THE REPUBLIC OF UGANDA

MINISTRY OF WATER AND ENVIRONMENT

Uganda National Climate Change Policy

PART II

DRAFT COSTED IMPLEMENTATION STRATEGY OF THE NATIONAL CLIMATE CHANGE POLICY

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Acronyms

A	Adaptation
ACPC	Africa Climate Policy Centre
AF	Adaptation Fund
AFD	French Development Agency
AfDB	African Development Bank
BLs	Bilaterals
CCD	Climate Change Department
CCU	Climate Change Unit
CDM	Clean Development Mechanism
CGIAR	Consortium of International Agricultural Research Centers
CI	Conservation International
CIDA	Canadian International Development Agency
CIFs	(World Bank) Climate Investment Funds (CTF and SCF)
COMESA	Common Market for Eastern and Southern Africa
CPF	Carbon Partnership Facility
CSO	Community Service Organization
CTF	Clean Technology Fund
CTF	(World Bank) Clean Technology Fund
DANIDA	Danish International Development Agency
DFID	Department for International Development for the United Kingdom
DFS	District Forest Services
EAC	Economic Commission for Africa
EC	European Commission
EE	Energy Efficiency
EU	European Union
EWS	Early Warning System
FAO	Food and Agricultural Organization
FCPF	Forest Carbon Partnership Facility
FDI	Foreign Direct Investment
FIP	Forest Investment Program
FORMIN	Ministry of Foreign Affairs of Finland
FSSD	Forestry Sector Support Department
FY	Financial Year
GDP	Gross Domestic Product
GEEREF	Global Energy Efficiency and Renewable Energy Fund
GEF	Global Environment Facility
GFDRR	Global Fund for Disaster Risk Reduction
GIZ	German Agency for International Cooperation
ICF	International Climate Fund (UK)
ICI	International Climate Initiative (Germany)
ICTSD	International Centre for Trade and Sustainable Development
IFPRI	International Food Policy Research Institute
IIED	International Institute for Environment and Development
IISD	International Institute for Sustainable Development
iNGO	International NGO
IT	Information Technology
IUCN	World Conservation Union
KCCA	Kampala Capital City Authority
KM	Knowledge Management
LDC	Least Developed Country
LDCF	GEF Least Developed Countries Fund
LULUCF	Land use, land-use change and forestry
M	Mitigation
M&E	Monitoring and Evaluation
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MDGAF	(Spanish) Millennium Development Goal Achievement Fund

MFI	Multilateral Financial Institution
MLOs	Multilateral Organizations
MoES	Ministry of Education and Sports
MoFPED	Ministry of Finance, Planning and Economic Development
MoLHUD	Ministry of Lands, Housing and Urban Development
MoLG	Ministry of Local Government
MoTIC	Ministry of Trade, Industry and Cooperatives
MoWT	Ministry of Works and Transport
MRV	Monitoring, Reporting and Verification
MWE	Ministry of Water and Environment
NAFIRI	National Fisheries Research Institute
NaFORRI	National Forestry Resources Research Institute
NCCC	National Climate Change Commission
NDP	National Development Plan
NEMA	National Environment Management Authority
NGO	Non-Government Organization
NFA	National Forestry Authority
NFC	Nyabyeya Forestry College
NPA	National Planning Authority
ODI	Overseas Development Institute
PES	Payment for ecosystem services
PCE	Policy Committee on Environment
PMF	Performance Measurement Framework
PPCR	(World Bank) Pilot Project for Climate Resilience
RE	Renewable Energy
REDD	Reduced Emissions from Deforestation and Forest Degradation
SCCF	Special Climate Change Fund
SCF	Strategic Climate Fund
SDC	Swiss Agency for Development and Cooperation
SIDA	Swedish International Development Cooperation Agency
SME	Small and medium-sized enterprises
SREP	Scaling-Up Renewable Energy Program for Low Income Countries
SREP	Scaling up Renewable Energy in Low Income Countries Programme
TA	Technical Assistance
TF	Trust Fund
TNC	The Nature Conservancy
UN	United Nations
UNDP	United Nations Development Programme
UNECA	United Nations Economic Commission for Africa
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
US$	United States dollar
USAID	United Stated Agency for International Development
UWA	Uganda Wildlife Authority
WB	World Bank
WOTR	Water Organization Trust
WRI	World Resources Institute
WWF	World Wildlife Fund

1. Introduction

The strategy will be considered in conjunction with the National Climate Change Policy developed over the first half of 2012 through an extensive consultative process and finalised in July 2012, following integration of the feedback received from the national consultation workshop.

The strategy is in its final form, building on the results of extensive consultations held on a series of previous drafts with key sector ministries and stakeholders that will be involved in its implementation (including civil society and private sector; sector ministries, departments and agencies; the Climate Change Unit [CCU]; the Permanent Secretaries forum; and the multi-stakeholder Technical Working Group set up for the development of the National Climate Change Policy and its draft costed implementation strategy). The feedback received has been integrated as appropriate. This final draft of the strategy was presented and validated at a national consultation workshop, held 13 December 2012.

1.1 Objective of the Strategy

This draft costed strategy complements the National Climate Change Policy and offers a way towards its operationalization. It is essentially aimed at the following inter-related objectives, as outlined in the policy:

- To provide for a more detailed action plan/road map for the implementation of the National Climate Change Policy
- To provide phased indicative climate change programmes for the priority areas under the policy
- To highlight the roles and responsibilities of the various stakeholders in the implementation of these programming priorities
- To provide indicative costing for these programmes
- To indicate in a more detailed manner potential sources of funding and financial tools to be tapped for the implementation of the policy, and to act as a tool to leverage such funding
- To provide a solid basis for the monitoring, reporting and evaluation of the policy implementation process
- To provide examples of prototype infrastructure designs for key sectors to be impacted by climate change, such as transport and works

1.2 Structure of the Strategy Document

The strategy is structured around the following sub-sections to respond to these objectives. It begins with a summary introduction to the main focus of the strategy. A second section presents the next steps in operationalizing the National Climate Change Policy in the form of an indicative road map to assist with the policy implementation. As a first step in the various sectors, it also presents an overview of the institutional set up for policy implementation and the communication strategy for the dissemination of the policy and strategy. This is followed by a discussion of the cost estimates associated with the implementation of the policy and some of the potential financing sources, with a breakdown estimated for priority short-term actions (1 to 5 years), as well as longer-term actions. The detailed implementation strategy itself is then presented, in the form of a table, covering common policy priorities, as well as policy priorities specifically aimed at addressing mitigation, adaptation, or monitoring, detection, attribution and prediction challenges. The last section of the document then introduces the monitoring and evaluation framework for the implementation of the

policy and strategy, which is detailed in table form in annex A of the document. Annex B describes the methodology used for additional cost estimates, while Annex C presents examples of prototype infrastructure designs for key sectors.

2. Summary Description of the Strategy Focus

The focus of the strategy is fully in line with the main policy priorities and strategic areas of intervention already identified as priorities in the National Climate Change Policy. For the sake of brevity, these are not repeated in this section. Suffice it to say that the strategy details potential results (outcomes) expected for each strategic area of intervention already identified under the policy. It also suggests a work programme under each of these outcomes in the form of a series of proposed output-level results to be achieved to realise these outcomes. Lead agencies and partners in implementation are provisionally identified for each output. Prioritisation is proposed for each output under a short- (1 to 5 years), medium- (6 to 10 years) and long-term (10 - 15 years) time frame. Broad cost estimates per expected outcome are provided, as well as a general indication of the various financial management tools and sources of funding that could be tapped in the process.

It is believed that this can provide a concrete basis for the various stakeholders to be involved in the National Climate Change Policy implementation, to embark on the next steps in doing their own internal planning to mainstream and address the climate change policy priorities identified by the policy based on this indicative work plan for policy implementation. A discussion of these first steps in moving forward with policy implementation by these various actors is provided in the section below.

To conclude, it should be noted that the structure of the detailed strategy, building on expected outcomes and outputs to be achieved, provides a good basis for each lead ministry, department and agency to develop its performance measurement framework for policy implementation, through the further development of agency- and department-specific performance and progress indicators in policy implementation, in addition to future activity reporting, once this indicative programme of action is tailored by each agency to its own specific implementation and funding realities.

3. Operationalizing the Policy

3.1 A Road Map

While the detailed implementation strategy presented in section five below provides guidance on how to tackle the policy priorities and strategic intervention areas over the first five years of implementation and then beyond, some basic building blocks need to be put in place in the various ministries, departments and agencies concerned with policy implementation in the very short term, to allow them to move forward with the other policy implementation partners on this common work agenda.

In that respect, in the next 12 months, each lead ministry, department and agency will have some basic management tasks to undertake to trigger the actual policy implementation, given the very

cross-sectoral nature of the policy and strategy. While taking a point of departure for policy implementation in the existing sector policies and strategies that already guide the work of the various sectors, some basic capacities are required of each institution to tailor the guidance provided in the costed implementation strategy to its specific realities.

Some start-up funding (see section 4.2 and Table 6) will be required to address the following institutional/management main steps of the road map to policy implementation:

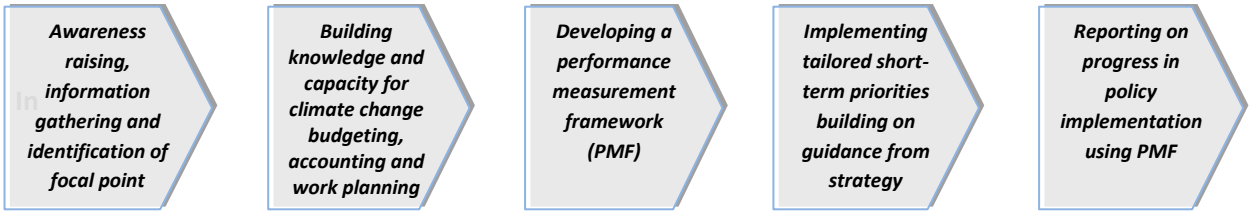
- **Awareness raising, information gathering and identification of focal point (first six months).** The policy and strategy development process has revealed that the level of knowledge on climate change and its impacts in specific sectors remains very low in Uganda. A first step in the process of policy implementation relates to the need to raise this awareness and take stock of existing sector specific climate change knowledge in a targeted manner, among decision makers and staff who have a critical role in management and planning in the priority strategic areas of interventions identified under the policy. Specific short-term work programmes for such awareness raising and stock taking will be developed in conjunction with the sectoral focal points to be identified in each concerned ministry, department and agency. It should be understood upfront that awareness raising on climate change and its challenges is a long-term process that is in fact pervasive to the whole strategy over its lifetime, and covers a much broader array of stakeholders. It therefore goes beyond this initial and very targeted awareness raising and stock taking task referred to as an early step under this road map.

- **Building knowledge and capacity for climate change accounting, budgeting and work planning (month four to eight).** Once this basic institutional structure is implemented and awareness is raised on climate change, its impacts and the measures foreseen to tackle it in the concerned sectors, some targeted capacity building with the same decision makers, sector budget officers and planners can be undertaken so that they are trained and coached on how to analyse data and revise their annual budgeting, accounting and work planning to tailor the climate change indicative work programme provided by the climate change strategy to their own sectoral work plans, on an annual basis. The aim should be to have this capacity building completed so that it can culminate into up-to-date, mainstreamed climate change planning in the 2013/2014 budget cycle of all concerned agencies, with progress reporting on policy implementation to follow by quarter afterwards. This means this work planning should be done in close conjunction with potential funders identified in the strategy to develop work planning that is as concrete and close to reality as possible. In that respect, efforts should be made to coordinate the work on accounting, financing and budgeting with the Department for International Development (DFID)-sponsored Overseas Development Institute (ODI) initiative already working on this issue in Uganda. Similarly, such coordination should take place with the work already planned and budgeted for on mainstreaming climate change in various sectors, such as under DANIDA funding for the Ministry of Water and Environment (MWE). Such budgets and work plans should be reviewed and quality controlled by the relevant national budget and planning authorities before final approval. This is a process in which the Ministry of Finance, Planning and Economic Development (MoFED), the National Planning Authority (NPA) and the Ministry of Local Government (MoLG) will have key roles to play.

- **Developing an accompanying performance measurement framework (PMF) (in parallel to work planning efforts).** Each lead ministry, department and agency should work closely with the National Climate Change Commission (NCCC) to devise a department-specific performance measurement framework to follow the progress in implementing its specific programmatic climate change policy and strategy efforts. This should be developed in conjunction with the work planning and budgeting, building on the indicative outcomes and outputs provided under the detailed climate change implementation strategy, and should be integrated with the on-going Medium-Term Expenditure Framework process at the national level and district level, as well as the district conditional grant system. Such performance measurement frameworks will identify a set of easy-to-measure performance indicators for each outcome and output to be achieved, with set targets, and will detail the means of verification and sources of data to inform progress on these indicator values. This department-specific PMF will then structure the progress reporting of each lead agency on its policy implementation work at the national level. The NCCC will itself be tasked with developing the overarching PMF for policy implementation, building on the department-specific PMFs.

  The figure below presents in schematic the various first steps of this road map to policy implementation, leading down the road to implementation of short-term priorities budgeted for and monitoring of progress in implementation.

Figure 1: Road map to early policy implementation



3.2 Institutional Framework and Resources for a Coordinated Response

3.2.1 Summary Overview of Institutional Framework

The institutional framework for the implementation of the policy and the key roles and responsibilities associated with the various stakeholders through this implementation process have already been described in the main policy document (Part I) and will therefore not be repeated here in detail. As a reminder, the main actors at the national level include the following:

- The Focal Climate Change Institution prescribed in the main policy; the National Climate Change Commission (NCCC)
- The two multi-stakeholder coordination mechanisms prescribed by the policy, namely:
  - The Policy Committee on Environment (PCE) at the executive level, chaired by the Prime Minister
  - The National Climate Change Advisory Committee at the operational level
- Other key coordinating ministries and authorities, namely:

  - The Ministry of Finance, Planning and Economic Development
  - The National Planning Authority
  - The Ministry of Local Government
- Other ministries, departments and agencies with a role in implementation

A similar management arrangement is mirrored at the district level:

- The climate change focal point anchored within the Natural Resources Department of the District Local Government
- The existing Environment Committee, as a mechanism to ensure cross-sectoral coordination
- All district-level departments with a role in implementation

It is of course understood that through the multi-stakeholder structures, at both the national and district levels, civil society and the private sector also have crucial roles to play as actors in the policy implementation process. In addition to their participation in those coordination structures, these actors are also involved in the implementation process, as is evidenced by a number of outcomes and outputs proposed under the detailed indicative implementation strategy (see Section 5 of this document). It is also understood that all individual citizens in Uganda, through their own awareness and voluntary approach to behavioural change and resource use, are the ultimate implementers of a number of the priorities under this policy. A number of outcomes and impacts under the policy indeed tackle directly or indirectly the need to raise their awareness and knowledge, and to provide incentive to bring about such behavioural change.

3.2.2 Resources for Coordination

In view of the institutional structure described above, in addition to indicative costs for the implementation of the road map (referred to earlier), and to support priority actions under the implementation strategy (discussed in Section 4), the coordination function must also be adequately resourced, to ensure a proactive and effective approach to the policy implementation process. The main elements of the coordination cost estimates include in particular:

- Putting in place a legal framework to guide the coordination, direction and overall implementation of the NCCP and its implementation strategy;
- Upgrading of the CCU to a National Climate Change Commission (NCCC) and supporting the various coordination functions of the NCCC for policy implementation,
- Strengthening the operations of Policy Committee on Environment (PCE) to guide climate change policy implementation,
- Operationalizing the National Climate Change Advisory Committee,
- Supporting the district-level focal point structure through basic capacity strengthening,
- Developing and implementing the communication strategy on the NCCP.

This costing is broken down in Table 1 according to these elements, for the short and medium term.

Table 1: Short and Medium Term Cost Estimate for the Coordination Function

Coordination function/Task	Total Cost (US$)	Short term (US$) (0-5 years)	Medium Term (US$) (6-10 years)
CCU upgrade to a National Climate Change Commission (NCCC) structure and coordination functions for CC Policy Implementation (developing both legal and institutional framework)	17,500,000	10,000,000	7,500,000
Operation of the Policy Committee on Environment (PCE) to handle climate change matters	20,000	20,000	-
Operation of the NCCAC	60,000	60,000	-
District level focal point structure	15,000,000	7,500,000	7,500,000
Communication Strategy on policy	2,500,000	2500000	-
Total Coordination costs	**35,080,000**	**20,080,000**	**15,000,000**

3.2.3 Communication Strategy

Notwithstanding the extensive consultation process that took place and led to both the policy and this implementation strategy, raising awareness among a wide array of stakeholders nationally around these two key documents, their thrust and the roles and responsibilities of the different actors involved in the implementation of the policy is paramount to its visibility. This awareness raising is vital for building the momentum required to ensure the policy's implementation, and ultimately to ensure the success of this major policy endeavour. It is also necessary to raise the understanding and knowledge around climate change issues and solutions at the national level, and the policy's profile at both the national and international levels, in order to attract international partners in support of its implementation.

There is therefore a need to develop of communication strategy to address these various aspects. The key principles driving the development of this communication strategy must include:

- Community ownership of the policy and participation in its implementation
- Language and cultural relevance of the policy
- Fostering learning and sharing among networks of people with similar concerns
- Supporting public debate on climate change issues
- Involving local administration and community leaders
- Gathering and systematizing available data and generating additional information to ensure an adequate analysis including disaggregated data for marginalized groups

- Promoting knowledge on the use of appropriate technology that can be owned and controlled by the people to meet their real needs

In light of these principles, the following measures will be pursued as first steps towards effective communication on climate change issues in the months following the adoption of the Policy:

- Conducting a communication needs assessment
- Improving access to climate change information
- Disseminating credible and reliable climate change information and research findings
- Developing a comprehensive communication plan

Out of the process of developing the communication needs assessment and the comprehensive communication plan, concrete activities will be identified. Some of these early activities are likely to include:

At the national level:

- Producing a popular or "layperson's" version of the policy and strategy intended for a general audience
- Translating this version into local languages and disseminating it nationally and locally to the general population through various means,
- Encouraging knowledge exchange and debate on climate change issues and the policy implementation through the use of various means such as workshops, meetings, audio, video, print and electronic mass and social media
- Developing posters and pamphlets (in multiple languages) summarising the main thrust of the policy

At the international level:

- Showcasing the policy and its implementation strategy in various regional and international forums
- Preparing an attractive policy and strategy summary information package, information booths and a presentation for international events and workshops, such as regional meetings, convention meetings, etc.

These activities will of course have to be expanded upon, to address all key guiding principles and aspects of the communication plan yet to be developed. The examples above are only focussed on some of the very first steps in that respect to foster further buy-in for the implementation of the policy.

4. Indicative Policy Implementation Costs and Sources of Financing

Uganda's need for climate financing as an addition to the ordinary development financing is imposed by the fact that climate change is both a developmental and an environmental challenge. The adverse effects of climate change pose a great risk to lives and livelihoods of people, particularly the poor and the vulnerable, as these effects can even reverse economic progress already made. It is for

this reason that adequate and sustainable financing needs to be mobilised for the country to move forward along a sustainable and resilient development path. The estimates provided in this strategy are considered minimal compared to the apparent needs of the country. The estimates provide a critical starting point that will open the door to more accurately establishing the real needs in the unpredictable environment of climate change.

Some of the strategic interventions identified in this strategy are already being addressed to some extent through existing development interventions with funding from the government, as well as development partners. In order to effectively address the identified strategic interventions, substantial amounts of additional funding will be required in the long term. This is largely due to the fact that, even in the absence of climate change impacts, there are still gaps that need to be filled in order for the country to get on the path to sustainable and resilient development. The additional funds become more critical because, in the presence of climate change, the problems faced by the country are exacerbated and therefore additional costs will have to be incurred in order for the country to follow a resilient development path. The major means through which the additional funds may be obtained include the following:

- **National budget.** The mainstreaming and integration of climate change issues into the national development agenda means that national budget allocations are to support the implementation of the climate change policy priorities that are already part of the national development agenda. These national budget allocations will be used to leverage the finances originating from external sources to cover the additionality related to climate change.
- **Dedicated funding from bilateral and multilateral sources.** The available sources of external funding for adaptation and mitigation are diverse and expanding, and include for instance: the World Bank's Carbon Funds and Facilities; the Least Developed Countries Fund (LDCF) of the United Nations Framework Convention on Climate Change (UNFCCC)/Global Environment Facility (GEF); the United Nation's Reduced Emissions from Deforestation and Forest Degradation (UN-REDD) Programme; Climate Investment Funds (CIFs) of the World Bank; the Special Climate Change Fund (SCCF) of the UNFCCC/GEF; the Adaptation Fund (AF) of the Kyoto Protocol (with secretariat at GEF and World Bank acting as Trustee); the Green Climate Fund; and the Scaling up Renewable Energy in Low Income Countries Programme (SREP). In addition to those, numerous bilateral development partners have either set up their own climate change bilateral funds and programmes, and/or are mainstreaming climate change support in their development cooperation programmes.
- **Private sector finance and foreign direct investments (FDIs).** Private sector players (both domestic and international) can provide investment mainly in the energy and forestry sectors. Private sector sources may be supplemented by public–private partnership funds and grants or soft loans from multilateral financial institutions (MFIs).
- **Carbon markets.** Market-based mechanisms such as the Clean Development Mechanism (CDM) and the REDD+ Mechanism, as well as voluntary carbon market schemes, can provide funds for mitigation.
- **Payment for ecosystem services (PES).** PES, also known as payments for environmental services (or benefits), is the practice of offering incentives to farmers or landowners in exchange for managing their land to provide some sort of ecological service. PES programmes promote the conservation of natural resources in the marketplace. This can include, for instance, the

integration of various innovative financing and payment schemes through appropriate taxes, levies and tariffs.

Table 2 on the next page summarises some of the financing sources and mechanisms.

Table 2: Sample of Finance Mechanisms and Descriptions

Finance Mechanism [Multilateral/ Bilateral/ Other]	[Adaptation/Mitigation – A/M]: Description
Climate Investment Funds (CIFs) [MLO: World Bank]	A/M: The CIF includes the Clean Technology Fund (CTF) – which supports the rapid deployment of low-carbon technologies - and Strategic Climate Fund (CTF), which includes the • Scaling up Renewable Energy in Low Income Countries Programme (SREP) – supporting investments in a small number of low income countries for energy efficiency, renewable energy and access to modern sustainable energy; • Forest Investment Program (FIP) – which seeks to reduce emissions and up-scale investment for reduced deforestation and forest degradation and to promote sustainable forest management, and; finally, the • Pilot Project for Climate Resilience (PPCR) – which aimed to integrate climate resilience in national development planning consistent with poverty reduction and sustainable development goals.
Forest Carbon Partnership Facility (FCPF) [MLO: World Bank]	M: The fund assists developing countries in their efforts to reduce emissions from deforestation and forest degradation, and support forest carbon stock conservation and sustainable management of forests and enhancement of forest carbon stocks (REDD+). The FCPF is comprised of a Readiness Fund, which aids countries in setting up national systems and arrangements for REDD+, and a Carbon Fund, which is to operationalize the REDD+ programs and deliver results in the form of social and environmental benefits, as well as emissions reductions to financial contributors.
Global Environment Facility (GEF) [MLO: GEF Secretariat, World Bank as Trustee]	A/M: The GEF Trust Fund supports energy efficiency and renewable energy mitigation projects, as well as enabling activities for technical assistance and mainstreaming climate change. The GEF also includes the Least Developed Countries Fund (LDCF) - which funds the preparation and implementation of the National Adaptation Plans of Action (NAPAs) - and the Special Climate Change Fund (SCCF) - which supports projects in adaptation; technology transfer and capacity building; energy, transport, industry, agriculture, forestry and waste management; and economic diversification.
International Climate Initiative (ICI) [BL/Private Sector: BMU/German government]	A/M: ICI funds mitigation, adaptation and climate change projects with biodiversity co-benefits, and places emphasis on climate change projects that catalyse other funding streams, especially from the private sector. For example, the fund's African Carbon Asset Development Facility (ACAD) seeks to improve financial institutions' ability to identify, appraise, and transact viable carbon opportunities.
International Climate Fund (ICF) [BL/Private Sector: DfID/UK Government]	A/M: The fund supports low carbon growth and adaptation in developing countries by demonstrating low-carbon growth, supporting countries with international negotiations, and capitalizing on opportunities for private sector partnerships, innovation, and sustainable development. In parallel the fund seeks to mainstream climate change into the UK's development aid programming.
ClimDev Africa Programme Special Fund (CDSF) [MLO: UNECA, AUC, and AfDb]	A/M: The fund provides assistance for the generation and wide dissemination of climate change information in Africa; capacity enhancement of policy makers and policy support institutions for integrating climate change into development programs; and implementing pilot adaptation practices.
Adaptation Fund (AF) [MLO: GEF as Secretariat, World Bank as Trustee, portion of funding from CDM CERs]	A: Established under the Kyoto Protocol, the AF is financed with a share of certified emissions reductions from CDM projects and a limited set of other donors. It funds adaptation activities for communities, countries and sectors, and implementing agencies include national entities approved by the AF Board.
(Proposed) **Green Climate Fund (GCF)** under the UNFCCC [n/a]	A/M: The fund began with a Fast Track commitment of US$ 7.5 billion by the European Union (EU). The GCF Board is considering the design of the fund in terms of governance structure, procedures, policies, funding mechanisms, potential safeguards and other key elements.
Africa Enterprise Challenge Fund (AECF): Renewable Energy and Adaptation to Climate Technologies (REACT) [MLO/Private Sector: UK Aid, DANIDA, AusAID, IFAD, MNFA]	A/M: REACT is a competitive funding window that provides grants, co-financing, loads and risk management to encourage private sector companies to compete for investment support for their new and innovative business ideas in low-cost, clean energy for rural households and businesses, products and services for rural farmers, and improving access to climate-relevant funding.
Common Market for Eastern and Southern Africa (COMESA) Carbon Fund [MLO/Private Sector: Funded by Norway, Britain, EC]	A/M: Working in the free-trade area established by the East Africa Community (EAC) and Southern Africa Development Community (SADC), the fund seeks to attract investors to purchase carbon offsets from agricultural, forestry and land-use projects, and is suitable for project developments that are or will be registered under the CDM.

Adequate financial resources are required in order to undertake climate change adaptation and mitigation. The New Delhi Work programme recognizes the need for adequate financial and technical resources to ensure effective implementation of activities of Article 6 of UNFCCC. Since Uganda contributes very little to greenhouse gas emissions but is highly vulnerable to climate change impacts, more resources are allocated to adapting to climate impacts in the short and medium term. In the long-term, the country will need to allocate more resources to mitigation because with the high level of development, population growth and oil extraction and use, green house gas emissions will be higher.

During the preparation of the NCCP and this implementation strategy, models and secondary data cost estimates for climate change were used to estimate the cost of implementing the NCCP. It is estimated that Uganda will require **US$ 3.9 billion** (approximately US$ 258 million per annum) over the next 15+ years to address climate change concerns in addition to the existing interventions. This represents approximately 1.6% of the country's Gross Domestic Product (GDP) per annum over the next fifteen years (GDP at market prices as of 2011). Of this, adaptation costs will account for approximately 1.2% and mitigation costs for 0.4% of the annual GDP. The summary estimates of these costs, by sectors of intervention under the policy, are presented in Table 3 below. It should be noted up front that a significant share of these estimated financial resource needs will be required and channelled at the local level, where a majority of the priority actions under this strategy will materialize, following the adopted policy principle of community-based actions to address climate change and its impacts.

The adaptation estimates are based on the methods presented by World Bank (2006)[1] and Stern Review (2006)[2]. Several other estimates of the costs of climate change adaptation in developing countries in the literature have adopted this methodology[3] (Annex B). The estimates are within the range of the average projected adaptation estimates for the Sub-Saharan Africa countries (at 1.7%–1.8% of their GDP per annum)[4] and are also lower than the World Bank (2006) estimates range of 2-10% of Gross Domestic Investment (GDI). The mitigation costs were estimated using the Integrated Assessment models (IAMs) - the FUND and PAGE models which estimate that the mitigation costs will range between 1.5 -10% of annual GDP[5] (Annex B). Again Uganda's mitigation costs are below these averages. However, it should be noted that for some interventions, there may be no clear divide between climate-change finances that address purely adaptation or mitigation concerns. This is because some adaptation and mitigation measures are mutually reinforcing and deliver co-benefits for both adaptation and mitigation. For example adaptation measures in sustainable land management can mitigate climate change if they involve forestry.

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[1] World Bank (2006), Investment Framework for Clean Energy and Development. World Bank, Washington, DC. http://siteresources.worldbank.org/DEVCOMMINT/Documentation/20890696/DC2006-0002(E)-CleanEnergy.pdf

[2] Stern, N. (2006), "The Economics of Climate Change", *The Stern Review*, Cambridge University Press, Cambridge.

[3] Brian Lipinski, Heather Mcgray (2010). Summary of studies estimating the costs of climate change adaptation in Developing Word.

[4] African Development Bank, 2012. *The Cost of Adaptation to Climate Change in Africa*

[5] Stockholm Environment Institute (2009). *Adapcost briefing paper*. *www.afdb.org/.../Africa*.

The estimation of the climate change intervention costs was based on Uganda's National Development Plan (NDP) - 2010/2011; projected GDP figures for 2011/2012 – 2014/2015 taking into account Projected Domestic Funding and projected donor funding as a percentage of GDP. The rest of the variables were projected (see methodology Annex B). The costing methodology was also informed by different authoritative sources, including the World Bank studies. These are only indicative of the direction the country needs to take in implementing the climate change policy. It is likely that, owing to the unpredictability of the impacts of climate change and the existing gaps in financial data for the country's climate change needs, the required financial input might be higher than projected if the country is to move on a sustainable climate-resilient development path. Attaining climate-proof and climate-resilient development requires much more than poverty alleviation. Apart from the existing deficits in addressing the poverty problem, the country faces some unpredictable future impacts as a result of changes in climate that cannot yet be precisely predicted. Uganda is already undertaking activities that address some of the impacts of climate change. Activities that are already being undertaken have already been taken care of and are therefore not included in these estimates.

Monetary estimation of costs for climate change response in Uganda is justifiable on the grounds that monetary costs, unlike other indicators, can be aggregated for comparison purposes (they provide a standard unit for comparison across different sectors). Monetary costs can also serve as an indicator in the cost–benefit analysis of different adaptation and mitigation activities. However, this information should be used in conjunction with other complementary indicators.

4.1 Policy Implementation Costs in the short to medium term

Implementing the strategic interventions in the NCCP in the short to medium term would require approximately US$ 905 million (see Table 3). Table 4 provides a summary of the breakdown of the climate change intervention costs from FY 2013/2014 to FY 2017/2018 for each sector sector/priority indicated this implementation strategy. In addition, Table 5 provides a summary breakdown of the costs per ministry over the period to enable the Ministries, Departments and Agencies (MDA) become aware and commit them to undertake the climate change interventions in this NCCP implementation strategy. The detailed breakdown of the intervention costs per ministry over the period is provided in Annex D. The estimation of the climate change intervention costs for this period was based on secondary data estimates for sectors indicated in the Medium Term Expenditure Framework (MTEF) under the National Development Plan 2010/2011 – 2014/2015; from which ratios were computed and used in the computation of costs for climate change interventions over the period 2013/2014 – 2017/2018.

