

Case Study on Climate Compatible Development (CCD) in Agriculture for Food Security in Kenya

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**Advancing Climate Compatible Development for Food Security
through the Implementation of National Climate Change Strategies**

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Table of Contents

1. Introduction: Agriculture, Food security and CCD approach, the Kenyan Case Study
2. Overview of Kenya
 - 2.1 Kenya's Climate;
 - 2.2 Kenya's Economy;
 - 2.3 Impacts of Climate Change in Kenya
- 3.0 National Climate Change Strategy and its State of Implementation
 - 3.1 National Climate Change Strategy background
 - 3.2 The Institutional Framework
4. Food Security and National Climate Change Strategy in Kenya
 - 4.1 Food Security and the National Strategy
 - 4.1.1 Relevant Adaptation themes in the National Strategy
 - 4.1.2 Examples of Planned Adaptation by Sector.
 - 4.2.1: Examples of Planned mitigation by Sector.
5. Potential Synergies, Key Barriers and Trade-offs
6. Climate Financing in Kenya
 - 6.1. Designing of Kenya National Climate Fund
7. Barriers to utilizing synergies and scaling-up the required actions
8. Conclusion
9. Annex 1 Stakeholders Engagement 2011 Feedback
10. Annex 2 Stakeholders feedback 2012
11. Reference

Diagrams and Figures

Figure 1: Map of Kenya

Figure 2: The NCCRS Action Plan Stakeholders.

Figure 3: NCCRS Action Plan Subcomponents (Ministry of Environment, G.o.K, 2010)

Figure 4: NCCRS Action Plan coordination.

Table 1: Action plan subcomponents Status, *August 2012*.

ACRONYMS

AP	Action Plan
ASAL	Arid and semi arid lands areas (ASALs)
ASPS	Agricultural Sector Programme Support Project (ASPS).
ASDS	Agricultural Sector Development Strategy
COMESA	Common Market for Eastern and Southern Africa.
CDKN	Climate and Development Knowledge Network
CCD	Climate Compatible Development
CCCU	Climate Change Coordination Unit
CDM	Clean Development Mechanism
KMD	Kenya Meteorological Department
DNA	Designated National Authority,
DOE	Directorate of Environment
DANIDA	Danish International Development Agency
ERS	Economic Recovery Strategy
GDP	Gross Domestic Product
KMD	Kenya Meteorological Department
MDG	Millennium Development Goals
MEMR	Ministry of Environment and Mineral Resources.
NAAIAP	National Accelerated Agricultural Inputs and Small Enterprises Project
NFSPP	National Food Security Promotion Programme
NMK	Njaa Marufuku Kenya (NMK)
MoA	Ministry of Agriculture
REDD	Reduced Emissions from Deforestation and Forest Degradation (REDD)
MOF&W	Ministry for Forests and Wildlife
MFA	Ministry of Foreign Affairs
NEMA	Environment Management Authority (NEMA)
NGO	Non-Governmental Organization
NCCAP	National Climate Change Action Plan
NCCU	National Climate Change Coordinating Office (NCCU)
NCCRS	National Climate Change Response Strategy
UNFCCC	United Nations Framework Convention on Climate Change
WB	World Bank

Executive Summary

Global climate change poses serious threats to food security of the millions in the Horn of Africa. For majority of poor nations, food insecurity remains a challenge. A range of factors constitute food security ranging from access, markets stabilization and building resilient food production and supply systems. Inbuilt integrated systems still lack within the food security sectors in Kenya even though the national government has had several initiatives and efforts towards such an approach. This means that an integrated system is missing that has a focus on adaptation and mitigation measures to promote compatible development in agriculture sector and specifically focusing on food security goals.

The case study is an attempt to explore the understanding of food security using the climate compatible development lens on the existing synergies between adaptation and mitigation as laid out in the Kenya's National Climate Change Action Plan (NCCRS AP). This being a build up on providing technical support to Kenya policy makers and key stakeholders with tools that integrate food security elements extracted from the action plan to harness global climate finance effectively.

Agriculture remains the mainstay of Kenya's economy currently contributing to about 26% of the Gross Domestic Product (GDP) directly and another 25% indirectly. It accounts for 65% of Kenya's total export and provides more than 18% per cent of formal and informal employment is in the rural areas. Kenya has tropical climate except the coastal parts and the northern parts that are generally arid and hot. Hot and humid at the coast, temperate inland and very dry in the north and north east parts of the country. In addition, the sector contributes to supporting the livelihoods and food needs of 80% of the Kenyan population. This means that strengthening of the agricultural sector is a prerequisite condition for achieving economic recovery and growth. Being a country depending on rain fed agriculture; Kenya remains vulnerable to changes in the climate taking in consideration that 80% of its land is arid and semi arid land. It has frequent floods and droughts that affect the livelihood approaches (crops and livestock). The rise in the frequencies of such disasters and the negative impacts they continued to have on community livelihoods and more so impacting onto the economy led to the Kenyan government action to develop a strategy that was geared to respond to the impacts of climate change.

The Kenyan NCCRS AP is an attempt to address some of these threats. The implementation of the NCCRS was a challenge because it lacked an action plan to guide. The Kenyan government set out to develop an action-plan looking at 8-subcomponents that include *long term national Low Carbon Development Pathway, Enabling Policy and Regulatory framework, NAPAs, NAMAs, National Technology Action Plan, National Performance and Benefit Measurement, Knowledge Management and Capacity Development and Finance* within the NCCRS and how the various

components can be implemented. This has become critical in the Kenyan case because it has provided an inroad for a range of government ministries and other stakeholders with interest in climate change and development to develop and address specific sub-areas and conduct costing exercises that enables existing global finance be accessible and justified. The ministries initially saw these as an additional burden but they currently see this as effective way to address a similar challenge of climate change impact. This is the key Government of Kenya's climate change guide that informs the climate change agenda in line with the main policy and other strategy documents including the national development blue-print; Vision 2030, the latest development strategy that is aimed at seeing Kenya grow to an industrialized country by the Year 2030. Largely the efforts laid out were geared towards finding ways that communities can adapt to the impacts of the climate change and at the same time encouraging activities and investments geared towards mitigation. The two aspects; adaptation and mitigation have been laid out and will eventually be integrated within the government national development planning and national budgetary process. The AP calls for a holistic and joint action with all key stakeholders who include related government ministries, private sector and civil society agencies in managing the effects of climate change. The AP has proposed a range of measures for adaptation and mitigation. It has however not been able to clearly bring out the synergies between the two and specifically, in addressing food insecurity matters in the country. The thin line between specific adaptation and mitigation measures in relation to food security aspects are not well understood by the policy actors. This means there is no clear way to make sufficient resource allocations for food security elements within the NCCRS AP.

Building synergies between adaptation and mitigation in relation to climate change becomes critical in promoting resilience in Kenya's food security and agriculture sector. There has been a growing and sustained debate in Kenya amongst policy makers, development actors and donors about food insecurity. Under the Ministry of Agriculture (MoA), there has been established an Agricultural Sector Coordination Committee (ASCU) that house 10 government ministries that have direct relevance to food security in Kenya. This body and other such as Harmonization Alignment and Coordination (HAC), that comprises donor agencies and government have one thing in common; Effective use of resources through coordination. The agencies mentioned above and other key ones including the Climate Change Secretariat under the Ministry of Environment and Mineral Resources (MEMR) form a good architecture in thinking about climate fund and a "gatekeeper organization". Develop agencies have invested \$2.3 billion in Kenya on funding mitigation and adaptation activities; roughly \$920 million is in energy sector and \$ 670 million in water and sanitation. Forestry, agriculture and coastal areas account for the most of the rest. The amount of funds devoted to mitigation and adaptation is roughly equal, with adaptation accounting for slightly more, as is appropriate for the Kenyan situation (Consultant, KCCAP; Sub-Component 8: Finance, August, 2012)

There is a progress of late to form Climate Change Authority to be the gatekeeper organisation, though there are debates that the Ministry of Finance should manage the climate funds. Climate stakeholders in Kenya have expressed that concern in several workshops and fora. The Climate Change Authority Bill' 1st Reading took place in Parliament on 2nd October, 2012. There

is hope it will be passed by the Parliament in 2013 if the current momentum is maintained and more support is received from the wider Kenyan politicians.

The paper makes a conclusion that there is a growing consensus among all stakeholders that climate change must be addressed in an integrated manner and brings balance between adaptation and mitigation. The growing population will need options for addressing adaptation in local sub-sectors. These options must aim at increasing food supply. This means that the Climate Compatible Development (CCD) concept needs to be mainstreamed in a balanced matter. Hence in order to achieve food security goals it will require to not only build effective but strategic partnerships that aim at a systematic development and implementation of CCD initiatives.

1. Introduction:

Agriculture, Food Security and the Climate Compatible Development (CCD) approach

The evidence of climate change in Kenya is unmistakable. Temperatures have risen throughout the country. Rainfalls have become scarce, irregular and unpredictable, and when it is raining, downpour is more intense. Moreover, extreme and harsh weather has become a norm. Since the early 1960's, both minimum and maximum temperatures have been risen by 0.7 – 2.0 °C.

