

Bridging Climate Information Gaps to Strengthen Capacities for Climate Informed Decision-making: Kenyan Case study



Workshop towards Migori County Climate Change Adaptation Plan

16-18 August 2018 Florence Hotel, Migori

Report prepared by the Stockholm Environment Institute







MIGORI COUNTY GOVERNMENT

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EXECUTIVE SUMMARY

The Workshop "*Towards Migori County Climate Change Adaptation Plan*" was held from 16-17 August 2018 at the Florence Hotel in Migori town. The workshop was organized by the Stockholm Environment Institute (SEI) in collaboration with World Vision Kenya WVK), the Ministry of Environment and Forestry (ME&F) of the Government of Kenya, and the Migori County Government (Department of Environment, Natural Resources & Disaster Management) to initiate the process for developing the Migori County Climate Change Adaptation Plan (CAP).

The workshop was part of the Kenyan case study for the project "*Bridging Climate Information Gaps to Strengthen Capacities for Climate Informed Decision-making*" that is led by the African Technology Policy Studies Network (ATPS) and funded by the African Development Bank (AfDB) through the Clim-Dev Programme. The overall goal of the project is to strengthen the capacities of relevant stakeholders in the five project countries - Cameroon, Kenya, Malawi, Nigeria, and Tunisia - to understand and deploy appropriate climate information and best practices to inform decision-making.

The workshop brought together a total of 45 participants, including representatives from the Ministry of Environment and Forestry (ME&F), Migori County government officials, the Kenya Agricultural and Livestock Research Institute (KALRO), parastatals, Non-governmental organizations (NGOs), farmer groups, the private sector, and researchers from local universities. The objectives of the 2-day workshop were to;

- Discuss the climate change challenges and opportunities for the Environment and Natural Resources related sectors, including Water, Land, and Agriculture in Migori County and identify practical and actionable interventions to inform the development of Migori County Adaptation Plan;
- Contribute to County Adaptation planning by the Department of Environment, Natural Resources & Disaster Management and identify opportunities for strengthening policy coherence and institutional coordination at County and national level;
- 3. Provide recommendations for the County Adaptation Plan and relate the CAP process to the CIDP (County Integrated Development Plan), the Second National Climate Change Action Plan (NCCAP 2018-2022), and the Kenya National Adaptation Plan (NAP 2015-2030).

Following the workshop, the steering committee was formed to continue with the CAP preparation process, including undertaking a rapid assessment of the climate change in Migori, analysis of the sector plans, consultation with stakeholders, mobilizing additional resources, preparation of a draft CAP aligned to the County Integrated Development Plan (CIDP), and establishing the necessary legislations at the County level.

Besides the workshop, the CDSF project team and the partners also conducted focus group discussions and training of farmers, extension agents and community development workers on the use of the Land*info* app on 18th August 2018 in Mikei village, Migori County, one of the sites for the Regreening Africa project implemented by World Vision Kenya. The training on the Land*info* app was led by the African Technology Policy Studies Network (ATPS. Together, the workshop and the field training will involve a participatory approach to generate information to inform the CAP and also provide inputs to the Robust Adaptation Toolkit that SEI is piloting as part of the CDSF project

1. INTRODUCTION

1.1 Background to the project

The "*Bridging Climate Information Gaps to Strengthen Capacities for Climate Informed Decision-making*" is a two-year project funded by the African Development Bank with the overall goal to strengthen the capacities of relevant stakeholders in the five project countries - Cameroon, Kenya, Malawi, Nigeria, and Tunisia - to understand and deploy appropriate climate information and best practices to inform decision-making. Specifically, the project aims to:

- 1. Identify and analyze climate information needs, provide support for climate information production, synthesis, and use.
- 2. Build the capacities and knowledge of stakeholders (government agencies, research institutions, extension agents and contact famers) to collect and utilize high quality, demanddriven climate information for adaptation planning and decision-making.
- 3. Facilitate the mainstreaming of climate change issues in regional policy dialogue aimed at raising awareness on climate change issues to strengthen understanding, use and mastery of climate information.

The project is implemented by a consortium of institutions led by the African Technology Policy Studies Network (ATPS), together with the Stockholm Environment Institute (SEI) Africa Center, the IGAD Climate Prediction and Applications Centre (ICPAC), the Observatoire du Sahara et du Sahel (OSS), the AGRHYMET Regional Centre (ARC), and the Regional Centre for Mapping Resource for Development (RCMRD). The project consists of two components, the first involves climate information synthesis, and the second involves capacity enhancement and climate information dissemination. This second component includes two pilot case studies in Kenya and Nigeria and is led by the Stockholm Environment Institute (SEI). The overall purpose of the component is to develop a robust adaptation toolkit to support adaptation planning and policymaking.

1.2 Kenyan Case Study

Migori County was identified as the focus for the Kenyan case study following consultations with the Government of Kenya, through the Ministry of Environment and Forestry (ME&F) which noted that the County had initiated the process to develop a County Climate Change Adaptation Plan (CAP). As part of the case study implementation and to leverage on ongoing climate change related interventions in the County, SEI established a collaboration with the Ministry of Environment and Forestry (ME&F), World Vision Kenya, and the Migori County Government (Department of Environment, Natural Resources & Disaster Management) to host the workshop from 16th to 17th September 2018. This was followed by focus group discussions (FGDs) and training of farmers, extension agents and community development workers on the use of the Land *info* app on 18th August 2018 in Mikei village, which is one of the sites for the Regreening Africa project implemented by World Vision Kenya. Together, the workshop and the field training involved a participatory approach to generate information to inform the CAP and also provide inputs to the Robust Adaptation Toolkit that SEI is piloting as part of the CDSF project.

2. WELCOME SESSION BY THE MIGORI COUNTY GOVERNMENT AND COUNTY ASSEMBLY

The workshop opening session included the introduction of all participants, followed by welcome and opening speeches by the representatives of the Migori County Government, and the Migori County Assembly.

2.1 Welcome address by Mr. Elijah Odhiambo, Ag. CECM for Environment, Natural Resources and Disaster Management, Migori County Government

Mr. Elijah Odhiambo, the County Executive Committee Member (CECM) for Lands, Housing and Physical Planning, and Ag. CECM for Environment, Natural Resources and Disaster Management, Migori County welcomed all the participants to the workshop and appreciated the willingness of the partners to support the county develop the climate change action plan. He conveyed the appreciation of the County's leadership, including the Governor and the government in general which recognizes climate change as a priority issue.

In his remarks Mr. Odhiambo noted that the theme of the workshop "*Bridging climate information gaps to strengthen capacities for climate informed decision making*" was relevant to the County because climate information is needed for development planning, and would also be a key component of the County climate change adaptation plan. He challenged the workshop participants on the need to be good stewards of the environment. He underscored the importance of the process and the need for inclusive participation of all actors and stakeholders.

Mr. Odhiambo emphasized the need for wider consultation with stakeholders and engagement of actors in the County. He in particular acknowledged the participation and support from the Chair, Vice Chair and members of the Environment Committee of the Migori County Assembly, and also the Environment Secretary in the Ministry of Environment and Forestry representing the national government.

Mr. Odhiambo reiterated the following issues for discussion at the workshop;

- The need to assess the climate related challenges in Migori County and learn from best practices in other counties;
- The need to link the County process to the National programmes on climate change;
- Identification of climate information gaps to inform the preparation of the CAP and a clear road map articulating the role of all the stakeholders;
- The need to match the proposed climate change actions with corresponding resource allocation. He noted that there is need for the County to set aside a percentage of the County budget appropriation to be invested in addressing climate change and called for the County Assembly members to support this proposal;
- Studies on the economics, including cost benefit analysis to determine the cost of climate change in the county

Mr. Odhiambo concluded by wishing all the participants a successful workshop and thanked the SEI, ATPS, World Vision Kenya and the ME&F for supporting the process.

