Africa Climate Research for Development (CR4D)

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On behalf of the CR4D community and secretariat

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The aim is to …

- Provide a brief overview of the African Climate Research for Development initiative – features and proposed governance structure.

- Discuss the value of bringing climate related knowledge close to users’ hands for Africa’s sustainable development.
Context: Need for improved climate science knowledge and predicting capability

Remote drivers: ocean/atmosphere interactions -> “pathways” to Africa -> Africa impacts (important all timescales)

Local/regional processes: convection; land-atmosphere coupling; land use change.

Greenhouse gases; climate change

Aerosols and boundary layer interactions
Africa’s narrative is changing: Transformation through managing climate risks and opportunities is urgent
The African Climate Conference – ACC2013
Advancing climate research priorities to address users needs
Climate information needs for end users in Africa and related climate science knowledge gaps (cross-cutting issues)

Assessing current vulnerability due to recent climate events
Lack of ‘impacts’ datasets (e.g. crop yields, river flows, health/hospital admission statistics) to aid development and targeting of applications models

Decision making at local scales
Climate services not sufficiently (geographically) specific

Estimation of the impacts of climate variability and change

Mainstreaming climate services for all timescales

Building Credibility & Confidence in Predictions
Forecast Evaluation
- Development of user-salient performance measures/indicators

Observation / database development
- Enhancing the observations network for both biophysical and socio-economic climate variables;
- Data rescue
- Development of better applications models

Downscaling
- understanding and improvement of the downscaling process
- quantification of benefits and uncertainties to users

Applications modelling
Improved understanding/ modeling of climate impacts on hydrology, food security and crop yields, health

Communication and climate service provider/user interactions
- Improving availability/usability of services
- Bridging the gap between service providers and end users, and the divide science vs indigenous knowledge

Climate Research Frontier
Africa Climate Research Priorities

African Climate Science Frontiers:
Addressing Priority Research Gaps to Inform Adaptation Decision-Making in Africa

Need for user-lead Research Frontiers
In alignment with the critical information needs of African end-users, policy-developers and vulnerable communities, to adapt to a changing climate and manage risks in the 21st Century:

- To support intra-seasonal risk monitoring and management to inform within-season operations (5 to 40 days range)
- To support strategic ahead-of-season planning (1-month to 12-months outlook)
- To support longer-term strategic planning/policy development (next 1-10 years)
- To support Climate change adaptation policy development/planning (next 50+ years)
- Assessing the current vulnerability due to recent climate events
- Estimation of the impacts of climate variability and change
- Decision making at local scales
- Building credibility and confidence in predictions, across timescales
- Mainstreaming climate services into policy formulation and decision making
Outcome of ACC 2013

- Conference Statement outlining:
  - Ambitious, Coordinated Agenda for African Climate Research to serve Development
  - Recommendations urging African institutions to establish sustainable Coordination platform on Climate Research for Development in Africa (under leadership of Clim-Dev Africa, WCRP, GFCS) > adopted during CCDA-3 conference

www.climateconference2013.org
Africa Climate Research For Development Agenda

Collaboration Platform
Steering Advisory Group
SECRETARIAT

Improved Observation System and Delivery
Scientific and Institutional Capacity Development
Mainstreaming Climate Services and Integrated Research

Co-designed multi-disciplinary climate research

Partners Network
Africa Climate Research Network
Global partners
Africa Climate Research Priorities

Co-designed end-to-end multi-disciplinary climate research

Subseasonal to Seasonal Prediction Project for Africa (S2S)
R. Graham (UK Met Office), A. Robertson (IRI), O. Ndiaye (ANACIM)

Improved Observation System and Delivery

Integrated Climate Science, Applications and Policy Research: HyVIC Project

Scientific and Institutional Capacity Development

Towards Robust Climate change projections over Africa: integrated CORDEX user-driven analysis
B. Hewitson, M. Shongwe

Mainstreaming Climate Services and Integrated Research

Extremes Attribution & Prediction in Africa / Multidisciplinary Validation of Forecast Skill
ACMAD, ETCCDI, WMO DARE
Where do we stand?

