interpretation of the climate services and products.</p>								



**Table 3: Capacity Needs Assessment of IGAD Climate Prediction and Applications Centre (ICPAC)**

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
1.	Governance	<ol style="list-style-type: none"> <li>ICPAC has a well-structured Governance Structure within the IGAD administrative system. ICPAC is an integral organ of Inter-Governmental Authority on Development (IGAD) Secretariat.</li> <li>ICPAC receives considerable support from the host national institution, the Kenya Meteorological Department.</li> </ol>	To commend the Management of ICPAC for establishing and maintaining an effective management and operational system.	<ul style="list-style-type: none"> <li>Director ICPAC</li> <li>Executive Secretary IGAD</li> <li>Kenya Meteorological Service (host)</li> </ul>	<ul style="list-style-type: none"> <li>The current ICPAC Budget does not cater for additional Staff for the RCC responsibilities.</li> </ul>						
2.	Infrastructure	<ol style="list-style-type: none"> <li>ICPAC has been provided adequate facilities by the host, Kenya Meteorological Department.</li> <li>ICPAC constructed a modern Office Block on land donated by the Kenya Meteorological Service. Resources for this project have been provided through the ClimDev project.</li> </ol>	<ol style="list-style-type: none"> <li>To recognize the importance of Host Country support for the effective operations of the Centre. This could be emulated by other RCCs.</li> <li>ICPAC to mobilize funds to complete the new building.</li> <li>When completed, ICPAC in partnership</li> </ol>	<ul style="list-style-type: none"> <li>ICPAC Management</li> <li>IGAD Secretariat</li> <li>Host country</li> <li>Development Partners</li> </ul>	<ul style="list-style-type: none"> <li>Non availability of funds to complete the new ICPAC Building</li> </ul>						<b>5m</b>

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
		3. Additional funds will be required to equip the building with appropriate working tools.	with IGAD Secretariat and Development Partners to provide the working tools such as computers, communication systems, and broad band internet among others.								
3.	Delivery of RCC Services-Gaps and Needs	<ol style="list-style-type: none"> <li>1. The assessment has confirmed that ICPAC has the technical capacity to produce high quality climate products and services.</li> <li>2. However there are gaps for the products and services to meet the requirements as stipulated for a WMO RCC.</li> <li>3. It was noted that the ICPAC Strategy (2016-2020) comprises of four components that would on a long term address these gaps : <ol style="list-style-type: none"> <li>a. Climate Monitoring &amp; Prediction</li> <li>b. Climate Applications</li> <li>c. Data Management,</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. Specific pending issues are identified but a general overarching need is for ICPAC to improve the organization of its products on the web and making sure that all links at ICPAC's website are populated with content.</li> <li>2. In order to address the requirements for the "mandatory functions" for WMO RCC designation. ICPAC should : <ol style="list-style-type: none"> <li>a. Build close partnership between the ICPAC dynamic models-based Long Range Forecasting (LRF)</li> </ol> </li> </ol>	<ul style="list-style-type: none"> <li>• ICPAC</li> <li>• Member NMHSs</li> <li>• Partner Universities and Research Institutions</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of tools such as computing capacity and broad band internet</li> <li>• Shortage of local experts in advanced climate modelling and research</li> <li>• Inadequate finances for supporting operations since IGAD Secretariat funds mainly cover operating costs of</li> </ul>						<b>5m</b>

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
		<p>Remote Sensing, and Geospatial Technology</p> <p>d. Disaster Risk Management</p> <p>4. Lack of access to broadband internet and high performance computing (HPC) is a major limitation to ICPAC's research, data archiving and transmission, and computing.</p>	<p>and SC�PEA (Strengthening Climate Information Partnerships) in the use of ensemble predictions from the Global Producing Centres (GPCs) including the UK Met. Office (UKMO) to generate Season to Season predictions, and ;</p> <p>b. Institutionalize all SC�PEA's pilot project themes into formal ICPAC functions including RCOF products.</p> <p>3. To create ICPAC Atlas web-apps as a one-stop advanced platform for an interactive atlas for researchers and decision makers. This is within the "Highly Recommended Functions" of WMO RCC.</p>		basic staff						

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
			<p>4. In regard to access to Broadband internet and high speed computing (HPC), ICPAC to collaborate with partners such as the UBUNTUNET. UbuntuNet Alliance for Research and Education Networking is a regional Research and Education Network of Eastern and Southern Africa whose mission is to secure affordable high speed regional and international connectivity as well as efficient ICT access and usage for African research institutions.</p> <p>5. ICPAC to continue with Rescued data programme beyond outcomes from the DARE pilot for Tanzania</p>								
4.	Financial Resources	ICPAC funding comes from IGAD Secretariat budget and Development Partners through Projects.	It is essential for ICPAC to develop a robust Resource Mobilization Strategy secure funding to sustain the higher cost of	<ul style="list-style-type: none"> <li>• ICPAC</li> <li>• IGAD</li> <li>• WMO</li> </ul>							2m