2.2 Opening Address by Hon. George Duro, Chair of the Environment Committee, Migori County Assembly

The Opening Address by **Hon. George Duro** the Chair, Environment Committee, Migori County Assembly was read on his behalf by **Hon. Bageli Mildad Joseph**, the Vice Chair of the Environment Committee. In His address, the Chair thanked the organiser of the workshop for involving the parliamentarians in such as process and highlighted their role as people representatives, which means they can benefit a lot from having the latest information on challenges such as climate change. He noted that Migori County is very big with 40 wards which are represented in the Assembly. He committed that the Committee will champion climate change issues in the Assembly and lobby for the allocation of budgetary resources to complement any support received from development partners and NGOs that are supporting the County; this will not be such a big challenge since about 70% of the Budget Committee members are also

members of the Environment Committee. He concluded by noting that the environment committee will support the recommendations from the workshop in the assembly and reported that the Clerk of the Committee who was in attendance will make a follow up to ensure that the recommendations are followed up.



Hon. George Duro the Chair, Environment Committee, Migori County Assembly addressing the workshop participants.

3. SESSION ONE: INTRODUCTION AND SCENE SETTING

3.1 Workshop objectives and expected outcomes - Stockholm Environment Institute

During the introduction and scene setting presentation, the workshop facilitator **Dr. Philip Osano, the Deputy Director for Capacity Development and Partnership at the SEI Africa** Center presented the workshop objectives and expected outcomes. He noted that the workshop has been financially supported by the SEI through funds from the African Development Bank (AfDB) funded project "*Bridging Climate Information Gaps to Strengthen Capacities for Climate Informed Decision-making*" through which SEI is leading two case studies in Enugu State, Nigeria, and Migori County, Kenya. As part of the Kenyan case study, SEI has established a collaboration with the Ministry of Environment and Forestry (ME&F), World Vision Kenya (WVK), , and the Migori County Government (Department of Environment, Natural Resources & Disaster Management) to initiate the process for developing the Migori County Climate Change Adaptation Plan (CAP). He noted that the purpose of the workshop was to bring together the county government and legislature, the national government and key stakeholders (universities, NGOs, private sector and women and youth groups) to contribute towards the CAP process. In particular, the objectives of the workshop are to;

- 1) To discuss the climate change challenges and opportunities for the Environment and Natural Resources related sectors, including Water, Land, and Agriculture in and identify practical and actionable interventions to inform the development of Migori County Adaptation Plan (CAP);
- To contribute to County Adaptation planning by the Department of Environment, Natural Resources & Disaster Management and identify opportunities for strengthening policy coherence and institutional coordination at County and national level;
- 3) To provide recommendations for the Migori CAP and relate the CAP process to the CIDP (County Integrated Development Plan), the Second National Climate Change Action Plan (NCCAP 2018-2022), and the Kenya National Adaptation Plan (NAP 2015-2030).
- Dr. Osano observed that three key expected outcomes from the workshop are;
 - 1. Mapping of selected projects and programmes on climate change adaptation in Migori County and learning from experiences from other Counties;
 - Identification of candidate priority interventions for the Environment, Natural Resources and Disaster Management, and related sectors, including Water, Land, and Agriculture for inclusion in the draft CAP;
 - Documentation of climate information experience by participants and the identification of major gaps that would need to be filled to ensure effective use and application of climate information;
 - 4. The formation of a Steering Committee led by the County Government of Migori to drive the CAP process and bring on board other partners and stakeholders.

3.2 Presentation of CDSF project - African Technology Policy Studies Network (ATPS)

Dr. Nicholas Ozor, the Executive Director of the African Technology Policy Studies Network (ATPS) introduced ATPS and gave a general overview of the CDSF project. The Project is funded by the African Development Bank (AfDB) through the Clim-Dev Special Fund (CDSF). He noted that the project is being implemented in five Africa Countries; (1) Cameroon, (2) Kenya, (3) Malawi, (4) Nigeria, and (5) Tunisia, and includes case studies on climate information services in Nigeria and Kenya. He added that the project promotes the use technology to improve the livelihoods through information on climate change and targets policy makers by providing scientifically credible information to inform decision making.

According to Dr. Ozor, ATPS has done considerable research and advocacy on the role of science and policy, and considers policy as very important and in most cases is superior to science. The project therefore facilitates the mainstreaming of climate change in different sectors such as in Agriculture and Food security, Energy, Health and Environment.

Dr. Ozor introduced two tools that are being promoted through the CDSF project; (1) the Interactive Collaborative Environment (ICE) platform, and the Land*info* app. The ICE is a web repository of information on climate change and has been developed to share good practices and knowledge among different users, including policy makers and researchers (See graphical illustration below).



A graphical illustration of ICE platform

The Landinfo app is a mobile app that provides information relevant to the unique potential of each piece of land and it aids access to information by farmers and land use planners on the soil type and climatic conditions.



Dr. Nicholas Ozor presenting on the CDSF project during the workshop

Plenary Q&A discussion

The following questions and issues were raised during the Q&A discussions;

What are the most visible benefits of the technologies being promoted through the project?

The Land *info* tool is a mobile phone app that can be used by farmers and other land managers to access climate information and data on soils conditions and this information is crucial in assessing the type of crops to grow in a particular region. The app can generate information on crop-soil maps for 75 different crops according to the soil preference with crops that yield optimally. ATPS was awarded a prize on climate information in Kenya based on the uniqueness of the Land *info app* and its potential for wider use among famers and agricultural planners.

A participant sought clarity on why ATPS considers policy as superior to science and technology

 ATPS advocates for evidence based policies and promotes policy research to understand the challenges in society and communicate to policy makers. Policy makers should use information generated by researchers to develop and implement the national and county development plans. Science is important to inform policy but few countries in Africa have invested in scientific research for decision making I and planning

At the end of the discussion, **Hon. Florence Oila**, Member of the Environment Committee of the Migori County Assembly proposed that one of the outputs from the workshop should be **to develop a policy paper in form of motion to be submitted to the County Assembly for adoption as a policy or legislation**. She noted that the Motion Paper should include information on climate change impacts in Migori County and recommendations from the workshop. This suggestion was unanimously adopted by the participants and the County Chief Officer for Environment tasked to follow up.



Hon. Florence Oila, MCA Migori County Assembly proposed that the preparation of a policy paper in form of motion to be submitted to the County Assembly

3.3 Keynote Speech by Dr. Alice Kaudia, Environment Secretary, Ministry of Environment and Forestry

The Keynote speech titled "*Climate Change in Kenya and the opportunities for improving community livelihoods through adaptation interventions*" was delivered by **Dr. Alice Kaudia, the Environment Secretary, Ministry of Environment and Forestry (ME&F)**. In her introduction, she noted with appreciation the evolving partnership and inclusivity of the process, noting that the workshop was well designed by bringing together the legislative and executive arms of the County government, the national government, the local community representatives, the private sector actors, NGOs and the scientific organisations. She noted that through this, the research-policy interface is clarified because these stakeholder groups are able to communicate with and learn from each other and avoid working in isolation.

On the subject of her address, Dr. Kaudia emphasized on the importance of informed decision making based on accurate and timely information to promote food security especially at the community level through climate change interventions. In particular, she mentioned that the Government of Kenya (GoK) has put in place the necessary policy and legislative framework for addressing climate change in Kenya, and now it is upon the County governments, the local communities and even the private sector to make use of the opportunities presented through the policy and legislative instruments, particularly the Climate Change Act (2016) and align actions and interventions to the Big Four Agenda outlined by the President of Kenya; (1) Food Security; (2) Health; (3) Housing; and (4) Manufacturing.

Some of the climate relevant policy documents developed by the national government include: the Vision 2030 Medium Term Plan III (2018-2022); the National Climate Change Response Strategy (NCCRS, 2010); the first National Climate Change Action Plan (NCCAP, 2013-2017); the National Adaptation Plan (NAP 2015-2030); the Kenya Climate Smart Agriculture Strategy (2017-2026); the Climate Risk Management Framework (2017); the National Climate Change Policy (2018); and the National Climate Finance Policy (2018), among other sector plans and policies that address aspects of climate change. She added that the second National Climate Change Action Plan (NCCAP, 2018-2022) is currently under review and due for publication and this presents the County government with an opportunity to downscale.

