PAFO CLIMAKERS WORKSHOP IN AFRICA

FINAL REPORT

OCTOBER 2021

EXECUTIVE SUMMARY

While agriculture is the backbone of many African economies, the African agriculture system is highly vulnerable to climate change, resulting in massive reduction in agricultural yields and income. The livelihoods of African farmers, particularly smallholder farmers, who constitute the majority of the labour force in Africa and produce about 80% of food in the continent, are threatened by climate change. The continuous vulnerability of the agriculture sector by climate and environmental shocks and stressors, such as floods, droughts, erratic and unreliable rainfall, and rising temperature, coupled with the extreme threats to the livelihoods of smallholder farmers, will exacerbate poverty, food insecurity, and nutrition and development related challenges on the continent. It is therefore imperative to respond to climate change in Africa through resilient and climate smart agricultural practices that have the potential to minimize climate risks and increase productivity. It is however, troubling that smallholder farmers with limited capacity to adapt to climate change are often neglected in climate change and adaptation policy processes. Contrarily, African farmers have rich experience and ecological knowledge that can be leveraged on to improve policies and interventions targeting climate change adaptation at national, regional and international levels. The Climakers workshop in Africa was therefore organized to build African farmers' capacity to respond to climate change and participate effectively as essential stakeholders in climate change policies at different levels of decision making.

This report provides detailed information on the workshop held on October 21, 2021 and its associated activities and discussions as well as the common position of African farmers with respect to addressing the menace of climate change. Indeed, the participants demonstrated that African farmers have chunk of knowledge pertaining to climate change and its impact on their farming activities (crop and livestock production) and the corresponding effects on food security and livelihoods of farmers and their households. The participants are cognizance of the fact that without addressing climate change urgently, the development process in Africa is likely to be affected negatively, since the agriculture sector is the engine of growth and development in many parts of the continent. As such, addressing the menace of climate change necessitates the need for governments and stakeholders to wholeheartedly place African farmers at the center of climate change policies and decision making. This is because farmers have the rich ecological knowledge and experience needed to mitigate climate shocks and stressors. More so, farmers constitute the main stakeholders whose work can directly minimize the emission of greenhouse gases (GHGs) into the atmosphere through the carbon sequestration potential of crops. Without engaging farmers directly in climate change policies and interventions, global, regional and national leaders are bound to fail in their attempt to address climate change: impacts and anthropogenic causes. The participants agreed that African governments must seriously show commitment and take realistic steps to address climate change as a priority in Africa.

TABLE OF CONTENT

ACRONYMS

AGRA	Alliance for Green Revolution in Africa
AU	African Union
CA	Climakers Alliance
CESSA	Center of Excellence for Seed Systems in Africa
COP	Conference of Parties
CSIR	Council for Scientific and Industrial Research
CSO	Civil Society Organization
EAFF	Eastern African Farmers Federation
EAGC	East Africa Grain Council
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
GHGs	Greenhouse Gases
IFPRI	International Food Policy Research Institute
IPCC	Intergovernmental Panel on Climate Change
NGOs	Non-Governmental Organizations
NFOs	National Farmers Organizations
PAFO	Pan African Farmers Organization
PROPAC	Regional Platform of Farmers Organizations of Central Africa
REC	Regional Economic Community
RFOs	Regional Farmers Organizations
ROPPA	Network of Farmers and Producers Organization in West Africa
SACAU	Southern African Confederation of Agricultural Unions
UESD	University of Environment and Sustainable Development
UMNAGRI	Maghrebian and North Africa Union of Farmers
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change

WFO World Farmers Organization

1.0 INTRODUCTION

1.1 Background

Climate change is a global phenomenon that threatens sustainable development. However, the adverse impact of climate change is not evenly distributed. Economies, particularly in developing regions of the world, are highly vulnerable and at risk to climate change. Climate change, such as erratic rainfall, rising temperature, and the associated shocks and stressors, including floods and droughts, have greatly affected economic growth and production in already fragile economies in Africa.

The fragility and vulnerability of African economies to climate change is largely due to overdependence on climate sensitive sectors, such as agriculture, fisheries and forestry. Again, rising poverty, low human capital development, and poor adoption of technology as well as rising political tensions and conflicts, have exacerbated grave impact of climate change in many parts of the continent. Agriculture, which is the backbone of many African economies, is highly affected by climate change. Extensive literature has reported rapid decline in crop yields and stock of livestock, due to erratic rainfall, rising temperature, floods and droughts. Similarly, increased invasion of crops and livestock by pests and diseases, has negatively affected productivity in many parts of Africa (Asare-Nuamah, 2021).

While the impact of climate change on the agriculture sector greatly affect national yields and economic development, farmers, particularly smallholder farmers in the sector, are hardest hit by climate change, resulting in declining livelihoods and food insecurity in farmer households. Agriculture in Africa employs over 60% of the labour force, who are predominantly poor, under-resourced and have low adaptive capacity to climate change. Coupled with this, the onset of the COVID-19 pandemic has affected the capacity of smallholder farmers, thereby increasing poverty (Diop & Asongu, 2021).

Nevertheless, vulnerable African farmers strive to contribute about 80% of the food produced in the continent, which helps to sustain food security of about 1.37 billion people in Africa. Intuitively, building the capacity of farmers through improved knowledge and practices, the provision of adequate logistics and infrastructure, and policy support, will be instrumental in minimizing farmers' vulnerability and boosting Africa's food security and socioeconomic development.

1.2 Rationale for the workshop

The adverse impact of climate change has necessitated the need for concerted efforts in driving global response to adapt and mitigate climate change. The reports of the Intergovernmental Panel on Climate Change (IPCC) have been at the forefront in driving policy support and global governance effort for climate change. Consequently, the United Nations Framework Convention on Climate Change (UNFCCC) has provided the platform for deliberating and defining policies to

support global and national initiatives for climate change adaptation and mitigation through the Conference of Parties (COPs).

