WISER

Weather and Climate Information Services for Africa

Pan-African Component

First Phase Final Report

24th December 2015 – 31st May 2017

United Nations
Economic Commission for Africa

ACPC
African Climate Policy Centre

Contents

Acronyms

ACMAD	African Centre of Meteorological Application for Development
ACPC	African Climate Policy Centre
AGN	African Group of Negotiators
AGRA	Alliance for a Green Revolution in Africa
AGRHYMET	Centre for the Regional Formation and Application of Operational Agro-Meteorology and Hydrology
AUC	African Union Commission
CARE	Cooperative for Assistance and Relief Everywhere
CEN-SAD	Community of Sahel-Saharan States
CIS	Climate Information Services
COMESA	Common Market for East and Southern Africa
CR4D	Climate Research for Development
DfID	Department for International Development
ECA	Economic Commission for Africa
EAC	East African Community
ECOWAS	Economic Community of West African States
ICPAC	IGAD Climate Prediction and Application Centre
ICRAF	World Agroforestry Centre
NEPAD	New African Partnership for Development
NGO	Non-Governmental Organization
NHMS	National Hydrology and Meteorological Service
PREPARED	Planning for Resilience in East Africa through Policy, Adaptation, Research and Economic Development
RCC	Regional Climate Centres
RCRP	Regional Climate Research Partnership
S2S	Sub-Seasonal to Seasonal
SAC	Scientific Advisory Committee
SADC-CSC	South African Development Community - Climate Services Centre
SASSCAL	Southern African Science Service Centre for Climate Change and Adaptive Land Use
TOR	Terms of Reference
UK Met Office	United Kingdom Meteorological Office
UN	United Nations

USAID	United States Agency for International Development
WISER	Weather and Climate Information SERvices for Africa
WMO	World Meteorological Organization

1. Executive summary

In addressing the barriers to Climate Information Service (CIS) uptake in development planning and raising its importance to key stakeholders, the Pan-African component of the WISER pilot phase achieved several milestones including building constituencies and outreach, awareness generation and enhancing an enabling environment for CIS investments.

The WISER initiative has built substantive constituencies through:

- The parliamentary and CSO training workshop, as well as the Southern African Regional Climate Services Workshop which brought together various constituencies from key research and academic institutions, line ministries and regional economic communities on CIS.
- The CIS Day during the Sixth Climate Change and Development in Africa Conference (CCDA-VI) and the WISER consultative meetings brought together a wide range of constituencies across the continent in the socio-economic benefits (SEB) of CIS and value-for-money.
- The CR4D Regional Climate Research Partnership (RCRP) workshops helped to expand the landscape of collaboration among critical stakeholders in co-exploration, co-designing, co-producing and co-communicating demand-driven climate research for development planning.
- Regional pilot research projects on seasonal to sub-seasonal (S2S) fostered partnership with Regional Climate Centers (RCCs), National Meteorology and Hydrology Centers (NMHSs) and other institutions (e.g., universities, research centers, etc) in Central and West Africa.
- CIS events during COP22 focusing on knowledge management for impactful CIS, CIS solutions for African SIDS and climate resilience of infrastructure.

Previous interventions implemented by the ACPC, such as ClimDev-Africa and CR4D, as well as other interventions in CIS and development policy, have cumulatively contributed significantly towards increasing awareness of the value of CIS and the emergence of an environment that will increasingly incentivise the uptake and use of CIS in development policy and practice. These experiences contributed significantly towards creating traction for the WISER programme in relevant policy circles, and also informed the design and convening of various regional workshops and trainings on:

- The socio-economic utility of CI and CIS for different development sectors in Africa.
- Value for Money (VfM) of CIS.
- Integrating CIS into legislation, development policies, plans and practices.
- Seamless climate forecasting to improve decision making at S2S timescale.
- Co-exploring, co-designing, co-producing and co-communicating CI and CIS.

Through collaboration and partnership with WMO, AMCOMET, GFCS, WISER East African component, RCCs and NMHSs, the WISER pilot phase produced the following outputs:

- In collaboration with WMO, a consolidated baseline report on needs and gaps in RCCs was produced.
- A standardized methodology for CIS needs assessment and business planning in NHMS was produced.
- The SEB and VfM frameworks were validated and partners agreed to align their activities to the frameworks.
- A multi-institution and multi-stakeholder regional climate research partnership was formed in East and Southern Africa and their respective user-driven project concept notes were developed for funding.
- A comprehensive mapping exercise on African institutions, initiatives and experts at the sub-national, national, regional and Pan-African level was finalized and google-map was developed to understand the research landscape in Africa.
- Stakeholders validated findings from the S2S pilot research project in central Africa and information for decision-making process in the agricultural sector were synthesized in a comprehensive report that will serve to support evidence-based decision making processes.

2. Introduction

The year 2015 was marked by several climate-related milestone events and programmes in the trajectory of sustainable development policy and practice. These include the launch of the Sendai Framework for Disaster Risk Reduction 2015-2030 (SFDRR) which creates a framework for linking climate change, disaster risk reduction and sustainable development policies to promote resilience; the Third Financing for Sustainable Development summit which focused on how the new sustainable development agenda will be financed, resulting in the Addis Ababa Agenda; Agenda 2030 and its associated Sustainable Development Goals; and the UNFCCC COP 21 which will delivered a post-Kyoto climate agreement aimed at keeping temperatures at below 2^0C. Climate change and its implications for sustainability is a common concern running through all these frameworks.

While communities across Africa already feel the effects of climate variability and change, the most severe impacts are expected to be felt in decades to come. Therefore, it is critical that development policies and practices at all levels from local-to-global scales incorporate accurate, timely, reliable and spatially detailed climate data and information, and define appropriate climate change actions. Adapting to climate change requires more than just understanding future climate risks, but also factoring short-to long-term climate information into investments and planning to help in guiding climate resilient development and promoting an enabling environment for the development, provision and uptake of climate information services.

In recognition that low uptake of climate information across Africa is threatening social and economic development, the Weather and climate Information Services for Africa (WISER) programme has been initiated by DFID with the aim of delivering a step change in the use of climate information to support poverty reduction and promote socio-economic development. The African Climate Policy Centre (ACPC) of the United Nations Economic Commission for Africa (ECA), in collaboration with the World Meteorological Organisation (WMO) and the African Ministerial Committee on Meteorology (AMCOMET) is implementing the Pan-African component of WISER, which aims to strengthen the enabling environment, including donor coordination, protocols for sharing data, contributing to the implementation of the Climate Research for Development (CR4D) initiative and fellowship programme. These interventions are organized , under pillars 2 and 3 of the programme. The expected outputs and corresponding sub-outputs for the first phase of the programme include:

- **Output 1: African regional strategies and an enabling environment for climate and weather services in Africa established and strengthened**

    - Sub-output 1.1: Consolidated baseline report on needs and gaps in Regional Climate Centers (RCC) produced;
    - Sub-output 1.2a: Standardized methodology for CIS needs assessment and business planning in National Hydrology and Meteorology Service (NHMS) developed;
    - Sub-output 1.2b: National Strategies Plans for east Africa NHMS of Burundi, Kenya, Rwanda, Tanzania and Uganda developed;
    - Sub-output 1.3: A framework for assessing economic value of CI and CIS for various sectors developed and tested;
    - Sub-output 1.4: Capacity building for parliamentarians, the African Group of Negotiators (AGN), civil society, private sector, gender groups, lawyers, other policy makers and legislators on CI and CIS implemented;
    - Sub-output 1.5: Pilot phase of the ACPC Pan-African fellowship programme implemented;
    - Sub-output 1.6: Knowledge management, communication plans developed, implemented and disseminated.

- **Output 2: Improved generation and use of climate information services (CIS)**

    - Sub-Output 2.1: CR4D Grant Management Mechanism developed;
    - Sub-Output 2.2: Support networks and regional bodies to promote effective use of weather and climate services in West, Central and Southern Africa;
    - Sub-Output 2.3: Oversee weather and climate research to build capacity and leadership in Africa.

This report presents the activities, achievements and challenges of the Pan-African component of WISER first Phase over the period from December 2015 to 31st May 2017.

3. Status of implementation and achievements

This section presents the achievements per output during the project period December 2015 to 31st May 2017:

3.1 Output 1: African regional strategies and an enabling environment for climate and weather services in Africa established and strengthened

The seven sub-outputs planned under this output were designed to support an enabling environment and vehicles to drive the uptake of weather and climate information services in Africa. Out of these sub-outputs, three have been implemented in collaboration with the World Meteorological Agency (WMO) based on the recognition of WMO's experiences and comparative advantages. These include: (i) sub-output 1.1: Consolidated baseline report on needs and gaps in Regional Climate Centers (RCC) produced; (ii) sub-output 1.2a: Standardized methodology for CIS needs assessment and business planning in National Hydrology and Meteorology Service (NHMS) developed; (iii) sub-output 1.2b: National Strategies Plans for east Africa NHMS of Burundi, Kenya, Rwanda, Tanzania and Uganda developed. The achievement per output is described below:

3.1.1 Sub-output 1.1: Consolidated baseline report on needs and gaps in RCCs

The establishment of Regional Climate Centres (RCC) within the Regional Economic Communities (REC) in Africa has been an important step in improving the co-generation and dissemination of climate information for policy and decision making. The main objective of this sub-output is to assess the needs and the capacity of RCCs for effective delivery of CIS. It will contribute to evidence-based policy processes for the strengthening of RCCs role in delivery of CIS for socio-economic transformation.

Therefore, Capacity Needs Assessments have been conducted to provide an overview on the needs and gaps in African Regional Climate Centres (RCCs). Four reports have been produced under this output and include a holistic view of the capacity of RCCs, which would provide entry points for technical support and intervention to ensure RCCs achieve their mandate. Capacity needs assessments were undertaken for ACMAD[1], AGRHYMET[2], and ICPAC[3];

After broad consultation of the Regional Climate Centers and member States, needs assessments for ACMAD and AGHRYMET were commissioned by WMO under agreement with ACPC.

The Capacity Needs Assessment undertaken for **ICPAC** was commissioned with the support of UK Met Office, under a WISER partnership agreement.

