



Bridging Climate Information Gaps to Strengthen Capacities for Climate Informed Decision-making

Proceedings of the Regional Climate Change Dialogue and Training Workshop for Policymakers and Scientists

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Prepared and Edited by:

Alfred Nyambane

Sharon Anyango

Nicholas Ozor

Organizing Institution

African Technology Policy Studies Network (ATPS)



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ACRONYMS AND ABBREVIATIONS

ADx	Adaptation Decision Explorer
AF	Adaptation Fund
AfDB	African Development Bank
ARC	AGRHYMET Regional Centre
ATPS	African Technology Policy Studies Network
CDM	Clean Development Mechanism
CDSF	Clim-Dev Special Fund
CERs	Certified Emission Reductions
ENDA	TM Environment Development Action in the Third World
GDPR	General Data Protection Rights
GFCS	Global Framework for Climate Services
GHGs	Greenhouse gases
ICPAC	IGAD Climate Prediction and Applications Center
INDC	Intended Nationally Determined Contributions
NMHSs	National Meteorological and Hydrological Services
OSS	Observatoire du Sahara et du Sahel
RCMRD	Regional Centre for Mapping Resource for Development
SCF	Standing Committee on Finance
SDG	Sustainable development goals
SEI	Stockholm Environment Institute Africa Centre
SEKU	South Eastern Kenya University
SEPAN	Sustainable Energy Practitioners Association of Nigeria
UNFCCC	United Nations Framework Convention on Climate Change

EXECUTIVE SUMMARY

The African Development Bank (AfDB) through its Clim-Dev Special Fund (CDSF), has supported the African Technology Policy Studies Network (ATPS) in partnership with the Stockholm Environment Institute (SEI) Africa Centre, IGAD Climate Prediction and Applications Center (ICPAC), Observatoire du Sahara et du Sahel (OSS), AGRHYMET Regional Centre (ARC), and the Regional Centre for Mapping Resource for Development (RCMRD) to implement a project tagged “Bridging Climate Information Gaps to Strengthen Capacities for Climate Informed Decision-making in Africa”. The goal of this project is to reduce vulnerability and foster a food-secure Africa by strengthening the capacities of African countries’ to understand and deploy appropriate climate information and best practices to inform decision-making and support development planning. The project focuses on five countries namely: Cameroon, Kenya, Malawi, Nigeria and Tunisia.

The Regional Climate Change Dialogue and Training workshop brings together delegates drawn from the target countries representing policy makers, practitioners, researchers and private sector actors to deliberate on the progress made so far in their countries in regard to climate change resilience and adaptation. The Regional Climate Change Dialogue and Training Workshop provided an avenue for sharing experiences and lessons drawn from the different countries relating to climate change. The overall goal of the regional workshop was to bring different partners and stakeholders with different climate expertise and interest together on the same platforms to learn, share and connect to understand each other and to promote climate information use for decision-making and planning. This included training policy makers, scientists and other stakeholders on various topics relating to climate information and services and informing policy recommendations by equipping African stakeholders with adequate climate information and capacity needed to promote a development pathway that is climate-resilient at institutional, national and regional levels.

The chief guest Hon. Samuel Onuigbo, Chairman of the Committee on Climate Change of the Federal House of Representatives, Nigeria noted that the topics discussed were very important especially to Nigeria and Africa as a whole because better ways on how to bridge climate information gap in Africa will be shared amongst each other. Dr Alice Kaudia, Environment Secretary, Kenya in her opening remarks emphasized on the importance of climate Information and quality research work reaching people at the right time, if information is not delivered at the right time then the written publications will not have any impact to the public.

As part of the project output, six training modules developed in this project were presented to delegates and the valuable inputs received from them will be incorporated in the final report. A draft adaptation toolkit was also presented in the forum and there was dialogue amongst various stakeholder categories/actors across the various topics covered by the presenters and various key messages drawn in form of resolutions.

1. INTRODUCTION

1.1 Background to the project

The African Development Bank (AfDB) through its Clim-Dev Special Fund (CDSF), has supported the African Technology Policy Studies Network (ATPS) in partnership with Stockholm Environment Institute (SEI) Africa Centre, IGAD Climate Prediction and Applications Center (ICPAC), Observatoire du Sahara et du Sahel (OSS), AGRHYMET Regional Centre (ARC), and the Regional Centre for Mapping Resource for Development (RCMRD) to implement a project tagged “Bridging Climate Information Gaps to Strengthen Capacities for Climate Informed Decision-making in Africa”. The goal of this project is to reduce vulnerability and foster a food-secure Africa through the strengthening of African countries’ capacities to understand and deploy appropriate climate information and best practices to inform decision-making and support development planning. The project focuses on five countries (Cameroon, Kenya, Malawi, Nigeria and Tunisia), which are a representative of the five major geographical regions in Africa. The selection of each country within a region is also based factors such as being a regional hub; country that is favourably disposed to climate change policies and institutions; and vulnerability to climate change impacts; and low capacities for adaptation and planning. Recent interventions through the Intended Nationally Determined Contributions (INDC) set out the pledges and intentions of these countries on climate change mitigation for the post-2020 period. Despite programmes and initiatives to address climate change issues, these countries are confronted with gaps on the available climate information and low capacity to collect, analyze, and use robust and reliable climate information to inform decision-making and to mainstream climate change adaptation and risk measures into national development plans and policies.

This project has three main components:

- (i) Climate information synthesis in selected countries;
- (ii) Capacity Enhancement and Climate Information Dissemination;
- (iii) Project management and administration.

The expected outcomes from this project include:

- (i) Improved national and regional level data collection systems and synthesis for better deployment in decision making and practice;
- (ii) Improved capacity of policymakers, scientists, extension agents and farmers to use climate information and technology tools for adaptation planning and decision making; and
- (iii) Strengthened information exchange and improved networking among stakeholders working on climate change adaptation in selected countries.

The direct beneficiaries of this project include: policymakers, climate researchers, practitioners, extension agents and farmers in the selected countries. The novelty in this project lies in bringing different partners and stakeholders with different climate expertise and interest together on the same platforms to learn, share and connect to understand each other and to promote climate information use for decision-making and planning.

The Regional Climate Change Dialogue and Training workshop for policymakers and scientists was held from **25-27 June 2018** in Nairobi, Kenya. In attendance were policymakers, scientists and other stakeholders from the target African countries with approximate 50 delegates present during the three-day workshop.

1.2 Overall Goal and Objectives of the Regional Dialogue and Training Workshop

The workshop aimed at bringing together different partners and stakeholders with different climate expertise and interest together on the same platforms to learn, share and connect to understand each other and to promote climate information use for decision-making and planning. This included training policy makers, scientists and other stakeholders on various topics relating to climate information and services and informing policy recommendations by equipping African stakeholders with adequate climate information and capacity needed to promote a development pathway that is climate-resilient at institutional, national and regional levels.

The specific objectives of this dialogue and workshop were:

- i) To facilitate the mainstreaming of climate change issues in regional policy dialogue aimed at raising awareness on climate change issues,
- ii) Training, outreach and awareness-raising to increase the use of climate resilient and adaptation best practice at various levels.
- iii) Dissemination of project outputs so far produced.
- iv) To strengthen understanding use and mastery of climate information and services.

1.2 Expected Outcomes

- i) Improved capacity of policymakers, scientists, extension agents and farmers to use climate information and technology tools for adaptation planning and decision making; and
- ii) Strengthened information exchange and improved networking among stakeholders working on climate change adaptation in selected countries.

2. OPENING SESSION OF THE TRAINING WORKSHOP

2.1 Opening Ceremony

The opening session was chaired by **Prof Malachy Okwueze**, Vice-Chancellor, Coal City University, Enugu State, Nigeria and it was moderated by **Dr Victor Ongoma**, lecturer, South Eastern Kenya University (SEKU), Kenya.

2.1.1 Opening Remarks from the Chair of the Session- Prof Malachy Okwueze



The Chairman of this session **Prof Malachy Okwueze** welcomed all delegates to the workshop. He started his opening remarks with reference to the 2009 Copenhagen Climate Change Conference where different world leaders, environment ministers and officials came together to discuss the global effects of climate change. According to Prof. Okwueze there were no global agreements but even if there would have been, some of the agreements made during the conference could be issues with continental and regional platforms on the implementation of the decisions agreed upon. Prof. Okwueze further expressed optimism that today more actions on climate change have born results and there is need to have concentrated efforts interfacing with various stakeholders to come up with solutions in regards to climate change. In addition, he noted that the workshop platform would yield results because it brought together various people with great expertise to dialogue on the current gaps identified in addressing matters on climate change. Lastly, he commended ATPS and its partners as well as the African Development Bank (AfDB) for organizing the workshop which is a platform to yield results and dialogue into action on climate change issues.

2.1.2 Welcome Remarks from the African Technology Policy Studies Network (ATPS)



Dr. Nicholas Ozor, ATPS Executive Director welcomed delegates to the 3-day workshop. He emphasized on the importance of dialogue in reference to climate change because in Africa there are low capacities in terms of adaptation and therefore there is need have continuous discussions on how Africa can equip itself well with tools and innovations to adapt to these changes. He also noted that Africa contributes 10% of green emissions which is less than 4% yet it tends to bear the greatest effect of climate change which is being witnessed through flooding and drought, which have ravaged many parts of Africa. Dr. Ozor further informed delegates that the Regional Climate Change Dialogue and Training workshop aims to identify, develop climate information that will enable different categories of actors (policymakers, researchers, members of parliament, media) in the climate change cycle to make climate informed decisions. In addition, ATPS in its efforts to address climate change issues are currently out-scaling the use of *LandInfo* mobile app across Africa. The *LandInfo* is a community driven app that enables users to instantaneously access climatic and soil information and interprets them in the context of local conditions. In his concluding remarks, Dr. Ozor introduced other project partners namely: Stockholm Environment Institute (SEI) Africa Centre, IGAD Climate Prediction and Applications Center (ICPAC), Observatoire du Sahara et du Sahel

(OSS), AGRHYMET Regional Centre (ARC), and the Regional Centre for Mapping Resource for Development (RCMRD).

2.2 Welcome Remarks from Chief Guests

2.2.1 Remarks from Hon. Samuel Onuigbo, Chairman of the Committee on Climate Change, Federal House of Representatives, Nigeria



Hon. Samuel Onuigbo, thanked the project partners for inviting him to this great workshop. He noted the discussion was very important especially to Nigeria and by a large extension Africa because the workshop will address better ways on how to bridge the climate information gap in Africa. Hon. Onuigbo informed delegates that Nigeria battle with the issue of Boko Haram problem took so long because the country did not take action to tackle climate change for instance, in Lake Chad millions of people depended on water however due to climate change, the lake started drying rapidly and proactive action was neither not deployed properly or information may not have been available at that time. Individuals without other skills and who previously depended on water from the lake ended up in cities to make tools for war that are today are being used to cause trouble in Nigeria. Drought and desertification has also ravaged some parts of Nigeria, there is need to therefore share scientific information and ensure tools are deployed well to prevent climate change crises. He further noted that from a legislative angle, Nigeria passed and assented a robust Bill on climate change which has the potential to help tackle the effects of climate change in the country. He was optimistic that he will gain new information from the workshop to take back home.

2.2.2 Remarks from Dr. Alice Kaudia, Environment Secretary, Kenya



Dr. Alice Kaudia expressed her joy for being at the workshop to share her experiences on what she has seen in Africa in regards to environmental issues. She emphasized on the importance of climate information and quality research work reaching people at the right time, if information is not delivered at the right time then the written publications will not have any impact to the public. She further urged delegates present to identify the nature of the climate information gaps, how they can bridge the climate information gap and what tools for climate information can be used and their availability to the public. Additionally, she also noted that SMEs, innovation and pitching provides opportunities for young people to avoid being idle and share information through their work to the public. She further noted that information needs to reach the end user to see change just as in the manner people use energy and water resources. In her concluding remarks, she noted that the Kenyan constitution guarantees the right to information, there is also a framework in the climate policy whereby the president and his deputy are part of the leadership that constitutes climate policy governance hence a sign of political goodwill. Dr. Kaudia concluded her opening remarks by declaring the Climate Change Dialogue and Training Workshop officially open.



Chief guests during the Regional Climate Change Dialogue and Training workshop; from left Dr Alice Kaudia, Prof Malachy Okwueze, Dr Nicholas Ozor, Mr Ralph Von Kaufman and Hon. Samuel Onuigbo

2.3 Introductions and Expectations

This session was facilitated by **Dr Ernest Acheampong**, the project manager who requested participants to introduce themselves and write their expectations. Some of the expectations from the delegates include:

- To know how climate information affects the business community and the African business network
- To know how youth will be involved in using climate information
- To identify research gaps in the area of climate change and natural resource management
- To find out the most effective communication of research ideas and research
- To create network and partnerships for effective research and sharing of information
- To learn how climate information can be effectively communicated
- To learn about ways of narrowing climate change information gaps
- To ensure that climate information provided is brought down to the end-users both in urban and rural areas of Africa
- To deepen understanding and collaboration amongst stakeholders in the area of knowledge sharing and capacity development.
- To develop capacity to generate climate information relevant to farmers
- To learn more of what other players are doing in the area of climate change

- To learn about technologies and innovations/tools that can be applied in bridging the climate information gap
- To learn how to integrate information and tools and use them to ensure sustainable agriculture and food security in Africa.
- To get capability on climate change policy and policy making and effective climate information communication
- To get clear approaches of reaching farmers with climate information
- Anticipated impact of information to policy makers and farmers
- To find out how to simplify climate information and make it accessible and useful to the end users
- To establish ways of using timely climate information to control new and emerging crop pests
- To network and partner to deliver short skills in climate change and agriculture courses
- To understand best practices that can be used to link climate information with policy
- Learn how to use climate information for planning and making decisions
- Learn how to effectively communicate climate science to non-scientists
- To find out how the private sector can participate in these processes.

2.4 About the Project and the Implementation Progress

Presented by Mr Alfred Nyambane, Research Officer-ATPS



This project, Bridging Climate Information Gaps to Strengthen Capacities for Climate Informed Decision-Making is being implemented by the ATPS in partnership with SEI, ICPAC, OSS, ARC and the RCRMD. The project aims to strengthen the capacities of relevant stakeholders in five countries (Cameroon, Kenya, Malawi, Nigeria, and Tunisia) to deepen their understanding and to deploy appropriate climate information and best practices to inform decision-making. The aims of the project are to: i) Identify and analyse climate information needs synthesis and use; ii) Build the capacity stakeholders to utilize high quality, demand-driven climate information for adaptation planning and decision-making; and iii) Facilitate the mainstreaming of climate change issues in regional policy dialogue aimed at strengthening the understanding, use and mastery of climate information.

In Africa, the production and access to climate information is on the rise nevertheless, consumers face various challenges in the application of climate information due to low quality of the information products, lack of segregated information at appropriate scales and difficulties in communicating and interpreting the information for planning and decision making. There is a clear gap between the capacity of climate scientists to produce policy-relevant information and decision-makers' need for such information in African countries. Political and socio-economic factors are instrumental in the access to and uptake of climate information. Some of the barriers which hinder uptake of climate information include: institutional mandates, hierarchical structures and lack of adequate incentives. A clear

understanding of local political contexts is needed to make the communication and use of climate information more effective.

The Project is being funded by the African Development Bank (AfDB) under the Clim-Dev special fund. It is expected after the two-year implementation period there will be Improved capacities of stakeholders and institutions to deploy appropriate climate information and best practices for effective climate-proof policy making and practices, improvement in national and regional level climate information systems for long-term development and adaptation planning and, strengthened information exchange and networking among stakeholders working on climate change. Project beneficiaries include: Government agencies and institutions; Researchers and experts; Policymakers and development planners; Contact farmers and Extension agents and Non-governmental organizations amongst others. Details of the project implementation are provided in Table 1 below.

