AFRICA CLIMATE CONFERENCE 2013

15-18 OCTOBER 2013

ACC2013 CONFERENCE STATEMENT

PREAMBLE

The Africa Climate Conference 2013 (ACC2013) was organized by the World Climate Research Programme (WCRP), the Africa Climate Policy Centre (ACPC), and the University of Dar es Salaam with support from an international Scientific Steering Committee Representing a number of climate-focused institutions. It was held from 15-18 October 2013 at the Arusha International Conference Centre in Arusha, Tanzania. The Conference brought together over 300 stakeholders from Africa and around the world. It discussed the state of knowledge on the African climate system; identified current gaps in climate knowledge; identified priority areas and outlined an agenda to advance the frontiers of African climate research that will inform development and adaptation decisions; drafted a road map for mainstreaming climate information into decision making; and identified key African institutions to nurture research ideas and further develop them into pan-African research program proposals that enhance climate services. The ACC2013 brought together diverse experts in climate science research, applications, and policy to provide suggestions on translating climate information and knowledge to areas such as agriculture and food production, water resources management, risk management, health, and adaptation planning. The Conference participants, who included scientists, representatives of national, regional, and international organizations, development partners, and users of climate information, have agreed on the following:

IMPORTANCE OF THE PROBLEM

1. *Acknowledging* that climate data, science, information, and knowledge are critical in all facets of development in Africa under a changing climate;

2. *Acknowledging* the importance of a multi-sectoral research agenda that facilitates the efforts of national meteorological agencies to create enhanced national climate services for national development partners;

3. *Concerned* that Africa is highly vulnerable to natural variations in climate and human-induced climate change and to associated extremes like heat waves, droughts, and floods;

4. *Noting* the importance of addressing climate variability and climate change to the achievement of Africa's development and poverty reduction objectives;

5. *Noting* that impacts of climate change include those on agriculture and food security, water resource management, sanitation and public health, energy, natural resource management, environmental conservation, ecosystem functions, tourism, transport, financial services, infrastructure, etc;

6. *Noting* that there is an urgent need to strengthen scientific understanding of past, present, and future climate and to ensure that this knowledge is available and relevant to decision makers in order to address associated impacts;

7. *Recognizing* that there are important gaps in Africa's climate observing systems that need to be filled to facilitate sound science and decision making;

8. *Noting* that the lack of adequate data and observation systems seriously hinders the ability of scientists to assess the past and current state of the climate;

9. *Understanding* that policy makers, development planners, farmers in the field, the health community, and communities of practice of other socio-economic sectors need timely, reliable, and easily understood climate information;

10. *Acknowledging* that a communications gap currently exists between African decision-makers, vulnerable communities, development practitioners, and climate scientists and that a coordinated collaborative research strategy could help narrow this gap and deliver operational climate services in support of adaptation;

11. *Underscoring* that Africa's strength in international climate change negotiations depends on the availability of high-quality scientific information;

12. *Recognizing* that many climate initiatives with a continental or regional remit have begun to focus on Africa, notably the African Ministerial Conference on Meteorology (AMCOMET), the Climate for Development in Africa Programme (ClimDev Africa), and others;

13. *Noting* also that global-scale initiatives, such as the Global Framework for Climate Services (GFCS), that can facilitate improvements in the use of climate information by policy makers and others, are underpinned by the availability of adequate climate observations and state-of-the-art science at regional, sub-regional, and local scales;

14. *Emphasizing* that African universities and research institutions should enhance their capacity development programmes in climate science research, applications, policy, and associated fields.

IDENTIFIED SCIENCE CHALLENGES FROM ACC2013

15. *Have recognized* the critical importance of recovering, digitizing, and analysing existing historical climate data and of developing tools and systems to add value to climate data that can provide useful information on climate extremes and support adaptation, mitigation, and risk management;

16. *Have determined* that improving seasonal climate prediction through better understanding the remote and local drivers of variability is important for ahead-of-season planning;

17. *Have concluded* that improving understanding of sources of sub-seasonal predictability over Africa is necessary to improve intra-seasonal risk monitoring and management and intra-season operations;

18. *Have determined* that improving understanding of the drivers of decadal and multi-decadal variability and of the role of aerosols can assist in longer-term strategic planning and policy development;