[1] *African Centre of Meteorological Applications for Development (www.acmad.net)*
[2] Centre Regional de Formation et d'Application en Agrométéorologie et Hydrologie Opérationnelle (www.agrhymet.ne)
[3] IGAD Climate Prediction and Applications Centre (www.icpac.net)

In addition to the above, a consolidated needs and gap assessment report was produced containing the following:

- A matrix presenting the current status and also projecting the future development of all African RCCs;
- Overview of governance issues of the RCCs and proposed concrete actions to realize the goals and objectives set out by the Centres, including a top level Monitoring and Evaluation (M&E) Plan to quantitatively monitor RCC improvements in institutional performance and service delivery over time;
- Prioritized capacity development needs for effective functioning of the RCCs; and
- A summary of the concrete recommendations and specific actions for the development of the RCCs over the next 5-10 years, with a summarized investment plan for the sustainable delivery of services (linking available funds and resource with the level of service).

Existing documentation on the Southern African Development Community Climate Services Centre (SADC-CSC) and the newly established Climate Application and Prediction Centre of Central Africa (CAPC-CA) were also incorporated in the consolidated report to provide a holistic view on the needs of the RCCs in the continent. These include the Strategy for SADC-CSC, which was commissioned directly by the Centre in 2016 and the Strategy for CAPC-CA, which was commissioned by the AMCOMET Secretariat, and was approved during the Third Session of AMCOMET in February 2015.

- The Report for ACMAD is attached as **Annex 1**
- The Report for AGRHYMET is attached as **Annex 2**
- The Report for ICPAC is attached as **Annex 3**
- The Consolidated Capacity Needs Assessment Report for RCC's in Africa is attached as **Annex 4**

3.1.2 Sub-output 1.2a: Standardized methodology for CIS needs assessment and business planning in National Hydrology and Meteorology Service (NHMS)

The main objective of this output is to develop a harmonized and standardized methodology for the development of National Hydrological and Meteorological Services strategic business plans for CIS uptake and delivery.

A template and guide for the Development of National Strategic Plans[4] has been developed to ensure a formalized and standardized approach, to the extent possible, in the development of National Strategic Plans for NMHSs across Africa.

The template and guide were validated through two regional meetings: one at the East African Community (EAC) Secretariat in Arusha, Tanzania, attended by Heads of NMHSs in the EAC. Partner States represented were, Kenya, Tanzania, Uganda, Rwanda and Burundi; and the second validation meeting was held at the COMESA Secretariat, under the auspices of the African Union Commission (AUC), and well attended by sub-regional

[4] The development of the Template and Guide for the Development of National Strategic Plans was implemented directly by WMO as contribution to the partnership with ACPC.

representatives from Member States, Regional Economic Communities (RECs) and Regional Climate Centres .

The template and guide have been used to implement output 1.2b particularly to develop the National Strategic Plans for Institut Géographique du Burundi (IGEBU), Kenya Meteorological Department (KMD), Rwanda Meteorological Service, Tanzania Meteorological Agency (TMA) and Uganda National Meteorological Authority (UNMA).

Furthermore, an impact assessment of the template and the guide will be undertaken during the WISER second phase to assess its impact and usefulness with a view to improve the eefectriveness of the tool and its bapplication.

The template and the guide are attached to the present report as **Annex 5.**

3.1.3 Sub-output 1.2b: National Strategic Plans (NSPs) for East African National Meteorological and Hydrological Services.

This sub-output aims at testing the templated developed with the East African Community. Consequently, the template and guide developed under output 1.2a, were used to develop five NMHS strategic plans namely (i) the Institut Géographique du Burundi (IGEBU) strategic plan, (ii) the Kenya Meteorological Department (KMD) strategic plan, (iii) the Rwanda Meteorological Service (Météo Rwanda) strategic plan , (iv) the Tanzania Meteorological Agency (TMA) strategic plan and (v) the Uganda National Meteorological Authority (UNMA) strategic plan.

During the period, each NMHS hosted a National Workshop for the validation of their respective National Strategic Plans to ensure ownership at relevant ministries and at the national level.

The National Strategic Plans for NMHSs in EAC Partner States are attached as follows: Institut Géographique du Burundi (IGEBU) – **Annex 6**, Kenya Meteorological Department (KMD) – **Annex 7**, Rwanda Meteorological Service (Météo Rwanda) – **Annex 8**, Tanzania Meteorological Agency (TMA) – **Annex 9** and Uganda National Meteorological Authority (UNMA) – **Annex 10.**

3.1.4 Impact assessment & sustainability of output 1.1 & 1.2

Throughout the implementation of the activities undertaken by WMO and AMCOMET, consultations were performed, not just with beneficiary institutions, but also with all partners at the continental, sub-regional and national levels as appropriate. These activities are also embedded in the priorities of the African Ministerial Conference on Meteorology (AMCOMET), a high-level joint initiative of the African Union Commission (AUC) and the WMO estabglished to ensure that National Meteorological and Hydrological Services (NMHSs) in Africa can better address issues pertaining to climate variability and change.

Through AMCOMET's Integrated African Strategy on Meteorology (Weather and Climate Services), Africa now has a strong policy to support evidence based effective mainstreaming of weather and climate services into sub-regional and national development plans, programmes and policies. As weather and climate patterns do not recognize political boundaries, enhanced sub-regional and regional partnerships are needed.

Furthermore, AMCOMET seeks to provide key support to the implementation of the Global Framework for Climate Services (GFCS) in Africa, including its priority areas (agriculture, food security, water resources, disaster risk reduction, health and energy). 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.

The long-term sustainability of the programme is linked to governments availing the necessary resources to NMHSs and RCCs. It is for this reason that the NSPs and Assessment Reports are linked to global agendas (Sustainable Development Goals, Sendai Framework on Disaster Risk Reduction, Istanbul Plan of Action, and COP21, among others), Regional Frameworks (AMCOMET Strategy, WMO's Regional Association 1 (RA1 Africa) Priorities, AU's Agenda 2063, among others), and to National Agendas (National Development Plans & Programmes – National Action Plans, among others).

3.1.5 Sub-output 1.3: A framework for assessing Value for Money (VfM) and Socio-economic Benefits (SEB) of CI and CIS for various sectors developed and tested

The overall objective of the framework is to provide a coherent approach for the Met Office, ACPC, DFID and other project stakeholders for measuring value for money (VfM) and socio-economic benefits (SEB) across the WISER programme. The specific objectives include:

Value for Money (VfM): this component aims to assess the Value for Money (VfM) of weather and climate services building on the 4Es – economy, efficiency, equity and effectiveness. It also serves to ensure that all projects and activities financed under WISER can demonstrate a strong theory of change supported by quantitative data around cost, delivery and outcomes.

Socio-economic benefits (SEB): This component aims to assess the socio-economic benefit (SEB) of weather and climate services, focusing on the analysis of the value of information. It is integrated with the VfM, providing key information on the efficiency and effectiveness components. It is centred on the assessment of benefits, and recommends a suite of methods including ex ante and ex post approaches, with modelling, cost loss analysis and econometric approaches to capture the varied benefits from different weather and climate services.

Implementation of activities under this component started in January 2016, but subsequently experienced delays arising from the need to finalize the VfM and SEB framework in order to establish a common basis for implementation of both East and Pan-African WISER programmmes. Extensive discussions and consultations were held

between ACPC, DFID and UK Met-Office, where the common framework has been reviewed and developed to capture five components :

- Value for money;
- Socio-economic benefits;
- Transformational impact;
- International Climate Fund (ICF)[5] indicators and;
- Monitoring evaluation and learning.

During the period under review, ACPC contributed to the review and testing of the framework and produced the following sub-outputs:

Report on SEB Modeling Guidance Material Indicators for an Integrated Cost Benefit Analysis (SEB assessment)

The report provides guidance for the analysis of the socio economic benefits of climate policy, as well as the identification and assessment of adaptation options. Specifically, it presents the steps required for the effective identification and use of indicators to support a sectoral and integrated analysis of SEB. Some of the steps presented are more relevant to climate vulnerability assessment, while others are more useful for adaptation and policy formulation/assessment. Given that the opportunities arising from adaptation are dependent on the (current and upcoming) issues originating from climate change, these steps can be applied sequentially. Finally, these steps lead to the implementation of an integrated Cost Benefit Analysis (CBA), where social, economic and environmental impacts –as well as policy outcomes- are considered. Differently from Multi Criteria Analysis, this integrated CBA includes the economic valuation of environmental consequences. The sectors covered by this model include: (i) agriculture; (ii) water resources, (iii) infrastructure; (iv) electricity generation; (v) land use and macro-economy. This research output represents a relevant decision-making tool which needs to be widely disseminated and used to support any assessment of cost benefit analysis of Climate Information and Climate Information Services. The report is attached as **Annex 11**.

Other activities related to testing of the model include:

(a) At the workshop in Addis Ababa, the Pan African CIS SEB Analysis model (PA CIS SEB) was introduced. The model, based on System Dynamics, allows for the integration of climate information into policy impact analysis across sectors. Simulation outcomes show the impacts of climate variability and extreme events on social, economic and environmental indicators. As a result, it allows for estimation of the socio-economic benefits of weather information by simulating alternative scenarios of action against a baseline.

(b) The workshop provided hands-on training on CIS-SEB analysis and the SEB data collection framework. It also provided an opportunity and a platform to discuss methodology to better assess the social, economic and environmental benefits of

[5] The International Climate Fund (ICF) is the UK government's commitment to developing countries to help them address the challenges presented by climate change and benefit from the opportunities.

weather and climate models using systems dynamic based modeling framework to inform policy and decision making at the national and regional levels. More than 70 key stakeholders representing government ministries (finance and economic planning, university, agriculture, health, infrastructure), non-governmental organizations, UN agencies, academic and research institutions from across Africa and as well as outside the continent attended the workshop.

(c) A WISER Consultative meeting was held from October 15-16, 2016. The meeting brought together key actors to discuss the implementation, share information and how best to effectively implement activities, measure and track indicators progress on core VfM and SEB. The meeting provided an opportunity to extensively discuss the VfM and SEB framework resulting in a better understanding of the framework and its relevance to implementation of the WISER initiative. It also helped establish a consensus on the VfM and SEB framework which enabled participants to articulate how best the various components and activities of the project will be aligned to the core elements of the framework for effective implementation. Apart from providing a unique space for the WISER East and Pan-African components and their stakeholders to interact and share best practices, lessons as well as identifying areas for joint implementation, the meeting also enabled interaction with the broader participants attending the Sixth Climate Change and Development in Africa (CCDA-VI) Conference. Most importantly, the active participation of WMO RA I (PRs and Directors of the African Met Services), AMCOMET, GFCS, RCCs, academia, CSO, policy makers and the broader UN and other international agencies helped enrich the discussion and popularized WISER to the community. In particular, the active participation of the president of WMO RA I as well as the Director of the

AMCOMET Secretariat and WMO LDCS gave much credibility to the meeting and endorsement of the strategic contribution that WISER will make towards demonstrating the socio-economic benefit of CIS to Africa's development and drive investments in CIS at all levels.