- Collaboration Platform
- Steering Advisory Group
- SECRETARIAT (ACPC/AMCOMET/WMO)

- Co-designed multi-disciplinary climate research
- Improved Observation System and Delivery
- Scientific and Institutional Capacity Development
- Mainstreaming Climate Services and Integrated Research

United Nations Economic Commission for Africa

WMO START global change System for Analysis, Research & Training

WCRP World Climate Research Programme

futureearth research for global sustainability
ClimDev-Africa:
- Position Africa at the frontier of climate science knowledge to allow vulnerable communities, governments and the private sector to translate advances in climate-related knowledge into effective policies, practices and planning processes for a climate resilient and sustainable development future

Areas of intervention:
1. Provision of widely available climate information, packaging and dissemination;
2. Quality analysis for decision support and management practice;
3. Informed decision-making, awareness and advocacy
Joint initiative of the WMO and AUC and is a body **endorsed by** the African Heads of States

A **high-level policy mechanism** for the development of meteorology and its applications in Africa

The **intergovernmental authority** on meteorology

**Vision:** to have a **framework of cooperation** to support sustainable development through the sound governance of the science of meteorology

**Mission:** to **provide political leadership**, policy direction and guidance in the provision of weather and climate services that meet societal needs
Integrated African Strategy on Meteorology (Weather and Climate Services)

Goals towards contribution to Africa’s Development

ADOPTED DURING THE SECOND SESSION OF AMCOMET, Oct 2012

ENDORSED BY THE EXECUTIVE COUNCIL OF THE AFRICAN UNION
Doc. EX.CL/764(XXII), Jan 2013

**Contribution to Africa's Development**

**Goal #1**
Contribute to Security (Safety of Life & Protection of Property and conservation of natural environment for Sustainable Development)

**Goal #2**
Position NMHSs & RCCs as core components of national and regional development frameworks

**Goal #3**
Enhance African Cooperation and recognition and provide a platform for W&CS

www.wmo.int/amcomet
Integrated African Strategy on Meteorology

Weather and Climate Services

FIVE STRATEGIC PILLARS

SP1: Increase **Political Support** and Recognition of NHMSs and RCCs

SP2: Enhance the Production and **Delivery of W&CS** for Sustainable Development

SP3: Improve **Access to MET Services** in particular for Marine & Aviation Sectors

SP4: Support the Provision of W&CS for **Climate Change Adaptation** and Mitigation

SP5: Strengthen **Partnerships** with Relevant Institutions & Funding Mechanisms
Strategic Pillar 4

SP4: **Support** provision of weather and climate services for climate change adaptation

**Areas of action**

- **Advocate** for at least 5% of budgets allocated to NMSs and associated institutions be used for research and development
- Support legislation designating NMSs as leading authority on climate change science-based projections

[www.wmo.int/amcomet](http://www.wmo.int/amcomet)
Areas of action (continued)

- Galvanize **greater engagement** between the climate and development communities

- Ensure a **structured implementation of GFCS in Africa**, and facilitate links between national and global GFCS implementation activities

- Liaise with relevant institutions and support the articulation of a **common African position** on climate change in international fora

www.wmo.int/amcomet
AMCOMET has pan-African mandate to promote cooperation at all levels and advocate for informed decision making based on robust science in matters related to weather and climate.

Platform to help increase visibility and ensure a better coordination and coherence on programmes, in particular the structured implementation of GFCS in Africa, including the research dimension.

AMCOMET and its Integrated African Strategy should be leveraged to promote institutional partnerships and outcome-based programmes.
Clim-Dev Programme, AMCOMET and WMO Joint Oversight of the CR4D Agenda

AU-ECA Conf of Mins of Finance and Econ Dev

Clim-Dev Programme

AMCEN  AMCOMET  AMCOW

WMO RAI

Meetings of the Chief Executives of the AUC, ECA and AfDB

Programme Steering Committee (CDSC)
(AUC, UNECA, AfDB and others)

African Climate Policy Centre (ACP)

ClimDev-Africa Special Fund (COSF)

Climate Change and Desertification Unit (CCDU)

Regional / sub-regional level
RECs/SROs, Regional/Sub-Regional Climate Institutions, RBOs, Research Institutions

National level
NMHSs, Sectoral Actors (public sector, private sector, civil society)

CR4D Secretariat

Scientific Advisory Committee

Institutional Collaboration Platform

Climate Research for Development (CR4D) Agenda
• There is a substantial need to bring cohesion from the fragmented Africa community and avoid duplication of effort for international investment to effectively engage in Africa-led science – facilitate the emergence of a single voice to development agencies;

• Identify research priorities and strategies for answering future and present concerns
• Enhance and support coordinated engagement in Africa and encourage applied/operational and research collaboration;
• Establishment of a user-demand driven approach for climate research to bridge the gap between climate information and the decision making;
• Prioritize the emergence of African science leadership in climate research, uptake and impact;
• Build a high-level dialogue between *science-active* African-research individuals and groups to build strategic cohesion;
• Build strategic partnerships with the international community;
• Build the demand for and capacity to use climate information and services (CIS) in decision making across Africa;
There are enormous challenges ahead
But together we can make it!

Please attend the CR4D side event for more details