

Climate Change Vulnerability and Adaptation Preparedness in Uganda

Africa has contributed very little to global warming, but it will be affected severely by climate change. While the continent has a role to play in the mitigation of greenhouse gas emissions, Africa's major focus is on issues of adaptation. In order to address the challenges of adaptation to climate change, African countries need substantial financial resources. At the same time, they require information systems, technical capacity, and the right policies and institutions. The governance of climate change adaptation is as important as its finance.

This study gives an overview about Uganda's efforts to address the challenges of adaptation to climate change so far. It provides information on existing policies and maps institutions and main actors in a rapidly emerging policy area influenced by a wide array of actors and interests.

The study constitutes a snapshot into the state of adaptation preparedness in East Africa, as at mid-2010. It shows what Uganda has already achieved in this regard. But it also identifies "loose ends" and problems, many of which are similar and related to issues encountered in governance and development policy debates more generally.

This volume forms part of a series of three studies (on Kenya, Tanzania, and Uganda, respectively) commissioned by the Heinrich Böll Foundation's Regional Office in Nairobi, Kenya. The studies should be of interest to everybody working in the area of climate change in East Africa – to those who seek general information and orientation in the field, as well as to experts already working towards a sound response to climate change in the region.

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LTS Africa
Nick Hepworth

**Climate change
vulnerability
and adaptation
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Uganda**

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LTS Africa
Nick Hepworth



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Preface

Africa has contributed very little to global warming, but it will be affected severely by climate change. While the continent has a role to play in the mitigation of greenhouse gas emissions, Africa's major focus is on issues of adaptation. In order to address the challenges of adaptation to climate change, African countries need substantial financial resources. At the same time, they require information systems, technical capacity, and the right policies and institutions. The governance of climate change adaptation is as important as its finance.

The provision of financing for adaptation has become a major issue in international climate policy. While the UNFCCC COP 15 in Copenhagen, in December 2009, did not arrive at bidding agreements, the "Copenhagen Accord" promises substantial finance in the years to come. At the same time, African countries have begun to establish and extend systems, institutions and policies designed to deal with climate change adaptation.

This study gives an overview about Uganda's efforts to address the challenges of adaptation to climate change so far. It provides information on existing policies and maps institutions and main actors in a rapidly emerging policy area that is influenced by a numerous actors and interests. The study constitutes a snapshot into the state of adaptation preparedness in East Africa, as at mid-2010. It shows what Uganda has already achieved in this regard. But it also identifies problems, many of which are similar and related to issues encountered in governance and development policy debates more generally.

The studies should be of interest to everybody working in the area of climate change in East Africa – to those who seek general information and orientation in the field, as well as to experts already working towards a sound response to climate change in the region.

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Executive Summary

Human induced climate change is likely to have severe consequences for Africa and a great deal of political attention and discussion is focusing on what the countries of Africa need in order to adapt. Within these debates important questions surround the priorities and scale of funding and technical assistance and the best ways to deliver the resources needed. This study explores these questions by examining the level of preparedness for climate change in Uganda and considers the current level of scientific understanding of future change and vulnerabilities; the country's current socio-economic context; the range of actors involved, their capabilities, actions to date and future policies and plans. It also examines the level of awareness on climate change, the role played by Uganda in international negotiations and the role and profile of gender empowerment in Uganda's response. Based on this analysis the following set of headline findings emerge and these inform the series of recommendations which follow.

Headline findings

Uganda's economy, the wellbeing of its population and its recent, positive development trajectory are particularly vulnerable to climate change and this is evidenced by the widespread damage and hardships imposed by regular drought and extreme rainfall events under current climate variability.

The issue of climate change has risen up the political and development agenda in Uganda over the past three years reflecting heightened global attention on the issue. The government, research and NGO community in

Uganda are increasingly active on climate change and with the support of development partners, in particular the Danish, British and German donors, a Climate Change Unit in the Ministry of Water and Environment, a Parliamentary Forum on Climate Change and a coalition of NGOs working on the issues (Uganda Climate Action Network) have been established. In a recent survey by GTZ, there were 84 different actors working on some aspect of climate change in Uganda.

With support from donors, Uganda is well represented in global negotiations on climate change and the country has received international recognition for the priority it has placed on gender empowerment in its response. Further, there are efforts ongoing to embed consideration of climate change implications into the National Development Plan and sectoral plans in water and agriculture. The private sector is not engaged in efforts to support the country's adaptation needs although some research is ongoing on how weather indexed insurance could be used to reduce the vulnerability of the agricultural sector.

Despite these positive signs Uganda is not well prepared for the challenge of adapting to climate change. The technical capacity and resources which exist tend to be tied up in serving the needs of the international agenda rather than actively planning and working to build Uganda's domestic resilience. Current policies and plans on the issue are inadequate and this appears to partially explain the lack of international finance to support adaptation. Government coordination on the issue suffers because of a lack of authority, capacity and political clout within the Climate Change Unit.

The reach and efficacy of government in supporting the most vulnerable communities is weak irrespective of climate change and there are systemic problems with governance, public sector functionality and the efficacy of aid which must be negotiated and learnt from within efforts to prepare Uganda for the challenges of climate change.

Although the donor community is committed to close collaboration and coordination under the Paris Declaration there is an apparent lack of meaningful coordination and leadership on climate change issues, and this risks further undermining the government response through imposition of disparate, externally set priorities.

Key recommendations

The current capability of Uganda to adapt to climate change is severely limited. Above all this work therefore underlines the urgency of a meaningful and binding global agreement to curb GHG emissions to minimize future climate change. The assumption that finance can simply be channeled to limit the impacts of climate change in countries like Uganda is dangerous - the well documented difficulties of delivering development assistance in Africa are evidence of this. At the same time the social, economic and political imperatives for adapting to the climate change already set in train, and the potential for new and significant funding for this demand action and radical thinking about how best to overcome the formidable challenges which climate change adaptation poses. To stimulate the Heinrich Böll Foundation's thinking on these opportunities the following recommendations are made:

1. Establishment and support to a national or regional research and advocacy facility with the mandate to promote the responsible interpretation and use of climate science and change scenarios; track the costs, benefits, efficacy and outcomes of government and development partner effort and investment on climate change adaptation to provide institutional incentives, promote integrity and accountable performance.
2. Promote responsible and tenacious reporting and media work. The media and other 'communicators,' politicians and NGOs in Uganda should be supported in their understanding of climate change, its uncertainties and its relative role in precipitating problems seen in the country. If citizen agency and political awareness are to play a role in better preparing Uganda to climate change, then the information which stimulates this must be credible and objective.
3. Support for the development of the National Climate Change Policy and targeted research on the national and localised economic and social impacts of climate change to refine understanding of priorities and the costs and benefits of adaptation investment. This should also include support for the targeted actions

required to influence and advocate at a high level internationally and within Uganda to broker a fair and appropriate package of financial support.

4. Advocacy for the strengthening or relocation of government coordination responsibility. This could usefully promote the disaggregation of responsibility for international negotiation from domestic adaptation planning within the CCU and the locating of this latter task within a better suited entity such as the Office of the Prime Minister.
5. A national or regional research, oversight and advocacy facility with the mandate to promote the responsible interpretation and use of climate science and change scenarios; track the costs, benefits, efficacy and outcomes of government, development partner and NGO effort and investment on climate change adaptation should be established and provided with financial and political support (or these roles conferred on existing organisations). Astute delivery of these functions is considered crucial within an effective response to climate change, to provide institutional incentives, promote integrity, transparency, and accountability, and to guard against overlapping, parallel or conflicting initiatives.
6. Effort is needed to unlock the current dilemmas within funding debates and to reconcile the disconnect between adaptation financing expectations within government and donor communities. Compromise models which overcome the inadequacies of current Official Development Assistance (ODA) and innovative modalities of adaptation finance support mechanisms should be developed, deliberated and tested.
7. The climate change response in Uganda represents an opportunity to undertake much needed targeted research and advocacy on the systemic problems and contextual solutions to the 'implementation gap' between government policy and action on the ground - a problem which Uganda shares with many countries in sub-Saharan Africa. Such work can provide innovative thinking about how existing institutional arrangements and architectures - for example in environmental protection, agricultural extension, land planning, natural and water resource management and disaster risk management - which will play a major role in building resilience can be

better supported to deliver - particularly for poor communities.

8. The private sector is yet to be meaningfully engaged on climate change issues in Uganda, although this is a crucial element of any effective response. This could usefully be initiated through a national or regional conference on the opportunities and challenges facing the private sector presented by, for example, adaptation and 'green' technologies, climate finance investment and private sector support for weather indexed insurance.
9. Targeted research and advocacy on the systemic problems and solutions to the 'implementation gap' facing countries in sub-Saharan Africa - innovative thinking about civil service motivation and reform and work to unlock the existing capabilities within and financing for existing institutions who will play a key role in reducing vulnerability and ensuring the security of and equitable access to natural resource assets.
10. Support is required to ensure that the climate change response in Uganda moves beyond merely gender inclusion, towards gender empowerment through (and for) effective climate change adaptation, through for example by targeting work with women's groups, farming cooperatives, rural development, or economic empowerment initiatives.

Acronyms

AU	African Union
ACCRA	Africa Climate Change Resilience Alliance
CAO	Chief Administrative Officer
CBMES	Community Based Monitoring and Evaluation Survey
CC	Climate change
CCA	Climate Change Adaptation
CC DARE	Climate Change and Development - Adapting by Reducing Vulnerability
CCU	Climate Change Unit
CDI	Climate and Development Initiatives
COP	Conference of the Parties - to UNFCCC
DDMR-OPM	Department of Disaster Management and Refugees - Office of the Prime Minister
DFID	Department for International Development
DoM	Department of Meteorology
DPM	Disaster Preparedness and Management
DRR	Disaster Risk Reduction
DSIP	Development Strategy and Investment Plan
DWRM	Directorate of Water Resource Management
ENSO	El Nino Southern Oscillation
GCM	Global Circulation Model
GEF	Global Environment Facility
GDP	Gross Domestic Product
GHG	Green House Gas
HBF	Heinrich Böll Foundation
HDI	Human Development Index
HEP	Hydro-Electric Power
IFRC	International Federation of Red Cross and Red Crescent Societies
INGO	International Non-governmental Organization
IWRM	Integrated Water Resource Management
LDC	Least Developed Country
MAAIF	Ministry of Agriculture, Animal Industries and Fisheries
MEMD	Ministry of Energy and Mineral Development
MDGs	Millennium Development Goals
MWE	Ministry of Water and Environment
NAPA	National Adaptation Programme of Action
NEMA	National Environment Management Authority
NCCF	National Climate Change Focal

NFA	National Forest Authority
NDP	National Development Plan
NDPM	National Disaster Preparedness and Management
NGO	Non-governmental Organization
NPA	National Planning Authority
NGO	Non-Governmental Organization
ODA	Official Development Assistance
OPM	Office of the Prime Minister
PEAP	Poverty Eradication Action Plan
PFCC	Parliamentary Forum on Climate Change
PRA	Participatory Rural Appraisal
SAM	Social Accountability Monitoring
TA	Technical Assistance
TI	Transparency International
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNGO	Ugandan Non-governmental Organization
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UPE	Universal Primary Education
WFP	World Food Programme
WHO	World Health Organization

One: Introduction

National economies, livelihoods and social wellbeing across Africa are highly vulnerable to climate variability and the challenges imposed by human induced climate change are likely to be formidable. Adequate funding and technological assistance to build resilience and support adaptation are required, and appropriate institutional arrangements are needed to facilitate this, possibly under a legally binding framework. Outstanding questions remain concerning the key vulnerabilities and priorities for support, the scale of funding required, the best ways of administering support and the optimum design of effective, accountable and transparent 'adaptation governance'.

In order to respond to demands for adaptation finance and support goal-oriented administration of these funds in an informed manner, the Heinrich Böll Foundation (HBF) Nairobi have commissioned case studies in Kenya, Uganda and Tanzania to evaluate these countries' state of preparedness for climate change adaptation. This report is the output of that work for Uganda. It provides:

- a profile of climate science, key impacts, vulnerabilities and adaptation priorities for Uganda (Chapter 2);
- a review of policy documents and a critical evaluation of their genesis, adequacy and relevance (Chapter 3);
- an overview of the legal framework in respect of climate change and the degree to which mainstreaming of climate change issues has occurred (Chapter 3);

- a review of the main actors, organizations and institutions, their responses and their capacity and efficacy in implementing adaptation policies (Chapter 4);
- a review of the main trends within public debates and levels of awareness about climate change within the public sphere (Chapter 5);
- a summary of the interfaces with international climate change negotiations and the role played by state and non-state actors (Chapter 6);
- an analysis of the way the gender dimensions of climate change are reflected in adaptation actions, actors, plans and their genesis (Chapter 7);
- a 'gap analysis' and suggestions to guide HBF engagement at a national and regional level on climate change (Chapter 8).

The methodology incorporated desk study and review of literature, triangulated through face-to-face interviews with key informants in Uganda between February and April 2010. Sources included government, NGO and development partner reports, policy documents and peer reviewed research, and informants included key individuals within government, non-governmental organisations, academia and development partners.

Given the limited time available to meet the growing number of actors working on climate change in Uganda, this study does not claim to be comprehensive. Rather, it draws on discussions with key players in Uganda, a critical review of policy documents and related research conducted by the author in Uganda from 2004-2010 to provide an insightful and contemporary account of Uganda's preparedness for climate change adaptation as of 2010.

Two: Uganda and its Changing Climate

To contextualize later discussions this chapter provides an overview of the socio-economic situation, current scientific understanding of climate change, key vulnerabilities and adaptation priorities in Uganda.

Under the long-term leadership of President Museveni the country is governed under a multiparty system and is divided into approximately 80 districts. Recent decentralization saw substantial powers, functions and responsibilities are devolved to Local Government, with the objective of improving the delivery of services. The Poverty Eradication Action Plan (PEAP) Uganda's main policy instrument for stimulating poverty reduction and economic growth aims to: (i) enable sustainable growth in the incomes of the poor; (ii) increase productivity and competitiveness of the economy; (iii) restore security, resolve conflicts and improve regional equity; (iv) strengthen governance; and (v) enhance human resource development. The PEAP is implemented through sector wide plans with resources provided by government and development partners within three-year investment cycles. In 2010 the PEAP process was replaced by National Development Plans which will operate over 5-year timescales up to 2025.

These efforts have yielded some impressive results. Uganda's economy has demonstrated sustained growth over the last two decades and managed to register 7% growth in 2008 despite the global economic downturn¹. The number of Ugandans living below the national

1 African Economic Outlook, <http://www.independent.co.ug/index.php/uganda-talks-/snapshot-of-ugandas-economic-outlook.html>, accessed 17/3/10

poverty line has decreased from 56% in 1992 to 31% in 2006. Significant progress has also been made in increasing school enrolment, reducing the gender gap in schools and improving levels of literacy.

However, Uganda remains one of the world's poorest and least developed countries with the Human Development Index² (HDI) placing it 157th out of 182 countries. To put Uganda's development status and fledgling economy into perspective a selection of HDI metrics have been presented against those from Germany in Table 1.

Among many difficult challenges, high population growth, underemployment, poor health, HIV/Aids, low investment, shortage of skills and persistent governance issues continue to undermine development efforts. Three quarters of Uganda's 30 million people still live on less than \$2 a day, average life expectancy is only 44 years and the percentage facing food insecurity is 40% and rising³. Donor dependence remains high with Official Development Assistance (ODA) grants accounting for over 30% of total government expenditure. Good governance is facing increasing challenges with a recent slide from 126th to 130th of 180 in Uganda's ranking in Transparency International's (TI) Corruption Perception Index⁴. There is also a growing disparity in poverty levels - the Gini Index of inequality is increasing - with large regional differences partly due to prolonged conflict in the north. Agriculture, most of it rain-fed and related activities employ between 70-80% of the workforce and coffee, tobacco and fish account for 43% of export earnings⁵. Together with an almost total reliance on run-of-river hydro-electric power (HEP) for energy supply, this ties Uganda's economic growth and poverty reduction efforts closely to climate, and according to several global assessments makes it one of the most highly vulnerable places to climate change anywhere in the world^{6,7}.

