



Climate Research for
Development in Africa

Climate Research For Development (CR4D) In Africa Initiative

Putting Science at the Service of Development

Programme Strategy (2018–2022)

**Addis Ababa, Ethiopia
December 2017**

MESSAGE FROM THE SCIENTIFIC ADVISORY COMMITTEE

Climate scientists predicted that future climate variability and change will affect significantly the livelihoods of both rural and urban communities in Africa. There is thus, an urgent need for African leaders to get accurate climate information to develop a large range of policy tools and services that would allow them tackle this climatic injustice more effectively and efficiently. Since the year 2015, the Climate Research for Development (CR4D) in Africa initiative has been benefited from the advisory and expertise of African climate scientists to help other African scholars, policy-makers, investors and other decision-makers to generate quality climate information and apply these services in various socio-economic productions, adaptation to climatic extremes and their mitigation, as well as to reduce the risk of natural disasters.

With the support of its Scientific Advisory Committee (SAC), the CR4D secretariat has developed a strategy for implementing its roadmap during the next five years (2018 – 2022). Key features of this strategic roadmap include among others: (1) a strategic plan for climate research development in each sub-regions of Africa; (2) grant management framework for funding the implementation of the CR4D research in Africa; and (3) recommendations for identifying, mapping and bringing together key CR4D stakeholders to ensure the full implementation of the strategy for a better development of climate policies and investments. It is in this context that the SAC provides guidance to the CR4D secretariat on climate research, policy, investments and other decision-making processes targeting climate variability and change. The SAC has also helped in assessing climate information needs in each sub-region of Africa. It has also assisted in identifying and mapping the members of an Institutional Collaborative Platform (ICP) on climate research for development. It is our sincere hope that the full implementation of the CR4D strategic roadmap would ensure uninterrupted delivery of critical climate information services and technologies for adaptation to and mitigation of climate change in Africa.

MESSAGE FROM THE INSTITUTIONAL COLLABORATION PLATFORM

The Institutional Collaboration Platform (ICP) has been operationalized in December 2017 as one of the CR4D's governance structures to provide space that promotes an interactive and collaborative research approach by bringing climate science, services and policy-making under a coordinated multi-disciplinary network of expertise and institutions to collectively address users-driven research challenges while maximizing on the opportunities presented by climate change and variability to socio-economic development in Africa. Hence, collaboration on user-driven research as well as capacity building are important components emphasized by the CR4D-ICP. Hence, the quality of products and services that meets the needs of users and society relies on synergy being built amongst institutions. Moreover, the collaboration amongst different institutions needs to be harnessed to avoid unnecessary duplications, conflicts and the danger of leaving gaps in the process. Increasingly, development partners also look favorably on collaborative projects implemented at regional and multi-disciplinary scale. The ICP meets bi-annually and to review progress and provide further guidance regarding users' climate information needs and priorities. ICP has a chair and a vice-chair, who are elected by the ICP members, and they serve for a period of two years. We, therefore, stress on greater user-involvement so that our efforts become completely responsive to the societal needs, as emphasized in this 5-years CR4D Strategy Plan.

This signifies the need of ICP for achieving CR4D agenda. ICP members are also running various relevant projects, programmes and activities that could provide great opportunities for achieving CR4D agenda.

ACRONYMS AND ABBREVIATIONS

ACC	African Climate Conference
ACPC	African Climate Policy Centre
AfDB	African Development Bank
AMCOMET	African Ministerial Conference on Meteorology
AUC	African Union Commission
CCDA	Conference on Climate Change and Development in Africa
CIS	Climate Information Services
CKM	Communication and Knowledge Management
ClimDev-Africa	Climate for Development in Africa
CLIVAR	Climate and Ocean Variability, Predictability and Change
CoE	Centres of Excellence
CR4D	Climate Research for Development
CSOs	Civil Servant Organizations
GFCS	Global Framework for Climate Services
GMF	Grant Management Framework
ICP	Institutional Collaboration Platform
IPCC	Intergovernmental Panel on Climate Change
NDCs	Nationally Determined Contributions
NFCS	National Framework of Climate Services
NGOs	Non-Governmental Organisations
NMHSs	National Meteorological and Hydrological Services
OB	Oversight Board
PESTLE	Political, Economical, Socio-cultural, Technological, Legal and Environmental (Ecological) factors
RA	Regional Associations
RCCs	Regional Climate Centres
RECs	Regional Economic Centres
SAC	Scientific Advisory Committee
SDG	Sustainable Development Goals
SIDS	Small Island Developing States
SP	Strategic Plan
TOR	Terms of Reference
UNECA	United Nations Economic Commission for Africa
UNFCCC	United Nations Framework Convention on Climate Change
WCRP	World Climate Research Programme
WMO	World Meteorological Organization

EXECUTIVE SUMMARY

The Climate Research for Development (CR4D) Strategic Plan 2018-2022 (SP) maximizes on the opportunities presented by climate variability and change while aiming at addressing challenges posed to the socio-economic development efforts of Africa. It specifically sets the directions and priorities to catalyze pan-African multi-disciplinary climate research that is responsive to specific user as well as development planning needs at local, national and regional levels. It also seeks to create a platform through an interactive and collaborative approach uniting climate science, services and policy-making under a coordinated network of expertise and institutions. Furthermore, the SP improves knowledge, access, quality, usability and mainstreaming of climate information into development planning and programmes in Africa. Hence, during 2018-2022, the CR4D SP emphasizes on the following four structural goals to sustainable development and improvement of research capacity on the continent:

- i. Co-designed multi-disciplinary research for improving climate forecast skill and reliability, across temporal and spatial scales;
- ii. Improved information service delivery, including information from observing systems;
- iii. Developed scientific and institutional capacity;
- iv. Provide climate services and user interface platforms.