The most visible feature is the increased variability of rainfall (GOK, 2010). For instance, there is a general decline of rainfall in the main rainy season from March to May (the "long rains"). As a result droughts have become more frequent between the March and May, the traditional rainy season. However, there is also a positive trend as Kenya has recently experienced more rains during the traditional short rain season. Some of the observed as well as projected climate change impacts in Kenya include;

- Only 17% of the country's land is arable while 83% consists of semi-arid and arid areas (ASAL). Due to climate change and other human factors, desertification will increase putting indigenous communities at high risk.
- Climate change threatens the country's biodiversity. A loss of some species has already been observed.
- Receding rangelands will threaten the livelihood of subsistence farmers and pastoralists.
- The Kenyan coastline is one of the most vulnerable to sea level rise in the world. It was estimated that about 17% of the city of Mombasa (or 4600 hectares of land) might be hit by rising sea levels rise of 0.3 metres.
- Kenya has always been facing water scarcity. The natural endowment of renewable freshwater is low and water resources are unevenly distributed in both time and space. Climate change will worsen this situation as it affects the main hydrological components. (I.e. precipitation and run-off).
- There have been serious droughts in the last five years. As a result river volumes have decreased dramatically, especially putting people and animals in arid and semi-arid areas at high risk. According to Government of Kenya (2010) the 2009 drought placed approximately 10 million Kenyans at risk (especially as a cause of malnutrition, hunger and starvation).

- Droughts reduced the production of not only staple food crops such as maize but also of other major crops such as tea or sugarcane.
- Health risks such as cholera, tuberculosis, sleeping sickness and rift valley fever are expected to increase as the rise in temperature is experienced.

The changing climatic (rainfall and temperature) patterns have already had adverse impacts on Kenya's socio-economic sectors. Current projections indicate that such impacts will worsen in the future if no adequate measures are taken to deeply cut the world's emissions.

Adverse impacts of climate in Kenya are compounded by local environmental degradation (illegal encroachments and settlements, logging and livestock grazing) that have among others, further aggravated deforestation and land degradation. For instance, the forest cover in Kenya has fallen from 12% in the 1960s to less than 2% at present. This has considerably affected Kenya's five main water bodies and thus affected water consumption patterns in rural and urban areas.

Kenya is already experiencing impacts due to the changes in climate that is mainly characterised by higher frequencies in droughts and floods (RF). This phenomenon makes it essential to systematically integrate synergies between mitigation and adaptation in the existing food security relevant development strategies and policies in Kenya. This project is making that effort by looking at three low income countries (Kenya, Honduras, and Bangladesh) and their respective national climate change strategies each country has a designated organization undertaking the write up of the case study with technical support being provided by two lead agencies based in Germany i.e. Perspective and Germanwatch. It uses the "climate compatible development" concept to analyse and design the financing instrument of food security aspects issues the strategies and action plans. The financing instrument will be built up from the existing country specific literature outlining the synergy between mitigation and adaptation. The tool targets not to jeopardise existing food security efforts by harnessing global climate finance.

The overall aim of the project is the provision of support to policymakers and related stakeholders on understanding how CCD concept can be applied in specifically targeting synergies between mitigation and adaptation with focus on the food and food security aspects. It further attempts to explore how in Kenyan case study (other case study countries) look at mitigation and adaptation and digs out any efforts to harmonize the two components.

Specific objectives include:

- To advance the understanding of what climate compatible development means for agricultural policies which aim at addressing food insecurity of the vulnerable populations;
- To advance the understanding of how national climate change strategies can promote climate compatible development in the area of food security, involving both adaptation and mitigation;

- Development of recommendations for a host country national climate action plan “gatekeeper” to integrate climate funding streams for the agriculture sector in a way that mitigation and adaptation benefits of a given funding opportunities are maximized.

The study has taken range of methods. They included an initial desk review of literature on mitigation and adaptation, food and food security, institutions and agricultural policies. The feedback from the key policy makers and stakeholders’ inception workshop was used. Use of unstructured interviews for specific policy makers and phone interviews were also conducted. These have enabled the team to prepare the Kenyan country case study.

The study is focussed on the food situation of the country bearing in mind the extra burden being caused by climate change impacts that include droughts and floods. It does make references to rain-fed agriculture dependence, agricultural growth and the productivity factor.

After making these assessments, it explores in depth the Kenya’s climate change action plan by looking at the mitigation and adaptation aspects that are outlined.

Finally it attempts to develop a table of synergies existing between mitigation and adaptation in the action plan, also looking at the potential barrier for the implementation of climate compatible development in the Kenyan context.

2. Overview

Kenya is located on the eastern part of the African continent. It has a total area of 582,650sq km including 13,400sq km of inland water and a 536 km of coastline. It is situated across the equator at the latitude of 4° North to 4° South and longitude 34° East to 41° East. The country is bordered by Sudan and Ethiopia in the north. Somalia lies to the east of the country while Indian Ocean borders the country in the south-eastern part. To the southwest of the country is bordered to Tanzania while Lake Victoria and Uganda are found in the west.

Kenya is divided into seven agro-ecological zones ranging from humid to very arid. Less than 20% of the land is suitable for cultivation, of which only 12% can be classified as high potential agricultural land and about 8% as medium potential land. The rest of the country (80%) is arid or semi-arid. Only 60% of the high potential land is devoted to crop farming and intensive livestock production while the rest is used for food and cash crop production, leaving the rest for grazing and as protected. A number of swamps are found in the north-eastern part of the country.

Agriculture is the mainstay of Kenya's economy, currently, directly accounts for 26% of the GDP and for 25% indirectly. The sector also accounts for 65% of Kenya's total exports and provides more than 18% of the country's formal employment.

Apart from (but also amplified by) climate change, deforestation is a great problem in Kenya. The main driver of deforestation is the high demand for energy (MoE, 2002). Climate Change is predicted to affect the growth, composition and regeneration capacity of forests resulting in reduced biodiversity and capacity to deliver important goods and services. This might then cause desertification, deforestation as well as land degradation as communities strive to derive their livelihoods on declining forest resources (NCCRS, 2010). In addition to deforestation, illegal encroachment, settlement logging as well as livestock grazing are observed to have negative impacts on forest ecology. For instance this might destroy water towers that serve as a catchment for the country's rivers and lakes.

2.1 Kenya's Climate.

The climate is fairly warm and tropical throughout most of the country's regions. From February to March temperatures mostly reach their maximum while from July to August they are at their minimum. Temperatures along the coast as well as in the northern parts of the country are typically the highest in the country. In Mombasa, the average daily temperature ranges from 27°C to 31°C. Nairobi, the capital city has at altitude 1,661 m and has a temperature range of 14°C to 25°C. In Eldoret, a city found in the Rift Valley at an altitude of 3,085, temperatures range from 10°C to 24°C. Lastly, Lodwar, a town around 50m above sea level and located very far up north in the country has a temperature range of around 24 °C to 35°C.

In regard to precipitation patterns the north and north-eastern parts of Kenya are very dry while the west is moderately temperate. The average annual rainfall along the coast (e.g. in Mombasa) is 1200mm. There are 2 rainy seasons, the "long rains" lasting from April to June and the "short rains" lasting from October to December. Most of the time, precipitation arrives in the afternoon or evenings and is often very intense.

The majority of the country receives less than rainfall needed to support crop cultivation. In fact, over two thirds of the country receives less than 500mm of rainfall per year and 79% has less than 700 mm annually. Only 11% of the country receives more than 1000mm per year. The mean annual rainfall shows a wide spatial variation, ranging from about 200 mm in the driest areas in north-western and eastern parts of Kenya to the wetter areas with rainfall of 1200mm to 2000mm in the areas bordering Lake Victoria and the Central Highlands in the East of the Rift Valley. Those areas are, therefore, mostly used for intensive agriculture and have highest concentration of inhabitants. Pastoral farming dominates the remaining drier regions of Kenya.