Although, the UNFCCC is guided by the principles of sustainability, particularly, inter-generational, intra-generational and procedural equity. In practice, it fails to embrace procedural equity, which argues for inclusivity in climate change decisions. Implicitly, many critical stakeholders, including farmers, are not offered the opportunity to active contribute to defining global/national interventions and policies for climate change adaptation. This is problematic since farmers are key stakeholders, whose ecological knowledge and experience can be leveraged on to inform policies and strategies for climate change adaptation.

As a result, farmers have low voice in global and national climate change policy process, which affects their capacity to embrace innovations and adaptation effectively. This may stem from farmers' low knowledge of UNFCCC negotiations and processes, coupled with weak and fragmentation of farmers in shaping global climate change and adaption governance through their rich ecological knowledge and experience. The Paris Agreement has however, broadened the scope of stakeholders' inclusion and engagement on climate change adaptation policies. In view of this, this workshop was organized on October 21, 2021 to provide the platform for farmers from different regions and cultures to consolidate their experiences for climate resilience, gain insights into global climate change and adaptation governance, and strengthen their approaches to contributing to shape global, regional and national policies and strategies.

1.3 Objectives of the workshop

This workshop was intended to achieve the following specific objectives:

1. Increase the capacity of African farmers to adapt to climate change through resilient agricultural practices
2. Strengthen the capacity of African farmers to increase their engagement and participation in climate change policies at national, regional and continental levels
3. Help farmers identify their sources of power and agency for engagement and participation in climate change policies
4. Consolidate best practices of climate smart and resilient agricultural practices in different regions of Africa
5. Consolidate the common voice and position of African farmers for global climate change governance and the associated policy processes

1.4 The participants

The workshop was intended to strengthen the capacity of African farmers. As such, multisectoral and multidisciplinary participants were necessary in order to fully achieve the objectives of the workshop. The participants of the workshop included the President and staff of the Pan African

Farmers Organization (PAFO), farmer leaders and staff from the PAFO Regional Farmer Organizations (RFOs) in East Africa (Eastern African Farmers Federation, EAFF), West Africa (Network of Farmers and Producers Organization in West Africa, ROPPA), Central Africa (Regional Platform of Farmers Organizations of Central Africa, PROPAC), North Africa (Maghrebian and North Africa Union of Farmers, UMNAGRI), and South Africa (Southern African Confederation of Agricultural Unions, SACAU), the President and staff of the World Farmer Organization (WFO). The participants also included individual farmers/members of the National Farmers Organization (NFOs) concerned with agriculture, food security and climate change. Other important participants of the workshop were from academia, research institutions, and funding agencies.

1.5 Mode of participation

Being cognizance of the COVID-19 pandemic and the associated restrictions in some countries across the globe, a hybrid format was adopted for the workshop in order to minimize the spread of the pandemic while keeping farmers and other participants safe. In view of this, some participants participated physically while others joined the workshop online via zoom. The adopted mode of participation ensured that all participants actively and interactively participated in the workshop and its associated activities.

1.6 Workshop facilitation methodology/approach

Generally, participatory and interactive delivery approaches were adopted in the dissemination and exchange of knowledge and skills/practices. This ensured that the participants were immersed in deconstruction and reconstruction of knowledge and practices necessary to boost farmers' adaptive capacity to respond to climate change and engage stakeholders in an inclusive and informed decisions and policies. The following specific approaches were central to the effective participation of the participants of the workshop:

1. Presentation: Presentations were done with the aid of PowerPoint. The presentations consisted of text, images, pictures and charts that provided practical understanding of the issues discussed.
2. Demonstration and Group activity: Demonstration were deployed to help participants identify their agency and power sources, as individuals and collectively as a group. Demonstration and group work were done with the aid of the Facebook Business Canvas (edited version) and specially designed interactive form, which embraced mutually inclusive processes of problem identification, ideation/brainstorming and peer-to-peer learning. Participants were taken through serial activities aimed at helping them identify how they can garner voice and movement for climate change policies and actions at national, regional and continental levels.

3. Open forum and discussion: This methodology was very critical as it offered the opportunity for participates to present their experiences and real life situations that can be harnessed to understand the African farmer and find collective approach to boost the capacity and the knowledge-based of Africa farmers. Open forum and discussion enhanced the process of consolidating the African farmers' experiences and their common voice/position for climate change.

2.0 WORKSHOP PROGRAMME OUTLINE AND MODULES

This section of the report provides accurate information on the workshop and the modules that were covered. See Table 1 in the Appendix for details of the programme outline for the workshop.

2.1 Opening remarks

The workshop began with an introduction done by Mrs Emmerance Tuyishime, the Programs Officer at PAFO. On her part, she elaborated on the genesis of the Climakers Alliance: a global alliance bringing together farmers and relevant stakeholders working together to strengthen the capacities and decision making processes related to climate change. As part of the Alliance, PAFO signed a memorandum of understanding with the World Farmers Organization (WFO) to mobilize funds to support consultation processes of farmer-based organizations on climate change related issues in Africa. As a result, regional and continental workshops are held in African to improve farmers' resilience and participation in climate change related policies. The regional workshops are facilitated by the regional FBO in each of the five regions of Africa. The continental workshop aims at helping African farmers share their climate change experience and exchange their best resilient practices while boosting their participation in climate change policies at national, regional and continental levels. The PAFO Programs Officer further introduced the workshop agenda, and also introduced the General Secretary of the WFO will be delivering the opening remarks and the the workshop facilitator, Dr. Peter Asare-Nuamah, the PAFO Expert, who doubles as a Lecturer in the University of Environment and Sustainable Development (UESD), Ghana.

On her part, Mrs. Arianna Giuliodori, the General Secretary of the World Farmers Organization emphasized that the Climakers Alliance (CA) was launched in 2018 at COP24 by a small group consisting of farmers, the private sector, civil society organizations and researchers, who collectively and strongly believed that farmers owned the solutions to the menace of climate change. Thus, they were convinced that farmers can drive positive responses to climate change in the form of both adaptation and mitigation. Indeed, the world has changed and people across the globe, especially in developing and vulnerable regions are experiencing though and harsh times exacerbated by the COVID-19 pandemic. Nevertheless, farmers in general have proven to be resilient, forward looking and innovative amidst the pandemic and frequent climate shocks and stressors.