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
			increased number of WMO 'mandatory' and 'highly recommended' products to become a WMO RCC	<ul style="list-style-type: none"> <li>Development Partners</li> </ul>							
5.	Human Resource and Capacity Building	<ol style="list-style-type: none"> <li>For ICPAC member countries to meet the WMO requirements ('mandatory' and 'highly recommended') they require most of the government institutions, administrative jurisdictions and sectors to incorporate climate change considerations in their plans and budgets.</li> <li>It was observed that the current process for research intake to support improvements in ICPAC's technical capacity is ad-hoc.</li> </ol>	<ol style="list-style-type: none"> <li>There is urgent need to train adequate professionals in climate sensitive sectors in each country to acquire end-to-end interdisciplinary understanding of the Climate and Climate Change.</li> <li>ICPAC due to its current capacities especially in available tools (computing power, hosting a EUMETSAT training centre, GIS facilities among others) is uniquely positioned to lead this process with NMHSs and the local and international universities doing climate studies in Eastern Africa.</li> <li>There is need for streamlining scientific</li> </ol>	<ul style="list-style-type: none"> <li>ICPAC</li> <li>Member Countries</li> <li>WMO</li> <li>AMCOMET</li> <li>Development Partners</li> </ul>	<ul style="list-style-type: none"> <li>Lack of Resources</li> <li>Lack of local personnel for secondment</li> <li>Lack of strong commitment by Universities</li> </ul>						<b>5m</b>

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
			<p>research intake to ensure efficient exploitation of the most current and credible research developments, and ensuring that ICPAC plays a key role in the review of relevant research undertaken by the regional and international research community such as the Universities in Africa, the CR4D, IRI, and ECMWF among others.</p> <p>4. Member countries urged to second experts to ICPAC.</p> <p>5. ICPAC in partnership with Universities to participate in mentorship programmes for young research scientists.</p>								
6.	Regional Climate Outlook Forum and User Interface	While ICPAC has a well-established Regional Climate Outlook Forum (RCOF) programme, the added responsibilities will demand a review of current	1. ICPAC through the RCOF process and ongoing IGAD-UNDP (tailored user products) and the ENACTS-WISER	<ul style="list-style-type: none"> <li>• ICPAC</li> <li>• Member Countries</li> <li>• WMO</li> </ul>	Inadequate support to the RCOF						<b>5m</b>

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
		status to meet RCC requirements.	<p>(integrated traditional-satellite data) develop capacity for tools that can be used by NMHS and their partners to quantify added economic value of climate information to assist policy makers in decision-making.</p> <p>2. To organize workshop(s) to support ICPAC RCC Users in the access and use of the expanded products.</p> <p>3. ICPAC to collaborate, as may be required, in the implementation of GFCS in the region</p>	<ul style="list-style-type: none"> <li>• GFCS</li> <li>• Development Partners and Stakeholders</li> </ul>							

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
7.	Ongoing Investment / Projects initiatives	<p>1. Two Strategies have been prepared that guide ICPAC in its implementation process: ICPAC Strategy-20116-20 and IGAD Regional Climate Change Strategy (IRCCS 2016). Key Strategy priority areas are detailed in the attached report <i>Doc-AMCOMET/RCC/08</i></p> <p>2. The USAID project Planning for Resilience in East Africa through Policy Adaptation, Research, and Economic Development (PREPARED). An important component of the PREPARED project is the Data Rescue in some of the countries of IGAD. This review has shown the need to upscale the DARE project to all IGAD countries.</p> <p>3. The IGAD-UNDP project on: ICPAC strengthening of the</p>									



	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
		COF applications/downscaling for the water sector.  4. ENACTS (2016; Enhancing National Climate Services) is led by the International Research Institute for Climate and Society (IRI) of Columbia University.									