1: Map of Kenya

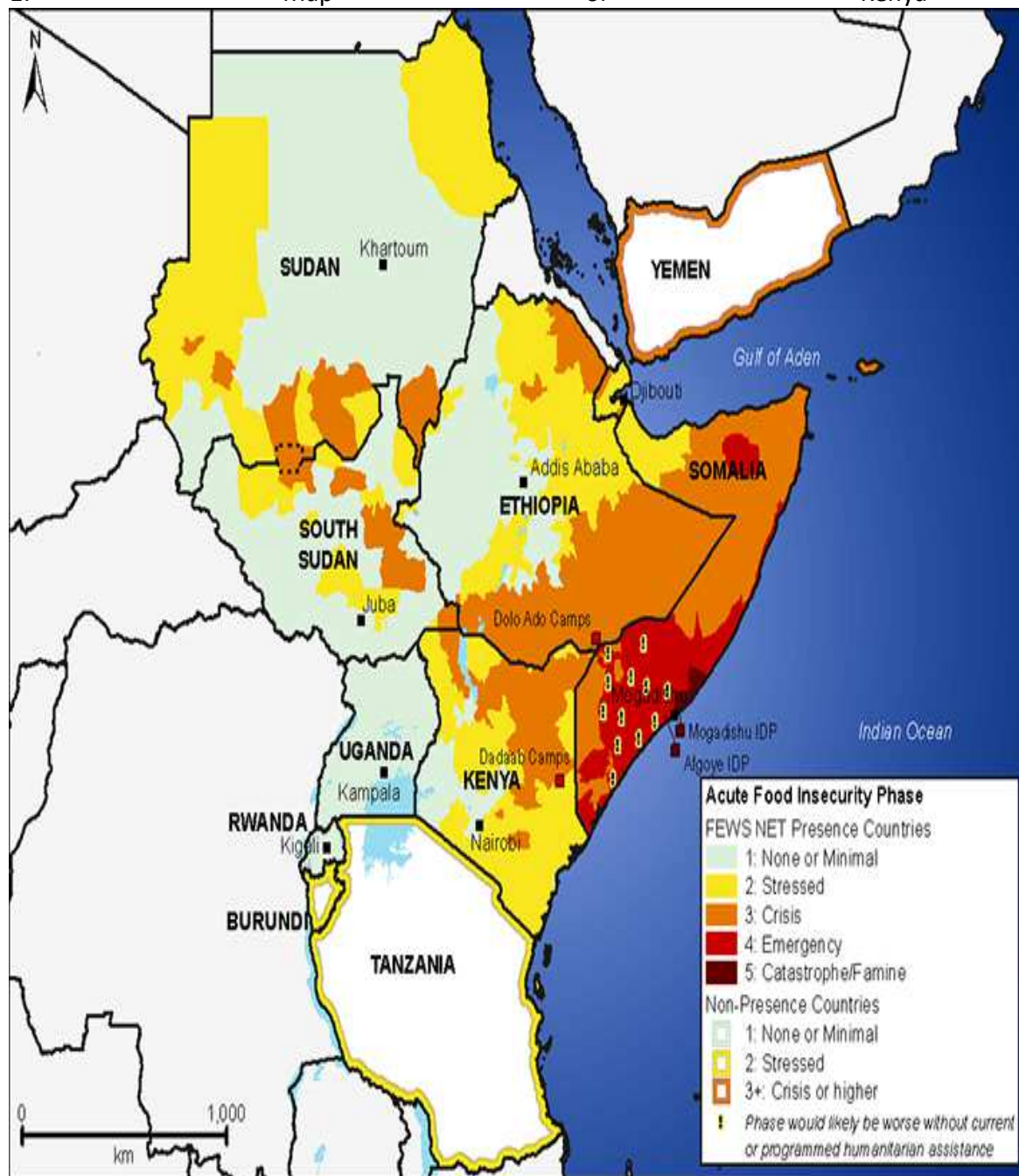


Figure 1: Map of Kenya

Source: Projection for crisis levels in East Africa from October to December 2011, FEWS Net.

2.2 Kenya's Economy.

Although the economy has performed better than many African nations, the benefits of growth have been diluted by a variety of factors: poor governance and corruption, increasing economic inequality, environmental deterioration partly caused by high surging population as well as erratic weather patterns, which have negatively affected the country's key economic sectors (agriculture, tourism, livestock, pastoralists, horticulture, fisheries and forest products). The agricultural sector accounts for 26% to the country's GDP. In comparison, the tourism and fisheries sector accounts for 10% of the country's agricultural GDP (Mbugua, 2009).

Horticulture, the fastest growing economic activity in the agricultural sector, generates over US\$ 300 million in foreign exchange earnings. Also, the capital value of the 46% of Kenya's livestock that is kept by pastoralists is approximately US\$ 860 million. Tourism is highly dependent on wildlife and the country's wilderness is also a very important industry ranking among the top three foreign income earners, together with the export of tea and horticultural products.

A Recent study by the Stockholm Environment Institute (SEI) on the future economic costs of the impacts of climate change in Kenya revealed that the future economic costs of the impacts of climate change on market and non-market sectors might be close to 3% of GDP per year by 2030 and potentially much higher than this (more than 5% of GDP per year) by 2050 (cf. Stockholm Environment Institute, 2009).

3. National Climate Change Strategy and its Implementation.

3.1 National Climate Change Strategy.

In 2009, Kenya launched the National Climate Change Response Strategy (NCCRS) that aimed at strengthening nationwide focused actions towards mitigating against, and adapting to the changing climate. The aim of the strategy is to ensure commitment and engagement of all stakeholders taking into account the vulnerability state of Kenya's natural resources. The NCCRS development took a participatory approach that involved two national and seven sub-national workshops. This development was spearheaded by the Ministry of Environment and Mineral Resources (MEMR). In addition, key stakeholders including Members of Parliament (MPs), the private sector, non-governmental organizations (NGOs), government ministries and agencies, the media, representatives from academia, as well as development partners were appraised and consulted on climate change issues.

It;

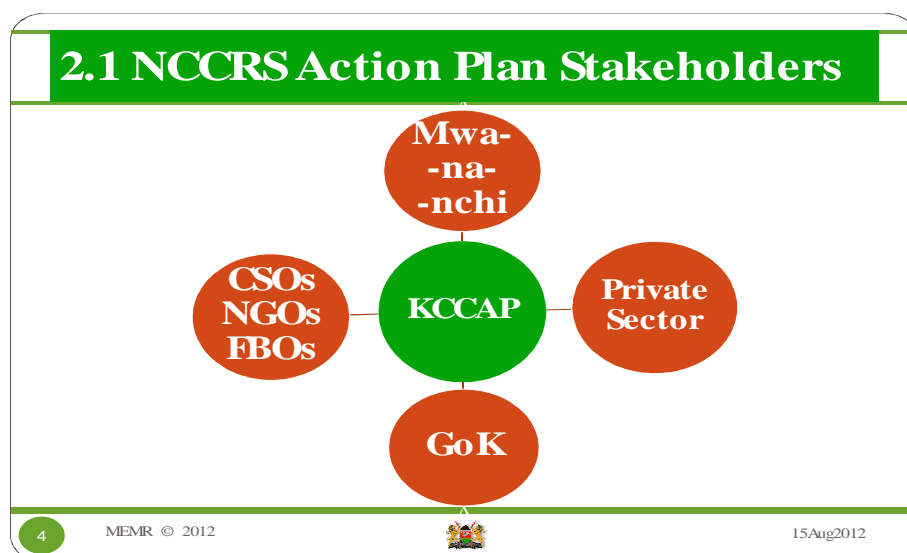
- Provides a framework for addressing the threats of climate change as well as takes advantage of any opportunities that may arise.
- Provides the means to actively engage in innovative processes necessary to address climate change.
- It is the key climate change agenda guide for the government.
- Informs nationwide climate change programmes and activities (in line with Constitution of Kenya 2010), including efforts towards the attainment of the MDGs and Kenya Vision 2030.

The primary focus of the NCCRS is to ensure that adaptation and mitigation measures are integrated in all government planning, budgeting and development objectives. It calls for a collaborative and joint action with all stakeholders (private sector, CSOs, NGOs, Faith-Based Organizations, etc) in tackling the impacts of climate change. The strategy proposes a number of measures meant to curb the adverse impacts of climate change on the country (adaptation) and to tame global warming (mitigation). Proposed mitigation interventions for example include a range of projects managed by the Kenya Forest Service's Forestry Development Plan (FDP) which aims at growing 7.6 billion trees during the next 20 years. It is anticipated that those trees will be planted mainly by students (35,000), women groups (4300), youth groups (16,350) and the six Regional Development Authorities (RDAs).

Main objectives of the NCCRS Action plan are;

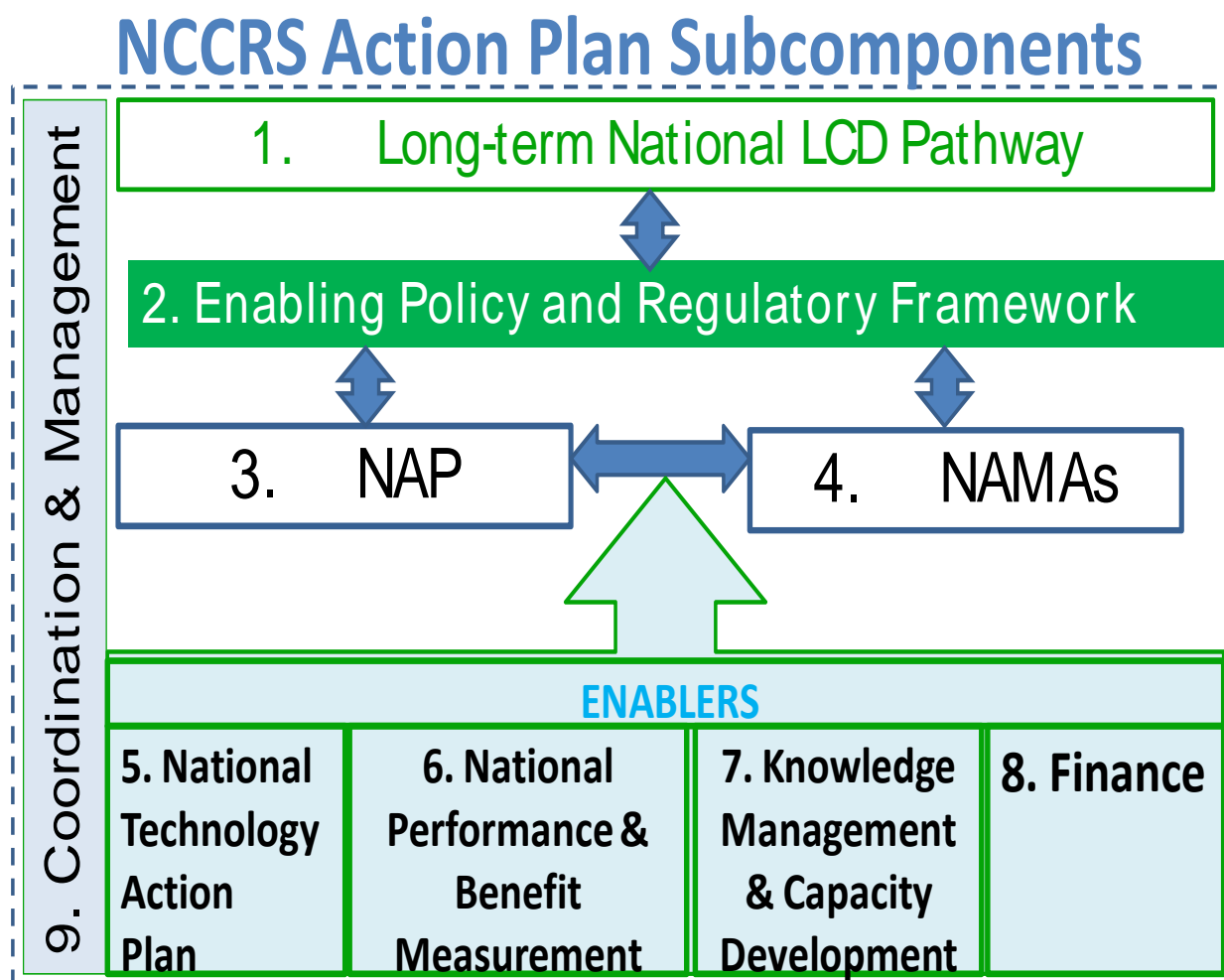
- Enhancing the understanding of the global climate change negotiation process, of international agreements, policies and processes and most importantly of the positions Kenya needs to take in order to maximize beneficial effects
- Assessing the evidence and impacts of climate change in Kenya
- Recommending a robust adaptation and mitigation measures needed to minimize risks associated with climate change while maximizing opportunities
- Enhancing the understanding of climate change on the national and local level
- Recommending vulnerability assessments, impacts monitoring and capacity building framework
- Recommending research and technological needs and avenues for transferring existing technologies
- Providing a conducive and enabling policy, legal and institutional framework to combat climate change