Dr. Kaudia indicated that the county should contextualise the Big Four Agenda in the local planning for climate change adaptation and outlined the following four priority areas of focus for the County;

- The County Government should allocate a specific budget line for climate change activities in the County. This could be anchored in the Climate Change Act 2016 and the County Assembly could also develop a county specific legislation on climate change;
- Set up a Climate Change Response Fund for Migori County, which can be tailored to the National Climate Change Fund (CCF) that is proposed in the Climate Change Act (2006) and the Public Finance Management (Climate Change Fund) Regulations (2018);
- 3) Align county Climate Change Action Plan to the national development agenda, including the Big Four Agenda and the Vision 2030, and the Sustainable Development Goals (SDGs);;
- 4) Aggressively promote Climate Smart Agriculture (CAS), including organic agriculture to generate income and improve the livelihoods of smallholder farmers and create business opportunities for other value chain enterprises. This can build on the CSA Implementation Framework that has been developed by the Ministry of Agriculture.

In conclusion, Dr. Kaudia underscored the need to conclude the preparation of the CAP quickly so that all stakeholders can move to implementation; have less talks more actions.



Dr Alice Kaudia, Environment Secretary, Ministry of Environment and Forestry giving the Keynote speech at the Workshop

Plenary Q&A discussion

The following questions and issues were raised during the Q&A discussions;

A representative from the Kenya Agriculture and Livestock Research Organisation (KALRO) inquired on the status of Climate Smart Agriculture Implementation Framework and suggested that organic agriculture strategies should be shared to be promoted and up scaled in the county

• Dr. Kaudia promised to do a follow up on this and avail the Climate Smart Agriculture Implementation Framework document together with other policy documents to be shared with all the participants.

An officer of the County Department of Environment observed that the major challenge to addressing climate change in the agriculture sector is how to ensure attitude change among farmers because many of them have not yet embraced and adopted organic agriculture. He called for mechanism that can promote to attitude change among farmers.

 Dr Kaudia responded that there is need for a radical approach to changes in farming practices and a business unusual approach to explore opportunities along the entire value chain not just in the farming and production. She noted for instance some of the agriculture and value chain innovations and business opportunities on climate change that have been identified by the NETFUND and added that under the Big Four Agenda of manufacturing, the State Department of Industrialisation is promoting the "One Village One Product" concept which supports value addition locally and creates opportunities for local processing and industries. A participant asked why we losing the war of fixing climate locally at the implementation level?

 Dr. Kaudia responded that the war is not lost, as there are opportunities to bring about change for example, through adopting a value chain approach to scale up value addition locally. She added that many technologies have been developed by research institutions such as KALRO, but these have yet to be fully adopted by farmers, so there is still the opportunity for us to translate science to practice and policy to action.

4. SESSION 2: REVIEW OF SELECTED PROJECTS AND PROGRAMMES ON CLIMATE CHANGE ADAPTATION IN MIGORI COUNTY AND LEARNING FROM EXPERIENCES IN OTHER COUNTIES.

This session involved presentation and sharing of experiences on five projects and programmes in Migori and other counties implemented by different partners that address different aspects of climate change.

4.1 Kenya Crops and Dairy Market System Development (KCDMSD) - RTI International

This presentation was done by **Dr. Paul Orengo of RTI International**. He noted that the Kenya Crops and Dairy Market Systems Development (KCDMSD) is a five-year program funded by USAID as part of Feed the Future, the U.S. Government's global hunger, and food security initiative that helps to increase agricultural production and reduce poverty and malnutrition in Kenya. It is implemented by RTI International together with the following six partners; 1) Busara Center for Behavioral Economics; 2) East Africa Market Development Associates (EAMDA); 3) Farm Input Promotions (FIPS); 4) International Livestock Research Institute (ILRI); 5) Making Cents International; and 6) Open Capital Advisors (OCA)

The KCDMSD project operates in 12 counties in Western/Nyanza and Eastern regions of Kenya (see figure below). The project is designed to spur competitive, resilient market systems in Kenya's horticulture and dairy sectors with a focus on the following value chains; dairy production, fodder and feed, Horticulture; mango, passion fruits, banana, avocado, pineapple, and sweet potato.



KMCSD supports five priority areas; (1) A competitive, inclusive, and resilient agricultural market system; (2) Diverse agricultural production and improved productivity; (3) An improved policy environment for market systems development; (4) Integration of women and youth into agricultural market systems; and (5) Collaborative action and learning for market systems change and technology adoption.

There is currently a call for proposal by RTI and the participants were encouraged to apply. Checklist for proposal consideration include; -

- The applicant must be from the County where RTI operate;
- The proposed activities must address one or more of the two value chains (horticulture or dairy);
- The activities proposed must seek to address market needs as identified through the project



Dr. Paul Orengoh, RTI International making his presentation at the workshop

Plenary Q&A discussion

The following questions and issues were raised during the Q&A discussions;

A participant sought to know whether the programme's dairy component is applicable to both cows and goats.

• Dr. Orengoh explained that the focus is on dairy and this includes milk from both cows and goats

A participant asked if the funding is limited to the identified-value chains or if consideration can be made to other value chains

• Dr. Orengoh responded that the value chains mentioned have been identified already but there could be provision for consideration of other value chains if these are county sensitive and have been identified as being of priority based on the County Integrated Development Plan (CIDPs) of the target counties

A question was asked if there are specific technologies that are being promoted through the Programme to enhance productivity.

• Dr. Orengoh responded positively noting that the Programme has already mapped a range of technologies that are to be promoted, and noted that considerations is being placed on a business model with strong private sector focus to enable scaling up and market linkages

4.2 Climate Vulnerability Assessment in the Lake Victoria Region – Ecofinder Kenya

Mr. Maurice Ogoma of Ecofinder Kenya gave the presentation on climate vulnerability assessment in the Lake Victoria region. The presentation was based on the experiences that Ecofinder learnt while doing climate vulnerability assessment in the Yala Swamp, Siaya County as part of the USAID funded PREPARED project. Mr. Ogoma observed that the Lake Victoria basin provides resources and ecosystem services that support the region's economy in sectors such as agriculture, energy, biodiversity, and transportation. The region is a climate change hotspot because of the high population densities and poverty rates, making it highly vulnerable to impacts of climate change. The potential climate impacts in the area include: food insecurity, high frequency and intensity of droughts and floods, reduced water supply, diseases, invasive species, resource-based conflicts among others.

Mr. Ogoma reported that Ecofinder was supported by the Lake Victoria Basin Commission (LVBC) to conduct a regional Vulnerability, Impacts and Adaptation (VIA) project with the following objectives;

- 1) To determine most at-risk populations and sectors;
- 2) To identify weaknesses and gaps in existing adaptation strategies and policies;
- 3) To put in place adaptation measures to respond to these impacts and build resilience;
- 4) To improve understanding of linkages among sectors;
- 5) To provide baseline for monitoring changes and offer opportunity for capacity building.

The VIA had three components:, namely (1) the mapping of climate hotspots across East Africa; (2) the in-depth technical studies across five sectors and; (3) community studies to explore the perceptions of climate risks and adaptation strategies in identified hotspots among the 17 communities across L. Victoria region. Through the project, Ecofinder developed training manuals for the community on different climate adaptation practices (see figure below).



From the study findings the key climatic hazards included droughts, flooding, soil erosion, human-wildlife conflicts (HWCs), and diseases affecting humans, livestock and crops. The study generated the following recommendations;

- 1) Integrate traditional and scientific knowledge in responding to climatic hazards/disasters for example, to enhance local coping mechanisms;
- Support formation and use of local structures such as the hazards/disaster committees, Village Environment Committees (VECs), Water Resource Users Associations (WRUAs), and agricultural committees;
- 3) Improve on and make necessary changes and adjustments on existing climate change vulnerability data assessment tools and mainstream climate change actions from vulnerability assessments into County Government policies and functions as recommended in the Climate Change Act (2016).

Mr. Ogoma concluded that climate vulnerability assessments can be used to lay foundation for climate adaptation planning and resilience building at local community and County scales.