Five briefs that looked in various aspect of CIS and SEB were produced to raise awareness and support decision-making in assessing socio-economic cost benefits of CIS. The policy briefs are: The role of weather information in policy making; The impact of a changing climate on policy effectiveness; The importance of weather information in informing budget allocation; Improving decision making by recognizing the role of systemic resilience; and Climate change in support of the SDGs. The five policy briefs are attached as **Annex 12-16.**

3.1.5 Impact assessment and sustainability of Sub-output 1.3:

The framework for assessing Value for Money (VfM) and Socio- economic Benefits (SEB) of CI and CIS constitutes a unique and relevant decision making tool for WISER stakeholders and African countries. The application of the framework will be extended to four additional countries during the second phase. It will be developed in more detail to focus on disaster risk reduction and specific sectors such as Water, Energy, Agriculture and Transport – being the critical infrastructure and related services areas identified as priority in the (I) NDCs of most African countries under the framework of the Paris

Agreement on climate change. Extension of the assessment to include other priority sectors of the GFCS will be undertaken.

3.1.6 Sub-Output 1.4: Capacity building and training for parliamentarians, the African Group of Negotiators (AGN), civil society, private sector, gender groups, lawyers, other policy makers and legislators on CI and CIS implemented

In the pilot phase of WISER, ACPC's capacity building interventions focused on training and building capacity for parliamentarians, civil society organizations, gender groups, lawyers other policy makers and legislators on CIS. In particular, ACPC developed an innovative approach involving training sessions for parliamentarians on the importance of CIS for development planning with impressive results and feedback, including the development of a well-received training package (curriculum) for parliamentarians that has now been developed further into an online training module on CIS and development planning for policy makers.

The main focus of the training and mobilization of the influence of parliamentarians on the importance of CIS for development planning is particularly significant in that as lawmakers with the powers to influence investments, they also depend and can readily influence their constituents as last mile users of CIS.

The Workshop was attended by thirty-six (36) participants including twenty-one (21) Members of Parliaments, and Senate and fifteen (15) representatives of Civil Society Organisation from Botswana, Burkina-Faso, Cameroun, Egypt, the Gambia, Ghana, Ethiopia, Kenya, Liberia, Nigeria, Rwanda, Sierra Leone, Swaziland, Tanzania, Uganda, Zambia, and Zimbabwe. The ACPC staff and three trainers from CAMCO Energy a Kenyan-based Climate Institution facilitated the training.

The participants saw value in increased efforts to broaden awareness among decision makers and emphasized that the approach of providing examples and case studies from other African countries was constructive and compelling. Participants were enthusiastic about a potential CIS guidebook modelled around this workshop's approach, as part of an awareness raising series at the national level. Such a guidebook would provide practical steps and models for integrating climate change information and services (from data collection to dissemination) as well as climate change adaptation.

In a nutshell, under this sub-output, the following products were delivered:

- A training modules on *"Mainstreaming/Integrating Climate Information and Services into Legislation, Development Policies, Plans and Practices: Training Resources for Capacity Building for Legislators, Policy Makers and Civil society*" **(attached as Annex 17**)
- E-learning module accessible at: https://unccelearn.org/course/view.php?id=32
- The regional workshop (report including evaluation and recommendations attached **as Annex 18**)

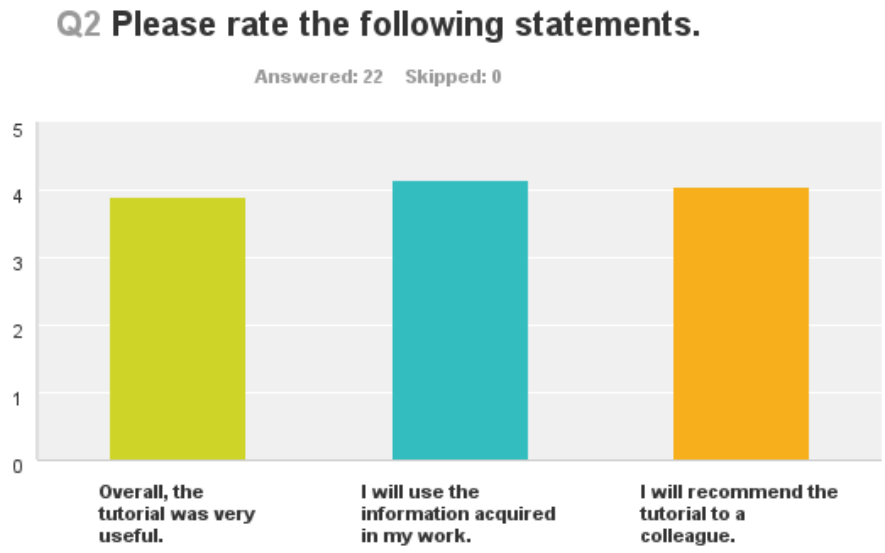
3.1.7 Impact assessment and sustainability of Sub-output 1.4:

According to feedback received from participants, 86% acknowledged that the workshop has improved their understanding of the definition of climate data, information and service, as compared to 7% without opinion and 7% who slightly disagreed. For most of the participants, about 78%, the workshop's objectives were met - it had contributed to the improvement of their knowledge of the role of climate information and climate information services in agriculture development, energy efficiency, water management other key development sectors. The majority, around 90%, noted that the workshop helped them to understand the necessity to support the mainstreaming of climate information and services into policy and legislation. Finally, with regard to the content of the modules, 93% of the participants thought that the content was relevant and helped them to improve their knowledge of climate information and climate information services.

The workshop adopted key recommendations and resolutions to be widely disseminated through Parliaments in Africa.

To further increase the reach and effectiveness of the training modules, ECA partnered with the One UN Climate Change Learning Partnership, UN CC: Learn, to develop and launch the interactive tutorial *"Climate Information and Services: A fast track course on climate information and services for decision-makers*". The tutorial was launched on 31st of March, 2017 on UN CC: Learn's e-learning platform. The number of people who have engaged with the course: more than 200.

As of April 26, 2017 the tutorial evaluation form has been submitted by 22 e-tutorial users. Users were asked to rate their experience with one to five thumbs up, respond to a short set of three questions and provide written comments and suggestions for improvement. Overall, the feedback reflects a positive and useful user experience with the tutorial as presented by the graph below.



In the second phase of WISER, ACPC will focus on making use of this on-line module for the training of trainers at national and sub-regional levels. CIS capacity development partnerships will be encouraged with national training institutions and universities for the deployment of the on-line modules in contributions building a critical mass of mainstream CIS-savvy community. A phased approach will be used to pilot and rollout this output through a training of trainers from selected institutions and organizations that offer support to Parliaments, CSO, media professionals, and youth groups; a review and translation of the modules and programme into French, based on outcomes of the training of trainers activities; establishment of a partnership with the UN CC: Learn for the impact assessment of the training programme and its wide dissemination online; and rollout of the training programme at national and regional levels in partnership with at least fifteen training institutions.

3.1.8 Sub-Output 1.5: Pilot phase of the ACPC Pan-African fellowship programme implemented

The purpose of this pilot fellowship programme is to provide training and capacity building opportunities to postgraduate African students working or conducting research on various aspects of climate change and its mainstreaming in planning and decisions-making processes in Africa. The programme also aims to link the African climate change scholars with relevant research and policy institutions across the continent. Therefore, during the period, the fellows' achievements were as follow:

A) *Climate Adaptation on Agriculture and Trade Fellow:* The main objective of the fellowship programme is to contribute to the development of the knowledge-base in capitalizing on the emerging opportunities from the interaction between climate change and agricultural trade for boosting inter-regional trade in agricultural commodities and enhancing climate adaptation for food security in Africa. During the period, the fellow benefited from learning opportunities through the interaction with research institutions and experts working on the nexus of climate change, agricultural production and trade in incentivizing business investments in agriculture to transform the sector in Africa and enhance food security. As a result, she contributed to a policy brief and successfully led two high level discussions that provided the fora for learning and sharing experiences and knowledge amongst experts, ministers and policy makers in the field of Climate Change Adaptation, Agriculture, and International Trade. The discussions were rich in raising issues that contributed to the articulation of policies that would support Africa's growth and transformation trajectory following climate-induced shifts in agro ecosystems. It also helped in illustrating the emerging corridors for agricultural trade and the opportunity to respond to market demand for agricultural commodities.

B) *Energy and Climate Change fellows*: The objectives of the fellowship program were to: (i) compile case studies to assess weather and climate variability impacts on energy production in selected renewable energy projects (wind, solar and hydropower); (ii) to contribute to the development of material for capacity building of energy planners; (iii) to contribute to the development of guiding principles for best practice in mainstreaming climate information services into energy planning; and(iv) to learn the use and integration of GIS tool at the Regional Center for mapping of

Resources for Development (RCMRD) in Nairobi, Kenya. During the period, the fellow achieved the following: (i) compiled data set on renewables (Wind, Solar Hydropower); (ii) developed maps, graphs, and tables on the annual energy production for Adama and Ashegoda renewable energy projects in Ethiopia. These knowledge products illustrate three years' forecasts by considering variabilities in weather and climate. (iii) Completed the GIS system with wind and solar projects as well as a compilation of other CIS proxy layers. The last output was to integrate the numerical weather prediction into the GIS system and configure the system to access CORDEX regional downscaled data. There were some technical challenges with this aspect and additional time is needed to address these issues.

C) *Communication Fellows (2):* The communication fellows were recruited to work under the supervision of a senior communication expert on the following issues: (i) stakeholder mapping, information needs and assessment of communication tools and channels for improved information uptake and (ii) mapping and assessment exercise of climate change policy decision spaces and key communication and advocacy intervention points in specific contexts. A consolidated report reviewed by a Senior Communication officer is available at Annex 21.

This fellowship has helped fellows to gain larger regional exposure and contact with key climate information experts, as well as knowledge on communication in climate change in different countries in the southern Africa. It has also enriched fellows' knowledge on new emerging issues in the region and gaps in climate information sharing and uptake; the mapping of climate information providers has helped to propose an innovative communication tool and strategy for the uptake of climate information by policy-makers within key national sectors.