4.2 Policy Implementation Cost for the First Financial Year - 2013/2014

The road map to implementation of the NCCP (Section 3.1 of this document) indicates that in the first in the first year (current financial year 2013/2014) each lead MDA has some basic management tasks to undertake to trigger the policy implementation. To that end, the GOU will start the process of developing the institutional framework for climate change governance at national level. In

addition, each lead institution (MDA) will undertake the following steps of the road map to policy implementation:

(i) Awareness raising, information gathering and identification of climate change focal point
(ii) Building knowledge and capacity for climate change accounting, budgeting and work planning
(iii) Developing an Performance measurement framework (PMF)
(iv) Implementing all sectoral projects and activities that have a climate change component or that need to be 'climate proofed' in the FY 2013/2014

The realization of the bold ambitions identified in the NCCP and its implementation strategy needs financial resources to flag off implementation in the first year. Uganda will need to access resources from both public and private sources and from both within Uganda and international sources. However, the GoU is duty bound kick start the implementation by providing funding for the first year; and this a critical basis for mobilization of resources from other sources (especially international climate change finance) for subsequent years. Approval and kick starting implementation of the NCCP will: (i) enable Uganda's public sector to mobilize domestic and international climate finance; and (ii) improve the 'investment climate for climate investment' and this will increase the flows of, in particular, private sector capital towards mitigation investment, from both Ugandan and international investors.

Table 4 indicated that cost of implementing climate change interventions for FY 2013/2014 (first Financial Year) is US$ 126 million of which: the adaptation cost is US$ 93 million and mitigation cost is US$ 25.9 million. The other costs are common policy priorities (US$ 3.6 million); climate change monitoring and detection (US$ 710,301) and coordination costs (US$ 2.9 million). It is estimated that the GoU will provide some start-up funding of up to the tune 60% of the total costs estimated for FY 2013/2014 (US$ 75.6 million) kick start the road map to policy implementation. In the subsequent years the GoU will then mobilise and access bilateral and international climate change finance. By doing this, the proportion of funds the GoU will have it provides for climate change intervention will reduce to about 30% of the total cost by 2017/2018. However, GoU will not provide funding to CSOs to implement climate change interventions because they are expected to mobilise their own financial resources. Table 6 summarises the funds to be provided by GoU to the different MDA to implement climate change interventions in the FY 2013/2014. All department and agencies in the ministry will have to work together to allocate the climate change funds depending on the interventions they will prioritise.

. **Table 3: Summary of Costs (Additional) for Implementing the National Climate Change Policy**

	Sector/Priority	Total Additional Costs (US$) (15 years)	Time Frame		
			Short- term (US$) (1-5 years)	Medium-term (US$) (6-10 years)	Long-term (US$) (11-15 years)
A. COMMON POLICY (CROSS CUTTING) PRIORITIES					
TOTAL COSTS COMMON POLICY PRIORITIES		**89,486,712**	**21,471,132**	**31,892,896**	**36,122,684**
B. ADAPTATION					
1	Agriculture	297,097,466	98,035,920	112,848,300	86,213,246
2	Water	202,912,829	36,648,207	67,198,692	99,065,930
3	Fisheries	163,125,744	17,402,140	68,962,850	76,760,754
4	Transport and Works	1,053,904,000	211,512,000	376,545,000	465,847,000
5	Forestry	24,286,880	2,463,745	12,599,755	9,223,380
6	Wetlands	2,303,463	1,539,841	763,622	-
7	Biodiversity	6,349,130	1,847,809	3,818,108	683,213
8	Health	732,694,136	128,262,303	279,027,742	325,404,091
9	Energy	382,441,000	160,314,000	131,592,000	90,535,000
10	Wildlife and Tourism	24,419,000	5,684,500	8,672,500	10,062,000
11	Human Settlements	13,637,000	3,181,000	4,853,000	5,603,000
12	Disaster Risk Management	12,144,075	2,928,806	4,230,843	4,984,426
13	Vulnerable Groups	3,626,076	1,269,149	1,692,337	664,590
TOTAL: ADAPTATION COSTS		**2,918,940,799**	**671,089,420**	**1,072,804,749**	**1,175,046,630**
C. MITIGATION					
1	LULUCF – Forestry	36,832,976	1,739,250	15,022,615	20,071,111
2	LULUCUF - Landuse and Landuse Change	2,727,000	636,000	970,500	1,120,500
3	LULUCF- REDD	36,404,967	10,203,600	13,656,923	12,544,444
4	Wetlands	18,561,576	5,124,990	5,408,142	8,028,444
5	Agriculture	141,912,000	26,568,000	50,155,000	65,189,000
6	Energy Generation	25,674,062	8,665,541	10,404,791	6,603,729
7	Energy Utilization	108,281,485	46,793,918	35,498,697	25,988,871
8	Industry	9,747,000	2,273,500	3,469,000	4,004,500
9	Transport	421,562,000	84,605,000	150,618,000	186,339,000
10	Waste Management	2,727,000	636,000	970,500	1,120,500

TOTAL: MITIGATION COSTS	**804,430,066**	**187,245,799**	**286,174,168**	**331,010,099**
D. MONITORING AND DETECTION				
TOTAL: MONITORING AND DETECTION	**19,620,179**	**5,364,558**	**5,811,144**	**8,444,477**
E. CLIMATE CHANGE COORDINATION				
TOTAL: CLIMATE CHANGE COORDINATION COSTS	**35,080,000**	**20,080,000**	**15,000,000**	**-**
GRAND TOTAL: ALL COSTS	**3,867,557,756**	**905,250,908**	**1,411,682,957**	**1,550,623,890**

Table 4: Summary of Costs (Additional) for implementing the National Climate Change Policy in the Short to Medium Term (1-5 years)

	Sector/Priority	Total Costs Short to Medium Term (US$) - 1-5 years	Year 1 2013/2014	Year 2 2014/2015	Year 3 2015/2016	Year 4 2016/2017	Year 5 2017/2018
A: COSTS COMMON POLICY PRIORITIES		**21,471,132.00**	3,161,941.80	3,690,887.32	4,245,906.13	4,883,982.48	5,488,414.28
B.	**ADAPTATION**						
1	Agriculture	**98,035,920.00**	13,314,915.15	15,998,670.07	19,059,164.94	22,901,600.34	26,761,569.50
2	Water	**36,648,207.00**	4,852,452.82	6,040,689.25	7,039,199.58	8,675,247.12	10,040,618.23
3	Fisheries	**17,402,140.00**	2,363,501.23	2,839,888.65	3,383,150.35	4,065,212.58	4,750,387.20
4	Transport and Works	**211,512,000.00**	29,967,556.16	36,011,647.96	41,356,133.86	48,379,787.14	55,796,874.89
5	Forestry	**2,463,745.00**	326,215.31	406,096.75	473,223.50	583,209.89	674,999.54
6	Wetlands	**1,539,841.00**	203,884.62	253,810.53	295,764.76	364,506.27	421,874.82
7	Biodiversity	**1,847,809.00**	244,661.52	304,572.61	354,917.67	437,407.48	506,249.73
8	Health	**128,262,303.00**	18,201,193.96	21,713,087.59	25,158,149.80	29,299,026.33	33,890,845.32
9	Energy	**160,314,000.00**	21,806,267.89	26,917,913.02	31,043,779.19	37,229,771.70	43,316,268.19
10	Wildlife and Tourism	**5,684,500.00**	906,038.41	1,011,305.10	1,148,191.26	1,261,239.50	1,357,725.74
11	Human Settlements	**3,181,000.00**	507,013.72	565,929.81	642,503.45	705,784.61	759,768.41

12	Disaster Risk Management	**2,928,806.00**	466,813.76	521,046.26	591,586.17	649,823.34	699,536.46
13	Vulnerable Groups	**1,269,149.00**	202,285.92	225,786.67	256,353.95	281,590.05	303,132.40
TOTAL ADAPTATION COSTS		**671,089,420.00**	**93,362,800.49**	**112,810,444.26**	**130,802,118.49**	**154,834,206.33**	**179,279,850.43**
C.	**MITIGATION**			-	-	-	-
1	LULUCF – Forestry	**1,739,250.00**	230,287.63	286,678.93	334,066.22	411,709.73	476,507.49
2	LULUCUF - Landuse and Landuse Change	**636,000.00**	84,210.40	104,831.28	122,159.62	150,551.90	174,246.81
3	LULUCF- REDD	**10,203,600.00**	1,351,020.74	1,681,849.72	1,959,855.14	2,415,363.77	2,795,510.63
4	Wetlands	**5,124,990.00**	678,580.87	844,747.25	984,381.79	1,213,171.35	1,404,108.75
5	Agriculture	**26,568,000.00**	3,608,378.09	4,335,682.95	5,165,085.35	6,206,395.76	7,252,457.86
6	Energy Generation	**8,665,541.00**	1,178,706.22	1,455,008.79	1,678,026.51	2,012,401.37	2,341,398.12
7	Energy Utilization	**46,793,918.00**	6,365,013.11	7,857,046.89	9,061,342.48	10,866,966.60	12,643,548.92
8	Industry	**2,273,500.00**	362,367.55	404,468.67	459,215.91	504,429.24	543,018.64
9	Transport	**84,605,000.00**	11,987,050.80	14,404,693.23	16,542,492.65	19,351,960.60	22,318,802.72
10	Waste Management	**636,000.00**	84,210.40	104,831.28	122,159.62	150,551.90	174,246.81
TOTAL MITIGATION COSTS		**187,245,799.00**	**25,929,825.79**	**31,479,838.98**	**36,428,785.27**	**43,283,502.22**	**50,123,846.75**
C: MONITORING AND DETECTION COSTS		**5,364,558.00**	710,301.18	884,235.01	1,030,396.78	1,269,881.12	1,469,743.90
E: CLIMATE CHANGE COORDINATION COSTS		**20,080,000.00**	2,957,077.03	3,451,751.75	3,970,810.44	4,567,545.30	5,132,815.48
GRAND TOTAL: ALL COSTS		**905,250,909.00**	**126,121,946.28**	**152,317,157.32**	**176,478,017.11**	**208,839,117.45**	**241,494,670.84**

Table 5: Summary of Climate Change Costs for MDA and actors in the short to medium term (five year period)

Ministry/Sector	Indicated Agencies under the Ministry	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	Total
Ministry of Water and Environment (MWE)	NEMA, NFA, NWSC, Uganda Meteorology Authority	20,960,615.36	25,331,475.13	29,357,611.01	34,872,365.27	40,179,235.53	**150,701,302.30**
Ministry of Agriculture, Animal Industry and Fisheries (MAAIF)	NARO, NAFFRI, NAADS	9,054,823.59	10,912,092.48	12,975,495.92	15,624,637.75	18,243,284.16	**66,810,333.90**
Ministry of Works and Transport (MoWT)	UNRA	23,919,169.47	28,769,252.97	33,075,182.44	38,749,997.87	44,715,340.05	**169,228,942.80**
Ministry of Energy and Mineral Development (MEMD)	ERA, REA	14,572,289.18	17,969,901.36	20,728,026.05	24,855,173.55	28,898,550.97	**107,023,941.10**
Ministry of Health (MoH)		7,367,616.15	8,782,497.00	10,173,689.33	11,840,910.88	13,686,918.26	**51,851,631.60**
Ministry of Lands, Housing and Urban Development (MoLHUD)	ULC	1,497,781.75	1,799,387.38	2,066,726.57	2,422,242.18	2,777,603.91	**10,563,741.80**
Ministry of Tourism, Wildlife and Antiquities (MoTWA)	UWA, UTB	453,019.20	505,652.55	574,095.63	630,619.75	678,862.87	**2,842,250.00**
Ministry of Gender, Labour and Social Development (MoGLSD)		780,212.70	903,175.42	1,036,516.82	1,182,573.86	1,319,202.70	**5,221,681.50**
Office of the Prime Minister (OPM)		2,057,546.27	2,436,320.24	2,816,699.79	3,260,410.43	3,744,875.96	**14,315,852.70**
Ministry of Trade, Industry and Cooperatives (MoTIC)	UNBS,	2,758,715.34	3,307,049.20	3,885,281.66	4,620,033.96	5,347,460.24	**19,918,540.40**
Ministry of Finance Planning and Economic Development (MoFPED)	UBOS, Population Secretariat	4,938,565.89	6,007,146.49	6,938,550.28	8,220,304.95	9,531,615.19	**35,636,182.80**
Ministry of Education and Sports (MoES)	Public Universities	2,606,481.49	3,146,906.00	3,714,442.02	4,468,231.08	5,187,529.32	**19,123,589.90**
National Planning Authority (NPA)		4,927,599.67	5,921,266.46	6,868,654.51	8,095,736.78	9,371,784.57	**35,185,042.00**
Ministry of Local Government (MoLG)		426,316.59	499,911.39	575,409.88	666,005.45	748,918.79	**2,916,562.10**

Kampala Capital City Authority (KCCA)		5,168,152.30	6,227,425.14	7,156,000.20	8,398,542.80	9,685,555.05	**36,635,675.50**
Local Governments (LGs)		18,316,700.79	22,169,883.47	25,697,979.35	30,473,553.15	35,285,419.79	**131,943,536.55**
Others (CSOs, Private Sector, Development Partners, regional Bodies etc)		6,316,340.55	7,627,814.64	8,837,655.64	10,457,777.73	12,092,513.48	**45,332,102.05**
Total		**126,121,946.28**	**152,317,157.32**	**176,478,017.11**	**208,839,117.45**	**241,494,670.84**	**905,250,909.00**

Table 6: Estimated climate change interventions cost for Ministries/Sectors 2013/2014.

FY 2013-2014		
Ministry/Department	**Indicated Agencies under the Ministry**	**Costs (US$)**
Ministry of Water and Environment (MWE)	NEMA, NFA, NWSC, Uganda Meteorology Authority	13,423,977
Ministry of Agriculture, Animal Industry and Fisheries (MAAIF)	NARO, NAFFRI, NAADS	15,134,634
Ministry of Works and Transport (MoWT)	UNRA	11,350,975
Ministry of Energy and Mineral Development (MEMD)	ERA, REA	7,567,317
Ministry of Health (MoH)		6,053,853
Ministry of Lands, Housing and Urban Development (MoLHUD)	ULC	2,270,195
Ministry of Tourism, Wildlife and Antiquities (MoTWA)	UWA, UTB	2,270,195
Ministry of Gender, Labour and Social Development (MoGLSD)		2,270,195
Office of the Prime Minister (OPM)		1,513,463
Ministry of Trade, Industry and Cooperatives (MoTIC)	UNBS,	2,270,195
Ministry of Finance Planning and Economic Development (MoFPED)	UBOS, Population Secretariat	2,270,195
Ministry of Education and Sports (MoES)	Public Universities	2,270,195
National Planning Authority (NPA)		1,513,463
Ministry of Local Government (MoLG)		3,783,658
Kampala Capital City Authority (KCCA)		756,732
MWE - CC Coordination Costs (CCU/NCCC)		1,513,463
Total		**76,232,707**

5. Detailed Indicative Implementation Strategy

5.1 Common Policy Priorities Matrix

Common Priorities										
Policy priority: To identify and promote common policy priorities to address climate change in Uganda										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (USD)***	***Timeframe***			***Lead Implementation Agency***	***Responsible Parties***	***Possible Sources of Finance***	***Possible Policy Instruments for Promoting Climate Change Investment***
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	***Long- term (10-15 yrs)***				
1 To promote and enhance climate change education, public awareness and capacity development through communication, training, information and knowledge management	1.1 Climate change education, public awareness and knowledge management for a range of stakeholders in the country.		*8,917,000*	2,080,000	3,173,000	3,664,000				
		1.1.1 Climate change is integrated in education curricula and training at primary, secondary, tertiary and higher education levels					MoES/CCU-MWE	MWE, NPA, MoLG, Local Governments, Development Partners, Universities and Training Institutions, CSOs, Private Sector	1. Government 2. MLOs, BLs focused on education and knowle ge management (e.g. CDKN, UNECA, LDCF) 3. Institutions, NGOs, Think tanks (e.g. ACPC)	1. National budget (education) 2. Grants, TA 3. Research Grants; payment in kind (technical

									4. Private Sector	training) 4. Co-financing; payment in kind (teacher training)
		1.1.2 Training models that address climate change challenges and opportunities developed and harmonized in all training institutions in the country.					MoES-CCU-MWE	MWE, NPA, MoLG, Local Governments, Development Partners, Universities and Training Institutions, CSOs, Private Sector	1. Government 2. MLOs and BLs (e.g. LDCF, SCCF, ICF, NCSP; ICF) focused on institutional development 3. Institutions, NGOs, Think tanks (e.g. ACPC, CIFOR, IFPRI) 4. Private Sector	1. National budget (education, sectoral, cross-sectoral) 2. Grants, TA 3. Research Grants; payment in kind (technical training) 4. Co-financing; payment in kind (technical training)
		1.1.3 Establishment of climate change training institutions, programmes and centres of excellence supported for increased capacity of the country to address climate change including the capacity to access and use of financial and technological resources available nationally, regionally and internationally.					MoES-CCU-MWE	MWE, NPA, MoLG, Local Governments, Development Partners, Universities and Training Institutions, CSOs, Private Sector	1. Government 2. MLOs and BLs focused on institutional development (e.g. LDCF, SCCF, UN-REDD Programme; IDRC/CIDA, GIZ, SIDA) 3. Institutions, Think tanks, NGOs (e.g. ACPC, CIFOR) 4. Private Sector	1. National budget (sectoral, cross-sectoral) 2. Grants, TA 3. Research Grants; payment in kind (technical training) 4. Co-financing; payment in kind (training)

		1.1.4 A database developed for repository of research findings, and sectoral information sharing including knowledge management in the country.					MWE	MoES, MAAIF, NPA, MoLG, Local Governments, Development Partners, Universities and Training Institutions, CSOs, Private Sector	Same as 1.1.1	
		1.1.5 A National Climate change negotiation platform and focal point established, financed and supported					MWE	NPA, MoFPED Development Partners, Universities and Training Institutions, CSOs, Private Sector	Same as 1.1.3.	
		1.1.6 A national climate change communication plan with clearly identified targets and messages developed and implemented ,					MWE	NPA, MoFPED Development Partners, Universities and Training Institutions, CSOs, Private Sector	Same as 1.1.3	
2. Provide adequate support for policies and programmes that take into account the interactions between population dynamics, climate change and	2.1 Climate smart policies and programs put in place and supported		26,537,864	6,474,087	10,211,577	9,852,200				

development.										
		2.1.1 Family planning and reproductive health promoted as cost-effective way of influencing future population growth and gender equality					MOH/ Population Secretariat	UFPA, MFPED, MoGLSD, MoLG, Local Governments, CSOs, Development Partners	1. Government 2. MLOs, BLs supporting reproductive health (e.g. WHO, UNFPA) 3. iNGOs and regional/local NGOs (e.g. Population Action, Global Gender and Climate Alliance (GGCA)) 4. Private Sector institutions supporting female-run enterprise etc. (e.g. banks, micro-loan schemes)	1. National Health Sector budget; district health budget 2. Grants, TA 3. Grants 4. Loans, Payment in kind (training)
		2.1.2 Concerted actions in place to improve women's status, maternal and child health, while protecting the right of women to make their own decisions about childbearing					MoH/Population Secretariat,	UFPA, MGLSD MoLG, Local Governments, CSOs, Development Partners	Same as 2.1.1.	Same as 2.1.1.

		2.1.3 Access to education beyond the primary level promoted in order to provide a foundation for greater resilience to the negative impacts of climate change					MoES	MWE, MGLSD, UNFPA, MoLG, Local Governments, SCOs	Same as 1.1.1.	Same as 1.1.1.
3. Promote climate change research and development, and information exchange, in all sectors impacted on by climate change so as to better inform future actions to address climate change challenges	3.1 Increased Climate change research and development in all sectors impacted on by climate change		10,181,000	2,616,000	3,511,000	4,054,000				
		3.1.1 Climate change research capacity developed in all sectors impacted on by climate change					MWE	MoES, NCST, Academic and research institutions, civil society, Development Partners	Same as 1.1.3.	Same as 1.1.3.
		3.1.2 Priority climate change research and development interventions are periodically selected, adequately funded and conducted in all sectors impacted					MWE	MoES, NCST, Academic and research institutions, civil society, Development Partners	1. Government 2. MLOs and BLs focused on enabling activities and implementation (GEF TF, SCCF, LDCF, AF, ICF, etc)	1. National budget (sectoral) 2. Grant, loans, PES, co-financing 3. Grants, payment in kind 4. Grants, payment in kind

		on by climate change							3. Institutions, Research centers 4. NGOs, CSOs 5. Private sector	5. soft/ concessional loans, carbon finance, co-financing, payment in kind (TA), risk management
		3.1.3 Climate change data and information sharing strategies and programmes developed and implemented					MWE	MoES, NCST, Academic and research institutions, civil society, Development Partners	1. Government 2. MLOs and BLs focused on research and information-sharing (e.g. LDCF, SCCF, IDRC/CIDA, ICI, GIZ, SIDA) 3. Institutions, Think tanks (e.g. ACPC, CIFOR) 4. NGOs, CSOs 5. Private Sector	1. National budget (sectoral, cross-sectoral) 2. Grants, TA 3. Research Grants; payment in kind (technical training) 4. Payment in kind, TA 5. Co-financing; payment in kind (training), TA
		3.1.4 Modalities of disseminating and sharing climate research findings developed in all sectors with an emphasis on research into use to inform policy and practice					MWE	MoES, NCST, Academic and research institutions, civil society, Development Partners	Same as 3.1.3.	Same as 3.1.3.
4. Promote and encourage the development, transfer and diffusion of climate change technology to address the	4.1 Increased Climate change research and development, transfer and diffusion of technology		34,166,000	7,958,000	12,141,500	14,066,500				

problem of climate change in all climate change in all climate change affected/related sectors										
		4.1.1 Technology transfer needs assessment conducted and capacity gaps identified					MWE	MoTIC, MoES, NCST, Academic and research institutions, civil society, Development Partners	1. Government 2. MLOs and BLs focused on tech transfer (e.g. WB CTF, GEF TF, GEF SCCF, LDCF) 3. Technical and Academic Institutions, Think tanks, NGOs 4. Private Sector Government,	1. National budget (sectoral) 2. TA, Loans, co-financing 3. Research Grants, TA, payment in kind (technical training) 4. Co-financing; concessional/soft loans, payment in kind (training)
		4.1.2 Institutions put in place and adequately facilitated to manage and coordinate the development, transfer, deployment and diffusion of climate change resilient and low carbon development technology					MWE	MoTIC, MoES, NCST, Academic and research institutions, civil society, Development Partners	Same as 4.1.1.	Same as 4.1.1

		4.1.3 A fund for the transfer, deployment and diffusion of clean and low-carbon technology established					MWE	MoTIC, MoES, NCST, Academic and research institutions, civil society, Development Partners	1. Government 2. Private sector, financial institutions/ banks 3. NGOs, SMEs, businesses,	1. National budget, subsidies/ tax incentives, feed in tariffs 2. soft loans, loan guarantees, co-financing, TA 3. TA, payment in kind
		4.1.4 National carbon foot print data base established and effectively managed					MWE	MoTIC, MoES, NCST, Academic and research institutions, civil society, Development Partners	Same as 4.1.1.	Same as 4.1.1.
5. To promote and encourage the mainstreaming of gender considerations in climate change issues	5.1 Gender considerations mainstreamed in climate change issues and the overall socio-economic life in the country		9,684,848	2,343,045	2,855,819	4,485,984				
		5.1.1 Integrate gender considerations in the assessing the vulnerability, impacts and risks to of climate change at local and national levels.					MoGLSD	MoGLSD	1. Government 2. MLOs, BLs supporting gender equity (e.g. GEF, GCF, DfID, GIZ, etc.) 3. iNGOs and regional/local NGOs, CSOs (e.g. CARE, IUCN) 4. Private Sector institutions supporting gender equity, women owned SMEs etc. (e.g. banks, micro-loan schemes)	1. National budget; district budgets 2. Grants, TA, PES, concessional loans 3. Payment in kind, TA 4. Co-financing, micro-loans, Payment in kind (training)
		5.1.2 Communities empowered and both men and women participate in planning, testing							Same as 5.1.1.	Same as 5.1.1.

		and rolling out climate change adaptation and mitigation activities								
		5.1.3 Gender and climate change issues are integrated in education curriculum and training programmes.							Same as 5.1.1.	Same as 5.1.1.
		5.1.4 Climate change response policies, activities, and budgets are gender sensitive.							Same as 5.1.1.	Same as 5.1.1.
		5.1.5 Promote social protection programmes for vulnerable communities and individuals more especially including women, children, youth and others.							1. National budget (sectoral); district budgets 2. Grants, TA, PES, concessional loans 3. Payment in kind, TA, training 4. Co-financing, micro-loans, Payment in kind (training), risk management	1. National and local Government 2. MLOs, BLs supporting gender equity and social protections (e.g. GEF, WB, DANIDA, SDC, SIDA, etc.) 3. iNGOs and regional/local NGOs, CSOs working on social safety nets, livelihoods (e.g. CI, CARE, IUCN) 4. Private Sector institutions supporting gender equity, social welfare etc. (e.g. banks, micro-loan schemes)
Sub-Total			**89,486,712**	**21,471,132**	**31,892,896**	**36,122,684**				

5.2 Adaptation Strategy Matrix

Sector 1: Agriculture and Livestock										
Policy priority: ***6. To promote climate change adaptation strategies that enhance resilient, productive and sustainable agricultural systems*** ***7. To promote value addition and improve food storage and management systems in order to ensure food security at all times, as a factor of resilience***										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (USD)***	**Timeframe**			***Lead Implementation Agency***	***Responsible Parties***	***Possible Sources of Finance***	Possible Policy Instruments for Promoting Climate Change Investment
				Short term (1-5 yrs)	Medium Term (6-10 yrs)	Long- term (10-15 yrs)				
1. Promote and encourage highly adaptive and productive crop varieties and cultivars in drought-prone, flood-prone and rain-fed crop farming systems	1.1 Climate resilient, adaptive and productive crops and cultivars widely used across the country		28,089,981	9,190,868	7,053,019	11,846,095				
		1.1.1 Researchers and institutions capacitated to undertake studies on climate resilient crop varieties and cultivars					MAAIF	NPA, Development Partners, CSO, Research Institutes and Universities, NAADS	1. National and local Government 2. Donor Support – MLOS, BLs active in agriculture (GEF SCCF, LDCF, WB, UNDP, FAO, MDG Achievement Fund – (Environment and Climate Change thematic window), SDC etc.) 3. Agric. NGOs, CSOs 4. International and regional Institutions, Research Orgs working on agriculture (e.g. IFPRI, CGIAR) 5. Private Sector, businesses	1. Sector Budget (agriculture / extension services), district budgets 2 grants, concessional loans, co-financing 3. TA, payment in kind 4. payment in kind, grants, TA 5. soft loans, risk management/ insurance schemes, loan guarantees,

										TA
		1.1.2 Climate change risk and vulnerability assessment conducted for the crop sector					MAAIF	MWE, Research Institutes and Universities, NAADS, MoLG, Development Partners, Local Governments, CSO	Same as 1.1.1.	Same as 1.1.1.
		1.1.3 Climate resilient indigenous crop varieties and cultivars identified, characterized, preserved, shared and promoted					MAAIF	NPA, Development Partners, CSOs, Research Institutes and Universities, NAADS	Same as 1.1.1.	Same as 1.1.1.
		1.1.4 Field trials conducted on climate resilient crop varieties					MAAIF	NAADS Universities, NEMA, Regional research institutes, Development Partners, CSO and Private sector	Same as 1.1.1.	Same as 1.1.1.
		1.1.5 Climate change resilient crop varieties made widely available and disseminated.					MAAIF	Universities, NEMA, Regional research institutes, Research Institutes, Development Partners, Local Governments, CSOs	Same as 1.1.1.	Same as 1.1.1.
		1.1.6 Increased awareness on the need for and types of climate resilient crop varieties in					MAAIF	MWE, NAADS, NARO, Local Governments, CSOs	Same as 1.1.1.	Same as 1.1.1.

		public and private sectors and communities								
2. Promote and encourage highly adaptive and productive livestock breeds	2.1 Adaptive and productive livestock breeds are widely reared across the country		32,900,993	15,318,113	7,053,019	10,529,862				
		2.1.1 Capacity of key research institutions and scientists strengthened to undertake research on climate resilient livestock and poultry					MAAIF	Development Partners, CSOs, CCU, Research Institutes and Universities	1. National and local Government 2. Donor Support – MLOS, BLs active in livestock and animal husbandry (GEF, FAO, DANIDA, USAID, SDC, MDGAF etc.) 3. Agric. NGOs, CSOs 4. International and regional Institutions, Research Orgs working on agriculture (e.g. IFPRI, CGIAR) 5. Private Sector, businesses	1. Sector Budget (agriculture / extension services), district budgets 2. grants, concessional loans, co-financing 3. TA, payment in kind 4. payment in kind, grants, TA 5. soft loans, risk management/ insurance schemes, loan guarantees, TA
		2.1.2 Climate change risk and vulnerability assessment conducted for the livestock sector					MAAIF	MWE, Research Institutes and Universities, NAADS, MoLG, Development Partners, Local Governments , CSO	Same as 2.1.1.	Same as 2.1.1.
		2.1.3 Climate resilient Indigenous livestock and poultry breeds documented, characterized, shared and promoted.					MAAIF	Research Institutes and Universities, Development Partners, CSOs	Same as 2.1.1.	Same as 2.1.1.