Mr. Maurice Ogoma of Ecofinder Kenya making his presentation at the workshop

Plenary Q&A discussion

The discussions following the presentation covered the following issues;

The challenges encountered in the use and application of the Vulnerability Assessment tool (VAT) at the local level, where it was generally noted that the tool should be modified and tailored to the local conditions and circumstances. Some participants observed that the vulnerability assessment (VA) is too focused on the community and pays little attention towards the governance, including the County Administration who are key policy makers. The presenter agreed to this concern and noted that the Tool was made with a special focus to generate evidence on locally based adaptation priorities and these should then be shared with the County government and other policy makers through the institutional structures for governance and considered in the county planning such documents such as the CIDPs

• It was emphasized that the VA should consider both the indigenous knowledge and traditional knowledge as these are not necessarily the same

4.3 The National Agricultural and Rural Inclusive Growth Project (NARIGP) - Migori County Government

Mr. Jared Odhiambo of Migori County Government gave this presentation. He noted that the National Agricultural and Rural Inclusive Growth Project (NARIGP) is funded by the World Bank Group for a fiveyear period, starting 31st July, 2017 and is implemented in 21 Counties in Kenya, including Migori. The Project objective is '*to increase agricultural productivity and profitability of targeted rural communities in selected counties, and in the event of an Eligible Crisis or Emergency, to provide immediate and effective response.*' A key premise of NARIGP is the importance of linking rural smallholder farmers' common interest groups (CIGs) and vulnerable and marginalized groups (VMGs) organized along selected priority value chains (VCs) to markets. Through improved adoption of new technologies and management practices (TIMPs), and by federating into Producer Organizations and other forms of rural institutions, targeted rural smallholder farmers will be able to increase their productivity, incomes, and profitability.

NARIGP has four interlinked components as follows:

- 1) Component 1 Supporting Community-Driven Development;
- 2) Component 2 Strengthening Producer Organizations and Value Chain Development;
- 3) Component 3 Supporting County Community-Led Development;
- 4) Component 4 Project Coordination and Management.

A contingency emergency response facility is also built under the fourth component to respond to any disaster affecting the agricultural sector.



Mr. Jared Odhiambo giving a presentation on the NARIGP project

4.4 Migori County Energy Planning -Stockholm Environment Institute and Migori County Government

This presentation was given by **Dr. Philip Osano of SEI** and **Mr. Aineah Aloo, the Director for Water, Migori County Government**, who was involved in the study implementation. This study on county level energy planning in Migori County was funded by the International Development Research Institute (IDRC) and implemented by SEI and Practical Action in collaboration with the Migori County government. Through a survey of 500 households, a number of expert interviews and eight focus group discussions, the study examined household energy consumption patterns and explored options for citizen engagement in energy planning (Johnson et al., 2016).¹ The key findings included the following;

- 1) The devolution of energy planning to the county level in Kenya provides an opportunity for endusers to have a voice in decisions that affect them. This can only be achieved, however, if concerted efforts are made to ensure wide, deep and meaningful participation.
- 2) Before county governments can start to plan, energy consumption patterns in the county must be understood. This will inform the planning process and ensure that the most pertinent issues are being addressed. In Migori County, survey data show that kerosene for lighting and fuelwood for cooking are the most pressing issues for households.
- 3) Citizens are willing and eager to engage in energy planning, and there are many existing avenues for engaging with them, which could reduce the cost and effort required. For example, existing women's and youth groups have experience educating their peers, building capacity and organizing activities/events to effect change.



Mr. Aineah Aloo, the Director for Water, Migori County Government during the presentation

¹ Johnson, O., Nyambane, A., Cyoy, E. and Oito, L. G. (2016). County Energy Planning in Kenya: Local Participation and Local Solutions in Migori County. Working paper no. 2016-01. Stockholm Environment Institute: https://www.sei.org/mediamanager/documents/Publications/SEI-WP-2016-01-Kenya-county-energy-planning.pdf

4.5 Reversing Land Degradation in Africa by Scaling-up Evergreen Agriculture (Re-greening Africa) Project – World Vision Kenya

This presentation was done by **Dr. Charles Odhiambo, the- Project Manager for the Regreening Africa project, World Vision Kenya**. He noted that the project is an intervention to reverse land degradation with support from the European Union. The EU seeks to mobilize countries of Africa, partners and stakeholders to form a movement that will see land degradation and effects of climate change that have heavily bedeviled Africa more than other continents reversed. Regreening Africa project aims to improve livelihoods, food security and resilience to climate change by smallholder farmers in Africa and restore ecosystem services, particularly through evergreen agriculture. The project targets the most vulnerable smallholder farmers and pastoralists. The project follows a clearly outlines methods of implementation which include the following processes:

- 1) Identifying and analysing existing re-greening strategies, practices and successes;
- 2) Building a grassroots movement and mobilising partner organisations;
- 3) Addressing technical, policy and legal issues and improving enabling conditions for re-greening;
- 4) Developing and implementing a communication strategy;
- 5) Developing or strengthening agroforestry value chains, and
- 6) Expanding activities that support the further refinement of practices and context-specific applications of practices.

Through the project, the expected leverage with County Government include the following ways; through joint Project implementation and monitoring of the project; the provision of technical support for capacity building of groups; supporting stakeholder mobilization and engagement to inspire formation of a County and national re-greening movement; the acquisition of high value agroforestry tree seedlings; development of legislative framework to promote trees on-farm; scaling-out the interventions to non-intensification sites; strategic engagement with the National Government for higher level policy influence; communicating project success to the public; and setting up and promoting strategic public-private-partnerships (PPPs) for rapid evergreen agriculture uptake.



Dr. Charles Odhiambo, World Vison Kenya making a presentation at the workshop

5. SESSION 3: CLIMATE CHANGE CHALLENGES AND OPPORTUNITIES FOR MIGORI COUNTY – IDENTIFICATION OF PRACTICAL AND ACTIONABLE INTERVENTIONS

5.1 The Migori County Climate Change Adaptation Plan development process

Presentation by Mr. Joshua Ngwala, Chief Officer, Department of Environment, Migori County Government. Mr. Ngwala reported that the County is making an effort to develop a Climate Change Adaptation plan in line with the requirements of the Climate Change Act 2016. There are many stakeholders working on climate change programs and the different groups within the population are also affected by climate change, so the County is keen to follow a highly participatory and consultative process to get the inputs and varied experiences from these stakeholders in order to design a Climate Change Adaptation plan that is inclusive of the needs of all stakeholders, and builds on all ongoing development programs.

Mr. Ngwala noted that the natural ecosystems in Migori are highly vulnerable to the impacts of climate change. The variations of temperature and precipitation are negatively affecting the dry land, hills and wetland ecosystems. This has caused decline in environmental quality leading to social and economic hardships to the people who depend on these ecosystems and increased resource conflicts. A key challenge for example has been the recurring floods in several low lying areas, including Nyora, Kabuto, Sere, Uriri, and Kuria East.

Mr. Ngwala added that a stronger positioning of the County Government in climate change matters will strengthen its credibility and allow it to contribute more effectively to the realization of Kenya's commitments in implementing the Climate Change Act 2016 and the National Climate Change Action Plan. Specifically, the CAP aims to define a vision and an action strategy to mainstream climate change issues in the County. He highlighted the goal of the session as follows;

- 1) To identify threats and opportunities for climate change, the priority planning areas for action
- To discuss a vulnerability assessment based on climate change projections for the county, the sensitivity of each planning sector, to climate change impacts, and the ability of the community to adapt to climate change impacts
- 3) To identify a risk assessment based on the consequences, magnitude, and probability of climate change impacts, as well as on an evaluation of risk tolerance and community values.
- 4) To identify actionable interventions (opportunities) across sectors.

The County has divided the development of the CAP in three phases: (1) Preliminary; (2) Inception; (3) and the Planning and implementation phase.