Figure 2: The NCCRS Action Plan Stakeholders.



Due to the complexities of operationalizing the climate change strategy, the Kenyan government collaborated with the private sector, the civil society, and with support from development partners. It comprised of nine interrelated subcomponents.

Figure 3: NCCRS Action Plan Subcomponents (Ministry of Environment, G.o.K, 2010)



3

Sub-Component (SC):

- SC 1:** Long Term Climate Resilient Low carbon Development Pathway- is designed to facilitate reflection and/or mainstreaming of climate change aspects into the country's Vision 2030 and its Medium Term Plans (MTP). It also seeks to identify key elements of the country's low-carbon and climate resilient growth.

- **SC2:** Enabling Policy and Regulatory Framework aims to review international, regional and national policy and legislative instruments relating to climate change with a view of developing a policy and /or legislative framework that promotes coherence, coordination and cooperative governance of climate change issues at the national and country levels.
- **SC 3:** NAMAs (and REDD+) is designed to identify and prioritize NAMAs that need to be internationally supported and enabled through technology development and transfer , financing and capacity building and to address Reduced Emissions from Deforestation and Forest Degradation – plus (REDD+) readiness activities as well as opportunities presented by compliance and voluntary markets.
- **SC 5:** National Technology Action Plan focuses on developing a National Technology Plan that incorporates the establishment of technology innovation centers.
- **SC 6:** National Performance and Benefit Measurement has a target of developing national climate change Monitoring, Reporting and Verification (MRV) guidelines and performance indicators.
- **SC7:** Knowledge Management and Capacity Development will address issues relating to institutional and technical capacity strengths and needs of the various factors ranging from government, private sector, civil society and local communities. It also encompasses education, training, public awareness and networking.
- **SC 8:** Finance aims to position the country to access finance from the various sources by developing an innovative financial mechanism that includes a national climate fund, investment strategy /framework and carbon trading platform. Also, it aims to identify tools and incentives that would enhance private sector investments in opportunities associated with climate change.

Table 1: Action plan subcomponents Status, August 2012.

Sub-component	Implemented by	Status
<i>Long-term climate resilient LCD pathway</i>	<i>IISD, ECN, Climate Care and ICRAF</i>	<i>Have submitted a draft report for phase 1 and are set to embark on Phase 2</i>
<i>Enabling Policy & Regulatory Framework</i>	<i>IDLO; Kenyatta University</i>	<i>In the process of preparing a draft climate change policy – To submit final drafts by 23 Aug 2012.</i>
<i>National Adaptation Plan</i>	<i>LTS Africa; Acclimatise UK</i>	<i>Outputs of the team have just started coming through and will by Monday (23 August 2012) send to reviewers for QA review.</i>
<i>NAMAs</i>	<i>IISD, ECN, Climate Care & ICRAF</i>	<i>Outputs have gone through the QA review. Final submission is expected by mid July 2012.</i>
<i>Climate Change Technology Action Plan</i>	<i>PTC</i>	<i>Submitted proposal – being considered.</i>
<i>National Performance &</i>	<i>LTS; Baastel; AEA</i>	<i>Team has submitted a draft National</i>

<i>Benefit Measurement</i>		<i>Performance and Benefit Measurement Framework (NPBMF). To embark on Phase II - to design the NPBMF.</i>
<i>Knowledge Management & Capacity Dev.</i>	<i>Arid Lands Information Network (ALIN)</i>	<i>Team has submitted 4 draft outputs. Final submission expected by 23 Aug 2012.</i>
<i>Finance</i>	<i>Adam Smith; Vivid Economics; KIPPRA</i>	<i>Outputs gone through the QA process; SC validation 22 Aug 2012; Final submission 23 Aug 2012.</i>

The Ministry of Environment and Mineral Resources (MEMR) organized a validation workshop for climate stakeholders to review and validate all the sub-components of the National Climate Change Action Plan (NCCAP) on September, 2012 (Stephen King'uyu presentation during the Low Emission Workshop, Kenya School of Monetary Studies, Nairobi, 2012). The contracted consultant responsible for finalization of each sub-component got a chance to identify relevant climate stakeholders.

The MEMR took the lead in the coordination of this Action Plan. The technical preparation and coordination included the members of the Multi-sectoral Climate Change Taskforce who provided oversight to the process; and there were representatives of the Government agencies, civil society organizations, academia and private sector entities who participated in the various Thematic Working Groups. Upon finalization of this Action Plan on November, 2012, the MEMR organized a NCCAP validation workshop for all the relevant climate stakeholders including the County representatives to contribute as required by the Kenya's Constitution. The NCCAP was then endorsed by 234 delegates from all the 47 counties of Kenya who converged at Utalii hotel in Nairobi on Thursday, 22 November 2012 (The Permanent Secretary in the Ministry of Environment and Mineral Resources Mr. Ali D. Mohamed who represented the Minister Hon. Chirau A. Mwakwere; official opening speech, 22 November, 2012)

The Kenya country aspects were addressed in various climate change workshops and were taken up by the Ministry of State, Planning and Vision 2030 to be integrated into the Kenya's Vision 2030. It is acknowledged that climate change was hardly mentioned in the medium Term Plan of Kenya's Vision 2030 and an inter-ministerial and cross-sectoral process with support by a team of world-renowned consultants are working to ensure that climate change is firmly integrated within the second MTP 2013-2017 and the wider implementation of Kenya's development blueprint. The process has been accelerated by the existing tangible collaborations between the three ministries; Environment, Finance, and Planning amongst other stakeholders to ensure that the Action Plan informs the next MTP cycle (2013-2017).

3.2 The Institutional Framework

In 2009 the Ministry of Environment and Mineral Resources (MEMR) set out a Climate Change Secretariat (CCS). The Secretariat has been acting as the technical coordinator of CC activities in Kenya. The political coordination of climate change (a higher body) is housed at the Prime Minister's Office (OPM) and its role has been pushing forward the climate agenda in Kenya.

The MEMR comprises three technical departments:

- Forest Department,
- Department for Resource Survey and Remote Sensing (DRSRS) and
- Department for Mines and Geology.

Moreover, the MEMR hosts several institutions that are in charge of climate change, for instance the Directorate of Environment (DOE) which is headed by an Environment Secretary.

The DOE has 3 directorates covering the following aspects:

- Policy formulation, interpretation and implementation
- Programmes, projects and strategic initiatives, and
- Multilateral agreements

Furthermore, under the supervision of the MEMR, the National Environment Management Authority (NEMA) has been the host of the country's Designated National Authority (DNA), which is responsible for approving the Clean Development Mechanism (CDM) projects. In the context of the UNFCCC, the MEMR is also the focal point responsible for international climate negotiations. Moreover, the Department of Multilateral Conventions is directly in charge of UNFCCC related policy activities.

In addition the MEMR oversees the Kenya Meteorological Department (KMD), which is mandated to provide meteorological and climatologically services to the country. They are in also in charge of climate research and monitoring.

Coordination of the Action Plan (see figure 4 below)

The high-level political support (*mentioned above*) to climate change activities is **the Climate Change Coordination Unit (CCCU)** is situated at the OPM' office. However, to infuse international environment diplomacy on climate change and other similar multilateral environment agreements **the Ministry of Foreign Affairs (MFA)** is involved to carry out that task.