**Table 4: Establishment of a Regional Climate Centre in Central Africa**

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
1.	Governance	<p>1. The RCC Central Africa is at its start-up stage. Appropriate decisions have been made by policy organs of the Economic Community of Central African States (ECCAS) to establish the RCC for Central Africa. The offer by Cameroon to host the RCC has been accepted.</p> <p>2. The host country, Cameroon has indicated that they will offer an existing building in Doula for the Centre.</p> <p>3. The process to recruit The Head of the RCC has been initiated by the ECCAS Countries.</p>	<p>1. It has been recommended that a Multi-functional RCC be established as opposed to a Networked RCC.</p> <p>2. The Head of the RCC, when recruited will implement the recommendations as specified in the already approved Strategic Plan.</p> <p>3. Immediate basic needs will include, among others: Suitable office space; IT and Computing facilities; critical mass of qualified Human Resources; finances availability.</p> <p>4. Commence the preparation of the required legal documents such as: Host Country Agreement, Memorandum of Understanding with collaborating partners (WMO, Development Partners among others),</p>	<ul style="list-style-type: none"> <li>• ECCAS</li> <li>• WMO</li> <li>• Development Partners</li> <li>• NMHSs in ECCAS Member States.</li> <li>• AMCOMET</li> <li>• NMHSs</li> </ul>	<ul style="list-style-type: none"> <li>• Designation of the head of the RCC could delay the start-up process.</li> <li>• The political process to approve the legal documents and working arrangements could be lengthy.</li> <li>• Resources for the Start-up stage could be lengthy.</li> </ul>						2m

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
			Protocols with ECCAS and Working Arrangements with NMHSs, other RCCs and stakeholders.								
2.	Human Resource Gaps	<ol style="list-style-type: none"> <li>1. It is noted that that the Centre has no staff as it is not operational</li> <li>2. The Head of the RCC, when appointed, will commence the process of recruitment of other staff both Scientists and support staff.</li> <li>3. He/she, with the help of Development Partners, will ensure the basic climate services and products within reasonable time.</li> </ol>	<ol style="list-style-type: none"> <li>1. It is envisaged that the initial Organizational Structure of the RCC would incorporate the following Departments : <ol style="list-style-type: none"> <li>a. Management Office</li> <li>b. Data Processing and Management;</li> <li>c. Network and Modelling;</li> <li>d. Climate Prediction</li> <li>e. Meteorological Applications and Disaster Management</li> <li>f. Administration and Finance</li> </ol> </li> <li>2. The Management Office will be headed the Head of the RCC who may also be responsible for the Administration and Finance with appropriate support</li> </ol>	<ul style="list-style-type: none"> <li>• ECCAS</li> <li>• WMO</li> <li>• Universities and Research Institutions</li> <li>• NMHSs</li> <li>• AMCOMET</li> <li>• Development Partners</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of funds at the start-up stage</li> <li>• Lack of qualified experts ECCAS Member States</li> <li>• Training could take long</li> <li>• Premises not ready in good time</li> <li>• Lack of working tools</li> </ul>						<b>10m</b>

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
			<p>staff.</p> <p>3. Initially the RCC may operate with seconded staff from ECCAS Member States.</p> <p>4. The Staff requirement outlined here comprise the minimum requirements to commence the operations of the RCC. There will be need to commence training of experts to Masters and Ph. D. levels in order to build a pool of experts.</p> <p>5. The detailed organizational structures and the staff recruitment plan are detailed in the Strategic Plan for the establishment of the RCC in Central Africa</p>								
3.	Infrastructure and tools Gaps / Needs	<p>1. The current status is that ECCAS has approved the offer by the Government of Cameroon to host the RCC.</p> <p>2. The Government</p>	<p>1. Noting the offer by Cameroon, the Head of the Centre supported by Stakeholders and Development Partners need to put in place the working tools especially computing systems and</p>	<ul style="list-style-type: none"> <li>• ECCAS</li> <li>• WMO</li> <li>• AMCOMET</li> <li>• Development Partners</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of Financial Resources to purchase the tools and put infrastructure</li> </ul>						<b>10m</b>

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
		of Cameroon has provided an existing building in Doula for the Centre.	<p>broad band internet to enable the centre to commence with provision of the basic climate services.</p> <p>2. The Head of the RCC should as a matter of urgency develop an action plan to make the centre operational especially in the provision of work friendly premises and operational tools.</p>	<ul style="list-style-type: none"> <li>Host Country</li> </ul>	in place.						
4.	Financial Resources	<p>1. The Centre is not yet operational but will require resources to meet the salary of the Head of the Centre as soon as he is appointed.</p> <p>2. Funds will also be needed to pay salaries for all other staffs well as to prepare the infrastructure and buy working tools.</p>	<p>1. The Financial resources for the Centre are expected to come from the following sources :</p> <p>a. Member States' assessed contributions;</p> <p>b. Voluntary and/or special contributions;</p> <p>c. Subsidies, donations and bequests;</p> <p>d. Contributions from cooperation partners;</p>	<ul style="list-style-type: none"> <li>ECCAS</li> <li>WMO</li> <li>AMCOMET</li> <li>Development Partners</li> <li>Host Country</li> </ul>	<ul style="list-style-type: none"> <li>It may take a long time to raise the required funds</li> </ul>						<b>5m</b>