2 Human Development Report 2009, United Nations Development Programme, New York.

3 MAAIF 2009

4 Transparency International 2009

5 Hepworth and Goulden 2008

6 Global Humanitarian Forum 2009

7 Thornton et al 2006

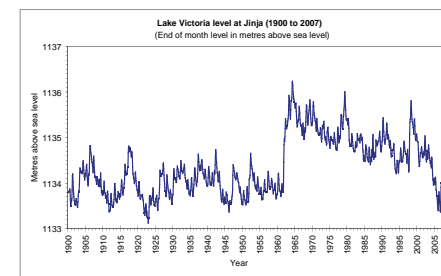
Table 1. Uganda at a glance: key development indicators from Uganda and Germany⁸

Country	Total Population (millions)			Annual pop. growth (%)		Urban pop (%)		ODA per cap US\$	Ad. lit. (%)	% not using impr. water source	% living on less than \$2/day	GDP per cap (US\$)	Ann. GDP growth (%)	Gini Index (b.)	Gov. spend on health per capita (US\$)	Public spend on edu. per pupil (US\$)	Life expet. at birth
	1990	2007	2020a	1990-1995	2005-2010	1990	2007	2007	2007	2006	2000-2007	2007	1990-2007	1992-2007	2006	2006	2007
Germany	79.4	82.3	80.4	-0.1	-0.2	73.1	73.8	..	..	..	..	40324	1.4	28.3	2,548	4,837	75
Uganda	17.7	30.6	46.3	3.2	3.3	11.1	13.3	56	73.6	36	75.6	381	3.5	42.6	39	110	44

2.1. Climate variability in Uganda

Natural climatic variability, its impacts and governance response carry important lessons for assessing Uganda's preparedness to anthropogenically induced climate change, and an understanding of climate variability in Uganda provides important context for discussions within this study.

East Africa's climate is naturally dynamic with high temporal and spatial rainfall variability. Some variability can be explained by large scale oscillations in atmospheric and ocean circulation (the El-Nino Southern Oscillation [ENSO] and lesser known events such as the Indian Ocean Dipole reversal). Historical variability and the occurrence of extreme events are reflected in the record of Lake Victoria water levels shown as Figure 1.



8 Human Development Report 2009. a. Estimates are based on various sources and are associated with high levels of uncertainty.

b. The Gini index is a measure of a nation's social equity and lies between 0 and 100. A value of 0 represents absolute equality and 100 absolute inequality.

Figure 1. Water levels of Lake Victoria 1900 – 2007 (from Hepworth and Goulden 2008)

Analysis of earlier lake levels suggest that the fluctuations and extremes seen in the last 100 years, including the significant rise in the 1960s are not unprecedented in history. According to peer reviewed research⁹ the 1960s increase is explained by exceptionally high rainfall over the lake and its catchment between 1961 and 1964. The accelerated decline between 2004 and 2007 has been the subject of much concern and debate and from a number of studies it appears that climatic and non-climatic causes have contributed. Approximately half of the drop in level between 2000 and 2006 can be explained by excess releases at the outflow of the lake made in order to meet power generation demands since the completion of the Owen Falls dam extension in 2000, whilst the other half appears to be due to climatic factors (ibid.).

This natural climate variability has had significant socio-economic impacts in Uganda, in particular through floods, droughts and changes in seasonal rainfall. Floods in 1961/62, 97/98 and in 2007 saw widespread infrastructure damage, displacement and destruction of livelihood assets. More recently in February 2010 unusually heavy rainfall has been linked to a catastrophic landslide in Mbale Region, killing as many as 300 people including many school children¹⁰. Droughts have also taken a significant toll. According to the International

9 Sutcliffe and Peterson 2007

10 http://news.bbc.co.uk/2/hi/uk_news/wales/south-east/8552555.stm

Disaster Database¹¹ a total of about 4.11million people in Uganda have been affected by climate related disasters of different kinds since 1979, of which 3.2 million have suffered severe droughts, 900 000 have been impacted by flooding and 100 000 by climate related disease epidemics.

Changes in rainfall reliability, onset and cessation cause crop failure and hunger, exacerbated by other stresses such as land degradation and insecurity. Rainfall variability has major implications for the use of other resources. Low lake levels since 2005 have led to power shortages, disruption to water supply, transportation and infrastructure and are linked to reduced productivity in Lake Victoria's fishery¹². An indirect consequence of these climate impacts is increased pressure on wetlands and forests, which suffer from encroachment and deforestation as people turn to charcoal, fuel wood and agricultural expansion as coping strategies.

2.2. Climate trends and future scenarios

Within the noise of this naturally variable climate, scientists have detected a gradual warming and wetting trend in East Africa over the past 100 years of about 0.5 °C and 10 - 20% respectively. Exceptionally wet years at the beginning of the 1960s are largely responsible for this increase in average rainfall and these changes cannot be attributed to human induced global warming with any certainty.

Future climate scenarios have been developed based on the results of modelling which attempts to predict future climate based on historical behaviour with adjustments made to reflect various green house gas (GHG) emission scenarios. There are few regionally downscaled models for East Africa or Uganda and those that exist have large embedded uncertainties, in part because of the limited temporal and historical coverage of climate observations. There is an increasing demand for regional scale seasonal forecasts and decadal scenarios from decision makers but care should be taken in communicating the uncertainties in these products. The latter are often inferred from models operating over much longer time scales which

inadequately capture decadal variability¹³. As well as highlighting a need for scientists and decision makers to be able to communicate and work under uncertainty this flags the importance of improving the coverage and quality of the hydro-meteorological data sets needed for regional modelling.

Available studies and climate models give variable results for future rainfall trends but there is certainty in the picture they provide for future temperature. The IPCC Fourth Assessment Report provides a comprehensive review of climate model projections for different regions in Africa¹⁴ focusing on the change in climate between the period 1980–1999 (to represent the current climate) and 2080–2099 (to represent the future)¹⁵. Table 2 draws from this assessment and summarises the main changes in temperature and precipitation between present and future periods for the East African region. Results are presented as changes in mean temperature and precipitation for the mean of all the climate models and their range.

These climate models show a consistent response in both mean annual and seasonal temperature change in the region, projecting warmer conditions of +3.2°C for East Africa by the 2080s. If global GHG emissions remain high then we are more likely to see temperatures increases in the top end of the range shown, up to +4.3°C. There is also consistency amongst models in projecting wetter conditions in East Africa, by as much as +7% by 2080/16. Table 2 has been supplemented to provide some best estimates of how temperature will change by 2020, and although the models point to an increasingly wet climate, cautiously no predictions are given for the magnitude of mean precipitation increase over this timescale.

¹³ Conway 2010

¹⁴ Based on a set of 21 models from their Multi-Model Data (MMD) set using the A1B emissions scenario Emissions scenario A1B represents a mid-range emission profile for a future world scenario characterised by rapid economic growth, a global population that peaks in the mid-21st century with a balanced use of fossil and non-fossil fuel energy sources (Nakićenović & Swart, 2000). Although A1B has been chosen as a "best-guess" scenario, by 2007 there were indications that we had already exceeded both this and the higher emissions scenarios used by the IPCC (Raupach et al., 2007).

¹⁵ Christensen et. al. 2007; Goulden et. al. 2009

¹⁶ Goulden et. al. 2009

Table 2. Changes in mean temperature and precipitation between present day and 2020s and 2080s for East Africa showing multi-model means and model range (from Goulden et al. 2009).

East Africa (12°S, 22°E to 18°N, 52°E)	Temperature		Precipitation	
	Annual (inter-model range)	Seasonal *	Annual (inter-model range)	Seasonal *
2080s	+3.2°C (+1.8 to +4.3°C)	Warming in all seasons: +3.1°C (DJF, SON) to +3.4°C (JJA)	Increase of 7% (-3 to +25%)	Increase in all seasons: 4% (JJA) to 13% (DJF)
2020s	+0.7 °C to 1.5 °C		Likely increase	

* DJF: December, January, February; MAM: March, April, May; JJA: June, July, August; SON: September, October, November.

There is also uncertainty as to how precisely climate change will influence extreme events - floods, droughts, heat waves,

and storms in the tropics. The climate drivers for inter-annual and decadal rainfall variability in ENSO events and Indian Ocean dynamics and models do not show clear tendencies for these events¹⁷. However Huntingdon et al. (2005) using four Global Circulation Models (GCMs) suggest that the number of extremely dry and extremely wet years will increase, and some models suggest that we will see a 20-30% increase in extreme wet seasons at a medium CO2 emission scenario.

The seasonality of rainfall could also change in the future. The highest percentage increase in rainfall is projected for December, January and February, which is historically the driest season for many parts of Uganda. This indicates that the current wet season from March to May (known as the long rains in Southern and Central Uganda) may shift forwards in time or the September to November rains, known as the short rains, may extend. It must be emphasized that there is already considerable variability in seasonal rainfall totals, much of which is linked to ENSO.

Climate change impacts are likely to be felt through changes in variability rather than the long term shifts in

average conditions, so this uncertainty around changes in extreme events brings uncertainty in the extent of impacts. That said we can be fairly certain that over the next 20 to 100 years mean annual temperatures will rise at a rate which has been unprecedented over the last 10,000 years.

In summary, temperatures are likely to increase in Uganda by up to 1.5 °C in the next 20 years and by up to 4.3 °C by the 2080s. Changes in rainfall patterns, total annual rainfall amounts and rainfall intensity are expected but there is less certainty here.

2.3. Impacts, vulnerability and adaptation priorities

Climate change is likely to have a wide range of interrelated impacts for the environment, economy and well-being of the Ugandan people. These impacts and their mechanisms, identified in existing literature are collated in Table 3 where based on a qualitative assessment the most severe impact areas have been marked in red. Whilst these effects are negative, there may also be beneficial outcomes such as increased grazing

¹¹ ACCRA 2010

¹² Hepworth and Goulden 2008

¹⁷ Conway et al. 2007

area for livestock in the cattle corridor with increased rainfall, or opportunities to grow more profitable crops. Indeed, given its reliance on rain-fed agriculture, on first reading the increased rainfall predicted for the region may seem positive, but, additional recharge and run-off may be offset by the greater evaporative losses brought by higher temperatures and future changes in precipitation have potential to bring heightened flood and landslide risks, increased soil erosion and crop damage.

Some of the potential economic implications of climate change can be interpreted through the widely replicated map (Figure 2) showing the predicted changes in robusta coffee growing areas with a 2°C rise in temperature. According to UNEP's analysis conditions will become unsuitable across most of Uganda's coffee growing area. As the nation's leading export commodity, the loss of coffee within 30 to 70 years could lead to the loss of US \$266 million in exports, 40% of export revenue and 3% of GDP, a figure in excess of the country's entire health budget¹⁸.

Although there is a need to improve understanding about how lake fisheries will be affected, through disturbed habitats, nutrient cycling and indirectly increasing domestic demand, climate change also poses risks here. Fish are the second largest export earner, bringing revenue of US\$125 million in 2007.

Modified resource management, introduction of new varieties and changes in husbandry techniques may sustain crops and industries based on them, but such adaptation options need to be explored and planned for. Whilst the impacts of climate change are likely to be significant for the future development trajectory of Uganda, sufficiently detailed exercises to quantify the implications or to assess the impact of past variability on the country's economy are lacking. A thorough evaluation of the fiscal and social development implications would help identify strategic priorities and focus decision maker's attention on the need and appropriate modalities for adaptation to climate change.

Adaptation is defined as adjustments in ecological,

social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts. It refers to changes in processes, practices, and structures to moderate potential damages to or benefit from opportunities associated with climate change¹⁹. Ability to adapt at country, community or household level is characterized as adaptive capacity and is related to the assets that one has access to (financial, natural resource, human and social capital) and how well these are used.

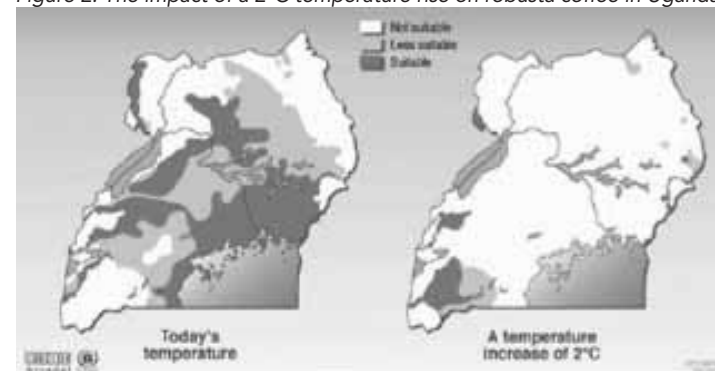
Limited financial capacity, infrastructure and equipment; dependence on rain-fed agriculture, primary production and natural resource use; poverty, low income per capita, low income and livelihood diversity; HIV/Aids; insecurity and weak institutions are all key factors in heightening Uganda's vulnerability, lowering its resilience and its adaptive capacity²⁰. In planning interventions around climate change it is vital to consider these underlying issues and their often unequal distribution as well as direct sectoral impacts.

Table 3. Impacts of climate change in Uganda by sector and effect highlighting likely impacts based on a review of available literature²¹

Effect	Higher temperatures	Increased drought	Increased rainfall & shift in seasonality	Impacts
Sector				
Human health	Shifts in areas / incidence of malaria; respiratory problems	Increased risk of water related disease; food shortage; water conflict; famine risk	Increased risk of waterborne disease; flood/landslide risk	Conflict; health burdens and risks; economic costs; poverty; inequity
Agriculture & food security	Shifts in the viable area for coffee and cash crops; reduced maize output; higher evapo-transpiration losses	Crop failure; reduction in grazing potential within the cattle corridor	Elevated erosion, land degradation crop loss; change in crop yields/disease	Food insecurity; economic shocks; loss of incomes and livelihood options; poverty
Infrastructure & settlements	Increased evaporative losses; damage to roads; cooling costs	Significant implications for run-of-river HEP; water shortage	Flood damage to infrastructure, transport, communications and settlements	Economic loss and growth volatility; reduced reliability of HEP; migration
Environment & biodiversity	Biodiversity loss as niches are closed out; changing ecosystem dynamics and production	Additional pressure on natural resource use through fallback on forests	Shift in habitats and growing seasons	Impacts on biodiversity and agro-ecological systems; fishery productivity deforestation

21 Orindi and Eriksen 2005, Orindi and Murray 2005, Goulden 2008, MWE 2007

Figure 2. The impact of a 2°C temperature rise on robusta coffee in Uganda²²



22 UNEP 2002, in MWE 2007

18 Based on 2007 figures drawn from Uganda Exports Online www.ugandaexportsonline.com, and the UNDP's Human Development Report 2008

19 IPCC, 2001

20 Ministry of Water and Environment 2007

Although care should be taken to avoid prescriptive adaptation 'solutions' in the absence of detailed contextual analysis, based on the climate change science and broad assessment of vulnerability in Uganda, the following adaptation priorities emerge:

- Agriculture and Food Security - support for autonomous adaptation through improving market access and inputs, decision options and economic/livelihood diversity; outreach activities to enhance management practices; adjustment to cultivars; enhance irrigation efficiency and/or expand irrigable area; enhanced pest and disease forecast and control; seasonal forecasting.
- Water Resource Development and Management - increase water storage and supply; demand management; effective systems of allocation within integrated river basin management; drought and flood warning and management.
- Infrastructure and energy supply - plan in resilience to climate shocks and change in the country's road, transport and communications infrastructure; plan for energy security in energy mix and design, operation and maintenance of plant.
- Diverse and resilient livelihoods - build human capital (skills, education, opportunity); health (including planning and response to climate change induced disease shift); technological alternatives; increase levels and sources of income; enhance equity and social capital.
- Effective institutions and governance - institutions capable, with resources, reach and incentives to plan for and deliver these services and adaptation responses, including undertaking research and development, forecasting and communications and implementing policy and law.