3.1.9 Impact assessment and sustainability of Sub-output 1.5:

It has been recognized that the lack of sufficient CIS professionals and practitioners in Africa poses a serious bottleneck to the uptake of CIS for transformative change on the continent. While various programmes are making efforts to address this barrier, the ClimDev Africa programme and the pilot phase of WISER have also made contributions towards developing a good number of CIS professionals on the continent. The WISER fellowship programme built on the ClimDev-Africa Pan-African fellowship programme supported by other funding partners to provide opportunities for young professionals to enhance their capacity to conduct research geared towards developing modalities and options for packaging customized products to the needs of end users. ACPC, in collaboration with these partners in the public and private sectors, will continue to mentor these young fellows as well as provide a space for them to share experiences with young Africans that have developed the innovative solutions to different challenges on the continent.

3.1.10 Sub-Output 1.6: Knowledge management, communication plans developed implemented and disseminated

Knowledge Management

In this output, implementation included support to the Pan-African component in provision of knowledge services, documentation and publications. A number of learning activities that included the CIS day at CCDA-VI, workshop and online learning module for policymakers, website and social media engagement, were facilitated.

During the consultative workshop held on the sidelines of CCDA-VI, the role of knowledge management in WISER, as well as lessons and best practices from the East Africa perspective were discussed. The report of this workshop is provided **in Annex 19**. A follow-up knowledge management and communications workshop convened from 24-26 May 2017 discussed knowledge and communications implications of CIS co-production, stakeholder mapping and a partnership for enhanced knowledge and information sharing, learning and communication effectiveness. The meeting further produced a roadmap towards an integrated KM strategy for WISERR East Africa and Pan Africa components in Phase 2. The detailed report of the workshop is currently under compilation.

Significant consultations and a desk study were undertaken in the development of a WISER Pan-African knowledge management strategy, with emphasis on partnerships to support the last mile delivery of CIS. Among the stakeholders consulted were ECA knowledge services, ICPAC, BRACED, the East Africa component of WISER, youth and ACPC staff. The format used consisted of personal interviews as well as a questionnaire. The draft strategy is attached in **Annex 20.**

Communications

During the first one-year phase of WISER, two communication research activities were undertaken with the objective to bridging the gap between climate information and users and to stimulate the use of climate products by end-users. These were:

(i) Review the uptake of climate information in decision-making at community level by select projects in the areas of adaptation, agriculture, disaster risk reduction and other climate-sensitive areas as well as identify the communication approaches, tools and methods for information uptake.

(ii) Identify policy decision spaces, needs and leverage points with a view to fulfilling a key objective of WISER to promote the uptake climate information and; demonstrate socio-economic value of climate information.

The main findings of the research include:

- Resilience in the face of climate change is embedded in indigenous knowledge and know-how, diversified resources and livelihoods, social institutions and networks, and cultural values and attitudes

- Research demonstrates that participatory approaches to community-level risk management can significantly improve the benefits of using climate information. End users of climate information should not merely be seen as a target audience but as partners in co-creating and learning through processes and products that reflect their own contributions.

- The importance of co-production is not only at community level but macro policy levels as well.

- Reaching the most vulnerable and remote is difficult because of the inequities in the patterns of flow and use of information make it difficult for national and sub-national governments, humanitarian and development organizations and other stakeholders to reach the “last mile” where adaptation measures are most needed. Subsistence farmers, rural communities and remote dwellers and cannot easily be reached.

- Given its critical importance, understanding of climate information deserves the best possible communications to convey the practical implications of the often complex, uncertain physical, biological and social processes that occur as a result of climate change.

- Realizing the practical value of climate information means ensuring that diverse stakeholders understand the risks and uncertainties that they face. Promoting such understanding is unlikely to be a sufficient condition for effective responses. However, such understanding is a necessary condition for action.

Key recommendations of these studies include:

- A training programme to understand probabilistic forecasts, the importance and use of climate information needs to be established, to strengthen capacities of policy makers and decision makers.
- Governments should invest in the Climate Change Knowledge Centers; it will be a useful tool to upscale uptake of climate information, exchange and disseminate of knowledge. This will improve general public awareness and the countries’ resilience to climate-induced disasters.
- An Inter-institutional Working Group for Climate information is recommended in each country to facilitate information sharing and consensus and to advise and provide collective information to policy makers.
- Building a communication network for stakeholders both at the national and the district level is important.
- Control and Quality Assurance is important for Met services to meet WMO ISO standards.
- Meteorology departments need updated equipment to make accurate predictions and build confidence and trust in weather and climate forecast.
- Politicians and local governors can be used as a vehicle to raise awareness and disseminate climate information to reach a wider audience when they convey their political agenda.
- Meteorology departments in the region need to be supported at district level in order to make specific requirements and predictions for districts and not only on national level.
- There is need to invest in community radio and media for effective grassroots dissemination to the last mile.
- There is need to improve on Communication protocols that downscale climate information.

- Co-production with traditional/indigenous knowledge systems need to be strengthened to prevent failure in implementation.
- Training journalists and media practitioners in each country to understand climate information and disseminate it is crucial.
- There is need for an impact based forecasting and response strategy to foster preparedness.
- When information is fit for purpose the uptake is enhanced.
- There is need for meteorology technicians to repackage climate information in an end-user friendly way, at regional, national and sub-national level.
  A consolidated report is attached as Annex 21.

Beyond these studies, during the period, new content is regularly posted on the ClimDev-Africa website, including new documents, stories and event information at the following addresses:

- http://www.climdev-africa.org/wiser/
- http://www.climdev-africa.org/cr4d/

3.1.11 Impact assessment and sustainability of Sub-output 1.6:

Knowledge management is a key component of WISER Phase 1, and will continue into Phase 2 focusing on transforming knowledge into action by improving the generation, co-production and access to a wide array of climate and related information and knowledge as well as effectively managing it to support decision making at national, sub- regional and regional levels across the continent.

Notwithstanding the importance of climate information, uptake is low for a number of reasons; political, institutional, technical, capacity as well as uncertainty about the information itself. When decision makers are faced with climate variability and extremes, complex and context specific responses have to be made. There is therefore an urgent and ongoing need to strengthen the knowledge into policy, advocacy and action.

Strategic communication plays a pivotal role in stimulating uptake and amplifying, translating, packing and disseminating the information for different stakeholders to different levels within the policy process.

3.2 Output 2: Improved generation and use of climate information services (CIS)

The CR4D initiative promotes and nurtures collaborative, user-driven, climate research activities to promote improved generation of climate information and climate information services needed for decision making in various climate sensitive socio-economic sectors. To achieve this key objective, three sub-outputs were planned during the pilot phase.

3.2.1 Sub-Output 2.1: CR4D Grant Management Mechanism developed

In order to better understand the climate science landscape in Africa and to bring on board a partner institution that manages WISER funded CR4D research, a number of activities were implemented during the pilot period. These activities were designed to build a

foundation for the operationalization of the WISER funded CR4D grant management mechanism and include:

- Finalization of the CR4D governance structure essential for the realization of CR4D strategic goals.
- Organizing the CR4D Scientific Advisory Committee (SAC) meetings to identify major priority climate research areas for CR4D in general and planned WISER funded research grants in particular;
- Organizing Regional Climate Research Partnership Workshop (RCRP) to explain the CR4D agenda and solicit inputs from various stakeholders. The workshops were also instrumental in identifying regional user-inspired climate research priorities, which can be considered in the planned grant management mechanism.
- Undertaking a comprehensive mapping exercise of institutions, initiatives, and experts engaged in climate and related research in Africa over the past 10 years in order to understand all players in the climate research and related activities landscape in Africa.
- Endorsing the terms of reference (ToR) for the elaboration of the 5-year CR4D strategic plan by SAC and Oversight Board, which recognizes the grant management mechanism as one of the nine major focus areas in the final strategic document.
- Establishing a set of minimum standards for the grant management mechanisms and identifying potential candidates for the institutional assessment.

The detailed activities and the corresponding contributions to the sub-outputs 2.1. are given below:

a) The first CR4D SAC meeting was held on 17-18 March 2016 in Addis Ababa, Ethiopia, to discuss various issues related to the governance of the initiative. The meeting elected its co-chairs and recommended the development of a white paper on the assessment of the implications of 2^0C warming for Africa 2020 in line with the IPCC proposed special report on the same question. The sub-committee was formed and developed the white paper, which will be used to contribute to the IPCC assessment report. In recognition of the need for publication, a task-team was formed to develop a white paper outlining a business case for an African journal on climate research and development. Furthermore, the SAC endorsed the two proposed CR4D Regional Climate Research Partnership (RCRP) workshops for East and Southern Africa and recommended holding similar workshops for African SIDS, Northern, West, and Central Africa. The final report (annex 22) and other relevant documents were compiled and are available on http://www.climdev-africa.org/cr4d/.

b) A workshop was held in Nairobi from 30-31 March 2016 to identify user-inspired climate research priorities that improve access to quality climate information and services in Eastern and Horn of Africa. The interim CR4D regional research coordination team was established and developed a concept note on "*the impact of climate change on the Food-Energy-Water nexus*", as a top priority for the sub-region. Participants also agreed that the newly established CR4D research coordination team to engage the marine and oceanographic institution; and develop an integrated user-

driven research on how changes in the sea surface temperatures and ocean heat affect the seasonal to sub-seasonal (S2S) forecasting on the nexus. This workshop was attended by over 50 participants, including Directors of the African Academy of Sciences, ICPAC, and representatives from EAC meteorological services, USAID PREPARED project, AGRA, CARE International, ICRAF, and others. They all agreed to work with CR4D and requested the Secretariat to take the lead in mobilizing seed money for the identified pilot project. The final report (annex 23) is available on http://www.climdev-africa.org/cr4d/.

c) The CR4D-RCRP workshops for Southern Africa were successfully held in Gaborone on 25-26 May 2016 with the primary objectives of scoping and assessing of user-driven climate research priorities for the region and initiate a multi-stakeholder collaborative partnership for effective integration of new research findings into applications. An interim regional climate research coordination team was formed and developed a concept note that focused on "*provision and use of climate information services to enhance agricultural development*". This concept note builds on existing initiatives and frameworks and has four components: (i) data acquisition (capture, storage, retrieval, sharing) and analysis (modelling and down-scaling); (ii) community interactions to establish user needs and options including diverse communications channels; (iii) product development and service provision; and (iv) technical, human and financial (resource mobilization) capacity development. This workshop gathered more than 45 experts from different countries and sectors. A public seminar was also held on the Nationally Determined Contributions (NDCs) to create awareness on one of CR4D research priority areas "*the impact of Paris Agreement on Africa's development*". This seminar was attended by high government officials and various other stakeholders. The survey conducted after the seminar suggested that the topic helped them to enhance their understanding on the Paris Agreement and its impacts to the continent. The final report (annex 24) was compiled and made available on http://www.climdev-africa.org/cr4d/.