Based on the African Climate Conference (ACC 2013) recommendations as well as emerging issues in climate science area, CR4D SP will advance African climate knowledge frontiers and provide a roadmap for mainstreaming climate information into policy, practices and decision-making process. The CR4D knowledge frontiers are, therefore, grouped broadly into three major thematic areas such as:

1. Foundational climate science;
2. Impacts, information, translation, and communication;
3. Engagement with policy, development and decision communities.

Each theme overseen by a Working Group that develops research activities. The working group is operationally monitored by the CR4D Secretariat while accountable to the CR4D Scientific Advisory Committee (SAC) for the implementation of the research. Overall, the implementation of CR4D SP generally requires inputs from diverse experts in climate science research, applications and policy in its effort to guide climate research for the period of 2018–2022 and thereby bring the greatest benefits to the last mile user communities.

“The CR4D five year (2018-2022) Strategic Plan sets out research priorities in pursuance of four (4) structural goals facilitating the establishment of multidisciplinary demand-driven research activities and three (3) knowledge frontiers that frame the research foci relevant to the continent.”

CONTENTS

<i>Message from the OVERSight board</i>	Error! Bookmark not defined.
<i>Message from the scientific advisory committee</i>	i
<i>Message from the institutional collaboration platform</i>	ii
<i>Acronyms and Abbreviations</i>	iii
<i>Executive Summary</i>	iv
1. Introduction	1
2. CR4D Framework for implementation	3
3. Vision, mission, principles and core values	4
3.1. <i>Vision</i>	4
3.2. <i>Mission</i>	4
3.3. <i>Principles</i>	4
3.4. <i>Core Values</i>	4
4. Gaps, Challenges and PESTLE analysis	5
4.1. <i>Gaps and Challenges</i>	5
4.2. <i>PESTLE Analysis</i>	6
5. CR4D Strategy (2018 – 2022)	7
5.1. <i>CR4D Structural Goals</i>	7
5.1.1. <i>Co-designed multi-disciplinary research</i>	7
5.1.2. <i>Improved information service delivery</i>	7
5.1.3. <i>Scientific and institutional capacity development</i>	7
5.1.4. <i>Climate services and user interface platforms</i>	7
5.2. <i>CR4D Knowledge Frontiers</i>	9
5.2.1. <i>Foundational climate science</i>	9
5.2.2. <i>Impacts, information, translation, and communication</i>	9
5.2.3. <i>Engagement with policy, development and decision communities</i>	9
6. Risks associated with the implementation of the SP	10
7. Additional documents for implementation plan	10
7.1. <i>Communication and Knowledge Management (CKM)</i>	10
7.1. <i>Resource mobilization</i>	10
7.1. <i>Monitoring, evaluation and reporting</i>	11
7.1. <i>Strategy for data availability and access</i>	11
8. Annexes	12
8.1. <i>Terms of Reference for the CR4D Oversight Board</i>	12
8.2. <i>Terms of Reference for CR4D Scientific Advisory Committee</i>	12
8.3. <i>Terms of Reference for CR4D Institutional Collaboration Platform</i>	14
8.4. <i>Terms of Reference for CR4D Secretariat</i>	15

1. INTRODUCTION

The outcomes of the Intergovernmental Panel on Climate Change (IPCC) Assessment Reports give evidence of considerably increased warming across Africa, which is consistent with human induced climate change. Future climate change impacts are also believed to cause wide fluctuations in temperature and precipitation. Adapting to this changing climate requires more than just understanding of future climate projections and risks, but also factoring in climate research findings into development policy, plans and practices within the climate sensitive socio-economic sectors such as agriculture and food security, health, disaster risk reduction, energy, and natural resources management (water, forests and others) as well as gender, migration, urbanization, infrastructure, marine and coastal zones, etc.

The climate knowledge gaps in Africa, however, remain large and seek targeted but sustained capacity development interventions in the areas of climate science research, applications and policy in order to enhance scientific understanding of past, present, and future climate. It is, therefore, critical that climate research in Africa provides accurate, timely, reliable and spatially relevant information to guide appropriate climate change adaptation and mitigation actions identified by the member states in their Nationally Determined Contributions (NDCs) documents. Moreover, such climate research should be demand-driven, responsive to the user needs, and be situated within the contexts of Agenda 2063, Sustainable Development Goals (SDGs) and the Paris Agreement.