Through the management of natural resource several ministries are either directly or indirectly involved in climate change activities. For example, the MEMR as well as the Ministry for Forests and Wildlife (MF&W) are actively engaged in climate change work. In the same strength, the MF&W is particularly involved in policy research on REDD and also takes part in negotiations on greenhouse gas emissions from Land Use and Land Use Change and Forestry (LULUCF).

Other ministries indirectly involved in climate change activities are:

- Ministry of Agriculture;
- Ministry of Land, Water and Irrigation;
- Ministry of Development of Northern Kenya and Arid Lands;
- Ministry of Fisheries, the Ministry of Tourism;
- Ministry of Public Health and Sanitation as well as the
- Ministry of Energy and Agriculture.

The ministries are involved in projects and initiatives that aim at providing policy guidance on community empowerment, primary healthcare, domestic water supply, and agriculture (crop and livestock) development. Coordination of climate change issues is improving the Kenya's policy landscape and the mentioned government ministries have established Climate Change Units (CCUs). Most are looking at linkages between climate change and food security aspects that have linkages with the CCD approach.

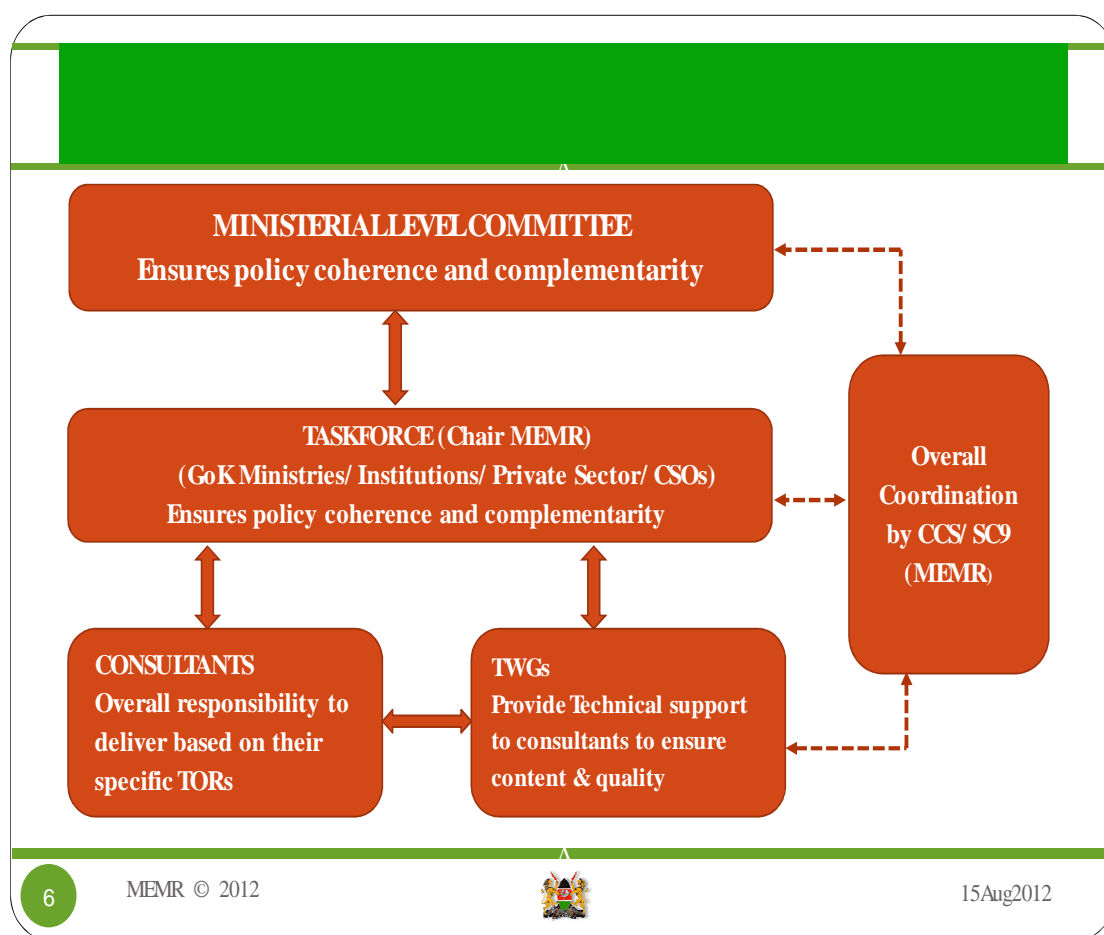


Figure 4: NCCRS Action Plan coordination.

Kenya's Climate Change Authority (CCA):

KENYA is set to become the first African country to establish an independent Climate Change Authority through the enactment of a law this year. There is progress of late to form Climate Change Authority to be the gatekeeper organisation, though there are debates that the Ministry of Finance should manage the climate funds. Climate stakeholders in Kenya have expressed that concern in several workshops and fora. There is support from the Parliamentary Network for Renewable Energy and Climate Change (PANARECC), Kenya Climate Change Working Group (KCCWG), Office of the Prime Minister (OPM) and other climate stakeholders in the country including key government ministries and parastatals. The Climate Change Bill to

establish the CCA was 1st read in Parliament on 2nd October, 2012. The authority will advise the national and county governments on legislation and other measures on mitigation and adaptation to climate change. The authority to be managed by a board will also coordinate between government and non-state actors on issues of climate change among other functions, including carrying out public awareness programme. There is hope it will be passed by the 10th Parliament before it is dissolved due to the upcoming Kenya's General Election in 4th March, 2012, that is if the current momentum is maintained and more support is received from the wider Kenyan politicians.

4. Food Security and National Climate Change Strategy in Kenya

Over the past four years, Kenya has been experiencing unprecedented food insecurity, mainly due to climate change and only little precipitation within the main food production areas. Furthermore, in the face of a declining economic performance Kenya witnessed a general increase in food prices as well as input prices in 2009. The combined effects of these factors dampened agricultural output in a significant manner. For that time it is estimated that about 51% of Kenya's population lacked access to (nutritional valuable) food. This increased the country's poverty rate and led to an increased number of people relying on (national and international) food aid. Particularly, people living in the arid and semi arid lands areas (ASALs) were affected the most (cf. Oniango, 2010). In fact, a decade ago, the rate of malnutrition among children under 5 years was estimated at 18% while it is now expected at 35% (cf. Oniango, 2010), obviously reflecting the deteriorating status of food security in Kenya (cf. Economic Review of Agriculture, 2007/2009).

Agricultural production accounts for 26% of GDP and 65% of the country's export earnings. In addition, the sector provides a living for more than 80% of the Kenyan population and significantly contributes to their food security. It is evident that a strong agricultural sector is the prerequisite condition for achieving economic recovery and growth.

A number of guiding policies and strategies have greatly influenced the agricultural sector. They include the Economic Recovery Strategy (ERS) lasting from 2003 to 2007, the Vision 2030 as well as the Strategy for Revitalizing Agriculture (SRA) for the timeframe 2004 to 2014. The Agricultural Sector Development Strategy (ASDS) aims at positioning the agricultural sector strategically as a key driver for delivering the 10% of the annual economic growth rate, which is envisaged under the economic pillar of the Vision 2030. Moreover, the strategy aims at guiding the public and private effort in addressing major development challenges that the agricultural sector is facing (cf. G.o.K, 2010).

To achieve the objectives of the ASDS the government has developed a broad strategy that involves a combination of both long and short term actions. While several programmes and policies are set to enhance production and income of the low-income class and thus respond to food security issues in the long term, the short term measures under the ASDS are actions such

as a waiver on the tariff of imported food products (especially maize) and the import and storage of grain for unstable times (cf. Songa, 2009).

More examples of short and long term food security related initiatives are stated below:

- The Kenya Agricultural Productivity Project (KAPP), a 12-year multi-institutional programme funded by the World Bank and the Government of Kenya, aims at an increase in agricultural productivity. Having been launched in 2004 the programme is currently being implemented in 20 pilot districts in seven provinces through a number of reforms in policy, research and farmer/client empowerment.
- The Second National Agriculture and Livestock Extension Programme (NALEP 2), an upscale of NALEP 1, aims at enhancing the contribution of agriculture and livestock to social and economic development and poverty alleviation. It covers 62 districts, compared to 43 in NALEP 1.
- The Horticulture and Traditional Food Crops Development Programme is funded by IFAD and covers 8 districts in the Eastern Province.
- Financial support by the EEC/EDF, World Bank and by some industry stakeholders for agricultural research foundation (such as the coffee research foundation) was established
- The National Food Security Promotion Programme called “Njaa Marufuku Kenya” (NMK) is an up-scaled implementation phase of the Kenya Special Programme for Food Security (KSOFS). It is funded by the Government of Kenya and covers 71 districts in the country. The KSOFS had been initiated through the FAO and its main objective is to reduce the number of food unsecured people by 50% until 2015 (MDG1). To achieve these farmers will be asked to form support groups, which are planned to subsequently be trained and empowered through the provision of seeds and other agro-inputs.
- In 15 districts in the eastern and coastal provinces the Danish International Development Agency (DANIDA) runs the Agricultural Sector Programme Support Project (ASPS). Being an up-scaling project from a previous mission that ended in 2005, the ASPS aim at a long-term support (10 - 15 years) of the Kenyan agricultural sector. Its overall objectives are to raise the income of smallholder farmers and agro-based micro and small-enterprises in the targeted semi-arid district.
- In 2007 the Government of Kenya started the 3-year National Accelerated Agricultural Inputs and Small Enterprises Project (NAAIAP). It focuses on small farmers who are lacking modern agricultural inputs, which applies for the majority of farmers with less than 2 acres, and provides them with inputs and extension services. It aims at reaching 2.5 million small farmers concentrating its activities in 33 in medium and high potential areas of Kenya.

