Title: Enabling adoption of climate resilient policies in Uganda: what do policy makers and actors need?

Name: Lingani Mpho Matlou

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Supervisory Committee: **DR Edidah Ampaire Lubega**

DR Caroline Mwongera

DR Treasa Galvin

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LIST OF ABBREVIATIONS

CC	Climate Change
IITA	International Institute of Tropical Agriculture
IFAD	International Fund for Agricultural Development
CCLA	Climate Change Learning Alliances
NA	National Environment Management Authority
NAP	National Agricultural Policy
NCCP	National Climate Change Policy

EAC	East African Community
ICT	Information Communication Technology
PACCA	Policy Action for Climate Change Adaptation

DEDICATION/ACKNOWLEDGEMENT

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ABSTRACT

The global exacerbating effects of climate change require timely and continuous innovative strategies that facilitate proper functioning of climate related policies. However, this entirely lies within the ability of policy makers and actors' to adopt climate related policies. Adoption would equally require realization of policy makers and actors' needs. Policy makers and actors' are in this regard challenged to ensure that the climate related polices within different government ministries, entities, and sectors jointly address climate change. Challenges affecting adoption of policies include inappropriate ICT, weak institutional systems, and lack of understanding on the importance of gender and climate change. The study adopts a multi-dimensional approach to investigate the ICT, institutional and gender related factors that affect adoption of climate related policies. Data collection from 113 policy makers and actor's involved use of the purposive sampling technique, respondents were from Kampala, Mbale, Nwoya, and Luwero in Uganda. Methods used to elicit information from the policy makers and actors' included semi-structured and key informants interviews. While quantitative data were analysed using both descriptive and inferential statistics, qualitative data were summarised through content analysis. Major findings show that 49% of the policy makers and actors possessed a postgraduate qualification. Findings also revealed that the most indicated needs involved capacity building 84% on the importance of gender and climate change, while 82% indicated that they needed opportunities for learning from other countries on implementation and 61% that they needed creation of climate change information hubs. While the study concluded that policy, makers and actors lacked an enabling environment to enable policy adoption. It recommended that policy makers and actors needed adequate capacity building to enable adoption of policies.

CHAPTER 1

1.0. INTRODUCTION

1.1 Background

A majority of the world's population lives within rural settings and heavily depends on agricultural activities for a livelihood. These are mostly characterized by mixed and sedentary farming with the use of simple economically sound practices such as growing rain fed crops and rearing pasture fed livestock, (FAO, 2013). Equally due to socio-economic challenges that render the majority of the population in Sub-Saharan Africa incapable of applying climate adaptable agricultural practices(Bryan *et al.* (2013), the risk of food insecurity and hunger is likely to rise. Certain regions of Sub-Saharan Africa like East Africa whose rural population is estimated to be poor yet is primarily dependent on agriculture are in dire need of support mechanisms and can equally prove to be resilient to potential effects of climate change with specific tailor made approaches (Benjamin *et al.*, 2014). Uganda, in this context, as the country of study is faced with adverse effects of climate change due to its low/inadequate adaptive and mitigation vulnerable capacities (Mubiru, 2010). This is further aggravated by lack of institutional capacity and inadequate skills for climate adaptation including lack of disaster preparedness (Kasimbazi, 2013). Furthermore, worth noting is that in driving climate change adaptation and mitigation is the government through political and public administration systems that include organisational structures, managerial practices, and institutional values, which officials enact. Added to these actors are the Non-Governmental organisations (NGOs who also play a critical role in the policy environment. As a result, these make up policy makers and actors and actors who play critical decision-making roles concerning policies that factor in climate change issues. However as studies indicate the rapid turn of global challenges associated with the complexities of climate change need competent policy makers and actors and actors. In the face of climate change policy makers and actors and actors are expected to make decisions that show the ability to apply approaches that involve that are able to circumvent the effects of climate change across the many spheres that involve human and natural dimensions (Omisore, 2014).

1.2. Statement of the problem

Though located in a region where rainfall amounts are exceptionally high, ranging from 750mm-2100mm (UBOS (2016), Uganda is not an exception to the global effects of climate change. With more than 70% of the rural population highly dependent on agricultural activities for a livelihood USAID (2015). Agriculture and other socio-economic activities are predicted to aggravate the effects of climate change if no appropriate adaptation and mitigation measures are put in place (IPCC, 2014b). More prone to the effects of climate change are rural communities in Uganda . Specific to this is their heavy dependence on rain fed agriculture, while rainfall has been shown to be occurring variably across the country (Osbahr *et al.*, 2011). The effects so far recorded include prolonged dry seasons Okonya *et al.* (2013), poor crop yields, increased pests and diseases, increased soil erosion (Apuuli *et al.*, 2000; Hisali *et al.*, 2011). Also, much related to heavy dependence on agricultural activities is high population growth leading to land overuse and depletion of land resources as a result of low uptake of technologies that can counteract land degradation (Ebanyat *et al.*, 2010) . In response, the government of Uganda has over the past years created response measures through policy formulation and review. These policies relate to natural resources, agriculture and the environment. The policies are meant to incorporate and address climate and climate change related issues across many other sectors of the country considered vulnerable to climate change. The overall outcome is to achieve climate resilience which is described by Adger *et al.* (2011), as characterized by the capacity to absorb distresses without changing overall system function. The ability to adapt within the resources of the system itself, and the ability to learn, innovate, and change. However, despite this achievement, several authors have criticized that there are weaknesses in adoption of the policies as within agriculture there are still challenges with access to credit, extension services and security of land tenure (Hisali et al., 2011). Equally, (Ampaire *et al.*, 2015a; Ampaire *et al.*, 2017; Environmental Alert, 2010) , suggest that low adoption of policies is linked to limited enforcement of the policies and regulations, minimal involvement of non-government actors and local government. The authors further suggest that non-functional implementation structures and unclear roles hamper adoption of climate resilient policies. Ampaire et al. (2017), expands on this statement and indicates that also linked to poor adoption of policies is lack of policy formulation consultation especially between national and local level officials. Their findings also concur with those of (Okolo *et al.*,

2015). This may suggest a need to understand the needs of policy makers and actors for change in policy implementation to take place. The authors also suggest poor coordination among the climate change relevant sectors despite mention of joint planning in the NCC as no clear plan of activities exists. Their findings suggest that adaptation and mitigation may be difficult to achieve if adoption of climate change policies is weak. Furthermore, they suggest that a lack of proper coordination leads to duplication of activities among the sectors as in the case of National Environment Policy and the Land Policy that both promote land stewardship.

Climate change is stated in the National Climate Change Policy (NCCP) GoU (2015) as cross cutting, suggesting that other than the previously mentioned key sectors , sectors involving groups such as children, youth, women and men are duly affected by climate change especially within agriculture. Acosta *et al.* (2015); propose that the climate related policies are still far reaching in addressing the needs of the aforementioned especially in relation to gender and climate change as firstly gender allocated budgets remain low at district and sub-county level (Acosta *et al.*, 2016). Secondly, gender related issues were indicated to be limited to description of women's issues and only recognized through commemorations. The silence in relation to social construction of issues that concern gender and climate change may suggest misconceptions by policy makers and actors, which alludes to understanding their needs.

In addition, the integration of climate change policies into the country's sectors has remained a challenge for Uganda at both central and local government level. This challenge seemingly associated with top-bottom approaches has been argued to hamper effective adoption to achieve adaptation and mitigation at district level (EMLI, 2015). This also suggests further understanding of policy actors' needs to capacitate both the central and local government.