Table 1: Bridging Climate Information Gaps to Strengthen Capacities for Climate Informed Decision-making Project Summary Report

Output / Activity As listed in the project document	Status: Complete, On- going, Not started	Work undertaken so far	Issues that need to be addressed: Decisions/actions to be taken	Performance Indicator	Means of Verification	Remarks
Component One: Climate Information Synthesis						
<i>Output 1.1: Technical report on the state of climate information needs and services for climate change mitigation and adaptation in Cameroon, Kenya, Malawi, Nigeria, and Tunisia</i> ➤ Activity 1.1.1 Desk Studies on identification and analysis of climate information and needs ➤ Activity 1.1.2 Mining of climate data and information based on identified needs ➤ Activity 1.1.3 Data collection, synthesis and analysis of high-quality climate information	Completed On-going On-going	ATPS has completed the climate information and needs assessment for Cameroon; RCMRD has completed the one for Malawi; OSS has completed the one for Tunisia; ICPAC for Kenya and AGRHYMET for Nigeria. A synthesized report for the 5 countries has been produced and is attached as an output for this component. The data from each country will be continuously updated as new information emerges.	The partners are jointly developing 2 papers from the synthesized data collected and mining other available data to update articles for submission to a peer-reviewed Journal in the field.	One Assessment completed by Dec 2017	-Technical report -A Published journal article - Report	Technical report on the state of climate information needs and services is complete. Mining of climate data and information is on-going to fill the gaps identified. Data will be purchased where necessary. This data will be analyzed and used to populate the ICE platform where people will freely access it.
<i>Output 1.2: Web-based Interactive Collaborative Environment (ICE) for climate information knowledge sharing and dissemination</i> ➤ Activity 1.2.1 Development of the ICE menus/ platforms	On-going	The first phase of the construction of the ICE platform consisting of the development of the knowledge repositories, virtual market for expert skills, collaborative working environment, e-training platform and key performance indicators (KPIs) has been developed.	Climate data and information from the desk studies in the target countries are currently being synthesized and would be used to populate the knowledge repositories once the platform has been fully developed and launched online.	1 ICE platform established by end of July 2018	- Reports hosted on the project's website and ICE	The ICE platform is almost complete.

Component Two: Capacity Enhancement and Climate Information Dissemination						
Output 2.1 Training modules for policymakers and scientists ➤ Activity 2.1.1 Development of training modules for climate scientists and policymakers	On-going	All partners except SEI were allocated specific modules that are now being developed	First drafts shared and partners working on comments	6 Training modules developed by June 2018	-Training module	Draft modules received and partners working to improve them based on comments received.
Output 2.2 Policy briefs and proceedings report of a 3-day regional climate change dialogue and training workshop for policymakers and scientists ➤ Activity 2.2.1 Organize 3-day Regional climate change dialogue and training workshop for policymakers and scientists ➤ Activity 2.2.2 Development of the policy briefs and proceedings report	Done On-going	Draft concept note was developed and shared. The activity has been implemented. Drafting of report and policy briefs have commenced.	The regional workshop was held in Nairobi from 25 th to 27 th June 2018.	-1 Policy brief developed -1 proceedings report completed by July 2018	-Proceedings reports -Concept Note -Policy briefs	Regional climate change dialogue and training workshop was implemented
Output 2.3 Training Manual for extension agents and contact farmers on the use of LandInfo mobile app ➤ Activity 2.3.1 Training of Trainers (TOT) for agricultural extension agents and contact farmers on LandInfo mobile app use	On-going (Training in Kenya and Nigeria have been completed)	The LandInfo training manual was developed and published. Two LandInfo mobile app training workshops were organized and conducted in Nakuru county, Kenya (8-9 November 2017) and Nsukka, Enugu State, Nigeria (28-29 March 2018). 120 people were trained in Kenya and another 120 extension agents, contact farmers, Staff of UNN and Students were trained in Nigeria. Prior to the training, a pre	Other trainings for Cameroon, Malawi and Tunisia will be organized and conducted as scheduled in the approved work plan.	150 Training of Trainers (TOT) on the use of LandInfo by September 2018. 10 farmers and 20 extension agents per country	-Training reports -Progress reports	ATPS worked with country chapter coordinators to organize the trainings both in Kenya and Nigeria. Partners were identified and the training was jointly organized. In Kenya, the County Department of Agriculture was heavily involved. The ATPS team made pre-visits to the county and sub-counties and the EAs and farmers were selected. In Nigeria, the University of Nigeria

		visit was conducted by the ATPS team in both countries to identify suitable extension agents and contact farmers for the LandInfo training.				Nsukka and the Enugu State Agricultural Development Programme (ENADEP) were heavily involved.
Output 2.4 ICE for climate information knowledge exchange and sharing ➤ Activity 2.4.1 Management of the ICE infrastructure	On-going	This will be a continuous process to keep updating and tracking activities on the platform once it is launched.	The consultant in liaison with the project team is compiling data from the target countries to populate the ICE platform once it is completed before it is officially launched.	1000 visitors to the ICE platform by December 2018	-Efficiently running ICE platform	The development of the ICE platform is on-going. Gathering of data and materials required for the platform is also on-going.
Output 2.5 A robust climate adaptation toolkit ➤ Activity 2.5.1 Conduct case studies through focus group discussion and dissemination workshops in Nigeria and Kenya ➤ Activity 2.5.2 Synthesis of the adaptation planning reports and its integration into the robust Climate Adaptation Toolkit	On-going Not Started	The first case study will be conducted from 1 st May 2018 in Nsukka, Enugu State Nigeria. This exercise is led by SEI.	Activities are on course. First case study in Nigeria has been done	1 Adaptation Toolkit developed by June 2018	-Proceedings report -Robust Climate Adaptation Toolkit	Activities are on-going. The SEI team is planning a case study in Kenya.
Component Three: Project management and administration						
Output 3.1: Project Launch and steering committee meetings	Completed/ongoing	Project was launched on 11 th September 2017 at Hilton hotel, Nairobi, Kenya First PSC meeting was held on 12 th September 2017 while the second was held on 28 th June 2018.	Successfully completed	Report completed by Dec 2018	-Proceedings report -Minutes of the Steering committee meetings	Successfully completed. 2nd physical PSC meeting was conducted on 28 th June 2018.
Output 3.2: Establishment of the Project implementation team with		• Tinni Halidou Seydou (AGRHYMET)	Permanent contact persons for the project			Successfully done

<p>clear responsibilities</p> <p>➤ Activity 3.2.1 Identify team members from each collaborating institution and assign responsibilities</p> <p>➤ Activity 3.2.2 Provide orientation and deploy staff</p>	<p>Completed</p> <p>Completed</p>	<p>seydoutinni@gmail.com Tel : +227 20 315 316</p> <ul style="list-style-type: none"> • George Kabaka (ICPAC) okabaka@icpac.net Tel: +254 20 387 8340 • Degelo Sendabo (RCMRD) degelo@rcmr.org Tel: +254 723 786161 • Nabil Benkhadra (OSS) nabil.benkhatra@oss.org.tn Tel: +216 71 206 633 • Philip Osano (SEI-Africa) philip.osano@sei.org Tel: +254 207 224 886 	<p>have been identified by the respective partners. These people are responsible for the implementation of activities assigned to each of the partners</p>			
<p>Output 3.3 Framework for Project implementation, procurement and disbursement</p> <p>➤ Activity 3.3.1 Implement procurement and financial transactions for project implementation</p>	<p>On-going</p>	<p>The ATPS has already transferred all funds to the different partners for all activities in this project. Each partner has acknowledged receipt of the project funds.</p> <p>Goods and services have been procured in accordance with the approved procurement plan and AfDB policies.</p>	<p>Activities are being implemented appropriately. There are no issues that need to be addressed here.</p>		<p>-Procurement plan in place</p>	<p>Activities are being implemented appropriately</p>
<p>Output 3.4: Quarterly reports, mid-term report and M&E plan</p> <p>➤ Activity 3.4.1 Prepare progress and quarterly reports for monitoring and evaluation of the project</p>	<p>On-going</p>	<p>Quarterly report prepared</p>	<p>Reports prepared and submitted Quarterly</p>		<p>-Quarterly Progress reports -Financial reports -M&E reports</p>	<p>Submitted on time</p>

2.6 The Interactive Collaborative Environment (ICE Platform)

Presentation by **Mr. Mathew Imulia**, IT Consultant- ATPS



ICE is a brainchild of the ATPS, whose birth was motivated and informed by the need to improve wide dissemination of climate change information. The ATPS has used its cost effective and efficient information and knowledge system, an online platform, ICE, to promote wide information dissemination, and to enable stakeholders to interact and share information and change issues for its valued users. The ICE platform is viewed as a platform that will offer opportunities for all stakeholders in the climate sector to participate in information sharing, aimed at strengthening the capacities of African countries to understand, develop and deploy appropriate scientific knowledge on climate information access, use and management on the continent (See Figure 1 for conceptual framework).

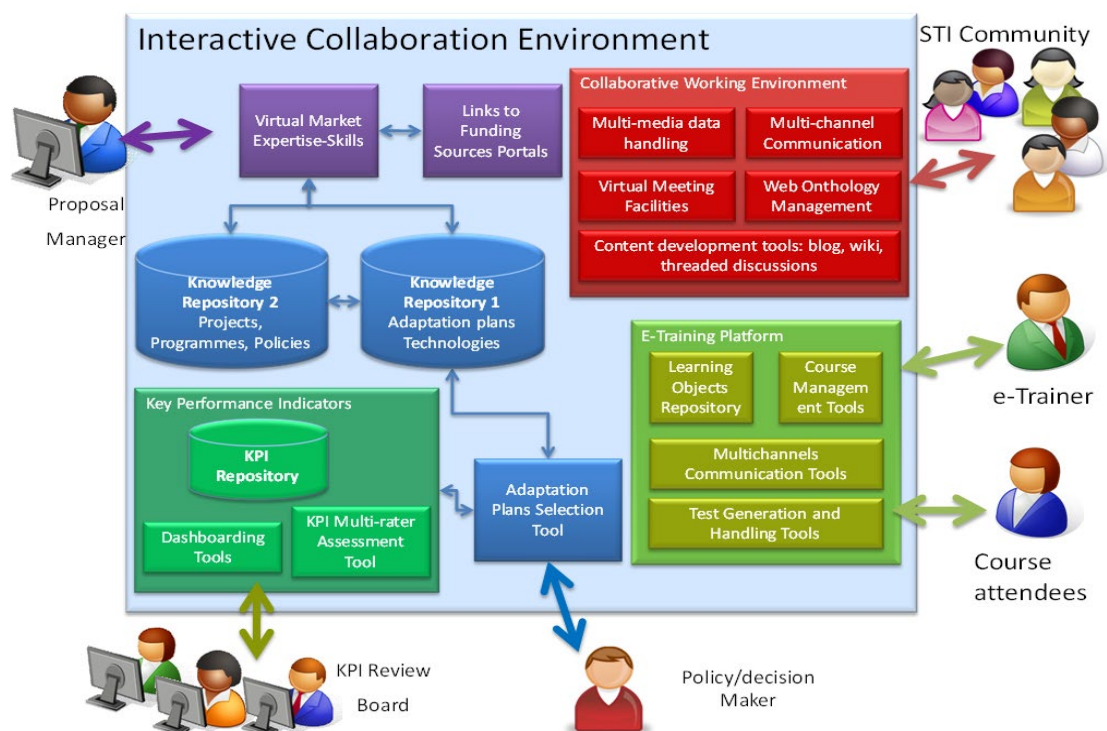
The ICE platform comprises a social media platform, a wiki (knowledge repository), a virtual market place, and enhanced search functionality on adaptation plans, technologies, policies and different projects. The social media platform is meant to bring together people to exchange ideas and experiences on climate change. This together with the virtual market place and streams from other mainstream media will serve to connect stakeholders to selected experts on climate change from whom they can share ideas on the subject, all for free! The virtual market place will also aggregate information on available donor funded projects to the stakeholders, as well as provide a chance for stakeholders to list their proposals for prospective funders to explore. The knowledge repository is a wiki that will serve the purposes of promoting file sharing on projects, programmes, adaptation plans and policies on climate change. Content on the wiki is uploaded freely by users of the platform, and verified by selected experts before being made publicly available to all users of the site. Chat rooms with private chat functionality are also a component/module of the site.

The project is estimated to be 75% complete at the time of presentation. Most modules had been developed including the social media platforms, user logins (with ability to login through social media accounts), Forum is complete with users able to add threads and create polls. The knowledge repository is also done with users of the site able to upload content from their local storage locations and the cloud straight to the forum. Visibility of trainers, administrators, moderators and users of the platform has also been worked on, with online availability being denoted by a tiny circle next to the user profile image/name.

Important Links

- Facebook: facebook.com/iceplatform
- Twitter: [@ice_platform](https://twitter.com/ice_platform)
- Site: <https://atpsice.org>

Figure 1: A conceptual Framework of the ICE platform is as demonstrated below



The pending assignments of the platform include mapping of climate funding mechanism module, design and management of climate partnership and networks, climate policy, addition of other language packs other than English, and styling the platform through design of an attractive theme that is appealing to the eye!

The development of the ICE platform also put into consideration the General Data Protection Rights (GDPR) of its users, a policy that became fully operational on 25th, May, 2018. Security measures have been put in place to safeguard the site and user information. The site also uses cookies for purposes of enhancing user experience with the platform (this option is displayed to the user in the course of interaction with the site). There is an option, with directions, on how to opt out of our mailing list, and security breaches that may require the attention of the user are reported in less than 72 hours. For more information on the GDPR policy, kindly visit <https://www.eugdpr.org/>

User groups so far accommodated on the platform include Super Moderators, Administrators, Moderators, Registered, Users awaiting activation and the Banned group. Depending on the user group one is cleared for, the privileges at stake include:

- View
- Post Threads
- Post Replies
- Post Polls

This platform will outlive this project and be applied beyond the time-frame of the project. We also recognize that the continued functioning of ICE requires personnel to man the platform, hence the project team will continue to liaise with the climate change community to maintain operations and functionality of this virtual hub. This way, individuals and organizations that did and did not participate in this amazing project will have the wonderful opportunity of being a part of the discussion on climate change using the ICE online platform. With this tool and others, the battle on climate change will be ours to lose!

Questions and Discussions

A member asked if institutions for instance universities can have their websites back linked to the ICE website with the aim of increasing the number of users in the site.

In his response, Mr Imulia, acknowledged the idea to be a noble one and added that the ATPS network will liaise with relevant institutions with regard to their integration into the system. He, however, elaborated that ICE, as is currently only permits for individual registration/membership, but would work on a module that would incorporate group membership so as to make this possible.

From a marketing angle perspective, a delegate noted that the ICE platform website is a bit technical for someone who is not tech-savvy to understand, and that the website was not aesthetically beautiful. The delegate further proposed that there is need to repackage its look as well information available on the website and there is need for the public to know the benefits of the site. She further asked on how the ICE platform will be able to compete with other global platforms after the PARIS agreement for instance the NDC partnership, P4G marketing among others.

Mr Imulia responded by asking for a little patience as the platform was yet to be completed. He told the delegates that he has been working to get the functionalities of the system right, before embarking on the beauty of the platform, which he promised to work on in the coming few weeks. On the issue of marketing, the developer absolved himself through admittance of being so conversant with marketing concepts, but promised to work with other colleagues within the network to repackage the information about the website in such a manner that would sell it to the users. With regard to how the ICE platform will compete against other global platforms, ATPS executive director Dr Ozor said plans would be put in place to ensure that the moderators and administrators of the platform are experts in the field of climate change who would be able to gauge quality of content supplied. To be able to guarantee quality, posts and threads will be first screened before allowing publication for public viewing.

Participants will be enrolled to the ICE platform to share lessons, practices, contact professions. The aim is to use the platform as a one-stop shop where people seeking information on climate change e.g. need an expert develop to assist to help you. Somebody in the platform will be able to assist you within Africa first then global.