19. *Have determined* that there is a need for robust climate change scenarios at regional and local levels appropriate for users decision-making and that such scenarios would assist in disaster risk reduction plans and the development of long-term climate change adaptation policy and planning;

20. *Have concluded* that further assessment and refinement of methodologies for assessing the attribution of climate events of the past and future is needed to provide timely analysis to governments and/or decision makers, in particular with respect to loss and damage issues;

21. *Have determined* that improved understanding of processes and feedbacks relating to the carbon cycle, water cycle, aerosols, vegetation, land-atmosphere coupling, land use change and their representation in climate models is needed to improve the physical basis of climate scenarios for Africa;

22. *Have concluded* that an effort is needed to improve understanding and prediction of sea surface temperature variability in the Indian Ocean and Tropical Atlantic Ocean comparable to the effort that has been made in the Tropical Pacific in order to better understand the impacts of this variability on African rainfall;

23. *Have concluded* that there is an urgent need for development of both sustained observational networks and also for short-term temporary intensive observational campaigns (such as achieved for West Africa by the AMMA programme);

24. *Have concluded* that there is also a need to develop impact datasets across all climate-sensitive sectors (e.g., for crop yields, river flows, groundwater, and health/hospital admission statistics) to aid development and targeting of applications models;

25. *Have determined* that there is a need to better characterize performance, credibility, and confidence for predictions on all timescales, most notably intra-seasonal and longer-term climate forecasts, in consultation with end-users, to facilitate the use of forecasts across timescales for early warning leading to early action;

26. *Recognized* the need for cross-disciplinary research between social and natural sciences to understand and better communicate projected climate impacts on water resources, health, wetlands, and other natural ecosystems, urban and rural areas, and livelihood systems to enable adaptation to a changing climate, for the benefit of resource planers and communities using them;

27. *Recognized* the key role of National Meteorological and Hydrological Services (NMHSs) and Regional Climate Centers in linking climate knowledge with action, and recognized the need to build the research

capability of institutions in Africa so that climate research outputs address the needs of policy-makers and vulnerable communities in Africa.

RECOMMENDATIONS

The Africa Climate Conference-2013 agreed on the following recommendations:

28. *Recommend to* WCRP and ACPC, in consultation with other institutions, to:
    a. review and endorse the identified priority African Agenda on Climate Research for Climate Services and Development, attached herewith as Annex 1.
    b. Support the development of a concrete research plan to advance current frontiers of African climate knowledge
    c. establish a coordination platform to mobilize African and non-African institutions to implement the priority agenda
    d. mobilize necessary financial resources for implementation through various mechanisms

29. *Propose to* Clim-Dev Africa to adopt the priority agenda and play a role in strengthening long-term research capability in Africa to deliver improved climate services for development, and coordinate the implementation of an African Agenda on Climate Research for Climate Services and Development;

30. *Propose to* the third Climate Change for Development in Africa Conference (CCDA-III) to endorse the ACC2013 Conference Statement recommendations for further actions;

31. *Recommend* to the African Union Commission (AUC), Regional Economic Communities (RECs), and Ministerial Councils, in particular the African Ministerial Conference on Meteorology (AMCOMET), the African Ministerial Conference on Environment (AMCEN), and the African Ministerial Conference on Water (AMCOW) to:
    a. review and recognize the African priority Agenda for Climate Research, Services and Development
    b. provide guidance and leadership to the priority agenda
    c. support the mobilization of resources for implementing the agenda

32. *Recommend* to the African Governments and their highest political leadership to lend their full support to the implementation of the African Climate Research for Climate Services and Development, so that climate science outputs address end user needs and are coordinated with other national programmes;

33. *Recommend to* key Institutions and programmes, including the AUC, ClimDev Africa, WCRP, the GFCS, all Regional Climate Centers and Institutions, ACMAD, NMHSs, representatives of key national universities leading climate research, and representatives of all major existing research initiatives on Africa climate research programs to actively participate in the platform and to nurture and implement the priority

agenda, including development of African climate scientists and science leaders;

34. *Request* the ACC2013 Scientific Steering Committee to:
    a. serve as an advisory body to the future platform on Climate Research for Climate Services and Development, taking into account user and multidisciplinary needs;
    b. provide scientific steering, agenda setting, and strategic prioritization, based on ACC2013 recommendations and evolving priorities of African climate research for development;
    c. serve as a custodian of the African Agenda on Climate Research for Climate Services and Development, and integrate through time evolving priorities of African climate research for development
    d. support the convening of a future African Climate Conference in five years' time to review progress on implementation of the African Agenda on Climate Research for Climate Services and Development