The Climate Research for Development in Africa (CR4D) initiative is representing a paradigm shift in dealing with climate change and development in the continent by providing a mechanism for integrating Africa-wide climate research initiatives as it brings together the scientists, practitioners, institutions as well as development actors to deliver on priority end user needs. CR4D is also playing a critical role in mobilizing African climate researchers around a unified climate research agenda to address priority needs of policy makers and vulnerable communities in Africa; and building the capacity of African climate scientists through cross-regional exchanges, fellowship and secondments.

The CR4D Strategic Plan (SP), therefore, sets out the priorities for the next five-year period (2018-2022) in pursuance of four (4) structural goals facilitating the establishment of multidisciplinary demand-driven research activities in the continent and three (3) knowledge frontiers that frame the research foci. The CR4D SP aims at advancing African climate research frontiers while providing a roadmap for mainstreaming climate information into policy, practice and decision-making process. It will also provide a roadmap for young African scientists and key institutions to nurture research ideas and further develop these ideas into pan-African research activities. Furthermore, it will create a multi-disciplinary and multi-stakeholder collaborative platform that mobilizes expertise and resources to conduct user-inspired research that informs climate change policy and plans in Africa.

2. CR4D FRAMEWORK FOR IMPLEMENTATION

CR4D is founded through the partnership between the African Climate Policy Centre (ACPC)¹ of the United Nations Economic Commission for Africa (ECA), the African Ministerial Conference on Meteorology (AMCOMET)², the World Meteorological Organization (WMO)³, the World Climate Research Programme (WCRP)⁴, and the Global Framework for Climate Services (GFCS)⁵.

CR4D's governance structure includes an Oversight Board (OB), Scientific Advisory Committee (SAC) and an Institutional Collaboration Platform (ICP). These entities are supported by the CR4D secretariat, hosted by the ACPC. However, the CR4D will continuously seek optimal ways to ensure an effective and efficient mechanism for implementation. The ICP and SAC would establish sub-committees that are responsible for specific and time-bound tasks, as the agreed actions require. Moreover, a Grant Management Framework (GMF) to be established for management of extra-budgetary funds/resources and will operate a transparent, high-quality, independent and objective research commissioning, grant administration, and management systems. The GMF has a Grants' Review sub-committee⁶, which is constituted on ad-hoc basis, to review CR4D grant/project proposals. The CR4D Secretariat and SAC co-chairs lead the process. The overall structure of the CR4D implementation mechanism is illustrated in Figure 1 below.

- *The CR4D Oversight Board (OB)*: composed of the representatives of the founding partners (ClimDev⁷ and

AMCOMET/WMO), the Directorate of Rural Economy and Agriculture (DREA) of the African Union Commission (AUC), the Climate Change Directorate of the African Development Bank (AfDB), and the chair of the ICP. Its roles include provision of strategic direction on the CR4D Agenda; reviews and endorsement of the budgets of CR4D; and provision of oversight in the operation of SAC (including its membership) and ICP. The terms of reference (ToR) for the OB are in Annex 8.1.

- *The Scientific Advisory Committee (SAC)*: a volunteer committee whose principal role is to provide guidance for CR4D research priorities, and scientific assessment. Members of SAC are appointed by the OB. The SAC is the core of the CR4D structure in terms of providing coordinated and converged advice and guidance for issues concerning African climate research in the overall CR4D implementation. The ToR are in Annex 8.2.
- *The Institutional Collaboration Platform (ICP)*: a continent-wide platform of participating and collaborating climate research institutions, academia, Regional Climate Centers (RCCs), Regional Economic Communities (RECs), Civil Servant Organizations (CSOs) including user sectors and related institutions and others. Continuous consultation with the users and partners is a key essence of CR4D, as is providing guidance to the overall CR4D implementation to ensure that research is relevant to the climate

¹ <http://www.acpc.org>

² <https://www.wmo.int/amcomet/en/pages/what-amcomet>

³ <http://public.wmo.int>

⁴ <https://www.wcrp-climate.org/>

⁵ www.wmo.int/gfcs/

⁶ Resources will be made available for the sub-committee to facilitate the review process

⁷ A joint pan-African initiative between the African Union Commission (AUC), the UN Economic Commission for Africa (ECA) and the Africa Development Bank (AfDB), where the African Climate Policy Centre (ACPC) is the Secretariat for ClimeDev-Africa

knowledge users in Africa. The ToR for ICP are in Annex 8.3.

- *The CR4D Secretariat:* hosted at the ACPC and expected to coordinate and assist the implementation of CR4D agenda on a day-to-day basis. It has been central in establishing the CR4D SAC and ICP, as well as in the initial phase of launching CR4D actions identified in Marrakech 2014⁸. In the coming period, the principal role of the Secretariat is to facilitate the work of OB, ICP and SAC to implement the agreed plans efficiently and effectively. The Secretariat reports to the OB and its ToR are in Annex 8.4.

- *Development Partner Forum:* CR4D shall continuously seek opportunities to interact with various donors. A Donor Forum shall be the main platform through which interested partners can convene in support of a unified climate research agenda in Africa.
- *The Editorial Sub-Committee:* The SAC is also tasked with coordinating editorial and peer-review process of papers submitted for publication in the CR4D proposed journal. The SAC co-chairs, in consultation with the CR4D Secretariat and broader representation of the African climate community, will constitute the Journal Editorial Sub-Committee.