Also, in a study by Rutting *et al.* (2016), that applied the scenario guided policy planning in Uganda , results show that the policy making process in Uganda is sometimes too slow and lengthy as a result of too many bureaucratic channels. Applying the scenario based planning in this case almost seems incompatible unless adjustments to reduce the bottlenecks are applied. Additionally, the authors cite a lack of transparency in availing policy documents especially the drafts by those leading their formulation. This is identified as a barrier to ownership and thereby impeding adoption. This also indicates a gap that needs understanding what policy makers and actors require to guide appropriate implementation.

It is on this basis that a study will be carried out in four districts of Uganda (Kampala , Nwoya, Luwero and Mbale) to investigate the needs of policy actors to establish the measures that can enable the adoption of existing and future climate resilient policies.

1.3. Research question

What are the needs of different policy makers and actors across governance levels in relation to adoption of climate resilient policies in Uganda?

1.3.1. Specific research questions

The following specific questions are linked to adoption of climate resilient policies in Uganda.

i. What information, communication and technology needs of policy makers and actors affect adoption of climate resilient policies in Uganda?
ii. What are the institutional needs of policy makers and actors affecting adoption of climate resilient policies in Uganda?
iii. Which gender related needs of policy makers and actors affect adoption of climate resilient policies of different policy makers and actors across government levels in Uganda?

1.4. General objectives

To analyse the needs of different policy makers and actors across government sectors (district,local) affecting adoption of climate resilient policies in Uganda.

1.4.1. Specific Objectives

To establish the information, communication and technology needs of different policy makers and actors that affect adoption of climate resilient policies across government levels in Uganda.

To determine the institutional needs of policy makers and actors affecting adoption of climate resilient policies across government levels in Uganda.
To investigate the needs of policy makers and actors in relation to gender and climate change that affect adoption of climate resilient policies across government levels in Uganda.

1.5. Significance of the study

The proposed study is based on a more interactive approach which will be significant to establishing the needs of policy makers and actors. This will further enhance the development of the body of knowledge required to drive adoption of climate resilient policies to achieve adaptation and mitigation across government and non-government sectors (national , district, local) in Uganda. The study will also help researchers, government, policy makers and actors, students and other relevant stakeholders acknowlege key issues in climate change.

Identifying the institutional needs of policy makers and actors and actors will enable better approaches and informed strategies. The study will also help strengthen the capacity of policy makers and actors to widen their knowledge to make better informed decisions based on evidence drawn from this study.

The study also seeks to understand the information needs of policy makers and actors and actors in Uganda. This will help devise interventions that equip policy makers and actors and actors with the knowledge and skills needed to address the challenges related to policy and ICT. Again, this will help policy makers and actors appreciate the impact of ICT on policy issues.

The study will provide an indepth understanding of needs of policy makers and actors in relation to gender and climate change. This will help establish issues that policy makers and actors and actors face in relation to gender and climate change, especially the relevance of gender in climate change. Furthermore, the study will aid policy makers and actors in the direction they need to take to tackle gender and climate change.

CHAPTER 2

2. LITERATURE REVIEW

2.1. Introduction

This chapter reviews existing literature relating to policy adoption and evaluates key theoretical and conceptual frameworks used in this research. These are the Cultural Theory of Risk and the Policy Adoption conceptual framework. The theory and conceptual framework will be contextualised to policy adoption in Uganda.

2.2. Climate Change

Climate change as defined by UNFCCC (1992), means a change of climate which is ascribed directly or indirectly to human activity that modifies the structure of the global atmosphere and which is in addition to natural climate variability, observed over comparable time periods. Climate change is viewed by several climate change proponents (development organizations and scholars) as occuring with heightened irreversible impact on the environment and human life (Stern, 2007). The general arguement is that human activities are major contributors to climate change contributing to global warming through green house gas emissions (GHGs), which are worsened by population increase and demand increase for human consumption needs. Contributers of GHGs are in this context argued to be increased land use such as agricultural activities and infrastructural developments (IPCC, 2014c) . Carbon emmissions from industrial driven activities are also argued to be culprits of climate change drivers. Observable effects of climate change have been attributed to extreme weather patterns such as a rise in temperatures, longer dry spells, extreme flooding, transboundary pests and diseases, additionally its effects are reported to be manifesting at varying degrees across the globe (FAO, 2011). The presentation of climate change variations indicates that adoption of climate resilient measures for adaptation and mitigation will have to be needs specific based on evidence based approaches involving inclusion of actors such as policy makers and actors.

Proponents such as Bostrom *et al.* (1994) have however argued that while scientific research shows the reality of climate change, a gap exists in the manner the general public and policy makers and actors view and understand climate change. With this view the urgency in realization and need to address climate change may be misjudged even with the formulation of climate resillient policies.

On the other hand Hulme (2009), in his presentation on 'Why we disagree about climate change', holds the view that climate change is basically viewed differently by scientists depending on the disciplinary practices, an example is that a natural scientist would fully concur with climate change and associate it with natural phenomenoma.While a theologist would perhaps associate it with human phenomenom linked to diversion from expected societal beliefs and norms such as extreme practices that lead to social construction dys-function. Approaches to addressing climate change would in this regard present differently. He further argues that while there is that general agreement on the basic principles of climate science, actions based on the implications are still faced with a lot of disagreements from scientists, politicians and publics. Hulme's arguments bring the researcher to an understanding that climate change is indeed still controversial across many groups in society. This may further indicate that alertness to climate change vulnerability is low and may lead to reactive approaches in climate change management while ignoring prior climate change preparedness . With scientists still contending, adoption and implementation of climate resillient policies may be prolonged while climate change continues to accelerate. There is need to further understand the dynamics associated with these differences in order to form inclusive based approaches that can leverage adoption of climate smart interventions.

Equally, Akoh *et al.* (2011), in a report developed for the African Development Bank (ADB), World Bank (WB) and the African Union (AU) that presents data on ICT development and climate change signifies that many researchers are not confident about climate trends due to lack of modelling capacity in Africa. The presentations in the report clearly depict that climate change indeed remains a contentious issue even at high level platforms. Yet without appropriate adoption processes in place, exponents of climate change present its effects as irreversible affecting future generations. Policy makers and actors in this framework may be viewed inadequte to enable operationalization of climate change intervention strategies if information on climate change is inconsistent and skewed. Again without sufficient technology to study and record sufficient data on climate change policy makers and actors remain crippled to plan, strategize and implement climate change interventions.

Equally, climate change has been shown to be strongly oppossed by some countries such as the United States (Selin & VanDeveer, 2007). Considering the position of the U.S. as one of the world powers, its position on climate change may influence the level and scope of climate change policy adoption on a wider scale. Also, opponents of climate change argue that,

proponents of climate change have not proven beyond doubt that climate change could be as a result of human activity (Hansen, 1998; Vanderheiden, 2008). This suggets that advancements in climate change policy may be faced with difficulty. Overcoming these barriers will need further developments in research.

2.3. Climate change resilience in Uganda

Resilience in the context of climate change is the ability to respond and the In Uganda, climate change effects have been documented to highly impact on the general population equally affecting resilience capacity. High socio-economic losses as a result of high climate variability resulting to loss and displacement of human life due to floods and landslides have been noted. Also, reduction and losses in economic viable activities and more risks predicted to affect the educational and institutional infrastructure have been indicated, (UNDP/NEMA/UNEP, 2009). Such losses indicate that climate change resilience may be compromised, this calls for further investigation.Furthermore in relation to factors affecting resilience, the report indicates low priority rating by government to allocate a substanial budget for increasing skills training related to climate change and non availabity of government strategies to address the public on climate change. Considering the lack for budget allocation, adoption of climate resillient policies may be far-fetched in Uganda. Correspondingly, this affects the level of developing resilience to climate change.