A delegate congratulated the ATPS team for developing the ICE platform, she noted that it is a good platform to showcase African expertise in environmental matters.

A member inquired on what mechanism ATPS will use to ensure the quality of content that goes in to the ICE platform is of good quality.

The ICE framework will have a manager who will be a qualified environmentalist and well knowledgeable on climate change issues, the manager will ensure information is correct. Additionally, information will pass through administrators, super administrators, and moderators before it is posted to the public.

Membership on the ICE platform will be institutional, mandatory commitment or individual partnership.

A delegate asked to what extent have the users been involved in the designing process of the ICE platform.

The ATPS Executive Director Dr. Nicholas Ozor responded to this by saying the idea had been conceived on a need basis, and it was important to deploy the system for use first before views of the user could be collected, which would now help further improvement of the project.

A member asked on about the strategies in place to get the web application usable on mobile devices.

The web application had been made in such a way that it was responsive and would behave appropriately across multiple devices including desktop computers, tables, smartphones and others. However, the web can only be access through a web browser using the domain name of the website. However, there was an assurance that there were deliberate efforts to get a mobile application version of the web application developed after full completion.

2.7 Analysis of Climate Information System

Presentation by Mr George Kabaka- ICPAC



To effectively deliver climate information, it is imperative to ensure that appropriate functional institutional, technological, and organizational arrangements are in place to generate, exchange, and disseminate information nationally, regionally and globally. Establishing a well-structured/ organized climate information system (CIS) is critical for the effective management of the complex flow of climate information from data collectors to the end users. A fully functional CIS aims to lessen the burden of climate information management for climate information users to make management decisions. It comprises a physical infrastructure of institutions, centers and computer capabilities, which together with competent human capacity assist in the development, generation and distribution of a wide range of climate information products and services to inform decision-making processes across a wide range of climate-sensitive activities and enterprises. This module has been developed to expose participants to the complex nature of relationship between the generation of climate information and the structures and systems that are put in place to ensure the generation and dissemination of

accurate data for decision-making. It highlights the important contribution of CIS in enabling better management of risks associated with climate change, and adaptation to climate change at all levels, through development and incorporation of science-based climate information and prediction into planning, policy and practice. The analysis of a climate information system is a step forward towards strengthening the application of climate knowledge in local, regional and global decision-making to support adaptation and mitigation practices.

The presentation looked at the climate information and services; the Global Framework for Climate Services (GFCS) and how climate information services can be used in development planning. Climate is typically one of many factors one must consider in development planning. Climate information and services can provide valuable insight along the decision-making process for instance, in the face of increasingly uncertain climate, achieving medium and long-term development objectives will increasingly depend on climate predictions and the use of climate information. Climate-smart development planning can also reduce the impacts of climate-related disasters, improve food security, enhance water resource management and build resilience.

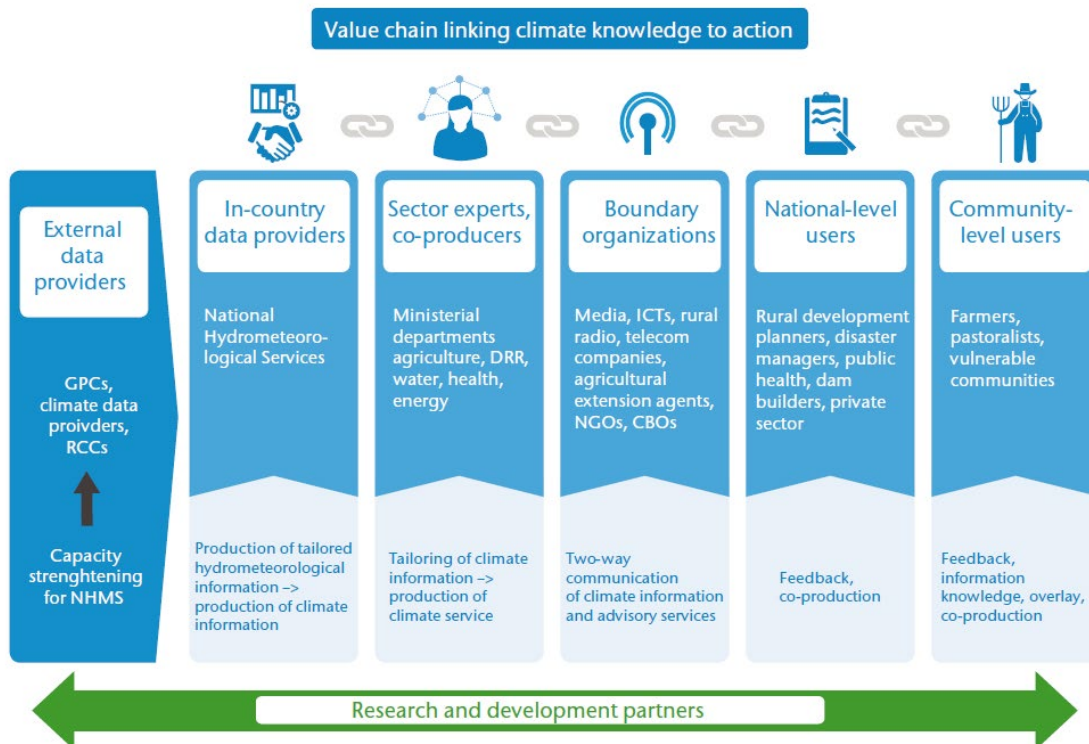
Climate information refers to the collection and interpretation of observations of the actual weather and climate as well as simulations of climate in both past and future periods while climate information is the collection and interpretation of weather and climate data that is credible, relevant and usable. Climate information services on the other hand, involve the provision of climate information to assist individuals and organizations in decision making. They can also be tools and processes that enable decision-makers and user communities to assess, and prevent or prepare for, potential impactful weather and climate events

Some of the global and regional initiatives and strategies require enhanced climate data sharing and exchange include: the Sustainable development goals (SDGs), Sendai Framework for Disaster Risk Reduction and the Paris Agreement on climate change.

Data value chain: Information flow that describes a series of steps needed to generate value and useful insights from data. These steps includes: enhanced data discovery (e.g., capture, storage, organization), integration (e.g., visualization, access), and exploitation (e.g., transformation, analysis, tailored products and services)

The key stakeholders in climate services include: users, providers, co-producers, communicators, boundary organizations, enablers and partners. Other stakeholders come from all GFCS priority areas and pillars and other interested stakeholders.

Figure 2: Value chain linking climate knowledge to Action



Global Framework for Climate Services (GFCS)

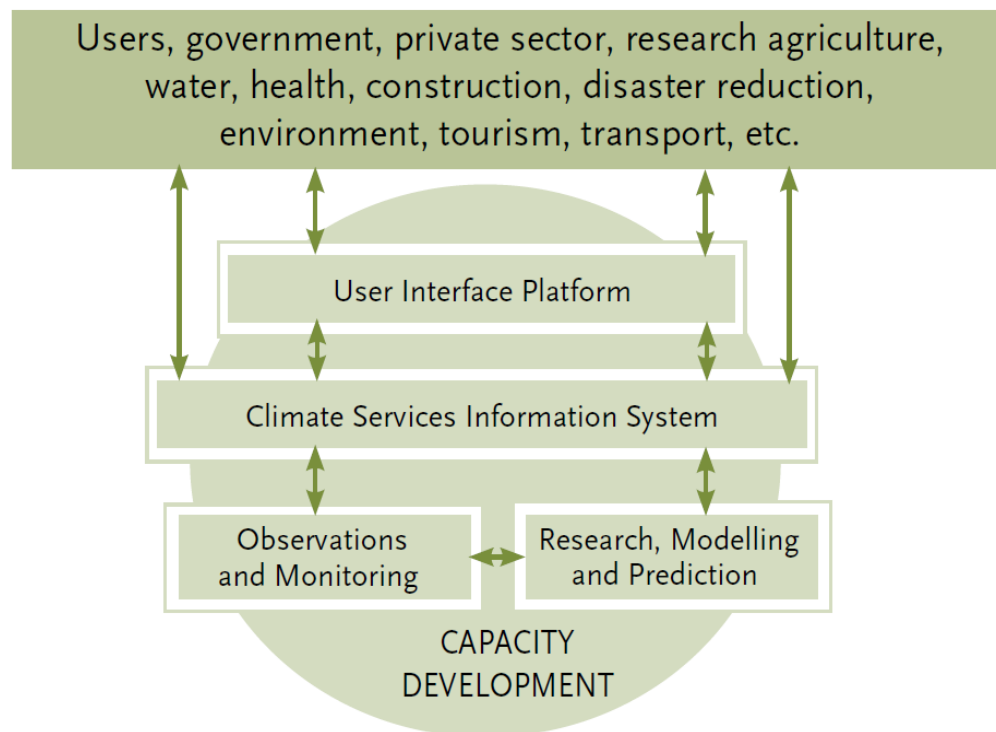
The World Climate Conference-3 (WCC-3) held in Geneva in 2009 unanimously decided to establish a Global Framework for Climate Services (GFCS) to guide the development and application of science-based climate information and services in support of decision-making in climate sensitive sectors. The role of GFCS is to coordinate, facilitate and strengthen collaboration among institutions to avoid duplication of efforts. It is built through user-provider partnerships that include all stakeholders.

The GFCS is an end-to-end system that uses observations, technology and scientific understanding as inputs for the development of climate services to meet user requirements. GFCS is designed around five major components or 'pillars', User needs are met by each of the pillars as follows:

- ▶ User Interface Platform (Users can make their voices heard through the Platform and make sure climate services are relevant to their needs)
- ▶ Climate Services Information System (The production and distribution system for climate data and information products that address user needs)
- ▶ Observations and Monitoring (The essential infrastructure for generating the necessary climate data)
- ▶ Research, Modelling and Prediction (To advance the science needed for improved climate services that meet user needs)

- Capacity Development (To support the systematic development of the institutions, infrastructure and human resources needed for effective climate services)

Figure 3: Role of the Global Framework for Climate Services and its component pillars



The scope and thrusts of the GFCS include five initial priority areas namely: agriculture and food security; disaster risk reduction; energy; health, and water.

Characteristics of an effective Climate Product

- Resolution** - The resolution of climate information products greatly affects how they can be understood and interpreted. Resolution by the temporal and spatial scales which may range from global to local). Temporal scales may range from monthly, to seasonal to geological.
- Accuracy** - The accuracy of weather forecasts has improved over time and today there is a reasonably accurate forecast of the weather in a particular location for up to 7 days in advance. Climate simulations, models and scenarios are simplified representations of the future climate and provide information on *possible* climate impacts.
- Relevance** - Different climate variables are relevant for different sectors and users. Climate information needs to be aligned with user needs and priorities, hence of practical application to decision makers, communities and other stakeholders.
- Accessibility** - Climate information is often highly technical. To be utilized, it needs to be accessible and easy to interpret by its target users.
- Cost effectiveness** - Achieve long-term objectives with limited resources in the short-term.

Uses of Climate Information

In the agricultural field, climate information can be used during pesticide and herbicide applications, fertilizer management, farm and irrigation management; Plant and animal pest and disease control strategies and crop selection. Weather and climate sensitive decisions in the agriculture and food security value chains for instance, decisions on whether to export and import of agricultural inputs and products; Identification of extreme weather and climate hazards that pose risks to agriculture and food security; Identification of populations vulnerable to weather and climate hazards; and Regulation and laws.

In Disaster Risk Reduction (DRR), there are six priority categories of activities that related to products and services by NMHSs, and promote widespread implementation of programmes and initiatives that incorporate climate information and services.

In the energy sector Energy, the main focus areas are in the Identification & Resource Assessment, Impact assessments (incl. infrastructure and environment), Site Selection & Financing, Operations & Maintenance and Energy Integration.

There have been on-going efforts in the health sector which have helped built experience, learning, and a community of practice to expand upon improving health related issues. Notable examples include: Heat-health and cold-health early warning systems, including development and use of climate indices relevant to health outcomes; Early warning systems for vector and water borne diseases such as malaria, rift valley fever, plague, water borne diseases and meningitis; and Air quality, pollens and allergens, ultra-violet radiation and their impacts on human health, especially in cities;

In this context, NMHSs can provide a range of services to support decisions by water managers that include: identification of extreme weather and climate hazards that pose water-related risks; identification of populations vulnerable to weather and climate hazards, including those in the coastal zone; implementation of risk management and emergency preparedness practices and procedures; development and implementation of water and environmental policy; and development and implementation of water and flood management policies and strategies.

Questions and Discussion

A delegate inquired whether the provision of capacity building services is only in ICPAC member countries or it can extend to other countries. ICPAC's primary focus on capacity building is at the 11 member countries, however with good donor funding there may be arrangements to extend capacity building to other countries.

Another delegate commented that there is a lot of climate information at the national however accessing the same information at the grassroot level is difficult because they are few weather stations additionally the climate information websites available have limited the information available to the public. In order to ensure climate information reach people there is need for ICPAC to integrate some of its programs with the County governments because they provide a large resource in disseminating information and they are directly in touch with citizens. In

addition, capacity building programs should also be included in the planning processes of county governments in order to mainstream climate information services, if the programs are captured in the planning stage it becomes easier to implement them.

Climate change information is required by everybody, a member proposed on the use IT to segment the different users for the purpose of their different needs for instance, the training modules can be made available to different stakeholders depending on their interests' in order to access climate data/information.

The ICPAC team pointed that they have not yet fully implemented the use of the MRV system which involves effective measurement, reporting and verification; and they are considering including it in their programs. In regards to the accuracy of climate information provided by ICPAC reported that the percentage of accuracy of the forecast provided is about 80% as per verification and assessment. The forecast are probability based however, long terms projections are actually scenarios (a possible outcome for the future) an understanding the uncertainties associated with the generation of climate scenario is necessary in the interpretation and use of climate projections.

One delegate was concerned that meteorological institutions have no relevance in the rural areas because of the method of communication they have adopted over the years. He gave a case study of Nigeria where the meteorological department announces in the media that people living along the coast should vacate yet there is no clear definition of a coast given or which community should vacate which areas. There is need for information to be given to the public in a concrete manner so that it can be used well. Giving forecast is a first step and the next one is taking action, which involves the disaster management and taking action.

The moderator and the chair of the afternoon session were Prof Okwueze and Hon Samuel Onuigbo respectively took over for the afternoon session. The session involved discussions around climate policy analysis and policy making.

2.8 Climate policy analysis and policy making

*Presented by **Mr Alfred Nyambane**, Research Officer-ATPS*



Reducing vulnerability and fostering a food-secure Africa through strengthening the capacities of African countries' to understand and deploy appropriate climate information and best practices to inform decision-making and support development planning is now a priority. Some African countries have developed policies that attempt to tackle environmental issues including climate change but still face serious challenges in implementing them. Some of the reasons documented include: lack of capacity in implementation or poorly developed policies or both. As part of this project outputs, ATPS has developed a module that provides clear guidance in the development of climate specific policies across the various sectors (Click [here](#) to access the module). It targets policymakers, practitioners and scientists working in various sectors that are affected by

climate change in the continent. The module aims to establish a conducive environment for building competence and competitiveness of African nations to achieve highest added value, efficiency, and productivity in the delivery of goods and services through the use of climate science and knowledge. In conducting climate policy analysis, the key issues that will be addressed include:

- What are the basic needs, strengths and resources of the nation?
- How can climate science support adaptation and mitigation and sustain a country's material base and wealth?
- In which sectors and in what order should a country stake its financial and other resources to promote climate adaptation and mitigation?
- What are the country's most urgent priority areas that are under the eminent threat of climate change?
- How can climate policy informed by climate science assist the country to rationalize the scarce resources and balance its socio economic imperatives?