d) The joint SAC and CR4D Oversight Board meeting was held between 20 and 21 October 2016 in Addis Ababa, Ethiopia; and announced its decision to expand the SAC membership from 15 to 19 to address the current gender imbalance as well as inadequate representation of the social science experts. The meeting also recognized the two research topics identified during the eastern and southern RCRP workshops and recommended the draft concept note to be developed fully in order to be considered in the planned grant management mechanism as well as to raise funds from other sources. Furthermore, the meeting discussed the ToR for two crucial CR4D governance structures: the Institutional Collaboration Platform (ICP) and SAC. It was decided that the ICP shall meet once a year while SAC meets twice annually. The meeting also recognized the urgency of developing the CR4D 5-year strategic plan; and accepted the grant management mechanism as one of the nine focus areas to be included in the final CR4D strategy document. Overall, the meeting recommended about 10 points with regard to the future direction of CR4D and the final report (annex 25) found on http://www.climdev-africa.org/cr4d/.

e) The CR4D Secretariat has undertaken a comprehensive mapping exercise on institutions, initiatives, and experts engaged in climate and related research in Africa over the past 10 years in order to identify major players in climate research and related activities in Africa. This work is crucial for future CR4D initiatives including the planned grant management mechanism as it gives valuable information for pooling and sharing research facilities, resources, and infrastructure among sub-regional, regional and Pan-African institutions. The results indicate that institutions in Southern and Eastern Africa are more engaged in various aspects of climate research (e.g., modeling, climate services and adaptation), while institutions in the Central and Northern Africa have conducted relatively less research work. With respect to international institutions, Universities in the United States followed by the United Kingdom, supported climate research work in Africa and their contributions are instrumental in building capacity and enhancing knowledge sharing among African scientists. In general, this work identified a lack of coordination among the existing institutions, organizations and experts and called for more coordination across the regions. The final report (annex 26) and the interactive google maps are Finalized – the google map is being tested at the following link:

f) The goal of the proposed 5-year strategic plan is to bolster opportunities for increased research on climate change that targets key Africa development issues through networking, knowledge sharing and publishing of key climate research services. The final TORs (annex 27) has nine areas of focus including (i) identifying gaps in data and research; (ii) developing a strategy for the on-going and emerging climate and related research issues in Africa; (iii) developing a strategy for enhancing Weather and Climate Services for policy and development planning in Africa; (iv) developing a strategy on engaging more African climate researchers and stakeholders in the IPCC Assessment Reports; (v) developing a strategy for dissemination of evidence-based climate information and knowledge; (vi) developing a strategy for Regional Climate Research Partnerships; (vii) developing a strategy for forums to promote on-going Climate Science Policy Dialogue; (viii) developing a strategy for capacity development; and (ix) developing a strategy on grant management and resource mobilization. The zero draft strategy document was developed by SAC sub-committee members; and a writeshop to finalize the strategy is scheduled for June 2017. The final strategy will be presented in the upcoming SAC meeting and CCDA for stakeholders' inputs.

g) As a crucial step in the operationalization of WISER funded grant management mechanism, the CR4D Secretariat in collaboration with DIFD/UK MET Office selected an institution that identifies potential candidates to manage the WISER-funded CR4D research. The selected institution (Dal Berg) established a set of minimum standards for the grant manager to deliver the intended outputs under WISER-funded CR4D research. The Secretariat was also involved in reviewing the final report produced by Del Berg while continuing working with DIFD on subsequent activities.

3.2.2 Impact assessment and sustainability of Sub-output 2.1:

The following sub-outputs will contribute to the effectiveness operationalization of the WISER funded CR4D grant management mechanism: (i) the operationalization of CR4D

crucial governance structures including the CR4D Secretariat, Oversight Board, and SAC; (ii) the establishment of federated CR4D research coordination teams to advance user-inspired climate research priorities in Eastern, Horn and southern of Africa. The proposed research projects identified during the two workshops will be submitted to the WISER funded grant management call and vetted accordingly; (iii) the comprehensive mapping of institutions, initiatives, and experts engaged in climate and related research in Africa over the past 10 years will help to avoid duplication of efforts; and (iv) establishment of a set of minimum standards for the grant manager and the selection of a best institution that identifies potential candidates to manage the WISER-funded CR4D research. Therefore, the WISER second phase grant management activities will build on the achievements under sub-output 2.1

3.2.3 Sub-Output 2.2 and 2.3: Support networks and regional bodies to promote effective use of weather and climate services in West and Central Africa; and oversee weather and climate research to build capacity and leadership in Africa

These two sub-outputs are interrelated and primarily designed to explore and assess the unique challenges and opportunities for multi-institution/multi-stakeholder climate research and promote effective use of CIS in selected sub-regions of Africa. Despite the existence of various challenges including a delay in disbursement of the second tranche of WISER funds and the lengthy internal recruitment process, the Secretariat managed to conduct:

- two regional projects in Central and West Africa; and
- a regional training workshop on S2S forecasting.

The detailed activities and the corresponding contributions to the sub-outputs 2.2 and 2.3. are given below:

a) The CR4D regional pilot project on S2S forecasts for agriculture was conducted for Central Africa region. Five GCMs forecasts (BOM, CMA, ECMWF, HCMR, and NCEP) were assessed for selected pilot counties (Cameroon and DRC). CMA was more skillful in Cameroon compared to ECMWF; both models showed strong deficiencies for ”earlier” and ”later” onset date categories. However, BOM displays better skill for all onset categories. Over DRC, BOM showed highest performance for most onset date categories while skills of CMA and ECMWF are close together. A verification of forecasts was also conducted using the Standardized Anomaly Index, Mean Bias, Frequency Bias, and Equitable Threat Score. Broadly, considering onset dates, models showed good skills to forecast “average” or “normal” category of onset dates over Cameroon and DRC, with higher frequency bias across large number of stations for CMA, followed by BOM and ECMWF. In the case of dry spells, detection at threshold of 1mm improved for CMA followed by BOM forecasts. Another important output of this pilot project is the established partnership with the International Research Institute (IRI) for Climate and Society of Columbia. Once stakeholder validation workshop held, the research findings from such work will be communicated to the respective regional climate outlook forums for effective utilization of S2S matrices in the agricultural sectors. The final research project report (annex 28) is under review.

b) A similar pilot project is being conducted in the Western Africa region. This work will be completed within the buffer period of WISER phase I.

c) The S2S training workshop was held between 8 and 9 February 2017 in Addis Ababa, Ethiopia, to train participants on seamless climate forecasts at seasonal to sub-seasonal (S2S) scale. The workshop gathered some 68 climate scientists, practitioners and researchers from 30 countries. About 70 per cent of workshop participants rated the content of the workshop as "very good" and would help build the capability of meteorological services in providing climate information in the S2S domain. Among the different training sessions, most participants said they were pleased with the panel discussion and ranked it the highest followed by presentations on the overview of the method, tools, data and approaches in S2S; and analysis, evaluation and verification of S2S forecast. The involvement of young researchers in the workshop was also judged instrumental in achieving the CR4D's goal of enhancing future climate research in the region. Most participants recommended similar workshops for the future. The final report (annex 29) on this training workshop is being produced.

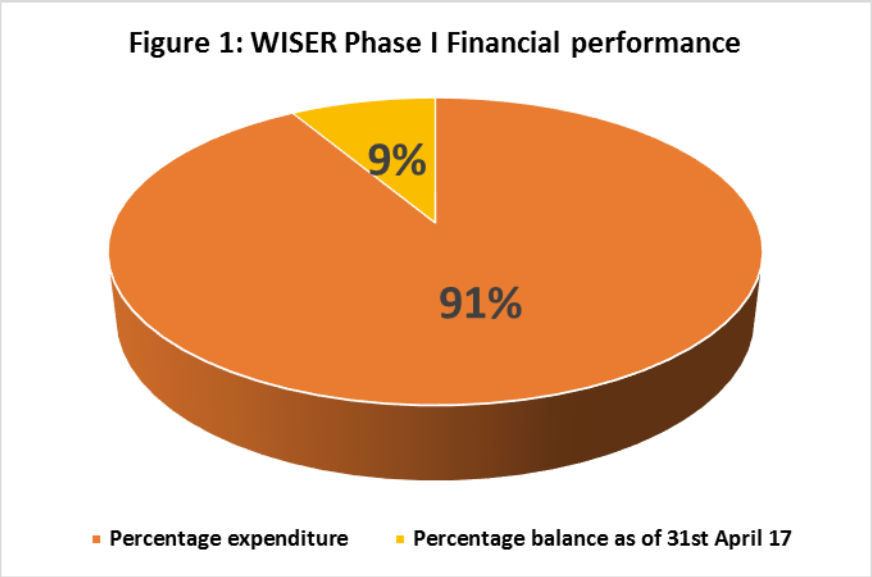
3.2.4 Impact assessment and sustainability of Sub-output 2.2 and 2.3:

The activities under the sub-outputs 2.2. and 2.3 will contribute to promote effective use of weather and climate services by developing a robust S2S forecast matrices for agricultural sector in central and west Africa. The research findings from such work will help to determine the onset and session of rainy seasons, and dry spells for agricultural purposes and will be communicated to the larger audience using their respective regional climate outlook forums. The lessons learnt from the implementation of field projects (such as on identifying potential partner institutions, provision of grant implementation support, tracking/monitoring of progress and outputs, and other) can also be used in the WISER phase II grant management mechanism.