While climate change has already had negative impacts on food security issues in Kenya, late responses and inaccurate policies by the government have to some extent contributed to the severe shortages of food. Rising food prices in the face of declining terms of trade in pastoral and agro-pastoral areas have certainly made the food insecurity critical issues throughout Kenya. Particularly the years 2009 and 2010 have been very challenging. Although some

development partners have been quick to support relief efforts, they have been slow to support food security initiatives that would have avoided the need for future relief efforts.

Although Kenya is undertaking many food security initiatives, there is only limited information on the impacts of those initiatives on food security and nutrition. Also, Kenya claims that it is committed to the African Union, New Partnership for Africa's Development (AU/NEPAD) principles and frameworks and therefore compliant with those food security ideals. However, it is unclear how these ideals are influencing the country's budgetary process. Kenya is also a member of the East African Community (EAC), Common Market for Eastern and Southern Africa (COMESA) and other regional bodies. However, it is not yet clear how the membership in those bodies influences Kenya's food security matters.

4.1 Food Security and the National Climate Change Action Plan.

A range of mitigation and adaptation measures and policies are available, but more efforts will be required to minimize vulnerability to climate change. In addition, there are barriers, limits and costs that are not fully understood (see section on stakeholders). Societies have a long record of managing the impacts of weather and climate-related events. Nevertheless, additional adaptation measures will be required to reduce the adverse impacts of projected climate change and variability, regardless of the scale of mitigation undertaken over the next two to three decades.

Moreover, vulnerabilities to climate change can be exacerbated by other factors. For instance, they arise from current climate hazards, unexpected weather patterns or from poverty. In Kenya, the most vulnerable sectors include agriculture, tourism, infrastructure, health and natural resources especially biodiversity (cf. IPCC, 2009).

4.1.1 Food Security Related Adaptation Themes in the National Climate Change Action Plan.

Matrix 1: (Downing et al. 2009)

Thematic area	Description
Agriculture	Accounts for 24% of the GDP in Kenya, with coffee, tea and horticulture contributing greatly to the country's foreign exchange earnings. With its reliance on weather agricultural production will most likely bear the brunt of climate change.
Livestock	About half of all livestock in Kenya is found in fragile ecosystems (i.e. arid and semi-arid land) that are most vulnerable to climate change. It is likely to experience pressure from increased livestock pest and diseases as well as from the loss of pastures. These impacts will potentially result in community conflicts, loss of lives and livelihoods as well as migration.
Water	Kenya is a water scarce country. Climate change will aggravate the situation as it affects precipitation patterns and evaporation.
Forestry	Over the past four decades Kenya has lost forest cover due to new settlements and agricultural land, illegal logging for commercial purposes and encroachment into forest reserves. Climate change is likely to increase the pressures on forests through less rainfall and forest fires.
Energy	Kenya predominantly depends on biomass energy, comprising firewood, charcoal and agricultural waste. Most of the biomass energy is used in rural households and small businesses. The country also depends on hydropower, which however has decreased within the past 20 years because of the destruction of many water catchments areas. As the country's demand has grown a margin of only 7% is left. With climate change the situation is likely to worsen as extreme events like frequent and prolonged droughts will lead to the reduction of water levels in dams, which will then severely affect hydropower production.

4.2. Food Security related mitigation elements by sector.

The Strategy has in place an effort to slow down the increase of atmospheric GHG concentrations by limiting current and future emissions and enhancing potential sinks for GHG's. Sectors that have synergies with adaptation and relate to food security aspects include forestry, energy and agriculture.

Thematic area	Description
Forestry	Not only do forests and on-farm trees provide a unique opportunity for Kenya to participate in mitigation, but they also present the country with valuable opportunities for carbon trading and finance. The Kenya government has initiated an ambitious programme of restoring the country's forest cover that is currently at 1.7% down from 12% only 30 years ago. The overall aim is to grow about 7.6 billion trees on 4.1 million hectares of land during the next 2 decades.
Energy	A study conducted by Stockholm Environment Institute (SEI) on the economic impacts of climate change in Kenya (cf SEI, 2009) revealed that the country's GHG emissions (total and per capita) are relatively low. However, Kenya's GHG emissions are rising quickly and the emissions from the energy sector are estimated to have increased by 50% over the last decade. To pursue the goal of a low-carbon society, Kenya should develop an energy mix that greatly relies on carbon-neutral energy. In addition Kenya's present power generation capacity is inadequate to meet current demand. To bridge the supply gap the government occasionally imports energy. In fact between June 2006 and June 2008 approximately 150 MW of energy was imported. As this is usually very expensive it requires large subsidies. Also, during drought periods the government usually leases thermal generation units. However they do not only contribute to increasing GHG emissions but are also costly.

Agriculture	Although emissions from the agricultural sector in Kenya are low, a number of mitigation actions bear a great synergy potential to adaptation measures and should therefore be promoted as a matter of priority.
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5. Potential Synergies, Key Barriers and Trade-offs

5.1 Potential Synergies and the Kenya Climate Change Action Plan

Mitigation	What are we saying about synergy?	Adaptation
<p>Agriculture, Though emissions from agriculture are low in Kenya, a range of mitigation and adaptation actions bear great synergies.</p>	<p>In Kenya, Institutional coordination units already existing within specific government ministries; existing cross sectoral coordination units (ASCU-covering 10 ministries but based at the Ministry of Agriculture), designing/developing</p>	<p>Agriculture, Tea, coffee and horticulture account for about 24% GDP. However the sector being depended on weather, the agricultural production will mostly bear the brunt of climate change</p>
<p>Energy Kenya’s GHG emissions are rising quickly and the emissions from the energy sector are estimated to have increased by 50% over the last decade. To pursue the goal of a low-carbon society, Kenya should develop an energy mix that greatly relies on carbon-neutral energy.</p>	<p>Institutional – harmonizing activities including planning/Finance</p>	<p>Energy Kenya predominantly depends on biomass energy, comprising firewood, charcoal and agricultural waste. Most of the biomass energy is used in rural households and small businesses. The country also depends on hydropower, which however has</p>

<p>In addition Kenya’s present power generation capacity is inadequate to meet current demand. To bridge the supply gap the government occasionally imports energy. In fact between June 2006 and June 2008 approximately 150 MW of energy was imported. As this is usually very expensive it requires large subsidies. Also, during drought periods the government usually leases thermal generation units. However they do not only contribute to increasing GHG emissions but are also costly</p>		<p>decreased within the past 20 years because of the destruction of many water catchments areas. As the country’s demand has grown a margin of only 7% is left. With climate change the situation is likely to worsen as extreme events like frequent and prolonged droughts will lead to the reduction of water levels in dams, which will then severely affect hydropower production.</p>
<p>Forestry Not only do forests and on-farm trees provide a unique opportunity for Kenya to participate in mitigation, but they also present the country with valuable opportunities for carbon trading and finance. The Kenya government has initiated an ambitious programme of restoring the country’s forest cover that is currently at 1.7% down from 12% only 30 years ago. The overall aim is to grow about 7.6 billion trees on 4.1 million hectares of land during the next 2 decades.</p>	<p>Institutional synergy</p>	<p>Forestry Over the past four decades Kenya has lost forest cover due to new settlements and agricultural land, illegal logging for commercial purposes and encroachment into forest reserves. Climate change is likely to increase the pressures on forests through less rainfall and forest fires</p>

Building synergies between mitigation and adaptation is critical in promoting community resilience in Kenya's agriculture and ultimately towards achieving food security. A growing interest amongst policy makers, development agencies, and donors is rising on the need to find synergies in climate change policies that define agriculture, specifically, looking at the two components (mitigation and adaptation). Kenya's NCCRS Action Plan considers various aspects that promote CCD approach in the sector. Kenya as a country has also taken initiatives that form a good basis to generate synergies. Institutional building and harmonization hence becomes a critical entry point for building synergies between adaptation and mitigation in Kenya as far as the climate change action plan is concerned.

The following text emphasizes the argument of institutional arrangements in existence and why they form a good basis to building synergies.

- The Ministry of Agriculture, an Agricultural Sector Coordination Unit (ASCU) exists with support from development partners and brings together 10 government ministries working on matters relevant to agriculture and food security. ASCU was central to the building of the climate change strategy.
The ministries include:
Agriculture, Environment, Water, Land, Energy, Livestock, Fisheries, Forestry, Northern Kenya and Arid Lands and Office of the President
- Within the ministries including agriculture there are established climate change units working on mitigation and adaptation strategies (such as under the ministry of energy ,forestry , agriculture). Such units are key to creating links and synergies.
- The CCS situated within the MEMR is the technical coordinating unit of climate change initiatives in Kenya (see earlier demonstration). Under the OPM, we have the political coordination of the climate change activities in Kenya.

The CCD approach requires decision makers to build their capacities on understanding how best to establish such synergies between adaptation and mitigation.