Moreover, as indicated, studies carried out by Environmental Alert (2010), show that a majority of climate change initiatives are donor funded. This has been seen to be a threat in enhancing continuity towards adoption as when donors pull out there is regression or non-adoption of donor initiatives. This also indicates that adaptation may not take place at the expected pace due to a fragile climate change environment. As a result, resilience to climate change may be compromised. Secondly, in relation to this, may be a weak negotiation and advocacy system due to incapacitated policy makers and actors especially that it has been previously indicated that donors seem to be more involved in climate change issues with little uptake from the government.

Quite widely, literature sources concur that climate change adaptation and mitigation are far from being attained (Orindi & Eriksen, 2005).This is related to lack of snyergies among and within various actors such as political leaders and technical leaders in the country despite the existence of a Climate Change Policy and implementation strategy. It must be appreciated that Uganda has shown the need to adapt and mitigate in issues of climate change as evidenced by the signing and ratification of the UNFCCC and the Kyoto Protocol in 1992/1993 and 2002 respectively.

However, formulation and implementation has been slow as evidenced by the formulation of her Climate Change Policy about 20 years later and its approval 3 years after its formulation. This indicates a weak policy formulation process, and adaptation in this context is bound not to happen at the expected pace. This may mean that resilience to climate change by the country

may have been adversely affected while the effects of climate change continue to exacerbate. Likewise, with consideration that the Climate Change Policy considers mitigation as secondary on Uganda's climate change agenda, GoU (2015), achievements in both adaption and mitigation still remain far fetched which affects the level of resilience. Though it is noted that mitigation as directed by the UNFCCC is largely mandatory for developed countries (UNFCCC, 1992). This goes against the newly advanced argument that adaptation and mitigation need to be addressed concurrently in order to achieve greater adaptation which is also an indicator for ability to build resilience, (AFDB, 2014; Locatelli *et al.*, 2015; Rizvi *et al.*, 2015).

Further more, the policy recognizes its implemenation as cross cutting spiralling across sectors and governance systems. This process on it's own implies massive resource injection to ensure success (Environmental Alert, 2010; Nyasimi *et al.*, 2016). Equally, Nyasimi et al. (2016), have indicated that resilience to adapt has been short lived as a result of the weak disbursement of funds rendering climate change projects futile. More to inability to build resilience which affects adapatation, the authors further indicate lack of coordinated effort in resource allocation (financial) across government sectors causing a delay in project inception. Also, associated to resilience is inability to gain and transfer knowledge on management practices that can enhance adaptation especially in regard to afforestation and reforestation. Added to these factors is lack of weather detection equipment and poor weather information dissemination channels. Knowledge based resources are indicated by the World Bank Chen and Dahlman (2005) as important for economic growth. Lack of adequate knowledge on climate change may render adoption of policies ineffectual, equally affecting adaption and mitigation as a result of lack of resilience capacity.

2.4. Policy and Climate Change in Uganda

Policy analysis on climate change reveals that climate change in Uganda is a cross-cutting issue as it correlates with many sectors and entities at government level (Ampaire et al., 2017). Among these are local districts of whom a high concentration of the population is rural based and about 80% heavily relies on rain fed agriculture for livelihoods (Banana *et al.*, 2014). As a result issues relating to climate change have been shown to require more coordinated efforts which have been shown to be lacking, (Ampaire et al., 2017; Okolo et al., 2015); mainly owing to weak policy formulation and implementation. Weak implementation of climate change initiatives has been found to cut across a number of countries in the developing world as in the case of a study carried out in Bangaladesh by (Huq, 2015). The study linked lack of buy in to issues related to climate change adaptation, especially by high level policy makers and actors as reaching them proved to be with difficulty. The study further indicates that, more easier to reach were middle level policy makers and actors which made understanding of their needs easier. Equally the policy makers and actors were able to comprehend and identify needs linked to

climate adaptation. Adopting this strategy in the case of districts in Uganda could make climate change adaption and mitigation less complex.

In line with UNFCCC and the East African Community (EAC) Regional Climate Change Policy, Uganda enacted it's National Climate Change Policy (NCCP) in 2015 to drive climate change at both national and district level. The goal of the policy in this context is to ensure a synchronized and coordinated approach towards a climate resilient and low-carbon development path for sustainable development in Uganda. The policy also recognizes that its priorities are on adaptation and mitigation, (GoU, 2015). Additionally, achieving these priorities is linked to mainstreaming with other sectors of the government and decentralization at local government level. Interlinked to the NCCP is the agricultral sector also guided by the National Agricultural Policy (NAP) of 2013. The NAP equally recognizes the need to develop capacity at all levels for planning and implementation of activities to address climate change and its impact on agriculture. The district and lower-level local government in this context is responsible for monitoring implementation of agricultural plans and policies (GoU, 2013b). With agriculture linked to the NCCP, the accomplishment of these priorities has been reviewed to be a major weakness towards achieving the implementation of the NCCP, Banana et al. (2014); mainly as a result of its broad nature. Also considering the concentration of rural population and dynamics at district level, the newly introduced policy of just two years, its highly multi-sectoral inolvement and demand for highly technical and finacial resources. The process of decentralization at district level demands exerted efforts for success in policy development and management to address climate change adaptation and mitigation. This will be to ensure district/subcounty level climate change related policy development, management and enactment to meet the policy priority areas .In this order, understanding the needs of policy actors is of critical importance. According to the NCCP policy, at local level, the responsible unit for climate change is the Natural Resources Department. At district level, the Local Government Act of 1997 invests local policy initiation, formulation , implementation and management upon divisions of Local Councils' executive administration, the political and public service administration GoU (1997); at both the district and lower local government level . However research based on the needs of the policy decision makers at this level in relation to climate change have not been adequately explored to inform inter-disciplinary policy formulation and management in relation to climate change adaptation and mitigation in agriculture.

Most research on adaptation and mitigation has focused on small-holder farmers.Findings have revealed that there is lack of adaptive capacity linked to institutional gaps (Ampaire *et al.*, 2015b; Ampaire et al., 2017). The findings give a bottom approach in understanding farmers needs. Additionally, results on interviews carried out on district and local policy makers and actors show gaps in policy formulation processes between the national, district and local policy actors. These gaps have been cited as barriers to successful agriculture adaptation and mitigation initiatives that could enhance climate smart agriculture at district and local levels. The intention

of intriguing the need for urgency in better policy formulation and management by policy makers and actors equally demands for better understanding of policy makers and actors needs on climate change which are currently less understood. Additionally,with climate change having been shown to largely impact on small holder farmers in different parts of the country at varying degrees and proportions, as observed by Okonya et al. (2013); in six different agro-ecological zones of Uganda.The authors suggest a need to strengthen policy makers and actors ability to enhance the adaptation capacity of farmers in relation to climate change.In a study carried out in South West Uganda, Osbahr et al. (2011); associated lack of adequate responsiveness to climate change in agriculture with limitations linked to practical agricultural innovations by policy makers and actors albeit successful institutional innovations. Their findinds concur with other previously mentioned findings which allude to the available climate change related instruments yet without much achievement in practice. However addressing this challenge with the existing climate change instruments has been with miniature effort by policy makers and actors. As a result this has seemingly brought about insignificant progress upon farmers ability to adapt and mitigate climate change. This is evidently seen when farming communites in rural areas abandon agriculture for urban areas in pursuit of better opportunities,(Bennett, 2015). This also suggests that resilience capacity has been affected most likely due to lack of adoption of climate resilient policies.

Also interlinked to climate change are gender issues in relation to policy. Acosta et al. (2015); cite issues of gender inclusion in relation to climate change related policies as a matter that lacks popular backing by policy makers and actors.Yet the role of men and women in climate change adaption and mitigation in agriculture and natural resources is of a great challenge for both, despite their different adaptive capacities based role on division as indicated by, Jost *et al.* (2016); in a study carried out in Rakai District,Uganda. Policy analysis findings also reveal that translation of gender in the NCCP is vague as it seems to relate gender with women, Acosta et al. (2015); as oppossed to relating climate change with the social construction of men and women, (Kisauzi *et al.*, 2012). Based on these findings it is equally important to understand the needs of the policy actors in relation to adoption of climate change resilient policies.