Stage/Phase	Activities
Preliminary	 Scope the climate change impacts to major sectors of Environment, Disaster Management, Meteorology, Water & Energy, Lands And Housing, Agriculture, Livestock, Fisheries, And Finance And Economic Planning Build and maintain support among stakeholders to prepare for climate change, IMPORTANT to ensure synergy between adaption and mitigation actions Build a climate change preparedness team Identify planning areas relevant to climate change impacts
Inception	 Establish a COMMON vision and guiding principles for a climate resilient community Set preparedness goals in each priority planning area based on these guiding principles

	 Integrate climate change adaptation into Migori County development planning and budgetary processes
Planning	 To develop, select, and prioritize possible preparedness actions. Identify a list of important implementation tools, and develop an understanding of how to manage risk and uncertainty in the planning effort. Measuring progress and updating plans, including how to: develop measures of resilience, and use these to track the results of our planned actions over time Review our assumptions and other essential information to ensure that our work remains relevant to the community's most salient climate change impacts, and to update plans regularly, moderating with NCCAP 2 and NAP (2015-2030)

On the linkages to the CIDP, he noted that access to economic wealth, modern technology, good infrastructure, information and skills, and quality of institutions all influence adaptive capacity. The County Government has various development projects in various sectors that enhance individuals' social capital (such as the quality of their social networks, access to and participation in decision-making processes), these influences adaptive capacity. Although the interventions proposed in the draft CIDP contribute to the process of building adaptive capacity through diverse technical approaches, there remains minimal regulatory and social limitations, including;

- Existing Policies and Programs shows great gaps in policies in relation to Climate Change
- Weak linkages exist between CIDP and climate change (currently the climate change actions in the CIDP implementation are mostly *ad-hoc* and coincidental and not by design and planning)
- Social Policy in the context of climate change Social policy to promote interventions that address hardships and income losses accruing to populations that are vulnerable to climate change. These approaches can help to enhance adaptive capacity of the local population.

Mr. Ngwala gave an example of the gaps in Land-Use Planning, which is essential for both reducing the vulnerability and enhancing the adaptive capacity of human settlements and industry. Because of such factors as disability, income level and lack of knowledge and awareness, people do not always have the choice to protect themselves from the impacts of climate change (e.g. people being unaware that they reside in a floodplain or being unable to afford a home anywhere other than in a floodplain). Effective land- use planning is intended to protect and improve the well-being of our citizens. Some of the ongoing actions on land use planning in the County include;

- Restricting development in high-risk areas: Communities like Nyora and Kabuto areas of Nyatike, have no regulations in place to restrict development in high-risk areas.
- Stringent requirements on new developments:
- Shoreline/Beach protection plans: In an effort to limit exposure to the hazards related to receding lake level.
- Relocating mining communities in government lands
- Building codes: have to be introduced. Energy and water conservation criteria into their building codes, have not been introduced.



Mr. Joshua Ngwala, Chief Officer, Department of Environment, Migori County Government.

5.2. Break out groups on adaptation interventions for the climate action plan

The participants were then divided into two groups to discuss and propose priority climate adaptation interventions for the climate action plan. Each of the sectors represented were assigned to the two groups as shown in the table below.

Group 1 Sectors	Group 2 Sectors
 Agriculture, Livestock, Fisheries Lands and Housing Finance and economic planning 	 Environment, Natural Resources and Disaster Management (including meteorology) Water and Energy Finance and economic planning

The two groups were assigned the following task;

- 1) List all the relevant sectors covered by the group
- For each sector, identify a climate related threat and opportunity and discuss and agree on two
 (2) priority interventions/solutions to be included in the County Climate Adaptation Plan (Intervention should be practical and actionable)
- 3) Identify and list ongoing and/or planned practical interventions/solutions for addressing climate change in Migori County

The summary of the group reports are presented in **Annex IV**.

5.3. Technological application for enhancing climate services to farmers and landuse managers – the *Landinfo App*.

Dr. Nicholas Ozor, the Executive Director of ATPS gave a demonstration of the *Landinfo App* that is being promoted by through the CDSF project as an ICT technology that can be used by farmers and land managers to access climate information to support agriculture. The participants downloaded the App and were taken through a step by step process of how to use the App. Dr. Ozor informed the workshop that ATPS would be willing to partner with the County government to roll out training for farmers and extension agents if resources can be availed to support the process.



Dr. Nicholas Ozor presenting the LandInfo mobile app at the workshop

5.4. Experiences and needs in the use of climate information services

Workshop participants shared their experiences of using climate information and identified the gaps that would need to be filled to make access and use of climate information effective for agriculture and other livelihood activities in the County. The facilitator asked each participant to respond in writing to the following two questions and later presented these to the plenary;

- 1) List One (1) example where you have used climate information in decision making (preferably in work context).
- 2) List One (1) major gap that would need to be filled to ensure effective use and application of climate information in your work

The responses from the participants are presented in Annex V

6. ANNEXES

Annex I: Photos from the Workshop











Annex II: Concept Note

"Bridging Climate Information Gaps to Strengthen Capacities for Climate Informed Decision-making (CDSF)"

Concept Note for the Kenyan Case Study to support the Migori County Climate Change Adaptation Plan

Background to the CDSF project

The "Bridging Climate Information Gaps to Strengthen Capacities for Climate Informed Decision-making" is a two-year project funded by the African Development Bank (AfDB) with the overall goal to strengthen the capacities of relevant stakeholders in the five project countries - Cameroon, Kenya, Malawi, Nigeria, and Tunisia - to understand and deploy appropriate climate information and best practices to inform decision-making. Specifically, the project aims to: 1) Identify and analyze climate information needs, provide support for climate information production, synthesis, and use; 2) Build the capacities and knowledge of stakeholders, including government agencies, research institutions, extension agents and contact famers to collect and utilize high quality, demand-driven climate information for adaptation planning and decision-making; and 3) Facilitate the mainstreaming of climate change issues in regional policy dialogue aimed at raising awareness on climate change issues to strengthen understanding, use and mastery of climate information.

The project has two components; (1) **Climate information synthesis**, and (2) **Capacity enhancement and climate information dissemination**. The Stockholm Environment Institute (SEI) leads the component on capacity enhancement and climate information dissemination, which involves the development of a robust adaptation toolkit to support adaptation planning and policymaking at the sub-national levels of governance and includes case studies in Enugu State in Nigeria and Migori County in Kenya.

Policies and institutional framework for climate change in Kenya

Climate change has increased the frequency and magnitude of extreme weather events that have negatively affected Kenya's economy which is highly dependent on natural resources and climatesensitive sectors such as agriculture, energy, transport, tourism, and water, making the country highly vulnerable to climate variability and change. To meet the international climate change obligations, Kenya ratified the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, which is aimed at keeping the global temperature rise to below 2°C, and which has committed all Parties to implement their voluntary Nationally Determined Contributions (NDC). Kenya's NDC sets out the country's actions to contribute to achieving the global goal set out in the Paris Agreement, and include mitigation and adaptation actions. The Paris Agreement entered into force in Kenya on 27th January 2017, and as set out in Article 2(6) of the Constitution of Kenya (2010), the Paris Agreement now forms part of the laws of Kenya.

The foundation of the institutional and legal framework for climate change action is the Constitution of Kenya (2010). Article 42 provides for the right to a clean and healthy environment for every Kenyan, which includes the right to have the environment protected for the benefit of present and future generations. Several policies, strategies, action plans and institutions have been established in Kenya at both the National and County levels to address climate change.

At the national level, these include the National Climate Change Response Strategy (NCCRS, 2010), the first National Climate Change Action Plan (NCCAP, 2013-2017), the National Adaptation Plan (NAP 2015-2030), the Kenya Climate Smart Agriculture Strategy (2017-2026), the Climate Risk Management Framework (2017), the National Climate Change Policy (2018) and the National Climate Finance Policy (2018), among other sector plans and policies that address aspects of climate change. The second

National Climate Change Action Plan (NCCAP, 2018-2022) is currently under review and due for publication soon.