The continental workshop in African is therefore necessary as the WFO prepares to deliver a fundamental piece/proposal at COP26 in Glasgow, that will go a long way to change the narrative of farmers' participation in climate change policies by providing recommendations that can help improve the commitment of governments and global leaders to take urgent steps to address climate change, thereby promoting a win-win scenario for policy makers, the plant and people living on it and lastly for the agriculture sector to thrive and feed the world sustainably. The regional and continental workshop hinges on the ideology of the Climakers Alliance, thus climate change solutions should be grounded and deeply rooted in what farmers are already doing to improve adaptation and mitigation. Consequently, the challenges and experiences of African farmers to be shared at the continental workshop were vital component of the solution. The workshop therefore offered the opportunity for farmers to learn from each other in an attempt to build a resilient and robust agriculture system across the globe.

2.2 Module 1: Overview of resilient and climate smart agricultural practices in Africa

This module of the workshop consisted of an interactive presentation and discussion, which offered an opportunity for participants, mainly African farmers, to share their experience and innovative solutions as resilient response to climate change. The presentation focused on four main aspects including agriculture for development in Africa, the vulnerability of African agriculture system, resilient agricultural practices in Africa and scaling up resilient agricultural practices in Africa. Presented by Dr. Peter Asare-Nuamah, the presentation sought to achieve the following outcomes:

1. To enable the participants appreciate the centrality of agriculture for Africa's development. This is was necessary to position farmers as critical stakeholders for development in Africa.
2. To help the participants gain insights into resilient agricultural practices adopted in Africa
3. To scale up resilient agricultural practices in Africa

The Facilitator pointed out that agriculture plays a critical role in the development process in Africa, as the sector is the backbone of many economies in the continent. Although the contribution of agriculture to gross domestic product has declined in recent years in Africa, it still contributes immensely, especially in landlocked countries, such as Chad, where agriculture contributes to about 50% of GDP. The sector also absorbs the majority of the labour force in the continent (over 60%), thereby helping to address unemployment. Agriculture is also the major source of foreign income and the main support base to achieving food security in Africa.

Although Africa has about 60% of arable land, however, the African agriculture system is highly vulnerable to climate change, which has ripping effect on the potential of the sector to contribute to drive development on the continent. The sector is dominated by about 80% of smallholder farmers, who are poor and have limited capacity to adapt to climate shocks and stressors, including erratic rainfall, rising temperature, floods, droughts, windstorm, and pests and diseases. More so,

low adoption of technology and innovation, poor land tenure and governance system, political conflicts and tension as well as poor agricultural practices increase the vulnerability of the agriculture sector.

The presentation provided the framework for the participants to discuss and engage with the subject matter. The discussion centered on two questions:

1. Which changes in climate have you experienced in your community as an African farmer?
2. How does climate change affect agricultural activity in your community?

The participants demonstrated their knowledge of climate change, as many of them noted that rising temperature, erratic and unpredictable rainfall, frequent droughts, floods and windstorms are typical manifestation of climate change. Many of the participants attributed climate change to human or anthropogenic activities. For instance, it emerged that deforestation, population growth and poor mining of natural resources are driving climate change in many parts of the continent. The observed changes have significantly altered the raining and planting seasons, which makes it difficult to farmers to rely on their tradition and prolonged years of ecological experience. For instance, delegate from West Africa hinted that, many farmers are confused as to when to plant because the rainfall season has changed and is completely unreliable to predict.

The impact of climate change on both crops and livestock were highlighted by the participants from Western, Northern and Central Africa. In Chad, for instance, it emerged that climate change impact on livestock activities is fueling conflicts among farmers and herders, which poses serious food and security threats to the country. Some of the participants lamented on the effect of climate change on fisheries and meat production, which according to them has caused scarcity and the corresponding high prices of fish and meat products. The continuous occurrence of the phenomenon may aggravate food insecurity in poor and vulnerable farmer households. The spread of pests and diseases in both crops and livestock has also skyrocket in recent times mainly to due to climate change. The activities of fall armyworms on grains and cereals were reported among the participants from the different regions of the continent.

The discussion was followed with the second part of the presentation, which focused on resilient agricultural practices. Conservation agriculture, the application of improved crop varieties and agrochemicals, irrigation farming, post-harvest management practices, bunds technology for rice production, terracing farming, and indigenous practices, such as tasa irrigation and the use of traditionally prepared manure (organic), were important resilient and climate smart practices boosting the resilience of the African agricultural systems. Conservation agriculture has been implemented by state governments and development partners in many parts of Africa, such as Zambia, Kenya, Zimbabwe and Ghana. It is resilient to climate change as it minimizes soil disturbance, reduces erosion through mulching, maintains soil mositure and increases food security through balanced or mixed cropping. Participants were encouraged to embrace conservation agriculture while spreading the news to other farmers in their communities and countries. Existing

evidence shows that farmers in Zambia, Kenya and Zimbabwe have increased their productivity through conservation agriculture, which has enabled households to adapt to climate change.

With climate change threatening the resilience and productivity of traditional crops, governments and research institutions have intensified the production and use of improved crop varieties in Africa. Crops such as maize, cassava, millet have improved varieties to withstand the change in climate. Improved varieties are drought tolerant, less water consuming and early maturing that enable African farmers to minimize the impact of climate change on crops. In the same vein, improved crops help to increase agricultural yields, thereby increasing food security, especially in poor and vulnerable households.

The application of improved varieties were reported by PROPAC and UMNAGRI to be common among farmers in Morocco, Algeria, Gabon and Cameroon. To increase the application of improved crop varieties, the Alliance for Green Revolution in Africa (AGRA) has set up the Center of Excellence for Seed Systems in Africa (CESSA) to guarantee a continental-wide approach to the production of improved seeds. In East Africa, the East Africa Grain Council (EAGC) also spearheads and streamlines the production of quality grains for farmers. In Ghana, the government has been instrumental in championing the production of quality and improved seeds through the Council for Scientific and Industrial Research (CSIR) Seed Centers. The Seed Centers and other private producers have helped distribute improved seedlings to farmers under the Government of Ghana flagship programme "Planting for Food and Job." Seed and nursery centers have also been established in Northern and Central African to promote access to quality seeds among farmers.