The module covers vital areas which are presented as units including:

- i) Overview of the climate policy process;
- ii) Overview of necessary tools to ensure a successful climate policymaking (data gathering, policy mapping, context assessment, issues in research to policy uptake, effective communication tools, etc.);
- iii) Institutional aspects of climate policymaking in Africa (institutional arrangements for successful climate policy formulation, key sectors to consider in climate policy and the interactions between them);
- iv) Public engagement in climate policy formulation; Stages in climate policy formulation; and
- v) Monitoring and evaluation in climate policymaking.

Questions and discussion

After the presentation was made delegates asked various questions concerning the module. Of particular interest from the delegates was the use of the terms climate policy vis a vis climate change policy. Some of the delegates felt that the module should have a title that addresses the challenge of climate change rather than the climate system which cannot be changed. Other delegates were of the opinion that climate policy encompasses both policies that influence the functioning of the climate information system and those that relate to climate change (Adaptation, mitigation and resilience). It was unanimously agreed that the modules should have a section with customized definition of the key concepts used.

There were further discussions regarding laws and policies. It was made clear that a policy is not a law. However the policy can be drafted and captured in a way that the law is embedded in it.

Group Work and Presentations

The delegates were divided into three groups to discuss various topics relating to climate policy making and analysis. Each group was given up to 30 minutes to discuss the topics provided. The groups would later present their findings to other delegates present during the workshop.

The first group discussed the best practices in Monitoring and Evaluation (M&E) that will ensure effective implementation of climate policy across different sectors and also explained why evidence based policy making is critical and the short-comings. They started by providing the best practices which included:

- **Data generation-** Collection of different types of data was seen as very critical in M&E. The various tools for data collection need to be developed and proper orientation done to the staff involved in this process to ensure accurate capturing of data.
- **Defining indicators-** Clear indicators need to be developed and shared with the team in the M&E plan. The indicators should be robust enough to capture every aspect being monitored in order to ensure efficiency of data capturing.
- **Information sharing-** It was also seen as necessary to always share information to the relevant stakeholders as soon as it is collected. This practice will enable the stakeholders to promptly make decision from a point of information rather than relying on speculation.
- **Impact Evaluation-** Periodic evaluation of the M&E plans should be conducted in line with the changes that may occur. This activity is aimed at revising the plan based on the new circumstances.
- **Timeframe evaluation-** Specific time frames should be set for the M&E plans when they need to be evaluated. The evaluation should not be randomized as ample time for implementation is required to gauge efficiency and effectiveness of the plans.

With regard to the importance of evidence –based policy making, it was noted that it allows for referencing and verification locally hence making its adoption easy and widely accepted. Evidence based policy making is end-user oriented and therefore very effective. It also leads to changes in framework for monitoring and evaluation making it precise and targeted. However, there are some shortcomings of evidence based policy making which include: concerns of a huge disconnect between science and policy application, lack of a systematic data collection processes and most often unconducive political environment which leads to biasness in adoption.

Group two was tasked to discuss who among the stakeholders should initiate the climate policy dialogue and who should keep the conversation going and to provide the reasons why. The group identified the following as key stakeholders in the process:

- Civil society
- Academia
- Development partners
- Law makers
- Public sector
- Private sector
- Government (ministries)
- International actors
- Collaborative effort
- Socially empowered grassroots' people

It was informed that every stakeholder has a crucial part to play in the process, these responses were based on the dynamics in some countries. The actors have different strengths in different countries. The civil societies are very strong in some countries while in others you find the governments very strong. Some countries even have individuals who have strong personalities and are able to initiate dialogue through social media and other platforms. To keep the conversation going, you find that activists, strong personalities and role models are able to drive the conversations. The civil society plays a very strong role in keeping conversations going. However, you also find strong governments keeping conversations going or even initiating these conversations. All these depend on the dynamics of the country.

The third group worked on how climate policy instruments can be utilized to strengthen the role of institutions in ensuring effective implementation of climate policy. Some of the policy instruments identified include:

- **Taxation and budgeting** –through taxing certain services that contribute to greenhouse emissions therefore discouraging such businesses and at the same time promoting efficient production systems that have close to zero emissions. More can as well be put in ventures that are green.
- **Education** (School curriculum revision) **and Advocacy**- information is key in promoting climate policy implementation. The higher the number of people reached by the information the higher the chances of success in implementation of the policies.
- **Incentives and disincentives**- e.g. banks reducing interest rates for farmers for taking loans to set up biogas equipment
- **Licensing and approval processes**- Licenses can be issued in order to control certain activities. This may include issuance of licenses for harvesting wood in government forests therefore ensuring control. A good approval process should also be installed to ensure close control of sensitive projects and proper utilization of natural resources.
- **Market instruments** – These are also very effective. These may include pricing of goods and services, introduction of taxes on commodities and services among others.
- **Payments for ecosystem services**- People and organizations utilizing natural resources or benefiting from ecosystem services are made to pay for conservation efforts of such resources.
- **Laws and legislations**- Laws and legislation targeting climate action should be enacted and implemented to the latter.
- **Strengthening the capacity of institutions**- bodies responsible for implementing climate policies are supported and strengthened to be able to perform their role properly.
- **Availing resources**- More resources can be availed to support actions that will promote climate change adaptation and resilience

The fourth group tackled the aspect of the important of engaging the public in the process of climate policy making and analysis. The public include end users of the products. Usually the policy dialogue is dominated by researchers/scientists, policy makers and sometimes the NGOs. The involvement of the public is important since they are the most affected by the policies and they are the ones who determine the success or failure of the policies.

3. MAPPING CLIMATE FUNDING, FORESIGHT STUDIES AND CLIMATE SCIENCE COMMUNICATION

Day two of the climate change dialogue and training workshop was chaired by **Mr Ralph Kaufmann**, a private sector actor and moderated by **Prof Michael Madukwe**, from the University of Nigeria, Nsukka.

3.1 Mapping of Climate Funding and Mechanisms

Presented by Mrs Khaoula Jaoui- OSS



At the global and regional levels, we are witnesses to the establishment of funds for climate change projects. The challenge for many countries and institutions is the lack of capacity and requisite knowledge on how to access these climate funds. OSS developed a module that covers vital areas in the mapping of climate funding including, sources of funds for specific research priority areas, eligibility issues, geographical interests, strategies and mechanisms for accessing funds in the short, medium and long term, and most importantly identifying funding suitability for climate change priority development projects. By using this module it is expected that's the capacity of countries will be strengthened on how to access global funding for climate projects. Institutions and countries will be able to identify appropriate funding sources for climate change projects aimed at supporting adaptation and mitigation initiatives.

The training module aims to support African national actors to master the concepts related to climate finance, to strengthen their knowledge on its global architecture and thus increase the chances of mobilizing climate finance.

Why this training module is important

- **Climate change** threatens global prosperity and development;
- Need of aggressive **Mitigation** actions to reduce global carbon emissions and **Adaptation** measures for vulnerable countries;
- African countries like most developing countries actively engaged in researching, defining and applying strategies for adaptation and mitigation;
- Several global **frameworks** and **Funds** established to support developing countries (UNFCCC, Paris Agreement, GCF, etc.);
- Africa share of climate finance is less than 5% in 2016 (source: Climate Policy Initiative)

Challenges

- Multitude of climate funds: in the framework of the UNFCCC, bilateral, multilateral or private
- Complexity of access to these funds
- Barrier of language for non-English speaking countries
- Climate funds requirements: good knowledge of funds procedures and technical capacities to develop bankable projects
- Reinforcing African countries to increase their share of climate funds

Consensus definition of Climate Finance, according to the Standing Committee on Finance - SCF: *“Climate finance aims at reducing emissions, and enhancing sinks of greenhouse gases and aims at reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts.”*

According to the UNFCCC agreement, Climate Finance must be:

- Mobilised by developed countries;
- provided to developing country Parties, taking into account the urgent and immediate needs of those who are particularly vulnerable to the negative effects of CC;
- balanced allocation between adaptation and mitigation;
- involved in a transparency context; and
- increased new and additional, predictable and adequate.

Mrs Khaoula focused on two funds in her presentation: The Adaptation Fund and the Green Climate Fund. Details of that presentation can be accessed from https://drive.google.com/open?id=1n6fb1HLM4pb1ysG1mlb_p5oCL9zjYO1O.

Figure 4: Global climate finance architecture

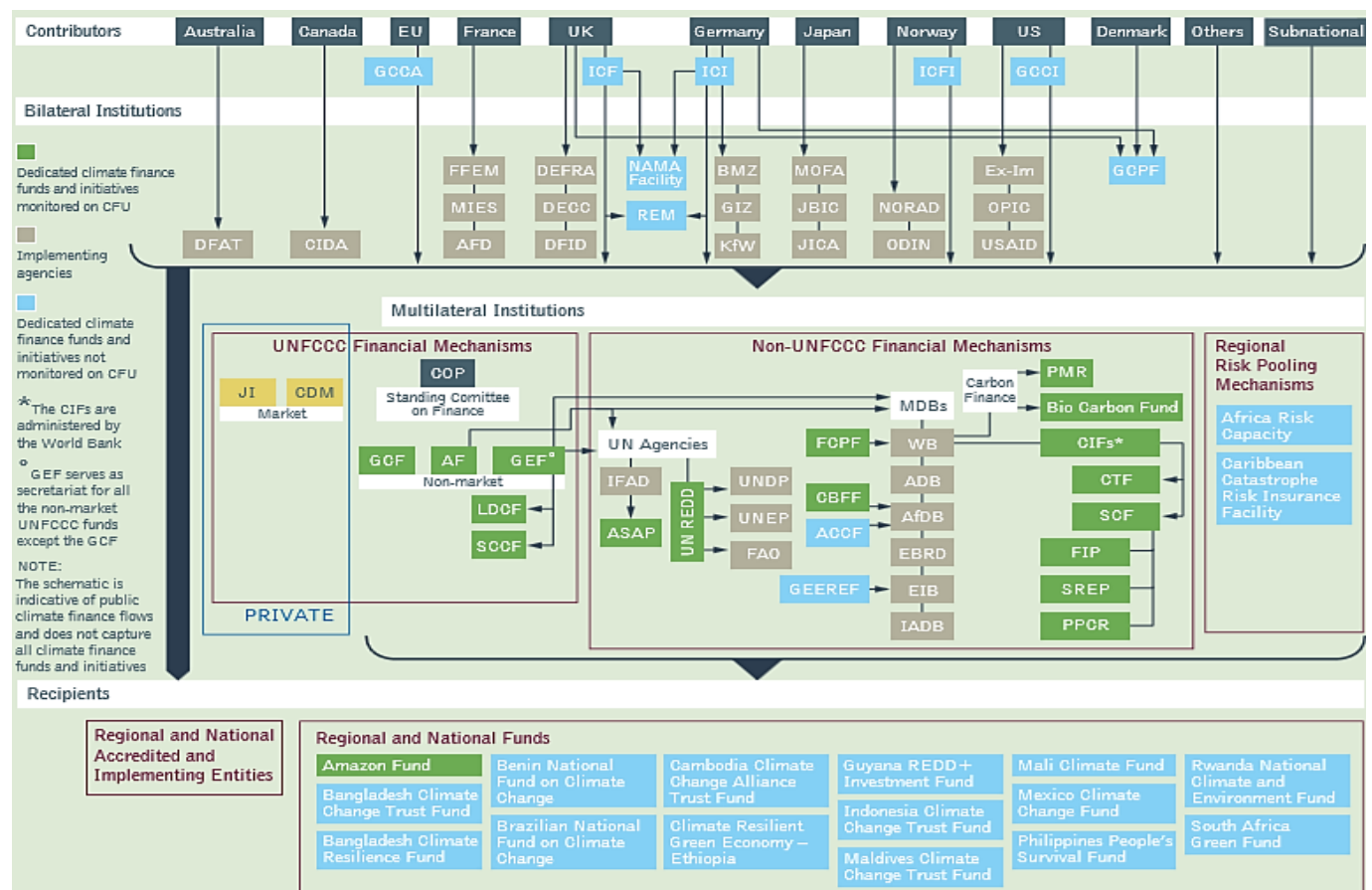
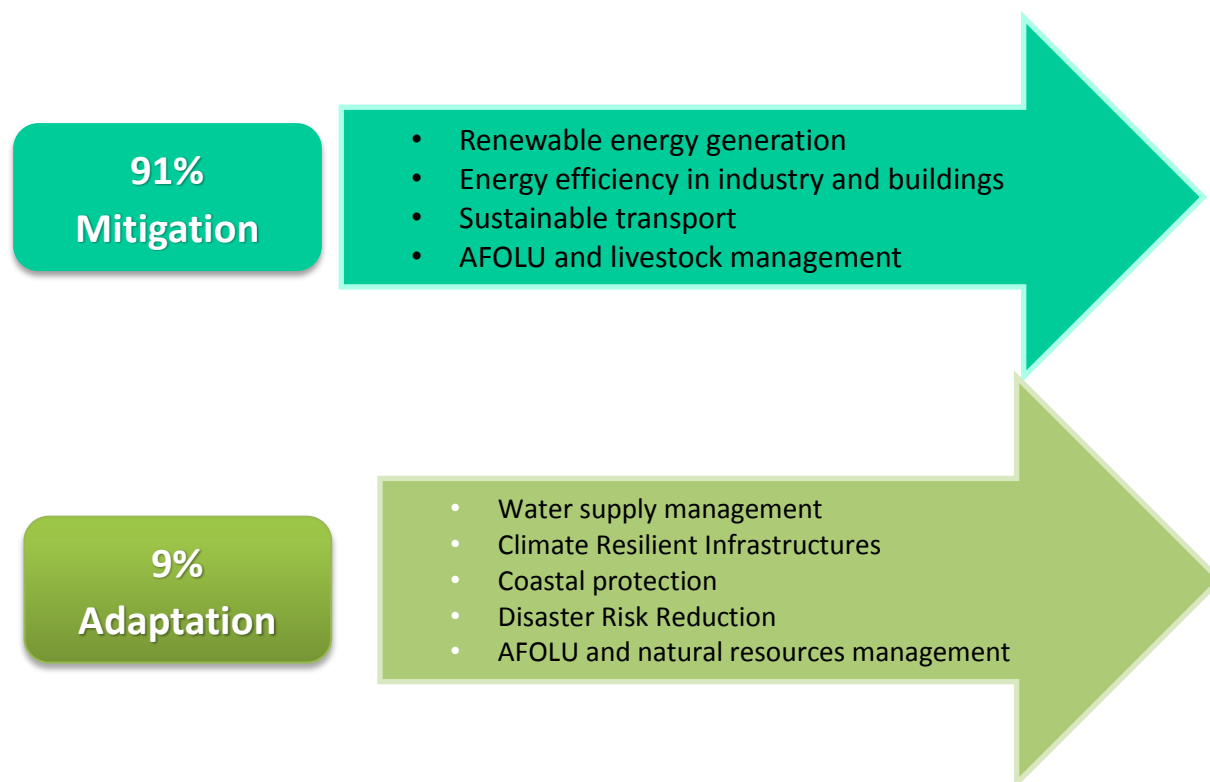


Figure 5: Distribution of Climate finance



The Adaptation Fund

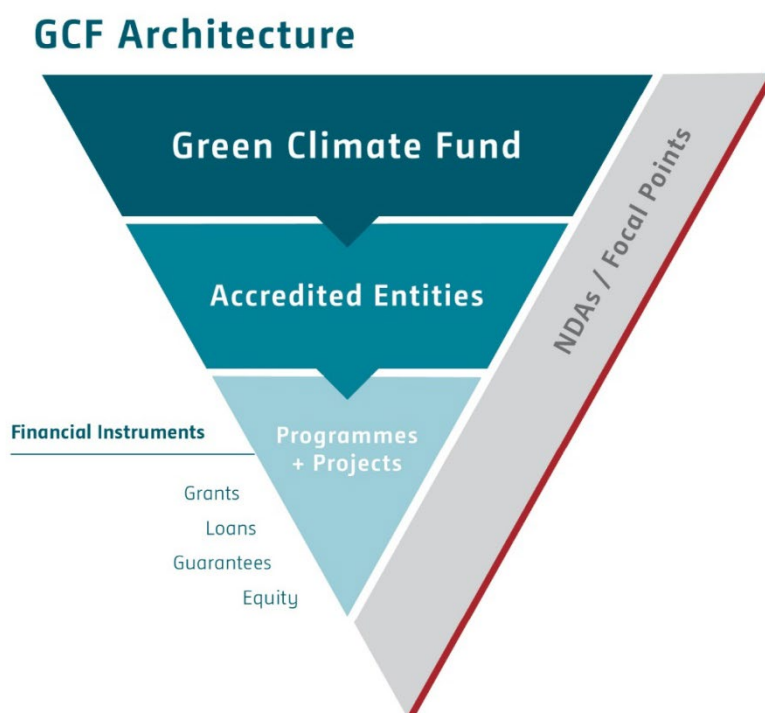
The Adaptation Fund (AF) was established in 2001 and became operational in 2010 to finance concrete adaptation projects and programmes in developing country Parties to the Kyoto Protocol that are particularly vulnerable to the adverse effects of climate change. The AF is financed with a share of proceeds from the clean development mechanism (CDM) project activities and other sources of funding. The share of proceeds amounts to 2 per cent of certified emission reductions (CERs) issued for a CDM project activity. Since 2010 Adaptation projects funded in more than 76 countries to nearly \$ 477 million USD. AF complements other financial mechanisms established under the UNFCCC:

- Least Developed Countries Fund
- Special Climate Change Fund
- Green Climate Fund.