In the next section, a review of the current state of climate change adaptation preparedness begins with a review of existing plans and policies relevant to climate change.

Three: An Analysis of the Climate Change Adaptation Policy Response

In this section the policy framework, strategies and plans in place to support Uganda's adaptation to climate change are reviewed. In particular the contents and genesis of core documents supporting these initiatives are considered in turn, including the role of public participation and use of expertise in their development. The handling of adaptation needs within national development plans is also considered.

This analysis is used together with the testimony of key informants to assess the adequacy of each individual policy initiative. Specific questions are posed as to whether existing plans represent current knowledge about national vulnerabilities and adaptation needs and whether recommendations and actions are adequate and realistic. The extent to which the challenges of climate change adaptation have been mainstreamed throughout the work and policy of ministries and other institutions is also evaluated. The chapter concludes with a reflection on the degree Uganda is prepared for the challenges of climate change at this policy level.

3.1. Policy genesis and content analysis

UNFCCC response and climate change specific policies and plans

Uganda's initial communication under the UNFCCC (2002)²³

Uganda ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1993

²³ Ministry of Water and Environment 2002, *First National Communication on Climate Change in Uganda*

and in response to commitments under Articles 4 and 12 submitted its 'First National Communication on Climate Change' in 2002. This comprised a national inventory of greenhouse gas emissions and an assessment of vulnerability and adaptation needs together with a set of recommendations. It was produced by the Department of Meteorology (DoM) in the Ministry of Water, Lands and Environment (MWE) in its capacity as the National Climate Change Focal (NCCF) point under the convention. The report was financed by the Global Environment Facility (GEF) through the UNDP.

The genesis of the report saw a series of task force activities and workshops co-ordinated by an Inter-departmental and Inter-ministerial Committee involving the range of government line ministries and seven District governments. The involvement of non-government actors is not mentioned in the report. The section of the communication on vulnerability and adaptation is drawn from analytical work done in 1996 through the US funded Climate Change Country Study Programme and is restricted to an analysis of vulnerabilities in three sectors - Agriculture, Forestry and Water Resources using the results of three GCMs. The document also maps other limited work on climate change up to that point and highlights the inadequacy of Uganda's network of climate observation stations.

The First National Communication does an adequate job of highlighting key vulnerabilities and adaptation priorities in the sectors assessed, though there are no detailed costs or prioritised plans for adaptation actions. The report represents a useful start, concluding that the lack of a land-use planning system and low levels of awareness are limiting factors and calling for intensive capacity building to enable Uganda to meet its commitments under UNFCCC and to adequately respond to climate change. However, the communication is driven by a need to service the international convention rather than a demand driven endogenous desire to enhance the country's resilience, and the degree to which this influences ownership and the success of subsequent initiatives is considered in the Chapter conclusions.

Uganda's National Adaptation Programmes of Action

Uganda's National Adaptation Programmes of Action (NAPA 2007) was developed under the leadership of

the DoM as the UNFCCC National Climate Change Focal Point. The formal objectives of the NAPAs are to provide a process for Least Developed Countries (LDCs) to identify priority activities that respond to their urgent and immediate needs to adapt to climate change – those for which further delay would increase vulnerability and/or costs at a later stage. NAPA development was funded by a grant from the GEF of US\$ 199,790 channeled through UNEP.

Analysis of the NAPA document, its genesis and level of implementation provide a useful step in appraising the adequacy of Uganda's response. The NAPA comprises the headline areas in Table 4.

Table 4. Headline hazards, vulnerabilities, impacts and adaptation projects of Uganda's NAPA

Climate related hazards	Main human vulnerabilities and livelihood Impacts
<ul style="list-style-type: none"> • Flooding (flash) • Drought and low flows • Landslides • Sand/dust storms • Heat waves • Forest fires 	<ul style="list-style-type: none"> • Reduced agricultural production • Water shortage and/or ground-water depletion • Increased disease and/or other health problems • Food security • Loss of forest area or production • Loss of land or degradation
Priority adaptation projects and costs	
1. Community Tree Growing Project (US\$ 5.5M) 2. Land Degradation Management Project (US\$ 4.7M) 3. Strengthening Meteorological Services (US\$ 6.5 M) 4. Community Water and Sanitation Project (US\$ 4.7M) 5. Water for Production Project (US\$ 5 M) 6. Drought Adaptation Project (US\$ 3M) 7. Vectors, Pests and Disease Control Project (US\$ 8 M) 8. Indigenous Knowledge (IK) and Natural Resources Management (US\$ 1.2 M) 9. Climate Change and Development Planning Project (US\$ 1.2 M)	

Both the NAPA and the First National Communication have been produced to a high standard when compared to comparative documents in the region. The Ugandan NAPA was developed through a relatively robust methodology which focused on analysis of climate related disasters, impacts and coping mechanisms at a community level, which following a literature review, saw Participatory Rural Appraisal (PRA) across three sample districts from each of highland, lowland, semi-arid, aquatic and shoreline landscape types. The process was managed by a joint team comprising a national NAPA team drawn from across government, sectoral task forces and a Project Management Unit of Technical Assistance staff. Community, regional, national and policy level workshops were used to validate the findings of the PRA exercises and further prioritize adaptation projects against three tiers of criteria - of relevance to national development goals, community resilience and NAPA objectives.

The document sets out and assigns costs to a set of nine adaptation projects (total cost US\$ 39.8 M), establishes implementing arrangements and has received the endorsement of the Ugandan government. The implementation arrangements propose the establishment of NAPA villages as pilot sites through collaboration with civil society groups, supervised by line institutions under the coordination of a multi-sectoral National Climate Change Steering Committee. To date, no NAPA projects have been implemented and the potential reasons for this lack of action are considered here.

Reflections on Uganda's NAPA and its current status

Opinion on the NAPA is split. Voices in the donor community including that of the Danes (the lead donors on climate change in Uganda) identify a level of national ownership and some good ideas within the priority projects and promote the collective funding of these pilots. Others such as the NGO, Climate and Development Initiatives (CDI) are more critical:

The NAPA is a good start but some key sectors did not engage because climate change has only entered the public consciousness in the past four years and at the time there was low awareness. The NAPA was a donor driven process but the process did involve numerous workshops at all levels and wide consultation.

Other criticisms of the NAPA include:

- a lack of detail in how projects were to cost and how the money will be spent;
- a lack of technical rigor in project prioritisation, both in terms of issues and locations;
- a lack of integrated thinking in that it separates out adaptation from the low carbon agenda;
- the absence of detailed vulnerability analysis at a national level where the NAPA looks at community level issues rather than providing a strategic overview of national adaptation needs - for example of vulnerability in energy sector;
- low levels of commitment from line ministries during plan development and the low profile of the steering committee.

Further problems include that the seemingly pragmatic use of PRA data rather than climate observation records risks labeling 'normal' climate events as induced by anthropogenic climate change. One example is the NAPA's handling of drought incidence. Based on PRA exercises the NAPA graphs a trend of increasing drought frequency in recent years, and explicitly links this to climate change. However, there are risks in ascribing short timescale fluctuations based on testimony to climate change. Firstly the period covered by recent memory is too short a period to determine a trend; second, important questions such as the criteria used to define 'drought' - the geographical extent affected and duration - are not addressed; third there is a risk of recall bias where community respondents ascribe greater severity to more recent events which are fresher in the memory; and lastly there is a risk that participants were unintentionally influenced to report an increasing frequency and 'a state of change' at a 'climate change' branded event. Though there is very little published literature on recent trends in Uganda or East Africa, analysis of available records shows no clear change in the frequency of droughts, but finds that droughts tend to occur regularly in Uganda²⁴. Research linking rainfall variability in East Africa to ENSO and sea surface temperature variations in the Indian and Atlantic oceans suggests that extreme events occur regularly at cycles of approximately 2.3, 3.5 and 5 years.

The data showing increased rainfall variability in the NAPA are also questionable because only three years of data are drawn on. This is not enough to establish a trend, though such a trend is stated as fact in the NAPA²⁵.

²⁴ Goulden 2006

²⁵ MWE 2007, pp 22 :2

The dangers of labeling what is potentially natural climate variability as human induced climate change hits home within debates about finance and responsibility for funding adaptation. Citing the 'polluter pays' principle senior Ugandan politicians and climate change negotiators publicly state that they expect all finance required to deal with climate change to be funded by developed countries, in addition to current ODA²⁶. Whilst this may seem a reasonable demand, in packaging natural variability as human induced climate change - or at least basing factual truth claims on sparse and questionable data - the NAPA introduces confusion and controversy into who is responsible for funding and acting on critical initiatives such as drought and flood management. The principle of polluter pays is a necessary element of the international response and financing. However a lack of technical rigor and inappropriate representations of uncertainty, such as that in the NAPA analysis threaten at worst to absolve national governments from management responsibility for any event associated with weather, or to delay action on climate extremes, climate change induced or not, whilst the most vulnerable continue to suffer.

These problems of attribution, responsibility and additionality in climate change adaption emerge again within this report and the corresponding recommendations are a key aspect of the concluding Chapter.

Whilst the production and government endorsement of the NAPA is politically significant, those closest to it suggest that it is something of an emergency response to the demands of the convention, and falls short of comprehensively addressing the difficult challenges facing Uganda, though that was never the intention.

A senior government official coordinating the NAPA development process thinks that the NAPA succeeds in providing a working framework for immediate adaptation actions and emphasises that projects should be implemented, but that a national policy on climate change is now needed:

We need to develop a comprehensive climate change policy to capitalise on the political momentum and guide the allocation of resources, and with Danish support we aim to have it ready by the end of 2010.

²⁶ Pers comm.. GTZ Feb 2010

It will outline key actions Uganda needs to take to develop a low carbon, climate resilient economy. At the same time we need to demonstrate we can deliver adaptation and help to the poor through the NAPA projects. The sums involved are not huge but its resources and support are the issue which stops this.

Others in government also lay the responsibility for lack of NAPA implementation with the development partners:

The NAPA is held up at the UN - nothing is happening.

Government official

The development partners tended to put the responsibility for a lack of implementation on a flawed process and a lack of government leadership:

The NAPA is stalled. It was not detailed enough and was not demand driven and no one is funding coordination or implementation of activities. Concrete steps to download the NAPA into action are lacking - in part because there is no identification of which government institution is responsible for regulating the resource spend.

Donor

There are restrictions on the funding for the NAPA. It's not going to be implemented and needs revision and augmentation with mitigation. It's also silent on disaster risk reduction. It's a project based approach - it's not holistic.

Donor

Whilst the above comment by a donor is factually incorrect - the NAPA says much about disaster risk reduction - it is also highly ironic that the reasons given for lack of funding by the UN are rooted in the original specifications provided by the UN for the NAPA - that it focus on adaptation and generates priority projects.

National development plans and sectoral strategies

Poverty Eradication Action Plan II - the National Development Plan

The Poverty Eradication Action Plan (PEAP) until 2008 existed as Uganda's comprehensive development framework and the vehicle through which a large portion of ODA was targeted. The development of a new National Development Plan is seen by many actors as an opportunity to review the gains, and act on the challenges, constraints and emerging issues facing Uganda's development. Stakeholders consider that the way in which climate change is handled in the new NDP is the critical factor in how well prepared the country is to deal with climate change, because the plan guides the work of government at all levels and influences ODA prioritisation over the medium term. To assess the way in which climate change will be dealt with in the final NDP - due in March 2010 - the genesis of the NDP and the draft NDP document have been reviewed.

The new five-year National Development Plan (NDP) 2010-2015 and revision process was led by the National Planning Authority in conjunction with the Ministry of Finance, Planning and Economic Development (MoFPED) and Office of the Prime Minister (OPM). The process was guided by sector working papers, one of which, 'Environment, Natural Resource and Climate Change' was developed by Uganda's National Environment Management Authority (NEMA), the semi-autonomous body responsible for environmental regulation.

As suggested in the title of NEMA's working paper, climate change was parceled with natural resources and environment, as one of ten themes around which analysis of how 'the sector' will contribute to national development goals was developed. Although this explicit attention to climate change is positive, doubts are raised about the NDP process and specifically about how effectively climate change can be integrated into the planning process if it has been handled as a sectoral issue. Stakeholders are critical of the process and pessimistic about the likely contribution of the NDP:

There was fatigue on the NGO side because the NPA was in chaos. No papers were available and

the process was difficult to follow. Environment Alert was on working group on climate change but I think the focus is on carbon opportunities.

UCSD

There's one page on climate change in the draft NDP but no coherent policy or plan on the issue.

DANIDA

We put in some comments to the NDP and we were pushing to integrate climate change into sectors, but they have thrown the ball back to us and asked us to develop guidelines on how to identify key actions and to set questions that need to be asked for each sector. We've gone back to the drawing board. It will take us 2-3 months and is held up in procurement. The procurement often costs more than the job itself.

CCU

Although weak management of environment and climate change is flagged as a binding constraint on development within the NDP, the manner in which it handles climate change is piecemeal. Climate change is primarily considered as a stand alone 'supporting sector' within which two interventions are planned. The first relates to the implementation of the UNFCCC through strengthening the CCU and developing a Climate Change Policy. The second aims to redefine climate change as a development issue which targets research, awareness raising, capacity building and development of sectoral guidelines for mainstreaming. As a 'stop gap' measure until the next NDP these may seem reasonable steps but they fall short of the integrated handling across the sectors that many actors were hoping for.

Positively, other key sectors and actors, such as the Ministry of Agriculture, Animal Industries and Fisheries (MAAIF) and the Directorate of Water Resources Management (DWRM) have taken the onus to integrate climate change issues into their sectoral planning. These autonomous efforts are reflected in the draft NDP. Commitments in relation to each sector are briefly considered in turn:

Agriculture and food security:

- Establish a climate change planning facility within MAAIF;

- identify climate change impacts, vulnerabilities and coping mechanisms in agriculture;
- improve the quality and distribution of forecasts;
- integrate climate change in agricultural strategies;
- enable District Production units to integrate climate change in their work and plans.

Water Resource Management:

For water resources climate change is limited to a reference in the sector situational analysis, though the planned interventions around enacting a functional institutional framework and system of rational water resource use and planning, if implemented promise to do much to reduce the countries vulnerabilities.

Disaster Management:

- Establish an appropriate legal and regulatory framework for disaster management;
- enhance capacity for disaster preparedness and management;
- support welfare of those affected by disasters;
- establish a national contingencies fund;
- establish a National Emergency Coordination and Operations Centre.

To explore the genesis and potential impacts of these NDP commitments, and their likely contribution to climate change preparedness the sectoral policy development and climate change integration initiatives which generated these intervention are considered briefly here.

Integration of Climate Change Issues into Agricultural Planning Frameworks, July 2009, Ministry of Agriculture, Animal Industry and Fisheries

Recognition within the MAAIF that climate change had to be mainstreamed into the agricultural components of the NDP and the Ministry's own Development Strategy and Investment Plan (DSIP) led to this initiative. It was funded from 2008 by the Government of Denmark and delivered through Technical Assistance (TA) support from CC-DARE (Climate Change and Development - Adapting by Reducing Vulnerability) with inputs from Professor Ogallo of the University of Nairobi and PEM Consult, a Danish consultancy.

The Final Report of the initiative claims and targets the following achievements:

1. Climate change has been mainstreamed into agriculture sector planning (through the interventions cited in the NDP and listed above)
2. Enhanced awareness and skills within key stakeholder groups
3. Guidelines developed on climate change adaptation for various sectors.

A five year budget for implementation is mentioned and the establishment of a Climate Change Unit within the MAAIF is proposed.