The application of agrochemicals has also intensified among Africa farmers. Agrochemicals have the potential to reduce the activities of pests and diseases, minimize the growth of weeds, and improve yields. For instance, the application of fertilizer has gained prominence among farmers across the continent due to the great potential to substantially increase yields from agriculture. However, agrochemicals have environmental and health implications: increasing the emission of greenhouse gases, exposing farmers and communities to health risks and eroding the ability of soil to support plant growth. Consequently, the participants were advised to ensure that they wear protective clothes during the application of agrochemicals to minimize the impact on human health. Improving education on the effective application of agrochemical is also gaining roots in North and Central Africa, as noted by UMNAGRI and PROPAC.

Irrigation farming is also a robust and resilient approach to mitigate climate change, especially in arid regions, where rainfall is scarce but agricultural production must continue. Irrigation farming can be practiced on small and large scale farms, by using advanced irrigation systems or hand sprayers and sprinklers. In North Africa where the Sahara poses a threat to successful agriculture, irrigation farming is widely practiced. UMNAGRI noted that smallholder farmers in Algeria and Morocco with the assistance of government institutions, NGOs and the private sector, dig wells, water basins and sakiya to increase their farming activities through irrigation. Such approaches enable farmers to produce their crops even in the absence of water. Similar cases of irrigation

farming were reported in Central Africa by PROPAC. Sprinker, drip, furrow and subsurface irrigation systems have been documented in many parts of the continent.

Effective an efficient post-harvest management practices are critical for African farmers to minimize the effect of climate change on food production and security. This stems from the fact that about 10-23% of post-harvest losses are experienced across the continent, with consequential impact on food security and livelihoods of poor farmer households. Poor transportation network, for instance, increases post-harvest losses of about 2-4%. It is essential that governments in Africa ensure that the appropriate infrastructure demands of farming communities are provided to minimize post-harvest losses and increase productivity and income for farmers. In essence, minimizing post-harvest losses requires improved hygiene and monitoring practices, the application of improve storage devices, driers and shellers. In Ghana, the Grain Mate device has been developed as a simple technology to help farmers monitor the moisture content of dried crops, such as cocoa, maize, rice etc., thereby helping farmers to minimize post-harvest losses emerging from poor drying practices, which account for about 1-2% losses.

The bunds technology has been embraced by rice farmers with the assistance of state and international development institutions. In Ghana, for instance, the Japan International Cooperation Agency (JICA) has been instrumental in scaling up the application of bunds technology among rice farmers. The bunds technology is guided by the idea that rice farming can be highly profitable even if the size of the land is small. In bunds technology, the farm is divided into small sizes (plots) and bunds are created around each plot to ensure that water and fertilizer applied on the land are not eroded but retained for the crops planted on the piece of land. Rice farmers in the Adansi North District of Ghana have provided positive feedback (substantial increase in yields) with the application of the bunds technology.

Terracing farming is predominant in Kenya, Tanzania, Zimbabwe and many other parts of the continent, as an approach for efficient and effective soil and water management. Farmers already face water and poor soil challenges, which affect agricultural productivity. As such, terracing help farmers to better manage water and soil for agriculture purposes. For instance, Fanya-juu, a terracing farming practice in Kenya helps farmers to increase soil and water management by about 35% compared to conventional agriculture. Similarly, compared to conventional agriculture, terracing farming helps farmers in Kenya to increase yields by 25%.

In addition to terracing farming, farmers in many parts of the continent have resorted to the application of traditional knowledge and practices as response to climate change and its associated impact on agriculture. In Niger, tasa, a simple irrigation system which involves digging hole across fields and close to crops to contain and retain water for crops, has been reported to be effective compared to conventional irrigation According to PROPAC, farmers in Cameroon, Central African Republic, Democratic Republic of Congo and Chad produce organic manure through vermiculture: the production of earthworms from beef dung, which are applied on the farmlands as fertilizers. Such approach increases the concentration of nitrogen, potassium and phosphorous, and micronutrients, such as magnesium, zinc, copper, sulfur and boron, which are critical for soil

and plant health. In Ghana, similar approach exist where cocoa farmers use chicken dropping a substitute for chemical fertilizer. The application of organic manure minimizes the health risks associated with the use of chemicals.

To limit the devastating action of insects, growers have adopted techniques of combining crops on the same plot. Thus, generally, lettuce is associated with celery. Maize with beans, cassava with peanuts etc. The combination of these crops allows rapid growth of celery after the withdrawal of lettuce, for example. Producers also combine black nightshade, amaranth, cabbage, green beans, mint, leek and chives. Growers are also setting up scarecrow devices to hunt birds in the field by using soil on the terminal bud of the corn stalk to control caterpillars. The use of wood chips to prevent weeds is a technique regularly encountered in Cameroon. For treatment techniques, the use of petroleum, ash, tobacco and Indian hemp is used to control insects and pests in many parts of Central Africa.

Faced with a constant decline in crop yields and ever-increasing changes in climatic risks and uncertainties, producers in Central Africa have developed other activities to diversify their source of income. These are livestock (pigs, broilers), the transformation of wood into charcoal, agro-food processing (production of cassava sticks), trade, crafts, and sand exploitation. . Young people have abandoned market gardening and have started driving motorcycle taxis. The production of argan oil, honey, vegetables and fruits are also common in Northern Africa. Other interventions implemented to supplement agricultures amidst climate change include the introduction of aromatic and medicinal plants, such as the Atlas pistachio, Stipa tenacissima, Agran and Carob trees. These practices are common with farmers in North Africa (Algeria, Morocco, and Tunisia) as an approach to control the rate of desertification and increase agricultural productivity. In Cameroon, participants noted the women are encouraged to produce charcoal from cassava leaves, which helps to minimize the activities of logging and the cutting down of trees for fuel wood. This approach has positive impact on forest and natural resources through environmental conservation and protection.