		2.1.4 Pilots conducted to identify highly adaptive and productive livestock breeds appropriate to particular communities and/or commercial areas					MAAIF	NARO, NAADS, Development Partners, CSOs, Local Governments	Same as 2.1.1.	Same as 2.1.1
		2.1.5 Climate resilient livestock and poultry breeds widely disseminated					MAAIF	NARO, NAADS, Development Partners, Universities, NEMA, Regional research institutes, CSOs	Same as 2.1.1	Same as 2.1.1
		2.1.56 Increased awareness among public and private sectors on the need for highly adaptive livestock and poultry breeds					MAAIF	NARO, NAADS, Local Governments, Development Partners, CSOs, Private Sector	Same as 2.1.1	Same as 2.1.1
		2.1.7 Climate change related pest and disease outbreaks readily addressed through veterinary services, including strengthened animal health measures					MAAIF	NARO, NAADS, MoLG, Local Governments	Same as 2.1.1	Same as 2.1.1
3. Promote and encourage conservation agriculture and ecologically compatible cropping systems to increase resilience to the impacts of climate change.	3.1 Conservation agriculture and ecologically compatible cropping systems widely practiced to increase climate change resilience across the country		13,014,701	6,127,245	2,938,758	3,948,698				
		3.1.1 Climate resilient cropping practices identified and promoted to suit different regions and ecological					MAAIF	MWE, FAO, Research Institutes and Universities, NAADS, MoLG, Development Partners, Local Governments CSO	1. National and local Government 2. Donor Support – MLOS, BLs active in agriculture	1. Sector Budget (agriculture / environment, water), district budgets 2 grants, concessional loans,

		systems in the country							productivity (GEF TF (land deg), SCCF, LDCF, WB, UNDP, FAO, MDG AF, SIDA, SDC etc.) 3. Agric. NGOs, CSOs (e.g. IRAM, Oxfam) 4. International and regional Institutions, Research Orgs working on agriculture (e.g. IFPRI, CGIAR) 5. Private Sector, businesses, financial institutions	co-financing 3. TA, payment in kind 4. payment in kind, grants, TA 5. soft loans, risk management/ insurance schemes, loan guarantees, micro-loans, TA
		3.1.2 Field trials of climate resilient cropping patterns conducted in association with water management systems					MAAIF	MWE, NAADS, NARO, MoLG, Local Governments , CSO	Same as 3.1.1.	Same as 3.1.1.
		3.1.3 Reduced land degradation and enhance sustainable agricultural production and food supply through agro-forestry, water management and conservation agriculture practices					MAAIF	MWE, NAADS, NARO, Development Partners, MoLG, Local Governments CSOs	Same as 3.1.1. with additional emphasis on forestry applications, e.g. REDD+, PES	Same as 3.1.1. with additional emphasis on forestry applications, e.g. REDD+, PES
4. Promote sustainable management of rangelands and pastures through integrated rangeland management.	4.1 integrated rangeland management promoted		21,978,601	-	8,816,273	13,162,328				
		4.1.1 Appropriate strategies developed to sustainably utilize					MAAIF	MWE, MoLG, NAADS, Local Governments, CSOs, Private Sector	1. National and local Government	1. Sector Budget (agriculture / environment), district budgets (land and water planning)

		communally grazed land and rangelands through participatory approaches							2. Donor Support – MLOS, BLs active in livestock and land management (GEF TF (land deg), FAO, WB Africa, USAID, MDGAF etc.) 3. Agric./livestock NGOs, CSOs (e.g. Oxfam, CI, WOTR, etc) 4. International and regional Institutions, Research Orgs working on agriculture (e.g. IFPRI, CGIAR) 5. Private Sector, businesses	2. grants, concessional loans, co-financing, PES 3. TA, payment in kind 4. payment in kind, grants, TA 5. soft loans, risk management/ insurance schemes, loan guarantees, TA
		4.1.2 Best practice indigenous range land management and drought coping mechanisms documented and disseminated to drought prone areas					MAAIF	MWE, MoLG, NAADS, Local Governments, CSOs, Private Sector	Same as 4.1.1.	Same as 4.1.1.
		4.1.3 Rangeland management plans implemented, including sustainable utilization at local and national levels					MAAIF	MWE, MoLG, Development Partners, NAADS, Local Governments, Private Sector	Same as 4.1.1.	Same as 4.1.1.
5. Promote irrigated agriculture by encouraging irrigation systems that use water sustainably	5. Increased acreage of irrigated agriculture		54,652,627	-	21,746,808	32,905,819				
		5.1.1 River basin irrigation schemes put in place and managed environmentally sound manner.					MAAIF	MWE, MoLG, MoLHUD, NPA, NEMA, CSO and Private sector	1. National and local Government 2. Donor Support – MLOS, BLs active in watershed and	1. Sector Budget (agriculture / environment, water), district budgets (land and water planning)

									land-use management (GEF TF (land deg, climate change), FAO, WB Africa, USAID, MDGAF etc.) 3. NGOs, CSOs (e.g. Oxfam, CI, IRAM, etc) 4. International and regional Institutions, Research Orgs working on agriculture, water management (e.g. IFPRI, CGIAR) 5. Private Sector, businesses	2. Grants, concessional loans, co-financing, PES 3. TA, payment in kind 4. payment in kind, grants, TA 5. soft loans, risk management/ insurance schemes, loan guarantees, TA
		5.1.2 Water basins and pans constructed to promote irrigated agriculture in communities					MAAIF	MWE, MoLG, NEMA, NARO, NAADS, Development Partners, CSO and Private sector	Same as 5.1.1.	Same as 5.1.1.
		5.1.3 Existing irrigated production systems (re)configured to use water more efficiently and to accommodate the use of marginal quality water					MAAIF	MWE, MoLG, NARO, NEMA, CSO and Private sector	Same as 5.1.1.	Same as 5.1.1.
		5.1.4 Small scale farmers supported to undertake irrigation activities through exposure and access to appropriate irrigation technologies.					MAAIF	MWE, MoLG, Local Governments, CSO and Private sector	Same as 5.1.1.	Same as 5.1.1.

6. Promote and encourage agricultural diversification, and improved post-harvest handling, storage and value addition in order to mitigate rising climate related losses and to improve food security and household incomes.	6.1 Improved food security and household income through climate-resilient agricultural practices		29,535,563	13,786,301	5,877,516	9,871,746				
		6.1.1 Programmes undertaken to promote agricultural diversification at household, local and national levels in order build climate change resilient households, communities and national economy.					MAAIF	MoTIC, NARO, NAADS, MoLG, Development Partners NEMA, CSO and Private sector	1. National and local Government 2. Donor Support – MLOS, BLs active in agriculture (IFAD, WB Africa, UNDP, FAO; IDRC/CIDA, MDG AF, SDC, SIDA, DANIDA, etc.) 3. Agric. NGOs, CSOs (CARE, Oxfam, 4. International and regional Institutions, Research Orgs working on agriculture (e.g. IFPRI, CGIAR) 5. Private Sector, businesses	1. Sector Budget (agriculture / extension services), district budgets 2 grants, concessional loans, co-financing 3. TA, payment in kind 4. payment in kind, grants, TA 5. soft loans, risk management/ insurance schemes, loan guarantees, micro-loans, TA
		6.1.2 Value addition in crops and livestock products gained through agro-processing.					MAAIF	MoTIC, Development Partners MoLG, Local Governments, Private Sector	Same as 6.1.1	Same as 6.1.1
		6.1.3 Appropriate food storage systems developed					MAAIF	OPM, MoLG, NAADS, NARO, Local Governments	Same as 6.1.1	Same as 6.1.1

		and promoted at household, local and national levels to mitigate rising climate related post harvest losses and enhance food security								
		6.1.4 Marketing opportunities provided for small scale farmers to increase their income opportunities and resilience to climate change impacts					MAAIF,	MoTIC, MFPED, MoLG, Local Governments, Private Sector	Same as 6.1.1	Same as 6.1.1
		6.1.5 Income generating activities that may arise due to climate change are identified and implemented					MWE	MAAIF, NPA, MWE, CSO, Privates Sector	Same as 6.1.1	Same as 6.1.1
7. Support community-based adaptation strategies through expanded extension services and improved systems for conveying timely climate information to rural populations for enhanced climate resilience of agricultural systems	7.1 Community-based adaptation strategies and resilient agricultural systems implemented throughout the country		11,482,890	4,595,434	2,938,758	3,948,698				
		7.1.1 Agro-meteorological information generation strengthened for improved early warning systems					MWE (Meteorology and CCU)	MAAIF, OPM, NPA, Local Governmentss, NEMA.	1. Government 2. MLOs and BLs focused on climate research and data/ information-sharing (e.g. GEF LDCF, SCCF, AF, WB Africa, IDRC/CIDA, ICI, GIZ, SIDA)	1. National budget (research, agriculture, weather/ meteorological), district budgets (meteorological systems)

		and food security							3. Institutions, Think tanks (e.g. ACPC, CIFOR) 4. NGOs, CSOs 5. Private Sector, financial institutions, businesses	2. Grants, TA 3. Research Grants; payment in kind (technical training) 4. Payment in kind, TA 5. Co-financing; loans, payment in kind (training), TA
		7.1.2 Capacity for the collection, analysis and dissemination of early warning systems data and information strengthened					MAAIF	MWE, OPM, MoLG, Local Governments, CSOs, Development Partners	Same as 7.1.1.	Same as 7.1.1.
		7.1.3 Community-managed information platforms disseminate timely weather and climate information to farmers and other users					MWE (Meteorology and CCU)	OPM, MAAIF, MoLG, Local Governments CSOs	Same as 7.1.1. with emphasis on local funding sources, CSOs, district governments	Same as 7.1.1. with emphasis on community and district level sources
		7.1.4 Involvement of communities in initiatives that empower them to wisely use natural resources to enhance their resilience to climate change					MAAIF	NAADS, MoGLSD, NAADS, CSOs	Same as 7.1.3.	Same as 7.1.3.
		7.1.5 Integrated crop-livestock systems developed to enhance community resilience to climate change impacts					MAAIF	NAADS, MoLG, NAADS, Local Governments, CSOs, Private Sector	1. National and local Government 2. Donor Support – MLOS, BLs active in livestock and agriculture (GEF TF (land deg), FAO, WB Africa,	1. Sector Budget (agriculture / environment), district budgets (land and water planning) 2. Grants, concessional loans, co-financing, PES

									USAID, MDGAF etc.) 3. Agric./livestock NGOs, CSOs (e.g. Oxfam, CI, etc) 4. International and regional Institutions, Research Orgs working on agriculture (e.g. IFPRI, CGIAR) 5. Private Sector, businesses	3. TA, payment in kind 4. Payment in kind, grants, TA 5. Soft loans, risk management/ insurance schemes, loan guarantees, TA
		7.1.6 Appropriate livestock production systems developed to enhance community resilience to climate change impacts					MAAIF	NAADS, MoGLSD, NAADS, CSOs, Private sector	Same as 7.1.5.	Same as 7.1.5.
8. Develop innovative insurance schemes (low-premium micro-insurance policies) and low-interest credit facilities to insure farmers against crop failure and livestock loss due to droughts, pests, floods and other weather-related events	8.1 Innovative insurance schemes to protect farmers against crop failure and livestock loss due to extreme weather-related events		105,442,110	49,017,960	56,424,150	-				
		8.1.1 Insurance schemes enable farmers to restock livestock and grow crops after adverse climatic conditions					MFPED	MAAIF, MGLSD, NAADS, NPA, Famer Organisations, CSOs, Private Sector	1. Government 2. MLOs, BLs active in land management, agriculture (GEF, FAO, SDC, etc.) 3. Private Sector	1. National Agric Sector Budget; District budget 2. co-financing, grants, loans, TA 3. Risk management,

										insurance schemes, micro-loans, TA, payment in kind
Sub-Total			**297,097,466**	**98,035,920**	**112,848,300**	**86,213,246**				

Sector 2: Water										
Policy priority: To support on-going efforts to ensure that climate change concerns are integrated into national efforts for sustainable and long-term conservation, access and effective utilisation and management of water resources.										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change ((USD)***	***Timeframe***			***Lead Implementation Agency***	***Responsible Parties***	***Possible Sources of Finance***	***Possible Policy Instruments for Promoting Climate Change Investment***
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	***Long- term (10-15 yrs)***				
1. Promote and encourage water harvesting and efficient water utilization among individuals, households, institutions and sectors	1.1 Increased water harvesting and efficient water utilization across the country		11,580,711	1,231,873	4,199,918	6,148,920				
		1.1.1 Increased investment in innovative water harvesting and storage technologies and infrastructure to ensure availability of water during dry seasons					MWE	MAAIF, NEMA, NWSC, Districts, Municipalities, Local Communities, Private Sector, Ministry of Water's appropriate Technology Centre (ATC), Universities and Research Institutions households and individuals	1. Government 2. Donor Support – MLOs and BLs active in water harvesting, storage, agriculture (GEF LDCF, SCCF, ICF, FAO; MDGAF, SIDA, etc.) 3. Private Sector – financial institutions, businesses 4. CSOs, NGOs, (WOTR, IUCN, etc) 5. Research institutions (IFPRI, CGIAR, etc.)	1. National Sector Budgets (water, agriculture), district budget 2. Grants, TA, concessional/soft loans, co-financing 3. Direct investment (infrastructure), soft/ concessional loans, risk management, TA, loan guarantees 4. TA, payment in kind 5. TA, grants
		1.1.2 Water efficient technologies adopted					MWE	MAAIF, NEMA, NWSC, CSOs, Private sector , Ministry of Water's appropriate Technology Centre (ATC), Universities and Research Institutions	Same as 1.1.1.	Same as 1.1.1

		1.1.3 Water conservation in urban areas improved through water recycling, reuse and reduction of water wastage					MWE	MAAIF, NWSC, NEMA, Municipalities, CSOs and Private Sector, households and individuals	Same as 1.1.1	Same as 1.1.1
		1.1.4 Sustainable utilization of water enforced in rural and urban areas					MWE	MAAIF, NWSC, NEMA, Local Governments	Same as 1.1.1	Same as 1.1.1
2. Ensure availability of water for production in water dependant sectors in order to increase their resilience to climate change impacts	2.1 Water for production provided in water dependant sectors to increase their resilience to climate change		69,453,691	15,398,406	26,726,753	27,328,532				
		2.1.1 Better coordination in agriculture and water sectors to ensure water availability for irrigation and application in dry spells					MWE	MAAIF, MEMD, NEMA, MoLG. Local Governments, communities	1. Government 2. Donor Support – MLOs, BLs supporting coordination, capacity building (GEF LDCF, MDG AF Environment and Climate Change thematic window, AF, WB Africa; IDRC/CIDA, SIDA, GIZ, DANIDA, etc.) 3. CSOs, NGOs 4. Private sector	1. National Budget (sectoral, cross-sectoral/ co-ordinating agencies) 2. grants, TA 3. grants, TA, payment in kind 4. TA, payment in kind
		2.1.2 Improved livestock watering facilities					MAAIF	MWE, MoLG. Local Governments, communities, private sector and individuals	1. National and local Government 2. Donor Support – MLOS, BLs active in livestock and animal	1. Sector Budget (agriculture / extension services), district budgets 2. Grants, concessional loans, co-financing, TA

									husbandry (FAO, DANIDA, USAID, SDC, MDGAF etc.) 3. Agric. and livestock NGOs, CSOs (Oxfam, Heffer Intnl.) 4. International and regional Institutions, Research Orgs working on agriculture (e.g. IFPRI, CGIAR) 5. Private Sector, businesses	3. TA, payment in kind 4. Payment in kind, grants, TA 5. Soft loans, risk management/ insurance schemes, loan guarantees, TA
		2.1.3 Regulation of lake levels for optimal hydropower production ensured					MWE	MEMD, Ministry of MoLG. NEMA, Local Governments, communities	1. Government 2. CSOs, NGOs active in watershed management 3. Private Sector – financial institutions, businesses	1. National budget (sectoral), tax incentives/ subsidies 2. payment in kind, TA 3. payment in kind, TA
		2.1.4 Water conservation within forestry, tourism and navigation supported to ensure water availability in those sectors.					MWE	MAAIF, Ministry of Tourism, Ministry of MoLG. Local Governments, communities, private sector and individuals	Same as 2.1.3.	Same as 2.1.3.
3. Promote and strengthen the conservation and protection against degradation of watersheds, water catchment areas, river banks and water bodies	3.1 Conservation and protection of watersheds and water catchment areas against degradation		-	-	-	-				
		3.1.1 Watershed/catchment management plans devised and approved					MWE	MAAIF, NFA, UWA, Local Governments, CSOs, Development Partners	1. Government 2. Donor Support from MLOs, BLs (LDCF, SCCF, MDGAF, etc) 3. NGOs, CSOs, research orgs (IFPRI; WOTR)	1. National Sector Budget, district budgets (planning) 2. Grants, TA 3. TA, payment in kind
		3.1.2 Sustainable land management practices expanded in					MWE	MAAIF, MEMD, MoLG, Local Governments, Development Partners,	Same as 3.1.1. in partnership with private sector where possible	Same as 3.1.1. in partnership with private sector where possible

		watersheds						SCOs, communities		
		3.1.3 Schemes for restricted/prohibited access to and use of natural resources in watershed areas implemented					MWE	MAAIF, NEMA, UWA, NFA, Local Governments, communities	Same as 3.1.1. in partnership with private sector where possible	Same as 3.1.1. in partnership with private sector where possible
		3.1.4 Degraded watersheds restored					MWE	MAAIF, NFA, UWA, Local Governments, communities	Same as 3.1.1. in partnership with private sector where possible	Same as 3.1.1. in partnership with private sector where possible
		3.1.5 Expansion of community-based watershed management and other decentralized water resource management					MWE	NEMA, MoGLSD, Local Governments, communities	Same as 3.1.1. in partnership with private sector where possible	Same as 3.1.1. in partnership with private sector where possible
		3.1.6 Heightened awareness on the importance of sustainable use of water resources					MWE	MAAIF, Local Governments, communities	Same as 3.1.1. in partnership with private sector where possible	Same as 3.1.1. in partnership with private sector where possible
4. Promote Integrated Water Resources Management (including underground water resources), including contingency planning for extreme events such as floods and drought	4.1 Integrated Water Resources Management Systems in place across the country		105,892,624	13,858,566	30,544,860	61,489,198				
		4.1.1 Integrated water resource planning and water information management systems designed and approved					MWE	MAAIF, NEMA NWSC, Local Governments, communities	1. Government 2. Donor Support from MLOs, BLs active in water management (LDCF, SCCF, MDGAF, etc) 3. Research orgs, institutions (IFPRI, CGIAR)	1. National Sector Budget, district budgets (water, planning) 2. Grants, TA 3. TA, payment in kind, grants

									4. NGOs, CSOs, (WOTR, Oxfam) 5. Private sector	4. TA, payment in kind 5. direct investment, concessional loans, TA, risk management schemes
		4.1.2 Integrated water resource management plans implemented					MWE	MAAIF, NEMA, Local Governments, communities	Same as 4.1.1.	Same as 4.1.1.
		4.1.3 Flood and drought protection structures in place to prepare against water-related disasters					MWE	MAAIF, Local Governments, communities	Same as 4.1.1.	Same as 4.1.1.
		4.1.4 Gender sensitive water management programmes implemented and youth involvement in decision-making regarding water use and management					MWE	MoGLSD, MAAIF, Local Governments, communities	Same as 4.1.1. with engagement of youth and gender-equity focused CSOs and NGOs	Same as 4.1.1. with engagement of youth and gender-equity focused CSOs and NGOs
		4.1.5 Inter-basin water transfers (waterways) constructed to channel water away from areas with excess water to those with deficit					MWE	MoWT, MAAIF, NPA, NWSC, Local Governments, communities	Same as 4.1.1.	Same as 4.1.1.
		4.1.6 Improved water governance, and enhanced coordination and collaboration amongst various water-relevant sectors					MWE	MAAIF, MEMD, MoLHUD, MoTI, Local Governments, communities	Same as 4.1.1. with emphasis on research orgs and NGOs supporting KM and coordination	Same as 4.1.1. with emphasis on research orgs and NGOs supporting KM and coordination
		4.1.7 Improvement in equitable access to and control over water resources					MWE	MAAIF, MoLHUD, Local Governments, communities	Same as 4.1.1. with emphasis on research orgs, NGOs and CSOs focused on participatory resource management	Same as 4.1.1. with emphasis on research orgs, NGOs and CSOs focused on participatory resource management
5. Ensure that all guidelines for infrastructure/ hydraulic works (i.e., water for production, piped water supply schemes and conditional grants guidelines for support to point	5.1 National guidelines developed for climate proofing infrastructure/hydraulic works		3,079,681	3,079,681	-	-				

sources protection) mainstream climate change										
		5.1.1 Guide for mainstreaming climate change into the water sector (infrastructure/ hydraulic works) developed					MWE	NPA, MAAIF, Local Governments, communities	1. Government 2. Donor Support – MLOs, BLs (GEF LDCF, MDGAF, WB, etc) 3. NGOs, CSOs 4. Research institutes and/or private sector	1. National Budget 2. grants, TA 3. payment in kind, TA 4. TA
		5.1.2 Capacity built among key government personnel and staff for water resources management					MWE	MAAIF, Local Governments, communities	Same as 5.1.1.	Same as 5.1.1.
		5.1.3 Templates with cost elements in mainstreaming climate change developed to guide stakeholders in planning, budgeting and implementation of adaptation activities/action					MWE	MAAIF, NPA, MoLG, Local Governments, Development Partners, CSOs.	Same as 5.1.1.	Same as 5.1.1.
6. Improve and strengthen trans-boundary cooperation regarding water resources management	6.1 Improved trans-boundary cooperation regarding water resources management		-	-	-	-				
		6.1.1 Mechanisms and opportunities for trans-boundary cooperation regarding water use and management					MWE	Ministry of Foreign affairs, Ministry of East African affairs, EAC, MAAIF, Nile Basin Initiative	1. Government 2. MLOs, BLs concerned with regional cooperation (EAC CC	1. Sector Budget, tax incentives, subsidies

		established and/or strengthened							Fund, GEF TF, LDCF, MDG AF, UN Agencies, etc) 3. NGOs, CSOs, research institutes 4. Private Sector	2. Grants, TA 3. TA, payment in kind 4. TA, payment in kind
		6.1.2 Information shared on water use, demand, and water resources development					MWE	Ministry of Foreign affairs, Ministry of East African affairs, EAC, MAAIF, Nile Basin Initiative	Same as 6.1.1.	Same as 6.1.1.
		6.1.3 Compliance to agreed procedures for conflict resolution regarding water use and management established					MWE	Ministry of Foreign affairs, Ministry of East African affairs, EAC, MAAIF, Nile Basin Initiative	Same as 6.1.1.	Same as 6.1.1.
		6.1.4 Joint trans-boundary research and poverty reduction water-related investments strengthened					MWE	Ministry of Foreign affairs, Ministry of East African affairs, EAC, MAAIF, Nile Basin Initiative, Universities and Research Institutions	Same as 6.1.1.	Same as 6.1.1.
7. Support institutional and human capacity building in water resource use, development and management	7.1 Developed institutional and human capacity in water resource use, development and management		4,212,516	1,539,841	2,672,675	-				
		7.1.1 Training programmes on water and watershed management conducted					MWE	MAAIF, Development Partners, Universities and Research Institutions	1. Government 2. MLOs, BLs concerned with water management (UN Agencies, etc) 3. NGOs, CSOs, research institutes (IFPRI, CGIAR, WOTR) 4. Private Sector businesses	1. National Sector Budget 2. Grants, TA 3. TA, payment in kind 4. TA, payment in kind

		7.1.2 Experiences and best practices on water use and management exchanged/shared among stakeholders					MWE	MAAIF, MEMD, Development Partners, CSOs, Private Sector, commmunities	Same as 7.1.1.	Same as 7.1.1.
8. Strengthen water resource monitoring networks and flood warning systems	8.1 Water resource monitoring networks and flood warning systems strengthened		8,693,606	1,539,841	3,054,486	4,099,280				
		8.1.1 Climate change models and forecasts are used to understand future water changes					MWE	MAAIF, MEMD, UNEMA, niversities and Research Institutions	Same as 7.1.1. with emphasis on NGOs, research orgs that can facilitate research, coordination, dissemination	Same as 7.1.1. with emphasis on NGOs, research orgs that can facilitate research, coordination, dissemination
		8.1.2 Sufficient hydrometric network(s) and flood warning systems protect flood-prone areas					MWE	MAAIF, MoLHUD, Local Governments	Same as 7.1.1. with emphasis on NGOs, research orgs that can facilitate research, coordination, dissemination	Same as 7.1.1. with emphasis on NGOs, research orgs that can facilitate research, coordination, dissemination
		8.1.3 Changes in surface and ground water quality and quantity monitored					MWE	NEMA,	Same as 7.1.1.	Same as 7.1.1.
		8.1.4 Artificial recharging of groundwater for threatened aquifers regularly monitored					MWE	NEMA,	Same as 7.1.1.	Same as 7.1.1.
		8.1.5 Laws and regulations enforced (and/or enacted) for efficient water resource management					MWE	NEMA, Local governments	Same as 7.1.1. with emphasis on government leveraging – e.g. tax (dis)incentives, subsidies	Same as 7.1.1. with emphasis on government leveraging – e.g. tax (dis)incentives, subsidies
Sub-Total			**202,912,829**	**36,648,207**	**67,198,692**	**99,065,930**				

Sector 3: Fisheries and Aquaculture										
Policy priority: To strengthen efforts to promote integrated fisheries resource management and improve aquaculture in order to ensure sustainable fisheries production										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (USD)***	**Timeframe**			***Lead Implementation Agency***	***Responsible Parties***	***Possible Sources of Finance***	Possible Policy Instruments for Promoting Climate Change Investment
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	***Long- term (10-15 yrs)***				
1. Promote and encourage climate change resilient fishing practices	1.1 Climate change resilient fishing practices		71,816,872	6,141,932	20,897,833	44,777,107				
		1.1.1 Studies on the impact of climate change fisheries and aquaculture conducted					MAAIF	MWE, NAFIRI, Universities and research institutions, NAADS	1. Government 2. Donor Support – MLOs, BLs active on fisheries, aquaculture (GEF TF, FAO, EC, SIDA, CIDA, etc) 3. Research orgs and NGOs (ODI, ICTSD, etc)	1. National Sector Budget 2. Grants, TA 3. TA, payment in kind, grants
		1.1.2 Input and output controls of the natural water fisheries sector adapted based on research findings					MAAIF	MWE, NAFIRI, NAADS, Fishing communities, private sector, universities and research institutions	Same as 1.1.1.	Same as 1.1.1.
		1.1.3 Coping and adaptation mechanisms developed and					MAAIF	MWE, NAFIRI, NAADS, Fishing communities, private sector, universities and research	Same as 1.1.1. with additional support from NGOs and CSOs with a focus on fishing	Same as 1.1.1. with additional support from NGOs and CSOs with a focus on fishing

		tested for fishing communities relying on natural water bodies						institutions	communities (e.g. CGIAR World Fish)	communities
		1.1.4 Climate early warning systems developed to enhance responsiveness of the fisheries sector to climate change					MAAIF	MWE	Same as 7.1.1.	Same as 7.1.1.
		1.1.5 Fish breeding sites in water bodies identified and protected					MAAIF	MWE, NAFIRI, Fishing communities, private sector, universities and research institutions	1. Government 2. Research organizations 3. NGOs, CSOs, communities 4. Private sector	1. Sector budget, tax (dis)incentives 2 TA, grants 3. payment in kind, TA 4. payment in kind, TA
		1.1.6 Government support programmes and low interest credit facilities enable fishing communities to recover from adverse climate conditions					MAAIF	MFPED, MWE, NPA, Private Sector	1. Government 2. Private Sector financial institutions	1. tax (dis)incentives, loan schemes 2. concessional/soft loans, micro-loans, risk management schemes
		1.1.7 Regulate lake levels to assist fisheries					MWE	MAAIF, MoLG, Local Governments, communities	Same as 1.1.1.	Same as 1.1.1.
2. Promote sustainable fish farming as a means of	2.1 Sustainable fish farming practices		-	-	-	-				

economic diversification and enhancing the resilience of the fishing sector to the impacts of climate change.										
		2.1.1 Promote small scale, community, and large scale fish farming that reduces over-fishing					MAAIF	MWE, NAFIRI, NAADS, Local Governments, communities	1. Government 2. Donor Support – MLOs, BLs active on fisheries, aquaculture (GEF TF, FAO, EC, SIDA, CIDA, etc) 3. Research orgs and NGOs (CGIAR, etc) 4. Private Sector	1. National Sector Budget, district budgets, community budgets, tax incentives, loan schemes 2. Grants, TA 3. TA, payment in kind, grants 4. TA, soft/ concessional loans, micro-loans, loan guarantees
		2.1.2 Investments in commercial fish feed production					MAAIF	MWE, NAFIRI, NAADS, Local Governments, communities	Same as 2.1.1.	Same as 2.1.1.
		2.1.3 Government support programmes and low interest credit facilities in place to enable communities adopt fish faming					MAAIF	MFPED, MWE, NAFIRI, NPA, Private Sector	Same as 2.1.1.	Same as 2.1.1.
		2.1.4 Value addition to fisheries					MAAIF	NAFIRI, NAADS, Universities and Research Institutions,	Same as 2.1.1.	Same as 2.1.1.

		products promoted by training fishermen in post-harvest handling and processing						Private Sector		
		2.1.5 Technologies provided for reducing use of firewood in fish smoking					MAAIF	MEMD, NAFIRI, NAADS, Development Partners, CSO, Private Sector	1. Government 2. Donor partners - MLOs, BLs (WB, GEF, FAO; SIDA, DANIDA, SDC, CIDA, etc) 3. NGOs, CSOs, (CI, WWF, TNC etc) 4. Research orgs (IFPRI, CGIAR) 5. Private Sector businesses	1. national budget (sector), district budget 2. grants, TA, tech transfer, PES 3. payment in kind, TA 4. payment in kind, TA 5. payment in kind, TA, risk management, micro-loans
		2.1.6 Increased investment in fisheries extension services					MAAIF	NAADS, NAFIRI, Local Governments, CSO, Communities	1. Government 2. Donor Support – MLOs, BLs active on fisheries, aquaculture (GEF TF, FAO, EC, SIDA, CIDA, etc) 3. Research orgs and	1. National Sector Budget, district budgets, tax incentives, loan schemes 2. Grants, TA

									NGOs (CGIAR, etc) 4. Private Sector	3. TA, payment in kind, grants 4. TA, direct investment
3. Promote and encourage collaborative and participatory management of aquatic ecosystems	3.1 Increased collaborative and participatory management of aquatic ecosystems		14,586,011	2,047,311	12,538,700	-				
		3.1.1 Fisheries resource management incorporates ecosystem-based approaches to adaptation					MAAIF	MWE, NAFIRI, NEMA, Local Governments, CSO, Communities	1. Government 2. Donor partners - MLOs, BLs (WB, GEF, FAO; SIDA, DANIDA, SDC, CIDA, etc) 3. NGOs, CSOs, (CI, WWF, TNC, etc) 4. Research orgs (IFPRI, CGIAR, etc.) 5. Private Sector businesses	1. National budget (sector), district budget 2. Grants, TA, tech transfer, PES 3. Payment in kind, TA 4. Payment in kind, TA

										5. Payment in kind, TA, risk management, micro-loans
		3.1.2 Improved aquatic resource governance through increased coordination and collaboration amongst various aquatic and fisheries related sectors					MAAIF	MWE, MEMD, NEMA, NAFIRI, Local Governments, CSO, Communities	Same as 3.1.1.	Same as 3.1.1.
		3.1.3 Community based fisheries and aquatic ecosystem management promoted and encouraged					MAAIF	MWE, NEMA, NAFIRI, NAADS, MLGSD, MoLG, Local Governments, CSO, Communities	Same as 3.1.1.	Same as 3.1.1.
4. Promote awareness of the climate change–related impacts on fisheries amongst the various stakeholders, such as local communities, resource managers and policy makers	4.1 Improved awareness of climate change–related impacts on fisheries amongst various stakeholders		7,293,005	1,023,655	6,269,350	-				
		4.1.1 Potential extent of climate change impacts on fishing communities relying on natural waters determined					MAAIF	MWE, NAFIRI, Universities and research institutions, Local Governments, CSO, Communities	Same as 1.1.1.	Same as 1.1.1.
		4.1.2 Increased awareness on the means,					MAAIF	NAADS, MWE, Universities, Local Governments, CSOs	Same as 1.1.1.	Same as 1.1.1.