The Green Climate Fund

The Green Climate Fund (GCF) was formally established in 2010 under the UN Framework Convention on Climate Change with a mission to support the goal of keeping climate change below 2 degrees Celsius. The Fund provides support to developing countries to help limit or reduce their greenhouse gas (GHG) emissions and adapt to climate change. Eligible countries include developing countries, parties to the Kyoto Protocol, countries particularly vulnerable to the negative effects of climate change (SID, LDCs, African countries). The supported measures include adaptation and mitigation projects and the access modalities is direct, regional and multilateral access.

Figure 6: GCF Business model



Questions and Discussion

A delegate on the eligibility process required while applying for various funds presented especially for those who are not signatories to the Kyoto Protocol. It was informed that each fund has its own eligibility requirements and specific focus area and result areas. Another delegate asked about the greenhouse emission target to reduce temperatures by 2°C. It was informed that there are indicators provided in the website in terms of tonnes of greenhouse gases required to be reduced to achieve the target.

3.2 Foresight Studies and Research Priority Setting in Climate Science and Policymaking

*Presented by **Dr Chidi Magnus**- President, Sustainable Energy Practitioners Association of Nigeria (SEPAN)*



In order to deal with the challenges associated with development trends, a new culture of future-oriented thinking is needed. This applies also to climate information and climate policymaking processes, which can be assisted by foresight in various ways. Foresight stresses the possibility of different futures (or future states) to emerge, as opposed to the assumption that there is an already given, predetermined future, and hence highlights the opportunity of shaping our futures (Havas et al, 2010). Foresight studies when applied to climate issues helps to: evaluate current policy priorities as well as potential new policy directions; see how the impact of possible policy decisions may combine with other developments; inform, support and link policymaking in and

across a range of sectors; identify future directions, emerging climate risks and opportunities, new societal demands and challenges as well as anticipate future developments, disruptive events, risks and opportunities. These scenarios form the key topics under this module. Research priority setting determines the prospects not only for scientific, but also socio-economic development. The module covers five criteria for ranking research priority areas (Click [here](#) to access the module). These are:

- appropriateness that includes ethical and moral issues, availability of pre-existing climate data, and cultural acceptability;
- relevance that includes equity focus and community focus, the size of the problem, and contributions to the national and sector objectives;
- feasibility which embraces capacity of the system to support the research, financial and human resources available, and cultural/political environment; impact of research outcome which includes opportunity to implement the research, use of the research results, link of the research to policy decisions, and overall reduction of the problem, including cost; and
- opportunity to strengthen collaboration with partners which includes presence of capable partners, availability of partner infrastructure and resources, possibility that potential partners will collaborate to undertake the research, and possibility of greater research outcome with partner involvement (Sylvia et al., 2015).

Dr Chidi defined foresight studies as processes of anticipation that identifies opportunities and threats which may arise in mid-to long-term versions of the future. As a way of thinking, foresight also encourages innovation, strategic evaluation and proactive shaping of the future. Where traditional planning has sought to prevent failures, foresight prioritizes resilience namely early detection and fast recovery. It allows organization and stakeholder network to identify the long-term trends which are likely to form their operating environment; as well as actions which are 'robust' across all of the scenarios (that is have a positive or neutral effect), 'tipping points' or inflection points (whereby the levels at which the momentum for change outcome look unstoppable) which will have a significant effect on the operating environment. Foresight studies provides a broad view to be taken of a sector or strategic issues and also enable practitioners to relate their sector to wider competitive set, rather than looking narrowly at their own industry; it also enables a system based view to underpin discussions about the future, making connections between different interventions and priorities, which helps both to identify unintended consequences and also the 'leverage point' which might create large effects through intervention; and the practice ensures the creation and exchange of shared knowledge between stakeholders. Foresight studies are effectively implemented through Scenario planning process which is a long term strategy and policy implementation tool. It is about generating narratives of the future to imagine how the world may evolve and what problems, challenges and opportunities could occur. They are useful long-term planning tools for anticipation and preparation for plausible, possible, probable and desired futures. This process includes:

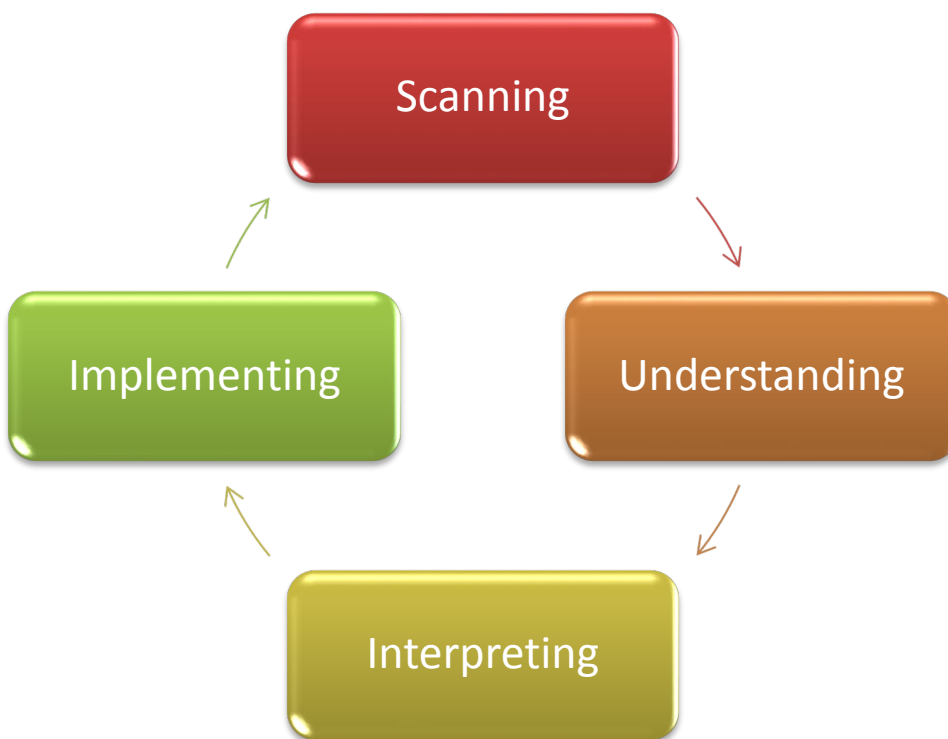
- Agreement on project question (to define scope);
- Identification of long list of relevant 'drivers of change';
- Prioritization of drivers and filtering for levels of importance and uncertainty;
- Identification of scenario axes (based on 'critical uncertainties');

- Development of scenarios;
- Testing of scenarios for robustness, and fuller development of scenario narratives; and
- Exploration of strategic implications of scenarios.

This is in contrast to “Forecasting” which creates a narrow view of the future its predictions in long term forecasting and has increasingly become discredited because most of the predictions have proved to be incorrect.

There is no doubt that governments have increasingly realized that few contemporary challenges can be confined to one policy area and a single-issue focus is in many instance insufficient. Climate change (the main crux of the matter in the training module) for instance, crosscuts other issues of concern including access to water, agriculture, food security, energy, and urban planning. Information silos common in highly decentralized and bureaucratic organizations can hinder the ‘whole- picture’ perspectives. This presents a further challenge for policy makers tasked with formulating strategies and policies that effectively address interconnected and interdependent problems. In an increasingly complex and rapidly changing world, the value of future thinking and foresight programmes as long term planning tools in strategic policy making and implication for sustainable development especially in African context cannot be over emphasized.

Figure 7: Foresights Studies Cycle



a) Horizon Scanning

It involves looking across the future landscape taking a broad view, to identify over all changes which are likely in the external and internal environments. In other words, scanning look at trends and drivers that are shaping the world including those within and outside a given context. The main function of futurist here is to collect knowledge about the future, specifically current knowledge that could have influence on the future or 'insight'. Though horizon scanning that is both wide and deep, it produces a pool of insights that form one big knowledge base about the future.

b) Understanding

It involves making connection between these drivers of change to understand how different trends connect or collide, to construct the landscape in which an industry sector or organization will be operating.

c) Interpreting and Formulating versions of the Future

It is the application of a combination of techniques and practices such as identify weak signals, or emerging strategic issues, casual layered analysis, wild card exercises, participatory method, road mapping, scenario planning, etc.

d) Development /Implementation of Strategic Options for Action

It involves the actions required to respond effectively to the challenges identified.



What is Systems Thinking?

Systems-thinking is a complex science requiring one to organize opportunities within a system to intervene, make impact and these interventions are known as leverage points. To elaborate on this, Dr Chidi facilitated a participatory exercise (Random picking play-and dancing) where delegates were given pieces of papers with written numbers. Each of the numbers represented a step in systems thinking. The steps are given below:

1. **Get the beat:** Before you disturb the systems in any way watch out how it behaves
2. **Listen to the wisdom of the system:** Aid and encourage the forces and structures that help the system run itself.
3. **Explore your mental models to the open air:** Remember that everything you know, and everything everyone knows is only a model to be subjected to peer-review.
4. **Stay humble. Stay a learner:** Systems thinking reminds us how incomplete our mental models are, how complex the world is and how much we don't know. We must learn by experiment-by trial and error, error, error(apologies to Buckminster Fuller)
5. **Honour and Protect Information:** A decision maker can't respond to information he or she doesn't have and can't respond to information that is inaccurate.
6. **Locate Responsibility in a System:** Intrinsic responsibility means that the system is designed to send feedback about the consequences of decision making and quickly and compelling to decision makers.
7. **Make a feedback Policies for feedback systems:** A dynamic, self –adjusting system cannot be governed by a static, unending policy.
8. **Pay attention to what is important, not just what is quantifiable:** Do not be stopped by 'if you can define it, measure it'. But no one can precisely measure the all-important justice, security, freedom, truth and love.
9. **Go for the good of the whole:** Don't maximize parts of the systems or subsystems while ignoring the whole. Don't go to the great trouble of optimization (extrapolation). Aim to enhance the total systems properties such as creativity, stability, diversity, resilience and sustainability.
10. **Expand your Horizon:** In a tricky, curving, unknown, surprising, obstacle- strewn path, you need to be watching both the short and long term-the whole system.
11. **Expand your Thought Horizon:** Defy the disciplines and what you think you are expert at, follow a system where it leads. It will be sure to lead across traditional disciplinary lines.
12. **Expand the Boundary of Caring:** It will not be possible in this integrated world for your heart to succeed if your lungs fail and for Europe to succeed and Africa fails. These are moral lessons of caring.
13. **Celebrate Complexity:** The universe is messy. It is non-linear, turbulent and chaotic. It organizes and evolves. It creates diversity and not uniformity. That's what makes the world beautiful and interesting. There is something in human mind that is attracted to mathematical, straight lines and not curves, to whole numbers and not fractions, to uniformity and not diversity, to certainties and not mystery (uncertainties).
14. **Hold Fast to the goal of Goodness:** Public discourse is full of cynicism. It is much easier to talk about hate than to talk about love. Don't weigh the bad news heavily than the good and keep standards absolute

3.3 Effective Climate Science Communication

Presented by **Mr Tinni Seydou**- ARC



Mr Tinni Seydou started his presentation by providing definition of key concepts such as climate, Weather, Climate change, climate Variability, Climate system and scenarios, adaptation, mitigation, vulnerability, resilience among others. Understanding these concepts is key to effective climate science communication. The rationale for developing an effective climate science communication strategy is supported by Sustainable Development Goal (SDG) 13: **“Take urgent action to tackle climate change and its impacts”**. The module covers effective communication with all stakeholders; effective methods of communicating climate information; and the implementation of research programmes to maximize impact on policy and development; and effective engagement with the media to improve public and policy discourse on climate change.

Critical questions that will guide this module include:

- What are the climate information to communicate (Objective)?
- Who is the target audience (Audience)?
- What is the message of communication?
- Is the message for multiple audiences or multiple messages for multiple audiences (Message)?
- What kinds of communication products best capture and deliver the messages (Tools and products)?
- What channels will be used to promote and disseminate the products (Channels)?
- What communications skills and hardware do one have (Resources)?
- What is your timeline? What opportunities might arise (Timing)?
- How will one know when the communication work is successful?
- What will have changed? How can one assess whether one used the right tools (Feedback)?

But how can climate information help to minimize negative impacts and maximize positive impacts on our activities? For any climate communication activity, there is a need to define:

- ❖ **Basic resources** of the activity
- ❖ **Major climate risks** on resources
- ❖ **Sub-activities that contribute** to the achievement of the activity
- ❖ **Information requirements** (operational / strategic) to:
 - minimize negative impacts
 - maximize positive impacts
- ❖ The **best channels** to transmit information:
 - operational
 - strategic

Figure 8: Effective Communication of Climate Science

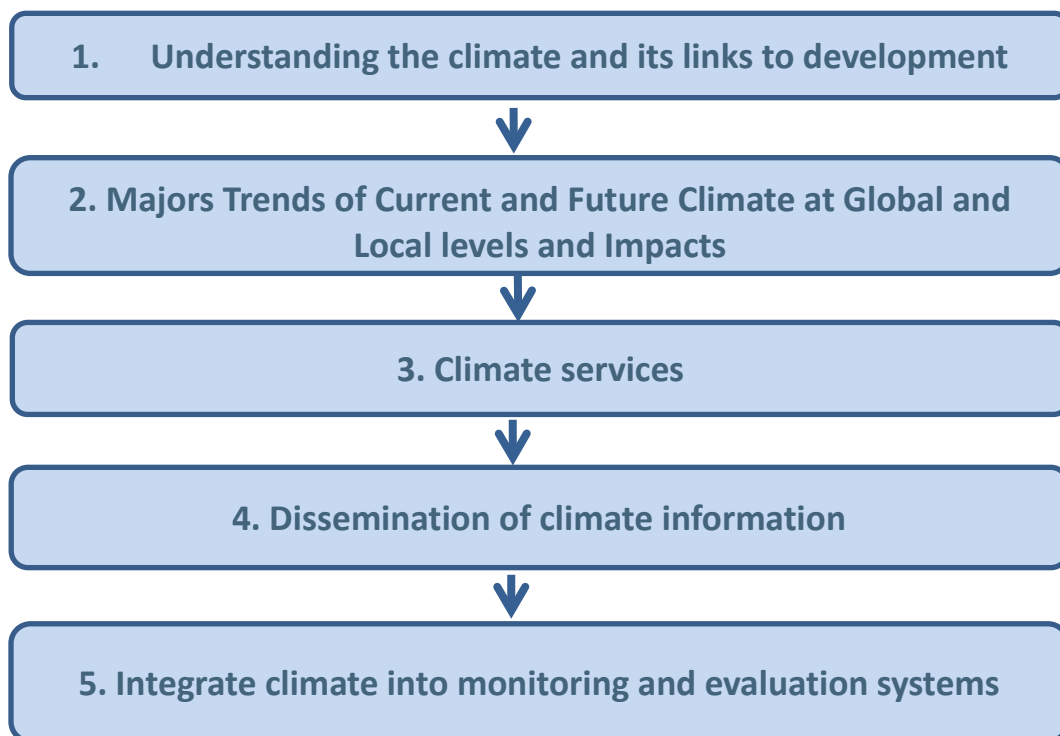


Figure 8 above shows the ideal steps in effective climate science communication however, every step has its challenges given the context in each of the African countries. These are clearly elaborated in the comprehensive training module and the detailed presentation that can be found [here](#).