The Climate Change Act (2016) is the key legislation that provides a regulatory framework for climate change in Kenya. The Act establishes the National Climate Change Council, the Climate Change Directorate, and Climate change units at sectors and County levels responsible for coordination and mainstreaming of climate change at all levels of government. As per the Act, the County Governments are responsible for integrating and mainstreaming climate change actions, interventions and duties set out in the Act into their County Integrated Development Plans (CIDPs), designating a County Executive Committee (CEC) member to coordinate climate change affairs, and report to the County Assembly annually on the progress on implementation of climate change actions.

A review of all the first generation of CIDPs (2013-2017) for the 47 Counties noted that adaptation actions were a priority for many counties, consistent with the National Climate Change Action Plan 2013-2017 (NCCAP) that stated that adaptation is the priority for Kenya. A total of 39 CIDPs identified adaptation actions including: awareness creation and capacity building to improve understanding of and action on climate change, sustainable agriculture (including conservation agriculture, irrigation and improved livestock practices), improved access to water, establishment of early warning systems, and water catchment conservation and protection. The review study recommended the need to develop tools to assist County Governments to mainstream climate change in their CIDPs, such as a framework for mainstreaming climate change in CIDPs and county budgets, and also the need to build the capacity of County officials and planners.² Some five Counties – Isiolo, Garissa, Makueni, Kitui and Wajir- have legislated climate change fund regulations that allocate a portion of their development budgets to funds that support local adaptation actions³.

Migori County Climate Change Adaptation Plan (Migori CAP)

The Kenyan case study is being implemented in Migori County, which is situated in the South western part of Kenya. The County Government of Migori has identified climate change as a major challenge and has initiated a process to develop a Climate Change Adaptation Plan (CCAP) in line with the second National Climate Change Action Plan (NCCAP, 2018-2022) and the Kenya National Adaptation Plan (NAP 2015-2030). The County's adaptation intervention priorities in the first CIDP 2013-2017 focused on agriculture and food security, with investments in several irrigation activities along the Lake Victoria and major rivers aimed at reducing reliance on rain fed agriculture. The lower Kuja irrigation scheme has been targeted to be the food basket of the county.

The County Government of Migori has also been actively involved in the preparation of the second National Climate Change Action Plan (NCCAP, 2018-2022) which has prioritized the provision of Climate Information Services for communities, farmers and early warning systems as part of the technologies and innovations for enabling actions to support the delivery of priority climate actions. The County participated in the consultations organized by the Climate Change Directorate with the Lake Economic Bloc in April 2018. As part of these consultations, Migori County together with the neighboring Homa-Bay County jointly identified several proposed actions for both mitigation and adaptation, including the

² Murphy, D. and Chirchir, D. (2017). Kenya County Integrated Development Plans (CIDPs) 2013-2017: Review of Climate Change Mainstreaming. StARCK+ Technical Assistance to Government of Kenya. Online: <u>http://www.kcckp.go.ke/download/nccap/downloads/Kenya-CIDP-2013-17-Review-of-Climate-Change-Mainstreaming1.pdf</u>

³ ADA Consortium (2017). Mainstreaming Climate Change Adaptation into Planning. Online: <u>http://www.adaconsortium.org/index.php/ada-resources/news-blogs/ada-blogs/95-blogs/114-mainstreaming-climate-change-adaptation-into-planning</u>

domestication of national legislations in the counties, establishment of an institutional framework for climate change, and development of a climate change policy and action plan.⁴

SEI has established a collaboration with World Vision Kenya, the Ministry of Environment and Forestry, and the Migori County Government (Department of Environment, Natural Resources & Disaster Management) to initiate the process for developing the Migori County Climate Change Adaptation Plan (CAP). A Steering Committee is to be established by the County Government of Migori to drive this process and bring on board other partners and stakeholders. The process will start with a two-day workshop to be held from 16-17 August 2018 followed by one day training of farmers, extension agents and community development workers on the use of the Land *info* app to be led by the African Technology Policy Studies Network (ATPS) on 18th August 2018 in Mikei village, which is one of the site for the Regreening Africa project implemented by World Vision Kenya. Together, the workshop and the field training will involve a participatory approach to generate information to inform the CAP and also provide inputs to the Robust Adaptation Toolkit that SEI is piloting as part of the CDSF project

The workshop will bring together representatives from the Ministry of Environment and Forestry, Migori County government officials, the Kenya Agricultural and Livestock Research Institute (KALRO), Non-governmental organizations (NGOs), farmer groups, the private sector, and researchers from local universities. The objectives of the 2-day workshop are to;

- To discuss the climate change challenges and opportunities for the Environment and Natural Resources related sectors, including Water, Land, and Agriculture in Migori County and identify practical and actionable interventions to inform the development of Migori County Adaptation Plan
- 2. To contribute to County Adaptation planning by the Department of Environment, Natural Resources & Disaster Management and identify opportunities for strengthening policy coherence and institutional coordination at County and national level;
- 3. To provide recommendations for the County Adaptation Plan and relate the CAP process to the CIDP (County Integrated Development Plan), the Second National Climate Change Action Plan (NCCAP 2018-2022), and the Kenya National Adaptation Plan (NAP 2015-2030).

Following the workshop, the steering committee is expected to continue with the CAP preparation process, including undertaking a rapid assessment of the climate change in Migori, analysis of the sector plans, consultation with stakeholders, mobilizing resources for the CAP process and preparation of a draft CAP to be aligned to the County CIDP, the with the second National Climate Change Action Plan (NCCAP, 2018-2022) and the Kenya National Adaptation Plan (NAP 2015-2030), and establishing the necessary legislations at the County level.

Contacts:

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- Dr. Charles Odhiambo, Project Manager-Regreening Africa, World Vision Kenya. Email: <u>charles_odhiambo@wvi.org</u>
- **Dr. Philip Osano**, Center Deputy Director for Capacity Development, Stockholm Environment Institute. Email: <u>philip.osano@sei.org</u>

⁴ Ministry of Environment and Forestry (2018). Report of the County Consultations Meeting For the Lake Region Bloc. Online: <u>http://www.kcckp.go.ke/download/nccap/downloads/3.-Lake-Region-</u> <u>Consultation_Report_19April2018.pdf</u>

Annex III: Workshop Programme

"Bridging Climate Information Gaps to Strengthen Capacities for Climate Informed Decision-making" Workshop towards Migori County Climate Change Adaptation Plan (Migori CAP)

Date: 16- 17 July 2018 Venue: Florence Hotel, Migori Town

Workshop objectives

- 1. To discuss the climate change challenges and opportunities for the Environment and Natural Resources related sectors, including Water, Land, and Agriculture in and identify practical and actionable interventions to inform the development of Migori County Adaptation Plan (CAP)
- 2. To contribute to County Adaptation planning by the Department of Environment, Natural Resources & Disaster Management and identify opportunities for strengthening policy coherence and institutional coordination at County and national level;
- 3. To provide recommendations for the Migori CAP and relate the CAP process to the CIDP (County Integrated Development Plan), the Second National Climate Change Action Plan (NCCAP 2018-2022), and the Kenya National Adaptation Plan (NAP 2015-2030).