		methods and options to create a climate resilient fishing sector								
		4.1.3 Capacity for fisheries and aquatic resources management built through training and deployment of personnel to mainstream climate change in fisheries and aquaculture					MAAIF	Universities and research institutions, Local Governments, CSOs	Same as 1.1.1.	Same as 1.1.1.
5. Provide economic incentives to diversify livelihood options in order to reduce dependence on climate-sensitive fisheries resources	5.1 Expansion of livelihoods options reduces pressure on climate sensitive fishery resources		20,812,888	4,094,621	16,718,267	-				
		5.1.1 Diversified sources of food, income and livelihoods identified and promoted among fishing communities to enhance community climate change resilience					MAAIF	NPA, NAADS, MoTI, MWE, Universities and research institutions, Local Governments, CSOs	1. Government 2. Donor Support – MLOs, BLs (GEF, FAO, UNDP, UNEP, DANIDA, DFID, etc) 3. CSOs, NGOs, (CARE, CI, etc.) 4. Research orgs, institutions, 5. Private sector	1. Sector Budget, district and community budgets, subsidies 2. grants, TA 3. grants, payment in kind, TA

										4. grants, payment in kind, TA 5. micro-loans, TA
		5.1.2 Government support programmes and low interest credit facilities enable fish famers adapt fish farming practices and incorporate other livelihood strategies					MFPED	MAAIF, NPA, Local Governments, CSOs , private sector, communities	1. Government 2. Private sector financial institutions	1. Sector Budget, district and community budgets, subsidies, loan schemes 2. Soft/concessional loans, insurance schemes, loan guarantees, risk management
6. Promote biological engineering and restoration of stress-tolerant organisms	6.1 Biological engineering and restoration of stress-tolerant organisms		48,616,969	4,094,621	12,538,700	31,983,648				
		6.1.1 Research conducted to develop fish species that are tolerant to climate change related stresses					MAAIF	MWE, Universities and Research Institutions, Local Governments, CSOs	1. Government 2. Donor Support – MLOs, BLs active on fisheries, aquaculture (GEF TF, FAO, EC, SIDA, CIDA, etc) 3. Research orgs and NGOs (ODI, ICTSD, etc)	1. National Sector Budget 2. Grants, TA 3. TA, payment in kind, grants

		6.1.2 Increased investment in fish hatcheries					MAAIF	Universities and Research Institutions, Local Governments, Private sector, CSOs	1. Government 2. Research orgs, NGOs, CSOs 3. Private sector financial institutions	1. Sector Budget, district and community budgets, subsidies, loan schemes 2. TA, payment in kind 3. Soft/concessional loans, insurance schemes, loan guarantees, risk management
		6.1.3 Research conducted in predation control in line with seasonal variations					MAAIF	MWE, Universities and Research Institutions, CSOs	Same as 6.1.1.	Same as 6.1.1.
		6.1.4 Integration of afforestation plans and practices with those of aquaculture					MWE	MAAIF, Universities and Research Institutions, Local Governments, CSOs	Same as 6.1.1. with additional support from donors active in forestry, REDD+, biodiversity (e.g. GEF, UNDP REDD, FAO, etc)	Same as 6.1.1. with additional support from donors active in forestry, REDD+, biodiversity (e.g. GEF, UNDP REDD, FAO, etc)
		6.1.5. Investment for enabling wider use of stress tolerant species					MAAIF	Universities and Research Institutions, Local Governments, Private sector, CSOs	Same as 6.1.2.	Same as 6.1.2.
7. Improve and strengthen trans-boundary cooperation regarding fisheries and aquatic ecosystems management	7.1 Improved trans-boundary cooperation in fisheries and aquatic ecosystems management		-	-	-	-				

		7.1.1 Opportunities and fora improved or created for dialogue and decision-making on trans-boundary cooperation in fisheries resource management strengthened					MAAIF	MWE, Ministry of Foreign affairs, Ministry of East African affairs, EAC, MAAIF, Nile Basin Initiative	1. Government 2. Donor partners active in regional cooperation - MLOs, BLs (WB, GEF, FAO; SIDA, DANIDA, SDC, CIDA, etc) 3. NGOs, CSOs, regional partners, institutions (EAC; CI, WWF, TNC etc) 4. Research orgs	1. national budget (sector), district budgets where applicable 2. grants, TA 3. grants, payment in kind, TA 4. payment in kind, TA
		7.1.2 Information on fisheries resources development shared among key actors					MAAIF	MWE, Ministry of Foreign affairs, Ministry of East African affairs, EAC, MAAIF, Nile Basin Initiative	Same as 7.1.1.	Same as 7.1.1.
		7.1.3 Agreed procedures for conflict resolution are adhered to regarding fisheries resource management					MAAIF	MWE, Ministry of Foreign affairs, Ministry of East African affairs, EAC, MAAIF, Nile Basin Initiative	Same as 7.1.1.	Same as 7.1.1.

		7.1.4 Joint trans-boundary research on fisheries strengthened					MAAIF	MWE, Ministry of Foreign affairs, Ministry of East African affairs, EAC, MAAIF, Nile Basin Initiative	Same as 7.1.1.	Same as 7.1.1.
Sub-Total			**163,125,744**	**17,402,140**	**68,962,850**	**76,760,754**			Same as 7.1.1.	Same as 7.1.1.

Sector 4: Transport and Works										
Policy priority: To develop and ensure integrated planning and management of transport and other physical infrastructure that build on insights from climate predictions										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (USD)***	**Timeframe**			***Lead Implementation Agency***	***Responsible Parties***	***Possible Sources of Finance***	***Possible Policy Instruments for Promoting Climate Change Investment***
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	**Long-term (10+yrs)**				
1. Integrate climate change into the existing infrastructure risk assessment guidelines and methodology	1.1 Climate proofed infrastructure risk assessment guidelines and methodology		14,100,800	14,100,800	-	-	MoWT	MWE, NPA, UNRA, NEMA, KCCA, Local Governments	1. Government 2. Donors – MLOs, BLs (e.g. WB, AfDB) 3. Research organizations, regional/national institutions, think tanks	1. National Sector Budget, district budgets 2. TA, budget support 3. TA, payment in kind
		1.1.1 Transport and works professionals review and revise existing risk assessment methodology					MoWT	MWE, NPA, UNRA, NEMA, KCCA, Local Governments		
		1.1.2 Climate change transport infrastructure risk assessment methodology, guidelines and programmes developed					MoWT	MWE, NPA, UNRA, NEMA, KCCA, Local Governments	Same as 1.1.1.	Same as 1.1.1.
		1.1.3 Climate change transport infrastructure risk assessment programme implemented					MoWT	MWE, NEMA, NPA, UNRA, KCCA, Local Governments	Same as 1.1.1. with additional support from private sector	Same as 1.1.1. with additional support from private sector
2. Building on work already underway, establish and enforce climate change–	2.1 Climate change–resilient standards for transport and infrastructure		21,532,900	7,050,400	14,482,500	-				

resilient standards for transport and infrastructure planning and development through monitoring and reporting systems	planning and development in place									
		2.1.1 Climate resilience framework developed to regulate and guide transport infrastructure development					MoWT	MWE, NEMA, NPA, UNRA, KCCA, Local Governments	Same as 1.1.1. with additional support from MLO and BL climate change funds	Same as 1.1.1. with additional support from MLO and BL climate change funds
		2.1.2 Penalties in place and enforced against non-compliance to transport and works laws and regulations				short term	MoWT	MWE, NEMA, NPA, UNRA, KCCA, Local Governments	1. Government 2. NGOs, CSOs	1. National budget, district budgets as needed, tax (dis)incentives 2. TA, payment in kind
		2.1.3 Establish or improve flood forecasting and warning systems for the transport sector				short term	MWE	MOWT, UNRA, KCCA, Local Governments	Same as 1.1.1. with additional support from private sector	Same as 1.1.1. with additional support from private sector
3. Encourage the integration of climate change into transport and infrastructure development strategies	3.1 Climate proofed transport and infrastructure development strategies		622,589,867	141,008,000	144,825,000	336,756,867				
		3.1.1 Increased awareness of needs for mainstreaming climate change into the transport and works sectors					MoWT	MWE, UNRA, KCCA, Local Governments	1. Government 2. Donors – MLOs, BLs (WB, GEF SCCF, ICF, etc) 3. NGOs, CSOs,	1. Sector Budget 2. TA, Grants for capacity building 3. TA, payment in kind, grants

									research institutions 4. Private sector	4. TA, payment in kind (training)
		3.1.2 Clear guide developed for mainstreaming climate change into the transport sector				Short to medium term	MoWT	MWE, NEMA, UNRA, KCCA, Local Governments	Same as 3.1.1.	Same as 3.1.1.
		3.1.3 Action plan devised for mainstreaming climate change into the transport and works sector				Short to medium term	MoWT	MWE, NEMA, UNRA, KCCA, Local Governments	Same as 3.1.1.	Same as 3.1.1.
		3.1.4 Existing infrastructure climate-proofed especially in areas where climate change is predicted to cause damage or destruction to infrastructure.				Medium term	MoWT	MWE, NEMA, UNRA, KCCA, Local Governments	1. Government 2. Donors – MLOs, BLs (WB, AfDB, GEF SCCF, ICF, etc) 3. NGOs, CSOs, research institutions 4. Private sector	1. Sector Budget 2. TA, co-financing, concessional loans, grants 3. TA, payment in kind, grants 4. direct investment, soft loans, risk schemes
		3.1.5 Transport and traffic management infrastructure designed and implemented to promote climate resilience				Medium to long-term	MoWT	MWE, NEMA, UNRA, KCCA, Local Governments	Same as 3.1.4.	Same as 3.1.4.
4. Promote and encourage water catchment protection in transport infrastructure development and maintenance	4.1 Transport infrastructure supports water catchment protection and maintenance		191,853,717	35,252,000	72,412,500	84,189,217				

		4.1.1 Water and forest sectors supported in water catchment protection and programs					MWE	MoWT, NFA NEMA, UNRA, KCCA, Local Governments	1. Government 2. Donor Support – MLOs, BLs (WB CIFs, GEF, ICF, FORMIN, DFID, etc) 3. NGOs, CSOs (WWF, CI, TNC, WOTR, etc) 4. Private sector	Sector Budget 2. Grants, concessional loans, co-financing 3. TA, grants, payment in kind 4. payment in kind, soft loans, carbon finance
		4.1.2 Tree planting and afforestation programs promoted along road reserves and river banks				Medium to long-term	MoWT	MWE, NFA, NEMA, UNRA, KCCA, Local Governments	Same as 4.1.1.	Same as 4.1.1.
5. Climate-proof existing and future infrastructure by conducting geotechnical site investigations (GSIs) to determine whether areas are appropriate or inappropriate for infrastructural development	5.1 Geotechnical site investigations (GSIs) enable improved climate-proofed infrastructure		203,826,716	14,100,800	144,825,000	44,900,916				
		5.1.1 Climate change risk assessment studies conducted for transport infrastructure					MoWT	UNRA, NEMA, KCCA, Universities, Local Governments	1. Government 2. Donors – MLOs, BLs (e.g. WB, AfDB, GEF) 3. Research organizations, regional/national institutions, academia, think tanks	1. National Sector Budget, district budgets 2. TA, budget support, grants 3. TA, payment in kind
		5.1.2 Climate change risk map developed to show				Short to Medium term	MoWT	NEMA, NPA, UNRA, KCCA, Universities,	Same as 5.1.1.	Same as 5.1.1.

		extent and types of vulnerability in infrastructure						Local Governments		
		5.1.3 Development and approval of a climate change infrastructure risk preparedness plan and response for the transport sector				Medium term	MoWT	UNRA, NEMA, KCCA, Universities, Local Governments	Same as 5.1.1.	Same as 5.1.1.
Sub-Total			**1,053,904,000**	**211,512,000**	**376,545,000**	**465,847,000**				

Sector 5: Forestry										
Policy priority: To ensure the sustainable management of forestry resources so that they can continue to provide global services, including mitigating climate change, while supporting the sustainable development needs of communities and the country										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (USD)***	***Timeframe***			***Lead Implementation Agency***	***Responsible Parties***	***Possible Sources of Finance***	***Possible Policy Instruments for Promoting Climate Change Investment***
				Short term (1-5 yrs)	***Medium Term (6 to 10 yrs)***	***Long- term (10-15 yrs)***				
1. Strengthen the existing national forestry policy to reduce deforestation and forest degradation	1.1 Strengthened national forestry policy to reduce deforestation and forest degradation		2,906,801	615,936	2,290,865					
		1.1.1 Climate Change integrated in existing National Forestry Policy					MWE/ FSSD	NFA, UWA, MAAIF, NEMA, MEMD, MoLG, Local Governments, CSOs/NGOs DFS LGs	1. Government 2. Donor Support – MLOs, BLs (FCPF, FIP, GEF, AF; SDC, SIDA, DFID, GIZ, etc.) 3. NGOs, CSOs 4. Research institutes, academia 5. Private Sector	1. Sector Budget; district budgets 2. Grants, TA 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, Levy of taxes
		1.1.2 Forestry legal framework, law enforcement and governance strengthened to stop illegal logging, deforestation, and land degradation					MWE/ FSSD	NFA, UWA, MAAIF, NEMA, MEMD, MoLG, Uganda Police, Judiciary, Local Governments, CSOs/NGOs DFS	Same as 1.1.1. with additional government mechanisms for financial (dis)incentives – taxes, subsidies	Same as 1.1.1. with additional government mechanisms for financial (dis)incentives – taxes, subsidies
		1.1.3. Forest sector institutional development and coordination					MWE/ FSSD	NFA, UWA, NEMA, MoLG, MPS,MFPED,	Same as 1.1.1.	Same as 1.1.1.

		strengthened to promote sustainable forest management						NPA, LG, DFS		
2. Promote intensified and sustained afforestation and reforestation programmes implemented by the government, institutions, households and individuals, the private sector, civil society and multilateral organizations	2.1 Sustainable forest management practices (afforestation, reforestation etc)		1,761,369	615,936	1,145,432	-				
		2.1.1 Forestry mapping strengthened to monitor changes in forest cover and forest-related activities					MWE FSSD	NFA, UWA, MAAIF, NEMA, MEMD, MoLG, Local Governments, Universities and Forestry Institutes, CSOs/NGOs DFS	1. Government 2. Donor Support – MLOs, BLs (FCPF, FIP, GEF, AF; SDC, SIDA, DFID, GIZ, etc.) 3. NGOs, CSOs (CI, WWF, IUCN, TNC, etc) 4. Research institutes, academia 5. Private Sector	1. Sector Budget; district budgets 2. Grants, TA 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, direct investment
		2.1.2 Private, community and cultural forests registered					MWE FSSD	Same as 2.1.1	Same as 2.1.1	Same as 2.1.1

		2.1.3 Forest management plans developed and implemented at local and national level					MWE/ FSSD	NFA, UWA, MAAIF, NEMA, MEMD, MoLG, Local Governments, CSOs/NGOs DFS	Same as 2.1.1.	Same as 2.1.1.
		2.1.4 Supply of quality tree seeds and planting materials increased to promote tree planting					MWE/ FSSD	NFA, Private sector, University, Research institutions (NaFORRI), Local Governments, DFS	Same as 2.1.1.	Same as 2.1.1.
		2.1.5 Reforestation and conservation of natural forests strengthened to increase resilience to climate change impacts					MWE/ FSSD	NFA, UWA, MAAIF, NEMA, MEMD, MoLG, Uganda Police, Judiciary, Local Governments, CSOs/NGOs	Same as 2.1.1.	Same as 2.1.1.
		2.1.6 Afforestation and tree growing promoted for increased production of forestry products like poles, timber, wood fuel etc					MWE/ FSSD	NFA, UWA, MAAIF, NEMA, MEMD, MoLG, Uganda Police, Judiciary, Local Governments, CSOs/NGOs	Same as 2.1.1.	Same as 2.1.1.
		2.1.7 Urban forestry mainstreamed in urban development plans					MWE/ FSSD	NFA, UWA, MAAIF, NEMA, MEMD, MoLG, Uganda Police, Judiciary, Local Governments, CSOs/NGOs	Same as 2.1.1. with additional support from NGOs, CSOs active in urban and peri-urban settlements	Same as 2.1.1. with additional support from NGOs, CSOs active in urban and peri-urban settlements
		2.1.8 Forest management practices applied that improve timber yield while enhancing the climate resilience of forests and forest products					MWE/ FSSD	NFA, UWA, MAAIF, NEMA, MEMD, MoLG, Local Governments, CSOs/NGOS	Same as 2.1.1.	Same as 2.1.1.
		2.1.9 Forest-dependent rural communities involved in forest management					MWE/ FSSD	MoLG, Local Governments, DFS, Communities, CSOs/NGOs	1. Government 2. Donor Support – MLOs, BLs (FCPF, WB FIP, GEF, AF; SDC, SIDA, DFID, GIZ,	1. Sector Budget; district budgets 2. Grants, TA

									UNDP REDD, etc.) 3. NGOs, CSOs (CI, WWF, IUCN, TNC, etc) 4. Research institutes, academia 5. Private Sector	3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, direct investment
		2.1.10 Increased community awareness of the importance of forestry resources and trees in the environment					MWE/ FSSD	MoLG, Local m Governments, DFS, Communities, CSOs/NGOs	Same as 2.1.8	Same as 2.1.8
		2.1.11 Community forests established and sustainably managed					MWE/ FSSD	MoLG, Local Governments, DFS, Communities, CSOs/NGOs	Same as 2.1.8	Same as 2.1.8
		2.1.12 Women and youth empowered to take active role in forest management					MWE/ FSSD	MLGSD, MoLG, Local Governments, DFS, Communities, CSOs/NGOs	Same as 2.1.8 with focus on NGOs and CSOs working in gender equity and youth education	Same as 2.1.8 with focus on NGOs and CSOs working in gender equity and youth education
		2.1.13 Restoration and rehabilitation of degraded forest ecosystems and sites promoted					MWE/ FSSD	NFA, UWA, NEMA, MoLG, Local Governments, DFS, Communities, CSOs/NGOs	Same as 2.1.8.	Same as 2.1.8.
		2.1.14 Strategic interventions developed under REDD program to support climate change resilient forestry sector and other supporting sectors					MWE /FSSD	NFA, UWA, DFS, MAAIF, MoLG, Local Governments, Communities, CSOs/NGOs, private sector	Same as 2.1.8.	Same as 2.1.8.
3. Promote and encourage efficient biomass energy production and utilization technologies to reduce biomass consumption	3.1 Efficient biomass energy production and consumption technologies and		3,522,737	1,231,873	2,290,865	-				

	practices expanded across the country									
		3.1.1 Sustainable charcoal production and utilization technologies promoted to reduce biomass (wood) fuel consumption					MEMD, MWE, FSSD	1. Government, NFA, DFS 2. Donor Support – MLOs, BLs (FCPF, FIP, GEF, AF; SDC, SIDA, FORMIN, DFID, GIZ, etc.) 3. NGOs, CSOs (CI, WWF, IUCN, TNC, etc) 4. Research institutes (including NaFORRI), Universities 5. Private Sector, private forest owners	1. Government 2. Donor Support – MLOs, BLs (FCPF, FIP, GEF, AF; SDC, SIDA, FORMIN, DFID, GIZ, etc.) 3. NGOs, CSOs (CI, WWF, IUCN, TNC, etc) 4. Research institutes, academia 5. Private Sector	1. Sector Budget; district budgets 2. Grants, TA, tech transfer 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, direct investment, tech transfer
		3.1.2 Alternative/non-timber livelihood systems take pressure off forest resources					MWE/ FSSD	Same as 3.1.1. but with emphasis on NGOs, CSOs centered on forest-based livelihoods and private sector	Same as 3.1.1. but with emphasis on NGOs, CSOs centered on forest-based livelihoods	Same as 3.1.1. but with emphasis on NGOs, CSOs centered on forest-based livelihoods
		3.1.3 Establishment of woodlots (farm forestry) for fuel-wood and other household uses					MWE/ FSSD	Same as 3.1.1.	Same as 3.1.1.	Same as 3.1.1.
4. Encourage agro-forestry, which will enable poor rural households to meet their	4.1 Agro-forestry practices enable poor rural households to meet their		7,153,766	-	3,054,486	4,099,280				

subsistence and energy needs	subsistence and energy needs									
		4.1.1 Agro-forestry and tree planting on farm intensified to cater for various need e.g. food/subsistence,, wood fuel, fodder, shelter windbreaks etc.					MWE/ FSSD	1. Government, DFS, MAAIF, MEMD 2. Donor Support – MLOs, BLs (FCPF, FIP, GEF, AF; SDC, SIDA, FORMIN, DFID, GIZ, etc.) 3. NGOs, CSOs (CI, WWF, IUCN, TNC, CARE, etc) 4. Research institutes, academia 5. Private Sector	1. Sector Budget; district budgets 2. Grants, TA, tech transfer 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, direct investment, tech transfer, soft loans, risk management	1. Government 2. Donor Support – MLOs, BLs (FCPF, FIP, GEF, AF; SDC, SIDA, FORMIN, DFID, GIZ, etc.) 3. NGOs, CSOs (CI, WWF, IUCN, TNC, CARE, etc) 4. Research institutes, academia 5. Private Sector
		4.1.2 On-farm growing of high conservation value species promoted					MWE/ FSSD	DFS, MAAIF	1. Government 2. Donor Support – MLOs, BLs (FCPF, FIP, GEF, AF; SDC, SIDA, FORMIN, DFID, GIZ, etc.) 3. NGOs, CSOs (CI, WWF, IUCN, TNC, CARE, etc) 4. Research institutes, academia	1. Sector Budget; district budgets 2. Grants, TA, tech transfer 3. TA, grants, payment in kind 4. TA, payment in kind
		4.1.3 Initiatives launched to provide funding and incentives for agro-forestry and improved forestry management					MFPED	MWE, MAAIF, NFA, FSSD, DFS, Development Partners, CSOs	Same as 4.1.1.	Same as 4.1.1.
5. Strengthen existing forestry research and encourage conservation and restoration of forest ecosystems	5.1 Strengthened forestry research and sustainable forest ecosystem		8,942,208	-	3,818,108	5,124,100				

critically threatened by climate change	managemen t									
		5.1.1 Forestry research capacity enhanced and forestry research conducted to document and pilot climate resilient indigenous and exotic tree species in the country					MWE/ FSSD/ MAAIF	NFA, NFC, NaFORRI, Development partners, Local Governments, Communities, CSO, Private Sector	1. Government 2. Donor Support – MLOs, BLs (FCPF, WB FIP, GEF, AF; SDC, SIDA, DFID, GIZ, UNDP REDD, etc.) 3. NGOs, CSOs (CI, WWF, IUCN, TNC, etc) 4. Research institutes, academia 5. Private Sector	1. Sector Budget; district budgets 2. Grants, TA 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, direct investment
		5.1.2 Climate change integrated in forestry training and education					MoES, MAAIF	NFA,	Same as 5.1.1.	Same as 5.1.1
		5.1.3 Drought resistant, pest and disease resistant, and multipurpose tree species promoted in the country					MWE/ FSSD	NFA, UWA, MAAIF, NEMA, MEMD, MoLG, University and Research Institutes,NFC, NaFORRI, Local Governments, CSOs/NGOs	Same as 5.1.1	Same as 5.1.1
Sub-Total			**24,286,880**	**2,463,745**	**12,599,755**	**9,223,380**				

Sector 6: Wetlands										
Policy priority: To promote long-term wetland conservation and restoration of degraded wetlands so that they can continue to provide global services, including mitigating climate change, while supporting the sustainable development needs of communities and the country										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (USD)***	**Timeframe**			***Lead Implementation Agency***	***Responsible Parties***	***Possible Sources of Finance***	***Possible Policy Instruments for Promoting Climate Change Investment***
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	***Long- term (10-15 yrs)***				
1. Strengthen the existing national wetland policy to prevent wetland degradation and encroachment	1.1 Strengthened national wetland policy prevents degradation and encroachment		307,968	307,968	-					
		1.1.1 Climate change integrated in the national wetland policy					MWE	MAAIF, NEMA, Local Governments, CSOs	1. Government 2. Donor Support – MLOs, BLs (GEF, WB, AF; SDC, SIDA, DFID, GIZ, etc.) 3. NGOs, CSOs 4. Research institutes, academia 5. Private Sector	1. Sector Budget; district budgets 2. Grants, TA 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind
		1.1. 2 Wetland legal and regulatory framework strengthened to stop illegal logging, deforestation, and land degradation					MWE	MAAIF, NEMA, Local Governments, CSOs	Same as 1.1.1.	Same as 1.1.1.
2. Promote and intensify wetland protection and restoration of degraded wetlands	2.1 Sustainable wetland management, wetland protection and restoration of degraded wetlands		689,779	307,968	381,811					
		2.1.1 Wetland mapping strengthened to monitor the status of wetlands					MWE	MAAIF, NEMA, Local Governments, CSOs	Same as 1.1.1.	Same as 1.1.1.

		2.1.2 Wetland management plans implemented at local and national level					MWE	MAAiF, NEMA, Local Governments, CSOs	Same as 1.1.1.	Same as 1.1.1.
3. Strengthen collaborative and participatory management of wetland resources	3.1 Collaborative and participatory wetland resources management		381,811	-	381,811					
		3.1.1 Ecosystem based approach to wetland resource management integrated climate change adaptation in the wetland sector					MWE	MAAIF, NEMA, Local Governments, CSOs	1. Government 2. Donor Support – MLOs, BLs (GEF, WB, AF; DFID, FORMIN, SIDA etc.) 3. NGOs, CSOs (CI, IUCN, WWF, TNC, etc) 4. Research institutes, academia 5. Private Sector	1. Sector Budget; district budgets 2. Grants, TA 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind
		3.1.2 Wetland resource governance improved through coordination and collaboration amongst various wetland-related sectors					MWE	MAAIF, MoLHUD, NEMA, Local Governments, CSOs	1. Government 2. Donor Support – MLOs, BLs (GEF, WB, AF; SDC, SIDA, DFID, GIZ, etc.) 3. NGOs, CSOs 4. Research institutes, academia 5. Private Sector	1. Sector Budget; district budgets 2. Grants, TA 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind
		3.1.3 Expansion of community based wetland management across the country					MWE	MAAIF, NEMA, Local Governments, CSOs, Communities	Same as 1.1.1.	Same as 1.1.1.
4. Strengthen existing wetland research and encourage conservation and restoration of ecosystems critically threatened by climate change	4.1 Strengthened wetland research, conservation, and restoration measures lessen climate impacts to ecosystems		923,905	923,905	-					

		4.1.1 Research on the potential effects or threats of climate change on wetlands ecosystems is used to devise appropriate adaptive responses					MWE	NEMA, Local Governments, CSOs	Same as 1.1.1.	Same as 1.1.1.
		4.1.2 Increased involvement of wetland -dependent communities in wetland management					MWE	NEMA, Universities and Research Institutions, Local Governments, CSOs, communities	Same as 1.1.1.	Same as 1.1.1.
		4.1.3 Increased use of indigenous knowledge systems for sustainable wetland management					MWE	NEMA, Universities and Research Institutions, Local Governments, CSOs, communities	1. Government 2. Donor Support – MLOs, BLs (GEF, WB, AF; DFID, FORMIN, SIDA etc.) 3. NGOs, CSOs (CI, IUCN, WWF, TNC, etc) 4. Research institutes, academia 5. Private Sector	1. Sector Budget; district budgets 2. Grants, TA 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind
		4.1.4 Increased awareness of the importance of wetland resources in the environment through sensitization and community participation					MWE	NEMA, Local Governments, CSOs, communities	1. Government 2. Donor Support – MLOs, BLs (GEF, WB, AF; SDC, SIDA, DFID, GIZ, etc.) 3. NGOs, CSOs 4. Research institutes, academia 5. Private Sector	1. Sector Budget; district budgets 2. Grants, TA 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind
		4.1.5 Women and youth empowered to take active role in the management and sustainable utilization of wetland resources					MWE	NEMA, Universities and Research Institutions, Local Governments, CSOs, communities	Same as 4.1.1. geared toward research orgs, NGOs, CSOs active on gender equity, youth education	Same as 4.1.1. geared toward research orgs, NGOs, CSOs active on gender equity, youth education
		4.1.6 Degraded wetland ecosystems and sites restored					MWE	NEMA, Universities and Research Institutions, Local	Same as 4.1.1.	Same as 4.1.1.

								Governments, CSOs, communities		
Sub-Total			**2,303,463**	**1,539,841**	**763,622**					

Sector 7: Biodiversity and ecosystem services										
Policy priority: To effectively address the challenges posed by climate change impacts on biodiversity and ecosystems, so as to ensure ecosystem health and provision of ecosystem services that are crucial to sustainable and resilient development										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (USD)***	**Timeframe**			***Lead Implementation Agency***	***Responsible Parties***	***Possible Climate Finance Instruments / Sources of Finance***	***Possible Financial Tool / Products***
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	***Long-term (10-15 yrs)***				
1. Identify biodiversity hotspots where only restricted development should be allowed	1.1 Identification of biodiversity hotspots where only restricted development should be allowed		1,761,369	615,936	1,145,432	-				
		1.1.1. National Biodiversity Strategy and Action Plan (NBSAP) operationalized and implemented					MWE	NEMA, NFA, UWA, Local Governments, CSOs	1. Government 2. Donor Support – MLOs, BLs (GEF, WB, AfDB, AF, GCF, UNDP, UNEP; DFID, GIZ, SIDA etc.) 3. NGOs, CSOs (CI, IUCN, WWF, TNC, etc) 4. Research institutes, academia (IISD, IIED, ODI, etc) 5. Private Sector	1. Sector Budget; district budgets 2. Grants, TA, PES, co-financing 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing
		1.1.2 Biodiversity and ecosystem mapping conducted and biodiversity hotspots for preservation identified					NEMA	MWE, UWA,	Same as 1.1.1.	Same as 1.1.1.
		1.1.3 Enhanced knowledge base and increased understanding of climate change impacts on biodiversity and ecosystems					MWE	NEMA, NFA, UWA, Universities and Research	Same as 1.1.1.	Same as 1.1.1.