Questions and Discussions

A question was asked by one of the delegates as to who the module is targeted for and the facilitator promptly responded by giving policy makers, scientists and practitioners as the main targets for the module.

Delegates also asked about the efforts made towards downscaling data and making it easier for farmers and other users to contextualize and utilize it. Mr Seydou explained that there have been efforts to reach farmers with translated information through extension officers however, he noted that those aspects are covered in another module or the climate change adaptation toolkit.

Another delegate suggested that a module on indigenous knowledge should be developed to allow utilization of these critical traditional methods to support climate change adaptation.

As part of the participatory activity, delegates were divided into two groups. The first was given images depicting various issues of climate variation, climate change adaptation, resilience and other critical terminologies. Delegates had to relate the photos with the key terms as well as clearly define and give differences of the terms.

The other group was asked to identify gaps and needs to improve climate information and services. In the group presentation, it was noted that climate information services involve many stakeholders, with various needs and various outputs. In most of the countries, National Meteorological and Hydrological Services are the key providers of climate information. CIS needs are in areas such as:

- **Data-** Access to data that enhance development of climate information services is limited. The station network is usually scarce and in some areas not representative to the local needs. There is need to improve the climate station network and promote data sharing and access
- **Information availability** Effective climate information system ensures usability of information, and for information to be usable it has to be available and accessible. Some of the information does not well reflect the needs of the users to make informed decision.
- **Quality control and user oriented information-** There is need to develop and avail user oriented climate information and product through a co-production principle and user engagement. There is need to ensure quality control of the climate information services and product through establishment of standards, and through establishment of coordination framework and platform for climate information.
- **Infrastructure-** Climate information system involves contribution of various stakeholders working together. Need for platform for interaction among all stakeholders and that which can promote communication of climate information.
- **Capacity-** Delivery of climate information system is hindered by various capacity limitations in:
 - **Human resource capacity** especially in the field of information technology, data analysis and management, and research.
 - **Technological resource capacity** is limited especially through limitation in computing data collection, and communication.
 - **Financial resources-**Effective implementation of climate service require **financial resources**, limited financing hinders the promotion and development of CIS.

4. PARTNERSHIPS, NETWORKING AND CLIMATE CHANGE ADAPTATION AND DIALOGUE

The third day of the training workshop and dialogue was dedicated to discussing aspects of partnerships, networking in climate change adaptation. The day's activities were moderated by **Dr Nicholas Ozor** and chaired by **Mr Chuma Ikenze**.

4.1 Design and Management of Climate Partnerships and Networks

Presented by Mr Degelo Sendabo-RCMRD



The skill to effectively design and manage partnerships and networks for effective climate information and decision-making in Africa is often neglected especially with regard to climate change adaptation and management. A training module that aims at building the capacity of participants to understand and apply knowledge in designing and managing partnerships for the generation, analysis and dissemination of climate information has been developed. It is meant to suit the immediate and future needs of a particular African country. It explores partnership and networking strategies between and amongst institutions and countries that enhance adaptation and mitigation planning and implementation. Overall, this will enable the stakeholders to increase opportunities for climate research-policy-practice linkages which will not only lead to the conducting of demand-driven researches on climate change issues to generate climate data and information, but also to translate them into evidence-based policies and programmes to support adaptation and mitigation.

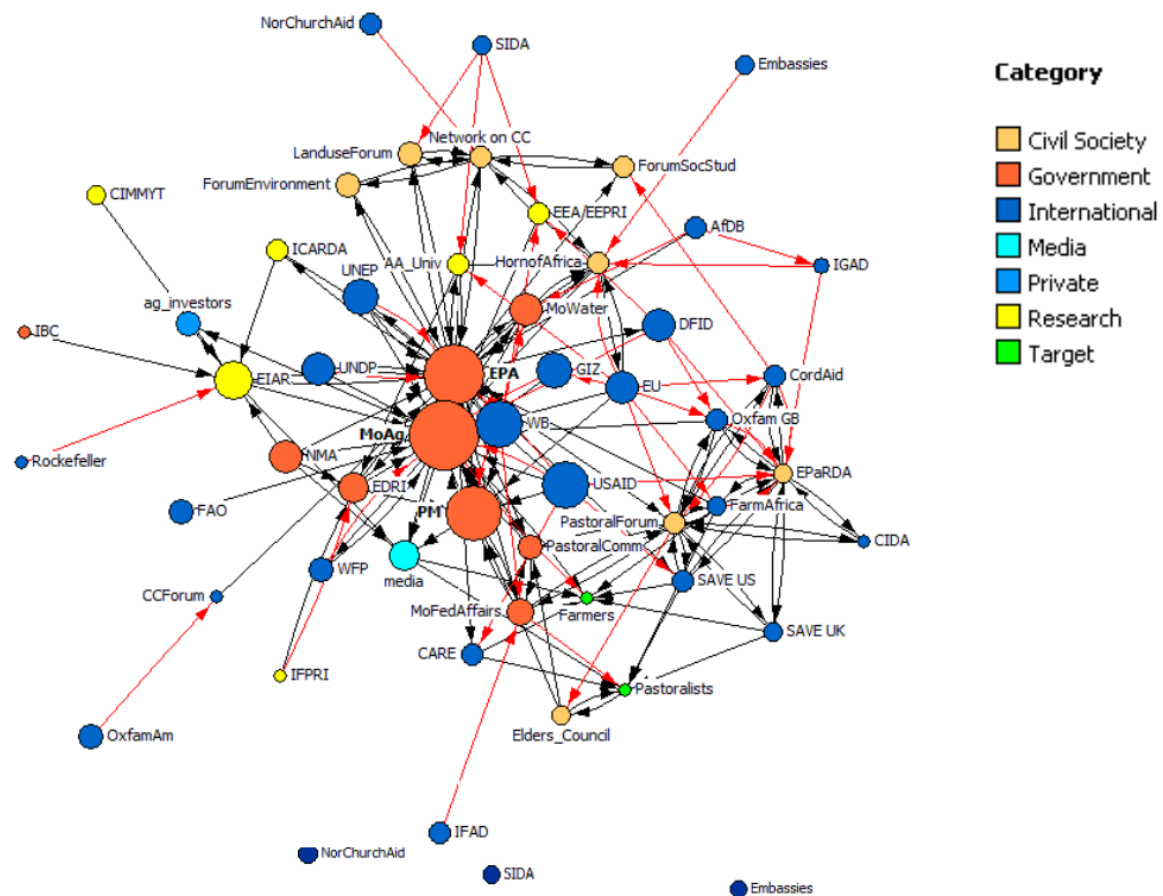
The underlying theory of change here is that the training package will lead to climate projects and programmes that:

- are better aligned with national development needs;
- provide evidence that is scientifically robust and credible; and
- are more effectively communicated to policy and private sector stakeholders.

This in turn will lead to the effective translation of research evidence into development interventions and policies. This Module is based on the following general assumptions and facts:

- Climate change has different actors in different sectors who can play different roles
- There are many classified resourceful stakeholders in the area of climate change
- Equipping all stakeholders on climate change related issues networking can be helpful for planning and decision making
- Motivating the stakeholders on the cooperation and partnerships will be helpful for mutual benefits
- There is duplication of efforts by many actors because they do not have good networking among the stakeholders.

Figure 9: A complex network of Actors of Climate Change



Group work and presentation

Group-1 Identify all actors in a country in different levels

National Level

- Government Ministries (Relevant ministries; water, environment, agriculture)
- Technical departments/Agencies (Meteorological departments, directorates of water resource management, national environmental agencies)
- Regulatory departments/oversights (climate change directorate)
- Research/technical institutions
- Non-state actors (Private sector, NGOs, civil society)

Local government

- Local government actors
- Non-state actors (NGOs, civil society, CBOs, private sectors)
- Representatives of the local communities

Regional Level

- Intergovernmental/Regional organizations (IGAD)
- Regional economic blocks

Group two was tasked to find alternative approaches to develop the Climate Change stakeholder's partnership. The group came up with the following:

- **Purpose of partnership** - to add value to individual efforts (civil society, local government, private organizations, researchers, farmer organizations, CBOs, Media, chamber of commerce).
- **What value** - Voice, advocacy, inform, exchange information between the stakeholders, resource lobbying/mobilization.
- All **stakeholders** to have **climate change on their agenda** and meet with each other in situations where networks already exist.
- **Depoliticize the climate change dialogue**, such that once regimes change the dialogue continues.
- Having **autonomous national, regional networks** of climate change stakeholders.
- Convince **businesses and business groups** that **green business** is profitable and good business. This will assist in resource mobilization. At present the engagement with business partners is minimal.

Group three worked on approaches of developing a policy that can reduce duplication of efforts and establishment of climate change forum in a national and local level. Some of the approaches of developing a policy to reduce duplication of efforts in addressing climate change are provided below. Duplication of efforts leads to wastage of resources; time, money, human resources climate issues are interdisciplinary and multidisciplinary.

- Establish a robust legal and policy framework which establish a central coordination unit: Setting up good governance structures (Bottom –Up approach); clear mandate for all stakeholders.
- Database: Mapping of institutions/actors and their specific areas of focus.
- Communication: Establish platforms for sharing information; conferences, meeting, newsletters, social media, knowledge centers, joint activities and research
- Ensure participation of all stakeholders in policy formulation and implementation

Steps of establishment of a forum

- a) Mapping of actors: their strength, weaknesses, size, location, sector of focus
- b) Decide of the effective platform for all stakeholders: Annual conferences; media platform-radio, mobile phones; community meetings; collaborative projects and activities
- c) Participatory processes in project development and implementation: appreciate different sources of information including citizen science

4.2 Climate change Adaptation toolkit

Presented by Dr Philip Osano- SEI Africa



The project has conducted one pilot case study in Nigeria. The other one will be conducted in Kenya. The aim is to develop a robust adaptation toolkit using information from the case studies to support adaptation planning and policymaking. The climate adaptation toolkit developed by the Stockholm Environment Institute (SEI-Africa) will be adapted to help the selected countries navigate the evolving architecture of climate information and opportunities for adaptation. Effective adaptation and climate-resilient development in selected countries is predicated on proper access to climate information, financial, technological and human resources (IPCCC, 2014). Adaptation needs will likely be greater in developing regions such as Africa and the failure to implement early adaptation in such countries will have disproportionate impacts on their vulnerability in the period after 2020 (UNEP, 2014). Evidence from the selected project countries suggests that responses of local communities to the impacts of extreme climatic events have mostly been reactive instead of proactive due to their unpreparedness and lack of appropriate adaptation tools. Recent assessments by the SEI-Africa and other partner institutions reveal the demand for climate adaptation tools to meet the needs of local communities in several African countries. In 2009, a study on vulnerability and adaptation assessment in Gambia in Banjul old town conducted by Environment Development Action in the Third World (ENDA-TM) highlighted the need to enhance local capacities in the understanding of climate variability and change to better respond to its adverse effects. One key component in responding to this need was the creation and access to user-friendly tools which could assist local communities to make climate adaptation decisions. From 2011 to 2012, ENDA-TM in collaboration with the SEI-Africa developed a toolkit for vulnerability and adaptation which was successfully tested and refined for use by local researchers and adaptation practitioners.

The results of the pilot study and application of the adaptation should be one of the key advocacy tools for mainstreaming the importance of building climate adaptation and resilience into national and sectoral plans. It will also provide opportunities to build onto the earlier outputs of the various adaptation programmes undertaken on the continent. The tools are not prescriptive, intrusive or exhaustive, but aim to provide practical and technical solutions, including identifying and supporting adaptation as a national priority, among others. The main outcome of this component will be an improved capacity of climate stakeholders including policymakers, climate scientists, extension agents and farmers to use climate information for adaptation planning and development decision-making.

Dr Osano in his presentation noted that there are many versions of Toolkits for promoting adaptation. SEI's toolkit developed to support adaptation planning at the community level. It consists of 7 "steps" – each of which can be applied or used independently depending on needs and context. The aim is to have an explicit link to policy – higher levels of decision making and sensitivity to scale of application.

Adaptation Toolkit Components

- **Resource Mapping-** This tool helps to identify or set boundaries to the area you will assess and maps out available biophysical resources and their spatial distribution. The output is a map showing the study area, available resources and the geographical distribution and the identification of key factors that shape the relationships between the social actors and the biophysical resources.
- **Capacity and Asset Mapping-** This tool identifies various capacities, skills and assets in the community/stakeholder group/project site that could be further strengthened. The output is a graphic overview of the available capacities, skills and assets.
- **Trend Analysis and Historical Disturbance Profile-** This tool helps identify climate related events that have affected the area in the past, either positively or negatively, as a basis for understanding current vulnerability. The output is a timeline and a table showing and describing past events/disturbances at the site, the consequences and the coping strategies.
- **Current Vulnerability Mapping-** This tool helps to establish the degree and range of impacts of different climate hazards on resources, people, livelihoods and social groups. The output is a picture showing the main climatic hazards that have affected the area/site and who/what is affected and to what degree.
- **Climate Change Perceptions-** This tool assess the community perception of climate change. It helps bring out and make explicit what local people view as being the drivers and consequences of climate variability and change. The output is a narrative of varying views on the dynamics of the climate change phenomenon so that these can be further discussed and compared with the available scientific data/information.
- **Participatory Scenario Building and Back-casting-** This tool aids community members to plan for the future and make adaptation decisions based on their past experiences, current capacity and available assets, and the vision and goals they have for the future. The output is a consensus view on possible adaptation options drawing on historical experience and current capacity but with explicit focus on how things might develop into the future.
- **Adaptation Screening/ Adaptation Decision Explorer (ADx)** - ADx is an adaptation decision tool to screen adaptation options. Users are able to select several methods to select the most appropriate and widely preferable adaptation options for their site/locality. The output is a subset of identified adaptation options that can be prioritized for implementation because they satisfy multiple criteria and preferences.

Questions and discussion

It was noted that this adaptation toolkit provides a good linkage to the foresights training module especially with regard to scenario building. An issue on how indigenous knowledge has been included in the adaptation toolkit and how some of the information can be translated and used locally across Africa was also raised. It was informed that the toolkit incorporates all the knowledge with regard to climate change adaptation particularly indigenous knowledge. Translation and customization for use is also necessary and that why resource persons will be required to facilitate this.

There was an overwhelming support and interest in the use of the LandInfo mobile app as a tool that can be used in building resilience and adapting to the adverse effects of climate change. Although there were concerns on the accessibility of smart mobile phones which was quelled as increasingly, the phones are getting cheaper and network coverage is greatly improving across Africa.