2.5. Climate Change Adaptation

Basing on studies carried out in the Least Developed Countries (LDCs), Huq *et al.* (2004); suggest that climate change adaptation is of importance to policy priority in LDCs to achieve adaptive capacity as the rate of vulnerability is more pronounced. Adaptive capacity is described by Eakin *et al.* (2011); as the ability of particular actors (or components of a system) to influence institutional structures. Also, Akoh et al. (2011); refers to adaptive capacity as ' refering to a system's ability to access resources and entitlements that help respond to threats. Factors including available technology, human skills training and access to financial services, as well as broader institutional structures and patterns of decision-making, are considered to be

critical determinants of adaptive capacity. In this context policy makers and actors when equiped with adaptive capacity are in a position to operationalize climate change adaptive measures. This may mean assessing the strenghts, weaknesses and opportunities within the system to identify the needs and align these to give better opportunities for adaptive capacity. Correspondingly, Huq et al. (2004); also hold the view that for adaptive capacity to be achieved scientific research that informs policy development needs to be contextualized into local settings through translation into appropriate language and timescales to help in formualtion of policies. The findings suggest that adaptation is not happenning as a result of language barriers especially at community level. The researcher holds the view that the scholars are cognisant of the needs of policy makers and actors to deliver public goods within a contextualized framework.

Eakin et al. (2011); also identified top-down approaches and centralized processes as key to hampering responses to climate change adaptation. Instead they suggest, in agreement with Pahl-Wostl *et al.* (2007); on more interactive approaches such as polycentric, multilevel and participatory governance structures. They percieve these to be more conducive to building adaption that enable learning, provide the basis for social memory, increase the diversity and quality of knowledge available for adaptation, and provide the best basis for trust and collaboration in problem solving. Basing on the scholarly literature it is of vital importance to note that governance systems are largely blamed for hampering progress in developments such as in climate change adaptation and mitigation.

Likewise linked to adaptation as explained by, Moser and Ekstrom (2010b); is the aspect of understanding the interconnected structural elements composing of the actors (policy makers and actors) and the larger context in which they operate (governance systems) and the object on which they act (climate change). Understanding the interplay of these components in the context of systems thinking helps identify the constraints associated with climate adaptation and draw on identifying the needs associated with adaptation.

2.6. Climate change and mitigation

The UNECA/ACPC (2014) report and findings by Akoh et al. (2011), indicate that climate change mitigation for Africa is characterized by high damage and losses as a result of an amalgamation of particularly severe projected impacts and relatively low adaptive capacity. Low adaptive capacity as presented by Akoh et al. (2011) is linked to factors such as limited , institutional and human resources, high dependency on ecosystem –dependent economic livelihood activities such as agriculture, fisheries, fossil fuels. Social conflicts are also some of the factors attributed to low adaptive capacity which as a result may also affect ability to mitigate. Due to these factors the researcher is of the view that identifying the institutional and human resource needs of the policy makers and actors is of great importance to addressing some

factors mentioned by Akoh et al. Mitigation in the context of climate change is defined by (IPCC, 2014a) as human induced interventions aimed at reducing the causes or augmenting the sinks of GHGs. Akoh et al. (2011); elaborate on the actions as involving reducing the concentration of greenhouse gases in the atmosphere, either by reducing emissions or by enhancing storage in terrestrial carbon sinks such as soils and forests.Reducing emmissions or increasing sinks may mean that policy makers and actors need the skills to align with climate change mitigation. These may help them with the expertise to identify and design more environmemtally friendly approaches to climate change which several scholars cite as still lacking within governemnts.

For Africa to reach the maximum potential to mitigate climate change, several scholars argue that numerous adjustments as in financial, education and management potential would need to be made as a result of the level of vulnerability as this is currently hinedring the ability to mitigate. Achieving this potential means considering the needs of the policy makers and actors as they are the caretakers of the governments role to the civic society.

Owing to low mitigation response, Rogelj *et al.* (2013), discusses this as linked to limited integration of scientific knowledge across disciplines. Basing on the authors's views this gap may hamper further interventions while cliamte change takes its toll. The views of policy makers and actors in this theme are imperative to help in interventions that can best help in the drawing up of best practices. These can support the development of integrated approaches that address climate change. Equally policy makers and actors operate within a system that has sub-systems that are subject to reviews in order to make adjustments relevant to contemporary needs. Nyong *et al.* (2007) alluded to achievements of mitigating climate change as slow, basing on ineffective approaches, that could have been as a result of solely focusing on modern interventions by experts while ignoring the indigenous methods that have evolved with communties. The authors cite Africa as an explicit example of success at obstructing the effects of climate change through indigenous methods. Disasters, as a result of extreme climate variability have occurred in Africa that have called for foreign interventions albeit Nyong et al's argument, suggesting that indigenous methods may be effective though with limited capacity however scientific interventions may upscale capacity levels. They however further suggest the importance of assimilating formal mitigation methods with indigenous approaches as they would lead to sustainable mitigation of climate change. Their scholarly views appreciate the importance of bottom up approaches as they work best when a sense of ownership is established. Policy makers and actors needs in this context need to be taken into account. This is based on the assumption that they best understand the communities they work with, exclusively for purposes of the relevance and degree of integrating indigenous and formal means of mitigating climate change. It is worth noting that often times the centralized systems of governance are viewed as contributing obstructions in adaptation and mitigation, also mainly due to bottle necks associated with the system.

2.7. Needs for climate change adaptation and mitigation

The UNDP (2010) describes the importance of developing the capacity of policy makers and actors through improving public service systems. This is viewed as vital for narturing the fostering of national ownership and the sustainability of development interventions and programmes. Countries classiffied under LDCs such as Uganda are descriped as widely in need of such support. Congruently, explicitly linked to capacity, World Bank (2003), alludes to deficiences in public service provision and management in Uganda as owing to poor management of resources and poor information dissemination. Especially, on key development issues such as adaptation and climate change. This evidently indicates the necessity to understand policy makers and actors needs within the setting of climate change in Uganda if climate change and its effects are to be tackled accordingly. Deficiences such as lack of coordination by the government were found by Heinrich Böll Foundation (2010); to be a contributor to lack of adaptation and mitigation capacity . However worth noting is that much emphasis on the recommendations based on the findings are not focused on further research that can unearth the needs of government actors to address the challenge. Rather the climate change responsibility is shifted to other non-governmental actors.Though non-governemental actors may be better placed in terms of coordination to drive climate change adaptation and mitigation. Worth noting is the importance of the role that policy makers and actors are invested with in fulfilling the mandate of meeting the needs of the general public.

Adaptation needs in climate change are defined by Noble *et al.* (2014); as the gap between what might happen as the climate changes and what we would desire to happen. The authors describe adaptation as a component that calls for receiving adequate information on the risks and vulnerabilities.Such information is necessary to compel identification of needs and appropriate adaptation options and mechanisms to reduce risks and build capacity. As already cited in the chapter climate change and its effects occur at varying degrees across different settings and may vary within in-country settings. This means approaches to adaptation will be contextual, for this to be effectual needs have to be understood. Not understanding these needs, negatively affects adaptation and mitigation as it may be in relation to non adoption of policies. Also, as previously indicated, considering views that the responses to climate change have been slow, understanding the needs of policy makers and actors is of fundamental importance to achieving the ultimate goal of adaptation and mitigation. Additionally considering the low socio-economic status of the african national governments adaptation and mitigation pose a challenge for african communuties. Prioritization of needs towards climate adaptation is central to successes in tackling climate change.