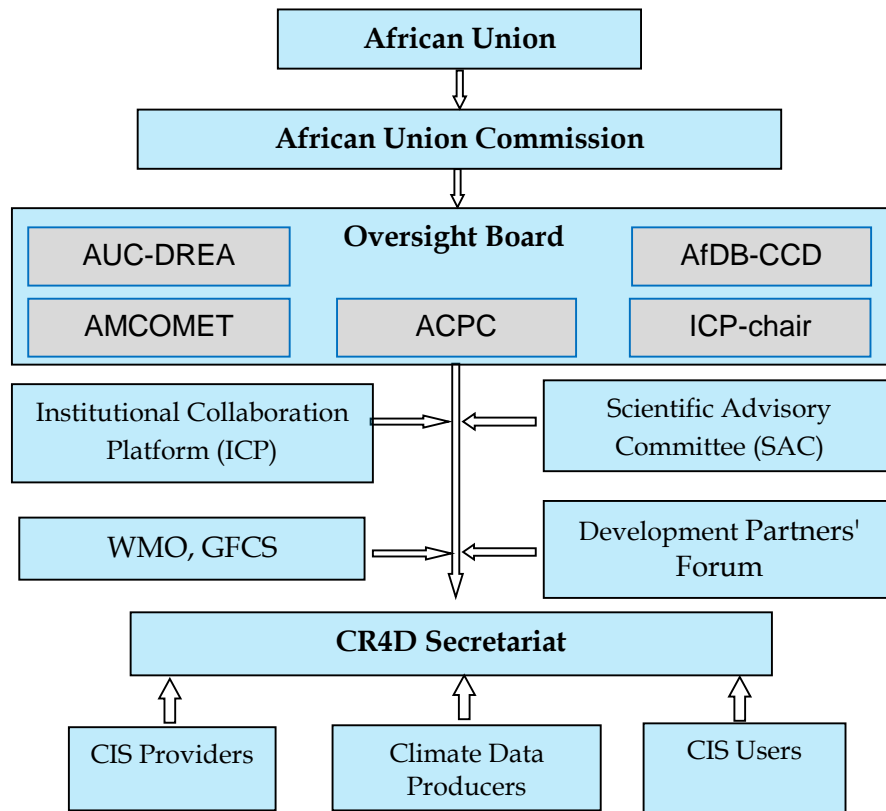


Fig 1. The overall CR4D governance structure

⁸ Climate Research for Development (CR4D) strategy meeting:
https://www.wmo.int/amcomet/sites/default/files/field/doc/events/af_rica_collaboration_platform_concept_note_01102014r.pdf

3. VISION, MISSION, PRINCIPLES AND CORE VALUES

3.1. Vision

The CR4D vision is to catalyze multi-institutional, multi-disciplinary, integrated and demand-driven climate research responsive to specific user and development planning needs.

3.2. Mission

The overarching mission of CR4D is to improve knowledge, access, quality, usability and mainstreaming of climate information into development planning and programmes in Africa emphasizing co-exploring, co-designing, co-producing and co-communicating.

3.3. Principles

CR4D seeks to enhance a continental and international community of researchers engaged on African climate issues, and able to respond to the CR4D user-informed strategic research goals. Resources will be mobilized to

conduct research and address key knowledge frontiers relevant to African policy and adaptation and mitigation communities, with special emphasis on developing human and infrastructural capacity to lead such research. Hence, the cross-cutting principles of CR4D include:

- Pan-Africanism advancing research frontiers that address user information needs in Africa;
- Cross-regional sharing, learning and capacity exchange;
- Provision of timely, quality and relevant climate information for users;

3.4. Core Values

The core values of CR4D are:

1. Accountability
2. Partnership
3. Teamwork
4. Inclusiveness
5. Quality research

4. GAPS, CHALLENGES AND PESTLE ANALYSIS

4.1. Gaps and Challenges

Below is the list of gaps and challenges that exist and need to be addressed for the effective implementation of the CR4D Agenda.

- Weak collaborative research partnerships for co-designing, co-resourcing and co-producing demand-driven research;
- Poorly coordinated pan-African strategic capacity building and development;
- Inadequate characterization of extremes and their impacts (risk profile/mapping) to strengthen resilience and adaptive capacity to climate-related hazards and natural disasters;
- Ineffective integration of climate change measures into national policies, strategies and planning;
- Poor understanding of climate impacts across five priority GFCs areas; agriculture, water, health, DRR, health, water and energy in Africa;
- Inability to provide robust scenarios projection aligned to specific goals/milestones of Agenda 2063;
- Lack of capacity to provide comprehensive continent-wide scenario projections for key socio-economic sectors in Africa, based on 1.5° - 2°C temperature thresholds for the implementation of the Paris Agreement;
- Limited climate research informed by national and regional climate change mitigation and adaptation strategies, that would also support implementation, review and monitoring of Nationally Determined Contributions (NDCs);
- Inadequate promotion of climate science research (in response to extreme events and resilience) leading into application and decision making tools that can enhance productivity in key socioeconomic sectors;
- Lack of effective frameworks for enhancing disaster preparedness, reduction and response;
- Lack of adequate research for enhanced early warning;
- Lack of enhanced production and delivery of weather and climate information services for sustainable development (social, economic and environmental governance);
- Limited and uncoordinated climate research (atmosphere-land-ocean-cryosphere coupling) that support resilience of vulnerable communities, ecosystems and livelihoods due to sea level rise, ocean acidification, especially in coastal and low-lying coastal countries including in the Small Island Developing States (SIDS);
- Lack of research on the impact of rapid urbanization/mega cities on climate change and vice-versa;
- Inadequate research on impact of climate change on human-wildlife conflict, social strife, human displacement and migration and others.