In effect this has led to a lack of synergy being built between mitigation and adaptation. Many policy actors had no good understanding of mitigation aspects and it made the issue lag in discussions. However, with good capacity building on mitigation aspects it has build a critical mass amongst the stakeholders in Kenya. This has meant that the MEMR, technical coordinator has a strong ground for establishing a basis for creating synergies between mitigation and adaptation.

Practical examples of synergies are early maturing fruit trees, improved cook stoves and drought tolerant seeds that can cope in adverse weather conditions.

As discussed earlier the Agricultural Sector Coordination Unit (ASCU) has enhanced collaboration between ten ministries. To ensure food security agricultural adaptation has to be taken onto the priority agenda. Besides, the development, dissemination and extension of flood, drought, and saline and disease-tolerant crop varieties should also be prioritized. All other climate change units shall ensure that climate risks posed to food security are mainstreamed in the agricultural development plans. The Harmonization and Alignment Committee (HAC) is another critical body chaired by the Government of Kenya that brings together all the development partners in Kenya. In discussing synergies, they become key especially in looking at establishing an instrument to tap global climate finance for food security.

6. Climate Financing in Kenya

According to the consultant who worked on the sub-component on finance, among the international investors Kenya has been relatively successful at attracting international public support though it has come with the cost of fragmentation. There are 15 different agencies supporting climate change activities and programmes in Kenya, each carrying their own administrative costs and with different rules and processes concerning both extent, and means, of engagement with the Government of Kenya. There is little evidence of the pooling of resources.

It is also estimated that Kenya has attracted more than \$600 million of international private sector investment in renewable energy alone. However, Kenya is ambitious to be self-sustaining in power generation and it's aiming to increase power generation from the current 1,479 MW to over 21 GW by 2030, requiring up to \$ 45 billion, including \$18 billion to develop 5 GW of geothermal power.

The Kenya government is currently implementing projects and programmes with climate change relevance to the value of Ksh 37 billion (\$ 450 million) from the domestic public source of climate finance. This was derived from 30 to 35 ongoing projects and activities. The bulk of these resources, around 45% are in the energy sector, with forestry and land-use projects and water and sanitation activities for a further 20% of resources each. Cross-sectoral and drought management receive 10% and 5% respectively while agriculture receives almost nothing (KIPPRA and ASI)

Kenya's dynamic private sector is estimated to have invested close to \$150 million in renewable energy projects alone to date, a figure that rises to in excess of \$1.2 billion if the Kenya's parastatals: Kenya Electricity Generating Company (KenGen) and the Kenya Tea Development Authority (KTDA) are included.

6.1. The designing of a Kenya National Climate Fund

The role of national climate fund is to manage the flows of international public climate finance within the country. It aims to overcome the challenges of fragmentation associated with the current disbursement of international public climate finance in Kenya. The Government of Kenya can also commit public resources to this Fund.

7. Barriers to utilising synergies and scaling-up the required actions

Knowledge on Mitigation and Adaptation keeps growing. This has led to improved understanding of ways to effectively response to the climate change impacts. It has also increased the awareness that exist on the synergies and linkages between mitigation and adaptation.

The section below looks in depth some of the existing barriers to addressing responses to adaptation and mitigation in the Kenyan context and some of the reasons why synergy building has remained a challenge.

The details are mainly from the stakeholder dialogues and informal interviews with key related policy makers in Kenya.

Barrier	Description
<i>Knowledge</i>	For a long time Kenya had no specialists on climate change, hence the subject was discussed at a theoretical level. Naturally this has limited the engagements of national ‘experts’ with the international community. And still, there are technical weaknesses within key institution that have been given a mandate to deal with climate change. Some institutions have started to engage with the climate change experts to find ways to incorporate climate theories and practice in current debates and projects. However, when it comes to stakeholder engagements on climate change matters expert knowledge is lacking. Particularly, this becomes obvious when designing new programmes or projects. In addition, linkages between food security and climate change have not yet been defined clearly.
<i>Social and Environmental</i>	In the beginnings of the climate debate many scientific concepts were not well understood by communities and other social actors. In fact, a number of local authorities were not able to understand the message and thus the potential impacts of climate change. For example, for people living in the

	<p>northern parts of Kenya, conserving nature and the environment was not seen as an important and necessary task. However, with increasing knowledge, a growing number of communities and institutions saw linkages between mitigation and adaptation measures and was willing to put them into practice. Another social-environmental barrier is the right of ownership. Many communities have the perception that projects are undertaken without their permission.</p>
Ecological	<p>As stated earlier 80% of the Kenya's land can be characterized as arid and semi-arid land. As this is already a barrier to effective agricultural production, climate change will worsen the situation as drought spells might also hit the 20% of land that is practical for agriculture.</p>
Institutional	<p>The existence of a silo working style amongst the various relevant ministries working in climate change sectors (including agriculture, water, environment and health) exist partly due to the lack of adequate capacity in looking at climate change from a holistic interdisciplinary perspective. The MEMR has remained the key institution in housing the climate change portfolio, incorporating other relevant stakeholder from government and development players.</p> <p>However many relevant government ministries are increasingly establishing and housing climate change units, for instance, within the Ministry of Agriculture. This has led to conflicts but also cooperation among various ministries. For example, the Ministry of Health and the MEMR are discussing the linkages between rising temperatures and the existence and potential sprawl of malaria. However, there is still a knowledge barrier when it comes to synergies between adaptation and mitigation as knowledge on mitigation measures is mostly stored at the Ministry of Energy while the Ministry of Agriculture has a good know-how on adaptation measures.</p> <p>An important element in the Kenyan context involves a slow change from handling adaptation and mitigation components from a one institutional eye view to looking at them across the sectors. For instance, food security is directly connected with fisheries, livestock, land, forest and environment and their respective ministries. However looking at it in a multi-sectoral perspective has remained a complex challenge as various ministries wanted control the most important thematic areas.</p>

	<p>As a response the Coordination Unit was established looking at agricultural matters in ten different ministries, mainly on the technical level. The Climate Change Secretariat (CCS) works in a similar manner: under the supervision of the MEMR, it technically coordinates all climate change related issues. While the CCS only coordinates, respective ministries are responsible for managing specific issues such as food security. It is also to note that the Office of the Prime Minister is managing the political coordination of climate change matters.</p>
<p>Funding</p>	<p>In terms of climate change finance, the government has experienced several funding challenges. For instance, climate change did not feature in the Medium Term Plan 2008-2012 of the Kenya’s Vision 2030 development blueprint. There is lack of prioritisation of climate change within the national budget as well as a specific climate change code or other reporting framework within the national accounts. In Kenya, various ministries prepare budgets every year and receive allocations for their projects based on their sectoral development plans. This has encouraged a silo working style of financing sectoral projects under each key ministry instead of doing in a cross-sectoral way. For instance, the Ministry of Water and the Ministry of Land could jointly be having a project on conservation. However, as they all request yearly allocations, they receive a separate budget although resources would have been lower on a cross-sectoral project.</p> <p>Other factors that constrain funding include:</p> <ul style="list-style-type: none"> • Lack of resources to support the processes of generating of program and project proposals for accessing funds for adaptation to climate change. • Lack of trust amongst main actors on “seed capital” resources for the development of rapid impact projects that motivate institutional, political and social actors to be active participants. • Serious time constraints when it comes to application for funds. Majority are still extremely bureaucratic. • Little or no interest from the donors in financing long-term research projects.

At the global level a systematic funding tool or mechanism is still missing to finance integrated projects. Evidently, there is a lack of a systematized tool that recognizes the differences and looks at how funds can be harnessed most effectively. For the Kenyan case there is no such tool focussing on food insecurity and climate change although it is a serious challenge in Kenya. Yet, as Kenya has developed the Harmonization, Alignment and Coordination (HAC) components, all

donor agencies are now requested to align their activities under the same umbrella. Moreover, the African Adaptation Programme being financed by the Japanese Government through UNDP, has also created a database targeting to report and classify all climate change projects. This systematization of finances is a step towards helping the CCD project in tapping on existing funding systems.

8. Conclusion

Kenya's NCCRS has contextualized a set of plans that indicate short and long term measures and benefits towards minimizing the impacts of climate change in relation to adaptation, mitigation and towards achieving sustainable development. As mentioned earlier, the strategy contains sub-components that include the management of knowledge, technology and low carbon development pathways which are key intervention models to capture both mitigation and adaptation. Initially, the strategy had a stronger reflection of adaptation. However, after several revisions, which were based on continued consultations with stakeholders, mitigation measures were included. In fact, interventions on green technologies and low carbon development pathways were identified to be very important when addressing agricultural and food related matters. Also the finalisation of the NCCAP and subsequent validation by county representatives is fundamental in guiding development of Kenya National Climate Fund, efficient resource mobilization and allocation and implementation of the mitigation and adaptation activities as stipulated in the NCCRS.

A growing interest from the government and the private sectors working in the field of agriculture has become key to food security. The establishment of cross-sectional units such as the Agricultural Sector Coordinating Unit (ASCU), which comprises 10 relevant government ministries, is a good example. The government and key actors in this sector still consider agricultural development a key requirement for food security, poverty alleviation and livelihood promotion. However even with such commitments, interactions and synergies are not well understood.

On a positive note, there is a growing consensus among all stakeholders that climate change must be addressed in an integrated manner with adaptation and mitigation. The growing population will need options for addressing adaptation in local sub-sectors. These options must aim at increasing food supply. This means that the CCD concept needs to be mainstreamed in a balanced matter. Hence in order to achieve food security goals it will require to build not only effective but strategic partnerships that aim at a systematic development and implementation of CCD initiatives.