2.8. Conceptual Framework

A conceptual framework involves a descriptive or diagrammatical illustration of the variables intended for a study. The framework shows the dependent variable (needs of policy makers and actors) and the independent variables (ICT, institutional and gender issues). Jabareen (2009); defines a conceptual framework as a network of interlinked concepts that together provide a comprehensive understanding of phenomenon or phenomena. Miles and Huberman (1994); equally describe a conceptual framework as resultant of concepts that are the products of the researcher's personal or technical knowledge prior experience, he further elaborates that they are maps for augmenting our understanding of the situation. Equally, McGaghie *et al*. (2001); summarize a conceptual framework as a ground for the presentation of the specific research question.

Information, Communication and Technology factors such as (access, communication, and dissemination) in climate change affect the needs of policy makers and actors. As without sufficient technological resources, Orindi and Eriksen (2005); to communicate climate resilient policies, policy makers and actors are unable to enable adoption of policies. Similarly, Upadhyay and Bijalwan (2015); allude to ICT as fundamental to dissemination of climate change information in multifarious ways and for systematic transformation of the information through networked governance. Inability to access climate resilient policies by policy makers and actors due to insufficient ICT may also render adoption of policies futile.

Failure to consider institutional needs of policy makers and actors may equally lead to inefficiencies in enabling adoption of climate resilient policies. Regulatory frameworks play a vital role in enabling adoption of climate resilient policies. They provide a basis for which policy makers and actors can determine successful policy implementation. As a result, this can influence the ability to adopt policies. The policy stages also determine the extent to which policy makers are able to adopt policies. Failure to appreciate any one of the policy stages may affect adoption of policies as it means an incomplete policy cycle. Considering the complexities associated with climate change, policy makers, and actors' aptitude to appreciate the need to benchmark is key. This is in relation to their realization for need to strengthen capacity to adopt climate resilient policies. Meeting these needs could aid in appropriate dissemination and access mechanisms of institutional frameworks by policy makers and actors. Also, meeting institutional needs could enable timely and efficient responses towards climate change adaptation and mitigation.

Inability to consider needs of policy makers and actors in relation to gender could hamper adoption of climate resilient policies. Mainly, due to inability to understand and put in place ways to balance gender needs. Lack of understanding on the importance of gender mainstreaming could lead to failure to adopt policies by policy makers. Similarly, if policy

makers are unable to comprehend the implementation of policies that are gender sensitive. This may hamper adoption of such policies and lead to policy failure. Meeting these needs could help put in place structures that best address gender needs and enable adoption of climate resilient policies. Capability to realize the needs of policy makers in relation to importance of climate change and gender can influence level of adoption of climate resilient policies.

ICT, institutional and gender factors are interlinked; the needs of policy makers and actors are associated with the availability of ICT to influence processing, dissemination and access to institutional and gender information. On another disposition, the demand by policy makers and actors for more institutional and gender information distribution may put forth a proposition to increase ICT infrastructure influence.

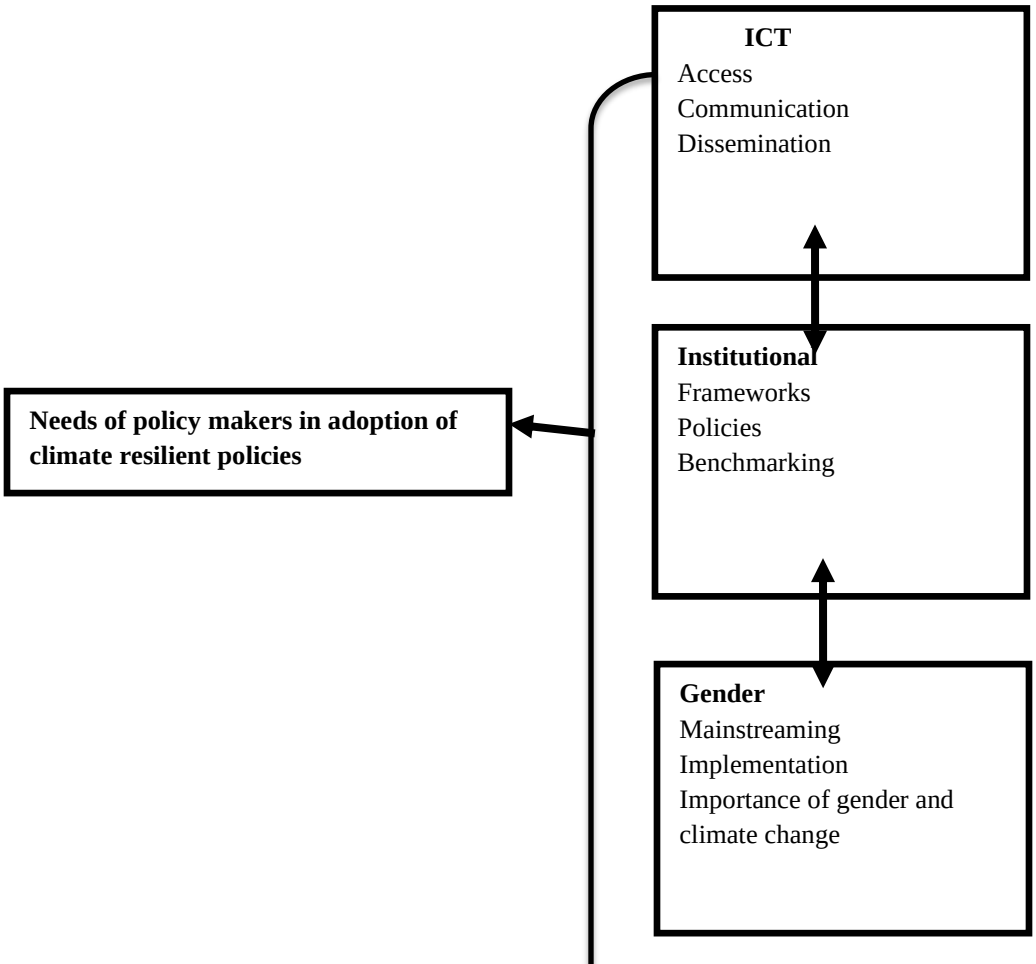


Figure 1: Conceptual Framework; Needs of policy makers and actors in adoption of climate resilient policies

2.9. Theoretical Framework

2.9.1. Cultural Theory of Risk

A theoretical framework is described as a systematic body of knowledge, grounded in empirical evidence, which can be used for explanatory and predictive purposes (Saunders *et al.*, 2015). Equally, Lauffer (2010); terms a theoretical framework as a grouping of related facts, concepts and hypothesis that is both descriptive and interpretive. This study is also rooted on Mary Douglas, Aaron Wildavsky and Michael Thompson Cultural Theory (Douglas, 1978; Douglas & Wildavsky, 1983; Thompson, 1990; Thompson & Wildavsky, 1982) . Cultural Theory is also interpreted and presented by various scholars as the Cultural Theory of Risk conceptual framework , Grid Group Cultural Theory and Grid Group Analysis (Mamadouh, 1999). The theory has been applied by various intellectuals, Douglas and Wildavsky (1983); within different contexts across the world. Mainly to describe social, economic and environmental phenomena especially to do with risk perception and communication (Rayner & Tansey, 2010; Tansey & O'riordan, 1999). Cultural Theory is perpetuated to explain the social and cultural predispositions of policy actors and interest groups, (Buck, 1988).

Through its fourfold typology of forms of social solidarity (the fatalist, individualist, hierarchist and egalitarian). It is described by, Thompson (2003); as able to unambiguously explain the

different social constructions of nature, physical and human, on which environmental debate is premised.