Whilst the aims and the reported outcomes of the initiative represent a major potential step in preparing Uganda for climate change, a detailed review of the final report flags a number of concerns and reveals the aforementioned claims to be grossly overstated. Firstly the framework for analysis and the methodology adopted by the project are weak - there is no rigorous analysis of climate histories, models, vulnerabilities or any testimony drawn from farmers themselves. Rather the information seems to be drawn from workshops of national and district Ministry staff which have produced lists of climate problems and responses. There is little in the way of coherent analysis to appraise the priorities or geographical 'hot spots' for action, or thinking about how past efforts to support resilience or growth in the agricultural sector have performed. As a short-term initiative to raise awareness and mobilize funds for climate change-related work within the Ministry it may be a positive contribution, but a robust, medium to long-term strategy in response to the threat posed to the sector and the livelihoods of 80% of Ugandans is urgently needed.

Climate Change Response Strategy and Action Plan, December 2009, Directorate of Water Resources Management, Ministry of Water and Environment

A study entitled 'Climate Change Vulnerability Assessment, Adaptation Strategy and Action Plan for the

Water Resources Sector in Uganda', was commissioned to a South African consultancy by the DWRM in 2009 under the basket funded Water Sector Support Programme. Whilst the terms of reference map out the requirement for the study to support the DWRM in its key role in preparing Uganda for climate change the final product again falls short. The methodology used is vague and lacks rigour, and its recommendations are considered by its commissioners in the DWRM as inadequate, unrealistic and unimplementable. In the words of the Directorate staff:

We will quietly move on and do our strategic planning on climate change in an imminent separate process

Government source

Other activities, discussed in Chapter 4, are ongoing to enable the DWRM to become functional, a step which will directly contribute to reduced vulnerability in Uganda, though within these activities significant challenges - primarily the lack of funding and priority assigned to WRM by the Ugandan government - remain.

Draft National Disaster Preparedness and Management Policy, Prime Minister's Office, 2008

This Draft Policy developed by the Department of Disaster Management and Refugees in the Office of the Prime Minister (DDMR-OPM) sets out a proposed institutional and legal framework for multi-sectoral coordination and collaboration on disaster risk reduction and management. The policy is to be underpinned by a proposed Disaster Preparedness and Management Act which will specify the formation and composition of a National Preparedness and Response Centre, an Emergency Operations Centre, the Inter-Agency Technical Committee and the Inter-Ministerial Policy Committee. It also proposes the interventions cited in the NDP. An NGO stakeholder commented that the policy is under development, but implementation is likely to be a problem.

3.2 Concluding remarks on climate change preparedness at policy level

As explored in this Chapter, whilst the Ugandan NAPA is a significant milestone, it is imperfect and even full implementation would not address the key vulnerabilities

facing Uganda in a comprehensive way. However, it does identify most of the key issues which Uganda faces under the best estimates of future climate and sets out a group of projects which could potentially benchmark how Uganda could adapt. The reluctance of the donors to fund these projects most likely stems from doubts about the efficacy of the institutional arrangements proposed and their capability to deliver. These key issues are revisited in Section 4 and Chapter 8 and their resolution will be a critical factor for whether a comprehensive climate change policy mentioned by a senior government official - and which aims to plug the gaps and address the inadequacies within the NAPA - will be implemented and succeed in readying Uganda for climate change.

In parallel, a review of the draft NDP suggests that the chance for Uganda to take robust action to respond to climate change by implementing steps to target and build resilience across the most vulnerable sectors over the next five years has been missed.

The plans which attempt to integrate climate change into water resources, agriculture and disaster management are important and commendable steps towards preparing Uganda for climate change. However as has been documented there are critical questions regarding the process design and methodologies adopted by these initiatives which introduce doubt around their value in guiding an efficient and effective response. For example, they tend not to disaggregate necessary actions in terms of locational or strategic priorities based on risks and vulnerabilities and this is likely to generate difficulties for implementation, in particular for ensuring that limited funds are spent in the most effective way. Additionally they are limited in their handling of how barriers and constraints to implantation can be overcome, beyond 'building capacity' and 'raising awareness'.

As an example the constraints identified in acting on climate change within the NDP are cited as:

1. Limited awareness at all levels about the causes of climate change and/or climate variability as well as their devastating impacts to socio-economic development plans and activities.
2. Lack of awareness about challenges and benefits of climate change and climate variability as well as adaptation measures.
3. Lack of guidelines for mainstreaming climate change into development planning.
4. Lack of adequate policy interface with climate

change.

5. Conceptualization of the importance of weather and climate information by strategic planners is insufficient and yet climate change significantly negates economic development.
6. Still weak coordination mechanisms for synergistic action

Whilst these observations are valid and reasonable, a more sophisticated analysis reveals a deeper, systemic set of constraints to do with context, political economy, governance, incentives, accountability and aid efficacy which undermine implementation of policies and plans across the development agenda. As an example, only 10% of Uganda's land area is titled, and so incentives to plan long term by land users or the ability of land planners to guide adaptive land use may deny progress on adaptation, irrespective of the amount of awareness raising or coordination. The challenge of climate change and the potential for new models of assistance and finance to support adaptation and vulnerable communities therefore present an opportunity - and an imperative - to negotiate the gap which has hampered policy implementation and development effort over the past 30 years.

Four: Climate Change Adaptation Institutional and Actors' Analysis

The cross-cutting impacts of climate change and the imperative for an integrated response means that a formidable set of institutions and actors are, and should be engaged in Uganda's response. The task of identifying these actors and evaluating their ability and efficacy to implement adaptation could therefore be similarly formidable. However, in March 2010 GTZ published a 'Climate Change Actors Landscape of Uganda'²⁷, which based on questionnaire survey responses, usefully maps out who is doing what on climate change, both on mitigation as well as adaptation. This report is a valuable source of reference to this study and those interested in the issue, and includes an analysis of perceived conflicts among actors, an 'encyclopaedia' and a 'yellow pages'.

Rather than replicating the GTZ study findings here, a summary is provided followed by a review of the most relevant actors and their actions. For each 'sector' the key actor's capacities, perceptions, positions and actual and potential roles in adaptation governance are considered prior to concluding remarks regarding the quality of governance and institutional capacity for climate change adaptation.

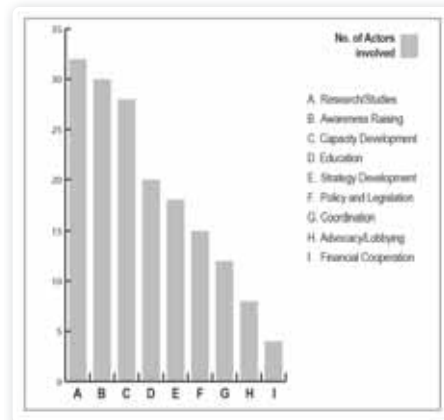
4.1. An overview of the actor landscape on climate change in Uganda

The GTZ study identified and logged the interests of 84 climate change actors across government (23), development partners (22), NGOs (20), research institutes (16) and the private sector (3). A breakdown of activities by type in Figure 3 indicates that the majority

are engaged in capacity building, awareness raising and research.

Figure 3. Activities on climate change in Uganda by number of actors involved (GTZ 2010)

Summary details of these actors in each of water,



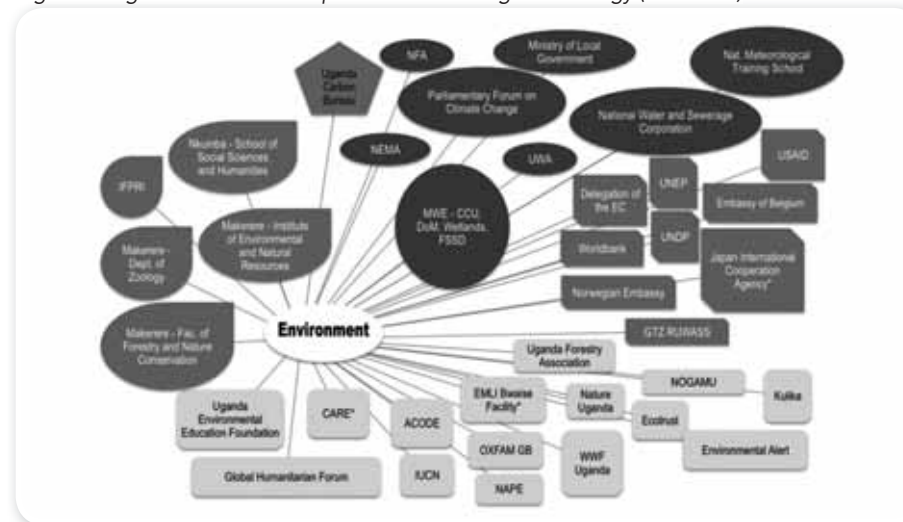
environment, energy, agriculture, and climate change specific sub-sectors, and on cross-cutting climate change issues are provided in diagram form in Figures 4 to 9.

Figure 4. Uganda actors landscape on climate change and water (GTZ 2010)



Figure 5. Uganda actors landscape on climate change and environment (GTZ 2010)

Figure 6. Uganda actors landscape on climate change and energy (GTZ 2010)



²⁷ GTZ 2010 (graphs reprinted with permission)

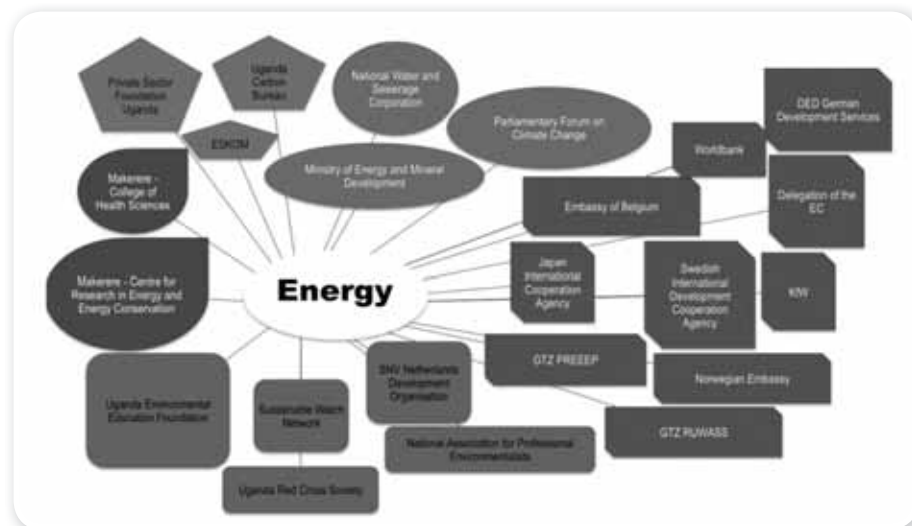


Figure 7. Uganda actors landscape on climate change and agriculture (GTZ 2010)

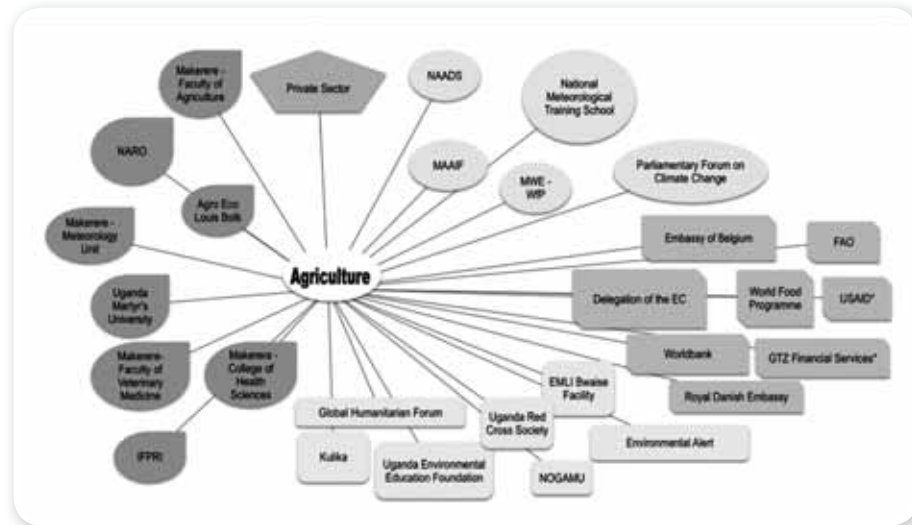


Figure 8. Uganda actors landscape on climate change specific initiatives (GTZ 2010)

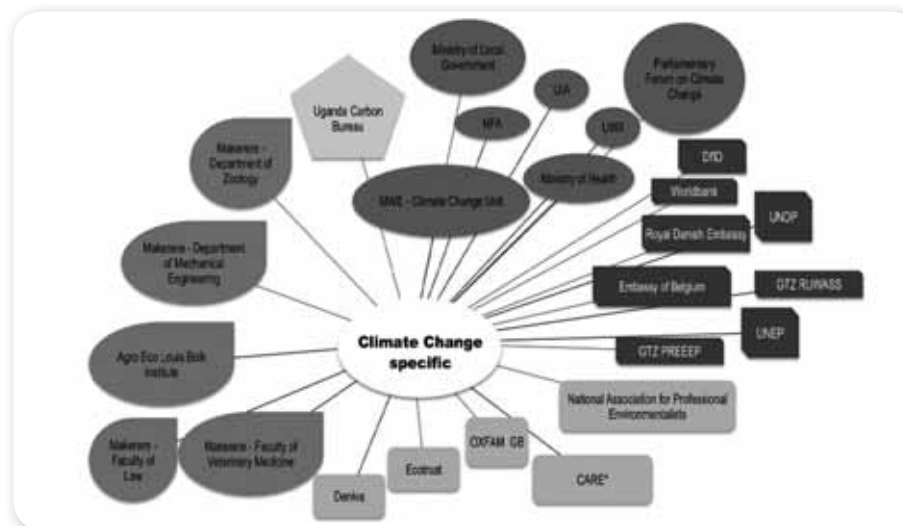


Figure 9. Uganda actors landscape on cross-cutting climate change issues (GTZ 2010)

In addition to this basic information the GTZ work provides an analysis of interest to this study. In particular it examines where the focus of actors energies are, illuminates the levels of coordination and conflict among these actors and factors behind both.

Figure 3 shows that the majority of actors are involved in awareness raising, capacity and research, potentially because of the 'newness' of climate change as a subject which requires sensitization and new understanding. Far fewer actors are involved in legislative aspects, coordination, advocacy and financial cooperation and it is interesting to reflect on why this is the case given the importance of these activities in any robust response.

The number of groups involved in strategy development and coordination are also revealing. If almost 20 actors are developing strategies on climate change - questions arise as to how these strategies are interrelated, whether they are complementary and how they feed into national priorities? In turn this points to the need for coordination, where, of the eleven actors involved, four are development partners with a lead role in sectoral working groups where climate change is considered a cross-cutting issue. Others are the Climate Change Unit, NEMA, the Parliamentary Forum on Climate Change, Oxfam, the National Forestry Authority, the World Food Programme and the Makerere College of Health Science/ African Initiative. That so many actors are involved in coordination hints at problematic, or at least non-optimal institutional structures, parallel initiatives and low levels of overarching coordination between groups.

The report also examines conflicts between actors and flags a number of causes for these including: different approaches to addressing climate change given the variety of possible responses, the uncertainty in the science and limited experience in moving from theory to practice in this 'new' field; competition for climate change finance among actors and unresolved struggles to determine who will be the lead in this new field. Respondents (20%) flagged the lack of coordination between actors as the main source of conflict and considered whether the Office of the Prime Minister should take a more prominent role and how work on climate change can be better harmonised - including involving the under-represented public sector.

The GTZ report draws conclusions and proposes possible next steps. These and the insights described here are critically appraised based on a brief analysis of the key actors in the sector.