4.2. PESTLE Analysis

The PESTLE stands for political, economical, socio-cultural, technological, legal and environmental (ecological) factors.

PESTLE ANALYSIS	
Political Factors	Economic Factors
<ul style="list-style-type: none"> ▪ Government stability and likely changes ▪ Bureaucracy ▪ Corruption level ▪ Tax policy (rates and incentives) ▪ Import restrictions (quality and quantity) ▪ Competition regulation ▪ Government involvement in trade unions and agreements ▪ Environmental Law ▪ Education Law ▪ Anti-trust law ▪ Discrimination law ▪ Copyright, patents / Intellectual property law ▪ Consumer protection and e-commerce ▪ Employment law ▪ Health and safety law ▪ Data protection law ▪ Laws regulating environment pollution 	<ul style="list-style-type: none"> ▪ Growth rates ▪ Inflation rate ▪ Interest rates ▪ Exchange rates ▪ Unemployment trends ▪ Labor costs ▪ Stage of business cycle ▪ Credit availability ▪ Trade flows and patterns ▪ Level of consumers' disposable income ▪ Monetary policies ▪ Fiscal policies ▪ Price fluctuations ▪ Stock market trends ▪ Weather ▪ Climate change ▪ Natural Disasters
Socio-cultural Factors	Technological Factors
<ul style="list-style-type: none"> ▪ Health consciousness ▪ Education level ▪ Poverty level ▪ Attitudes toward security and safety ▪ Attitudes toward product quality and customer service ▪ Attitudes toward "green" or ecological products ▪ Attitudes toward and support for renewable energy ▪ Population growth rate ▪ Housing quality ▪ Squatting ▪ SDGs 	<ul style="list-style-type: none"> ▪ Basic infrastructure level ▪ Rate of technological change ▪ Spending on research & development ▪ Technology incentives ▪ Legislation regarding technology ▪ Technology level in organization ▪ Communication infrastructure ▪ Access to newest technology ▪ Internet infrastructure and penetration
Legal Factors	Environmental (ecological) Factors
<ul style="list-style-type: none"> ▪ Anti-trust law ▪ Discrimination law ▪ Copyright, patents / Intellectual property law ▪ Consumer protection and e-commerce ▪ Employment law ▪ Health and safety law ▪ Data Protection 	<ul style="list-style-type: none"> ▪ Weather ▪ Climate change ▪ Disaster management ▪ Laws regulating environment pollution ▪ Air and water pollution ▪ Recycling ▪ Waste management ▪ Attitudes toward "green" or ecological products

5. CR4D STRATEGY (2018 – 2022)

The goal of CR4D is to mobilize and coordinate collaborative climate initiatives, including targeted applied climate research and analysis among national, regional and Pan-Africa institutions through a common platform. This will contribute to enhanced co-production of quality and user-desired climate information and services, also necessary for supporting effective policymaking and sustainable development planning.

5.1. CR4D Structural Goals

The four (4) Structural Goals, consistent with the gaps and challenges, to enable research are as follows

5.1.1. Co-designed multi-disciplinary research

- Sustainable structures, environment and fora to engage in mutual learning and dialogue between stakeholders and scientists for developing transdisciplinary approaches
- Incorporation of indigenous knowledge systems

5.1.2. Improved information service delivery

- Improved information service delivery, including information from observing systems.
- Continent-wide data availability for research, including knowledge sharing frameworks among various institutions, users and stakeholders at all levels from regional, sub-regional and national. Initial target disciplines are agriculture, water, marine, health and energy, and addressing the different needs of stakeholders at all levels.
- Enhanced capacity to translate data to information and services.

5.1.3. Scientific and institutional capacity development

- Motivation of African scientists through providing incentives for engaging in global science programs (e.g. IPCC, WCRP, GFCS, etc.) to promote African climate research
- Research partnerships within Africa to:
 - increase inter-institutional exchanges and so better leverage and develop complementary capacity;
 - enhance the alignment of research with societal needs;
 - integrate regional scientists into global networks;
 - develop early career researchers
- Develop partnership with private sector
- Start ups climate related innovations
- Contribution to IPCC Assessment Report and associated special report

5.1.4. Climate services and user interface platforms

- Promote platforms for strategic guidance on climate science-policy linkage
- Improved techniques and methods for communication with stakeholders
- Contribute to the development and publication of the 5-year State of the Annual African Climate working with relevant institutions.