Fig 2 suggests that cultural theorists define human interaction rather more loosely using two main coordinates, grid and group to produce four ways of life, O'Riordan and Jordan (1999); or four types of social environments as indicated by (Mamadouh, 1999). Scholars, O'Riordan and Jordan (1999); describe the coordinates of grid and group as follows; the group (horizontal axis) symbolizes that societies vary according to the strength of their group ties and how absorbing the group's ties are on the individual, (Oltedal *et al.*, 2004). While the vertical axis of grid denotes the degree, to which an individual's life is demarcated by outwardly obligatory order. A high-grid state of affairs is where each person has very limited behavioural options. As grid weakens, individuals are free to act and are increasingly expected to negotiate their own social relations. When the interaction between grid and group changes, this may influence peoples' social participation. Also, O'Riordan and Jordan (1999); further state that in the context of climate change and policy, proponents of cultural theory maintain that people's policy choices are supportive of and rationalized on the basis of these different "ways" or value orientations.

The forms of social solidarity are explained in this manner; the fatalist are described as low group on a high grid, as they feel tied and regulated by groups they do not belong to, Oltedal et al. (2004); and are in this case vague and unreliable, constrained by the notion and caprice of others. That is, the fatalist would rather be oblivious of risks, since it is assumed to be unavoidable to them anyway, (Oltedal et al., 2004). Decision making in this case is seen as unable to change anything and others can instead make the decisions. This group is equally perceived to be non-existent as its voice is unheard, (Swedlow, 2014; Thompson, 2003).

While the individualist is defined as low group, low grid have a nonconformist view of the environment and perceive things that endanger their own way of life as risky, (Oltedal et al., 2004). Correspondingly, Oltedal et al. (2004); also defines the individualist as seeing nature as self-preserving, with the ability to re-establish its own status quo. Hence, people do not need to care a great deal, about how nature is treated. In the context of climate change, the individualist policy makers and actors may not perceive climate change as a phenomenon that needs any human action. Instead, they could conclude that everything about it will position itself back in order without human intervention.

In the case of the Egalitarian, high group, low group, are best described by, Oltedal et al. (2004); as seeing nature as fragile and vulnerable to human interventions. This makes egalitarian alert about pollution and new technologies that might change the state of nature. This group will generally oppose risk that will inflict irreversible dangers on many people or the future. Policy makers and actors in this group will likely be proactive support strong policy interventions to address climate change.

Hierarchist, high grid, high group are pronounced by, Oltedal et al. (2004); as emphasizing the natural order and see nature as largely self-preserving, though within strict and rigid limits. If people cross these limits, nature will no longer be able to heal itself, and this may have dramatic consequences. Hence, hierarchist accept risk as long as decisions about these are justified by government or experts. Within this category, policy makers and actors will likely see the need to take action on climate change issues if certain boundaries are crossed.

Within the context of enabling adoption of climate, change polices for adaptation and mitigation. Based on a study conducted in the United States on climate change risk perception and policy preferences, Leiserowitz (2006); gives an almost clear view that Cultural Theory could be used to give direction on the needs of policy makers and actors. His findings show that of the four fold typology, support for national and international climate policies was strongly linked with the pro-egalitarian principles while opposition was associated with anti-egalitarian, pro-individualists and pro- hierarchist principles. Leiserowitz concludes that with this response climate change remains of low priority, with little sense of urgency and suggests the need for more efforts to get a buy in for support of climate change policies. Also, Pendergraft (1998); in a study involving human dimensions of climate change in the United States, like Leiserowitz also found out that individualist and hierarchic preferences seem to combine against egalitarian preferences. This suggests that cultural theory can be an effective approach to determine the needs of policy makers and actors as it gives an understanding of how social institutions are classified and their responses to risks such as climate change in relation to their classification (Douglas, 1986).

However, Jones (2011); indicates a somewhat different viewpoint from Leiserowitz findings of the four fold typology. Jones' study indicates that the three cultural types (egalitarians, hierarchs and individualists) have a positive common ground for climate change policies. Especially to do with renewable energy and in this context broad cultural coalition involving compromise may be generally required for major policy change. Also, based on his findings the fatalists remain insignificant in driving or hampering any move to do with climate change policies. His findings advocate for approaches that also target specific needs of policy makers and actors in line with key policy reforms within different contexts. As belonging to a certain cultural solidarity does not inevitably determine a policy preference, dynamism in this context seems to be the underpinning notion of why preferences are not static to a certain group.

From a global point of view, Ekisa (2018); shows that cultural theory is able to distinguish the needs of policy actors by showing the positions of both developed and developing/least developed countries on their responses to climate change policies. Drawing from the work of, Van der Wurff (2009); he gives a view point that United States and United Kingdom have an individualistic position on climate change issues as they prefer a voluntary approach towards climate change policies. He places Germany on the egalitarian position as it prefers a more stringent approach to climate change policies as it is a global issue. Furthermore he seems to consider African countries to be more on the fatalist side as they are not likely to take much

action unless the generators of the GHGs emissions avail financial backing to drive climate change policies. Like Ekisa, Jones (2011); concludes that with the existing contentions, striking a compromise is paramount to the successes of climate change policies.

Drawing from the endless heated debate on climate change, mainly from the global North, Verweij *et al.* (2006); use the four fold typology of the 'four ways of life to indicate that the debates are an indication of one world view that has been followed to drive climate change policy. They use the Kyoto Protocol (1997) as one such example, which has had bottle necks as some countries such as Canada and Russia have been reluctant to commit to its requirements. They propose that application of cultural theory in this context could help address such challenges. The authors support that;

> 'Cultural theory is perceived to distill certain elements of experience and wisdom that are missed by others. Provides a clear expression of the way in which a significant portion of the populace feels we should live with one another and with nature and these need all the others in order to be sustainable.'

In contrast, Verweij et al. (2006); also argue that cultural theory has its limitations as, differentiating between only four ways of organizing and perceiving will not always be sufficient to answer extremely detailed research questions. Additionally, Renn (1992); also concurs with this view although within the context that given the many social groups four prototypes are limited to measure this diversity. The view given here is that fitting groups within just four prototypes may give biased results and misdirect policies. Another factor highlighted by, Verweij et al. (2006); is that when using cultural theory, policy analysts can neither self-evidently accept any single definition of what the issue at hand is and how it should be resolved, nor reason from a single established point of view. From the authors' viewpoints, one would conclude that cultural theory is probably more suitable for exploratory purposes. Principally, for better understanding of underlying issues that would otherwise hinder progress in certain policy stages.

Also, in criticism of cultural theory is, Renn (1992); he argues that the theory is ineffective where groups are mixtures of prototypes as it may not be able to explicitly explain them especially with league and association groups. In view of Renn's observations, it may be worth noting that in its approach cultural theory may need to appreciate that groups it tends to measure or study are not static in nature. In a more elaborate term, the fatalist may turn out to be the individualist within another context of risk perception.

However, Tansey (2004); also holds a rather substantial argument against critics of cultural theory especially in relation to the findings of (Boholm, 1996; Sjöberg, 1997) who disregard its explanatory strength in studies they conducted in America. Tansey argues that Boholm and Sjöberg and others have taken the theory out of context as it has been applied within the wrong settings, confusing it for a psychological approach and hence their weak findings. Tansey further argues that Douglas relates the theory to social institutions and not on societies as applied by

major critics of cultural theory and links this to felony, as the wrong tool is being used for the wrong job.