4.2. Government of Uganda

Climate Change Unit, Department of Meteorology, Ministry of Water and Environment

The Climate Change Unit (CCU) was established in 2009 with support from the Government of Denmark. It was established under the direct responsibility of the Permanent Secretary of the MWE to galvanise and strengthen the work of the Department of Meteorology which up to that point had been coordinating the national response on climate change and responding to the needs of the UNFCCC. Recognising that the DoM had neither the capacity, resources nor the political clout to fulfil its role, Danida sought to strengthen these capacities and reach across government. The CCU originally consisted of Philip Gwage and Paul Isabirye of the DoM but two further staff have been recruited via Danida support for two salaries for four years. The CCU was legally established and mandated to lead on climate change issues in the country by a Cabinet Memorandum and reports to a Climate Change Steering Committee comprising twelve members drawn from across government. According to a senior government official coordinating this process, this elevates the issue to a much higher status - and is partially a response to the growing political awareness on the issues and in anticipation of significant carbon finance, 'although none is in the pipeline'.

Responsibilities of the CCU include:

- National lead negotiator (COP 15/UNFCCC) - including
- Development of policy and legislation on climate change (including the proposed National Climate Change Policy)
- Strategy development and action planning, including mobilization for NAPA implementation
- National coordination of climate change activities
- Knowledge management and awareness raising
- Development of sectoral guidance
- Secretary to Climate Change Policy/ Steering Committee (quarterly and ad hoc meetings)

- Participant in the Environment and Natural Resources - Sector Working Group (ENR-SWG quarterly meetings)
- Informally reporting to the Parliamentary Forum on Climate Change (PFCC)

The CCU is currently planning the 2nd National Communication on climate change but according to a government official, funds have yet to materialize from UNEP and implementation could be hampered by an overly bureaucratic procurement process.

The Climate Change Royal Danish Support project is channeling US\$ 11 M to enable the CCU to perform these many duties. This included preparation for COP 15 through a set of outsourced consultancy contracts.

Parliamentary Forum on Climate Change

This forum was established in 2008 under the chairmanship of Hon. David Ebong to address the environmental, social and economic pressures presented by global climate change. With DfID and Danida support the aim was also to share information and 'get the issues on the table to ensure a united front for COP 15'²⁸.

According to the PFCC webpage, 'the Forum has established a timeline of priorities and expected outcomes, to be adopted by and implemented by its members. These priorities include streamlining climate change issues into the national budget, creating a communications strategy, implementing a training program for all members so that in the long run the trickledown effect is to the constituencies that each member serves.'

PFCC-Uganda's objectives are stated as the following:

1. To increase public awareness on Climate Change and promote best practices that reduces emissions of Greenhouse Gases.
2. To contribute to adaptation and mitigation measures
3. To raise awareness about and support for the economic and sustainable development opportunities associated with accessing carbon credit markets.
4. To promote gender and public health issues in the reduction of emissions of Greenhouse Gases and the country's adaptation to the effects of Climate Change.

²⁸ Philip Gwage, pers. comm.. Feb 2010

5. To establish a Parliamentary information help desk on climate change and associated environmental issues.
6. To create linkages at national and international levels that can promote global action on Climate Change.
7. To promote and harmonize Climate Change responses at both the national and local levels.
8. To promote information exchange, policy dialogue and action between the different stakeholders in Uganda, regionally and internationally.
9. To monitor, evaluate and disseminate reports on the performance of institutions responsible for implementing Climate Change programmes and to hold them accountable to Ugandan citizens.
10. To take whatever action is necessary to develop and enhance the capacity of the Forum to achieve its objectives.

The forum currently has about 80 members, including MPs, development workers and members of the public.

According to the development partners supporting the Forum, the PFCC are:

a bit of an unknown quantity for now.. They seem to have the right motivations but don't really know what they want. They developed a proposal which seemed to involve turning themselves into an NGO and we responded with an offer of support to make themselves into an analogue of the British all party parliamentary group - i.e. non political, with no real power but potentially highly influential.

The donor partner will provide one year's funding for office space and a support officer to see if the group is a success.

Directorate of Water Resource Management / Directorate of Water Development

The Directorates of Water Resources Management and Directorates of Water Development within the Ministry of Water and Environment appear to be taking something of a lead in terms of their consideration of vulnerability and adaptation responses. The Joint Water Sector review of 2007 established a specific undertaking for the sector

to develop a national strategy for adaptation to climate change from a water resources perspective. With funding from the Government of Denmark this resulted in the poor quality report already mentioned which was not tangible and will be quietly wrapped up. A National Assessment and Strategy in Water Resources being put together with support from different consultants (DHI and COWI) will now be the vehicle used to incorporate climate change into strategic planning in the water resource sector²⁹

The Joint Water and Sanitation Sector Programme Support sees a total commitment of US\$ 150 M³⁰ from 2007 - 2012 and in improving the management of water resources and delivery of water services should contribute to a reduction in Uganda's vulnerability to climate change. That said, there are concerns from within the Ministry and outside that the bulk of this expenditure being allocated to water supply and sanitation efforts, and that investment in an effective system of water resource management may lose out to the politically more popular and visible delivery of taps and toilets. However, it should be noted that these water supply and sanitation demands reflect very immediate, felt and popular in Ugandan society. There are also concerns that the investments in infrastructure are not keeping up with demand due to the rapid growth of urban centres in Uganda, and that investments may not be considering the future impacts of climate change.

It was mentioned that the World Bank is in the process of developing a Water Resources Assistance Strategy for Uganda though details were not available at the time of writing.

Regional sectoral support programmes such as the Nile Basin Initiative (NBI) (funded by DFID, World Bank, SIDA and other donors) and the Lake Victoria Environmental Management Programme (LVEMP) (World Bank support) are beginning to focus on climate change, and key staff from the DWRM and the CCU were attending a Global Water Partnership workshop

29 Pers. comm.. Metzger J. Feb 2010

30 Funded by GoU, African Development Bank; Austrian Development Agency; GTZ/DED, Germany; Ministry of Foreign Affairs, Denmark; Swedish International Development Co-operation Agency

on the issue in Nairobi in February 2010. The Lake Victoria Basin Commission, established in 2005 as an institution of the East African Community (comprised of Kenya, Tanzania, Uganda, Burundi and Rwanda) and implementer of the planned second phase of LVEMP, propose to have a sub-programme on climate change, although detailed proposals are yet to emerge.

National Environmental Management Authority

The operational mandate of the National Environment Management Authority (NEMA) is heavily intertwined with climate change. This semi-autonomous environmental policy and regulation body is responsible for shaping environmental policy, administration of Strategic and Environmental Impact Assessment and compliance and enforcement with environmental law, coordinated by their Kampala headquarters, which works through District Environment Officers.

These existing institutional arrangements for environmental governance and regulation require significant strengthening in order to reduce vulnerability. Rigorous analysis of potential developmental impacts against medium term climate change scenarios and the effective enforcement of conditions which conserve the natural resource assets that can 'buffer' climate impacts (i.e. wetlands/forest/freshwater resources) will reduce Uganda's vulnerability. However the process for determination of Environmental Impact Assessments and the enforcement of development conditions is currently very weak.

NEMA also claim an overall coordination role on environment matters relating to climate change with the goal to ensure integration of climate change issues. Beyond their contribution of a working paper on the issues for the NDP process and attending meetings called by the CCU it is unclear how these roles are to be realized.

Department of Disaster Management and Refugees - Office of Prime Minister

The Department for Disaster Management and Refugees (DDMR-OPM) in the Office of the Prime Minister (OPM) is responsible for multi-sectoral coordination and collaboration in disaster risk reduction. The Department is sometimes referred to as the Department of Disaster Preparedness, and is also interchangeably referred to as the Ministry of Relief, Disaster Preparedness and Refugees, however, this ministry is still at proposal stage. The

department is headed by the 1st Deputy Prime Minister and Minister for Disaster Preparedness and Refugees, supported by a Minister of State and a team of Technical Experts led by a Commissioner and two Assistant Commissioners. The department is also the secretariat for an Inter-Ministerial Policy Committee (IMPC), which provides policy direction and coordination on disaster management. The department is supported by a 'National Platform' that consists of sectoral disaster focal point officers from government, donors and NGOs. These focal point officers in government chair sectoral working groups on health, water & development; education; food security; sanitation; agriculture; transport; and lands which feed information into the National DRM Platform³¹.

At district level, District Disaster Committees have been established in 11 high disaster risk districts³². Each is supervised by a District Coordinator, hired by UNDP, who reports to the Chief Administrative Officer (CAO) with overall accountability for disaster preparedness³³.

To date, the DDMR-OPM has conducted³³:

- Hazard, risk and vulnerability assessments for Teso, Lango and Acholi sub-regions to provide baseline information needs in planning preparedness and management strategies.
- In partnership with Oxfam, similar hazard, risk and vulnerability studies in Karamoja, Mt. Elgon and Mt. Rwenzori regions.
- Disaster mapping using GIS for the whole country to district level with plans to map to community level.
- Early warning exercises on radios in collaboration with meteorology department.

Reflections on preparedness for climate change within the Government of Uganda

Despite targeted support from the Government of Denmark and an elevated political status, the CCU continues to struggle, as the DoM did before it, to adequately manage an unrealistic workload and bring influence to bear on more powerful Ministries, and this is a major factor which weakens Uganda's national preparedness.

Whilst the technical understanding and professional capability within the unit is strong, capacity and the

31 ACCRA 2010

32 Soroti, Katakwi, Kaberamaido, Kitgum, Pader, Amuru, Gulu, Arua, Nakapiripirit, Kapchorwa, Manafwa

human resources available are massively overstretched and this is exacerbated by rapidly increasing demands for communication, consultation and engagement on climate change both internationally and domestically. In particular, the sparse resources available seem to be tied up with meeting donor conditionalities in terms of procurement, in servicing the needs of the COP and international negotiations and meetings to the significant detriment of the domestic response on climate change. In the words of a senior official:

The CCU is far too small and we are not able to influence other line ministries. We are outward facing to UNFCCC but we do try and get people involved in workshops. I spend a large percentage of my time at international meetings - I'm on the CDM executive board which meets five times a year and I'm on the G77 panel which meets six times a year so at least a quarter of my time is on the international process. There's also a lot of work in procurement that takes a lot of time and resources.

Other stakeholders' comments on the CCU included:

The problem is that the CCU is mostly tied up in UNFCCC work and there is a poor level of communication with other actors - they are unresponsive. They lack funds and are understaffed.

NGO

We want to work with CCU but they are not easy to reach even though we share the same building. We are supposed to be working together but it is very difficult - they are not there. They do not attend our - National Platform for Disaster Preparedness and Management meetings. Why don't we come together as our priorities are the same? We also don't do direct implementation - we work through and with sectors

Government source

The CCU is simply not functioning. It should not be drawn from the DoM - perhaps in NEMA or MAAIF.

Donor

The CCU are totally under capacity - spending 70% of their time in Bonn or servicing the UNFCCC.

Donor

The prospects for the CCU to fulfill its ambitious mandate seem increasingly unlikely unless the following issues are addressed:

- The Head of the Unit, recognised as perhaps Uganda's most capable expert on climate change, has announced his retirement, though he will continue to support climate change-related work in some capacity.
- Though tasked with the development of a national policy on climate change by the end of 2010, the CCU admit themselves to have limited experience of guiding such a process but hope with Danish support they can 'learn by doing'.
- Calls for more staff to strengthen and expand the unit are allegedly difficult because of GoU commitments to IFI codes on government staffing limits³³.
- Morale and motivation within the unit, its ability to attract and retain high calibre staff is said to be very low in part because of what are considered very low government salaries (US \$ 300 - 400 dollars per month for senior staff). In the words of a Senior official:

I'm committed to serve. I'm now retired but will serve in a voluntary capacity. As a public servant I'm ill paid, only \$400 dollars a month but I'm willing to do the job. But the team lacks commitment and capacity. We need to second high calibre people into the unit. The key is motivated staff but people look for money rather than the chance to serve.

- The skill mix available within the Unit is recognised by many as the wrong type to effectively fulfil the CCU role:

There are excellent technical people heading these key units, but they are simply not coordinators. There is limited capacity in CCU to get the policy out, but I think there is hope and there are examples of success.

33 Pers. comm. Philip Gwage Feb 2010

For example the decentralisation on water was rolled out by training the trainers and setting up a multi-sector working group. There is no strategy, no plan on climate change but political interest is now very high.

Donor

This is a similar story in other areas of Ugandan government, where political attention and interest is high, in part because of the promise of climate finance, but where ability to coordinate and capacity to deliver or implement is low. For example the Parliamentary Forum on Climate Change seems to share the objectives of the CCU but stakeholders considered it to be 'just a talking shop'. A UN Agency source claimed 'no one is quite sure what they do'.

Elsewhere it is a lack of funding as well as low capacity and coordination which limits the preparedness of Uganda to climate change. For example the Ministry of Water and Environment is allocated as little as 2% of the annual government budget. In the water sector, the JWSSPS allocates 9% of total funds to water resource management, though the Directorate of Water Resource Management expect their actual budgets to receive as little as 3%, which is insufficient to role out water resource law. By their own estimates, about 75% of water abstractors who require a water use permit³⁴, are operating without one and only 25% of those discharging waste water have a licence, with less than 1% of those actually compliant. A Water Policy Committee was set up under the 1998 Water Act - but this has never been functional and WRM development and progress in the sector is held back.

This shortfall in regulatory reach is significant because it is generally the wealthier and politically savvy water users who are aware of the law, recognise the value of a water use permit and proactively obtain one. Poor water users find it more difficult to access the system even if they are aware that it exists. Where climate change and increased demand bring competition, it will therefore be those without legal permissions to protect their access to water - the poor and vulnerable - who will tend to lose out.

34 Water use permits set down the conditions under which water abstractions can take place based on an understanding of needs downstream, against which use is monitored and regulated. Together with issuance of waste discharge consents, which similarly set the legal conditions, quality and quantities of waste water flows into the environment, they form the basis of effective water resource regulation regimes.

A working system of water resources regulation is critical to effective drought and flood risk management and operational responses to those events. Only where abstractions are regulated can use be systematically scaled back to protect priority uses (health, livelihood and environment) during time of drought. There is some hope that these functionalities may come through the JWSSPS, however, to support an effective response to climate change effective water resource management needs to be considered a priority - by both donors and government - and supported accordingly. This may be facilitated by forthcoming reports from the DWRM on financing the sector and their proposed national strategy, and with the World Bank's muted sector assistance plan. The DWRM benefits from capable, committed and 'visionary' leadership and unlocking progress and funding here should be a priority, particularly given Uganda's reliance on agriculture and run-of-river HEP.

NEMA also possess capacity and reach to act positively on climate change but clarity in responsibilities and resolution of overlapping mandates, and strong leadership are needed to address both the explicit capacity issues linked to resources and more tacit, or political barriers to effective natural resource management. For example NEMA are 'coordinated' on the issue by the CCU but acknowledge that they lack the capacity to do so. Others spoke of inter-departmental-politics, empire building and jostling for access to climate finance funding streams. An apparent poor appetite for inter-agency working, openly acknowledged within government requires redress for an effective response to climate change.

Elsewhere in government the DDMR-OPM offers a potential avenue for progress. The office of the Prime Minister is said to be strong and a favoured location for climate change response among stakeholders but is yet to take substantive action or a leadership role. The institutional structure for DRR is established in some districts and it is not difficult to see how galvanizing the cross-sectoral - central to local architecture for disaster risk reduction and response (or for that matter the district level environment officers reporting to NEMA) - and making it work, could be an efficient starting point for downscaling and mainstreaming an operational response to climate change. Certainly, it would be inefficient to set up a further parallel operational structure to those that exist.

That said, the practice of existing government officers being assigned extra roles without clear terms of reference or resources, as is done in both the DDMR and NEMA structures jeopardizes commitment and frustrates DRR and environment work. Although donors pay some staff directly (e.g. The UNDP and DDMR-OPM Secretariat & District Coordinators) the sustainability of this approach is questionable.