Annex 1: Stakeholders Engagement and Feedback in 2011

A stakeholder engagement meeting brought together about 25 policy makers to examine the CCD concept (Organizations are listed at the end of the box). The policies were part of a process as they were interviewed on their opinions of the CCD concept and how they would mainstream the synergies between mitigation and adaptation into the development discourse.

The introduction to these engagements, it was reiterated that climate change has been recognized as a global issue without boundaries within countries or institutions - a phenomena that has affected sustainable livelihoods and food security, especially, in the northern parts of Kenya. Drought and climate refugees were presented as an example. As Kenya has experienced climate within the last decade or so it was mentioned that action should focus at all levels and sectors. The issues of mainstreaming climate change measures within public sector plans were highlighted as key action.

The Climate Change Unit (CCU) at the Ministry of Agriculture affirmed that agriculture remains Kenya's fundamental pillar for growth. According to them it accounts for 24% to the GDP and at the same time remains the main pillar for food security. It contributes to about 60% of foreign earnings and about 70% to the employment, a key aspect in promoting equity. Further, the CCU stated that the export base was very narrow and there is a strong need for diversification through agriculture.

Representatives from the public sector assured that they are looking to moving into agribusiness from subsistence farming. In fact, they referred to the NCCRS, to the ASDS policy on the agricultural sector extension and to a concept note on how to quick start finance on agriculture. The same representatives also recognized the need to coordinate climate change activities to achieve the objectives. According to them there is the need for enhanced synergies to avoid the duplication of efforts. Moreover, they said that emphasis needs to be put on innovation, political goodwill and the will to integrated funding. The representatives also noted that collaboration on the CCD concept would be a great advantage to the already ongoing efforts and initiatives. The stakeholder session aimed at establishing and generating an initial thinking on the CCD concept. Response was framed based on ideas that were to tease out food security elements of the strategy.

Responses from stakeholders included:

- Aspects beyond food security should be assessed such as feed security that caters for pastoralist communities.
- Food and feed debates have been well captured in the climate change narratives.
- The need to redefine food security and address other issues that include food availability, access, reliability and utilization.
- What can be made better and what can be more responsive to the situation.
- How to integrate climate change and food security in development plans.
- Appropriate, accessible and affordable technologies to farmers and whether bottle necks that hinder technology adoptions have been addressed.
- Financing mechanisms.

- The role of the private sector in food security matters.
- Why small scale farmers have preference to certain indigenous crops.
- A data base has been created of all adaptation initiatives in the country by the African Adaptation Programme (AAP). It looks at all the risks and how they influence climate change initiatives, how adaptation is mainstreamed within the government plans. Plans to develop these to reflect how best to mainstream adaptation into government planning and how to include the private sector in the planning process. Ideas about the relationship of food security and the strategy that was suggested by the stakeholders.
- Food systems that include energy issues surrounding agriculture and food security. Harnessing the use of water for agriculture and the need to look into aspects of adding value for fodder crops.
- Identification of synergies within the strategy will mean looking closely at adaptation and mitigation being taken up by various institutions. Policy statements need to go further, for example, by promoting woodlots. Woodlots will need identification and definition as a source of biodiversity to include specific beneficial species that are agro-ecologically useful. Identifying and prioritizing elements while looking at the financing options on food security and agriculture.
- There is need to conduct proper analysis of tree species and future carbon markets. Also breeding based on farmers needs will be a critical. It will help in deciding where to improve the covers of forest. It will also be critical in looking at environmental degradation as a framing tool. Look at factors that influence production including soil fertility of specific areas. Rain-fed agriculture and its reliance is an aspect that has direct relevance to food security. Diversification of food production and awareness by farmers of climate change and variability should be prioritized. Looking at the whole value chain is important including aspects of storage to avoid losses and damages.
- Knowledge management in climate debates is needed and promotion of coordination and putting together information for example through creating a portal for Kenya to enable information access. The need is also to look at improving information access to farmers. The same emphasis should be on information flow to policy makers.
- Technology financing is critical followed by capacity gaps. Arguments of failure of carbon financing in African nations and emphasis that REDD ++ has the same fate if nothing is done. Youths and climate must be considered in linking technology to smallholder farmers and pastoralists.
- Look on how renewable energy technologies can be harnessed to improve agriculture e.g.

solar for drying grains, biofuels etc.

- Address post harvest losses by integrating the youth in agriculture and development.
- Institutions and organizations need to be systematized to complement each other's efforts.

Proposed way forward include:

- Emphasis that the status of food security need to be systematically tracked. Further, there is the need of a coordinated approach to avoid various efforts on similar projects (with reference to the Agricultural Sector Coordinating Unit (ASCU) and Harmonization and Coordination Alignment (HAC)).
- Critical to align initiatives on food security to the issue of climate change.
- Creation of or joining an existing relevant network that links the processes and informs the position of the country on climate finance and conveying the messages through sustained policy process.
- Identification of a gatekeeper organization
- A database containing information on funds, status and origins will be established. This will provide a quick update on the status and levels of global climate funds as well as a on the status of access.
-

Represented stakeholders included:

- Ministry of Agriculture, Climate Change Unit
- Climate Change Secretariat, Ministry of Environment and Mineral Resources
- Climate Change Political Coordination Unit (Prime Minister's Office)
- Ministry of Northern Kenya
- Kenya Forestry Research Institute (KEFRI)
- Ministry of Energy
- Ministry of Finance
- Ministry of Energy, Kenya

- Arid lands Information Network , ALIN
- Kenya Agricultural Research Institute (KARI)
- Kenya Meteorological Department
- Climate Prediction and Application Centre (ICPAK), Kenya Meteorological Department
- Rockefeller Foundation
- CARE International
- East African Community Climate change unit
- United Nations Development Programme (UNDP)
- United Nations Food and Agriculture Organization (FAO)
- Climate Change Secretariat Kenya
- Eco-build Africa
- University of Reading ,UK
- Ford Foundation
- Kenya National Federation of Farmers

Annex 2: Stakeholders' feedback during the Climate Compatible Development, Food Security and National Climate Change Strategies workshop held on 5th and 6th September, 2012 at the Hilton Hotel, Nairobi

Key Discussion Points for the workshop participants:

1. Accessing and disbursement of climate finance in the Kenyan context

a) Efficiency and effective transfer of climate finance from international levels in the Kenyan context and disbursement at the county level to the communities, the following factors have to be considered:

- Capacity building on climate finance should be carried out at all levels in the country
- Inclusiveness in the whole climate change financing need to be embraced
- Climate finance is not well disbursed to the local level
- Create public awareness to enable climate stakeholders aware to advocate for better resource allocation for climate change activities and work with the media and other climate actors who can take this up.
- Information sharing/Dissemination of information is fundamental
- A specific institution/body/unit etc should be formed to channel the climate money received into the right projects (proposed in the Climate Change Authority Bill- draft).

b) Success of, and obstacles hindering Kenyan institutions in accessing the climate fund:

There is success in some climate fund but some obstacles exist, these include:

- donor restrictions;
- insufficient information and
- lack of clear coordination climate change activities in the country

2. Funding of integrated approaches in mitigation and adaptation that integrate food security:

- The Sub-component 8 on finance of NCCRS has taken care of financing of mitigation and adaptation activities but food security aspects need to be integrated as well as put in place checks and balances.
- Adjusting international funding opportunities to enable support for integrated

approaches

- Change the monitoring approach and monitor the overall/broader national plan.
- Involvement of all relevant actors/players in the proposal development before request for funds. This can also help increase efficiency/effectiveness. The actors will then be in a position to monitor

3. Challenges that Kenya Small-Scale Farmers face in accessing climate funding and information :

- Lack of proper coordination: climate stakeholders with sufficient of knowledge on climate change engage with governments not engage with small farmers. They are not involved in day to day running or implementation of climate change projects at the community level
- Poor targeting – insufficient access to support local communities
- Lack of subsidies
- Unavailable, inaccessible and scattered information

Solutions:

- Equip Extension officers involved with up to date information
- adoption of new technologies
- Traceability mechanism of projects, especially after project ends
- ‘Lessons learnt’ systems – from demonstration farms and opportunities for farmers to adapt
- Provide clear information to benefits farmers; translating knowledge to practice like information centers
- Facilitate attitude change
- Undertake capacity assessment of small-scale farmers
- Undertake risk and needs assessment
- Expose farmers and extension officers to new places, networks and technologies e.g. forums for farmers to learn from each other

- Introduce compensation mechanisms
- Introduce accountability mechanisms
- Reduce transaction costs and ensure they are spread out

Small-Scale Farmer Expectations of Gatekeepers:

To provide:

- Quality control
- Security/assurance especially from the risks that they face
- Educate farmers on exploitation
- Supervisory/Regulatory role
- Provide small grants and incentives
- Independent and strong, higher than the Cabinet
- Liaison with relevant sectors/ministries
- Suitable structures of communication between the farmer and gatekeeper
- Oversee implementation of adaptation and mitigation interventions
- Ensure constitutional dispensation of **gender participation**
- Civil society-like body that is not core government

It should be:

- A Climate Change Authority (CCA)
- Co-ordinator/Regulator with good mix of persons in various sectors – academic, civil society, any other suitable stakeholder

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