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
			<p>e. Payment for services rendered;</p> <p>2. The Centre must develop a Resource mobilization Strategy for sustainability.</p> <p>3. Development Partners and Stakeholders are urged to give this a priority to have the Centre operational.</p> <p>4. ECCAS to provide the initial funds to pay for the Head of the Centre and provision of basic working tools.</p>								
5.	Implementation Modalities	It is noted that the RCC is not operational but the process has commenced with the political decisions made and the process of appointing a Head of the RCC started	<p>It would be preferred if the implementation was executed in phases as proposed here :</p> <p>a. <b>Start-up phase</b> : This phase could last up to three years after the appointment of the Head of the RCC. This is a critical stage as it forms the foundation for the future of the Centre.</p> <p>b. <b>Demonstration Phase</b>: During this</p>	<ul style="list-style-type: none"> <li>• ECCAS</li> <li>• WMO</li> <li>• AMCOMET</li> <li>• Development Partners</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of funds</li> <li>• Shortage of experts</li> <li>• Political and/or civil unrest</li> <li>• Lack of development partners</li> </ul>						<b>10m</b>

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
			<p>phase the Centre will prepare for the commencement of the process to be a WMO RCC. The Centre will produce services and products as guided by WMO and also to meet the specific needs of Central Africa Sub region.</p> <p>c. <b>Operational Phase:</b> On successful completion of these initial phases, the Centre should have the necessary capacities with a pool of qualified experts and adequate operational tools. This could be achieved within 5-6 years from the time the Head of the Centre is appointed.</p>								

**Table 5: Capacity Needs Assessment of SADC Climate Services Centre (SADC-CSC)**

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost	
						Y1	Y2	Y3	Y4	Y5		
1.	Governance	<p>1. The current Governance structure needs to be reviewed in order to address the identified constraints and challenges.</p> <p>2. The SADC-CSC operates with only two professional staff therefore unable to fully fulfil its mandate.</p> <p>3. SADC Policy Organs are aware of the challenges facing the CSC and are willing to collaborate with partners and stakeholders for its development.</p>	<p>The organizational and operational structures of the SADC-CSC need to be reviewed in order to :</p> <p>a. Provide flexibility to interact with other Regional and International institutions</p> <p>b. Provide some level of autonomy to the Centre</p> <p>c. Provision of adequate office space</p> <p>d. Review and carry out a work load analysis in order to determine the Human Resource requirement for optimum operation of the Centre</p> <p>e. Establish working arrangements with national Meteorological and Hydrological Services in SADC Member States (NMHSs), the Metrological Association of Southern Africa(MASA) and Development Partners</p>	<ul style="list-style-type: none"> <li>• SADC Management</li> <li>• SADC Policy Organs</li> <li>• SADC Member States</li> <li>• Development Partners.</li> </ul>	<ul style="list-style-type: none"> <li>• Lengthy process in decision making at SADC</li> <li>• Lack of Financial Resources</li> </ul>							5m
2.	Human	1. The SADC-CSC is	1. Immediate staff requirement	<ul style="list-style-type: none"> <li>• SADC</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of</li> </ul>							10m



	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
	Resource Capacity	<p>critically understaffed. The Centre is managed by two professional staff, who are involved in technical, operational, Financial and Management duties.</p> <p>2. The SADC-CSC has applied to WMO for designation to be WMO Regional Climate Centre. However the Staff situation will be a challenge especially during the Pilot Phase.</p>	<p>priority for the CSC in implementing the Pilot Phase is :</p> <p>a. Climate modelling expert- for operational activities on LRF</p> <p>b. Climate Monitoring expert - for operational activities on climate monitoring</p> <p>c. Climate data expert - for operational activities on data services</p> <p>d. ICT Expert– technological support on the activities of the operational experts</p> <p>e. Communication expert – for products outreach and visibility of the centre</p> <p>2. SADC Member States are urged to second experts to the CSC on a cost sharing basis.</p> <p>3. CSC to negotiate with development partners for staff and staff development component factored in the projects.</p> <p>4. SADC Secretariat to factor</p>	<p>Management</p> <ul style="list-style-type: none"> <li>• SADC NMHSS</li> <li>• WMO</li> <li>• AMCOMET</li> <li>• Development Partners</li> </ul>	<p>qualified experts in the sub-region for secondment</p> <ul style="list-style-type: none"> <li>• Lack of Financial resources</li> <li>• Long recruitment process</li> </ul>						