The module ended with the provision of recommendations necessary to increase resilient agriculture, boost agricultural productivity and improve food security and livelihood of farmers engaged in the sector in Africa. There were calls for African governments and their development partners to increase investment in the agriculture sector. Similarly, the commitment of African governments to adhere to the Malabo protocol should be promoted to increase the resilience of the agriculture sector in the continent. Increasing investments in the sector has a great potential to boost socioeconomic development, address poverty and improve food security and livelihoods, particularly in vulnerable communities in the continent.

Investments in the agriculture sector should be directed to fertilizer, hybrid and improved seeds, irrigation systems, storage facilities and other critical areas. Also, regional trades in agricultural products should be a priority among African governments. This can be achieved with an improved agricultural value chain and value addition to agricultural products. There is also the need for states and educational/research institutions to increase research and development for agriculture in order

to scale up agricultural innovations and resilient practices. Climate services to farmers using radio, television, mobile messaging, extension agents, and farmer-to-farmer education must be intensified across Africa. Education on climate change and resilient agricultural practices must also be intensified, especially among smallholder farmers in rural Africa by employing a mixture of the following mediums: radio and television (climate journalism), extension agents, opinion leaders and farmer-to-farmer education. These, if implemented, would boost African's agricultural systems, and improve adaptation and mitigation to climate change.

2.3 Module 2: Farmers' agency and power for engagement in climate change policies

The second module of the workshop also consisted of an interactive presentation, group activities and discussion, which offered an opportunity for participants to share their experiences and challenges in participating in climate change related policies. The presentation focused on an overview of global climate change and adaptation governance, a demonstration of farmers' agency and power sources and building momentum for farmers' engagement in climate change policies. The presentation sought to help farmers understand how global climate change and adaptation governance operates, enable participants to identify their agency and power sources for engagement in climate change policies and finally acquire requisite knowledge and skills necessary to build farmers' voice for engagement in climate change policies.

The module started with the genesis of global environmental concerns. References were made to the following landmark events, which sparked the quest among global leaders to address global environmental challenges, including climate change, deforestation, desertification, water and air pollution, among others.

- The Stockholm Human Environment Conference (1972)
- World Commission on Environment & Development (1987)
- Intergovernmental Panel on Climate Change (IPCC) reports (1991, 2000, 2007, 2012, 2014, 2018, 2021)
- Rio de Janeiro Conference on Environment and Development (1992)

All the landmark events associated the rising environmental challenges to human activities, such as population growth, urbanization, industrialization, and poor agricultural practices. With respect to climate change, the Intergovernmental Panel on Climate Change (IPCC) has particularly reported that there is about 90-95% consensus among scientists that climate change is caused by anthropogenic factors, which release greenhouse gases (GHGs), such as carbon dioxide, methane, chlorofluorocarbons, sulphur dioxide, and nitric oxide, into the atmosphere. These gases have serious implications on ozone layer depletion, global warming and climate change. Intuitively, there was the urgent need for a concerted global attention to mitigate the anthropogenic causes of climate change and minimize it impacts, especially in developing economies.

The United Nations Framework Convention on Climate Change (UNFCCC) provided the framework for the world leaders to demonstrate commitment towards addressing global

environmental challenges. The Convention committed governments across the globe to take concrete steps and implement actions to address the anthropogenic causes of climate change. The UNFCCC is deeply rooted in the principles of sustainability (i.e. inter-generational, intra-generational and procedural equity). However, in practice, the UNFCCC fails to adhere to these principles, especially procedural equity, since many critical stakeholders including farmers and youths, are not offered the opportunity to actively participate in global policies related to climate change. It must be emphasized that procedural equity calls for inclusivity in policy making processes.

Another weakness was that climate change adaptation, which is important for Africa and African farmers, was not been given the full attention at the UNFCCC. It was evident that the UNFCCC was more tilted to the concerns of the developed world compared to the developing economies. Inherently, the UN Conference of Parties (COP) for global climate change policies equally sidelined important stakeholders, such as farmers, in policy formulation and implementation. Fortunately, the Paris Agreement of 2015 sought to address some of the weaknesses in the UNFCCC by broadening stakeholders' participation and emphasizing the importance of climate change adaptation at the global level. However, the inherent challenge associated with procedural equity has not been aggressively addressed by the Paris Agreement. This is because since the onset of the UNFCCC, two category of participants are identified. These include:

- Parties: Active participants in negotiations (e.g. governments, international development agencies [World Bank, African Development Bank], regional institutions [African Union])
- Observers: Passive participants (NGOs such as YOUNGO)

Observers are offered a camouflage participant status but in reality they do not have any power to actively participate in negotiations. Consequently, participation by observers takes the following form, which defeats the procedural equity principle.

- Advocacy
- Side events
- Exhibits
- Actions
- Informal meetings
- Press conference
- Protest
- Written submissions
- Observing negotiations and plenary interventions

The overview of global climate change and adaptation governance was followed with the section on agency and power, where participants were taken through what agency is, how they can mobilize and utilize their power to engage in climate change policies. The facilitator explained that agency is the capacity to act voluntarily without any form of compulsion and it is influenced by social conditions of people. In that case, farmers' agency is dependent on: their engagement in agriculture which is sensitive to climate change, their limited capacity (poor access to resources), poverty levels and high vulnerability to climate change. Consequently, African farmers have the agency to address climate change and deserve to be seated on the policy table. Agency is also influenced by ego and alter perceptions. Ego is the perceptions farmers have about their own agency while alter perception is how other stakeholders including government, COP, PAFO have about farmers. Indeed, high ego and alter perceptions strongly increase farmers' agency to participate in climate change policies. Unfortunately, alter perception of farmers' agency remains low, which affects their participation in climate change policies. However, farmers' agency can exercised based on the power available to them, which includes:

- Symbolic power
- Social power
- Cognitive power
- Material power
- Leverage power

Symbolic power can derived from membership of larger organizations (e.g. national, regional and continental farmer-based organizations), such as PAFO, WFO. Such organizations have moral mandate and integrity to address issues affecting their members. Cognitive power constitutes the extent of farmers' knowledge and information on climate change, the associated policies and policy processes. Social power can be derived from social networks that farmers can access and exploit to gain audience and increase their participation in climate change policies. Examples include the media, CSOs/NGOs, political parties, government representatives (extension agents), farmer-to-farmer relations. Farmers can also derive their leverage power when they have access to participate and influence policy platforms, processes and stakeholders at different levels such as COP, African Union, Regional Economic Communities and at the national levels. Material power also constitutes the availability of adequate financial and material resources to augment farmers' participation in climate change policies. While farmers have limited material power, the PAFO and its partners can play important role in boosting the material power of farmers, necessary for them to effectively engage in policy processes.