Beyond capacity, leadership and mandates, many stakeholders pointed to systemic problems with good governance and corruption in Uganda which unless tackled or bypassed would hamper effective adaptation, just as it has traditional development efforts. For example, CDI flag existing problems with carbon finance and doubted that climate finance would benefit the most vulnerable without a paradigm shift in modalities. They cited several recent incidences of grand corruption³⁵ and stress that the success in dealing with this issue will determine the success of the climate change response in Uganda:

However much money you put in, there is no guarantee that the money will end up helping the vulnerable. Unless donors impose conditions to manage those resources responsibly and make the government responsive and publicly accountable to Ugandan citizens, money for climate change will just make matters worse. We can give many examples where the elite capture resources or where government eats money. There is no transparency at lower government levels and no capacity to follow up problems. Decentralized government has just led to decentralized corruption. The trouble is that the integrity of the CSO community is also questionable - because of course, a society will reflect the behaviour of its government. If the police work - the system works - but not in Uganda, not like Rwanda. The situation is so grave it needs special attention and

35 Such as 1) Damian Akamkwasa, Head of the National Forest Authority who has been arraigned in suspicion of selling forest reserves after 1.5 M US\$ was found at his home; 2) the Global Fund for AIDS, Malaria and TB scandal which has seen nearly over 300 individuals, from Ministerial to community based organisation levels implicated in the systematic embezzlement of over \$1.6M; 3) Problems in the Agricultural extension service which sees the Executive Director is being quizzed for squandering public resources which are channelled through District Government.

specific interventions. It's not just about designing bigger road drains or planting trees - the bigger picture needs to be addressed. Vulnerability is caused by poor governance.

They suggest that donors could put money directly into infrastructure such as roads to help people get into market and underpin resilience through stimulating livelihood diversity and growth. They also stress the need to build the capacity of institutions to enable transparency and accountability i.e. financial transparency work and support for systems of good governance at MoFPED and District level.

CDI and other stakeholders thought the approach of social accountability monitoring (SAM) was very promising. They cited the Community Based M&E System (CBMES) pioneered by the NGO the Uganda Debt Network and used to undertake social accountability monitoring in schools, education and health sectors as an example. Financial flows are public access under the Information Act and although there was recognition that capacity for this work is currently low, an initiative which tracked spending on climate change spending by both government, donors and NGOs and monitored benefits could help:

If local communities were enlightened about their rights and the system of how public resources are sent to the districts...this could work for adaptation funds.

Other stakeholders agreed that CCA should redouble a focus on governance and be careful to avoid misdirection of funds intended for climate change:

Governance is a problem in Uganda, there is very low accountability.

NGO

A government source was quoted as saying that the government is not implementing adaptation:

The government tends to spend funds on inputs (e.g. vehicles) that do not directly support implementation.

It's a donor problem too - they are providing funds for such inputs. For effective adaptation the donors should consider partnering with NGOs - and the government can work with them under MoUs. It can be argued that money will be spent more effectively if it's channelled through NGOs.

This last salutary warning carries particular weight coming from a senior government official. This key issue of governance and climate finance is revisited in the concluding chapter where a set of corresponding recommendations are made.

4.3. Development partners

The main development partners working on climate change are introduced here along with a summary of their known plans and activities, prior to an appraisal of the efficacy of this work in supporting Uganda's response to climate change. In addition to those donors and activities mentioned explicitly here, the World Bank are co-chair of Environment and Natural Resources Donor Partner Group (ENR-DPG) and are doing actor analysis in environment sector, though according to stakeholders, they are fairly inward looking concerned for example with internal environmental safeguards of World Bank projects. USAID are expected to increase their engagement soon and although this is likely to be around agriculture and food security the details were unavailable at the time of writing.

Norway are leading on initiatives around Reducing Emissions from Deforestation and Degradation (REDD) and together with the Belgian government are working on the Clean Development Mechanism but their initiatives are not explored in detail here.

United Nations Development Programme and other UN bodies

The UNDP in Uganda are working on project based interventions around biodiversity, wetlands, land degradation; capacity building and advocacy; support activities and GEF delivery. On climate change adaptation the UNDP have recently announced a US\$ 1M project, the 'Territorial Approach to Climate Change in the Mbale region of Uganda' which is co-financed by DfID and the Welsh government. To be delivered through MoFPED, the MWE and District governments UNDP's

territorial approach sees Wales partnering Mbale Region to build low carbon and climate resilient growth as a pilot through which to make the case for up scaling.

The UNDP is also adopting a new approach to mainstreaming CCAM into its own country policies and plans and analytical work is being undertaken to link Human Development Indicators to climate change with the objective that the 2010 Human Development Report will include climate change indicators.

The UN Joint Programme on climate change includes FAO and WFP in its preparation and will inform a joint programme within the UN National Development Assistance Framework.

Government of Denmark / Danida

Climate change is a high priority for DANIDA and they have been the lead donor on the issue in Uganda, establishing a support project for the GoU to establish the CCU.

The financial contribution by DANIDA amounts to around US\$ 2 M, just under half of which is directed at the establishment of the CCU and salaries for two of its staff for four years. As well as a major contribution towards Uganda's preparation and participation in COP, the remaining portion of these funds are directed to the mainstreaming of adaptation in Uganda and the development of a National Climate Change Policy. According to their climate change focal point:

It was a small amount - a one off with government taking responsibility. Unfortunately government recruitment has been slow and there is no equipment. Finally two people have been recruited but they are finding it difficult to work with the sectors.

DANIDA have also provided US\$ 1M straight to foundations in northern Uganda on workshops for young people around COP 15, and an unknown figure for the MAAIF initiative to integrate climate change into agricultural planning through support from the CC-DARE programme.

German Technical Cooperation / GTZ

According to other stakeholders consulted, the GTZ are performing a useful role through a climate change component on their work on RUWAS (Reforming Urban

Water and Sanitation). Their 'Actor landscape map of climate change in Uganda' has been much anticipated and welcomed by all stakeholders and their subsequent plans to follow up this publication with a meeting to discuss coordination of this huge collective effort promises to be a critical step in improving the response of on climate change in all sectors.

GTZ are also contributing to a programme of finance sector support to agriculture which could indirectly have benefits for resilience.

UK Aid / Department for International Development

There is significant political commitment within the UK for DfID to take a leading role in responding to the challenges of climate change. In Uganda, limits on staff numbers have meant that this role is limited to provision of funds for a range of activities, rather than 'hands on' engagement. These have included:

- Commissioning a 2008 study on 'Climate Change in Uganda: appraising the impacts and response';
- Funding of a post within the World Bank to work on Environment and Climate Change issues;
- A £300K contribution to the UNDP Territorial Approach project to support leadership on climate change at District level;
- Funding of an advocacy officer position within Uganda Climate Action Network / Oxfam;
- Funding the Parliamentary Forum on Climate Change;
- US\$ 1M support to the African Climate Change Resilience Alliance (ACCRA).

The British Government are also active on climate change issues through the Foreign and Commonwealth Office and British Council, mainly concerned with awareness raising and education.

Reflections on donor response to Uganda's preparedness for Climate Change

Climate change is now firmly within the 'development agenda' and numerous new initiatives are being set up. They try to co-ordinate this through the DPG on Water and Environment and to minimise duplication. The Danish have done a lot to set up the

CCU and do capacity building - but they all need to think how to complement, not duplicate.

Government Source

The way climate change is being dealt with by the donors is ad hoc - it's a new topic and there is not much coordination.

Donor

Donor coordination, duplication and draining of government resources through disparate, projectized approaches has long been recognised as a barrier to effective aid delivery and the major development partners signed up to the Paris Declaration on harmonisation and are committed to more joined up thinking and action in the way they deliver support to developing countries.

In many countries this has been attempted through pooled funding mechanisms, sector wide approaches and general budget support, coordinated through a Donor Partner Working Group (DPG - membership exclusively from DPs), and Sector Working Group (SWG - membership from those working in the sector). The goal of these groups is for each donor to share what they are doing to avoid duplication and explore how to build synergies.

In Uganda there is an Environment and Natural Resources Donor Partner Working Group (ENR-DPG), co-chaired by the World Bank and Norway and a Water Supply and Sanitation Donor Partner Working Group (WSS-DPG), and according to a review of the GTZ actors encyclopaedia, an Energy Donor Partner Working Group; a Sector Working Group on Sustainable Land Management; a Water and Environment Sector Working Group and Environment and Natural Resources sub-sector Working Group; a Climate Change and Adaptation Thematic Working Group; a Climate Change Donor Working Group alongside a Climate Change Steering Group and it seems, a Climate Change Policy Group.

It was reported that through the Environment Sector Working Group, chaired by the World Bank, people working on climate change have met around three times in 18 months for dialogue but a coordination mechanism among the donors for climate change has not been established.³⁶ However it was also reported that a climate

change sub-sector working group is co-chaired by the CCU and that this established the National Climate Change Policy Committee.

Clearly with all these groups working on aspects of climate change, in the milieu of development assistance to Uganda, donor coordination on climate change remains a very significant challenge. This was also a key finding of a DfID assessment in 2008³⁷.

In addition to an apparent vacuum of meaningful co-ordination and leadership among the donor partners - which invites a wasteful, disparate, externally driven and ultimately potentially ineffective and damaging response in Uganda - there is a requirement to reconcile the different expectations within the donor community and government of how funding modalities for climate change adaptation will operate.

4.4. Non-governmental organisations

Amongst both international and local NGO's climate change has boomed as an issue of focus in response to both the needs and interests of their constituencies, and in expectation and response to funding opportunities around the issue.

Of the international NGOs Oxfam established a leadership role in 2008 through a publication and video 'Turning Up the Heat: Climate Change and Poverty in Uganda', an advocacy tool for focusing political attention on the issues. They have also facilitated the formation of a coalition of organisations in Uganda - Uganda Climate Action Network (U-CAN) a communication platform for lobbying and advocacy to enable a strong united voice within civil society. The initiative emerged from the Pan-Africa Climate Justice Alliance attempts to influence the AU and awareness within CSOs of the need to work at regional and national levels. U-CAN has around 40 members and was very active in the run up to COP 15 with one meeting since, although no government representative attended this. Whilst U-CAN represents a positive step for Uganda's response, it is said to suffer from inconsistent leadership, with the second person to take the role having moved to a new position. U-CAN has no strategic plan but was said to be useful in the run up to COP where the messages advocated coincided with those of the Ugandan government and provided a strong platform for negotiation.

Oxfam are also a key partner together with Save

³⁷ Hepworth and Goulden 2008

the Children, Care, World Vision and UK research institutions the Overseas Development Institute and Institute of Development Studies, in the African Climate Change Resilience Alliance (ACCRA). ACCRA is a regional (Ethiopia, Uganda, Mozambique) research and advocacy programme funded with \$1M from DFID. It aims to understand the links between disaster risk reduction and adaptation by supporting research by CSOs on 'on the ground' interventions' in Uganda and will focus on Karamoja and Bundabuja. The first year will focus on research, the second on advocacy and learning for government and others which will lead into a capacity building programme.

Local NGOs, most notably Environmental Alert, Uganda Coalition for Sustainable Development (UCSD), UWASANET, Nature Uganda, National Association for Professional Environmentalists (NAPE), DANIVA and Ecotrust possess an impressive level of technical and political understanding of climate change in Uganda and responses to it. Their work to date reveals ability and willingness, given funding to take on key roles in supporting an effective response. In particular they can conduct research to develop evidence based advocacy, can identify and pilot adaptation responses, can communicate with citizens and other civil society groups and begin to hold government to account for the efficacy of its response. This last activity, accountability monitoring of government and DP performance on climate change and variability is an activity which several stakeholders recommended as a positive step, and whilst delivered with some success by the Uganda Debt Network in other sectors it has yet to be attempted in these fields.

DANIVA, a long established network of 700 community based organisations across Uganda, are working with an IIED programme to test a methodology called LOCATE which supports the identification of local vulnerabilities and adaptation options areas, and grants for CBOs to implement designed projects.

Reflections on the efforts of NGOs

The growing activity on climate change is potentially very positive but stakeholders also mentioned problems of coordination in this sector. In particular it was said that initiatives of the INGOs were driven from Head Offices in Europe, creating a 'mushroom field' of disparate interests and activity with intangible outcomes where oversight is poor and a lot of money is at stake³⁸.

³⁸ GTZ Pers. comm., Feb 2010

Each NGO is refocusing on climate change but there is no leadership and nothing concrete has been done. No funding is going to communities and there are no real examples of adaptation in Uganda. For example, rainwater harvesting and community water conservation is a win-win; in agriculture, farmers need help and there's a lot to be learnt from traditional methods, but very little is being done. Also, although it has been shown to have good potential in places like Ethiopia, I'm not aware of any weather indexed micro-insurance initiatives linked to climate change adaptation in Uganda. We need to stop talking and to act. It's urgent.

Donor

4.5. Private sector

The GTZ actors landscape study identifies only three private sector entities engaged in climate change. They include Eskom Ltd who are concerned with energy supply; the Uganda Carbon Bureau, a dynamic entity that is trying to spearhead CDM and low carbon development in Uganda; and the Private Sector Foundation, also working on rural energy transformation. This research also identified the Climate and Development Initiative (CDI), a Ugandan led NGO-cum-consultancy which has a well established track record of working with international partners to promote pro-poor carbon and energy resilience initiatives. CDI possess an excellent overview of the challenges facing Uganda and insights on the key challenges including its energy future where 90% of the population is reliant on fuel wood.

That no private sector entities seem to be engaged in adaptation, neither in thinking about the vulnerabilities faced by business and the economy and actions required on resilient growth, nor in providing services to others to assist in building resilience is revealing.

Furthermore, large economic entities, particularly commercial farms, fisheries, factories and tourist facilities are likely to have valuable insights into the shocks which a variable and changing climate can impose on economic activity, and of the array of measures available to build resilience. No exercise has been attempted to bring that level of experience together or to formulate a business led response to adaptation.

Elsewhere in the region, agricultural micro-finance and weather index insurance (WII) is being piloted and promoted as a private sector supported response to climate change. In Uganda the ILO are working with MicroEnsure to carry out a feasibility study on WII for crops in Uganda. Demand by the lending institutions and the farmers is high. The government is feverishly working to modernise and promote investments in agriculture because it is the backbone of the country. Though according to those working on the pilot the following challenges have to be overcome before WII can take off³⁹:

1. Meteorology department- data, both historical and present is limited because of the number and distribution of weather stations. Where demand from farmers is high, functioning weather stations are not available, nor is the data adequate for use. Therefore there is no weather data available to provide an accurate index needed for the WII product. More weather stations well distributed in the country are needed.
2. Farmers would like to be insured against weather risks plus other hazards that come with extreme weather events because weather has become more and more unpredictable. Normal rainfall patterns are changing, the usually regular bi-modal rainfall pattern common to Uganda is changing to one main rainfall season in the second half of the year. The first rainy season can no longer be adequately predicted, rains are delayed and duration is shorter, so that the usual crops grown in that season cannot be sustained.
3. The WII product, although more affordable than the traditional insurance, is still too expensive and complex for the targeted low income and small holder farmers to buy and understand, respectively. Even, the personnel in the lending institutions and insurance companies do not totally understand WII. Simpler and affordable WII products need to be designed with the ability to cover more weather related agricultural risks, such as wind speeds, incidence of certain pests and diseases and fire.
4. Lastly, awareness and sensitization by the government or relief agencies on the benefits of WII and micro insurance for agriculture is necessary to build trust and increase numbers of insured farmers.

39 Josephine Muchwezi Mukibi, MicroEnsure

4.6. Universities and research bodies

The GTZ survey identifies eleven departments at Makerere University, Nkumba University and Uganda Martyrs' University working on aspects of climate change. Together with National Research bodies - such as the National Agricultural Research Institute - there are international research organisations such as the International Food Policy Research Institute working on the issues, though there is no umbrella entity guiding, steering or prioritising all this work, or feeding its results to where they could be used. Nor is there a central body to act as a repository or quality assurance mechanism.

Although there are pockets of good research and development, high level understanding and Ugandan technical / consultancy support available on climate change issues there was universal agreement from stakeholders that a much stronger role for research around a nationally mediated and prioritised research agenda was needed.