4. Financial performance

Funds received and expenditures analysis

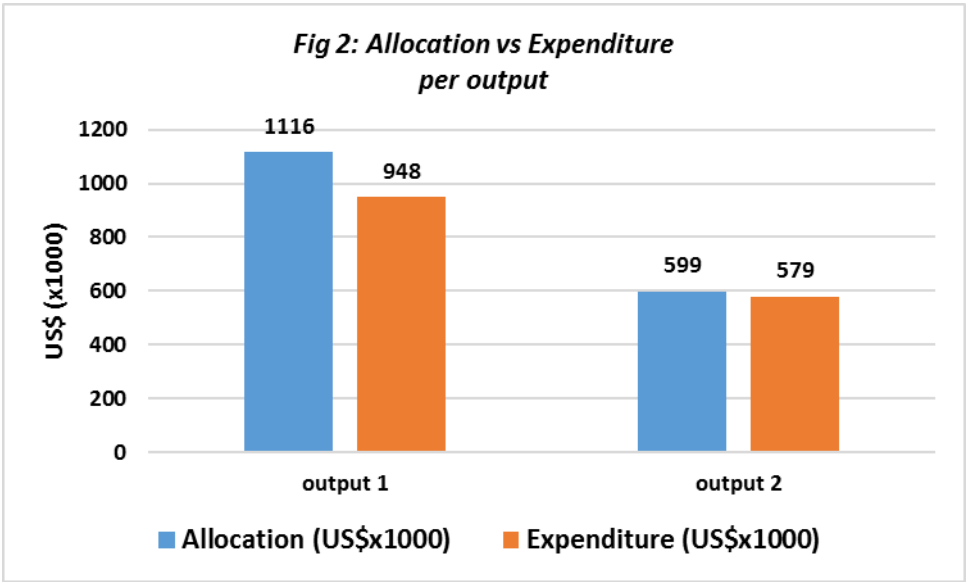
From the United Kingdom of Great Britain and Northern Ireland (UK), under the WISER first phase, the equivalent of **US$ 2,814,011.63** was received in two installments as follows:
(i)A first installment amounting to US$ 1,846,316.43 was received on 15 December 2015; and (ii) a second installment of US$967,695.20 was received on 22 November 2016. Out of this amount as of 31 April 2017, the total amount of US$2,572,376.62 was spent and committed leaving a balance of US$241,635.01, representing as per figure 1 below, a fund utilization rate of **91%.**

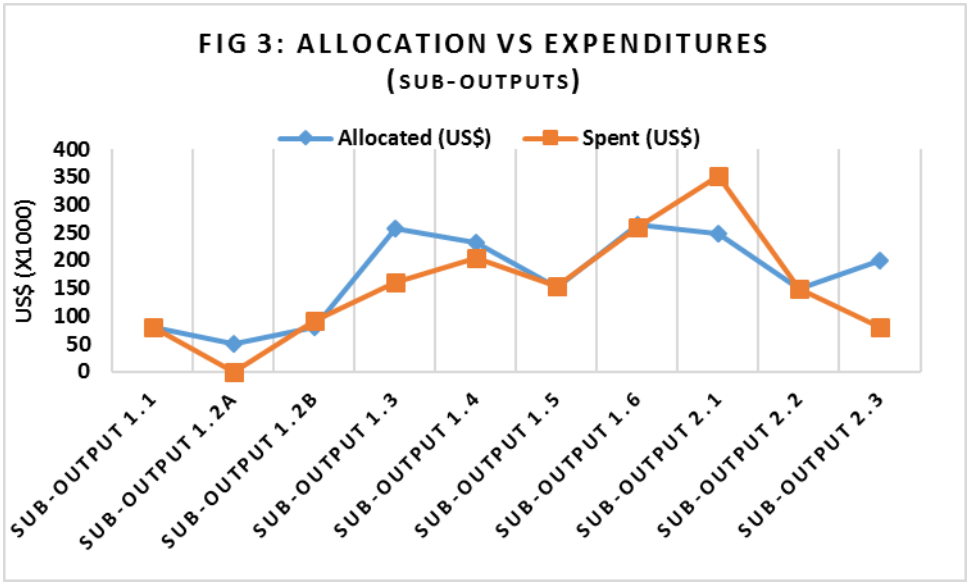


Expenditure vs Allocation per output and sub-output

During the period under review as represented by fig 2 above, the total expenditure per output was less than the allocated resources leading to a positive budget variance. However, while analyzing the expenditures per sub-outputs as highlighted by fig 3, a major deviation was observed at output 2.1 level which is due to four months support to the temporary CR4D coordinator and the extension of the research assistant contract during the buffer period.

The expenditure of the CR4D coordinator was raised through the first WISER progress report of January to June 2016.





5. Challenges and Lessons learned

The design of the WISER pilot phase was tailored to provide key lessons to guide the implementation and delivery of the WISER Business Case in a full project and to address the above barriers, particularly in the case of the Pan-African component. The initial observations from the WISER pilot phase have shown that there are still some significant gaps in the production, management, use, communication and uptake of CIS for development planning in Africa.

Evidence from the implementation of the sub seasonal to seasonal (S2S) forecasting and the socio-economic benefits framework activities in the pilot phase of WISER has shown that predictions are getting better but uptake is still rather low. For example, although the prediction for the recent El Nino event in SADC region was very good and a regional inter-agency committee (RIASCO), in response to the 2015-2106 El Nino, was setup as a demonstration of CIS uptake in planning, the timely uptake of the information in responding to the challenges was still limited. Furthermore, across the continent, there are other initiatives such as the Climate Outlook Forums (COFs) at regional, national and sub-national levels working to improve forecasting, uptake and response. Yet, there is still a need to urgently elevate CIS to the highest levels to ensure climate-resilient planning. The prominence of climate change and CIS in national planning is dependent on three inter-related areas of political economy: i) support from powerful actors and stakeholders, ii) structure of governance arrangements and institutional arrangements, and iii) the ability to take advantage of appropriate windows of opportunities[6]

[6] See, for example, (i) the publication by CDKN in 2015 on "Promoting the use of climate information to achieve long term development objectives in sub-Saharan Africa: results of FCFA scoping phase", available at https://cdkn.org/wp-content/uploads/2015/02/CDKN_FCFA_synthesis.pdf, and (ii) IIED's publication in 2014 on "Assessing the effectiveness of investments in climate information services", available at http://pubs.iied.org/pdfs/17264IIED.pdf

The case of widespread deployment of renewable energy in recent years provides further empiricism on the importance of high level policy stimulation for the uptake of important technologies and services. In this case, the high level of participation by the private sector in the accelerated deployment of renewables and buy-in from policy makers at the highest level was catalysed by policies and demonstrated socio-economic and environmental benefits of renewables rather than by the argument of environmental and climate benefits.

Others lessons learned at strategic and operational levels include:

Strategic level

From the WISER pilot phase consultative meetings, technical workshops, training events, CR4D SAC meetings, CR4D Regional Climate Research Partnership (RCRP) workshops, CR4D pilot projects, regional assessments and the CIS Day organized as part of CCDA-VI conference, the following key lessons have been drawn:

- The policy and legislative environment does not provide sufficient incentives for the uptake and use of CIS. This could be attributed to weak institutional and human capacities as well as limited and poor quality climate data and information.
- There are numerous fragmented initiatives which seek to support the production and uptake of CIS on the continent. However, many of these initiatives are small-scale and therefore unable to influence the policy and legislative agenda in the continent because of weak or complete absence of coordination mechanisms.
- Coordinated approaches to upscale CIS production and uptake are non-existent or still in their infancy stage to foster partnerships and networks. Moreover, the existing partnerships at the continental level such as ClimDev-Africa, PACJA, CDKN and others are in need of strengthening and legitimation.
- Strategies for brokering and managing the information and knowledge produced from the numerous initiatives and interventions do not as yet exist to enhance the impact of CIS for end-users as well as to fully engage with CSOs, private sector, as well as NHMS and various government ministries.
- There is a weak collaborative research platform in the continent for co-designing, co-resourcing and co-producing user-driven climate information and services.

Operational level

- The underestimation of the timeline during project design for key deliverables had a significant impact on implementation.
- The unexpected budget revision and deliverables over a short project cycle created major challenges in project implementation.
- The delay in the releasing of the second tranche for the first phase had impacted the scope and completion of some planned outputs such as (i) Output 1.3: Assess the economic value of CI and CIS for various sectors; and (ii) Output 2.3: Oversee weather and climate research to build capacity and leadership in Africa.

6. Overall impact assessment and evaluation

During WISER Phase I, the first level of impact assessment was limited to output indicators and compliance to the WISER programme hypothesis and assumptions. A more elaborate impact assessment should be considered during the second phase.

Therefore, during the first phase, the following conditions related to the WISER assumptions were met and will contribute to the expected impacts:

Fund related assumption

- WISER second phase process has started and will build on lessons learned during the first phase;
- ACPC, with the cohort mix climate-related skills, has sufficient capacity to implement the second phase.

output related assumptions

The following major output related assumptions were also met:

- The political environment is stable enough to allow for climate services and NMHSs to operate unhindered.
- There is willingness to collaborate among multiple partners at global, regional, national and sub-national levels evidenced by the collaborative framework on-going discussions.
- There is willingness for producers and users to collaborate in co-production processes.
- A 'critical mass' of African research capacity can be attracted and retained through the CR4D platform.
- Access of information is not hindered by external factors such as political conditions, extreme climate events and disasters.

Evaluation

According to the ECA performance rules and regulations, an evaluation of the WISER first phase is planned and will start in June 2017. The objective of the evaluation is to undertake a comprehensive review of the WISER first phase portfolio. It will cover the period December 2015- March 2017 and will address the extent to which the project was successful in reaching the overall objective and expected accomplishments/outcomes of ECA's selected result areas. Based on the findings, the evaluation shall also make recommendations for future commitments. In doing so, the evaluators should seek to assess whether these thematic areas have been implemented and results achieved in accordance with the plan, or if there have been constraints / bottlenecks that have limited the successful implementation and the effective achievement of the expected results. To this end, both external and internal factors should be analyzed. The evaluation has four evaluation criteria and will cover a set of key evaluation questions, specified as follows: (i) **Relevance:** Were the objectives (as stated in the logical framework) consistent with member States, RECs and the continent's specific policies, strategies and plans? (ii)

Effectiveness: How **effective** have the interventions carried out been in terms of achieving the targeted results? (iii) **Efficiency**: How **efficient** has the overall effort been in terms of management of resources, time committed *vis – a- vis* results achieved: (iv) **Progress towards intended Impact**: To assess how well the project is on track in delivering quality outputs that contribute towards achieving desired outcomes (intermediate changes) in line with the approved log frame.