35. *Suggest* to the development partners/donors to:
    a. endorse the priority agenda
    b. provide the necessary financial support through their various funding agencies

36. *Propose to* African scientists and their respective institutions to:
    a. adopt elements of the priority agenda as part of their own research programmes and/or training curricular development
    b. enhance their internal capacities for implementing the agenda

37. *Suggest to* the ACPC to convene a meeting of the proposed institutional platform for coordination in the first quarter of 2014, convening all major climate research initiatives working on Africa to identify steps necessary to further implementation of the priority African climate research agenda identified in Appendix A.

VOTE OF THANKS

38. Finally, the conference participants:
    a. *Thank* the sponsors for their financial contributions for organizing the ACC2013
    b. *Appreciate* the efforts made thus far by the ACC2013 Scientific Steering Committee in drafting research frontiers and organizing the Conference
    c. *Appreciate* the full support provided by the government of the United Republic of Tanzania and the University of Dar es Salaam to the organization of ACC2013.

October 18, 2013, Arusha Tanzania

Annex 1

Priorities for Climate Research in Africa

African Climate Research Agenda for Climate Services & Development

A Recommendation from the Africa Climate Conference-2013: "Advancing Frontiers of African Climate Science, Research and Knowledge to Inform Adaptation Decision-Making in Africa"

Bringing together the cream of African climate research with user community representatives, The Africa Climate Conference 2013 (ACC-2013) proposes an ambitious coordinated research agenda to advance the current frontiers of climate knowledge to inform adaptation decision-making and climate risk management in Africa, and provide policy-makers as well as vulnerable communities with operational climate services.

The proposed agenda is described in Table 1. It consists of four large priorities for climate research to serve development in Africa, identified from ACC-2013 discussions. Under each priority are clustered critical pan-African climate research program proposals that will need to be supported and implemented to advance current knowledge frontiers, each bridging the gap between social and biophysical research, and between Research and Application, towards delivery of a coordinated climate research agenda for Africa that brings research outputs together with user needs.

Key Priority Area for Climate Research to serve Development needs (Cluster)	**Pan-African Climate Research Program Proposal**
1. Co-designed multi-disciplinary research for improving climate forecast skill and reliability, across temporal and spatial scales (towards operational user-relevant seamless forecast products)	Subseasonal to Seasonal Prediction Project for Africa
	Integrated Climate Science, Applications and Policy Research – Understanding underpinning drivers of climate variability in Africa Unfolded across five regions of Africa (East Africa, Congo Basin, West Africa, North Africa, Southern Africa)
	Towards Robust Climate change projections over Africa: integrated CORDEX user-driven analysis
	Integrated multi-disciplinary climate and impacts research (across four priority GFCS sectors- DRR sector, health, water and agriculture) Extremes Attribution
	Multi-disciplinary validation of forecast skill

	(including impacts skill)
2. Filling the Data Gap **Tailoring for Sector Decision-making**	Filling the Gap in Multidisciplinary data sets (for both climate and sector-specific vulnerability datasets) - Development of Integrated Africa Climate Data Information System within existing national and international initiatives - Risk Profiles for Major African Cities
3. Capacity-building, at all levels	Building African Capacity in Climate Science & Communication for Linking Climate Knowledge with Action – - Nurturing an African intellectual leadership in Climate Research for Development - African research nodes of excellence Developing and Mainstreaming training curricula for a changing climate
	From Global to Local: Linkages across prediction centers for delivery of operational climate services
4. Mainstreaming climate services into decision-making: Linking Knowledge with Action **Improved and more effective communication between climate science and Policy to identify end user needs**	Framework for Co-producing Climate Services and Integrating Knowledge for Action - Building the Interface: Multi-Stakeholder Platforms for Dialogue – Best methods for bringing together climate scientists and users for definition of common language, identification of needs and design of climate services to meet user needs - Co-producing climate knowledge with local stakeholders – the End of End-users - Supporting Adaptation under deep uncertainty- adaptation scenarios addressing envelope of uncertainty, across timescales