5.2. CR4D Knowledge Frontiers

Based on the ACC2013 recommendations, and taking into account the status, gaps and emerging issues described in the previous sections, CR4D identifies the major knowledge frontiers and structural goals for the coming 5-year period. CR4D Knowledge Frontiers are grouped in three thematic areas where each theme should be overseen by a Working Group under the leadership of Senior Researchers in Africa. The Working Groups are mandated by the SAC to develop research activities and are accountable to the SAC for the implementation of the research, and operationally monitored by the CR4D Secretariat. Granting agencies would be invited to support one or all thematic research areas.

5.2.1. Foundational climate science

The CR4D foundational climate science thematic area improves the understanding of underpinning drivers and dynamics of climate variability and changes while improving forecast and climate prediction skills, climate change projections.

1. Improved understanding of the underpinning drivers and dynamics of climate variability and change in Africa
 - Observation, data and monitoring
 - Multi-scale climate processes
 - Feedbacks and systems thresholds
 - Simulation of Africa climate dynamics at multiple scales
2. Improving forecast and climate prediction skills
 - Innovation in techniques and tools to enhance decision and policy relevant information
 - Assessing limits to skill in relation to spatial scales and future time horizons
 - Understanding and characterizing the scale dependencies of uncertainty
3. Developing robust climate change projections for Africa at multiple scale
 - Understanding what constitutes climate information in the context of application.

- New approaches to climate information distillation from multiple streams of conflicting data.
 - Understanding time dependency critical systemic thresholds
4. Better prediction and attribution of extremes of climate and impacts
 - Exploration of the nature of extremes: singular, compound, slow onset, long and short duration, etc.
 - Attribution of extremes of climate and impacts relative to natural climate variability and change.

5.2.2. Impacts, information, translation, and communication

1. Enhance added-value in sub-seasonal to seasonal prediction
 - Methods and approaches to understanding and characterizing added value.
 - Co-exploration frameworks between climate scientists and stakeholders.
2. Enhanced understanding and communication of climate impacts across GFCS priority areas (DRR, health, water, energy, and agriculture) as well as migration, gender, urbanization, infrastructure, marine and coastal zones, etc.
 - Development of regional impact assessments

- Articulation of key impact statements targeting regional and national policy-makers, responsive to their decision needs
3. Improved metrics and analytics for evaluation and validation of skill and uncertainty in forecasting and projecting future climate and impacts.
 4. Understanding communication theory, barriers and opportunities.

5.2.3. Engagement with policy, development and decision communities

To attain Africa's development objectives as framed by the SDGs and the continent's Agenda 2063, climate change must be integrated in development policy, planning

and programmes in member States and regional economic communities (RECs). Hence, CR4D will undertake research and analysis to support, among others, the implementation of the Paris Agreement and achieve the goal of limiting global warming.

1. Improved assessment of the uptake, application and user value of climate and impact information by stakeholders.
2. Enhanced capacity for co-production and transdisciplinary research.
 - Nurturing an African intellectual leadership (Strengthening Youth Initiatives, Graduate and Post-Doctoral Scholarships, and Early Career research Fellowships)
3. Technology Innovations for effective climate services

6. RISKS ASSOCIATED WITH THE IMPLEMENTATION OF THE SP

The primary risks to achieving substantive progress on both the structural support for the research community, and new knowledge development, are reflected in the following leading issues.

1. Changes in the African research institutional landscape whereby the activities of CR4D become superseded or eclipsed by other regional, continental or global initiatives by other organizations;
2. Inadequate resources to achieve effective activation of a critical mass of activity and researcher participation under the CR4D identity; and
3. Outcomes and deliverables are not seen as providing significant benefit to science and/or society in comparison to what emerged from the research community independent of CR4D.
4. Lack of consistent and inclusivity among climate research operations and applications communities across Africa.

7. ADDITIONAL DOCUMENTS FOR IMPLEMENTATION PLAN

As part of the overall CR4D Strategic Plan, the implementation plan will include, but not limited to, the following:

7.1. Communication and Knowledge Management (CKM)

The CR4D CKM supports generation, packaging and dissemination of knowledge products to key constituencies for climate-smart development. This focus area will generate and deliver knowledge on climate solutions in ways that advance the integration of climate change into development policies, strategies, plans and application. Under this focus area, CR4D will:

- Establish a resource platform for data, information and knowledge sharing on climate information systems
- Manage knowledge and facilitate peer learning, sharing and outreach programmes among producers and users of climate information systems
- Provide advisory and technical services for effective strategies to communicate climate solutions.

7.2. Resource mobilization

The main drivers critical to the long-term success of CR4D resource mobilization include:

- (1) High involvement of the CR4D governance bodies with the wider stakeholders including development partners;
- (2) Strong commitment from the founding partners;
- (3) In accordance with the research thematic area and priority research areas defined by SAC;
- (4) Fundamentally about relationships and for donors to keep giving they need be actively engaged;
- (5) Consistency with the CR4D strategy.