Time	Activity
08: 00-09: 00	Arrival and registration (ALL)
09:00-09:30	WELCOME SESSION: Migori County
	• Welcome address (Elijah Odhiambo, County Executive Committee Member, Lands, Housing and Physical Planning and Ag. CEC for Environment, Natural Resources and Disaster Management, Migori County)
	Opening Address (Hon George Duro, Chair, Environment Committee, Migori County Assembly)
09:30-11:00	SESSION 1: Introduction and Scene setting
	Introduction of participants (Facilitator)
	Workshop objectives and expected outcomes (Dr. Philip Osano, Stockholm Environment Institute)
	• Presentation of CDSF project (Dr. Nicholas Ozor, Executive Director, ATPS; African Technology Policy Studies Network))
	• Keynote Speech on Climate Change in Kenya and the opportunities for improving community livelihoods through adaptation interventions (Dr. Alice Kaudia , Environment Secretary, Ministry of Environment and Forestry)

Programme for Day 1 (Thursday 16 August 2018)

10:45-11:00	NETWO	RKING BREAK						
11:00-13:30	SESSION 2: Review of selected projects and programmes on climate change adaptation in Migori County and learning from Experiences in other Counties							
	Migori County Energy Planning (Dr. Philip Osano, Stockh	olm Environment Institute)						
	Kenya Crop and Dairy Market System Development Project (Dr. Paul Orengoh, RTI International)							
	Climate Vulnerability Assessment in the Lake Victoria Re	• Climate Vulnerability Assessment in the Lake Victoria Region (Mr. Leonard Akwany, Executive Director, Ecofinder Kenya)						
	Kenya World Climate Smart Agriculture Project in Migori,	Kenya World Climate Smart Agriculture Project in Migori, TBD						
13:30-14:30	LUNCH BREAK							
14:30-16:30	 SESSION 3: climate change challenges and opportunities for Migori County – identification of practical and actionable interventions across the related sectors (parallel break-out groups) Presentation on the Migori County Climate Change Adaptation Plan development process and linkages to the CIDP (Mr. Joshua Ngwala, Chief Officer, Department of Environment, Migori County) 							
	 Break out group 1 (Moderator: Elijah Gambere) Agriculture, Livestock, Fisheries Lands and Housing Finance and economic planning Break out group 2 (Moderator: Joshua Ngwala) Environment, Natural Resources and Disaster Management (including meteorology) Water and Energy Finance and economic planning 							
16:30 - 17:00	 SESSION 3 (continued) Technological application for enhancing climate services to farmers and landuse managers – the Landinfo App. (Dr. Nicholas Ozor, Executive Director, ATPS) 							
17:00	Tea break and Workshop Adjournment							

Programme for Day 2 (Friday 17th August 2018)

Time	Activity
09: 00-09:30	RECAP OF DAY 1
	Review of day one activities/outputs (Emerging issues for action)
	SESSION 3 (continued)
09:30-10:30	Group presentations and discussions (30 min per group)
10:30-10:45	• Presentation on Regreening Africa-Kenya Project (Dr. Charles Odhiambo, Project Manager-Regreening Africa, World Vision Kenya)
10:45 - 12:00	SESSION 4: Adaptation planning opportunities for strengthening policy coherence across sectors and institutional coordination at County and National (parallel break-out groups)
	Opportunities for policy and programme coherence
	Mapping of partners for the Migori CAP
	Proposed timelines and steps for CAP process
12:00-12:30	CLOSING SESSION
	Workshop evaluation
	Closing Remarks
12:30	LUNCH BREAK AND DEPARTURE
14:00 - 15:30	Meeting of the Migori County Climate Change Adaptation Plan Steering Committee
	Host: Migori County Government
	(Closed Session)

Annex IV: Break-out discussions on threats, opportunities, practical interventions and ongoing/planned programmes

Group 1: Agriculture, Livestock and Fisheries; Lands and Housing; Finance and economic planning

Sector	Climate change threats	Opportunities	Practical intervention	Ongoing/planned interventions
Agriculture, Livestock and Fisheries	Floods	 Water harvesting Efficient water use through irrigation Protection of water catchment areas Embracing emerging innovations and technologies Livestock off take Programme 	 Roof water, run off, storm water management and Irrigation. Soil conservation structures Conservation agriculture Stock piling and constituting proper response mechanism 	 Lower Kuja Irrigation Conservation Agriculture Climate smart agriculture Economic stimulus programme
	Drought	 Efficient water use through irrigation Conservation agriculture Promotion of renewable energy strategies Protection of water catchment areas Policy of at least 10% vegetation cover 	 Water use efficiency Protection of water catchment areas Drought tolerant crops Early warning systems Climate advisories 	Spring protection Metrological department weather information KALRO MOALF
	Unreliable weather conditions	 Promotion of renewable energy strategies Protection of water catchment areas Embracing emerging innovations and technologies 	 Embracing emerging innovations and technologies Development of early warning systems 	Regular weather update by Meteorological department

Threats, opportunities, practical interventions and ongoing programmes/planned programmes

Inv	vasive species of	•	Embracing emerging	•	Embracing emerging	KEPHIS
pla	ants and animals		innovations and		innovations and	KALRO MOAI
La	nd degradation	•	Practice of conservation	•	Practice of conservation	MOAI
		•	agriculture Renewable energy	•	agriculture Renewable energy	KES
		•	Protection of water	•	Reflewable chergy	
			catchment areas			
Inc	duced migration	٠	Water harvesting			
		٠	Water use efficiency			
			through irrigation			
		•	innovations and			
			technologies			
Lo	oss of biodiversity	٠	Conservation agriculture	•	Integrated pest management	National museum of Kenya
		٠	Promotion of renewable	•	Sustainable land	KALRO
			energy strategies		management	
		•	Protection of water	•	In situ and ex situ	
		•	Embracing emerging		establishment)	
			innovations and			
			technologies			
		٠	Land fragmentation			
Re	esource use	•	Water harvesting			
CO	onnicts	•	water use efficiency			
		•	Protection of water			
			catchment areas			
Dw	vindling water	٠	Water harvesting			Ministry of Energy
res	sources	٠	Water use efficiency			
			through irrigation			
		•	Conservation agriculture			
		•	energy strategies			
		•	Protection of water			
			catchment areas			

				•	Embracing innovations technologies	emerging and			
Lands ar Housing	nd C n	Climate indu migration	luced	٠	Embracing technologies	modern	•	County spatial planning Erection of dykes	
	C s e c F o	Collapsing structures due extreme wea conditions Resource conflicts	of e to ather use	•	Appropriate planning	physical	•	Adherence to building codes Climate proofing building (use of materials that withstand extreme climate situations)	
Finance ar economic planning	nd S g G	Slow econo growth (Redu GDP)	omic luced	Av Av str	ailability of climate ailability of ategies	funds working	•	GCF, Adaptation fund, REDD+, National Environment Trust Fund	

Group 2: Environment, Natural Resources and Disaster Management (including meteorology); Water and Energy; Finance and economic planning

Threats, opportunities, practical interventions and ongoing programmes/planned programmes

Sector	Threat	Opportunity	Intervention
Forestry	Deforestation	 National and County legislation in place. Availability of research institute for forests. 	 Rehabilitation of degraded forestland Encourage agroforestry Encouraging conservation forestry
Wildlife	 Loss of habitat leading to migration of most wildlife Invasive species Rate of natural forest regeneration is slow due to climate change. Heat reduces reproduction rate especially for fish 	 Availability of research institutes for wildlife Availability of relevant policies Availability of donors willing to support wildlife conservation. 	 Support programmes that advocate for natural vegetation regeneration Conduct research Establish wildlife protection areas like sanctuaries and conservancies.

Mining	 Clearance of natural vegetation for expansion. Collapse of mines during extreme weather. Soil and water pollution 	 Availability of the national Mining Act Availability of partners willing to support in improving the sector 	 Rehabilitating abandoned mining sites. Domesticating the national mining law and ensuring its implementation Developing effective early warning systems.
Meteorology	 Ozone layer depletion. Unpredictable weather patterns. 	 Availability of technological inventions 	 Automatic weather stations Reduction of greenhouse gas emissions.