								Institutions, Local Governments, CSOs		
		1.1.4 Species threatened by climate change identified, and focused research and conservation measures undertaken					MWE	NEMA, NFA, UWA, Universities and Reaserach Institutions, Local Governments, CSOs	Same as 1.1.1.	Same as 1.1.1.
		1.1.5 Increased awareness of the impacts of climate change on biodiversity and ecosystems and on the need for ecosystem based adaptation					MWE	NEMA, NFA, UWA, Universities and Reaserach Institutions, Local Governments, CSOs	Same as 1.1.1.	Same as 1.1.1.
2. Build on efforts underway to strengthen sustainable land management in fragile ecosystems and sharing of benefits	2.1 Sustainable land management in fragile ecosystems		689,779	307,968	381,811	-				
		2.1.1. Framework and well defined mechanisms developed to promote payment for ecosystem services (PES) and community rights on access and benefit sharing.					MWE	NEMA, NFA, UWA, , Local Governments, CSOs	1. Government 2. Donor Support – MLOs, BLs (GEF, WB, AfDB, AF, GCF, UNDP, UNEP; DFID, GIZ, SIDA etc.) 3. NGOs, CSOs (CI, IUCN, WWF, TNC, etc)	1. Sector Budget; district budgets 2. Grants, TA, PES, co-financing 3. TA, grants, payment in kind 4. TA, payment in kind

									4. Research institutes, academia (IISD, IIED, ODI, etc) 5. Private Sector	5. TA, payment in kind, co-financing
		2.1.2 Ecosystem-based adaptation promoted as a means/tools to increase resilience of fragile ecosystems to climate change impacts					MWE	NEMA, NFA, UWA, , Local Governments, CSOs	Same as 2.1.1.	Same as 2.1.1.
		2.1.3 Bush clearance studied and its impact on Uganda's green house gas profile understood					MWE	NEMA, NFA, UWA, Universities and Reaserach Institutions, Local Governments, CSOs	Same as 2.1.1.	Same as 2.1.1.
		2.1.4 Sustainable range management and land use planning promoted					MWE	NEMA, NFA, UWA, Universities and Reaserach Institutions, Local Governments, CSOs	Same as 2.1.1.	Same as 2.1.1.
		2.1.5 Conservation measures promoted inside and outside protected areas and in other fragile ecosystems					MWE	NEMA, NFA, UWA, Local Governments, CSOs	Same as 2.1.1.	Same as 2.1.1.
3. Encourage collaborative management and sustainable use of biodiversity and ecosystems	3.1 Strengthened collaboration on sustainable use of biodiversity and ecosystems management		381,811	-	381,811	-				
		3.1.1 Climate change adaptation measures incorporate ecosystem-based approaches to natural resource management					MWE	NEMA, NFA, UWA, Universities and Reaserach	1. Government 2. Donor Support – MLOs, BLs (GEF LDCF, WB, AfDB, AF, GCF, UNDP, UNEP; DFID,	1. Sector Budget; district budgets 2. Grants, TA, PES, co-financing 3. TA, grants, payment in kind

								Institutions, Local Governments, CSOs	GIZ, SIDA etc.) 3. NGOs, CSOs (CI, IUCN, WWF, TNC, etc) 4. Research institutes, academia (IISD, IIED, ODI, etc) 5. Private Sector	4. TA, payment in kind 5. TA, payment in kind, co-financing
		3.1.2 Improved coordination and collaboration in ecosystem management across sectors					MWE	NEMA, NFA, UWA, , Local Governments, CSOs	1. Government 2. Donor Support – MLOs, BLs (GEF, WB, AfDB, AF, GCF, UNDP, UNEP; DFID, GIZ, SIDA etc.) 3. NGOs, CSOs (CI, IUCN, WWF, TNC, etc) 4. Research institutes, academia (IISD, IIED, ODI, etc) 5. Private Sector	1. National Budget (sector, cross-sector); district budgets 2. Grants, TA, direct budget support, co-financing 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing
		3.1.3 Community based natural resource management systems enable protection of biodiversity and ecosystems					MWE	NEMA, NFA, UWA, Local Governments, CSOs, Communities	Same as 3.1.1.	Same as 3.1.1.
4. Promote valuation and payment for ecosystem services, and streamline other ecosystem benefit-sharing schemes	4.1 Functioning valuation and payment for ecosystem services and ecosystem benefit-sharing systems		1,761,369	615,936	1,145,432					
		4.1.1 Socio-economic benefits of biodiversity and ecosystems (and the extent to which they are threatened by climate change) researched and					MWE	NEMA, NFA, UWA, Universities and Research	1. Government 2. Donor Support – MLOs, BLs (GEF LDCF, WB, AfDB, AF, GCF, UNDP, UNEP; DFID,	1. Sector Budget; district budgets 2. Grants, TA, PES, co-financing 3. TA, grants, payment in kind

		documented						Institutions, Local Governments, CSOs, Communities	GIZ, SIDA etc.) 3. NGOs, CSOs (CI, IUCN, WWF, TNC, etc) 4. Research institutes, academia (IISD, IIED, ODI, WRI, etc) 5. Private Sector – specialized technical experts	4. TA, payment in kind 5. TA, payment in kind, co-financing
		4.1.2 Adaptive responses utilize valuation and PES schemes							Same as 4.1.1.	Same as 4.1.1.
		4.1.3 Payment for ecosystem services and other benefit sharing schemes incentivize biodiversity and ecosystem conservation							Same as 4.1.1.	Same as 4.1.1.
5. Ensure that any human activity within the vicinity of protected areas does not compromise the integrity of the ecosystem	5.1 Human activity within the vicinity of protected areas does not compromise the integrity of ecosystems		683,213	-	-	683,213				
		5.1.1 Promotion of responsible utilization of ecosystems and restoration of degraded ecosystems					MWE	NEMA, NFA, UWA, Universities and Research Institutions, Local Governments, CSOs, Communities	1. Government 2. Donor Support – MLOs, BLs (GEF LDCF, WB, AfDB, AF, GCF, UNDP, UNEP; DFID, GIZ, SIDA etc.) 3. NGOs, CSOs (CI, IUCN, WWF, TNC, etc) 4. Research institutes, academia (IISD, IIED, ODI, WRI, etc)	1. Sector Budget; district budgets; community budget 2. Grants, TA, PES, co-financing 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing

									5. Private Sector – specialized technical experts	
		5.1.2 Ecosystem management plans implemented					MWE	NEMA, NFA, UWA, Local Governments, CSOs, Communities	Same as 5.1.1.	Same as 5.1.1.
		5.1.3 Access to and use of resources in fragile ecosystems restricted					MWE	NEMA, NFA, UWA, Local Governments, CSOs, Communities	Same as 5.1.1.	Same as 5.1.1.
		5.1.4 Legal framework on environmental impact assessment and environmental audit enforced for all activities in fragile ecosystems					MWE	NEMA, NFA, UWA, Local Governments, CSOs, Communities	1. Government 2. Donor Support – MLOs, BLs (GEF LDCF, WB, AfDB, AF, GCF, UNDP, UNEP; DFID, GIZ, SIDA etc.) 3. Regional/local NGOs, local CSOs 4. Research institutes, academia 5. Private Sector	1. Sector Budget (taxes, subsidies); district budgets; community budget 2. Grants, TA, co-financing 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, co-financing, payment in kind
6. Strengthen the capacity for monitoring the impacts of climate change on biodiversity, ecosystems and ecosystem services	6.1 Enhanced capacity to monitor the impacts of climate change on biodiversity, ecosystems and ecosystem services		1,071,590	307,968	763,622	-				
		6.1.1 Potential impacts of climate change on ecosystems modeled.					MWE	NEMA, NFA, UWA, Local Governments, CSOs, Communities	1. Government 2. Donor Support – MLOs, BLs (GEF LDCF, WB, AfDB, AF, GCF, UNDP, UNEP; DFID, GIZ, SIDA etc.)	1. National Budget (sector, cross-sectoral) 2. Grants, TA, PES, co-financing 3. TA, grants, payment in kind

									3. NGOs, CSOs (CI, IUCN, WWF, TNC, etc) 4. Research institutes, academia (IISD, IIED, ODI, WRI, etc) 5. Private Sector – specialized technical experts	4. TA, payment in kind 5. TA, payment in kind, co-financing
		6.1.2 Appropriate ecosystem-based adaptation measures developed and tested					MWE	NEMA, NFA, UWA, Local Governments, CSOs, Communities	Same as 6.1.1.	Same as 6.1.1.
		6.1.3. Climate change indicators for biodiversity and ecosystem monitoring incorporated into national strategies and quantitative baselines established					MWE	NEMA, NFA, UWA, Local Governments, CSOs, Communities	Same as 6.1.1.	Same as 6.1.1.
		6.1.4 Human resource trained in ecosystem-based adaptation measures and strategies					MWE	NEMA, NFA, UWA, Universities, Local Governments, CSOs, Communities	Same as 6.1.1.	Same as 6.1.1.
Sub-Total			**6,349,130**	**1,847,809**	**3,818,108**	**683,213**				

Sector 8: Health										
Policy priority: To strengthen adaptive mechanisms and enhance early-warning systems and adequate preparedness for climate change–related diseases										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (USD)***	**Timeframe**			***Lead Implementation Agency***	***Responsible Parties***	***Possible Climate Finance Instruments / Sources of Finance***	***Possible Financial Tool / Products***
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	***Long- term (10-15 yrs)***				
1. Conduct vulnerability assessments of health sector to climate change impacts	1.1 Identified vulnerabilities of the health sector to climate change impacts are used to support decision-making		9,495,328	9,495,328	-	-				
		1.1.1 Knowledge base built on the vulnerability of the health sector to climate change					MoH	UBOS, MWE, Universities and Research Institutions, Local Governments	1. Government 2. Donor Support – MLOs, BLs (GEF LDCF, WB Africa, AfDB, UNDP, MDGAF, WHO; DFID, USAID, JICA, NORAD, etc.) 3. NGOs, CSOs 4. Research institutes, academia 5. Private Sector – specialized health experts	1. National Budget (sector, cross-sectoral); district budgets 2. Grants, TA, co-financing, budget support 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing, direct investment
		1.1.2 Information on the vulnerability of the health sector to climate change disseminated widely to all key stakeholders					MoH	UBOS, MWE, Universities and Research Institutions, Local Governments	Same as 1.1.1.	Same as 1.1.1.
		1.1.3 Limitations of the health sector/systems response capacity to climate related health risks identified					MoH	MWE, UBOS, Universities and Research Institutions, Local Governments	Same as 1.1.1.	Same as 1.1.1.
2. Assess the impacts of	2.1 Potential impacts of		47,356,147	18,990,655	28,365,491	-				

climate change on human health and wellbeing	climate change on human health and well-being used to support decision-making									
		2.1.1 Research and assessments on potential impacts of climate change on human health and well being widely disseminated					MoH	MWE, Universities and Research Institutions, Local Governments	1. Government 2. Donor Support – MLOs, BLs (GEF LDCF, WB Africa, AfDB, UNDP, MDGAF, WHO; DFID, USAID, JICA, NORAD, etc.) 3. NGOs, CSOs 4. Research institutes, academia 5. Private Sector – specialized health and climate change experts	1. National Budget (sector, cross-sectoral); district budgets 2. Grants, TA, co-financing, budget support 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing
		2.1.2 Cost of increased mortality, morbidity and consequent reduction in human productivity due to climate change impacts on human health calculated					MoH	MWE, UBOS, Universities and Research Institutions, Local Governments	Same as 2.1.1.	Same as 2.1.1.
3. Put in place contingency plans to develop climate change–resilient health systems	3.1 Contingency plans in place for climate resilient health systems		47,476,638	-	23,738,319	23,738,319				
		3.1.1 Infrastructural, human and financial resource needs to respond to climate change-related health risks defined and calculated					MoH	MoWT, MWE, Local Governments, Development Partners, CSOs	1. Government 2. Donor Support – MLOs, BLs (GEF LDCF, WB Africa, AfDB, UNDP, MDGAF, WHO; DFID, USAID, JICA, NORAD, etc.) 3. NGOs, CSOs 4. Research institutes,	1. National Budget (sector, cross-sectoral); district budgets 2. Grants, TA, co-financing, budget support 3. TA, grants, payment in kind 4. TA, payment in kind

									academia 5. Private Sector – specialized economic and health experts	5. TA, payment in kind, co-financing
		3.1.2 Health sector preparedness programme developed to respond to the impacts of climate change					MoH	OPM, MWE, Local Governments, Development Partners, CSOs	Same as 3.1.1.	Same as 3.1.1.
		3.1.3 Health workers increase understanding and capacity for action to improve climate change resilience of health systems					MoH	MWE, Local Governments, Development Partners, CSOs	Same as 3.1.1.	Same as 3.1.1.
4. Improve the capture, management, storage and dissemination of health information	4.1 Improved health information managements systems in the country		28,596,581	9,570,709	9,455,164	9,570,709				
		4.1.1 Collection and management of health data and health records strengthened at health centres					MoH	UBOS, Local Governments, Development Partners, CSOs	1. Government 2. Donor Support – MLOs, BLs (GEF LDCF, WB Africa, AfDB, UNDP, MDGAF, WHO; DFID, USAID, JICA, NORAD, etc.) 3. NGOs, CSOs 4. Research institutes, academia 5. Private Sector – health/data management experts	1. National Budget (sector, cross-sectoral); district budgets 2. Grants, TA, co-financing, budget support 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing
		4.1.2 Capacity and means to collate and analyze health data improved					MoH	UBOS, Local Governments, Development Partners, CSOs	Same as 4.1.1.	Same as 4.1.1.
		4.1.3 Health information dissemination framework implemented					MoH	UBOS, Local Governments, Development Partners, CSOs	Same as 4.1.1.	Same as 4.1.1.

5. Heighten the surveillance of disease outbreaks and provide subsequent rapid responses to control epidemics	5.1 Surveillance of disease outbreaks and rapid responses to control epidemics is operational		47,622,453	-	18,910,328	28,712,126				
		5.1.1. Heightened surveillance of disease outbreaks, including deployment of technologies such as mobile telephones					MoH	OPM, WHO, Local Governments, Development Partners, CSOs	1. Government 2. Donor Support – MLOs, BLs (GEF LDCF, WB Africa, AfDB, UNDP, MDGAF, WHO; DFID, USAID, JICA, NORAD, etc.) 3. NGOs, CSOs 4. Research institutes, academia 5. Private Sector –IT/EWS experts	1. National Budget (sector, cross-sectoral); district budgets 2. Grants, TA, co-financing, budget support 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing
		5.1.2 Efficient early warning systems and information dissemination networks put in place					MoH	MWE, OPM, Local Governments, Development Partners, CSOs	Same as 5.1.1.	Same as 5.1.1.
		5.1.3 Rapid response to epidemics through early warning systems and surveillance					MoH	Local Governments, Development Partners, CSOs	Same as 5.1.1.	Same as 5.1.1.
6. Strengthen public health systems by building hospitals and supplying them with medicine, equipment and well-trained personnel	6.1 Strengthened public health systems to deal with expected and potential health impacts of climate change		381,095,172	-	141,827,457	239,267,714				

		6.1.1 Health outreach programmes include areas that are vulnerable to climate change related health risks					MoH	Local Governments, CSOs, Communities	1. Government 2. Donor Support – MLOs, BLs (GEF LDCF, WB Africa, AfDB, UNDP, MDGAF, WHO; DFID, USAID, JICA, NORAD, etc.) 3. NGOs, CSOs 4. Research institutes, academia, hospitals, clinics 5. Private Sector	1. National Budget (sector, cross-sectoral, extension services); district budgets 2. Grants, TA, co-financing, budget support 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing
		6.1.2 Climate change adaptation mainstreamed into the National Health Policy and the Environmental Health Policy and Human resource Development					MoH	NPA, MWE, NEMA, Local Governments, CSOs	Same as 6.1.1.	Same as 6.1.1.
		6.1.3 Health centres and health facilities built/improved in areas that are identified as vulnerable to climate change health risks					MoH	MWE, Local Governments, Development Partners, CSOs	Same as 6.1.1.	Same as 6.1.1.
		6.1.4 Sufficiently stocked vaccines and medicine to treat climate-related diseases and conditions					MoH	National Medical stores, National Drug Authority, Local Governments, Development Partners, CSOs, Private sector	Same as 6.1.1. with focus on public-private interface in collaboration with CSOs, NGOs	Same as 6.1.1. with focus on public-private interface in collaboration with CSOs, NGOs
		6.1.5 Ready transport, medicine and human resource in areas (include remote areas) vulnerable to climate related risks					MoH	MWE, OPM, Local Governments, Development Partners, CSOs	Same as 6.1.1. with focus on public-private interface in collaboration with CSOs, NGOs	Same as 6.1.1. with focus on public-private interface in collaboration with CSOs, NGOs
		6.1.6 Recruitment and training of qualified health personnel for delivery of services in vulnerable communities					MoH	Local Governments, Development Partners, CSOs	Same as 6.1.1. with focus on training/services from research/academic partners, in collaboration with CSOs, NGOs	Same as 6.1.1. with focus on training/services from research/academic partners, in collaboration with CSOs, NGOs
		6.1.7 Working conditions improved for health professionals to ensure					MoH	Local Governments, Development	Same as 6.1.1. with focus on public-private interface in collaboration with CSOs,	Same as 6.1.1. with focus on public-private interface in collaboration with CSOs,

		health service delivery despite climatic stressors						Partners, CSOs	NGOs	NGOs
7. Make provisions for a safe water chain and sanitation facilities to limit outbreaks of water-borne diseases, and implement strong public awareness programmes to promote better hygiene	7.1 Safe water chain and sanitation facilities and public awareness limits outbreaks of water-borne diseases		47,356,147	18,990,655	28,365,491	-				
		7.1.1 Water and sanitary service needs assessments completed in areas vulnerable to climate change related health risks					MoH	MWE, Local Governments, Development Partners, CSOs	1. Government 2. Donor Support – MLOs, BLs (GEF LDCF, WB Africa, AfDB, UNDP, MDGAF, WHO; DFID, USAID, JICA, NORAD, etc.) 3. NGOs, CSOs 4. Research institutes, academia 5. Private Sector	1. National Budget (health sector, public works); district budgets 2. Grants, TA, co-financing, budget support 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing
		7.1.2 Information on the impacts of floods and other climate related health disasters on the provision of water and sanitary services used to improve decision-making					MoH	MWE, Local Governments, Development Partners, CSOs	Same as 7.1.1.	Same as 7.1.1.
		7.1.4 Disaster management plan devised to provide water and sanitary services during floods and droughts					MoH	OPM, MWE, Local Governments, Development Partners, CSOs	Same as 7.1.1.	Same as 7.1.1.
		7.1.5 Increased public awareness of clean water, sanitation and hygiene relative to climate related					MoH	MWE, Local Governments, Development Partners, CSOs	Same as 7.1.1.	Same as 7.1.1.

		health risks								
8. Increase the health workforce's awareness of the relationship between climate change and human health	8.1 Health workforce uses awareness and understanding of relationship between climate change and human health to improve practices and actions taken		28,485,983	28,485,983	-	-				
		8.1.1 Increased awareness of heath workers on the effects of climate change on human health					MoH	MWE, Local Governments, Development Partners, CSOs	1. Government 2. Donor Support – MLOs, BLs (GEF LDCF, WB Africa, AfDB, UNDP, MDGAF, WHO; DFID, USAID, JICA, NORAD, etc.) 3. NGOs, CSOs 4. Research institutes, academia, hospitals, clinics 5. Private Sector	1. National Budget (health sector, public works); district budgets 2. Grants, TA, co-financing, budget support 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing
		8.1.2 Health workers' capacity built on ways to build climate resilient health systems and communities					MoH	MWE, Local Governments, Development Partners, CSOs	Same as 8.1.1.	Same as 8.1.1.
		8.1.3 Public awareness of relationship between health and climate change improved through outreach programs and promotion of healthy living					MoH	MWE, Local Governments, Development Partners, CSOs	Same as 8.1.1.	Same as 8.1.1.
9. Develop further support action plans against HIV/AIDS to enhance the climate change resilience of	9.1 Strengthened support action plans against HIV/AIDS to enhance the resilience of HIV/AIDS		95,209,689	18,990,655	28,365,491	47,853,543				

HIV/AIDS affected persons and communities	affected persons and communities to climate change impacts									
		9.1.1 Increased public awareness of the causes, effects and prevention of HIV					MoH	Uganda Aids Commission, MoLG, Local Governments, Development Partners, CSOs	1. Government 2. Donor Support – MLOs, BLs (GEF LDCF, WB Africa, AfDB, UNDP, MDGAF, WHO; DFID, USAID, JICA, NORAD, etc.) 3. NGOs, CSOs 4. Research institutes, academia, hospitals, clinics 5. Private Sector	1. National Budget (health sector, public works); district budgets 2. Grants, TA, co-financing, budget support 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing
		9.1.2 Strengthen HIV/AIDS counseling among climate change vulnerable segment of the population					MoH	MoLG, Local Governments, Development Partners, CSOs	Same as 9.1.1.	Same as 9.1.1.
		9.1.3 Proportion of morbidity and mortality of people living with HIV/AIDS that can be attributed to climate hazards and climate change assessed and quantified					MoH	Uganda Aids Commission, MoLG, Universities nad research institutions, Local Governments, Development Partners, CSOs	Same as 9.1.1. with assistance from health research institutions, academia, and private sector	Same as 9.1.1. with assistance from health research institutions, academia, and private sector
		9.1.4 Activities that enhance the protection of women and children against contraction of HIV/AIDS in climate change vulnerable regions supported					MoH	Uganda Aids Commission, MoLG, Local Governments, Development Partners, CSOs	Same as 9.1.1. with emphasis on CSOs, NGOs with focus on gender and youth	Same as 9.1.1. with emphasis on CSOs, NGOs with focus on gender and youth
Sub-Total			**732,694,136**	**128,262,303**	**279,027,742**	**325,404,091**				

Sector 9: Energy										
Policy priority: To promote sustainable energy access and utilisation as a means of sustainable development in the face of uncertainties related to climate change										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (USD)***	**Timeframe**			***Lead Implementation Agency***	***Responsible Parties***	***Possible Climate Finance Instruments / Sources of Finance***	***Possible Financial Tool / Products***
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	***Long- term (10-15 yrs)***				
1. Promote and participate in water resource regulation so as to ensure the availability of water for hydropower production	1.1 Water resource regulation ensures the availability of water for hydropower production		54,028,500	45,804,000	8,224,500	-				
		1.1.1 Improved understanding across the water sector of future water changes as a result of climate change					MWE	MEMD, NEMA, NWSC, Universities and Research Institutions	1. Government 2. Donor Support from MLOs, BLs active in water management (LDCF, SCCF, MDGAF, etc) 3. Research orgs, institutions 4. NGOs, CSOs, 5. Private sector	1. National Sector Budget, district budgets (water, planning) 2. Grants, TA 3. TA, payment in kind, grants 4. TA, payment in kind 5. direct investment, concessional loans, TA, risk management schemes
		1.1.2 Water development and regulations reviewed and harmonized to take into account anticipated climatic changes					MWE	MEMD, NEMA, NWSC, CSOs	1. Government 2. Donor Support from MLOs, BLs active in water management (LDCF, SCCF, MDGAF, etc) 3. Research orgs, institutions 4. NGOs, CSOs,	1. National Sector Budget, district budgets (water, planning) 2. Grants, TA 3. TA, payment in kind, grants 4. TA, payment in kind
		1.1.3 River water abstraction controlled					MWE	MEMD, NEMA, NWSC, CSOs	Same as 1.1.1.	Same as 1.1.1.

		and efficient utilization of upstream water promoted								
2. Promote and participate in water catchment protection as part of hydroelectric power infrastructure development	2.1 Water catchment systems protect hydroelectric power infrastructure	2.1.1 Afforestation and reforestation measures protect watersheds that supply major hydroelectricity generating sources	60,336,818	-	27,415,000	32,921,818	MWE	MEMD, NEMA, NWSC, CSOs	1. Government 2. Donor Support from MLOs, BLs active in water management (WB, LDCF, SCCF, MDGAF, CIFs, FCPF etc) 3. Research orgs, institutions 4. NGOs, CSOs 5. Private sector	1. National Sector Budget, district budgets (water, land-use planning) 2. Grants, TA 3. TA, payment in kind, grants 4. TA, payment in kind 5. Direct investment, concessional loans, TA, risk management schemes
3. Diversify energy sources by promoting the use of alternative renewable energy sources (such as solar, biomass, mini-hydro, geothermal and wind) that are less sensitive to climate change	3.1 Alternative renewable energy use decreases dependence on climate-sensitive energy sources		74,044,318	-	41,122,500	32,921,818				
		3.1.1 Alternative sources of energy expanded in urban and rural areas to reduce dependence on biomass energy					MEMD	MWE, ERA, NWSC, Local Governments, Development Partners, CSOs, Private Sector	1. Government 2. Donor Support from MLOs, BLs (WB, LDCF, CIFs, SCCF, MDGAF, CIFs, FCPF; GIZ, DFID, etc) 3. Research orgs, institutions 4. NGOs, CSOs 5. Private sector	1. National Budget (energy), feed in tariffs, taxes/subsidies; district budgets 2. Grants, TA, budget support 3. TA, payment in kind, grants 4. TA, payment in kind 5. Direct investment, concessional loans, TA

		3.1.2 Research and economic incentives make renewable energy technologies that are less sensitive to climate variability more accessible					MEMD	MWE, ERA, Local Governments, Universities and Research Institutions, Development Partners, CSOs, Private Sector	Same as 3.1.1.	Same as 3.1.1.
4. Promote energy-efficient firewood cook stoves, solar and liquefied petroleum gas (LPG) cookers	4.1 Household energy efficiency and savings improved		128,217,500	114,510,000	13,707,500	-				
		4.1.1 Expanded use of efficient firewood/charcoal cooking stoves, solar and LPG cookers					MEMD	MFPED, MWE, ERA, Local Governments, Development Partners, CSOs, Private Sector	1. Government 2. Donor Support from MLOs, BLs (WB, LDCF, CIFs, SCCF, MDGAF, CIFs, FCPF; FORMIN, NORAD, DANIDA, SIDA, SDC, etc) 3. Research orgs, institutions 4. NGOs, CSOs 5. Private sector	1. National Sector Budget (energy), district budgets 2. Grants, TA 3. TA, payment in kind, grants 4. TA, payment in kind 5. Concessional loans, TA, payment in kind
		4.1.2 Government addresses issues of cost by providing subsidies or tax waivers to poor households					MFPED	MEMD, MoLG,	1. Government 2. Donor support	1. National Sector budget 2. Grants, budget support, TA
5. Conduct research to determine the potential impacts of climate change elements on the country's power supply chain	5.1 Deepened understanding of and improved response measure options to potential impacts of climate change		65,813,864	-	41,122,500	24,691,364				

	on the country's energy supply									
		5.1.1 Vulnerability assessment of the energy supply chain to the impacts of climate change conducted					MEMD	MWE, ERA, Local Governments, Universities and Research Institutions, Development Partners, CSOs, Private Sector	1. Government 2. Donor Support from MLOs, BLs (WB, LDCF, CIFs, SCCF, MDGAF, CIFs; DFID, GIZ, SIDA, SDC, etc) 3. Research orgs, institutions 4. NGOs, CSOs 5. Private sector	1. National Sector Budget (energy), district budgets 2. Grants, TA, co-financing 3. TA, payment in kind, grants 4. TA, payment in kind 5. Concessional loans, TA, payment in kind, co-financing
		5.1.2 Options identified for addressing limitations in energy sector response to potential climate change impacts					MEMD	MWE, ERA, Local Governments, Universities and Research Institutions, Development Partners, CSOs, Private Sector	Same as 5.1.1.	Same as 5.1.1.
		5.1.3 Awareness raised and capacity built among energy professionals to address climate change concerns					MEMD	MWE, ERA, Local Governments, Universities and Research Institutions, Development Partners, CSOs, Private Sector	Same as 5.1.1.	Same as 5.1.1.
		5.1.4 Energy planning and infrastructure design integrates climate change					MEMD	MWE, NPA, MoWT, ERA, Local Governments, Development Partners, CSOs, Private Sector	Same as 5.1.1. with direct investment from private sector	Same as 5.1.1. with direct investment from private sector
Sub-Total			**382,441,000**	**160,314,000**	**131,592,000**	**90,535,000**				

Sector 10: Wildlife and Tourism										
Policy priority: To ensure the conservation of wildlife resources and plan for improved resilience of tourism resources and infrastructure to climate change										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (USD)***	***Timeframe***			***Lead Implementation Agency***	***Responsible Parties***	***Possible Climate Finance Instruments / Sources of Finance***	***Possible Financial Tool / Products***
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	***Long- term (10-15 yrs)***				
1. Develop a national wildlife adaptation strategy that includes well-assessed climate change adaptation strategies	1.1 National wildlife adaptation strategy includes robust climate change adaptation strategies		4,275,146	2,273,800	2,001,346	-				
		1.1.1 Current wildlife conservation policies and activities reviewed for their relevance and/or contributions toward climate change adaptation					Ministry of Tourism, Wildlife and Heritage	MWE, UWA, NEMA, CSOs	1. Government 2. Donor Support – MLOs, BLs (GEF, WB, AF, ICI, UNDP, UNEP; DANIDA, DFID, SDC, SIDA etc.) 3. NGOs, CSOs (CI, IUCN, WWF, TNC, etc) 4. Research institutes, academia 5. Private Sector	1. National Sector Budget 2. Grants, TA, co-financing 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing
		1.1.2 Appropriate adaptation needs/options established for wildlife based on assessment of likely impacts due to climate change					Ministry of Tourism, Wildlife and Heritage	MWE, UWA, NEMA, CSOs	Same as 1.1.1.	Same as 1.1.1.
		1.1.3 National Wildlife Adaptation strategy developed					Ministry of Tourism, Wildlife and	MWE, UWA, NEMA, CSOs	Same as 1.1.1.	Same as 1.1.1.