7. Transitional arrangements

The various challenges faced during the first phase implementation as highlighted above led to the agreement for a buffer period to allow the completion of low risk outputs and activities as detailed in the table below:

Outputs	Deliverables	Commentary/Justification
Output 1: Strengthening African regional strategies and enabling environment for climate and weather services in Africa		
Sub- Output 1.3: Assess the economic value of CI and CIS for various sectors		
Extension of the lead consultant of the SEB/Vfm study	SEB /VfM Framework	Initially, it was planned for six months to cover five countries. However, due to several challenges, he was recruited for two months. His extension is needed (1) to complete the remaining work in two countries; (2) to develop SEB knowledge products; (3) to enrich the SEB framework to support the implementation of WISER phase II
Extension of the Research Assistant - According to the above,	SEB /VfM Model	His extension is needed to assist the work of senior consultant and participate in the field data collection
Data collection and analysis	SEB /VfM data collection framework	
Sub-Output 1.6: Knowledge management, communication and dissemination		
Regional KM Partnership meeting	KM Strategy	The Pan-African draft and that of the East African component will be integrated into one WISER KM strategy
Stakeholder mapping; information needs and; assessment of communication tools and channels for improved information uptake study	Stakeholder mapping; information needs and; assessment of communication tools and channels for improved information uptake report.	Study undertaken by communication fellows with support from the Senior Communication Officer
Research study on mapping and assessment exercise of climate change policy/decision spaces and key communication and advocacy intervention points in specific contexts	Mapping and assessment exercise of climate change policy/decision spaces and key communication and advocacy intervention points in specific contexts	same as above
Regional stakeholder validation workshops on validation of KM strategy and the two communication assessments reports	KM and Communication Workshop report	As per the initial plan, one regional communication workshop and one regional workshop on Pan-African Knowledge Management strategy draft review will be organized. As a follow-up to the outcomes of various planning conference calls and advice from DFID to work towards one KM strategy for WISER and have an integrated

Outputs	Deliverables	Commentary/Justification
		communication framework for WISER, the two workshops are combined and will be organized in collaboration the WISER East Africa program. Consultation is on-going to determine the dates and appropriate stakeholders to enrich the process.
High Level Profiling of CIS in G20 Germany 2017 Publication and on-line Portal	Double Page ACPC/CIS advocacy on G20 Germany 2017 and G20 Portal	
Senior Communication officer		The senior communication consultant extension is linked to the outputs from the two communication fellows.
CIS outreach events on the sidelines of the IPCC working group III scoping meeting in Addis Ababa		
Sub-Output 1.4: Train and build capacity for parliamentarians, AGN, civil society, private sector, lawyers, gender groups, other policy makers and legislators on CI and CIS		
Adapt the CIS course material for on-line provision	CIS On-line training	Initially, printed modules and programme were planned – Furthermore, to ensure an effective rollout of the modules to many beneficiaries and provide access to a critical mass, the on-line option was selected- Therefore, ACPC entered into agreement with the United Nations specialized training Center: The United Nations Institute for Training and Research (UNITAR) to jointly develop the on-line version of the modules and programme. The total amount for the project is US$49,756.00; out of which ACPC will contribute US$37,317.00 and UNITAR, US$12,439.00 - ACPC was able to allocate this resource under the same output, resulted from the balance of the training of Parliamentarians and CSO. Two training workshops were planned but one was implemented with the merging of the two groups i.e. the Parliamentarians and CSO.
Sub-Output 1.5: Implementation of the pilot phase of the ACPC Pan-African fellowship programme		
Communication and Climate Change fellows (x2)	Report	The communication fellows are currently working on the following outputs : (i) stakeholder mapping, information needs and assessment of communication tools and channels for improved information uptake and (ii) mapping and assessment exercise of climate change policy decision spaces and key communication and advocacy intervention points in specific contexts- They are supposed to collect data in some selected countries and undertake the analysis and key recommendations with the support from the Senior communication consultants- Due to the recruitment delay which was initially planned for six months and delay in travel processes, an additional month is required to allow the two fellows with the support from the senior communication consultant to come with comprehensive analysis.
Adaptation & Climate Change fellow (x1)	Report	
Energy & Climate Change fellow (x1)	Report	The research fellow has completed the GIS system with wind and solar projects as well as compilation of other CIS proxy layers. The last bit of the work was to integrate the numerical weather prediction into the GIS system and configure the system to access CORDEX regional downscaled data. There were some technical challenges with this aspect and the additional time is needed to address these issues.
Output 2: Improved generation and use of climate information services (CIS)		
Sub-Output 2.1: Develop awareness on CR4D & Grant Management		

Outputs	Deliverables	Commentary/Justification
Research assistant until May 2017		The extension is needed to support: (i) S2S work in west Africa, (iii) mapping of climate research and related initiatives work, (iii) translating and disseminating CR4D research products, (iv) the day-to-day activities of the CR4D Secretariat, and others
Sub-Output 2.2: Support networks and regional bodies to promote effective use of weather and climate services in West Africa		
Recruitment of a lead consultants and two (2) consultants for one month	Final report on S2S in agriculture for west Africa	Three consultants were recruited based on the requirements on the ToR but they failed to deliver the required products on time. Hence, their contract terminated. The newly recruited consultants will work for two months to finalize the remaining activities (i.e., development of methods and metrics on S2S for agricultural sector)
Baseline information and needs for climate information and services in agriculture at the S2S scale		
Research and data sets needed to develop and improve S2S forecasts tailored to users in agriculture sector		
Methodologies and metrics that can be applied to assess the utility of S2S information based on hindcasts from global climate producing centers		

NB: WISER Phase I Evaluation process has been postponed for the second phase

8. Outlook: WISER Phase II

Going forward, the Pan-African component will seek to address the barriers identified during the framing of the programme, building on the lessons learned from implementation of the pilot phase and ClimDev-Africa, thereby increasing the overall impact of WISER through ensuring the integration of CIS into development policy across key development sectors such as water, energy, agriculture and transport (which constitute the principal focus of ACPC's programme strategy), as well as ensuring the long term sustainability of CIS as a core input into development policy. ACPC will leverage its strong convening power and unique policy influencing space that it occupies on the continent for the implementation of WISER phase II.

The Center will continue to intervene in the two pillars (2 and 3) as in WISER Phase I, while supporting the East African component in implementing pillars 1 and 4. Building and learning from the actions implemented in the Pan-African component of the pilot phase of WISER, ACPC proposes new critical actions to enhance the delivery of the overall business case of WISER.

9. Conclusion

The design of the WISER pilot phase was tailored to provide key lessons to guide the implementation and delivery of the WISER Business Case in a full project and to address

the above barriers, particularly in the case of the Pan-African component. The initial observations from the WISER pilot phase have shown that there are still some significant gaps in the production, management, use, communication and uptake of CIS for development planning in Africa.

Annex I: WISER Phase I Result based Budget implementation status

N	Outputs	Performance Indicator	Planned / Achieved	Deliverable	Allocated Budget	Budget Disbursed	Balance	Commentary
Output 1: African regional strategies and an enabling environment for climate and weather services in Africa established and strengthened								
	Sub-Output 1.1: Production of consolidated baseline report on needs and gaps of ACMAD[7], AGRHYMET[8], and ICPAC[9]. RCCs in collaboration with WMO	**The number of baseline reports on needs and gaps in RCCs**	**Planned: 4** **Achieved: 4**	**Consolidated capacity needs assessment report for RCCs**	79,795.85	80,791.55	-995.70	The total estimated budget for the three outputs was far below the ensued provisional budget received from service provider and for the recruitment of renowned experts. Therefore, as the standardized methodology will serve as a foundation for NHMS strategic plans on the continent, an institutional contract was facilitated by WMO which provided US$60,0000.00 for the related expenses.
	Sub-Total output 1.1				**79,795.85**	**80,791.55**	**-995.70**	
	Sub-Output 1.2a: Production of a standardized methodology for weather and climate information services need assessment and National Strategic Plans for NHMS.	**The number of NMHS with modernization plan focusing on improved service delivery**	**Planned: 5** **Achieved: 5**	**A standardized methodology**	50,409.15	0	50,409.15	
	Sub-Output 1.2b: Development of National Strategies Plans for East Africa NHMS from Burundi, Kenya, Rwanda, Tanzania, and Uganda			**5 NHMS strategy plans**	79,795.00	92,920.02	-13,125.02	
	Sub-total sub-output 1.2				**130,204.15**	**92,920.02**	**37,284.13**	WMO-ACOMET requested to use the balance to support the development of NSP for another State. WMO received request for such support from Cabo Verde, Cameroun and Mauritania
	Unrealised loss on currency exchange						**-631.05**	
	Sub-total agreement with WMO				**210,000.00**	**173.711.57**	**35,657.38**	

[7] *African Centre of Meteorological Applications for Development (www.acmad.net)*

[8] Centre Regional de Formation et d'Application en Agrométéorologie et Hydrologie Opérationnelle (www.agrhymet.ne)

[9] IGAD Climate Prediction and Applications Centre (www.icpac.net)

N	Outputs	Performance Indicator	Planned / Achieved	Deliverable	Allocated Budget	Budget Disbursed	Balance	Commentary
	Sub-Output 1.3: Assess the economic value of CI and CIS for various sectors	**SEB assessment guide**	**Planned :1 Achieved :1**	**1 guidance document**				
		A framework for assessing VfM and SEB of CI and CIS developed	**Planned :1 Achieved :1**	**1 framework document**				
		SEB Model	**Planned :1 Achieved :1**	**1 SEB model**				
	Organise an inception meeting to review and adopt the VfM and SEB framework, confirm the selected sectors/activities and develop/finalize the detailed delivery and timelines	**Number of people in user and producer organizations trained on VfM and SEB model**	**Planned: 80** **Achieved: 150**	**Workshop report**	50,000.00	50,852.00	-852.00	
	Consultants			**1 International and 3 National consultants recruited**	126,800.00	60,800.00	66,000.00	
	Data collection and analysis			**Data Collection framework**	13,820.00	8,504.00	5,316.00	
	Finalize report				15,000.00	0.00	15,000.00	
	Stakeholder validation and application workshop	**Number of joint and learning initiatives at regional that support an enabling environment for the delivery of weather and climate service** **And Number of workshop report**	**Planned :2 Achieved :2** **Planned :2 Achieved :2**	**Meeting report**	47,600.00	40,530.00	7,070.00	