Annex V: Participants responses on their experiences in using climate information

Participant	Example of use of climate information	Gap in climate information
William/SEI	Rainfall data- Patterns long-term, Variability, and climate change in Rift valley (1950-2011).	SLCP data to inform policy on short lived climate pollutants, long- term climate change prediction and simulations in Rift valley.
Hesbon/ USAID	Planning implementation schedule in infrastructure/ construction works for water supply system	Not all stakeholders take seriously climate information in planning/ decision making often could lead to conflict of ideas. Stakeholders hence should be able to appreciate and apply climate information on day today work issues.
Prof. Daniel Nyamai-Rongo University	Species domestication- I have carried out plant species screening for adaptation on the basis of climate dates/information and biophysical parameters of the sites for my field research.	Lack of reliable data on climatic factors, especially long-term observations for determining trends.
Duncan Oaro- CGA General Growers	We often use climate information in deciding the time to plant crops. We rely on the meteorological department's weather prediction.	Major gap on application of climate information is the accessibility by the intended recipient. Smallholder farmers rarely receive the weather updates therefore accessibility need to be enhanced.
Tonny Kidiga/Migori County	Advising farmers on appropriate land preparation methods and designing soil and water conservation structures	Use of technology to access instant weather/ climate information by agricultural practitioners
Elijah Odundo/USAID -KIWASH	In support of county water security planning, we have used downscaled climate data in 10 projects, the precipitations patterns and intensity over time for Migori County	There is no reliable data on County water resources and demand for water by the different sectors for that can be used for water use planning service provision and development
Thomas Akungo/ MCA Migori	In improving the youth groups in my ward, we invest reasonably in dairy weather horticulture and require to know when to kick off of the projects and when to plant so that we have a reduction in the expenses in pests and disease control.	We majorly rely on the weather patterns and reports from the updates from the metrology department which are not always spot on and exact.
Eddah Kaguthi/KARLO	I analysed 30 years ran fall and temp data in deciding the best crop varieties to plant in Garissa county and the choice	Ensure effective use and apply climate information. Better analysis of met data to show correlation between climate information and productivity.

	of the drought tolerant green guavas was the best suited for food and nutritional security	
Elizabeth Odoyo / KARLO	National climate change action plan. Climate smart agriculture strategy; when writing a proposal to seek funds.	Lack of climate information database. Inventory of existing information on climate
Jared Odhiambo/ Agriculture	Selection of crop varieties for specific regions	Major groups- focus is sometimes not specific to a region
Paul Orengoh/ RTI	I often use climate information as part of a check list for interrogating grant applications under the Kenya crops of dairy market systems projects. I also use climate information in calibrating water resources management decision support systems	Reliable data of appropriate scale is lacking
Mercy Achapa/ County department of Environment	Choosing kind of the species to be grown under the greening programme To inform climate change adaptation concept To inform investment	
Joshua Ngwala/ County department of Environment	When plant trees/ start of planting season. When to take a vacation/ leave What to wear to work, when to hold meetings at various locations, type of transport to use, Choosing site projects	
Okeyo George/ Ministry of Agriculture	Development of crop planting calendar for the sub county	No proper channels to share information about climate between governments departments because sometimes the data used to generate that information is unreliable due to obsolete technology
George Omolo/KFS	Climate information/ decision making Tree planting and plantation establishment, Provision of extension services for private forestry development	Availability of climate data. Availability of weather. Climate stations Knowledge in interpreting the climate data
Arnold Bosire /One Vision Kenya	Used information on climate to arrange on the harvest of the farm produce, be informed from the met department about the coming rains	Information dissemination in getting some that the information (flow of information)

Maurice Ogoma/ Ecofinder Kenya	Ecofinder Kenya used the results of C3A2 climate vulnerability surveys to identify and implement climate smart adaptation livelihoods, developed awareness, creation of strategies and adaptation action plans for Yala Wetlands communities in Siaya County	Inadequate institutions and community level capacity (trainings)on how to use climate information at the local levels
Elizabeth /Send a cow Kenya	Establishment of climate smart technologies in Kakrao Wards	Capacity building for relevant stakeholders and community members on climate information for easy accessibility/dissemination
Allan Ojwang/Migori County	Selection of tree species to be planted in Nyatike Sub- County	Public Education
Eveline Onyango/Coun ty Department of Environment	Clearing heaps of garbage from transfer stations and skips	Climate information sharing/ early warning systems
Julie Adhiambo/ County Department of Water	Construction/Repair of intake works planning. Has to be done during dry season when stream levels are low.	Climate information sharing gap
Nicholas Ozor/ATPS	The start of planting of my crops in the farm based on rainfall information available to me from Land info	Availing new technologies like land info to farmers to enable them access climate information readily.
Hon Bageni Joseph/MCA	Crop farming. To determine type of crop to grow/ tobacco	Tobacco growing climate change rainfall e.g. trans, rainfall which cannot be produced.
Alice Kaudia/ ME&F	Timing training farmers on land preparation to grow soya beans based on rainfall onset dates	Radio broad casting station in Local language to disseminate rainfall incidence to farmers.
Dancan/ Equity Bank	Whether lending to a certain sector e.g. farming will be liable going by the anticipated changes in the weather	Relying on rainfall water instead of alternative sources
Joel Maritim/ KCB	Appraisal of mortgage loans- NEMA approval	Meteorological approval before giving agriculture loans in KCB banks LTD (Loans are given because of previous repayment or deliveries to market and not considering current climatic change through relevant climatic information)

Jomo Silas/County sports and youth affairs	To develop sports infrastructure and plan sports event	Lack of legislations on infrastructure sports
Agnes Awinja/ Director gender and equality department	In the months of September-October/November 2017, the Meteorology department had warned of heavy rainfalls. As a department we used this information to ask the women poultry farmers in the wards women SACCOS to construct raised poultry houses to avoid loss due to floods	Awareness creation is a major gap in ensuring effective use and application of climate information in my work
Paul Mwita/ Migori County	In estimating markets due which depends on Agriculture market supplies information on weather patterns in the past is used to make exact projections	To make effective use and application of climate information, a system to maintain data base on climate information should be awarded
Samson Hayanga/KMD Migori	Use weather information to inform farmers and other stakeholders of the expected weather and climatic conditions (weekly, daily, monthly and seasonal forecasts)	Policy should be put in place in order to enforce planner and all other weather users to use weather information in their activities
Tom Masenya/ Envt Department Migori County	Early warning systems to indicate the level of water in a river system, informed decisions and plan for evacuation in time	Accessibility of the climate information should be in simple terms to be understood by the majority of the people.
Eng. Ainea Anika/Migori County	Silting of Gogo falls dam in Nyatike sub-county resulting in lower power generation to tell when there will be power rationing	Lack of appreciation and therefore knowledge of the effects of climate change in the county at the top policy matters and decision makers
Hon. Duro George Akinyi	Climate information and advice miners in Macalder when to do mining (the artisan miners)	Communication barriers; information delayed for effective and efficient communication. Lack of county regulations
Denis Oiro/ Migori County	Decisions on when to minimise fieldwork especially during the rainy seasons	Embracing modern technology in carrying out surveys work as this will not depend heavily on climate conditions

Annex VI: Evaluation of the workshop

What went well	What could have been better?
 Learning about new climate innovative technologies for climate information Connecting with the players in the field of climate information The county is now more serious on climate change and environment issues Content developed in a participatory manner Quality of Information and practical climate solutions Honest Sharing of experiences Well researched presentations and knowledgeable presenters Good representation from the county The Environment Secretary, Ministry of Environment stayed all through the workshop Context of the information and practical knowledge sharing The workshop was too educative, learning from different partners Help identify partners that implement projects in line my line hence fostering collaborations More information about climate information by different organizations and how to access them Flow of content and relevant information/ the content of the workshop very comprehensive Networking opportunity Group work presentation and discussions The workshop was very interactive, and I was able to make contacts Good group engagements Learnt about a new app Networking made new friends 	 Better time management especially on the first day, maybe have fewer presentations and more discussions The hotel food and services were below average The workshop period should have extended to allow more input from the participants and more questions to be answered More time for presentations and group exercises Upscaling the discussions to higher policy/ decisions makers in the county The workshop should have been held outside the county to avoid county staff moving in and out of the meeting Time management by the participants In-depth discussions of certain components of the thematic areas Invitation of some key stakeholders such as the sectors dealing with disaster responses so as to share their responses in the event of climate induced disasters Improving further the action plan and policy making processes Improve land info presentations Provide accommodation for all participants to minimize time wastage Incorporate the end users of climate information it the workshop(farmers) to share their experiences Practical experience on the use of climate data

 Gender issues should be discussed more broadly and into deeper depth i.e. impact on children and women More fieldwork and reducing on the theories and have more practical information tools More time for deliberations and brainstorming Get a more spacious hall
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Annex VII: List of Workshop Participants

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Attendance Form for Migori County Climate Change Adaptation Plan Workshop <u>16th and 17th August 2018</u>

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Attendance Form for Migori County Climate Change Adaptation Plan Workshop 16th and 17th August 2018

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