The challenge is to ensure that the research needed to enable Uganda to respond effectively is identified, prioritised and resourced, rather than Ugandan research capacity being drawn down to collaborate on disparate, foreign lead research which answers external research agenda's and lacks rigorous dissemination in Uganda. The National Agricultural Research Organisation, the Ministry of Water and Environment and senior representatives at Makerere stress an urgent need for a research prioritisation exercise to take stock of current understanding and identify gaps in knowledge. A further need is to establish a centre for climate change research in Uganda to act as a hub for this work but stakeholders doubted that the dynamism existed within Ugandan academia to drive such an initiative.

4.7 Concluding remarks on climate change adaption institutions and actors analysis

This chapter has attempted to document the considerable number of actors involved and activities now underway on climate change adaption in Uganda. In doing so it has identified a range of potentially very positive initiatives and a set of issues which require resolution or negotiation to unlock progress on preparing Uganda for the challenges of climate change. These include:

- The challenges facing the CCU and the need to bolster its resources and political influence or to

relocate all or some of its national coordination responsibilities to better resourced, more capable and well-positioned organisations. The Office of the Prime Minister could provide this and move towards activation of existing cross-sectoral, national to local institutions such as those in agricultural extension; environmental management, water resource management and disaster risk management to respond to climate change, rather than establishing new, costly and unwieldy structures.

- Poor coordination of the response to climate change is a deep seated problem across government, donors, the NGO community, the private sector and academia. There is an urgent need for strong coordination and leadership within and across these sectors.
- Most actors and around 50% of activities concern research, awareness raising or capacity building whilst there seems little financial support or appetite for real action.
- Existing difficulties with government implementation and poor governance threaten to derail adaptation efforts.

According to all stakeholders, climate change is now high on the Ugandan political agenda but the financial resource allocation and balance of inter-Ministerial influence within Uganda to respond to the issues are problematic. The entire allocation to Ministry of Water and Environment, from where the issue is being addressed, is only 2% of the national budget, and it is tasked with trying to influence much stronger ministries such as Energy, Agriculture.

Despite the political alertness, the budget for working on environmental issues is next to nothing. Rather, there is an expectation that industrialized countries will 'pay for the party'. This has been voiced at the highest levels with a senior government official stating that he expects all measures on climate change to be financed by the west and not through ODA. On the other hand many development partners are beginning to question whether separate and additional funding for adaptation is desirable or possible, given that effective adaptation may best come through existing ODA 'type' interventions; the growing recognition that adaptation and mitigation need to be integrated through low-carbon climate resilient growth; and the need to avoid duplication, additionality and parallel programmes.

Donor partners are also rightly nervous about the institutional capacity to absorb and spend new tranches of money for adaptation outside existing ODA mechanisms.

There is little capacity to absorb resources for climate change adaptation within government

UN Agency

At the same time commentators within government argue against mainstreaming of climate change and the importance of separately allocated funds:

It's important we don't just mainstream climate change - I do not believe in mainstreaming - if resources aren't clearly allocated then nothing will happen and the finance and support will not reaching the most vulnerable.

Government official

This case study also flags the hazards of inadequate analysis and communication on the issue which labels extant climate variability as human induced change and given Magengi's declaration, thus invites a political spat over who is responsible for the response. Other risks have come to light, including the precedents which suggest that climate funds may be misused, misdirected or embezzled.

These are all difficult challenges, and the urgency for their resolution comes not only from the social imperatives derived from continued vulnerability of Uganda and its people, but from the political imperatives to develop a system for adaptation governance and dispersal of climate finance, at amounts which one DP estimates will be greater than ODA in 5-10 years.

The forthcoming meeting to discuss the results of the GTZ actor landscape work represents an opportunity to make progress on coordination, but other more systemic problems will take time and concerted effort to resolve. A primary problem within these is the need for public sector reform to ensure that suitably qualified and motivated staff can be retained within government:

Of course there are problems with recruitment and retention in government... Even a PS only gets around 2.5m UgSh and its easy to get 5 or 6 times

more than that working for an NGO. Of course there are also problems with workshop culture and professional workshoping.

Donor

There are at least 60 or 70 international climate change jobs advertised each week on the Climate web server - why would people stay in government? The climate change 'industry' needs to wake up and we need a big change to get motivated and well paid people- otherwise, of course they will look for workshops and international meetings to collect allowances and contacts for future work.

Ugandan Academic

Notwithstanding these multiple, deep rooted and challenging problems, there are promising autonomous initiatives within Uganda which reveal its growing capability to address national priorities. The apparent lack of willingness among some donor partners to commit the significant resource needs so that Uganda can act on the imposed priority of climate change is perhaps understandable given these unresolved challenges. But at the same time this lack of commitment belies a lack of ambition, creativity and vision, and evidently shows back-peddling from earlier promises within the donor community.

Five: Public Awareness of Climate Change

As in most countries Climate Change has been an area of increasing debate within Uganda's media, with articles focused on the implications for Uganda, radio and television giving airtime to the issue, particularly in the run up to COP 15. This debate and discussion is mirrored across civil society and political institutions, through for example DANIVAs awareness raising work with its 700 CBO membership across the country and DfID's support to the Parliamentary Forum on Climate Change. But increased coverage and awareness doesn't necessarily translate to increased understanding or action within the groups most effected or able to affect change. Much depends on the quality, tenacity and modes of communication used and the socio-economic and governance landscape against which it takes place.

As part of its Africa Talks Climate initiative the BBC World Service Trust, conducted research to explore public understanding of climate change in 2009⁴⁰. The research saw twelve focus group discussions across Uganda and 18 key informant interviews with religious leaders, government, civil society, business and media people to explore how people perceive and think about the issue. The full report is a useful resource for those working on the issues and its findings and recommendations are summarised in Table 5.

⁴⁰ BBC World Service Trust 2010, Uganda Talks Climate: the public understanding of climate change, Research Report, British Council, www.africatalksclimate.com

Table 5. Summary of key insights and recommendations emerging from the BBC-WST trust research on Climate Change awareness in Uganda (BBC-WST 2010)

KEY INSIGHTS:

Knowledge gap: Neither the term nor the concept of 'climate change' is recognised by most Ugandans

Trees and changing weather: Ugandans associate deforestation to changing weather, proposing that 'trees bring rain' but most do not recognise the role that trees play in absorbing carbon dioxide

Local to global problems: There is low public awareness that local environmental problems could have causes that extend beyond Africa, yet opinion leaders consider that climate change is a global problem with a global solution to be driven and financed by developed countries

Communication gap: Opinion leaders are concerned that the public is ill-informed about climate change and stress that communication needs to be relevant to peoples lives and their understanding of their environment

RECOMMENDATIONS:

1. Information and communication needs of Ugandan citizens must be part of the national response to climate change
2. Uganda's response to climate change will be determined by the availability and quality of information
3. The information needs of the rural poor are an immediate concern, and there is an unmet demand for information and resources targeted and communicated in a way which will enable them to cope with existing variability and future climate change
4. The international climate change discourse is inaccessible to most Ugandans and information and debate are required to promote citizen engagement in Uganda's response to climate change

The study finds that outside the professional cliques of Kampala, levels of awareness about climate change are limited and state that this has implications for Uganda's preparedness or response to climate change. A common perception is that weather and weather related disasters are 'acts of god', a difficult position to reconcile with improving citizen agency and government accountability for adaptation. Whilst the study is a useful starting point and its recommendations stand, its results and their interpretation diverge slightly from the testimony and evidence gathered by this research. Firstly, rather than insufficient debate, stakeholders attested to a very significant increase in the volume of coverage and attention given to the topic but complained about a lack of targeting or contextualisation of this information to promote action:

Climate change is a boom area - there are now masses of articles and projects and but no real coordination, coherence or direction. Certainly there is no guidance from the Climate Change Unit or the Climate Action Network about what Uganda and its people should do - they are not fulfilling their roles.

NGO

There is a lot more awareness about Climate Change of late - it is there. But now there is a need to act. There were lots of national level workshops preparing for COP 15 but not much has come of it.

Government source

In 2009 there was a big effort on awareness at a national level in the run up to COP 15 using radio and TV but this isn't reaching the community level. They know things are changing but don't understand the issues or what to do about it.

NGO

In this way the BBC study may overstate the role of information and communication in preparing for climate change. Whilst important, the value of communication is conditional on people having the resources, capacity, incentives and the political will to use and act on information.

Secondly, this study documents a risk and fear that high levels of unsophisticated media coverage, donor and NGO effort and their interrelationships with the political response may be cultivating perverse outcomes which may act to stall action, divert resources or derail efforts and accountability in other priority areas. There are two key issues here:

1. Duplication and diversion of resources.

Numerous stakeholders spoke of the 'circus' of awareness raising workshops which government officers attend on climate change in return for generous sitting allowances. They say that a lack of co-ordination combined with an eagerness by almost all development actors to 'do something' on climate change is leading to duplication and diversion of limited capacity and government resources away from targeted action on climate change and in other key sectors.

2. Misattribution and absolution for poor performance and governance.

With the rise of the climate change agenda and its capturing of the media and donor 'zeitgeist' there is a fear that it could be used as a 'catch all' bogeyman against which to attribute unconnected or only partially related problems. This is particularly the case where irresponsible or poor quality analysis, journalism and miscommunication further cloud and confuse the already uncertain knowledge of how future climate will change. This is also linked to the political / policy response to climate change and critically has major implications for funding allocation and additionality (see Section 4.7). Although they did by no means doubt the significance of the threat posed by climate change to Uganda's development, the fear was voiced by donors, government and NGO representatives that climate change risks being used to veil government underperformance in other areas⁴¹. As an illustration of this, the New Vision reported the following in response to the Mbale landslide:

Disaster Minister Prof. Kabwgyere said a downpour triggered off the landslides from about 800metres above Nametsi trading centre... but they were not a surprise because of climate change and the El-Nino rains.

New Vision March 3, 2010, p2

⁴¹ DANIDA/GTZ/CDI/CCU

Whilst the article also explored other potential risk factors which exacerbate the landslide threat, there is a risk that, supported by low awareness, lack of analysis and poor journalism, climate change may be used as a tag to absolve government and other actors from taking affective action in key areas such as environment, infrastructure, food security and health. A source at the UNFCCC focal point on climate change said that:

people are blaming this landslide on climate change, as they are so many droughts and floods, but the weather has always caused problems.

A further example was provided where the washing out of the new Kampala bypass was heralded as an impact of climate change, rather than the more likely poor planning of levels and drainage⁴².

Greater levels of public awareness, debate and information are critically important for preparing Uganda for climate change, and it is clear that efforts in this area are increasing. For example, the UNDP are assisting the CCU to increase public awareness through secondment of a UN Volunteer⁴³, U-CAN, ACCRA, CLACC and the UN Territorial Approach are among many other projects on climate change working at local, district and regional scale to increase awareness. However as explored here there are potential problems associated with 'awareness raising' and important nuances in the way such activities are conceived, structured and coordinated which need to be understood in order to better prepare Uganda for climate change. Corresponding recommendations are made in the concluding Chapter.

⁴² GTZ

⁴³ Philip Gwage pers comm

Six: Regional and International Actions

Supporting the engagement of Uganda in international negotiations has been a priority within donor support to Uganda on climate change with the Government of Denmark in particular providing around US \$ ½ Million for preparation and participation by Uganda in the COP process. This support has seen very active involvement by Uganda and it has taken on international leadership roles as the Vice President of the COP Bureau and as a member of the CDM Executive Board.

This support culminated in the participation of over 50 governments of Uganda delegates at COP 15 in Copenhagen, together with about 25 Ugandan CSO representatives (supported by Oxfam).

Uganda was aligned with the Africa Groups Negotiation Text. Key elements of this position on adaptation were:

1. Objectives, scope and guiding principles: to establish an action-oriented adaptation programme based on the NAPA;
2. Implementation of adaptation action:
 - a. prioritise the short term adaptation needs
 - b. adequate, predictable and sustainable finance for adaptation
 - c. distinct scaled up finance from ODA
 - d. engagement of all stakeholders
3. Means of implementation
 - a. commitment from Annex 1 parties should be legally binding with reporting and verification mechanisms

4. Risk reduction, management and sharing
 - a. public private partnership to catalyse engagement
 - b. multi windowed mechanism for risk reduction in line with country driven approaches to support vulnerable regions, groups, sectors and ecosystems
5. Institutional arrangements
 - a. predictable and adequate financial resources, technology transferred capacity building to developing countries
 - b. existing institutions be enhanced
 - c. new adaptation committee be established as a clearing house for information dissemination
 - d. national and regional coordinating centres be established
 - e. adaptation centres be established
6. Monitoring and review of adaptation and support established to ensure compliance in meeting commitments under Article 4 (para 4.3, 4.4, 4.5)

The Ugandan delegation was disappointed with the outcome of the COP 15 negotiations. As part of the LDC and G77 coordinators at Bali they had promoted a long term call for finance and technology transfer to enable adaptation. The lead negotiator reflects on the lack of progress at Copenhagen and questions the value of the Accord and the commitments of the north:

we couldn't get what we'd been expecting and will need to extend the lifetime of the working groups. Things have gone awry. Kyoto was a good basis but when the USA walked out it was a real pity. We shouldn't destroy Kyoto as it's all we have and it was a big blow - we needed them to ratify it. On the Copenhagen Accord, there was so much pressure to sign but I want to ask, how the Donor Partners see it? Are they really committed to \$30 billion? It's mentioned but I'm not convinced it will be delivered. After all, in 2001 the EU promised E400 M from 2005 but nothing has come. It's just a political statement. How are they going to ensure political commitment? Are they really motivated to deliver?

Government source

Other non-state actors involved in the COP/UNFCCC process attest to the positive role played by the Ugandan delegation but highlight where the difficulties in negotiations lie:

We and other CSOs played a role at COP as part of the delegation lobbying on CDM - we want to see real benefits for poor communities. But the problem with all these negotiations is the problems with finance. What should assistance look like and how should it be delivered so that it gets to most vulnerable. That question needs to be answered before the developed countries will pay. To answer it needs a broader picture and is about governance across the board. There is nervousness to give to Uganda after the scandals of the Global Fund. There's a real danger that money given to Uganda to adapt will be captured by the elites.

NGO

Although with donor support Uganda has made a good fist of representing its needs and those of Africa and LDCs at international negotiations a set of issues are flagged through this engagement:

1. Negotiations are led by the CCU / Department of Meteorology, the Focal Point for Climate Change. According to individuals in the unit they spend around one quarter of their time servicing the UNFCCC and COP. According to other actors, including the donors that fund them - this figure is around 70%. The result is that the little human resource, capacity and technical expertise available and mandated to coordinate Uganda's domestic response spend the majority of their time servicing the needs of the international community.
2. Informants claimed that some Ugandan delegates were just there for the per diems and travel allowances. The benefits and the costs of the mass involvement of GoU delegates in these negotiations needs to be better reconciled with the current lack of resources for adaptation action on the ground in Uganda.
3. There appears to be an impasse in terms of funding for adaptation which is as yet unreconciled. This relates to the insistence of developing country governments that money for adapting to climate change needs to be delivered separately, additionally and with no conditionalities, and yet a growing recognition that funding adaptation separately or outside of existing ODA initiatives invites problems including:

- high transaction costs, risks of additionality and double accounting;
- compartmentalizing or projectising adaptation efforts whilst core ODA programmes may be the most efficient way to reduce vulnerability;
- promoting high cost adaptation projects when the low carbon - climate resilient growth agendas require a more sophisticated integrated approach on growth and social vulnerability.

Furthermore, there is no clear agreed way forward for how adaptation funding will be delivered, dispersed and governed. There appears to be little coherence or consensus in how best to deliver and govern adaptation finance.

Seven: Gender Analysis

For efficiency and completeness, a review and analysis of the gender dimensions of climate change vulnerability and response in Uganda has been included as a discrete section here, rather than as bolt on comments in earlier sections.