							Heritage			
2. Promote measures that preserve the integrity of ecosystems that provide critical wildlife habitats and host endangered species	2.1 Ecosystems critical to the survival of wildlife in light of climate change are preserved and protected		2,104,544	-	667,115	1,437,429				
		2.1.2 Species conservation efforts (reassessed and) strengthened to increase their contribution toward resilience to climate change impacts					Ministry of Tourism, Wildlife and Heritage	MWE, UWA, NEMA, CSOs	Same as 1.1.1.	Same as 1.1.1.
		2.1.3 Community wildlife conservancies formed and sufficiently supported, especially for endangered species					Ministry of Tourism, Wildlife and Heritage	MWE, UWA, NEMA, CSOs	Same as 1.1.1. with emphasis on local CSOs, NGOs supporting community resource management	Same as 1.1.1. with emphasis on local CSOs, NGOs supporting community resource management
		2.1.4 Carrying capacity of rangelands improved					Ministry of Tourism, Wildlife and Heritage	MWE, UWA, NEMA, CSOs	Same as 1.1.1.	Same as 1.1.1.
		2.1.5 Rangelands and other wildlife habitats monitored and remediated					Ministry of Tourism, Wildlife and Heritage	MWE, UWA, NEMA, Local Governments CSOs	Same as 1.1.1.	Same as 1.1.1.
3. Develop park management practices that will enable wildlife to adapt to the changing climate	3.1 Sustainable park management improves adaptation of wildlife to the changing climate		7,032,346	-	2,001,346	5,031,000				
		3.1.1 Park management plans and activities integrate climate change into the					Ministry of Tourism, Wildlife and Heritage	MWE, UWA, NEMA, Local Governments CSOs,	1. Government 2. Donor Support – MLOs, BLs (GEF, WB, AF, ICI, UNDP, UNEP; DANIDA,	1. National Sector Budget, district and community budgets

		management of protected areas						communities	DFID, SDC, SIDA etc.) 3. NGOs, CSOs (CI, IUCN, WWF, TNC, etc)	2. Grants, TA, co-financing 3. TA, grants, payment in kind
		3.1.2 All weather infrastructure developed to support tourism in the country causes minimal damage to wildlife habitats					Ministry of Tourism, Wildlife and Heritage	UWA, MoWT, MWE, Uganda Tourism Board, Local Governments CSOs	1. Government 2. Donor Support – MLOs, BLs (GEF, WB, AF, ICI, UNDP, UNEP; DANIDA, DFID, SDC, SIDA etc.) 3. Private Sector	1. National Sector Budget 2. Grants, TA, co-financing, concessional loans 3. TA, payment in kind, co-financing, soft loans
4. Encourage mechanisms of improving local vulnerable populations' livelihoods using revenues generated from the tourism industry	4.1 Tourism industry revenue is used to improve the livelihoods of local vulnerable populations		3,138,246	1,136,900	2,001,346	-				
		4.1.1 Current adaptive capacity of communities around protected areas assessed					Ministry of Tourism, Wildlife and Heritage	MWE, UWA, Uganda Tourism Board, Local Governments CSOs, communities	1. Government 2. Donor Support – MLOs, BLs (GEF, WB, AF, ICI, UNDP, UNEP; DANIDA, DFID, SDC, SIDA etc.) 3. NGOs, CSOs (CI, IUCN, WWF, TNC, etc) 4. Research institutes, academia 5. Private Sector	1. National Sector Budget; district and community budget 2. Grants, TA, co-financing 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing
		4.1.2 Mechanisms and opportunities for improving local vulnerable populations' livelihoods using revenues generated from tourism industry are identified/devised					Ministry of Tourism, Wildlife and Heritage	UWA, Uganda Tourism Board, Local Governments CSOs, communities	Same as 4.1.1.	Same as 4.1.1.

		4.1.3 Participatory approaches to rangeland management used to involve communities dependent on wildlife protected areas					Ministry of Tourism, Wildlife and Heritage	UWA, Uganda Tourism Board, Local Governments CSOs, communities	Same as 4.1.1.	Same as 4.1.1.
		4.1.4 Community training and awareness raising conducted to improve understanding of options and linkages between the tourism industry and local livelihoods					Ministry of Tourism, Wildlife and Heritage	UWA, Uganda Tourism Board, Local Governments CSOs, communities	Same as 4.1.1.	Same as 4.1.1.
5. Develop and diversify tourism products that are less sensitive to climate change, as an adaptation and substitute for the many natural attractions that are quickly disappearing	5.1 The tourism industry is more climate resilient through diversification of products		7,868,718	2,273,800	2,001,346	3,593,571				
		5.1.1 Vulnerability of the tourism sector and tourism products to climate change impacts assessed					Ministry of Tourism, Wildlife and Heritage	UWA, Uganda Tourism Board, Universities and Research Institutions, Local Governments CSOs, communities	1. Government 2. Donor Support – MLOs, BLs (GEF, WB, AF, ICI, UNDP, UNEP; DANIDA, DFID, SDC, SIDA etc.) 3. NGOs, CSOs (CI, IUCN, WWF, TNC, etc) 4. Research institutes, academia 5. Private Sector	1. National Sector Budget; district and community budget 2. Grants, TA, co-financing 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing
		5.1.2 Tourism products less sensitive to climate change developed and promoted					Ministry of Tourism, Wildlife and Heritage	UWA, Uganda Tourism Board, Universities and Research Institutions, Local Governments	Same as 5.1.1.	Same as 5.1.1.

								CSOs, communities		
		5.1.3 Domestic tourism market developed to cushion the tourism industry against spillover effects of possible mitigation measures in the international aviation industry					Ministry of Tourism, Wildlife and Heritage	UWA, Uganda Tourism Board, Local Governments CSOs, communities	Same as 5.1.1.	Same as 5.1.1.
		5.1.4 Training and research programs implemented in tourism product development and protected areas management					Ministry of Tourism, Wildlife and Heritage	UWA, Uganda Tourism Board, Universities and Research Institutions, Local Governments CSOs, communities	Same as 5.1.1.	Same as 5.1.1.
Sub-Total			**24,419,000**	**5,684,500**	**8,672,500**	**10,062,000**				

Sector 11: Human settlements and social infrastructure										
Policy priority: To promote the urban planning and development of human settlements that are resilient and robust enough to withstand climate change–related risks and hazards										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (USD)***	**Timeframe**			***Lead Implementation Agency***	***Responsible Parties***	***Possible Climate Finance Instruments / Sources of Finance***	***Possible Financial Tool / Products***
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	***Long-term (10+ yrs)***				
1. Promote and encourage proper planning of urban centres in order to have climate change resilient urban areas	1.1 Integrated urban planning and climate change resilient urban centres		4,653,752	-	1,565,484	3,088,268				
		1.1.1 Assessment of climate change threats to formal and informal settlement patterns and housing					MoLHUD	MoLG, NEMA, KCCA, Local Governments	1. Government 2. Donor Support – MLOs, BLs (WB, GEF LDCF, MDGAF, UN Agencies; DFID, GIZ, AFD, etc.) 3. NGOs, CSOs 4. Research institutes, academia 5. Private Sector	1. Sector Budget; district budgets 2. Grants, TA 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing
		1.1.2 Planning principles for the improvement of climate resilience enforced in the design of urban centres					MoLHUD	MoLG, NEMA, KCCA, Local Governments	Same as 1.1.1.	Same as 1.1.1.
		1.1.3 Urban and housing development planning policies reviewed to take climate change adaptation					MoLHUD	MoLG, NEMA, KCCA, Local Governments	Same as 1.1.1.	Same as 1.1.1.

		needs into account								
2. Revise and harmonize structural/building codes and standards, as well as the training on such standards, taking into account the expected changes in climate	2.1 Climate proofed structural/building codes and standards and capable personnel to implement them		2,914,832	1,871,176	1,043,656	-				
		2.1.1 Structural/building codes and standards reviewed and harmonized to take into account anticipated climatic changes					MoLHUD	MoLG, NEMA, KCCA, Local Governments	1. Government 2. Donor Support – MLOs, BLs (WB, GEF LDCF, MDGAF, UN Agencies; DFID, GIZ, AFD, etc.) 3. NGOs, CSOs 4. Research institutes, academia 5. Private Sector	1. Sector Budget; district budgets 2. Grants, TA, co-financing 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind
		2.1.2 Increased technical capacity of urban planners, housing development professionals, and decision makers on climate change resilient urban development and management					MoLHUD	MoLG, KCCA, Universities, Local Governments	Same as 2.1.1.	Same as 2.1.1.
3. Improve disaster preparedness by increasing the number of well-equipped health facilities, constructing dams and dykes in flood-prone areas, and improving disaster preparedness and management knowledge and skills in regions prone to	3.1 Facilities and relevant units in urban and rural areas prone to climate risks and disasters are equipped and prepared to deal with disasters		3,082,197	935,588	1,043,656	1,102,953				

such climatic disasters										
		3.1.1 Financial and technical support provided to units concerned with disaster mitigation and management					OPM	MWE, MoLHUD, MoLG, KCCA, Universities, Local Governments	1. Government 2. Donor Support – MLOs, BLs (WB, GEF LDCF, MDGAF, UN Agencies, GFDRR; DFID, AFD, etc.) 3. NGOs, CSOs 4. Research institutes, academia 5. Private Sector	1. Sector Budget; district budgets 2. Grants, TA, co-financing 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing, risk management, insurance schemes
		3.1.2 Increased knowledge and capacity to act on climate related disasters in areas prone such climatic hazards					OPM	MoLHUD, MoLG, KCCA, Universities, Local Governments	Same as 3.1.1.	Same as 3.1.1.
		3.1.3 Humans relocated from disaster prone areas					OPM	MoLHUD, MoLG, KCCA, Local Governments	Same as 3.1.1.	Same as 3.1.1.
		3.1.4 Clear delineation of roles and responsibilities and functional coordination systems among relevant units and facilities					OPM	MoLHUD, MoLG, KCCA, Local Governments	1. Government	1. Sector Budget; district budgets
4. Strengthen housing development policies, including subsidies to low-income communities	4.1 Housing development policies support low-income communities	4.1.1 Housing development policies strengthened to include subsidies to low-income communities	52,183	-	52,183	-	MoLHUD	MFPED, MoLG, KCCA, Local Governments	1. Government 2. Donor Support – MLOs, BLs (WB, GEF LDCF, MDGAF, UN Agencies; DFID, AFD, SIDA, etc.)	1. Sector Budget (housing, DRR), subsidies, taxes; district budgets 2. Grants, TA, co-financing

5. Establish insurance schemes to provide reparations in regions affected by climatic disasters	5.1 Insurance schemes provide sufficient reparations in regions affected by climatic disasters	5.1.1 Insurance schemes established for reparations to persons and communities established affected by climatic disasters	2,367,199	-	1,043,656	1,323,543	MFPED	MoLHUD, MoLG, KCCA, Local Governments, Private Sector	1. Government 2. Donor Support – MLOs, BLs (WB, GEF LDCF, MDGAF, UN Agencies, GFDRR; DFID, AFD, etc.) 3. Private Sector	1. Sector Budget; district budgets 2. Grants, TA, co-financing 3. TA, payment in kind, co-financing, risk management, insurance schemes
6. Develop climate change awareness programmes involving all communities and stakeholders	6.1 Climate change aware communities and stakeholders		140,419	-	52,183	88,236				
		6.1.1 Community based climate change awareness raising and sensitization campaigns carried out					MWE	MoLHUD MoLG, KCCA, Municipalities, Local Governments, CSOs, Communities	1. Government 2. Donor Support – MLOs, BLs (WB, GEF LDCF, MDGAF, UN Agencies, GFDRR; DFID, AFD, etc.) 3. NGOs, CSOs 4. Research institutes, academia 5. Private Sector	1. Sector Budget; district budgets 2. Grants, TA, co-financing 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing
		6.1.2 Gender focal points, women and men self-help groups in rural and urban areas capable of environmental management and disaster risk management					MWE	MoLHUD, MLGSD, MoLG, KCCA, Municipalities, Local Governments, CSOs	Same as 6.1.1. with emphasis on NGOs and CSOs active on gender equity	Same as 6.1.1. with emphasis on NGOs and CSOs active on gender equity
		Resident associations participate in and encourage awareness raising for community response to emergencies and climatic					MoLHUD	MLGSD, MWE, MoLG, Local Governments, CSOs	1. Government 2. NGOs, CSOs	1. District budgets, community budget 2. TA, grants, payment in kind

		changes								
7. Disseminate climate-change and early-warning information in local languages to improve community disaster preparedness	7.1 Improved dissemination of climate-change and early-warning information and community disaster preparedness		187,118	187,118	-	-				
		7.1.1 Communication of climate change and early warning systems information supported for the purposes of disaster preparedness					MWE	OPM, MAAIF, MoLG, Local Governments, CSOs	1. Government 2. Donor Support – MLOs, BLs (WB, GEF LDCF, MDGAF, UN Agencies, GFDRR; DFID, AFD, etc.) 3. NGOs, CSOs 4. Research institutes, academia 5. Private Sector	1. Sector Budget; district budgets 2. Grants, TA, co-financing 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing
8. Diversify economic activities to improve the resilience of rural communities dependent on climate-sensitive sectors such as agriculture and livestock rearing	8.1 Diversified economic activities and increased community resilience to climate change impacts	8.1.1 Rural communities dependent on climate-sensitive sectors have new or improved options to increase their income sources	-	-	-		MAAIF	Ministry of Trade, Industry and Cooperatives, MoLG, Local Governments, CSOs	1. Government 2. Donor Support – MLOs, BLs (WB, GEF LDCF, MDGAF, UN Agencies, GFDRR, ICI; DFID, AFD, etc.) 3. NGOs, CSOs (CARE, IUCN, etc) 4. Research institutes, academia 5. Private Sector	1. Sector Budgets; district budgets 2. Grants, TA, co-financing 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing

		8.1.2 Means for rural communities to communicate and exchange on ideas and options for livelihoods diversification supported and encouraged					MAAIF	Ministry of Trade, Industry and Cooperatives, MoLG, Local Governments, CSOs	Same as 8.1.1.	Same as 8.1.1.
9. Create "green spaces" in urban centres to moderate temperatures and provide fresh air for healthy living	9.1 New and enhanced green spaces in urban centres moderate temperatures and provide fresh air for healthy living		239,300	187,118	52,183	-				
		9.1.1 Collaboration between urban planning department(s) and other relevant agencies enhanced to ensure that urban areas have adequate green places and leisure parks					MoLHUD	MoLG, KCCA, NEMA, MoH, MWE, MoLG, Local Governments, Private Sector	1. Government 2. Donor Support – MLOs, BLs (WB, GEF LDCF, MDGAF, UN Agencies, ICI, ICF; AFD, NORAD, GIZ, etc.) 3. NGOs, CSOs (IIED, Pact etc.) 4. Research institutes, academia 5. Private Sector	1. Sector Budgets (planning, infrastructure); district budgets 2. Grants, TA, co-financing 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing, direct investment
		9.1.2 Sustainable waste management supported by enforcing appropriate means and approved interventions					KCCA/ Local Governments	MWE, MoLG, MoH, CSOs, Communities, Private Sector	Same as 9.1.1.	Same as 9.1.1.
		9.1.3 Increased scale of tree planting and afforestation in urban centres and rural homesteads					KCCA/ Local Governments	MWE, CSOs, Communities, Private Sector	Same as 9.1.1.	Same as 9.1.1.
Sub-Total			**13,637,000**	**3,181,000**	**4,853,000**	**5,603,000**				

Sector 12: Disaster Risk Management										
Policy priority: To ensure disaster mitigation and adequate preparedness for climate change–induced risks, hazards and disasters										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (USD)***	**Timeframe**			***Lead Implementation Agency***	***Responsible Parties***	***Possible Climate Finance Instruments / Sources of Finance***	***Possible Financial Tool / Products***
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	***Long- term (10-15 yrs)***				
1. Develop and implement a climate change–induced disaster risk management strategy	1.1 Climate change–induced disaster risk management strategy established		305,995	305,995	-	-				
		1.1.1 DRR concept promoted by addressing the five priority areas of the Hyogo Framework for Action (HFA) and implementing the African regional DRR strategy and program of action					OPM	MWE, MLGSD, Local Governments, Development Partners, SCOs	1. Government 2. Donor Support – MLOs and BLs active in DRR (GFDRR, WB, GEF LDCF, SCCF, ICF, UNISDR, other UN Agencies) 3. NGOs, CSOs active in DRR (e.g. GNDR, RCRC) 4. Research institutes (IDS, IISD, IIED, etc) 5. Private sector – financial and other businesses	1. National budget (Sectoral), tax (dis)incentives 2. Grants, TA 3. Payment in kind, grants, TA 4. TA, grants, payment in kind 5. Risk management, insurance schemes, soft/concessional loans (infrastructure, other services), TA

		1.1.2 Country specific climate-related disaster risk reduction and management scheme developed					OPM	MWE, MLGSD, Local Governments, Development Partners, SCOs	Same as 1.1.1.	Same as 1.1.1.
2. Create an appropriate legal and regulatory framework for disaster management	2.1 Appropriate legal and regulatory framework for disaster management in place	2.1.1 Legal and regulatory framework established for disaster risk management	174,854	174,854	-		OPM	MWE, MLGSD, Local Governments, Development Partners, SCOs	1. Government 2. Donor Support – MLOs and BLs active in DRR (GFDRR, WB, GEF LDCF, SCCF, ICF, UNISDR, other UN Agencies) 3. NGOs, CSOs active in DRR (e.g. GNDR, RCRC) 4. Research institutes (IDS, IISD, IIED, etc)	1. National budget (Sectoral) 2. Grants, TA 3. Payment in kind, grants, TA 4. TA, grants, payment in kind
3. Promote vulnerability risk mapping (including the social and economic impacts of climate change) of the whole country and all sectors	3.1 Social and economic impacts of climate change better understood from climate change vulnerability risk maps for entire country		510,511	87,427	423,084	-				
		3.1.1 Vulnerability assessment, risk and hazard mapping of entire country and all sectors undertaken, including social and economic impacts of					OPM/ MWE	MAAIF, MEMD, MoWT, MoH, MoGSD, Local Governments, Development Partners, SCOs	1. Government 2. Donor Support – MLOs and BLs active in DRR (GFDRR, WB, GEF LDCF, SCCF, ICF, UNISDR, other UN Agencies)	1. National budget (Sectoral), tax (dis)incentives 2. Grants, TA

		climate change							3. NGOs, CSOs active in DRR (e.g. GNDR, RCRC) 4. Research institutes (IDS, IISD, IIED, etc) 5. Private sector – financial and other businesses	3. Payment in kind, grants, TA 4. TA, grants, payment in kind 5. TA, payment in kind, co-financing
		3.1.2 Climatic risk assessment and monitoring widely practiced with use of vulnerability risk mapping					OPM/ MWE	Meteorology Authority, MAAIF, MEMD, MoWT, MoH, MoGSD, Local Governments, Development Partners, SCOs	Same as 3.1.1.	Same as 3.1.1.
4. Improve early-warning systems and preparedness to avoid or minimize the adverse impacts of climate change	4.1 Early-warning systems and climate change disaster preparedness in place		1,012,261	437,135	-	575,126				
		4.1.1 Acquisition and dissemination of weather and climate information for improved early warning systems					OPM/ MWE	MAAIF, MEMD, MoWT, MoH, MoGSD, Local Governments, Development Partners, SCOs	1. Government 2. Donor Support – MLOs and BLs active in DRR (GFDRR, WB, GEF LDCF, SCCF, ICF, UNISDR, other UN Agencies) 3. NGOs, CSOs active in DRR (e.g. GNDR, RCRC) 4. Research institutes (IDS, IISD, IIED, etc)	1. National budget (Sectoral), tax (dis)incentives 2. Grants, TA 3. Payment in kind, grants, TA 4. TA, grants, payment in kind 5. TA, payment in kind, co-

									5. Private sector – financial and other businesses	financing
		4.1.2 Emergency response and post disaster recovery systems developed (and/or strengthened) to avert or minimize adverse impacts of disasters					OPM/ MWE	MAAIF, MEMD, MoWT, MoH, MoGSD, Local Governments, Development Partners, SCOs	Same as 4.1.1.	Same as 4.1.1.
5. Strengthen climate change–induced disaster management institutions at the national and local levels to reduce causality and ensure preparedness	5.1 Strengthened disaster management institutions at the national and local levels		3,933,341	-	1,057,711	2,875,630				
		5.1.1 Climate change and disaster-relevant institutions and committees strengthened at the national and local levels to reduce causality and ensure preparedness					OPM	MWE, MLGSD, Local Governments, Development Partners, SCOs	1. Government 2. Donor Support – MLOs and BLs active in DRR (GFDRR, WB, GEF LDCF, SCCF, ICF, UNISDR, other UN Agencies) 3. NGOs, CSOs active in DRR (e.g. GNDR, RCRC) 4. Research institutes (IDS, IISD, IIED, etc) 5. Private sector – financial and other businesses	1. National budget (Sectoral), tax (dis)incentives 2. Grants, TA 3. Payment in kind, grants, TA 4. TA, grants, payment in kind 5. TA, payment in kind, co-financing

		5.1.2 Improved management of trans-boundary and cross-cultural natural resource-based conflict resulting from stress on water and pasture for pastoral communities					OPM	MWE, MLGSD, Local Governments, Development Partners, SCOs	Same as 5.1.1. with support form NGOs and CSOs focused on cross-boundary resource management	Same as 5.1.1. with support form NGOs and CSOs focused on cross-boundary resource management
6. Provide basic needs to victims of climate change–induced disasters in the form of financial assistance or donations of food, goods and services as the need arises	6.1 Basic needs met for victims of climate change–induced disasters	6.1.1 Systems established for transfer of financial assistance or donations of food, goods and services to disaster victims as the need arises	-	-	-		OPM	MWE, MLGSD, Local Governments, Development Partners, SCOs	1. Government 2. Donor Support – MLOs and BLs active in DRR (GFDRR, WB, GEF LDCF, SCCF, ICF, UNISDR, other UN Agencies) 3. NGOs, CSOs active in DRR (e.g. GNDR, RCRC) 4. Research institutes (IDS, IISD, IIED, etc) 5. Private sector – financial and other businesses	1. National budget (Sectoral) 2. Grants, TA, budget support 3. Payment in kind, grants, TA 4. TA, grants, payment in kind 5. TA, payment in kind, co-financing, donations
7. Encourage the formation of resident associations that can respond to emergencies, and involve them in key decision making to reduce risks.	7.1 Resident associations established that can plan for and respond to emergencies		809,481	174,854	634,626	-				
		7.1.1 Community-based approach to disaster risk reduction and climate change adaptation promoted					OPM	MWE, MLGSD, Local Governments, Development Partners, SCOs	1. Government 2. Donor Support – MLOs and BLs active in DRR (GFDRR, WB, GEF LDCF,	1. District and community budgets

									SCCF, ICF, UNISDR, other UN Agencies) 3. NGOs, CSOs active in community-based DRR (e.g. GNDR, RCRC)	2. Grants, TA 3. Payment in kind, grants, TA
		7.1.2 Resident associations prioritize the special needs of vulnerable groups such as children, women, youth, elderly and other specific groups					OPM	MWE, MLGSD, Local Governments, Development Partners, SCOs	Same as 7.1.1. with engagement of CSOs and NGOs focused on gender equity and social welfare	Same as 7.1.1. with engagement of CSOs and NGOs focused on gender equity and social welfare
8. Strengthen the National Emergency Coordination and Operations Centre and establish a national contingency fund	8.1 A strengthened National Emergency Coordination and Operations Centre and a national contingency fund		2,898,793	1,748,541	-	1,150,252				
		8.1.1 National Emergency Coordination and Operations Centre strengthened for effective response to emergencies					OPM	MWE, MLGSD, Development Partners, SCOs	1. Government 2. Donor Support – MLOs and BLs active in DRR (GFDRR, WB, GEF LDCF, SCCF, ICF, UNISDR, other UN Agencies) 3. NGOs, CSOs active in DRR (e.g. GNDR, RCRC) 4. Research institutes (IDS, IISD, IIED, etc) 5. Private sector –	1. National budget (Sectoral) 2. Grants, TA, budget support 3. Payment in kind, grants, TA 4. TA, grants, payment in kind 5. TA, payment in kind, co-

									financial and other businesses	financing, donations
		8.1.2 National contingency fund established					OPM	MWE, MLGSD, Local Governments, Development Partners, SCOs	1. Government 2. Donor Support – MLOs and BLs active in DRR (GFDRR, WB, GEF LDCF, SCCF, ICF, UNISDR, other UN Agencies) 3. Private sector – financial and other businesses	1. National budget (Sectoral) 2. Grants, TA, budget support 3. TA, payment in kind, co-financing, donations
9. Promote the development of innovative insurance schemes to insure households, institutions and businesses against the destruction caused by extreme weather events and disasters	9.1 Innovative insurance schemes insure households, institutions and businesses against the destruction caused by extreme weather events and disasters		2,498,839	-	2,115,422	383,417				

		9.1.1 Innovative insurance schemes developed and promoted to insure households, institutions, and businesses against the destruction caused by extreme weather events and disasters					OPM	MWE, MLGSD, Local Governments, Development Partners, SCOs	1. Government 2. Donor Support – MLOs and BLs active in DRR (GFDRR, WB, GEF LDCF, SCCF, ICF, UNISDR, other UN Agencies) 3. Private sector – financial and other businesses	1. National budget (Sectoral) 2. Grants, TA, budget support 3. TA, payment in kind, co-financing, donations, risk management, insurance schemes
		9.1.2 Decision-support mechanisms established and outreach conducted to help target actors to assess risks and understand (regional) contingency plans					? OPM	MWE, MLGSD, Local Governments, Development Partners, SCOs	Same as 9.1.1. with additional support from CSOs, NGOs	Same as 9.1.1. with additional support from CSOs, NGOs
Sub-Total			**12,144,075**	**2,928,806**	**4,230,843**	**4,984,426**				

Sector 13: Vulnerable Groups										
Policy priority: To give special attention to the improvement of the resilience of vulnerable groups to climate change										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (USD)***	**Timeframe**			***Lead Implementation Agency***	***Responsible Parties***	***Possible Climate Finance Instruments / Sources of Finance***	***Possible Financial Tool / Products***
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	***Long- term (10-15 yrs)***				
1. Put in place social protection mechanisms to ensure that vulnerable groups and communities are empowered to effectively and adequately adapt to the impacts of climate change	1.1 Vulnerable groups and communities are empowered to adapt to the impacts of climate change		1,764,225	585,761	846,169	332,295				
		1.1.1 A consolidated social protection fund targeting vulnerable groups (aged, destitute children and the disabled) is put in place					MLGSD /MWE	MWE, Local Governments, CSOs, Communities	1. Government 2. Donor Support – MLOs, BLs (GEF LDCF, WB, AF, ICI, UNDP, UNEP; IDRC/CIDA, DANIDA, AFD, etc.) 3. NGOs, CSOs (CARE, Pact, etc)	1. National Sector Budget; district and community budget 2. Grants, TA, co-financing 3. TA, grants, payment in kind
		1.1.2 Provisions made to ensure that vulnerable groups and communities are empowered to effectively and adequately adapt to the impacts of climate change					MLGSD /MWE	MWE, Local Governments, CSOs, Communities	1. Government 2. Donor Support – MLOs, BLs (GEF LDCF, WB, AF, ICI, UNDP, UNEP; IDRC/CIDA, DANIDA, AFD, etc.) 3. NGOs, CSOs (CARE, Pact, etc) 4. Research institutes, academia	1. National Sector Budget; district and community budget 2. Grants, TA, co-financing 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing

									5. Private Sector	
		1.1.3. Social protection programmes for vulnerable communities, households and individuals including women, children, youth and others strengthened					MLGSD /MWE	MWE, Local Governments, CSOs, Communities	Same as 1.1.1. with additional support from CSOs, NGOs active in gender equity and social welfare	Same as 1.1.1. with additional support from CSOs, NGOs active in gender equity and social welfare
2. Support vulnerable groups to engage in sustainable adaptation mechanisms to cope with climate change impacts	2.1 Climate change adaptation mechanisms appropriate for vulnerable groups	2.1.1 Vulnerable groups supported and encouraged to engage in sustainable adaptation mechanisms to cope with climate change impacts	1,145,887	390,507	423,084		MLGSD /MWE	MWE, Local Governments, CSOs, Communities	Same as 1.1.1.	Same as 1.1.1.
3. Integrate climate change–related issues into economic policies and action plans that address the needs of vulnerable groups	3.1 Economic policies and action plans that address the climate change needs of vulnerable groups		715,965	292,881	423,084	-				
		3.1.1 Climate change issues integrated into economic policies and action plans that address the needs of vulnerable groups					MLGSD /MWE	MWE, Local Governments, CSOs, Communities	Same as 1.1.1.	Same as 1.1.1.