The presentation opened the platform for the participants to discuss the challenges they face and how African farmers can engage in climate change related policies (see Activity 1 & 2 in Appendix). Many of the participants concurred that farmers are sidelined and neglected at all policy levels (national, regional and international), which affects the capacity to address climate

change. This is largely to due low alter perception about the agency of farmers in contributing to climate change. However, farmers have rich ecological knowledge and experiences that can be brought on the policy table to find sustainable and lasting solutions to climate change. Some participants from Central and Western Africa noted that they have on several occasions submitted proposals to their governments through national farmer-based organizations but their government minimally take farmers concerns into policies. The participant expressed worry about the top-down approach, which characterizes climate change policy processes at national, regional and international levels. It is therefore not surprising that if farmers cannot be given the opportunity to actively participate in national policies, it will be quite difficult to gain active participation at the international level (i.e. COP).

The participants agreed that it is important for farmers to fight for policy engagement and inclusion at the national level since it is the basis for them to be recognized at the international level. More so, national government have better representation at the international policy table and hence farmers can leverage on their participation in national policies to influence international policy processes. Some of the participants suggested the need for awareness and mass education on the civil rights of farmers, which can be harnessed to improve their participation in policies. There were also suggestions for farmers and farmer-based organizations to partner with national and international organizations (e.g. FAO, IFPRI) that can help improve their engagement in policies through capacity building and advocacy. Farmer at national, regional and international levels should lobby for permanent committees to negotiate or participate in policies on behalf of farmers. This will help present the cases and common position of farmers to policy makers.

The participants emphasized the strategic position of the PAFO to change the narrative of farmers' engagement in policies at national, regional and international levels. At the national level, the PAFO must help build the capacity of national farmer-based organizations to effectively engage in policies and interventions that concern them. At the regional and continental level, the PAFO should work towards having representations on all policy processes that have to do with the agriculture sector. It was also suggested for PAFO to rally behind the WFO in championing and advocating for the active participation of world farmers at all international policy platforms including the UNFCCC and COPs. To achieve this, the experiences and common position of African farmers must be promoted by both PAFO and WFO.

2.4 Closing remarks

The closing remarks were delivered by the Presidents of the World Farmers Organization and the Pan African Farmers Organization. On his part, Dr. Theo de Jager, the President of WFO lamented on the failure of global leaders to recognize farmers as critical and essential stakeholders in addressing climate change. Farmers has far been neglected on the policy table and it is a high time they advocate for their engagement in all policy processes related to climate change and the agriculture sector. The global policy processes are clear manifestation of the fact that farmers

across the globe have been misused and the trend cannot continue anymore. This is because no one is more vulnerable to climate change than farmers, who are the drivers of the global food systems. Farmers have the potential to capture carbon dioxide into the soil through their crop production activities. Also, soil health is critical to addressing the menace of climate change and only farmers have the potential to do that. Intuitively, farmers have something substantial to contribute to climate change and can therefore not continue to be neglected at policy platforms and processes. To this end, the WFO and PAFO are a force to recon with and it is time policy makers give critical attention to farmers across the globe.

The President of the PAFO, Mrs. Elizabeth Nsimadala emphasized the vulnerability of the African agriculture systems and farmers to climate change and how policy interventions are essential for adaptation and mitigation in the continent. Agriculture is central to Africa's development and hence it was critical for policy makers in African to give important attention to the sector and the associated phenomenon that threatens agriculture. The call for effective policies can be improved if farmers' experiences are well understood and communicated. As such, the Climakers Workshop offers the opportunity for African farmers to share their experiences, exchange and learn resilient agricultural practices from other regions while attaining a common voice and position of farmers in the continent. The PAFO is strategically positioned to ensure the development of the agriculture system in Africa by first helping to address vulnerability and building the capacity of farmers, whose work are critical for the sector. The PAFO's strategic partnership with the Climakers Alliance and the WFO is therefore essential to the development and promotion of resilient agricultural systems in Africa.

APPENDIX

Table 1: Workshop Programme Outline

Activity	Time	Responsibility	Delivery methodology
Opening remarks	14:00 – 14: 15	PAFO President WFO	Presentation
Overview of climate smart and resilient agricultural practices in Africa	14: 15 – 15: 15	Expert	Interactive presentation with case studies and demonstrations
Identifying farmers' agency and power sources for climate change engagement and policies	15: 15 – 16: 00	Expert	Interactive presentation, group work, activity and case studies
Coffee break 16:00 – 16:15			
Discussion – Q/A	16:15 – 16: 40	PAFO	Open forum
The way forward: A message of hope	16: 40 – 16: 50	PAFO President WFO	Presentation
Closing remarks	16: 50 – 17: 00	PAFO	

Activity 1: Individual/Group work

Use the table to identify the sources of power available to you as a farmer. Have you applied or used any of the powers for climate change policies either at the national/regional or continental levels?

This activity is aimed at examining participants' understanding of their power for climate change policies

Power Types	Sources	Previous application	
		Yes	No
Cognitive power			
Social power			
Material power			
Symbolic power			
Leverage power			

Activity 2: Group work

Using the African Union as the policy platform for climate change in Africa, and guided by your agency and power for engagement in climate change policies, demonstrate how you can effectively participate in continental climate change policy processes.

This activity is aimed at helping participants demonstrate how they can participate in climate change policies using the African Union as the case study.