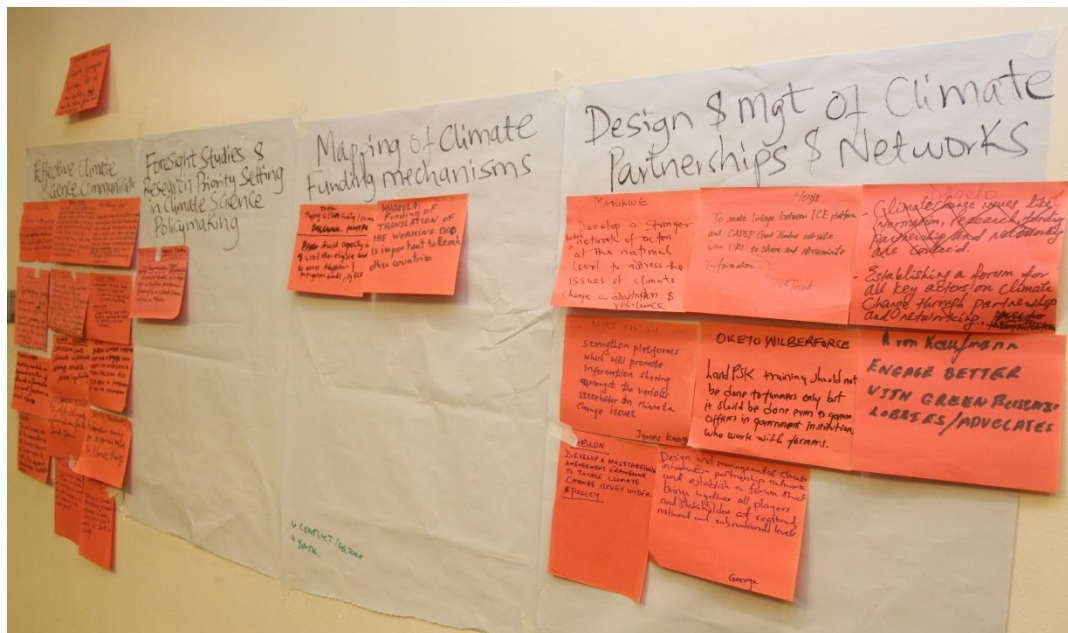
4.3 Climate change dialogue

Facilitated by **Dr Philip Osano-SEI Africa**

Dr Philip Osano handed delegates with large sticky notes to write one key/import aspect that they think is critical regarding climate change and how best African nations can build resilience and adapt against its adverse effects. The sheets were collected and categorized as provided below based on the six modules that were developed.

Analysis of Climate Information Systems

- Identify user needs of climate information and develop a CIS that addresses those needs
- Develop database to capture and store data that can be shared by all stakeholders and the public at large
- Reduce inter-departmental or organizational turf wars by making climate change issues a subset of all departmental and organizational planning goals
- Give high priority to expanding LandInfo to answer as many questions and the so what questions as possible



Climate Policy analysis and Policy Making

- Climate change should be integrated into all sectors that affect people in African Countries.
- Ensure that information for decision making is inclusive and covers the key layers of stakeholders comprising the grassroots, community, local, state and national levels. It must be simple to understand and implement.

Effective Climate Science Communication

- Develop a climate information App capable of serving as a one stop shop information base that can be updated as new information emerges

- Information dissemination about climate change should be made easier for the understanding/assimilation of majority of the population who dwell in the rural areas by translating them into local dialects in small pamphlets and other means of communication
- Integrate frequent weather forecast information push and dissemination into national food systems by use of mobile and other web-based platforms that can relay real-time info for farmer preparedness for effective value-chains and disaster management through effective funding mechanisms.
- Bridging climate information gaps should be participatory involving even the local people
- Climate information generated from scientists and researchers should be simplified and translated to ensure policy makers and end-users comprehend it for initiating adaptation and mitigation action
- Take the climate information to the lowest level i.e. user who is most affected by climate change shocks. Explore use of cheap mobile phones to disseminate the information and possibly in the local languages.
- Develop a module on communication of climate information to rural farmers in Africa
- Find a way where all the information collected on climate change can be tailor made to suit different stakeholders for effective action
- Have a platform for sharing experiences related to climate change

Foresight Studies and Research Priority Setting in Climate Science Policymaking

- Develop foresight studies as a major tool in long term development planning in climate science regime in Africa.

Design and Management of Climate Partnerships and Networks

- Develop a stronger linked network of actors at the national level to address the issues of climate change adaptation and resilience.
- To make linkage between ICE platform and Capacity Development Project CADEP (JICA project) good practice website with URL to share and disseminate information
- Establish a forum for all key actors on climate change through partnership and networking.
- Strengthen platforms which will promote information sharing amongst the various stakeholders on climate change issues.
- Engage better with green business lobbies/advocates
- Develop a multi-stakeholder engagement framework to tackle climate change issues under a policy.
- Design and management of climate information partnership network and establish a forum that brings together all players and stakeholders at regional, national and subnational levels.

Mapping of Climate Funding Mechanisms

- Build capacity in LDCs and other eligible countries to access adaptation and mitigation funds for instance, the GCF among others.
- Translation of the working documents is important to reach other countries

Most of the issues raised hinged upon communication and dissemination of climate information and the design and management of climate partnerships and networks. Climate Information Systems were also pointed as critical in ensuring access of quality climate information and services to ease decision making.

4.4 Key Messages and Resolutions

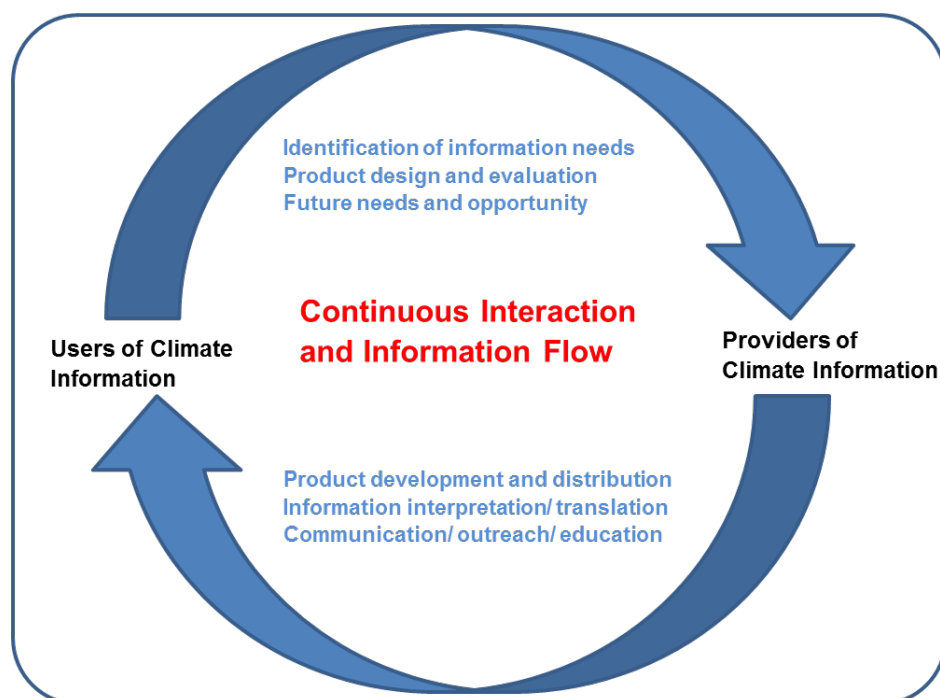
Presented by Dr Ernest Acheampong-ATPS



Dr Ernest Acheampong presented a summary of key messages that came out of the dialogue during the three-day workshop. It was clear that the production and access to climate information is on the rise in Africa countries. Nevertheless, consumers face various challenges in the application of climate information due to issues related to the low quality of the information products, lack of segregated information at appropriate scales and difficulties in communicating and interpreting information for planning and decision making. There is a clear gap between the capacity of climate scientists to produce policy-relevant information and decision-makers' need for such information in African

countries. Political and socio-economic factors are instrumental in the access to and uptake of climate information. Barriers to the uptake of climate information include: institutional mandates, hierarchical structures and a lack of adequate incentives. A clear understanding of local political contexts is needed to make the communication and use of climate information more effective. Figure 8 illustrates the general flow of climate information.

Figure 10: An illustration of Climate Information Flow



The key messages and resolutions were categorized into three categories: communication, investment and capacity & foresight.

Communication

- Climate information communication is usually the responsibility of formal scientific bodies such as meteorological agencies. However, climate information that reaches end users is usually excessively technical, ill-matched to their demands and easily leads to misunderstanding of the uncertainties associated with it.
- The generation and communication of climate information needs to be linked to development processes through integration into sectoral plans and decisions on basic service delivery.
- Climate information should be service-orientated and integrated into decision making from national through to the community level.
- The success of bridging climate information gap will depend on the ability to institutionalize two-way communication between producers and end- users, so those who need it can continue to use information over time.
- Processes to engage scientists, policy-makers and practitioners around the uptake of climate information into long-term decision-making should be flexible and respond to stakeholders' changing needs.
- Establishing partnership and networks creates a common platform for the generation of well harmonized and consolidated climate information for decision making.

Investments

- Through the effective use of climate information, decision-makers can make investment and planning decisions that are proactive, durable and robust. Effective use of climate information also minimizes the risk that decisions will adversely affect – or increase the vulnerability of – other systems, sectors or social groups.
- Long-term climate information is not necessary for every development initiative, but it will be crucial to the sustainability and effectiveness of many targeted investments and planning decisions (particularly long-term investments with long-lived implications).
- Organizations responsible for communicating climate science should be aware of the social value of the information they provide, and the legitimacy of the goals pursued by policy-makers. They must adhere to principles of honesty, precision, transparency and relevance when communicating climate information.
- Notwithstanding the need for awareness-raising, consideration should be given as to whether efforts to promote medium- to long-term climate information in places where there is little to no demand from decision-makers are appropriate and ethically defensible.

Capacity and Foresight

- Funds for Adaptation and mitigation are available, and offer several opportunity for African countries
- African countries must build their capacities (institutional, human resource capacity, and technical capacity) to access the various components of the Adaptation fund and Green Climate Fund.

- Foresight studies allow countries to effectively plan, organize and implement multiple climate-proof projects in a coordinated way.
- Integration of foresight studies (scenario planning) into the various development planning is critical to future adaptation and resilience
- Foresight studies represents a paradigm shift from the traditional (linear) planning method due to the growing complexity and uncertainties.

5. CLOSING SESSION

The chair of the session Mr Chuma Ikenze announced a slight change in the programme to allow for way forward from Dr Nicholas Ozor and closing remarks before delegates were presented with certificates of participation. Dr Ozor started by thanking all the delegates for finding time to participate in the 3 day Regional dialogue and training workshop. He recognized delegates who traveled far and wide to attend this event despite having their own personal commitments and busy schedules. He thanked Hon. Samuel Onuigbo (Chairman of the Climate Change Committee at the Federal House of representatives, Nigeria) for making time and committing three days for this workshop. He also recognized the sacrifice made by Prof Malachy Okwueze (Vice Chancellor of Coal City University, Nigeria). He thanked the project partners for their good work throughout the implementation of this project and the African Development Bank for providing funds to implement this important project. Finally he thanked Dr Alice Kaudia for officially opening the Regional Climate change Dialogue and Training Workshop and lastly, he wished all the delegates a safe journey to their different destinations.

Mr Chuma Ikenze, Chairman of ATPS Board of Directors was invited to award delegates with certificates of participation. He was assisted by Mr Ralph Kaufmann and Dr Nicholas Ozor. Mr Chuma Ikenze in his capacity as the chair of the session and also representing the host ATPS, also thanked the delegates for putting in their valuable time in this event. The event was declared officially closed.

6. REGIONAL CLIMATE CHANGE DIALOGUE AND TRAINING WORKSHOP EVALUATION

According to the figures shown below, the title and description of the workshop clearly conveyed its content and objectives and outcomes of the regional workshop were very clear. All delegates agreed that the workshop was engaging and empowering however in terms of time allocation delegates had mixed reactions. Majority of the delegates present were satisfied with the content they received during the three day workshop and the program was well paced within the allocated time.

Figure 11: Evaluation of the content of the dialogue and training workshop

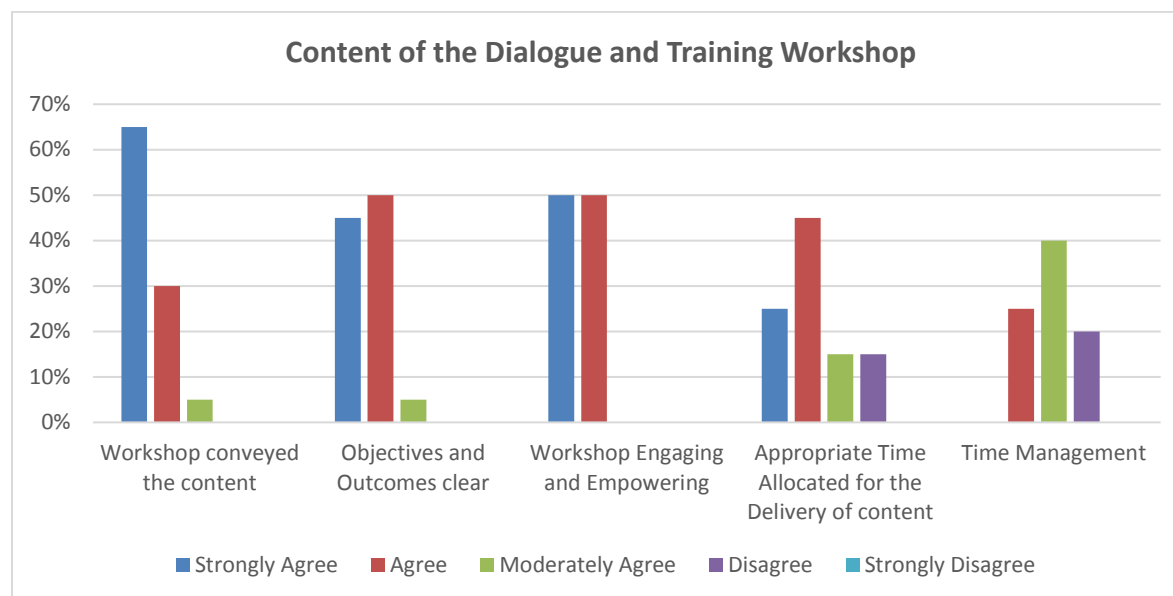
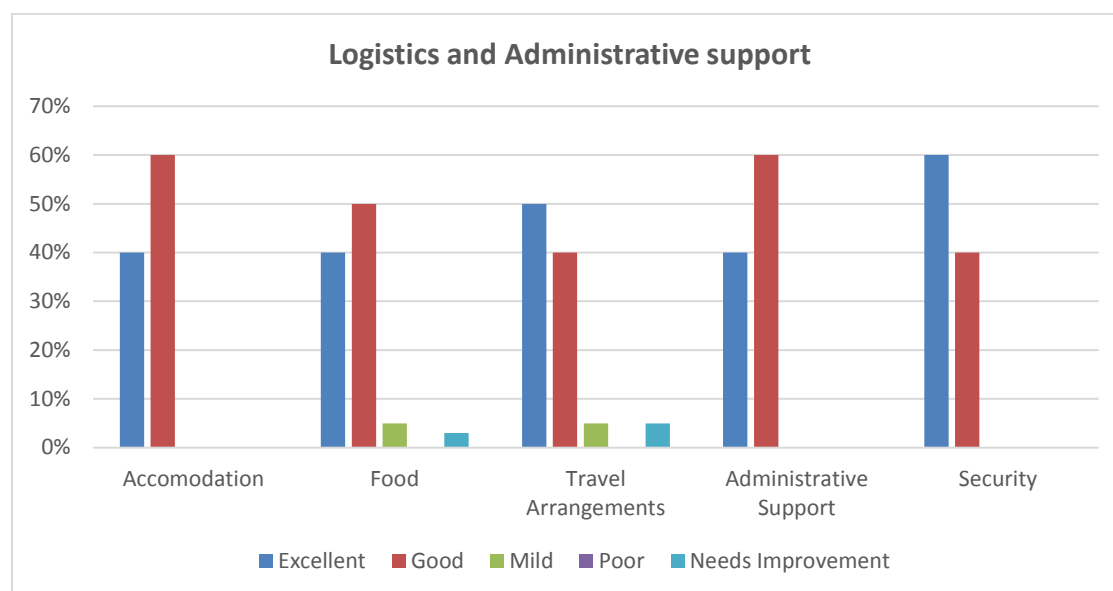


Figure 12: Organization and Facilitation of the Workshop



According to figures 11 and 12, 80% of the delegates agreed that the quality of the organization, facilitation of the training and dialogue content was excellent, the presentations made during the workshop and the discussions delegates had during the break-out sessions were excellent as well as the key messages and recommendations made by the delegates. Lastly, on the time factor 60% of delegates agreed that the time allocated for the presentations was adequate while 15% of the delegates were of the opinion on the need to increase time for the presentations.