		3.1.2 Access ensured for women and children to health facilities and treatments that build their resilience to climate change related disease outbreaks					MoH	MLGSD, MWE, Local Governments, Development Partners, CSOs	Same as 1.1.1. with additional support from CSOs, NGOs active in gender equity and social welfare	Same as 1.1.1. with additional support from CSOs, NGOs active in gender equity and social welfare
Sub-Total			**3,626,076**	**1,269,149**	**1,692,337**	**664,590**				
TOTAL ADAPTATION COSTS			**2,918,940,799**	**671,089,420**	**1,072,804,749**	**1,175,046,630**				

5.3 Mitigation Strategy Matrix

Sector: 1: LULUCF (land Use, Land-Use Change and Forestry)										
Policy priority (Forestry) • ***To continue and step up efforts targeted at effective forest management*** • ***To make a deliberate departure from "business as usual" by formulating sectoral policies that address issues associated with increased unit productivity in plantation forestry*** • ***To promote and develop afforestation and reforestation programmes in non-forested areas and intensify afforestation and reforestation efforts in other areas***										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (US$)***	***Timeframe***			***Lead Implementation Agency***	***Responsible Parties***	***Possible Climate Finance Instruments / Sources of Finance***	***Possible Financial Tool / Products***
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	***Long- term (10-15 yrs)***				
1. Ensure that the forest sector continues providing global services in mitigation of climate change while supporting sustainable development needs of the country	1.1 Forests sustainably managed to mitigate climate change		4,335,404	579,750	3,755,654	-				
		1.1.1 Public awareness increased on opportunities and requirements for carbon financing facilities in the forestry sector					MWE/ FSSD	NFA, Private Sector, Development Partners, CSOs/NGOs, District Authorities, Local Communities	1. Government 2. Donor Support – MLOs, BLs (FIP, GCCA, FCPF, WB CIFs, GEF, UNDP, UNEP, FAO; NORAD, FORMIN, GIZ, DFID, etc) 3. NGOs, CSOs 4. Research institutions, academia	1. National budget, district and community budgets 2. Grants, co-financing, TA 3. TA, payment in kind 4. TA, payment in kind 5. TA, co-financing, payment in

									5. Public Sector	kind
		1.1.2 Afforestation and reforestation with appropriate tree species in rural and urban areas promoted to mitigate climate change					MWE / FSSD	NFA, Private Sector, Development Partners, CSOs/NGOs, District Authorities, DFS, Local Communities	Same as 1.1.1.	Same as 1.1.1.
		1.1.3 Appropriate NAMAs developed for the forestry sector					MWE / FSSD	NFA, Private Sector, Development Partners, CSOs/NGOs, District Authorities, DFS, Local Communities	1. Government 2. Donor Support – MLOs, BLs (FIP, GCCA, FCPF, WB CIFs, GEF, UNDP, UNEP, FAO; NORAD, FORMIN, GIZ, DFID, etc) 3. NGOs, CSOs 4. Research institutions, academia 5. Private Sector	1. National budget 2. Grants, co-financing, TA 3. TA, payment in kind 4. TA, payment in kind 5. TA, payment in kind
		1.1.4 Incentives put in place for private sector to increase forest cover					MWE/ FSSD	NFA, DFS, Private Sector, Development Partners	1. Donor Support – MLOs, BLs (FIP; GCCA, FCPF, WB CIFs, GEF, UNDP, UNEP, FAO; NORAD, FORMIN, GIZ, DFID, etc) 2. Private Sector	1. Grants, co-financing, TA 2. TA, co-financing, payment in kind, carbon finance
		1.1.5 Proper law enforcement to ensure sustainable use of existing forests					MWE/ FSSD	NFA, DFS, Private Sector, Development Partners	1. Government 3. NGOs, CSOs	1. National budget, district and community budgets 2. TA, payment in kind

2. Provide financial support, technology transfer and provision for capacity building, especially to forest-dependent communities	2.1 Strengthened capacity for and resources devoted to expanding coverage of non-degraded forests	2.1.1 Capacity enhanced for local communities to manage and sustainably use forest resources	6,358,168	724,688	5,633,481	-	MWE/ FSSD	Private Sector, Development Partners, CSOs/NGOs, DFS, Universities,	1. Government 2. Donor Support – MLOs, BLs (FIP, GCCA, FCPF, WB CIFs, GEF, UNDP, UNEP, FAO; NORAD, FORMIN, GIZ, DFID, etc) 3. NGOs, CSOs 4. Research institutions, academia 5. Private Sector	1. National budget 2. Grants, co-financing, TA, PES 3. TA, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing, carbon finance
3. Provide incentives for farmers to establish commercial woodlot plantations, including peri-urban plantations	3.1 Expansion of extensive woodlot plantations with higher carbon stocks		26,139,404	434,813	5,633,481	20,071,111				
		3.1.1 Establish appropriate incentive schemes for farmers to engage in commercial woodlot plantations, including per-urban plantations					MWE/ FSSD	DFS, Private Sector, Development Partners, NGOs, District Authorities Districts, CSOs/NGOs	Same as 2.1.1. with emphasis on public-private interface	Same as 2.1.1. with emphasis on public-private interface
		3.1.2 Establishment of commercial forest plantations and agro-forestry forestry practices supported to mitigate climate change					MWE/ FSSD	NFA, DFS, Private Sector, Development Partners, NGOs, District Authorities Districts, CSOs/NGOs	Same as 2.1.1. with emphasis on public-private interface	Same as 2.1.1. with emphasis on public-private interface

		3.1.3 Conservation of natural forests and protected areas supported to sequestrate carbon					MWE/ FSSD	NFA, UWA, DFS, Private Sector, Development Partners, NGOs, District Authorities Districts, CSOs/NGOs	Same as 2.1.1. with emphasis on public-private interface	Same as 2.1.1. with emphasis on public-private interface
Sub-Total			**36,832,976**	**1,739,250**	**15,022,615**	**20,071,111**				

Sector: 1: LULUCF (Land Use, Land-Use Change and Forestry)										
Policy priority (Land Use and Land Use Change): • ***To promote and enforce urban and rural planning of settlements*** • ***To control and monitor land development and other land-use changes in a sustainable manner so as to better manage GHG sources and sinks***										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (millions of US$)***	**Timeframe**			***Lead Implementation Agency***	***Responsible Parties***	***Possible Climate Finance Instruments / Sources of Finance***	***Possible Financial Tool / Products***
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	***Long-term (10=15 yrs)***				
1. Demarcate areas reserved for industrial use and other land development	1.1 Industrial and other land use zoning enforced for different sectors, taking into account potential for reduced GHG emissions	1.1.1 Appropriate land use planning and zoning measures introduced that account for emissions impact	1,733,268	353,333	632,935	1,733,268	MLHUD	MWE (FSSD), NFA, DFS, KCCA, ULC, BLB, DLB, Districts, Municipalities, Local Communities Private Sector Development Partners	1. Government 2. Donor Support – MLOs, BLs (FIP, GCCA, FCPF, WB CIFs, GEF, UNDP, UNEP, FAO; NORAD, FORMIN, GIZ, DFID, etc) 3. NGOs, CSOs 4. Research institutions, academia 5. Private Sector	1. National budget, district budgets (planning) 2. Grants, co-financing, TA, budget support 3. TA, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing
2. Strengthen urban development authorities by providing funds and the ability to enforce regulations	2.1 Authorities manage sustainable urban land development and use for GHG emissions reduction	2.1.1 Development and/or revision of (new) plans and regulations for lower emission urban development	352,312	141,333	210,978	-	MLHUD	MWE (FSSD), NFA, DFS, KCCA, ULC, BLB, DLB, Districts, Municipalities, Local Communities Private Sector Development Partners	1. Government 2. Donor Support – MLOs, BLs (FIP, GCCA, FCPF, WB CIFs, GEF, UNDP, UNEP, FAO; NORAD, FORMIN, GIZ, DFID, etc) 3. NGOs, CSOs 4. Research institutions, academia 5. Private Sector	1. National budget, district budgets (planning) 2. Grants, co-financing, TA, budget support 3. TA, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing

3. Promote human resource development in land management	3.1 Increased human capacity for improved sustainable land development and use for reduced GHG emissions	3.1.1 Extensive promotion of and training on urban and rural land use planning	641,420	141,333	126,587	373,500	MLHUD	KCCA, ULC, Districts, Municipalities, Development Partners	1. Government 2. Donor Support – MLOs, BLs (FIP, GCCA, FCPF, WB CIFs, GEF, UNDP, UNEP, FAO; NORAD, FORMIN, GIZ, DFID, etc) 3. NGOs, CSOs 4. Research institutions, academia 5. Private Sector	1. National budget, district budgets (planning) 2. Grants, co-financing, TA, budget support 3. TA, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing
Sub-Total			**2,727,000**	**636,000**	**970,500**	**1,120,500**				

Sector: 1: LULUCF (Land Use, Land-Use Change and Forestry)										
Policy priority (REDD+): To continue to actively promote joint Reduced Emissions from Deforestation and Forest Degradation (REDD+) efforts involving the public and private sectors										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (millions of US$)***	***Timeframe***			***Lead Implementation Agency***	***Responsible Parties***	***Possible Climate Finance Instruments / Sources of Finance***	***Possible Financial Tool / Products***
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	***Long- term (10-15 yrs)***				
1. Conserve the existing forests and implement REDD+ programmes to access additional funds from carbon markets	1.1 Capacity to implement REDD+ developed in Uganda at different levels, from national to local		18,156,832	4,638,000	6,828,462	6,690,370				
		1.1.1 R-PP developed and refined					MWE/ FSSD	CCU, NFA, UWA, DFS, Universities and research institutions, Development Partners, District Authorities, Private sector, NGOs/CSOs	1. Donor Support – MLOs, BLs (FIP, GCCA, FCPF, WB CIFs, GEF, UNDP, UNEP, FAO; NORAD, FORMIN, GIZ, DFID, etc) 3. NGOs, CSOs 4. Research institutions, academia 5. Private Sector	1. Grants, co-financing, TA 3. TA, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing
		1.1.2 Readiness package submitted to FCPF (including capacity developed, REDD+ strategy, institutional set up					MWE/ FSSD	CCU, NFA, UWA, DFS, Universities and research institutions, Development Partners, District Authorities, Private sector, NGOs/CSOs	1. Government with donor support	1. sector budget, grants

		for benefit sharing, proper governance, putting, MRVs in place, etc.)								
		1.1.3 Training and other capacity building measures taken to improve understanding of and access to REDD+ funding/carbon markets					MWE/ FSSD	CCU, NFA, UWA, DFS, Universities and research institutions, Development Partners, District Authorities, Private sector, NGOs/CSOs	1. Government 2. Donor Support – MLOs, BLs (FIP, GCCA, FCPF, WB CIFs, GEF, UNDP, UNEP, FAO; NORAD, FORMIN, GIZ, DFID, etc) 3. NGOs, CSOs 4. Research institutions, academia	1. National budget, district budgets (planning) 2. Grants, co-financing, TA, budget support 3. TA, payment in kind 4. TA, payment in kind
2. Set-up mechanisms to regulate the implementation of REDD+ projects and the set-up of equitable benefit sharing schemes	2.1 A functioning REDD scheme in Uganda with appropriate funding		18,248,135	5,565,600	6,828,462	5,854,074				
		2.1.1 REDD pilot schemes developed and implemented					MWE/ FSSD/CCU	NFA, DFS, Development Partners, Private sector, NGOs/CSOs	1. Government 2. Donor Support – MLOs, BLs (FIP, GCCA, FCPF, WB CIFs, GEF, UNDP, UNEP, FAO; NORAD, FORMIN, GIZ, DFID, etc) 3. NGOs, CSOs 4. Research institutions, academia 5. Private Sector	1. National budget, district budgets (planning) 2. Grants, co-financing, TA, budget support 3. TA, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing
		2.1.2 Systems and incentives in place to ensure credible					MWE/ FSSD/CCU	NFA, DFS, Development Partners, Private sector, NGOs/CSOs	1. Government 2. Donor Support –	1. National budget, district and community budgets (planning)

		benefit sharing scheme							MLOs, BLs (FIP, GCCA, FCPF, WB CIFs, GEF, UNDP, UNEP, FAO; NORAD, FORMIN, GIZ, DFID, etc) 3. NGOs, CSOs	2. Grants, co-financing, TA, budget support 3. TA, payment in kind
Sub-Total			**36,404,967**	**10,203,600**	**13,656,923**	**12,544,444**				

Sector 2: Wetlands										
Policy priority: *Conservation and sustainable use of wetlands*										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (US$)***	**Timeframe**			***Lead Implementation Agency***	***Responsible Parties***	***Possible Climate Finance Instruments / Sources of Finance***	***Possible Financial Tool / Products***
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	***Long-term (10+ yrs)***				
1. Promote and intensify wetland protection and restoration to enhance sinks of green house gases	1.1 Increase in carbon stocks through wetland protection and restoration	1.1.1 Expansion of wetlands in the area mapped and protected	6,008,313	1,601,559	1,730,605	2,676,148	MWE	MWE (WMD), NEMA, NGOs, Development Partners, District Authorities. Local Communities	1. Government 2. Donor Support – MLOs, BLs (GEF, WB, AF; SDC, SIDA, DFID, GIZ, etc.) 3. NGOs, CSOs 4. Research institutes, academia 5. Private Sector	1. Sector Budget; district budgets, community budgets 2. Grants, TA, budget support 3. TA, grants, payment in kind 4. TA, payment in kind 5. TA, payment in kind, co-financing
2. Promote sustainable use of wetlands	2.1 Sustainable economic development in wetlands that reduce GHG emissions	2.1.1 Sustainable utilisation of wetlands by communities so the wetlands continue to offer global services of mitigating climate change	12,553,263	3,523,431	3,677,537	5,352,296	MWE	MWE (WMD), NEMA, NGOs, Development Partners, Private Sector, District Authorities. Local Communities	Same as 1.1.1.	Same as 1.1.1.
Sub-Total			**18,561,576**	**5,124,990**	**5,408,142**	**8,028,444**				

Sector 3: Agriculture										
Policy priority: To mainstream climate change mitigation issues in the efforts underway to promote and improve the management of natural resources, in order to ensure resilient, productive and sustainable agricultural systems with reduced GHG emissions										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (US$)***	**Timeframe**			***Lead Implementation Agency***	***Responsible Parties***	***Possible Climate Finance Instruments / Sources of Finance***	***Possible Financial Tool / Products***
				Short term (1-5 yrs)	*Medium Term (6-10 yrs)*	Long- term (10-15 yrs)				
1. Promote and encourage conservation agriculture and ecologically compatible cropping systems and agricultural practices to increase GHG sinks	1.1 Widespread use of agricultural practices that reduce GHG release from soils		55,314,102	12,651,429	22,291,111	20,371,563				
		1.1.1 Minimum tillage and other conservation agricultural techniques adopted by farmers to maximise carbon storage.					MAAIF	NARO, NEMA, Local Governments, Research Institutes, Development Partners, District Authorities, Local communities	1. National and local Government 2. Donor Support – MLOS, BLs active in agriculture (GEF SCCF, LDCF, WB, UNDP, FAO, MDGAF; SIDA, GIZ, DFID, SDC etc.) 3. Agric. NGOs, CSOs	1. Sector Budget (agriculture / extension services), district budgets 2 grants, concessional loans, co-financing

									4. International and regional Institutions, Research Orgs working on agriculture (e.g. IFPRI, CGIAR) 5. Private Sector, businesses	3. TA, payment in kind 4. Payment in kind, grants, TA 5. TA, payment in kind
		1.1.2 Organic agriculture promoted as a mechanism of reducing GHG emissions from agrictlure					MAAIF	MWE, NARO, Universities and Research Institutes, Development Partners, CSOs	Same as 1.1.1	Same as 1.1.1
		1.1.3 Wider use of ecologically compatible cropping systems as ways of increasing carbon storage					MAAIF	MWE, NARO, Universities and Research Institutes, Development Partners, CSOs	Same as 1.1.1	Same as 1.1.1
		1.1.4 Agriculture projects developed and registered for carbon markets					MAAIF	MWE, NARO, Universities, Research Institutes, Development Partners, farmers	Government	Sector budget
		1.1.5 Development NAMAs for the agricultural sector supported.					MWE	MAAIF, NARO, Universities, Research Institutes, Development Partners, farmers	Government with donor support	Grants

2. Promote the sustainable management of rangelands to reduce GHG emissions from soil and land degradation	2.1 Reduced GHG emissions through , through sustainable land management of rangelands and pastures		72,522,808	9,488,571	22,291,111	40,743,125				
		2.1.1 integrated rangeland management plans prepared and implemented					MAAIF	NARO, Universities, Research Institutes, Development Partners, farmers	1. National and local Government 2. Donor Support – MLOS, BLs active in agriculture (GEF SCCF, LDCF, WB, UNDP, FAO, MDGAF; SIDA, GIZ, DFID, SDC etc.) 3. Agric. NGOs, CSOs 4. International and regional Institutions, Research Orgs working on agriculture (e.g. IFPRI, CGIAR) 5. Private Sector, businesses	1. Sector Budget (agriculture / extension services), district budgets 2 grants, concessional loans, co-financing 3. TA, payment in kind 4. Payment in kind, grants, TA 5. TA, payment in kind
		2.2.2 Implementation of integrated rangeland and pasture management plans enforced.					MAAIF	NARO, Universities, Research Institutes, Development Partners, farmers	1. National and local Government 2. Donor Support – MLOS, BLs active in agriculture (GEF SCCF, LDCF, WB, UNDP, FAO, MDGAF; SIDA, GIZ, DFID, SDC etc.)	1. Sector Budget (agriculture / extension services), district budgets 2 grants, concessional loans, co-financing

									3. Agric. NGOs, CSOs	3. TA, payment in kind
3. Promote the sustainable utilisation of agricultural products	3.1 Minimal GHG emissions from utilisation of agricultural products for livestock feed		14,075,090	4,428,000	5,572,778	4,074,313				
		3.1.1 Training and information dissemination on appropriate combinations of agricultural products for livestock feed					MAAIF	NARO, Universities, Research Institutes, Development Partners,farmers Private sector, Local Communities	1. National and local Government 2. Donor Support – MLOS, BLs active in agriculture (GEF SCCF, LDCF, WB, UNDP, FAO, MDGAF; SIDA, GIZ, DFID, SDC etc.) 3. Agric. NGOs, CSOs 4. International and regional Institutions, Research Orgs working on agriculture (e.g. IFPRI, CGIAR) 5. Private Sector, businesses	1. Sector Budget (agriculture / extension services), district budgets 2 grants, concessional loans, co-financing 3. TA, payment in kind 4. Payment in kind, grants, TA 5. TA, payment in kind
		3.1.2 Recycling of agricultural wastes supported including composting and waste to energy					MAAIF	MEMD, NARO, Universities, Research Institutes, Development Partners, Private sector,	Same as 3.1.1.	Same as 3.1.1.

		activities						Communities		
Sub-Total			141,912,000	26,568,000	50,155,000	65,189,000				

Sector 4: Energy Generation										
Policy priority: To support and accelerate the implementation of the Renewable Energy Policy (REP), in particular with respect to the promotion and development of new clean energy technologies in order to reduce GHG emission										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (US$)***	***Timeframe***			***Lead Implementation Agency***	***Responsible Parties***	***Possible Climate Finance Instruments / Sources of Finance***	***Possible Financial Tool / Products***
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	***Long- term (10-15 yrs)***				
1.Promote investment in clean energy generation under public–private partnerships	1.1 Reduction in GHG emissions from energy generation		4,125,350	-	3,060,233	1,065,118				
		1.1.1 Increase in installed capacity, generation and access of clean energy					MEMD	Ministry of Finance Private sector	1. Government 2. Donor Support – MLOs, BLs (GEEREF, SREP, CDM, CPF, SCF, CIFs, GEF, WB; FORMIN, NORAD, GIZ/KfW, DFID, etc.) 3. Private Sector	1. National budget, tax (dis)incentives, feed-in tariffs, loan guarantees 2. Budget support, concessional loans, co-financing, grants, TA 3. soft loans, TA, payment in kind, direct investment
		1.1.2. Support the development and implementation of NAMAs in the energy sector					MEMD	MWE, MoFPED, NPA, Private sector	1. Government 2. Donor Support – MLOs, BLs (GEEREF, SREP, CDM, CPF, SCF, CIFs, GEF TF, GEF SCCF, WB; FORMIN, NORAD, GIZ/KfW, DFID, etc.) 3. Private Sector 4. NGOs, CSOs, 5. Research institutions	1. National budget, tax (dis)incentives, feed-in tariffs, loan guarantees 2. Budget support, concessional loans, co-financing, grants, TA 3. Soft loans, TA, payment in kind, direct investment 4. TA, payment in kind 5. TA, payment in kind, grants

2.Promote, encourage and incentivise cogeneration, which is the production by industries of heat or steam and electricity from renewable biomass	2.1 Reduction in GHG emissions through use of cogeneration	2.1.1 Increase in energy generated by sugar factories and other relevant processing plants	1,863,164	-	1,224,093	639,071	Private Sector	MEMD UERA Private Sector (mainly sugar factories with others to follow)	1. Government 2. Donor Support – MLOs, BLs (GEEREF, SREP, CDM, CPF, SCF, CIFs, GEF, WB; FORMIN, NORAD, GIZ/KfW, DFID, etc.) 3. Private Sector	1. National budget, tax (dis)incentives, feed-in tariffs, loan guarantees 2. Budget support, concessional loans, co-financing, grants, TA 3. soft loans, TA, payment in kind, direct investment
3.Provide tax incentives and other benefits to private-sector companies who invest in cleaner energy generation	3.1 increased private sector involvement and investment in clean energy generation	3.1.1 Increased amount of clean energy generated through support of the private sector	1,038,094	-	612,047	426,047	Ministry of Finance (MoF)	MEMD Private Sector Uganda Investment Authority	1. Government 2. Donor Support – MLOs, BLs (GEEREF, SREP, CDM, CPF, SCF, CIFs, GEF, WB; FORMIN, NORAD, GIZ/KfW, DFID, etc.) 3. Private Sector	1. National budget, tax (dis)incentives, feed-in tariffs, loan guarantees 2. Budget support, concessional loans, co-financing, grants, TA 3. soft loans, TA, payment in kind, direct investment
4.Promote the use of alternative renewable energy sources such as solar, biomass, wind and biofuels, as well as their associated technologies	4.1 Diversification of energy generation sources and appropriate technologies	4.1.1 Increased proportion of clean energy in the national grid	8,665,541	8,665,541	-	-	MEMD	Private Sector; Universities and other tertiary institutions; NGOs	1. Government 2. Donor Support – MLOs, BLs (GEEREF, SREP, CDM, CPF, SCF, CIFs, GEF, WB; FORMIN, NORAD, GIZ/KfW, DFID, etc.) 3. Private Sector	1. National budget, tax (dis)incentives, feed-in tariffs, loan guarantees 2. Budget support, concessional loans, co-financing, grants, TA 3. soft loans, TA, payment in kind, direct investment
	4.2 Increased national energy security	4.2.1 Reduced dependence on limited (non-renewable) energy resources					MEMD	MEMD Universities and other tertiary institutions NOGs	Same as 4.1.1.	Same as 4.1.1.
5. Develop hydroelectric and geothermal power systems and integrate them into the East African Power Pool in the medium term	5.1 Developed domestic hydroelectric and geothermal power resources	5.1.1 Improved supply of hydroelectric and geothermal power generation at local level	3,327,304	-	1,836,140	1,491,165	MEMD	Uganda Electricity Transmission Company Uganda Electricity Regulatory Authority,MoF	1. Government 2. Donor Support – MLOs, BLs (GEEREF, SREP, CDM, CPF, SCF, CIFs, GEF TF, GEF SCCF, WB; FORMIN, NORAD, GIZ/KfW, DFID, etc.) 3. Private Sector 4. NGOs, CSOs	1. National budget, tax (dis)incentives, feed-in tariffs, loan guarantees; district budgets 2. Budget support, concessional loans, co-financing, grants, TA 3. Soft loans, TA, payment in kind, direct investment 4. TA, payment in kind

6.Promote the use of combined-cycle gas turbines in cases where there is a shortfall in renewable energy power generation systems	6.1 Improved availability of cleaner sources of fossil fuel energy where renewables are unavailable	6.1.1. Combined cycle gas turbines available in place of HFO and diesel systems	3,327,304	-	1,836,140	1,491,165	MEMD	MoF Private Sector (independent power producers)	1. Government 2. Donor Support – MLOs, BLs (GEEREF, SREP, CDM, CPF, SCF, CIFs, GEF, WB; FORMIN, NORAD, GIZ/KfW, DFID, etc.) 3. Private Sector	1. National budget, tax (dis)incentives, feed-in tariffs, loan guarantees 2. Budget support, concessional loans, co-financing, grants, TA 3. soft loans, TA, payment in kind, direct investment
7. Regulate the oil and gas sector and use of fossil fuels to reduce GHG emissions	7.1 Regulated oil and gas sector and use of fossil fuels to mitigate GHG emissions		3,327,304	-	1,836,140	1,491,165				
		7.1.1 Climate change issues integrated in the oil and gas exploration and extraction to mitigate GHG emissions					MEMD	MoTIC, MWE, MoFPED NEMA, UNBS, Development Partners, CSOs, Private Sector	1. Government 2. Donor Support – MLOs, BLs (GEEREF, SREP, CDM, CPF, SCF, CIFs, GEF TF, GEF SCCF, WB; FORMIN, NORAD, GIZ/KfW, DFID, etc.) 3. Private Sector 4. NGOs, CSOs active in extraction industries 5. Research institutions	1. National budget, tax and fine (dis)incentives, feed-in tariffs 2. Budget support, concessional loans, co-financing, grants, TA 3. Soft loans, TA, payment in kind, direct investment, co-financing 4. TA, payment in kind 5. TA, payment in kind, grants
		7.1.2 GHG emissions from fossil fuel consumption reduced by financial and regulatory disincentives					MEMD	MoTIC, MWE, MoFPED, NEMA, UNBS, Development Partners, CSOs, Private Sector	1. Government with the support of donors	1. National budget, TA support from donors
Sub-Total			**25,674,062**	**8,665,541**	**10,404,791**	6,603,729				

Sector 5: Energy Utilisation										
Policy priority: • ***To promote conservation and efficient utilisation of energy to reduce GHG emissions, especially at consumer levels (industries, households, commercial and institutional buildings)*** • ***To encourage the use of alternative fuels instead of heavily relying on biomass***										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (US$)***	**Timeframe**			***Lead Implementation Agency***	***Responsible Parties***	***Possible Climate Finance Instruments / Sources of Finance***	***Possible Financial Tool / Products***
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	***Long- term (10+ yrs)***				
1.Promote the development of energy conservation and efficiency projects in all sectors; for example, to promote the use of stabilised bricks and efficient brick kilns in the building sector	1.1 Reduced emissions and improved forest cover through decreased consumption of woodfuel		29,282,812	-	12,240,930	17,041,882				
		1.1.1 Low cost buildings provided for low income and vulnerable groups; constructed and lived in with minimal wood consumption					MEMD	Universities and other tertiary institutions Private Sector, NGOs Ministry of Housing, NEMA Ministry of local government	1. Government 2. Donor Support – MLOs, BLs (GEEREF, CDM, CIFs , ICF, GEF, ICI, WB, AfDB; AFD, NORAD, JICA, etc) 3. Private Sector	1. Sector budget 2. Grants, TA, co-financing 3. co-financing, soft loans, micro-loans for SMEs, TA
		1.1.2 Usage of woodfuel in brick burning reduced through promotion of stabilised bricks and efficient brick kilns.					MEMD	Universities and other tertiary institutions Private sector	Same as 1.1.1.	Same as 1.1.1.

		1.1.3 Reduction in woodfuel usage by institutions and industries					MEMD	Universities and other tertiary institutions Private sector NGOs	Same as 1.1.1. with additional support from institutions, industries	Same as 1.1.1. TA, in-kind payments from institutions, industries
2. Enforce building codes with the aim of reducing energy consumption and encouraging designs that maximise the use of natural daylight in buildings	2.1 Reduced GHG emission from building energy consumption	2.1.1 Increased proportion of energy efficient buildings meeting code and maximising efficient design	71,833,154	43,327,702	20,197,534	8,307,918	MoLHUD	National Bureau of standards Professional Engineering Institutions	1. Government 2. Donor Support – MLOs, BLs (GEEREF, CDM, CIFs, ICF, GEF, ICI, WB, AfDB; AFD, NORAD, JICA, etc) 3. Private Sector 4. Research/ Institutions	1. Sector budget 2. Grants, TA, co-financing 3. co-financing, soft loans, TA 4. TA, payment in kind
3. Promote the use of energy-efficient technologies such as compact florescent lamps and other commercially available high-efficiency lamps	3.1 Reduction in energy use and GHG emissions in building sector from use of energy efficient technologies		1,863,164	-	1,224,093	639,071				
		3.1.1 Increased proportion of buildings integrating energy efficient technologies					MEMD	MoFPED, Private sector	1. Government 2. Donor Support – MLOs, BLs (GEEREF, CDM, CIFs, ICF, GEF, ICI, WB, AfDB; AFD, NORAD, JICA, etc) 3. Private Sector 4. Research/ Institutions	1. Sector budget 2. Grants, TA, co-financing 3. co-financing, soft loans, TA 4. TA, payment in kind
		3.1.2 Energy efficient technologies incentivised					MEMD	Private sector	1. Government 2. Donor Support – MLOs, BLs (GEEREF, CDM, CTF, ICF, GEF, ICI, WB, AfDB; AFD, NORAD, JICA, etc) 3. Private Sector 4. Research/ Institutions,	1. Sector budget, tax (dis)incentives 2. Grants, TA, co-financing 3. co-financing, soft loans, TA 4. TA, payment in kind

									NGOs, CSOs	
		3.1.3 Energy saved for other productive uses					MEMD	Energy end-users NGOs	Same as 3.1.2	Same as 3.1.2
4.Promote efficient firewood/charcoal stoves and solar and LPG cookers, and address the high upfront costs of acquiring these technologies through household subsidies or tax waivers	4.1 Forests preserved for sequestering carbon and emissions reductions through reduced/efficient use of fuel wood	4.1.1 Reduced utilisation of biomass energy through efficient cooking stoves; reduced deforestation and forest degradation	5,302,356	3,466,216	1,836,140	-	MEMD	MoFPED, Development Partners, Local Governments, CSOs	1. Government 2. Donor Support – MLOs, BLs (GEEREF, CDM, CIFs , ICF, GEF, ICI, WB, AfDB; AFD, NORAD, JICA, etc) 3. Private Sector 4. NGOs, CSOs, Institutions	1. Sector budget 2. Grants, TA, co-financing 3. co-financing, soft loans, micro-loans for SMEs, TA 4. TA, payment in kind, grants
	4.2 GHG emissions reductions from decreased charcoal use	4.2.1 Increased number of households using LPG cookers, thereby reducing pressure on use of charcoal					MEMD	MoFPED, Development Partners, Local Governments, CSOs	Same as 4.1.1.	Same as 4.1.1.
5. Reduce deforestation by providing alternative clean energy sources and efficient appliances for energy use, management and conservation	5.1 Reduced deforestation and increase in carbon sequestration through use of alternative energy sources and products	5.1.1 Improved energy management and conservation in institutions and industries				Synergy with forestry	MEMD	Universities and other tertiary institutions Private sector NGO's UNFA	Same as 4.1.1. with additional support from institutions, industries	Same as 1.1.1. with additional support from institutions, industries
Sub-Total			**108,281,485**	**46,793,918**	**35,498,697**	**25,988,871**				

Sector 6: Transport Sector										
Policy priority: • ***To promote the development, approval and effective implementation of a long-term national transport policy and plan that will take GHG mitigation concerns into account*** • ***To effect a gradual shift to the use of less carbon-intensive fuels (including compressed natural gas, ethanol and LPG) in vehicles instead of relying heavily on gasoline and diesel fuels*** • ***To promote modes of transport that take GHG emission reduction into account***										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (US$)***	**Timeframe**			***Lead Implementation Agency***	***Responsible Parties***	***Possible Climate Finance Instruments / Sources of Finance***	***Possible Financial Tool / Products***
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	***Long- term (10-15 yrs)***				
1.Improve road infrastructure, and traffic management in urban centres to reduce traffic congestion and GHG emissions	1.1 Reduced traffic congestion and GHG emissions in transport in urban areas resulting from improved road infrastructure and traffic management		137,596,957	-	40,164,800	97,432,157				
		1.1.1 Improved transport infrastructure					Ministry of Works (MoW)	Kampala city council; private sector Other local authorities	1. Government 2. Donors – MLOs, BLs (WB, GEF SCCF, ICF, etc) 3. NGOs, CSOs, research institutions 4. Private sector	1. Sector Budget 2. TA, Grants, soft loans, co-financing 3. TA, payment in kind, grants 4. TA, payment in kind (training), direct investment, concessional loans
		1.1.2 Improved traffic flow and management in urban areas.					MoWT	KCCA, MoLG, Local Governments Universities Private sector, CSOs	Same as 1.1.1.	Same as 1.1.1.

2. Promote and encourage reduction of reduce greenhouse emissions from the transport sector	2.1 Clean air and reduction in GHG emissions from the transport sector		264,982,325	79,317,188	100,412,000	85,253,137				
		2.1.1. Develop plans and strategies to promote efficient public transport sector					MOWT	MoFPED, Private sector Local government	1. Government 2. Donors – MLOs, BLs (WB, GEF SCCF, ICF, etc) 3. NGOs, CSOs, research institutions 4. Private sector	1. Sector Budget 2. TA, Grants, soft loans, co-financing 3. TA, payment in kind, grants 4. TA, payment in kind (training), direct investment, concessional loans
		2.1.2 NAMAs developed in the transport sector					MoWT	MWE, Development Partners, CSOs, Private Sector	Same as 2.1.1.	Same as 2.1.1.
		2.1.3 Low carbon transport modes developed including bus rapid transport, light rail and trams and marine transport systems					MoWT	MoLHUD, MoLG, Local Governments, Private sector	Same as 2.1.1.	Same as 2.1.1.
		2.1.4 Existing railway system improved to reduce road traffic and GHG emissions					MoWT,	MoFPED, NPA, MoLHUD, MoIG, KCCA, Local governments	Same as 2.1.1.	Same as 2.1.1.
		2.1.5 Non-motorized modes of transport developed					MoWT	KCCA, MoLG, Local Governments, Development Partners, Private Sector	Same as 2.1.1.	Same as 2.1.1.