Criteria	Examples
Key activities	
Key resources	
Key partners	
Value proposition of farmers	

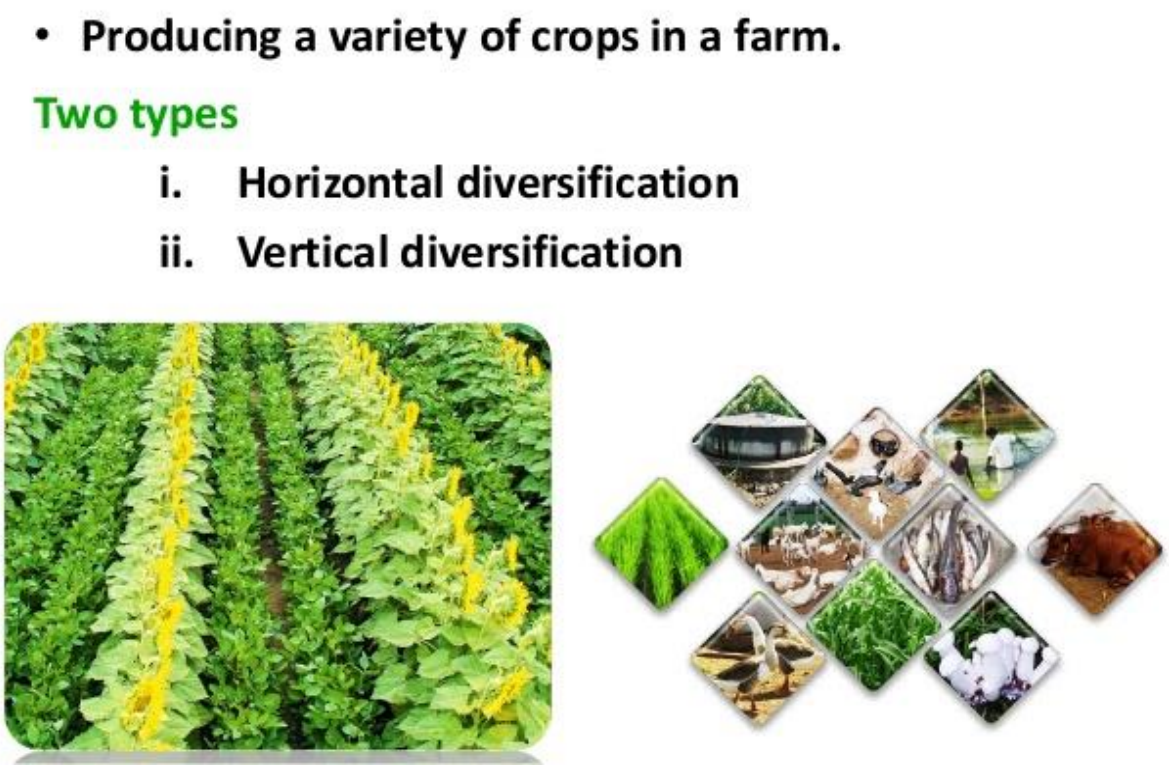
Channels of engagement	

Figure 1. Tasa irrigation

Figure 2. Bunds technology for rice production

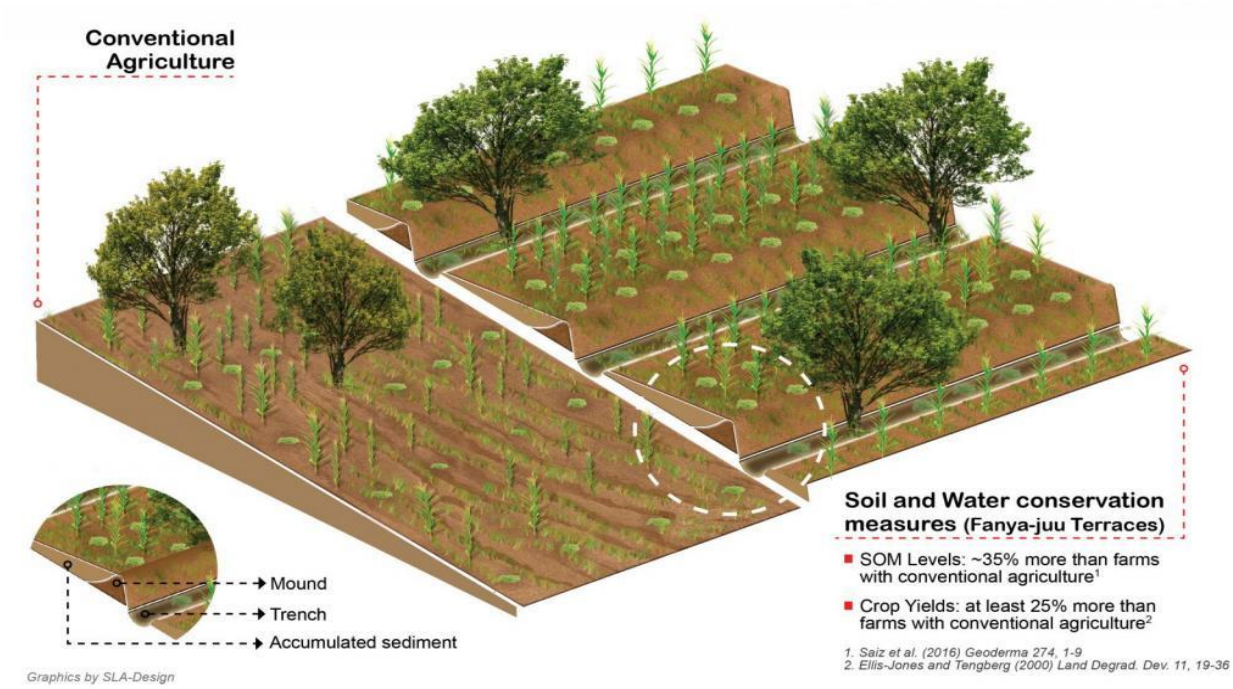
Figure 3. Soil cover under conservation agriculture

Figure 4. Crop diversification under conservation agriculture



Source: https://crackittoday.com/current-affairs/what-is-crop-diversification/

Figure 5. Fanya-juu terracing farming in Kenya



Source: https://ccafs.cgiar.org/news/terracing-practice-increases-food-security-and-mitigates-climate-change-east-africa