7.3. Monitoring, evaluation and reporting

Implementation of the CR4D strategy will be through an implementation plan guided by a performance operational model designed to ensure value for money from efficient programming and synergy with other programmes. It addresses the gathering of information on baselines, indicators and milestones and also provides a way of recording the impacts of the assumptions and risks identified.

Monitoring: Monitoring activities will be undertaken following standard guidelines adopted by the partner institutions and will include the following: (i) measurement against the indicators in the results-based matrix; (ii) annual financial reports; (iii) annual progress reports, including on the use of funds; and (iv) “Traffic light” reports, highlighting risks to goal achievement.

Evaluation: In addition to annual internal self-evaluations, two main evaluations will be undertaken during the five years: (i) a midterm external evaluation at the end of year three, and (ii) an end-of-plan external evaluation after year five, with a focus on outcomes in line with the log frame.

7.4. Strategy for data availability and access

Systematic observation of the climate system - atmosphere, land and ocean - is a key prerequisite for advancing scientific knowledge on climate change and informing decision making on mitigation and adaptation (*Annex 9.8*). Systematic observation, therefore, ensures the availability of a repository of climate data necessary for production of customer-specific Climate Information Services (CIS) that meet sectoral requirements including Finance Economic Planning and Development sector. Noting basic requirements for research and recognize resolutions for increased data availability to enable climate research for development in Africa, CR4D strategy programme will take into account:

- Basic Requirements for Research
- Availability of Climate Data for Research
- National Framework of Climate Services (NFCS)
- WMO Resolutions on Data
- Institutions and Infrastructure for Climate Research

8. ANNEXES

8.1. Terms of Reference for the CR4D Oversight Board

The Oversight Board (OB) is composed of representatives of ClimDev Partnership (one from each of the following institutions - African Development Bank, African Union Commission and the Africa Climate Policy Centre), AMCOMET and the Chair of the Institutional Collaboration Platform (ICP). The representative shall nominate a Chair on a bi-annual basis.

The OB meets once a year and shall invite the SAC Co-Chairs, the CR4D Secretariat as representatives as well as other partners and/or key representatives as needed. The OB shall:

1. Provide high-level guidance to set the CR4D Agenda;
2. Deliberate on and confirm the strategic direction of the CR4D Agenda;
3. Review and endorse budget of CR4D;
4. Endorse SAC membership ensuring, *inter alia*, geographic/regional balance, academic/professional merit, dedication to duty and gender equality;
5. Endorse ICP membership based on the recommendations made by the CR4D Secretariat and SAC.

8.2. Terms of Reference for CR4D Scientific Advisory Committee

1. Terms of reference

The mandate of the SAC is to provide guidance for the CR4D research priorities, and scientific assessment of the CR4D climate related research activities as established, supported, and implemented by the CR4D in Africa initiative. Specifically, the SAC is tasked to:

- Advise the Oversight Board and ICP on matters of climate-related science in relation to the CR4D core mission;
- Formulate scientific recommendations on research priorities and knowledge gaps for consideration by the ICP, with strong attention to climate information needs in Africa;
- Evaluate the scientific implications of the ICP decisions;
- Review and revise the CR4D 5-year Strategic Plan as may be required;
- Provide guidance to on-going external climate-related research in Africa and relevant international research;
- Review and contribute to the secretariat's institutional mapping of Africa institutions and organizations involved in climate research in Africa;
- Advise on and contribute to capacity building activities in climate related research;
- Review the scientific content and selection criteria of CR4D Calls for Proposals,
- identify thematic area of research, Centres of Excellence (CoE) as well as working groups for specific theme, identify development Partners for resource mobilization, and also advise the OB
- Support the secretariat in the review of proposals to the CR4D calls for proposals to ensure a coherent portfolio of projects under CR4D aligned with scientific priorities, and support the mentoring of scientists in developing proposals to the CR4D;

2. Membership and organization of the SAC

The SAC is a volunteer committee appointed by the Oversight Board, and is responsible to the Oversight Board. The nomination of new members or renewal of the term of appointment of members will be overseen by the secretariat before the end of the final year of a membership cycle, and active membership shall begin on 1 January of the following year.

The Oversight Board, with input from the CR4D Secretariat, appoints the members on merit from the nominated candidates, with balanced representation of regions, physical climate science and social science disciplines, and gender. Members are appointed to serve for a 3-year term, renewable for one second term. There will be a maximum of 19 members.