3. Promote private-sector investment in the biofuel industry, covering the whole biofuel chain from cultivation to fuel processing	3.1 Developed biofuel industry in Uganda		7,670,186	-	4,016,480	3,653,706				
		3.1.1 Biofuel plants constructed					MEMD	MoFPED Private sector Financial institutions	1. Government 2. Donors – MLOs, BLs (WB, GEF SCCF, ICF, etc) 3. NGOs, CSOs, research institutions 4. Private sector	1. Sector Budget, subsidies, tax incentives 2. TA, Grants, soft loans, co-financing 3. TA, payment in kind, grants 4. TA, payment in kind (training), direct investment, concessional loans
		3.1.2 Human resource development in biofuel					MoES	Universities and other tertiary institutions MEMD Private sector Financial institutions	Same as 3.1.1.	Same as 3.1.1.
		3.1.3 Use of marginal land for fuel/ energy production					MEMD/ Mo A&AH	Farmers Associations Private Sector Research institutions	Same as 3.1.1.	Same as 3.1.1.
		3.1.4 Established biofuel distribution system					MEMD	MoF Financial Institution Private sector	Same as 3.1.1. largely stemming from public-private sector interface	Same as 3.1.1. largely stemming from public-private sector interface
4.Establish national standards for emissions and implement strict vehicular emissions standards in tandem with measures to gradually phase out old, inefficient motor vehicles, while	4.1 Functional national standards for vehicular emissions; reduced GHG emissions from old vehicles		11,312,533	5,287,813	6,024,720	-				

encouraging the importation of efficient ones										
		4.1.1 Vehicle emissions standards developed and enforced					MoWT	MWE, NEMA, Private Sector	1. Government 2. Donors – MLOs, BLs (WB, GEF SCCF, ICF, etc) 3. NGOs, CSOs, research institutions 4. Private sector	1. Sector Budget, subsidies, tax incentives 2. TA, Grants, soft loans, co-financing 3. TA, payment in kind, grants 4. TA, payment in kind (training), direct investment, concessional loans
		4.1.2 Old and inefficient vehicles gradually phased out as new vehicles increase		Medium term to long-term			MoFPED	MoWT, NEMA, Private sector	Same as 4.1.1.	Same as 4.1.1.
Sub-Total			**421,562,000**	**84,605,000**	**150,618,000**	**186,339,000**				

Sector 7: Industrial Sector										
Policy priority: • To promote cleaner production processes in industries to contain the increase in GHG emissions										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (US$)***	***Timeframe***			***Lead Implementation Agency***	***Responsible Parties***	***Possible Sources of Finance***	***Possible Policy Instruments for Promoting Climate Change Investment***
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	***Long- term (10-15 yrs)***				
1.Promote new technologies in cement processing industries	1.1 Improved cement production process		6,123,517	1,420,938	2,477,857	2,224,722				
		1.1.1 Cleaner production processes introduced for cement that will reduce wastes.					MoTIC	MoFPED, NEMA, Uganda investment Authority Private sector	1. Government 2. Donors – MLOs, BLs (WB, GEF SCCF, ICF, etc) 3. NGOs, CSOs, research institutions 4. Private sector	1. Sector Budget, subsidies, tax incentives 2. TA, Grants, soft loans, co-financing 3. TA, payment in kind, grants 4. TA, payment in kind (training), direct investment, concessional loans
		1.1.2 improved cement manufacturing techniques that reduce GHG emissions and energy consumption developed					MoTIC	Uganda Cleaner Production Centre (UCPC) NEMA Private Sector, UNBS	Same as 1.1.1.	Same as 1.1.1.
2. Improve the efficiency and use of alternative fuels for lime kilns	2.1 Reduced deforestation around lime production areas	2.1.1 Use of more efficient lime kilns promoted	426,281	426,281	-	-	MEMD	Private Sector Universities and other tertiary institutions	1. Government 2. Donor Support – MLOs, BLs (WB SCF, GEF, CPF, CIFs, etc) 3. NGOs, CSOs, research institutions	1. Sector budget, district budgets 2. Grants, TA 3. TA, grants

	2.2. Alternative fuels used for lime kiln reduce pressure on fuel wood	2.2.1 Use of alternative energy sources for lime kilns promoted to replace fuel wood dependency					MEMD	Private sector NEMA	Same as 2.2.1.	Same as 2.2.1.
3. Promote cleaner production in the industrial sector (waste reduction)	3.1 Reduced GHG emissions in the industrial sector		2,362,378	284,188	743,357	1,334,833				
		3.1.1 Increased use of lower emissions alternatives in paint industry (chemicals)					MWE	MoTIC, Private sector UCPC NEMA	1. Government 2. Donors – MLOs, BLs (WB, GEF SCCF, ICF, etc) 3. NGOs, CSOs, research institutions 4. Private sector	1. Sector Budget, subsidies, tax incentives 2. TA, Grants, soft loans, co-financing 3. TA, payment in kind, grants 4. TA, payment in kind (training), direct investment, concessional loans
		3.1.2 Increased use of lower emissions alternatives in dry cleaning (chemicals)					MWE	MoTIC, Private sector UCPC NEMA Ministry of Industry and Tourism	Same as 3.1.1.	Same as 3.1.1.
		3.1.3 Increased use of lower emissions alternatives in foam industry (chemicals)					MWE	MoTIC, UCPC NEMA, Private sector	Same as 3.1.1.	Same as 3.1.1.
		3.1.4 Improvements in energy efficiency in industry supported					MEMD	MoTIC, UCPC NEMA, Private sector	Same as 3.1.1.	Same as 3.1.1.

4.Review and enforce emission regulations in the industrial sector	4.1 Industrial sector complies to updated emissions standards		834,824	142,094	247,786	444,944				
		4.1.1 Emissions regulations in the industrial sector reviewed and strengthened and MRVs put in place to monitor emissions					MoTIC,	MWE, MEMD, Private sector UCPC	1. Government 2. Donors – MLOs, BLs (WB, GEF SCCF, ICF, etc) 3. NGOs, CSOs, research institutions 4. Private sector	1. Sector Budget, subsidies, tax incentives 2. TA, Grants, soft loans, co-financing 3. TA, payment in kind, grants 4. TA, payment in kind (training)
		4.1.2 Reviewed emissions regulations in the industrial sector implemented to reduces GHG emissions in the industrial sector					MoTIC,	MWE, MEMD, UCPC, Private sector	Same as 4.1.1.	Same as 4.1.1.
Sub-Total			**9,747,000**	**2,273,500**	**3,469,000**	**4,004,500**				

Sector 8: Waste Management										
Policy priority: • ***To promote sustainable use of solid and liquid wastes for energy generation and other uses, such as fertilisers***										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (US$)***	**Timeframe**			***Lead Implementation Agency***	***Responsible Parties***	***Possible Sources of Finance***	***Possible Policy Instruments for Promoting Climate Change Investment***
				Short term (1-5 yrs)	***Medium Term (6-10 yrs)***	***Long- term (10+ yrs)***				
1. Promote and encourage waste-to-energy programmes to reduce GHG emissions and increasing energy generation and access.	1.1 Reduction in GHG emission and other pollutants from inappropriate waste management practices; increased energy generation and access.		863,250	318,000	97,050	448,200				
		1.1.1 CDM projects and NAMAs developed in the waste management sector					MWE	MEMD, NEMA, NWSC, MoFPED, KCCA, Local Governments Uganda Investment Authority Development Partners, Private Sector	1. Government 2. Donor Support – MLOs, BLs (WB, GEF, CPF, CIFs, etc) 3. NGOs, CSOs, research institutions 4. Private Sector	1. Sector budget 2. Grants, TA, concessional loans 3. TA, grants, payment in kind 4. Direct investment, carbon finance, TA, soft loans
		1.1.2 Energy generation from waste including landfill gas, waste water, biogas etc promoted					MEMD	MWE, NEMA, NWSC, MoFPED, KCCA, Local Governments Uganda Investment Authority Development Partners, Private Sector	Same as 1.1.1. including financial incentives from government	Same as 1.1.1. including financial incentives from government
		1.1.3 Cost effective and efficient waste to energy technology					MEMD	MWE, NEMA, NWSC, MoFPED, KCCA, Local Governments Uganda Investment	Same as 1.1.1.	Same as 1.1.1.

		developed						Authority Development Partners, Private Sector		
2.Promote proper disposal and sustainable use of wastes, including sorting and composting waste	2.1 Environmentally friendly solid and liquid waste management facilities		900,300	318,000	582,300	-				
		2.1.1 Increased compost production (fertiliser) from wastes					KCCA/Local Governments	MWE, MoLG, NEMA Development Partners, CSOs, Private Sector	1. Government 2. Donor Support – MLOs, BLs (WB, GEF, CPF, CIFs, etc) 3. NGOs, CSOs, research institutions 4. Private Sector	1. Sector budget, tax incentives 2. Grants, TA 3. TA, grants, payment in kind 4. Direct investment, carbon finance, TA, soft loans
		2.2.2 Increased waste reuse, recovery and recycling					KCCA/Local Governments	MWE, MoLG, NEMA Development Partners, CSOs, Private Sector	Same as 2.2.1.	Same as 2.2.1.
3.Promote the gasification and incineration of large quantities of waste to generate thermal energy or electricity	3.1 Introduction and/or expansion of new technologies for electricity and thermal energy generation from wastes		642,300	-	194,100	448,200				
		3.1.1 Energy generation by gasification					MEMD	Private sector Universities and other tertiary institutions NGOs	1. Government 2. Donor Support – MLOs, BLs (WB, GEF, CPF, CIFs, etc) 3. NGOs, CSOs, research institutions 4. Private Sector	1. Sector budget, tax incentives, loan guarantees, feed in tariffs 2. Grants, TA, concessional loans 3. TA, grants, payment in kind 4. Direct investment, carbon finance, TA, soft loans

		3.1.2 Energy generation by anaerobic systems (biogas)					MEMD	Private sector Universities and other tertiary institutions NGOs	Same as 3.1.1.	Same as 3.1.1.
		3.1.3 Energy generation by incineration					MEMD	Private sector Universities and other tertiary institutions NGOs	Same as 3.1.1.	Same as 3.1.1.
4.Promote the use of human waste for production of biogas, which can be used for cooking and lighting in institutions such as schools and hospitals, while effluent can be used as fertiliser	4.1 Reduction in methane emissions from human wastes	4.1.1 Accessible and affordable alternative energy resources available to households and institutions	321,150	-	97,050	224,100	MEMD	Private sector Household Institutions Universities and other tertiary institutions NGOs	1. Government 2. Donor Support – MLOs, BLs (WB, GEF, CPF, CIFs, etc) 3. NGOs, CSOs, research institutions 4. Private Sector	1. Sector budget, tax incentives, loan guarantees, feed in tariffs 2. Grants, TA, concessional loans 3. TA, grants, payment in kind 4. Direct investment, carbon finance, TA, soft loans
Sub-Total			**2,727,000**	**636,000**	**970,500**	**1,120,500**				
TOTAL MITIGATION COSTS			**804,430,066**	**187,245,799**	**286,174,168**	**331,010,099**				

5.4 Monitoring, Detection, Attribution and Prediction Strategy Matrix

Monitoring, Detection, Attribution and Prediction										
• *Policy priority: To continue the on-going efforts to strengthen the capacity of the Department of Meteorology in its functions in climate change monitoring and detection in Uganda*										
Strategic interventions	***Expected outcomes***	***Output***	***Total Additional cost due to climate change (USD)***	**Timeframe**			***Lead Implementation Agency***	***Responsible Parties***	***Possible Sources of Finance***	***Possible Policy Instruments for Promoting Climate Change Investment***
				Short term (1-5 yrs)	***Medium Term (5-10 yrs)***	***Long- term (10+ yrs)***				
1. Support capacity development for accurate weather data collection, analysis and climate monitoring	1.1 Increased capacity for accurate weather data collection and analysis		8,090,157	1,792,128	1,611,225	4,686,803				
		1.1.1 Modern meteorological infrastructure increased and adequately maintained (weather observing stations, communication and processing systems, and training and dissemination facilities)					MWE (National Meteorology Authority)	MWE, MAAIF, Local Governments, Development Partners, Civil Society	1. Government 2. MLOs and BLs focused on climate research and data/ information-sharing (e.g. GEF LDCF, SCCF, AF, WB Africa, IDRC/CIDA, ICI, GIZ, SIDA) 3. Institutions, Think tanks (e.g. ACPC, CIFOR) 4. NGOs, CSOs 5. Private Sector, financial institutions, businesses	1. National budget (research, agriculture, weather/ meteorological), district budgets (meteorological systems) 2. Grants, TA, co-financing 3. Research Grants; payment in kind (technical training) 4. Payment in kind, TA 5. Co-financing; loans, payment in kind (training), TA

		1.1.2 Digitization of data and historical climate data rescue promoted					MWE (National Meteorology Authority)	MWE, MAAIF, Local Governments, Development Partners, Civil Society	Same as 1.1.1.	Same as 1.1.1.
2. Support timely sharing and dissemination of relevant data and information with potential users at both the national and district levels	2.1 Timely sharing and dissemination of relevant weather and climate data and information with potential users at national and district levels	2.1.1 Systems for weather and climate data information sharing functional and data disseminated to potential users in all sectors at national and district levels	535,741	246,374	152,724	136,643	MWE (National Meteorology Authority)	MWE, MAAIF, Local Governments, Development Partners, Civil Society	Same as 1.1.1.	Same as 1.1.1.
3. Provide support for the development of reliable climate modeling and prediction and climate early-warning systems.	3.1 Reliable climate early warning systems is in place		680,425	246,374	229,086	204,964				
		3.1.1 Downscaling of Global and Regional Climate model outputs to national and sub-national levels supported to address climate variability and change in the country					MWE (National Meteorology Authority)	MWE, MAAIF, Local Governments, Development Partners, Civil Society	1. Government 2. Development partners – MLOs, BLs (ECA/AfDB, GEF SCCF, WB; GIZ) 3. Institutions, think tanks, academia, NGOs	1. Sector budget 2. Grants, TA 3. TA, payment in kind, grants
		3.1.2 Early warning systems strengthened for monitoring, detection, attribution and prediction of extreme weather and climate events;							Same as 3.1.1.	Same as 3.1.1.
4. Support Research and Development climate monitoring, detection, attribution and prediction	4.1 Enhanced capacity for climate research and development		10,313,856	3,079,681	3,818,108	3,416,067				
		4.1.1. Priority research and Development interventions are					Different ministries and universities	North and South Research partners	1. Government 2. Development	1. Sector budget

		selected, adequately funded, and implemented							partners – MLOs, BLs (ECA/AfDB, GEF SCCF, WB; GIZ) 3. Institutions, think tanks, academia, NGOs	2. Grants, TA 3. TA, payment in kind, grants
		4.1.2. Modalities of disseminating and sharing climate research findings developed, with an emphasis on research into use to inform policy and practice					MWE	Other ministries , Local Governments, Development Partners, Civil Society	Same as 4.1.1.	Same as 4.1.1.
TOTAL			**19,620,179**	**5,364,558**	**5,811,144**	**8,444,477**				

6. Monitoring and Evaluation (M&E) Framework

Effective implementation of the National Climate Change Policy highly dependent on the internal "feedback" generated through monitoring, reporting and verification (MRV) processes. Without the M&E framework, it will be impossible for the GoU to assess the effectiveness of investment in mitigation and adaptation, or to determine whether the funds are being spent wisely.

6.1 Rationale for the M&E Framework

The M&E framework is underpinned by the need to promote efficiency and effectiveness in service delivery to achieve results as well as transparency and accountability in the use of available resources. In addition, the continuance of international funding for climate change activities depends on effective M&E, and as far as climate is concerned developing the MRV system is crucial. Bilateral aid agencies, multilateral development banks and other providers of finance need the results of MRV systems to validate the effectiveness of funds they provide. Therefore, securing further financial support for the implementation of the NCCP will be dependent on the successful establishment of the M&E framework.

To assist in the process of effective and efficient implementation of the national climate change policy and its strategy, as well as to promote the lessons learning through this process, it is paramount to develop a clear set of building blocks to organise the monitoring and evaluation of the policy implementation process. This is what the present M&E framework for the policy is meant to provide.

The main building blocks of the M&E process, as well as guidance with respect to the main roles and responsibilities of the key stakeholders in this M&E process are described below.

6.2 Main Buildings Blocks of the M&E Framework

The M&E framework for the policy is composed of the following two key components:

- **The monitoring function**. Monitoring is meant to be a continuous process of performance assessment over the policy implementation period and will provide the main stakeholders in the policy implementation process with clear and regular reporting on the extent of progress in the implementation of the policy and its strategy.

  In this case, the reporting will be provided on an annual basis. Details on roles and responsibilities in this annual reporting/monitoring function have already been elaborated upon in the policy document, but are also reiterated in section 6.3 below. Monitoring typically does not cover reporting against expected and unexpected policy impacts, which tend to relate to longer time frames and typically present attribution challenges. Monitoring will focus on issues of effectiveness and efficiency in strategy implementation against the approved outcomes and outputs under the detailed action programme for the strategy.

- **The evaluation function**. Evaluation is the systematic and independent assessment of the policy implementation process and its results. The aim is to determine the relevance and fulfilment of

objectives, as well as the effectiveness, efficiency, impact and sustainability of the policy implementation and its results. It aims to provide information that is credible and useful, enabling the incorporation of lessons learned into future revision of the policy or its implementation strategy, as the context surrounding the policy evolves.

In the case of the climate change policy, an independent evaluation is planned after the first five years of implementation, in 2017. The recommendations resulting from this evaluation will feed into the revision process for the policy. As already mentioned in the policy document, this revision is to be carried out based on a thorough public consultation process and review of the results at that point in time.

Annex A provides a summary monitoring and evaluation matrix, highlighting the main issues to be covered by monitoring on a regular basis on one hand, and independent evaluation on the other.

6.3 Monitoring, Reporting and Verification (MRV) System

A key component of the proposed M&E is an overarching MRV system that can deliver both MRV of greenhouse gas (GHG) emissions and mitigation activities and monitoring and reporting of the adaptation activities. The MRV system will assist by:

- Providing guidance on the implementation of climate change response actions (both adaptation and mitigation actions), whether in the form of policies, projects, programmes or business ventures.
- Helping fulfill Uganda's international reporting obligations: for example, by assisting in developing its GHG inventory and tracking mitigation and adaptation actions ready to report to the United Nations Framework Convention on Climate Change (UNFCCC) through National Communications (NCs). The MRV system will formalize and institutionalize the process for producing the GHG inventory and NCs;
- Demonstrating the country's climate finance readiness and providing a strong platform for attracting international climate finance flows from multilateral and bilateral development partners.

The proposed MRV system will carry out a process that contains three main stages, as follows:

- Measurement, monitoring (and evaluation): data and information will be gathered and fed into the system; the data and information will be quality checked and evaluated.
- Verification: the analysis will produce results that will be cross-checked and verified to ensure that they are realistic estimates of the outcomes being monitored.
- Reporting: once the results have been verified, they will then be reported in whatever format is required.

The underlying principles of the MRV system design are to build on existing institutions and skills wherever possible and to take into account the planned climate change governance structures. Existing M&E systems within the Ministries, Departments and Agencies (MDAs) and M&E related governance structures have important roles to play in the MRV system.

However, arrangements required by the MRV system and the additional functions of the various participants in the Performance Measurement Framework (PMF) require a significant capacity

building effort. A set of activities that expand the scale, reach, efficiency and effectiveness of programmes and institutions will be required.

It could take up to three to five years before the MRV system is fully operational. Therefore, the core elements of an M&E will be used as a fully fledged MRV system is being developed or fast tracked. However, to meet international reporting obligations to the UNFCCC through National Communications, GHG inventories will need to be produced on a regular basis. Therefore there is need for a clear methodology and team in place to continually improve the transparency, accuracy, completeness, comparability, consistency of the GHG inventory each time it is produced.

6.3 Tools, Roles and Responsibilities in the Implementation of the M&E Framework

Each lead ministry, department and agency for which accountabilities have been identified under the costed implementation strategy will have a role to play in monitoring and reporting. As mentioned earlier in this document, it is expected that as each partner in the policy implementation process tailors the indicative strategy guidance to its own work planning, specific performance measurement frameworks (PMFs) to organise the monitoring and reporting function for each partner will also have to be developed as part of the planning process, with guidance from the NCCC, to ensure a common format that can easily be consolidated. The NCCC will itself be tasked with developing the comprehensive overarching PMF.

Such individual PMFs, as well as the overarching PMF, will present, for each category of results (outcomes and outputs in particular), performance indicators and targets, as well as methods and data sources to be used to streamline this reporting.

The roles and responsibilities in monitoring and evaluation of the main actors in policy implementation are briefly presented below.

6.3.1 In Monitoring:

The various ministries, departments and agencies concerned with the indicative climate change programmes detailed in the strategy are expected to report on a quarterly and semi-annual basis on their progress in the implementation of their respective tasks and in the attainment of their expected results under the climate change strategy. This information will be reported to the Ministry of Finance Planning and Economic Development, and copied to the National Planning Authority and the NCCC.

The National Climate Change Commsiion (NCCC) under the Ministry of Water and Environment (MWE): The reporting from the various ministries, departments and agencies will be consolidated as relevant at the national level by the NCCC. The NCCC will be tasked with preparing a consolidated annual progress report on the overall implementation of the policy implementation strategy, for consideration by the Cabinet and the Prime Minister's Office. The NCCC will also be responsible for the development of an overarching MRV system. The NCCC may provide guidance to the various ministries, departments and agencies as they develop their PMFs and reporting formats, to ensure consistency and focus on result-based management in the implementation of the policy.

The Ministry of Local Government (MoLG) will review development plans and budgets of local governments to ensure they mainstream climate change issues. It will in addition review relevant reports from the local governments to ensure the quality of the reporting, and consolidate reporting on district-level actions towards the implementation of the policy on a semi-annual basis. This information will be reported to the Ministry of Finance, and copied to the National Planning Authority and the NCCC.

The Ministry of Finance, Planning and Economic Development (MoFPED) will also be responsible for resource mobilization, formulation of national budgets, and disbursement of climate change policy budgetary resources, financial accountability, and budget monitoring and reporting. It will also review quarterly and semi-annual reports from the ministries, departments and agencies concerned, to ensure that resource use is in line with expected and actual progress in implementing the policy.

The National Planning Authority (NPA) will be responsible for developing guidelines for mainstreaming climate change into sectoral and local development pans and budgets. It will also ensure that the climate change PMFs (result indicators) developed by relevant institutions of Government (and relevant non-state actors) are consistent with the national development objectives. NPA will review sectoral plans from ministries, departments and agencies to ensure they mainstream climate change issues. It will in addition review quarterly and semi-annual reporting by the institutions concerned in light of the work plans it approved for each lead agency.

Development Partners will support the M&E framework and in particular the development of a MRV system by providing financial and technical assistance for: the operationalization of the M&E system; the refinement of indicators, tools and processes; and the implementation of M&E activities, capacity building for M&E, and use of M&E products.

Civil society and private sector organisations, through their representation on the multi-stakeholder National Climate Change Advisory Committee, will also play a key role in the monitoring function. This will be done, for instance, through their review of the consolidated progress reports to the Committee on the implementation of the policy. Their representation on that Committee will also provide a conduit for feedback from civil society and the private sector to present their own evidence on the pace of progress of the implementation of the Climate Change Policy and their own reporting on their actions towards the implementation of the Policy.

As outlined in the monitoring and evaluation matrix provided in Annex A, the various line and cross-cutting departments participate in on-going monitoring of the policy implementation. Due to the importance of quality reports for the proposed M&E framework and the setting of appropriate performance targets, particular attention should be paid to the equal application of criteria and standards, as well as the comparable use of formats in reporting. To assume their roles, the various M&E actors therefore need certain capacities, both in terms of human resources and technical know-how. In addition, the NCCC, given its key role in consolidated reporting at the national level, will require adequate capacity to perform this function effectively. Care should be taken, as part of the early activities in operationalizing the institutional framework for the implementation of the policy, to provide adequate resources for this monitoring function, in both the NCCC and the line and cross-cutting ministries that have to report on their actions.

6.3.2 In Evaluation:

The first independent evaluation is to take place in 2017 and should ideally be commissioned by the National Climate Change Policy Committee (NCCPC). A steering committee under the NCCPC should be set up to develop the terms of reference and to provide guidance to the independent evaluation team contracted to conduct this evaluation. This steering committee should bring about a balanced representation of the following groups of actors: various ministries, departments and agencies involved in the implementation of the policy, donors supporting the policy implementation process, civil society and private sector representatives involved in policy implementation. Ideally, this steering committee should be chaired by a representative with strong credentials in evaluation.

Annex A: Overall Monitoring and Evaluation Matrix

Key performance questions	Methods, Sources	Frequency	Responsibility
Relevance of the Policy and its Priorities			
To what extent is the policy still in line with the current international negotiation context?	• Impact evaluation, reporting from various programmes	• Every 5 years	• Evaluation team
To what extent is the policy and its priorities in line with the evolving national policy framework and priorities?	• Impact evaluation, reporting from various programmes	• Every 5 years	• Evaluation team
To what extent is the policy responding to the priority needs of all main stakeholders groups when it comes to climate change concerns and impacts?	• Impact evaluation, reporting from various programmes	• Every 5 years	• Evaluation team
Effectiveness – Policy Results Achievement			
Outcome level			
What has been the progress on the road map to implementation and on setting up institutional delivery mechanisms, and has it been according to the set schedule in the Implementation Strategy in terms of the following? • Awareness raising and information gathering organised and conducted with key decision making and planning staff of sector actors in conjunction with NCCC and focal points • Building knowledge and capacity for climate change budgeting, accounting and work planning • Updating budgets and work plans to integrate the climate change actions • Developing a performance measurement framework (PMF) • Setting up and funding the institutional structure at the national and local level for policy coordination and implementation • Conducting a communication needs assessment	• Reporting from NCCC and various sectoral entities on status and timelines	• Quarterly and semi-annual reporting	• NCCC and relevant ministries, departments and agencies

Key performance questions	Methods, Sources	Frequency	Responsibility
• Improving access to climate change information • Disseminating credible and reliable climate change information and research findings • Developing a comprehensive communication plan			
What has been the progress towards the expected outcomes under the common policy priorities, as well as the adaptation-, mitigation-, monitoring- and detection-specific policy priorities	• Desk review of reporting from various programmes against their PMFs	• Quarterly and semi-annual reporting	• Relevant ministries, departments and agencies
	• Desk review of reporting from various programmes against their PMFs	• Annual reporting	• Consolidated reporting by NCCC
	• Interviews, desk reviews, focus groups with beneficiaries, etc.	• Every 5 years	• Evaluation Team
Output level			
What has been the progress towards the expected outputs under the common policy priorities, as well as the adaptation-, mitigation-, monitoring- and detection-specific policy priorities?	• Desk review of reporting from various programmes against their PMFs	• Quarterly and semi-annual reporting	• Relevant ministries, departments and agencies
	• Desk review of reporting from various programmes against their PMFs	• Annual reporting	• Consolidated reporting by NCCC
	• Interviews, desk reviews, focus groups with beneficiaries, etc.	• Every 5 years	• Evaluation team
Activity and Input level			
Has progress in work plan implementation by the different concerned stakeholders unfolded as planned?	• Desk review of reporting from various programmes against their PMFs and work plans	• Quarterly and semi-annual reporting	• Relevant ministries, departments and agencies
Were the resources (human, technological and financial) required for implementation mobilised as expected? How did this affect result achievement?	Desk review of reporting from various programmes against their PMFs, work plans and budgets	• Annual reporting	• Consolidated reporting by NCCC
		• Every 5 years	• Evaluation team

Key performance questions	Methods, Sources	Frequency	Responsibility
Efficiency			
Were resources used as planned? Were activities and budgetary resources adequate to achieve the expected outputs and policy outcomes	▪ Desk review of reporting from various programmes against their PMFs, work plans and budgets	• Quarterly and semi-annual reporting	• Relevant ministries, departments and agencies
Could resources have been used in a more efficient manner	▪ Desk review of reporting from various programmes against their PMFs, work plans and budgets	• Annual reporting	• Consolidated reporting by NCCC
Where the financial management tools, delivery mechanisms and management structures used for the implementation of the policy efficient and effective	▪ Interviews, desk reviews, focus groups with key stakeholders, etc.	• Every 5 years	• Evaluation team
Impacts			
Has the policy achieved its expected impacts to date and why?	• Impact evaluation methodologies, desk review of reporting from various programmes	• Every 5 years	• Evaluation team
What are the unexpected impacts achieved to date?	• Impact evaluation methodologies, desk review of reporting from various programmes	• Every 5 years	• Evaluation team
Sustainability of Results			
Are the Policy implementation results likely to be sustained?	• Interviews, desk reviews, focus groups with beneficiaries, etc.	• Every 5 years	• Evaluation team
Are the key capacities to ensure scaling up and mainstreaming of climate change issues into national planning in place and effective in ensuring a sustainable approach to tackling climate change concerns in Uganda	• Interviews, desk reviews, focus groups with beneficiaries, etc.	• Every 5 years	• Evaluation Team

Annex B: Estimating Additional Costs for Addressing Climate Change

1. Methodology for estimating additional costs of adaptation

The estimates are based on the methods presented by World Bank (2006)[6] and Stern Review (2006)[7]. Several other estimates of the costs of climate change adaptation in developing countries in the literature have adopted this methodology. According to this methodology, the costs of climate proofing range 2-10% of gross domestic investment (GDI)[8].

Thus we assume three scenarios i.e. the best scenario (2 %), medium scenario (5%) and worst scenario (10%)

The model

$$SPCA_{it} = \beta(SPDF_{it})$$

Where;

β - Intensity parameter

$SPDF_{it}$ – Projected domestic funding for the sector I in the time period t

$SPCA_{it}$ - Projected costs of climate change for the sector i in the time period t

$$PCA_t = \sum_i SPCA_{it}$$

Where:-

PCA_t - Projected costs of climate change for the time period t

Where:

As a percentage of GDP:

$$EPCA_t = \sum_i \frac{SPCA_{it}}{GDP_t}$$

[6] World Bank (2006), *Investment Framework for Clean Energy and Development*. World Bank, Washington, DC. http://siteresources.worldbank.org/DEVCOMMINT/Documentation/20890696/DC2006-0002(E)-CleanEnergy.pdf
[7] Stern, N. (2006), "The Economics of Climate Change", *The Stern Review*, Cambridge University Press, Cambridge.
[8] Brian Lipinski, Heather Mcgray (2010). Summary of studies estimating the costs of climate change adaptation in Developing Word.

$EPCA_t$ - projected costs of climate change as proportion of GDP for the time period t.

2. **Methodology for estimating Costs of Mitigation**

Studies on Africa, using Integrated Assessment models (IAMs) , such as the FUND and PAGE model, estimate the mitigation costs to range between 1.5 -10% of annual GDP. It is also indicated that 10% is too high for a sustainable economy[9]:

$$MC = \alpha GDP$$

Where

MC-mitigation costs

GDP- Gross Domestic Product

$$NGDP = GDP - MC$$

Where

NGDP-net gross GDP(indicates the reduction in GDP due to mitigation costs)

$$MCS = \frac{RFS}{TRF} MC$$

Where

MCS- mitigation costs per sector

RFS- resource funds per sector

TRF- total resource funds (sum of resource funds to the key identified sectors)

[9] Stockholm Environment Institute (2009). *Adapcost briefing paper. www.afdb.org/.../Africa.*

Annex C: Possible Engineering Adaptation Interventions

Please see separate document

Annex D: Breakdown of Climate Change costs over the short to medium term (5 years)

Please see separate document