Figure 6. Current and projected contribution of agriculture to GDP in Africa

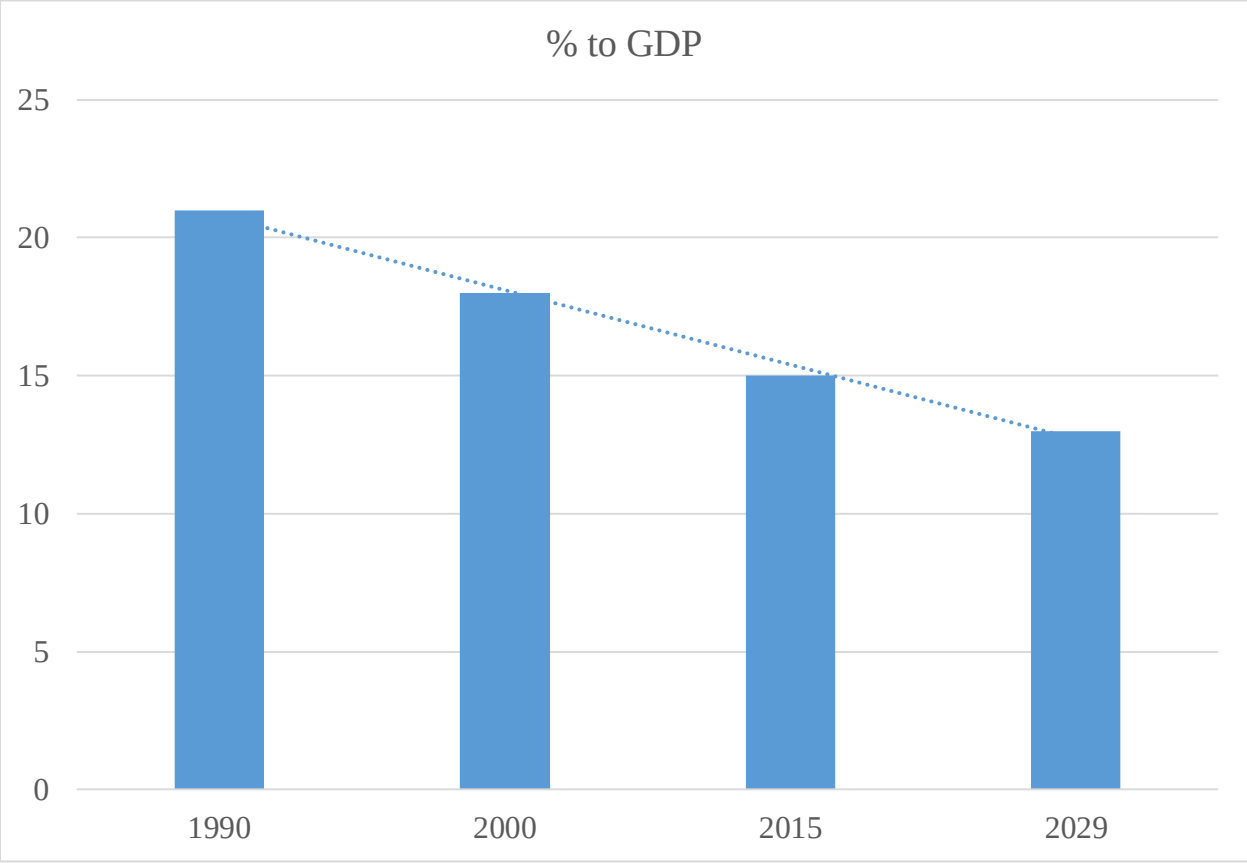
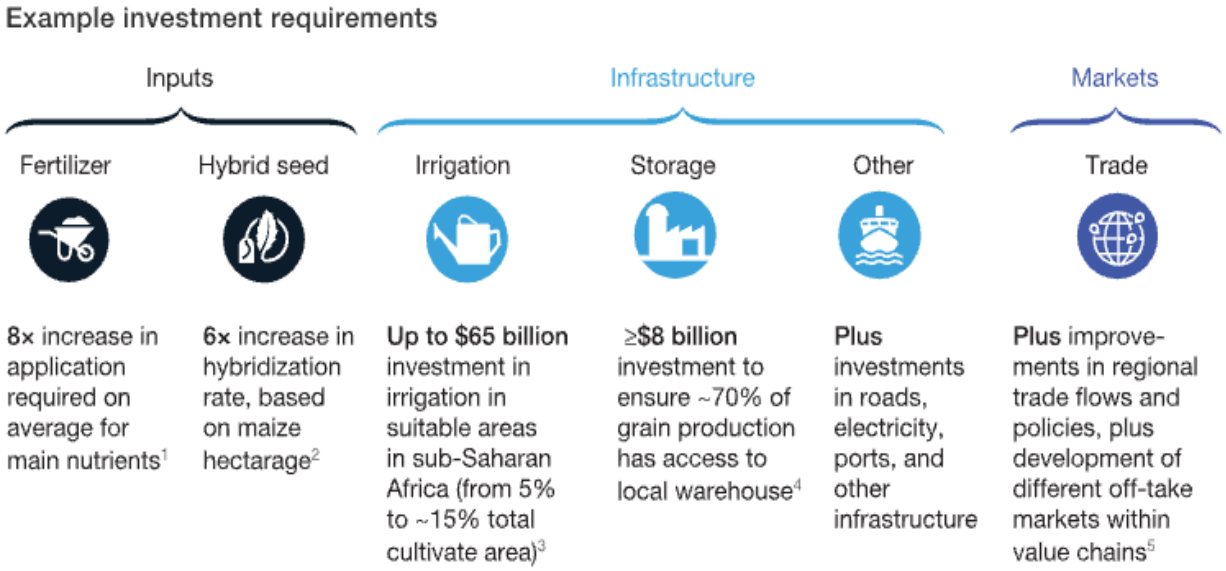


Figure 7. Required investments in Africa's agriculture



Source: McKinsey & Company (2019)