N	Outputs	Performance Indicator	Planned / Achieved	Deliverable	Allocated Budget	Budget Disbursed	Balance	Commentary
	Policy brief				5,000.00	0.00	5,000.00	
	Sub-total sub-output 1.3				**258,220.00**	**160,686.00**	**97,534.00**	
	Sub-Output 1.4: Train and build capacity for parliamentarians, AGN, civil society, private sector, lawyers, gender groups, other policy makers and legislators on CI and CIS							
	Regional workshop for Pan-African Parliament - for 45 participants	**Number of decision makers and legislators trained on mainstreaming CI and CIS in development**	**Planned: 45** **Achieved: 45**	**1 Workshop reports and 1 validated module**	73,400.00	99,058.57	52,289.84	
	Regional Workshop for CSO, Media, Youth, Women – (for 60 participants) in Addis Ababa **(merged with MPs training workshop)**	**Number of people in user organizations trained on mainstreaming CI and CIS in development**	**Planned: 60** **Achieved: 60**		46,095.81			
	CR4D SAC members attended the CIS day and had twoi days Governing meeting				21,852.60			
	Training for policy makers, private sector, CSOs on renewable energy for INDCs in East and Southern Africa - in partnership with UNFCCC, IRENA and AfDB			**Workshop report**	10,000.00			
	Youth and women on the implementation of Paris Agreement			**Workshop report**	50,000.00	37,507.53	12,492.47	

N	Outputs	Performance Indicator	Planned / Achieved	Deliverable	Allocated Budget	Budget Disbursed	Balance	Commentary
	Provision Travel for Staff				5,000.00	5,000.00	0.00	
	Recruitment of Consultant for the development of training modules on mainstreaming CI and CIS in development planning				12,000.00	26,000.00	-14,000.00	
	Finalization of the curriculum and development of a guidebook	**Number of learning products**	**Planned: 1** **Achieved: 2 (guidebook & on-line)**	**CIS training modules**				
	Adapt the CIS course material for on-line provision			**On-line module**	15,000.00	37,317.00	-22,317.00	
	Sub-total sub-output 1.4				**233,348.41**	**204,883.10**	**28,465.31**	
	Sub-output 1.5 : Pilot Pan-African fellowship program implemented	**Number of young African scientists supported by WISER**	**Planned: 4 fellows Achieved: 4 fellows**					
	Communication and Climate Change fellows (x2)			**2 Assessment reports**	59,836.00	32,900.00	26,936.00	
	Senior Communication Expert			**Edited policy briefs, reviewed and packaged fellows report**	0.00	30,000.00	-30,000.00	
	Adaptation & Climate Change fellow (x1)			**1 Report**	62,400.00	62,400.00	0.00	
	Energy & Climate Change fellow (x1)			**1 Report**	29,918.00	28,200.00	1,718.00	
	Sub-total sub-output 1.5				**152,154.00**	**153,500.00**	**-1,346.00**	
	Output 1.6: Knowledge management, communication and dissemination							
	Knowledge management	***Pan-African Knowledge Management***	***Planned: 1 Achieved :1***	***1 KM strategy***				

N	Outputs	Performance Indicator	Planned / Achieved	Deliverable	Allocated Budget	Budget Disbursed	Balance	Commentary
		Strategy developed						
	Recruitment of one (1) Knowledge Management Expert			**Recruited**	40,000.00	14,400.00	25,600.00	
	KM Partnership meeting				47,478.55	37,478.55	10,000.00	
	WISER KM and partnership strategy developed edited and printed				**0**			
	Communications			***2 Assessment reports***				
	Undertake stakeholder mapping; information needs and; assessment of communication tools and channels for improved information uptake.	**Number of learning products**	**Planned :1 Achieved: 1**	**1 assessment report**				
	A mapping and assessment exercise of climate change policy/decision spaces and key communication and advocacy intervention points in specific contexts			**1 Assessment report**				
	Focus group workshops on communication approaches for uptake of CI&CIS in decision Making (communicating VfM and SEB) back to back with scheduled RCOFs meetings			**3 Reports**	40,000.00	30,000.00	10,000.00	
	Organize one regional workshop on results of the two assessments				50,000.00	50,000.00	0.00	
	Develop and disseminate knowledge and communication products from the outputs of WISER phase 1			**Policy briefs, web-content, press releases, information briefs**	20,000.00	21,200.00	-1,200.00	
	CIS outreach event on the sideline of the IPCC working			**Outreach reports**	0.00	8,516.75	-8,516.75	

N	Outputs	Performance Indicator	Planned / Achieved	Deliverable	Allocated Budget	Budget Disbursed	Balance	Commentary
	group III scoping meeting in Addis Ababa							
	Senior Communication Expert			**Report**	0.00	30,000.00	-30,000.00	
	On-line Knowledge product support officer			**completed**	48,000.00	48,000.00	0.00	
	Travel				20,000.00	20,000.00	0.00	
	Sub-total sub-output 1.6				**265,478.55**	**259,595.30**	**5,883.25**	
Output 2: Improved generation and use of climate information services (CIS)								
	Sub-Output 2.1: Develop awareness on CR4D & Grant Management	**Grant Management framework developed**	**Planned :1 Achieved: 1**					
	Awareness and conceptual framework about CR4D coordination platform				13,720.54	13,720.54	0.00	
	CR4D Coordinator: WISER contributed for four months while temporary coordinator was on board and staff times complemented for three months to support CR4D related implementation of WISER outputs 2.1, 2.2, 2.3			**Overall coordination**	0.00	73,700.00	-73,700.00	
	Research assistant to support CR4D implementation was recruited for six months and extended to additional five months to support implementation of WISER outputs 2.1, 2.2, 2.3			**Supporting the overall coordination**	31,200.00	59,800.00	-28,600.00	
	CR4D Scientific Advisory Committee (SAC) meeting in Addis Ababa	**Number of CR4D advisory and guidance**	**Planned: 1** **Achieved :2**	**2 Reports**	29,665.00	29,665.00	0.00	

N	Outputs	Performance Indicator	Planned / Achieved	Deliverable	Allocated Budget	Budget Disbursed	Balance	Commentary
		meeting						
	Grant Management: Institutional assessment, TOR for selection of Grant Management Institution - award			**Grant being awarded**	0.00	0.00	0.00	
	Recruit consultant for Institutional mapping			**Report**				
	Finalize reports on institutions, experts and initiative mapping	**Institutions, Experts, and Climate, science and related initiatives produced**	**Planned: 2 Achieved: 2**	**Reports**	36,000.00	36,000.00	0.00	**Produced by the consultant**
	Finalize interactive mapping on climate institutions and experts in Africa			**Interactive map**				**Developed by the consultant**
	Regional research partnership workshop for East Africa	**Number of climate research partnership established**	**Planned: 2** **Achieved: 2**	**Report**	50,900.00	50,900.00	0.00	
	Regional research partnership workshop for Southern region of Africa			**Report**	81,239.00	81,402.53	-163.53	
	Staff travel				7,275.00	7,275.00	0.00	
	Sub-total sub-output 2.1				**249,999.54**	**352,463.07**	**-102,463.53**	
	Sub-Output 2.2: Support networks and regional bodies to promote effective use of weather and climate services in West and Central Africa			**Produce 2 final reports**				
	Recruit one (1) International Consultant to lead implementation of CR4D Pilot Projects- to develop prototype forecast for sub-seasonal to seasonal scale (10 to 90 days) Climate Information - for Central Africa sub-region - for four	**Number of research report generating evidence, knowledge and learning to inform decision making**	**Planned: 2 Achieved: 2**		24,000.00	24,000.00	0.00	

N	Outputs	Performance Indicator	Planned / Achieved	Deliverable	Allocated Budget	Budget Disbursed	Balance	Commentary
	months							
	Recruit three (3) support consultants for CR4D Pilot Projects- to develop prototype focus for sub-seasonal to seasonal scale Climate Information - for Central Africa sub-region for four months				60,000.00	60,000.00	0.00	
	Lead Consultant-To lead implementation of CR4D Pilot Projects- to develop prototype focus for sub-seasonal to seasonal scale (10 to 90 days) Climate Information - for West Africa				24,000.00	26,000.00	-2,000.00	
	Recruit two support consultants for CR4D Pilot Projects- to develop prototype focus for sub-seasonal to seasonal scale (10 to 90 days) Climate Information - for West Africa sub-region for four months				40,000.00	36,000.00	4,000.00	
	Finalize baseline information and needs for climate information and services in agriculture in Central Africa at the S2S scale			**1 Assessment report**			0.00	
	Finalize the improvement of S2S forecasts tailored to users in agriculture sector in Central Africa			**1 Assessment report**			0.00	
	Finalize methodologies and metrics for assessing the utility of S2S information based on hindcasts from global climate producing centers			**1 Assessment report**			0.00	

N	Outputs	Performance Indicator	Planned / Achieved	Deliverable	Allocated Budget	Budget Disbursed	Balance	Commentary
	Produce 1 final report						0.00	
	staff travel				2,000.00	2,000.00	0.00	
	Sub-total sub-output 2.2				**150,000.00**	**148,000.00**	**2,000.00**	
	Sub-Output 2.3: Oversee weather and climate research to build capacity and leadership in Africa	**Number of people in user and producer organizations trained**	**Planned: 40 Achieved: 70**					
	Regional workshop on seamless climate forecast to improve decision making at sub-seasonal to seasonal (S2S)				80,000.00	74,209.49.00	790.51	
	Analysis and evaluation of uncertainties associated with sub-seasonal to seasonal (S2S) information (West, Southern Africa)				120,000.00	0	120,000.00	
	Develop S2S forecast metrics for specific sectors (e.g. agric.)							
	Organise sub-regional training workshop for research on S2S							
	Initiate impacts assessment of 2o global warming lead by two Regional Climate Research Teams (East, Southern)							
	Sub-total sub-output 2.3				**200,000.00**	**79,209.49**	**120,790.51**	
	Sub-Output 3.1a and 3.1b: Staff time							
	Staff Costs				605,328.78	646,842.91	-41,514.13	
	Individual contractors (consultants) for admin support				63,135.00	63,135.00	0.00	
	WISER planning meeting & Official mission				35,000.00	33,782.00	1,218.00	

N	Outputs	Performance Indicator	Planned / Achieved	Deliverable	Allocated Budget	Budget Disbursed	Balance	Commentary
	Sub-total sub-output 3.1				**703,463.78**	**743,759.91**	**-40,296.13**	
	Sub-Total				**2,422,664.28**	**2,276,439.49**	**146,224.79**	
	Program Support Cost (13%)				314,946.36	295,937.13	19,009.22	
	WISER I evaluation				76,401.00	0.00	76,401.00	
	TOTAL (US DOLLARS)				**2,814,011.64**	**2,572,376.62**	**241,635.01**	
	TOTAL AMOUNT RECEIVED: 1st Installment: US$1,846,316.43// Second Installment: US$967,695.20				**US$ 2,814,011.63**			

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