Figure 13: Logistics and Administrative support



With regard to logistics and administrative support, all delegates were satisfied with accommodation provided during the three day workshop period. The food was good and only a few were of the opinion that there needs to be improvement which can be attributed to different dietary preferences. Delegates agreed that administrative support and support given were excellent and they also expressed satisfaction on the travel arrangements with a few noting on the need to improve.

Additionally, delegates noted they were happy to learn more about foresight studies as a long-term planning tool in climate science, the presentations of different modules and the break-out sessions were very informative, the ICE platform and they also recommendation the presentations to be shared with the delegates after the workshop.

The least exciting part of the workshop about the workshop according to some of the delegates was that one delegate felt that the presentations were tailored too much on policy and the time allocated for presentations and group discussions was little.

Participants urged the organizers of the workshop to circulate the presentations made so as to keep the conversation ongoing, resource allocation to climate change issues should be given a priority and lastly a delegate was of the opinion that the capacity building course modules/toolkits should be integrated into long term learning programs in tertiary institutions.

ANNEXES

Annex I: Programme



OBSERVATOIRE
DU SAHARA
ET DU SAHEL



Day 1: Monday 25th June 2018

Chairman: Prof Malachy Okwueze		Moderator: Dr Victor Ongoma Rapporteur: Ms Ruth Oriama
Time	Activity	Facilitator
8:30 am - 9:00 am	Registration	Ms Sharon Anyango
9:00 am - 9:30 am	<u>Opening Ceremony</u> Opening Remarks- ATPS Executive Director Opening Remarks- Clim-Dev Special Fund Coordinator-AfDB Opening Remarks- Chief Guests <ul style="list-style-type: none"> Hon. Sam Onuigbo- Chairman of the Committee on Climate Change, Federal House of Representatives, Nigeria Dr Alice Kaudia- Environment Secretary, Kenya 	Dr Nicholas Ozor, Executive Director - <i>African Technology Policy Studies Network (ATPS)</i>
9:30 am - 10:30 am	Introduction and Expectations	Dr Ernest Acheampong
10:30 am - 10:45 am	Tea/Coffee Break-Group Photo	
10:45 am - 11:15 am	Project progress presentation	Mr Alfred Nyambane- <i>ATPS</i> Mr Mathew Imulia - <i>ATPS</i>
11:15 am – 11:30 am	ICE Platform	
11:30 am – 11:45 am	Discussions	
11:45 am - 12:30 pm	Analysis of Climate Information Systems	Mr George Kabaka and Mr Abebe Tadege- <i>IGAD Climate Prediction and Applications Center (ICPAC)</i>
12:30 am - 1:00 pm	Discussions	
1:00 pm - 2:00 pm	Lunch Break	
2:00 pm - 2:30 pm	Climate Policy Analysis and Policymaking	Mr Alfred Nyambane and Dr Ernest Acheampong- <i>ATPS</i>
2:30 pm - 3:00 pm	Group work	
3:00 pm – 3:45 pm	Plenary and Discussions	
3:45 pm – 4:00 pm	Tea/Coffee Break	
4:00 pm	End of Day 1	
6:00 pm – 9:00 pm	Networking Cocktail-Roof top	ALL

Day 2: Tuesday 26th June 2018

Chairman: Ralph Von Kaufmann		Moderator: Prof Michael Madukwe Rapporteur: Mr Alfred Nyambane
Time	Activity	Facilitator
8:30 am - 9:00 am	Recap	Dr Ernest Acheampong
9:00 am - 9:30 am	Mapping of Climate Funding and Mechanisms	Mrs Khaoula Jaoui- <i>Observatoire du Sahara et du Sahel (OSS)</i>
9:30 am - 10:30 am	Group work and discussions	
10:30 am - 10:45 am	Tea/Coffee Break	
10:45 am - 11:15 am	Foresight Studies and Research Priority Setting in Climate Science and Policymaking	Dr Chidi Magnus Onuoha- <i>ATPS/ President, Sustainable Energy Practitioners Association of Nigeria (SEPAN)</i>
11:15 am - 12:30 pm	Group work	
12:30 am - 1:00 pm	Plenary presentations and discussions	
1:00 pm - 2:00 pm	Lunch Break	
2:00 pm - 2:30 pm	Effective Climate Science Communication	Tinni Seydou and Issaka Lona - <i>AGRHYMET Regional Centre (ARC)</i>
2:30 pm - 3:00 pm	Group work	
3:00 pm – 3:45 pm	Plenary presentations and discussions	
3:45 pm – 4:00 pm	Tea/Coffee Break	
4:00 pm	End of Day 2/Networking	

Day 3: Wednesday 27th June 2018

Chairman: Chuma Ikenze		Moderator: Dr Nicholas Ozor Rapporteur: Ms Ruth Oriama
Time	Activity	Facilitator
8:30 am - 9:00 am	Recap	Mrs Khaoula Jaoui- OSS
9:00 am - 9:30 am	Design and Management of Climate Partnerships and Networks	Mr Degelo Sendabo and Mr Agedi - <i>Regional Centre for Mapping Resource for Development (RCMRD)</i>
9:30 am - 10:30 am	Group work and discussions	
10:30 am - 10:45 am	Tea/Coffee Break	
10:45 am - 11:30 am	Climate change Adaptation toolkit-Presentation	Dr Philip Osano and Dr Robert Ochien'g- <i>Stockholm Environment Institute (SEI)</i>
11:30 am - 12:00 pm	Discussions	
12:00 pm – 1:00 pm	Climate change dialogue/ Key issues	Dr Philip Osano

1:00 pm - 2:00 pm	Lunch Break	
2:00 pm - 3:00 pm	Climate change dialogue/ Key issues	Dr Philip Osano
3:00 pm – 3:30 pm	Key Messages and Way forward	Dr Ernest Acheampong
4:15 pm – 4:30 pm	Closing remarks/Vote of thanks	Dr Nicholas Ozor
3:30 pm – 4:00 pm	Award of certificates	ALL
4:00 pm – 4:15 pm	Tea/Coffee Break	
	End of the Workshop//Networking	



Annex II: Participants List



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PARTICIPANTS LIST

REGIONAL CLIMATE CHANGE DIALOGUE AND TRAINING WORKSHOP, NAIROBI, KENYA, 25-27, JUNE 2018

	NAME	ORGANIZATION	EMAIL ADDRESS	PHONE NUMBER	SIGNATURE		
					DAY 1	DAY 2	DAY 3
1.	Abdi Gedi	Researcher-RCMRD	agedi@rcmr.org	0712522966			
2.	Abebe Tadege Tsehayu	Researcher-ICPAC	atadege@icpac.net	0716223871			
3.	Agnes Mwang'ombe	University of Nairobi -SEMIs	mwangombe@uonbi.ac.ke	0722 788995			
4.	Alex Mutungi	Biovision Africa Trust	amutungi@biovisionafrica.org	+25472121298			
5.	Alfred Nyambane	Researcher-ATPS	nyambane@atpsnet.org	+254713701775			
6.	Alice Kaudia	Polycymaker- Kenya	environmentsecretary@environment.go.ke	0722762927			
7.	Anthony Muyepa	Polycymaker-Malawi	muyepaa@gmail.com	+265 888 538596			
8.	Chidi Magnus Onuoha	Researcher-Nigeria	chidimagnus1@gmail.com	+234803316245			
9.	Chokri Mezghanni	Policy Maker-Tunisia	chokri.mezghani@mineat.gov.tn	+216 22749362			
10.	Christopher Kang	Policy maker-Cameroon	ckange@yahoo.co.uk	00237 678667494			
11.	Chuma Ikenze	Private Sector-ATPS	chumaike@gmail.com				
12.	Cornelius Okello	University of Nairobi-Kenya	cbokello@gmail.com	0733703940			
13.	David Mugambi	Researcher-Chuka University	mugambi.david@gmail.com	0729-911803			
14.	Degelo Sendabo	Researcher-RCMRD	degelo@rcmr.org	070570127			
15.	Dominic Wanjihi	Biogas International Ltd	biogasinternational@gmail.com	0724319992			
16.	Ernest Acheampong	Researcher-ATPS-Ghana	eachampong@atpsnet.org	0705343711			
17.	Fiona Percy	Practitioner-Care International	fiona@careclimatechange.org				



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REGIONAL CLIMATE CHANGE DIALOGUE AND TRAINING WORKSHOP, NAIROBI, KENYA, 25-27, JUNE 2018

	NAME	ORGANIZATION	EMAIL ADDRESS	PHONE NUMBER	SIGNATURE		
					DAY 1	DAY 2	DAY 3
18.	George Kabaka	Researcher-ICPAC	okabaka@icpac.net	075166593			
19.	Hon Samuel Onuigbo	Policy Maker- Nigeria	agunambe@yahoo.com	0739801188			
20.	Isaiah Okeyo	Polycymaker-Ministry of Agriculture and Irrigation	iokeyo1@yahoo.com				
21.	Issaka Lona	Researcher-ARC-Niger	issaka.lona@gmail.com	+227 97971627			
22.	James Kaoga	University of Nairobi-Kenya	jkotieno@uonbi.ac.ke	0724369439			
23.	Jaro Arero	UNESCO	jarero@unesco.go.ke				
24.	Jemimah Onsare	National Research Fund-Kenya	jemimahg76@gmail.com				
25.	Justus Kabyemera	African Development Bank	J.KABYEMERA@AFDB.ORG				
26.	Justus Wanzala	Journalist	wanzalaj@yahoo.com	0721584135			
27.	Khoulou JAOU	Researcher-OSS-Tunisia	khaoula.jaoui@oss.org.tn	+216 55 62 0 118 +216 72 20 6 633			
28.	Kingdom Kwapata	Researcher-Malawi	kwapata@yahoo.com	+265 999 195477 +237 677 188798 +237 699 593440			
29.	Kum Christian	Researcher-Cameroon	teghechrist@yahoo.com	+234 803 706 68			
30.	Malachy Okwueze	Policy Maker- Nigeria	malachy.okwueze@unn.edu.ng				
31.	Mathew Imulia	IT Consultant-ATPS	mimulia@atpsnet.org	0111 411 062			
32.	Michael Madukwe	University of Nigeria, Nsukka-Researcher	madukwemichael@yahoo.com				
33.	Mohamed Takoy	ADESO Africa	mtakoy@adesoafrika.org				
34.	Nicholas Ozor	Executive Director-African Technology Policy Studies (ATPS)	nozor@atpsnet.org	0713161928			



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	NAME	ORGANIZATION	EMAIL ADDRESS	PHONE NUMBER	SIGNATURE		
					DAY 1	DAY 2	DAY 3
35.	Onesmus Maina	African Development Bank	O.MAINA@AFDB.ORG				
36.	Patricia Nying'uro	Kenya Meteorological Department	pnyinguro@gmail.com	0722880945			
37.	Philip Osano	Researcher-SEI	philip.osano@sei.org	0726709088			
38.	Rachel Kotso	RMRDC/ Policymaker-Nigeria	raekotso@gmail.com				
39.	Ralph Kaufmann	Private Sector-ATPS	ralphvonkaufmann@gmail.com	+44 7519616642			
40.	Robert Byrne	Policy Researcher-Sussex	R.P.Byrne@sussex.ac.uk	+44 7733433262			
41.	Robert Ochieng	Researcher-SEI	robert.ochieng@sei.org				
42.	Ruth Oriama	Researcher-ATPS	roriama@atpsnet.org	+254720889412			
43.	Samou Kone	Researcher-OSS-Tunisia	samou.kone@oss.org.tn	+21654030655			
44.	Samwel Marigi	Kenya Meteorological Department	drsmarigi@gmail.com	0727742311			
45.	Sharon Anyango	Communication and Outreach-ATPS	sanyango@atpsnet.org	0722720674			
46.	Sylvia Mburugu	Kenya Forum for Agricultural Advisory Services (KeFAAS)	info@kefaas.org				
47.	Tiberious Etyang	eNSPIRE Africa	etyang@enspireafrica.net	072355061			
48.	Tinni Seydou	Researcher-ARC-Niger	seydou.tinni@cifs.int	722796293808			
49.	Victor Ongoma	Climate Change Expert-Kenya	victor.ongoma@seku.ac.ke	0726867881			
50.	Wilberforce Okeyo	Kenya Forest Service	wkeyowilberforce@gmail.com	0715729697			
51.	Yuki Honjo	JICA	honjoyuki21@gmail.com	0701740054			



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	NAME	ORGANIZATION	EMAIL ADDRESS	PHONE NUMBER	SIGNATURE		
					DAY 1	DAY 2	DAY 3
52.	Zablon Shilenje	Policy Maker-County Director of Environment -Kenya	zablonweku@yahoo.com	0722362233			
53.	Elvina Kwamboka	SEI	elvina.kwamboka@sei.org	0724804643			
54.	Samuel Ngunjiri	National Assembly, Nigeria	agunamboka@yahoo.com	0723470390/188			
55.	Nonne R. Birema	Biogas International Ltd	biogasinternational@yahoo.com	0723481097 0722702330/			
56.	Madona Amali	XPRS	adriengmadona@gmail.com	0720159630			
57.							

Annex III: Photos



Delegates of the Regional Climate Change Dialogue and Training workshop



Delegates participating in group discussions during the regional workshop

Annex IV: Evaluation Form

REGIONAL CLIMATE CHANGE DIALOGUE AND TRAINING WORKSHOP EVALUATION FORM 25- 27 JUNE 2018. NAIROBI, KENYA

Thank you for participating in this event. We would appreciate if you could take a few minutes to share your opinions about the training workshop with us. Your input will help us identify ways that we can enhance the preparation and learning experience and make improvements in our future events.

Please return this form to the facilitators at the end of the workshop.

Content of the Training Workshop

1. Please rate the following questions based on the content of this training and dialogue. *(Tick appropriately)*

		Strongly disagree 1	Disagree 2	Moderately agree 3	Agree 4	Strongly agree 5
a)	The title and description of the workshop clearly convey its content					
b)	The objectives and outcomes were clear					
c)	The training and dialogue was engaging and empowering					
d)	The visual aids and handouts are useful					
e)	Given the time allowed, the amount of material covered was appropriate					
f)	The program was well paced within the allotted time					

Organization and Facilitation of the Dialogue and Workshop

2. Kindly provide feedback that will help facilitators/organizers evaluate their efforts. *(Tick appropriately)*

		Excellent 1	Good 2	Mild 3	Poor 4	Needs improvement 5
a)	The quality of the training and dialogue content					
b)	The quality of presentations made during the workshop					
c)	The quality of open discussion/break-out sessions					
d)	Quality of the moderation and facilitation of the sessions					
e)	Key messages and recommendations presented					
f)	Time allocated for the presentations					

Logistics

3. Please provide feedback about the logistics arrangements. *(Tick appropriately)*

		Excellent 1	Good 2	Fair 3	Poor 4	Needs Improvement 5
a)	Accommodation					
b)	Food					
c)	Travel Arrangements					
d)	Administrative support					
e)	Security					

4. What aspects of this training and dialogue excited you most?

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5. What aspects of this training and dialogue were you least excited with?

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6. Are there any other comments or suggestions you would like to make?

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Thank you for taking time to complete this form