Recent work has done much to elucidate the rationale and modalities for improved integration of gender equity across the climate change agenda⁴⁴. In part these efforts respond to a UN CSD 2006 meeting on the issues which concluded that:

- women, because of social roles, discrimination and poverty are affected differently by climate change and extreme weather events;
- women are not sufficiently represented in decision making processes or in the development of adaptation or mitigation strategies;
- women should contribute not because they are 'vulnerable' but because they have different perspectives and experiences to contribute.

Because of the differentiated and often unequal roles between women and men within society and local communities, women have the capacity to be impacted in an unequal manner and to be primary arbiters of effective adaptation. Without robust handling and integration of gender issues and equity within the climate change response there is a threat of unequal impacts and deepening of gender inequity. The UNDP resource guide on gender and climate change concludes that: improved understanding and analysis of gender

and climate change must be integrated into examining the issues and response; information must be gathered, documented and effectively communicated; that international and national policies and plans must be influenced to integrate gender issues; and gender issues should be incorporated and women should participate when developing strategies, creating awareness and building capacity.

As well as quantitative assessments of the number of women involved in climate change activities, qualitative analysis is needed to appraise whether this engagement is meaningful. Rodenburg (2009) provides a set of qualitative criteria for screening policy instruments. A combination of these approaches is applied here to appraise where, how and how effectively the response to climate change in Uganda has integrated gender equity considerations. Specifically, based on a review of key documents, secondary data and key informant interviews a qualitative assessment has been made of the level of gender inclusivity and the level to which gender equality is embedded within the various aspects of Uganda's response to climate change. The key distinction between gender inclusivity and gender equality is that the former refers to the involvement of women in decision making and debate whilst the latter considers whether this translates into genuine equal rights, responsibilities and opportunities of women and men⁴⁵. A brief text justifies the indications provided in Table 6, however these judgments are not equivocal and invite discussion and debate.

Table 6. Analysis of degree to which a gender inclusive approach and gender equality are embedded in aspects of Uganda's response to Climate Change

Y - Yes N - No ? - Inconclusive	Gender inclusive approach	Gender equality embedded
Gender equity in Uganda	Y	?
The gender analysis provided in Table X demonstrates that Uganda is making good progress nationally on the representation of women in key positions, with around a third of ministers, MPs, technical and professional staff, legislators and senior managerial positions occupied by women and near equity in school enrolment levels. However, disparities in income levels, adult literacy and the gender empowerment measure indicate that Uganda is some way off from genuine gender equality.		
Gender in CC Policy and Development	Y	?
In international analysis the Ugandan NAPA has been noted as paying particular regard to gender issues in its genesis and focus. It pays specific reference to the differentiated impacts of CC on women - for example, citing that dowry payments are sought to enhance resilience to drought which leads to girls marrying at a young age and being exposed to STDs. Gender issues were also used to rank NAPA projects, featuring explicitly in two projects, and is an explicit feature of the PEAP and Disaster Management Policies. However gender is not mentioned in the MAAIF work on CC and receives piecemeal handling in the DWRM study. Policy appears gender inclusive but there is a lack of detailed information available on how gender will be differentiated in policy implementation and rather, the references whilst positive, appear largely totemic and rhetorical.		
Gender and CC actors landscape	Y	Y
Women are well represented in the actors landscape on CC in Uganda, particularly within NGOs and CBOs, the donor community and senior levels of government working on the issues. The Minister for State for Water and Environment, the Minister for Water and the Minister for Environment are all women, although the CCU is not gender balanced. Because of this inclusion, beyond the community level, it is felt that women and men have equal opportunities to participate in the CC agenda in Uganda.		
Gender and CC awareness	Y	?
Gender considerations feature prominently in much of the awareness raising literature on CC in Uganda (see Oxfam 2008, BBC-WST 2010 etc) and testimony of stakeholders suggests that there is equitable representation in awareness raising and capacity building events, thus in terms of the content and recipients, at a professional level there appears to be a level of equity. However given differences in literacy levels and access to information at a community level (for example women may be too busy with chores or may not be allowed to attend community meetings) it is unlikely that there is equality in terms of awareness		
Gender and International negotiations	Y	Y
According to informants, Uganda is well represented by women at international negotiations (making up 1/3rd of delegates at COP15) and are represented in the most senior positions within the delegation where they play a critical role in embedding gender equality in an African context within those debates and decision making processes.		

44 UNDP 2009, Rodenburg 2009 and collated by Terry 2009

45 UNDP Gender Equality Strategy 2008-2011

Gender focused action on CC Adaptation	N	N
The lack of gender inclusivity and equality within concrete action on climate change adaptation is because to date there has been very little action at all. Although the INGOs and CBOs have established or are establishing pilot projects for adaptation, there is little evidence that poor communities of either gender have benefited to date.		

Table 7. A snapshot of gender inclusion and equality indicators for Uganda and Germany⁴⁶

Country	% female adult lit. rate	% male adult lit. rate	Female combined gross enrolment ratio %	Male combined gross enrolment ratio %	Earned income ratio of female to male	Gender empowerment measure (GEM)	Seats in parliament (% held by women)	Legislators, senior officials and managers (% women)	Professional and technical workers (% women)	Women in ministerial positions (% of positions)	Year women received the vote
	1997-2007 ^a	1997-2007 ^a	2007 ^b	2007 ^b	2007 ^f	2007	2008 ^d	1999-2007 ^e	1999-2007 ^e	2008 ^h	
Germany	..	..	87.5	88.6	0.59	9	31	38	50	33	1918
Uganda	65.5	81.8	61.6	62.9	0.69	49	31	33	35	28	1962

The levels of gender inclusion in the climate change agenda in Uganda are promising, in particular where this

⁴⁶ Human Development Report 2009 inclusion has been driven autonomously. For example the UNFCCC makes no reference to the need for a gendered response to climate change and yet Uganda's response has emphasised the relevance of gender in its national response. However, as already explored, detailed plans, policies, and most of all action are lacking to translate this into genuine gender equity throughout the way Uganda responds to the challenge.

Women are well represented at a policy level. For example, Maria Mutagamba, the Minister of Water represents Uganda in the COP, is a powerful advocate and works for the inclusion of the gender dimension in the climate change agenda in Uganda. But there is no real strategy or plan for implementation

NGO

Our Ministers and other senior women are capable and committed, for example Winnie Maseko MP, and Chair of the Natural Resources committee, and

Christine Natengu of Environment Alert are very impressive. Uganda is gender sensitive but we lack resources to do very much about it. We are aware of the issues but where will the money come from to act?

Government Agency

It seems that whilst there is recognition of the importance of the gender dimension of climate change and women have been included in activities and awareness raising around the issues, there is a wider failure to develop pragmatic and strategic plans to build resilience or act on the vulnerabilities. This not only threatens to reverse poverty reduction and economic gains in Uganda, but because of the nature of climate change impacts and their differential implications for women and for men, girls and boys, to reverse gains in gender equity.

Eight: Conclusions and Recommendations

This report traces how the elevation of climate change up the global political and development agendas has translated into heightened political interest and an escalation in the number of actors involved and initiatives underway around the topic in Uganda. In particular, political momentum has been demonstrated in the run up to COP 15 and the National Development Planning process which has seen the formation of a Parliamentary Forum on Climate Change; the setting up of a coordinating Climate Change Unit within government; the establishment of a civil society platform in U-CAN; targeted initiatives to integrate climate change into key sectors of water resources, agriculture and disaster management; a broad array of research, awareness raising and communication activities and the comprehensive mapping of the landscape of actors working on the issue. This work, much of it funded and supported by development partners and NGOs, in particular the Government of Denmark; the UK Department for International Development; German Technical Cooperation and Oxfam is commendable. However, this case study identifies outstanding issues and interrelated problems which threaten to undermine these efforts to prepare Uganda for climate change adaptation. These include:

- **Capabilities:** Pockets of technical expertise and competence to respond to climate change exist within Ugandan government, line ministries, NGOs, research institutions and the private sector. However they are spread thinly and appear overwhelmed by the challenges of responding to a new, complex

and cross-cutting challenge around which there is much uncertainty. Additionally, this limited capability seems drawn towards outward facing initiatives such as international negotiations and the demands of external actors, rather than focusing on the immediate domestic needs of Uganda. The international support available on climate change to extend these capacities is not reliable in terms of its quality and the adequacy of finance, however this latter issue is confused through problems with absorptive capacity, governance and unresolved political and practical arguments regarding adaptation finance.

- **Resources and finance:** Connectedly the financial and technical resources available to Uganda to adapt to climate change are very limited both because of a lack of prioritisation and finance allocation within the GoU and an apparent reluctance by the development partners to mobilise adaptation finance. As already mentioned there are complex and competing positions around adaptation finance that require resolution. Dilemmas include the difficult delineation between funds for resilience and resource security in the face of 'normal' climate and pressures and funding for anthropogenically induced climate change; funding as part of or through existing ODA channels vs. new arrangements; difficulties in calculating the level of funding required and the lack of agreed indicators for monitoring outcomes; the levels of conditionality and control available to donor vs. recipients. It appears that answers to these questions need to be played out to unlock large scale global funding for adaptation. The High Level Panel on Climate Change funding set up after COP 15 with Meles Zenawi representing Africa aims to address these but it is likely that they are best answered at a country specific level which considers the nuances of local context.
- **Policy and process:** The quality of policies relating to climate change adaptation and the processes adopted in their genesis are mixed. The NAPA, though a reasonable 'first stab' at preparing the country seems unlikely to be funded in its current form, even though it could provide useful benchmarking. Given that the National Development Plan is also unlikely to adequately handle climate change, much

will depend on the quality and coherence of the proposed National Climate Change Policy and of sectoral plans on climate change under development or up for review.

- **Coordination and leadership:** Related to this and the other factors already mentioned, the level of leadership and coordination across and within government, development partners, research and NGOs still falls well short of that required to adequately respond to climate change. A vacuum of meaningful co-ordination and leadership on the issue invites a wasteful, disparate, externally driven and ultimately ineffective and potentially damaging response in Uganda
- **Implementation:** Notwithstanding improved policy, finance and levels of coordination, implementation of adaptation actions will be an enormous challenge. This assessment is based on difficulties in extant policy implementation and the absence of a working institutional architecture to deliver adaptation. Lack of implementation and action is likely to promote further social and gender inequity as the most vulnerable are impacted.
- **Information and communication:** Examples are given where an absence of information or the inappropriate interpretation of available information can lead to perverse outcomes on climate change. Whilst it should never be assumed that better information will lead to better outcomes, there are key information gaps which need to be filled, such as a national to local appraisal of strategic economic, environmental and social vulnerabilities to prioritise and target action and funding. The ways in which information and uncertainty are communicated is also critical.
- **Systemic issues:** Problems with the political ecology, incentives, governance, corruption, public sector recruitment, retention and motivation, and their linkages to the current development paradigm in Uganda create a very challenging context for any effective action on adaptation. Power imbalances, low accountability, and styles of leadership within government; and the 'brain drain', workshop culture,

denial of autonomy and aid dependency brought by donors conspire to mire the response to climate change.

Above all, these problems flag the need for renewed urgency and global political commitment to control greenhouse gas emissions and to prevent further climate change. Assumptions that new funding can be effectively channelled to poor countries to help them adapt to climate change, in the light of this case study, are bold at best and reckless at worst. Based on the current assessment, Uganda's governance and resourcing challenges, and the lack of reach and capacity of the state, mean that it may be unable to effectively adapt to climate change. There is a risk that no matter the level of activity and finance on adaptation, the poorest and most vulnerable will suffer the most significant consequences of climate change.

More optimistically, the observed political interest and potential for finance now need to be harnessed to move from disparate activities unlikely to yield results towards concrete, coordinated action and agreement on how best to enhance the resilience of the most vulnerable. The challenge of adaptation also invites fresh thinking on new models of finance and ways in which systemic problems with existing ODA can be overcome. These tasks are urgent, not only because of the social imperatives to reduce vulnerability, but because the perceived failure of COP 15 and the lack of progress in current adaptation efforts could see political interest wane and the window of opportunity for meaningful action to close.

In order to support much needed progress HBF are presented with the following recommendations:

1. Lobby on the renewed urgency of reaching agreement on GHG emission control given the observed and possibly insurmountable systemic challenges facing adaptation.
2. Establishment and support to a national or regional research and advocacy facility with the mandate to promote the responsible interpretation and use of climate science and change scenarios; track the costs, benefits, efficacy and outcomes of government and development partner effort and investment on climate change adaptation to provide institutional incentives, promote integrity and accountable performance. A

particularly useful focus would be on bridging the science and finance debates around attribution and additionality. Based on theoretical understanding of institutional incentives (based on a review of hundreds of development interventions by Arturo Israel), climate change adaptation has a particularly low level of built in performance incentives. CCA has low 'task specificity' - there are many ways to attainment, success criteria and signals are distant and unclear and a wide range of stakeholders are responsible. It also has few 'competition surrogates' that is, it needs to be lead by government and few people are tracking performance. Low specificity tasks with a dearth of competition surrogates operate under an 'enormous handicap, lacking any powerful incentives for performance'⁴⁷ Independent or social auditing and performance monitoring of adaptation efforts by government and donors are therefore vital mechanisms for supporting effective action, though this work is not being done.

3. Promote responsible and tenacious reporting and media work. The Ugandan media and other 'communicators', politicians and NGOs in Uganda should be supported in their understanding of climate change, its uncertainties and its relative role in precipitating problems seen in the country. Where necessary this needs to be supported by targeted, prioritised and good quality research. Efforts should be made to identify where climate change problems are misused or misreported. If citizen agency and political awareness are to play a role in better preparing Uganda to climate change, then the information which stimulates this must be credible and objective. It is particularly vital that NGOs, the government, donors and even communities do not use climate change as a 'crisis narrative' to win funds and influence without a grounded evidence base or measured analysis of the climate related issues they face. Bring key issues into the light i.e. International response, government response, practical actions, what it means for Ugandans.
4. Support for the development of the National Climate Change Policy and for targeted research on the national and localised economic and social impacts of climate change to refine understanding of priorities and economic returns on adaptation

investment. This should also include support for coordinated and prioritised action and training; a communication strategy to clearly identify who needs climate information, when and in what form and their capacity to use it in order to better including a review of current communication measures and their failures, and resources and structures required to meet those needs; and an advocacy strategy developed and owned in Uganda to identify the targeted actions required to influence and advocate at a high level internationally and within Uganda to broker a fair and appropriate deal and action plan.

5. Advocacy for the strengthening or relocation of government coordination responsibility. This could usefully promote the disaggregation of responsibility for international negotiation from domestic adaptation planning within the CCU and the locating of this latter task within a better suited entity such as the OPM.
6. Targeted research and development work to unlock the dilemmas within funding debates and reconciliation of the disconnect in financing expectations within government and donor communities. Development of compromise models which overcome the inadequacies of current ODA and adaptation finance mechanisms and new models of adaptation funding disbursement which target the most vulnerable communities.
7. Meaningful engagement of Private Sector through a regional conference on opportunities and challenges facing PS through adaptation, including support for the testing, brokering or advocacy around weather indexed insurance as a CCA response.
8. Targeted research and advocacy on the systemic problems and solutions to the 'implementation gap' facing countries in SSA - innovative thinking about civil service motivation and reform etc and work to unlock the existing capabilities within and financing for existing institutions who will play a key role in reducing vulnerability - NEMA; agricultural extension; DRR; water resource management. To include detailed political economy/ecology analysis to add a level of sophistication to understanding the political barriers and opportunities to pro poor adaptation.

⁴⁷ Israel 1989

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About the Heinrich Böll Foundation

The Heinrich Böll Stiftung / Foundation (HBF) is the Green Political Foundation, affiliated to the "Greens / Alliance '90" political party represented in Germany's federal parliament. Headquartered in Berlin and with offices in more than 25 different countries, HBF conducts and supports civic educational activities and projects world-wide. HBF understands itself as a green think-tank and international policy network, working with governmental and non-governmental actors and focusing on gender equity, sustainable development, and democracy and human rights. HBF's Regional Office for East & Horn of Africa operates in Nairobi, Kenya, since 2001.

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