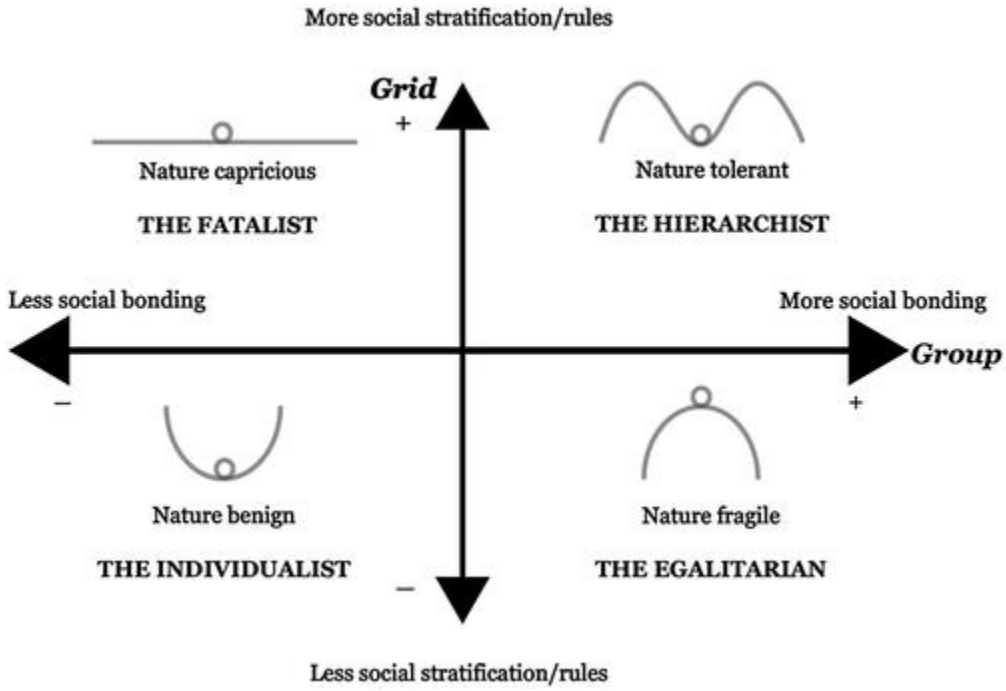


Figure 2: Four worldviews and myths of nature

Source: (McNeeley & Lazrus, 2014)

CHAPTER THREE

3.0 METHODOLOGY

3.1. Introduction

This chapter sets out the research approaches and methods used to collect the data from the field and methods of data analysis. It explains how the data sources and how the sample size was derived from the study site. To achieve the set objectives and for the hypothesis to be tested, there was need for both primary and secondary data sources.

3.2. Study Area

The study was carried out in four districts of Uganda, Nwoya, Mbale, Luwero (local level) and Kampala (national level) as shown in fig 3. The districts were selected on the basis of the facilitation of the learning alliances platforms through the International Fund for Agriculture (IFAD) and the Policy Action for Climate Change Adaptation (PACCA) projects which operated entwined . The learning alliance platforms established in these districts presented a source for data collection from policy makers and actors as these comprised of diverse policy actors and understanding their needs in this context was important. Policy makers and actors comprised of politicians, technocrats NGOs, community leaders and members.

The Uganda Bureau of Statistics, Housing and Population Census, recorded the population for Nwoya to be at 133,506 (UBOS, 2016) . Nwoya is located in the Northern part of Uganda; it is a recently created district (2010) carved from Amuru district, which was earlier (2006) part of Gulu district (Mwongera *et al.*, 2014). The main socio-economic activities in Nwoya District are agriculture and animal husbandry, with some non-farm activities as income supplement such as charcoal making. The district is recovering from a post war period of more than 15 years (Self Help Africa, 2013). As a result a significant number of the population constitutes of those who were living in the Internally Displaced Peoples camps (IDPs). This has led to land conflicts as resettlement patterns are non-traditional as practiced before the war, while some vast land remains idle. (United Nations, 2013).

Mbale is one of the oldest districts in country, located in eastern Uganda ,the district has a total population of 488,960 (UBOS, 2016). The main soci-economic activity is agriculture, the main crops are coffee, beans, matooke, maize, onions, potatoes, sweet potatoes and carrots.

Luwero district is located in the central part of Uganda and lies north of Kampala, with a road distance of about 64km. According to the UBOS (2016), Luwero has a population size of 456,958, the main economic activities comprise of both farm and off farm activities. In the northern area, there is mainly cassava, sweet potatoes, maize and bananas. In the southern and central, there are bananas, potatoes, cassava, beans, ground nuts and horticulture crops like tomatoes, pineapples, cabbages and greens, upland rice as food crop. Cash crops for the southern and central region are coffee, vanilla, bananas, and the horticultural crops mainly pineapples, water melons, passion fruits, tomatoes, cabbages and vegetables. Rainfall is well strewn across the year with annual average of 1300mm.

Kampala district serves as Uganda's location for the capital city, Kampala. It is host to a population size of 1,507,080 UBOS (2016),23% of its area is fully urbanized, 60% is semi-urbanized and the rest is termed as rural settlements. The city serves as Uganda's political seat, the country's economic hub accounting for 80% of the country's industrial and commercial activities which generates 65% of the national GDP.

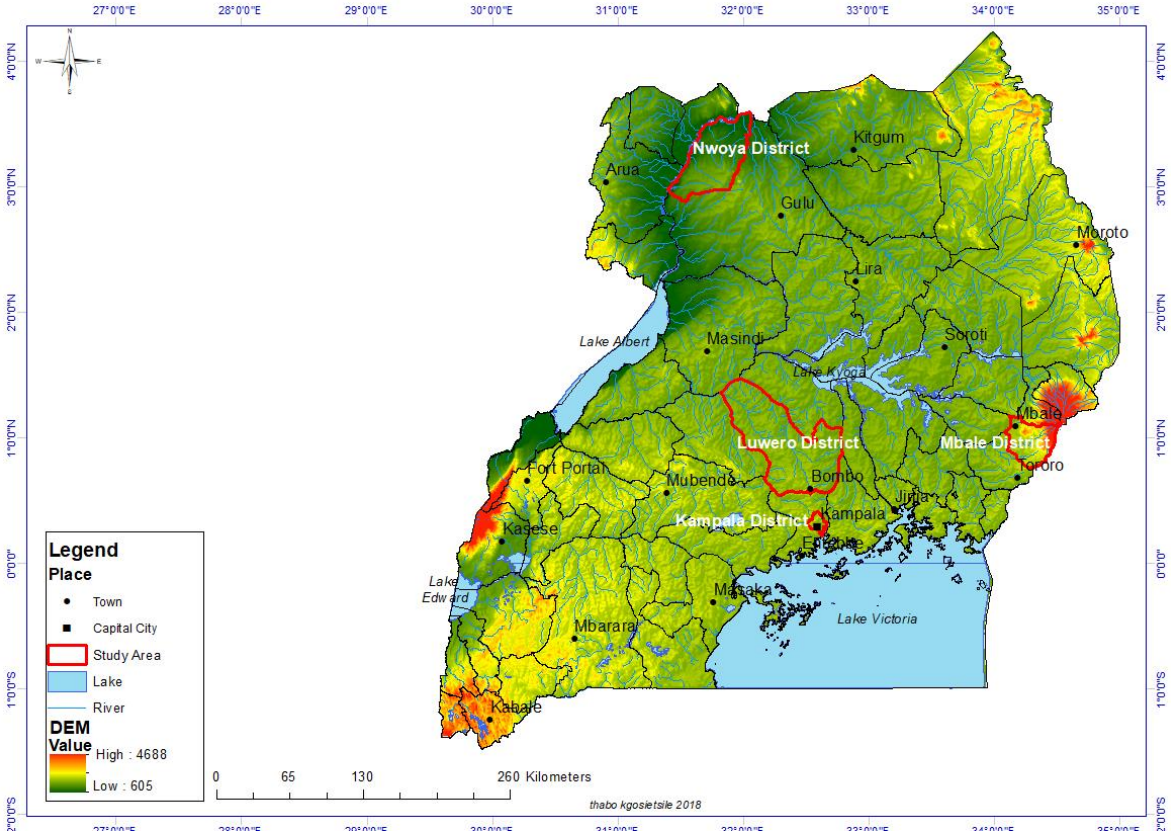


Figure 3: Map showing study areas: Nwoya, Mbale, Luwero and Kampala Districts

Source: (Kgosietsile, 2018)

Fig 3, an illustration of the map of Uganda showing the location of Kampala, Luwero, Mbale, and Nwoya districts. The districts serve as the platforms for national and district learning alliance daises for policy makers and actors.