The SAC will be led by two co-chairs, (re-)elected by the membership on every membership refresh cycle. The duties of the (co-)chairperson(s) shall be:

- To develop the meeting agendas, in consultation with the secretariat
- To preside over the sessions of the SAC and ensure that the Committee's activities, decisions and recommendations are in harmony with the overall aims and interests of the CR4D
- To act on behalf of the Committee between meetings
- To conduct, either directly or through the Secretariat or appropriate sponsoring organizations, correspondence on all matters related to the planning, scientific steering and implementation of the CR4D
- To review the minutes and supporting documents of SAC meetings and ensure the minutes circulated in a timely manner
- To sustain regular communication with the members
- To request the Oversight Board and the CR4D Secretariat to provide necessary information relevant to the implementation and follow-up on the recommendations made by the SAC to ensure progress of the CR4D Agenda
- To mandate sub-committees and task groups on an as-needed basis

3. Meetings

- The SAC will meet at least once a year on rotation basis across the RECs, at a venue determined by the co-chairs in conjunction with the secretariat.
- Secretarial support for the meetings (including the taking of minutes) will be supplied by the secretariat.
- Representatives of the Oversight Board and of the ICP should be invited, as needed. Observers from national agencies, or individual experts or international scientific institutions may be invited to attend sessions on an as-needed basis.
- Meetings should endeavor to engage with representatives of the local scientific, development and user communities to gain input on local issues and increase visibility of the CR4D, through invitation to participate in an appropriate session.
- The minutes of each SAC session shall be circulated to the members and Oversight Board within a month along with the supporting documents considered by the Commigftee.

8.3. Terms of Reference for CR4D Institutional Collaboration Platform (ICP)

The ICP is composed of maximum 50 members, each of whom are to serve on a 2-year term that is renewable for an additional term. Each member represents a participating and collaborating climate research institution, academia, African Member States, including user sectors and related institutions. The CR4D Secretariat is responsible to make recommendations to the Oversight Board for ICP membership, for a mapping process to ensure balanced representations and legitimacy of represented entities. The ICP meets bi-annually (one in remote and one in-person in conjunction with the Climate Change and Development in Africa Conference (CCDA)) and review user climate information needs and priorities.

The ICP shall:

- Provide policy guidance to the Oversight Board (OB) and CR4D;
- Provide advice to OB on the CR4D Budget from the viewpoint of climate knowledge users as well as advise on sustained funding schemes;
- Review research priorities and capacity development needs identified by the Scientific Advisory Committee (SAC) and provide recommendations;
- Receive, monitor, review and approve reports of different organs (SAC, OB, CR4D secretariat) of the CR4D and adopt resolutions at ICP annual meeting for implementation
- Approve research collaboration framework and partnerships, among identified research programmes, and develop collaborative initiatives and work plans to be recommended to SAC;
- Provide guidance for the establishment of optimal mechanisms to promote CR4D (e.g. dedicated journal, award or recognition of outstanding work by young scientists, scholarships);
- Provide guidance to the CR4D project on dissemination to enhance uptake of research findings
- Propose periodic Africa Climate Conferences, and make recommendations to OB and SAC as appropriate;
- Explore linkages with similar platforms with lessons to strengthen the CR4D project

The ICP has chair and vice-chair, elected by the ICP members for two years. The Vice-chair will also assume the below responsibilities in the absence of the Chair. Hence, the duties of the chair institution include:

- Represent ICP in the OB meetings and decisions
- Develop meeting agendas, in consultation with the Secretariat, and lead ICP meeting
- Preside over the sessions of the ICP and ensure that the ICP activities, decisions and recommendations are in harmony with the overall aims and interests of the CR4D on behalf of the ICP between meetings
- Conduct, either directly or through the Secretariat or appropriate sponsoring organizations, correspondence on all matters related to the planning, scientific steering and implementation of the CR4D
- Review the ICP meeting minutes and supporting documents and ensure the minutes circulated in a timely manner and sustain regular communication with the members
- Mandate sub-committees and task groups on an as-needed basis.

8.4. Terms of Reference for CR4D Secretariat

The CR4D Secretariat is hosted by the Africa Climate Policy Centre (ACPC), in order to facilitate the overall implementation of CR4D through its Oversight Board, Institutional Collaboration Platform (ICP) and the Scientific Advisory Board. The CR4D Secretariat reports to the Oversight Board and shall:

- Prepare the annual budget for the CR4D implementation, to be reviewed and approved by OB;
- Prepares the agenda for, assist proceeding, and finalize summary reports of the Oversight Board and support implementation of decided actions in coordination/communication with ICP, SAC and partners as identified;
- Prepare the agenda for, and assist proceeding, and finalize summary reports of the ICP regular meetings, and facilitate implementation of the agreed actions during the intersessional period;
- Carries out the necessary mapping and assessment of potential members of ICP, to be reviewed and approved by OB;
- Assist nomination process for SAC members and report to the OB, based on consultations with African research communities (e.g. African climate science research network)
- Facilitate and support the work of the SAC; including the preparation of and finalization of the final reports of the SAC regular meetings and intersessional work for research priorities;
- Serve as a conduit for the effective flow of communication between the different organs of the CR4D and to carry through information without delay or inputs and to ensure a timely circulation of information through the following:
 - Ensure that SAC meeting recommendations are communicated in a timely manner to the OB;
 - Ensure that feedback from OB are communicated back to SAC as soon as possible;
 - Ensure that ICP decisions, which guide the strategic direction of CR4D, are documented and submitted to the OB and SAC in a timely manner;
- Provide quarterly reports to the Oversight Board in key issues in implementation; and
- Develop and make recommendations to SAC and OB for their approval, implementation frameworks at regional and sub-regional levels.

CR4D FOUNDING PARTNERS



Contacts

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