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
			the staff emoluments for the core Expert and support staff.								
3.	Operational Tools	<ol style="list-style-type: none"> <li>1. The SADC-CSC is not adequately equipped to undertake the RCC Pilot Phase.</li> <li>2. The CSC is expected to get additional equipment through the Institutional Support to African Climate Institutions Project (ISACIP)</li> </ol>	<ol style="list-style-type: none"> <li>1. The SADC Secretariat to urge to plan to provide funds to CSC to purchase operational tools as an ongoing activity.</li> <li>2. CSC Coordinator to ensure appropriate tools and equipment is purchased through the ISACIP project particularly in regard to the RCC Pilot Phase.</li> <li>3. To facilitate the NMHSs in the SADC-CSC Members acquire tools in order to support the activities of the Centre especially in regard to availability and transmission of climate data.</li> <li>4. To negotiate with Development Partners for inclusion of operational tools in projects.</li> </ol>	<ul style="list-style-type: none"> <li>• SADC Management</li> <li>• SADC NMHSs</li> <li>• WMO</li> <li>• AMCOMET</li> <li>• Development Partners</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of funds</li> </ul>						<b>10m</b>
4.	Financial Status	<ol style="list-style-type: none"> <li>1. SADC-CSC relies on funds from the SADC Secretariat to pay for staff salaries and</li> </ol>	<ol style="list-style-type: none"> <li>1. SADC Secretariat to increase its budgetary allocation to the CSC for recruiting more staff and purchasing operational</li> </ol>								<b>10m</b>

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
		<p>running costs of the Office.</p> <p>2. Additional funds come from projects funded by Development Partners.</p> <p>3. The lack of qualified staff and shortage of operational tools is due to lack of adequate funds.</p>	<p>tools.</p> <p>2. SADC Member States to be urged to support some CSC activities directly through respective budgets on voluntary basis.</p> <p>3. In the very short term, CSC to mobilize funds in preparation for the RCC Pilot Phase. <i>(To recruit experts and purchase working tools)</i></p> <p>4. SADC in collaboration with WMO, SADC Member States, Development Partners and stakeholders to organize an Investors Forum to raise funds.</p> <p>5. SADC CSC to develop a Resource Mobilization Strategy that would take into account the sustainability of centre. SADC CSC to organize a Development Partners forum to solicit for partnership in the development of the Centre.</p>								
5.	Milestones and key steps towards	1. It is noted from above observations that the SADC CSC is currently	1. To develop a comprehensive Implementation Plan.	<ul style="list-style-type: none"> <li>SADC Management</li> <li>SADC</li> </ul>	<ul style="list-style-type: none"> <li>Lack of strong coordination</li> </ul>						5m

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
	designation to WMO RCC	operating at a very low level and a lot of work and effort will be required to strength the Centre to a level of implementing the RCC Pilot Phase.  2. SADC-CSC continues to organize regular Southern Africa Climate Outlook Forums (SARCOF) including Capacity building workshops.	<ol style="list-style-type: none"> <li>2. SADC Member States to give high priority to the activities and programmes of the CSC and provide financial support.</li> <li>3. WMO to provide guidance, as may be appropriate, in the implementation of the Strategy and designation of the SADC-CSC as a Regional Climate Centre.</li> <li>4. SADC Secretariat to ensure availability of adequate resources both human and technical for successful implementation of the RCC process.</li> <li>5. Due to the current low capacity SADC CSC may adopt two phase approach towards successful designation as a WMO SADC-CSC as follows : <ol style="list-style-type: none"> <li>a. <b>Phase 1- Short Term Strategic Plan</b> that will involve the initial processes required for implementation of an RCC and the pilot phase which is implemented before being recommended to be a fully-fledged CSCWMO</li> </ol> </li> </ol>	<p>NMHSs</p> <ul style="list-style-type: none"> <li>• WMO</li> <li>• AMCOMET</li> <li>• Development Partners</li> </ul>	<p>among the Partners, stakeholders and SADC-CSC in the implementation process.</p> <ul style="list-style-type: none"> <li>• Lack of resources to for SARCOF</li> </ul>						

	Activity	Current Status	Recommendation	Responsible Stakeholders / Partners	Risks	Time Lines					Estimated Cost
						Y1	Y2	Y3	Y4	Y5	
			RCC; and b. <b>Phase 2 - Long Term Strategic Plan</b> to address issues during the fully fledged phase of an established CSC WMO RCC including its long term sustainability.								