3.3. Sampling and Population

Kampala, Mbale, Luwero and Nwoya that serve as the learning alliance zones, were purposively selected for the study. Data were collected from the policy makers and actors; the districts were selected, as it was important to understand the needs of policy makers already engaged as multi-stakeholders through the learning alliance platforms.

The purposive sampling technique was used for data collection. Purposive sampling also called judgement sampling is described by (Tongco, 2007) , as the deliberate choice of an informant due to the qualities the informant possesses. As a non-random technique, it does not need underlying theories or a set number of informants. The judgement of the researcher serves as the centre for selection of the respondents. In this context selection of respondents is on non-equal basis (Trochim, 2006). This entailed selections based on policy makers and actors that were participants of the national and district level learning alliance platforms.

Data collection involved policy actors and makers within the national and district learning alliance zones. Selecting a population sample from different policy makers and actors within different government sectors/levels (national and district).Specifically those related to agriculture, food security, rural development, climate change etc. Selection involved 113 policy makers and actors through purposive sampling technique. This entailed selections based on attendance of climate change related forums by policy makers and actors. Reaching the selected respondents involved on setting up appointments with some of the policy makers and actors in their workstations.

3.4. Data collection

Gathering relevant information from the respondents involved the use of instruments such as interview schedules, interview guides, questionnaires, field visits, a voice recorder, and camera. The objectives of the study informed the development of the questions.

3.5. Validity and reliability of instrument

While the validity of an instrument is a measure of its ability to measure the variables for which it is designed, reliability is the degree to which the instrument is consistent in clarity and devoid of any ambiguity. A pre-test (that is, test re-test) was carried out by interviewing a set of respondents in Kampala on 9 November 2017 to determine whether the instrument could be adjudged adequate or not in terms of its consistency and validity. The supervisors reviewed the instrument and a pre-field study was conducted in Kampala on 10 November 2017.

3.6. Data Collection

While the study aimed at interviewing 250 policy makers and actors, however, 113 were interviewed from 31st October 2017 to December 23, 2017. This was based on the ability to schedule appointments and get consent and responses from the policy makers and actors in their various stations. Also, attendance of the wrap up meeting on IFAD and PACCA project, learning alliance meetings by policy makers and actors as per the scheduled times determined the number of respondents. Both primary and secondary data sources were used to generate the data for the study. Primary data were collected from policy makers and actors with a structured and unstructured interview schedule. Primary data collection involves obtaining information from the original source. It gives a realistic view of the topic being researched. However, the shortcoming of this type of data may be its unrepresentativeness in some cases.

Majority of the respondents were interviewed at the district learning alliance and national policy dialogue platforms. Some of the policy decision makers were interviewed at their workstations at both district and national level. These were identified through the IFAD-PACCA policy decision makers' names register. The process to gaining access to interviewees involved presentation of interview request letters and appointment setting. In addition, interview guide and key informants consultations were used to collect information from key informants respectively. In all the districts there was need for revisits and constant, follow ups mostly done physically, telephonically and through e-mails. This was to reach more respondents and to collect answered questionnaires. Additionally, observations, photography, field notes, and recordings were further used to collect primary data from the respondents and from the study areas. Semi-structured interview schedule were used to generate some information like structures, laws, policies and regulations.

In order to obtain a collective deeper understanding on policy decision makers' needs, FGDs were used to elicit relevant information from the policy makers. To gain additional understanding of both the dependent and independent variables within the study area photography and observations were also used.

Secondary data were collected through government records and other publications such as national policies that relate to climate issues from the from the various sectors. Secondary data provides an inexpensive means of data collection as information is readily available. The constraint with this method of data collection is collection of outdated information, which may longer be relevant to the particular study. This information obtained included policy dialogue on issues of ICT, gender and institutional frameworks.

3.7. Data Analysis

Descriptive statistics such as frequency, percentages, and tables were used to summarise the quantitative data. Qualitative data were analysed through thematic analysis, using coding techniques, grouping similar information in categories, and relating different ideas and themes to one another. IBM SPSS statistics version 25 by and excel were used to analyse the data.

Qualitative data analysis is described by Caudle (2004), as making sense of relevant data gathered from sources such as interviews, on site observation and documents and responsibly presenting what the data reveal.

CHAPTER FOUR

4.0 Results and discussion

4.2. Demographic attributes of policy actors

Understanding the demographic characteristics of policy actors based on sex, education, field of work and number of years working in a particular field is very fundamental. This is because these variables influence the needs of policy actors in relation to enabling adoption of climate resilient policies. Awareness of the demographic context of the policy actors also helps to give an in-depth understanding of their linkage with needs to enable adoption of climate resilient policies. This section gives a demographic overview of policy actors' profile based on the data collection and analysis.

Data in Table 1 show the representation of male policy makers at both national and district level. About (69%) represented district policy makers and actors, while (67%) represented national level policy makers and actors. The findings reflect the dominance of men as policy actors, as women represented a less than 50% of policy actors at both national and district level. Despite this representation, women's participation in policy issues especially in relation to representing women's matters is seen as more noticeable in a few sub-Saharan countries such as Uganda (Goetz, 1998).

The sex of the respondents is important for analytical purposes. This will ensure the identification of the most dominant policy actors among men and women. It also provides an insight in understanding the dynamics of policy issues among policy actors at both national and district level from a gender based perspective.

Table 1: Policy makers and actors demographic attributes at national and district level

Level	Variable	Frequency	%	n=113
National	**Sex**			
	Male	18	66.7	
	Female	9	33.3	
	Total	27	100	
District	**Sex**			
	Male	59	68.6	
	Female	27	31.9	
	Total	86	100	

Source: Field Survey; 2017

4.4. Policy actors' level of education

Data in Table 2 show that 0.9%, of the policy actors attained a PhD qualification, while about 49 percent, of the policy actors' attained master's degrees as their highest level of education. Some 36.3% of them attained bachelor's degrees as their highest level of education. While those that had a diploma qualification accounted for 8%, 1.8% had A'levels, O'level and primary education qualification. Karyeija (2005), also found in a policy study conducted in Uganda that a majority of policy actors were highly qualified. Analysis shows that a majority of the policy actors possess a tertiary education, with a high percentage of policy makers and actors, having attained a postgraduate qualification. Given the high level of qualifications, enabling adoption of climate resilient policies would be a smooth process. However, it seems that in this context a post graduate qualification does not correlate with enabling adoption of climate resilient policies. This may suggest that climate change issues are not yet considered as high priority in Uganda as some studies propose (Olsen, 2006). Again, gauging with the cultural theory this may also propose that policy makers and actors in Uganda most likely belong to the fatalist typology. This is because, on a global scale, Uganda, like most African countries has been found to contribute extremely low GHGs, while the amount of projected increase is also expected to be relatively low (Apuuli et al., 2000). This may influence perceptions on climate change risk as not serious or urgent to need any action from Uganda's perspective.

Table 2: Policy actors and makers level of qualification

Variable	Frequency	%	n=112
Education			
Primary	2	1.8	
O 'level	2	1.8	
A 'level	2	1.8	
Diploma	9	8.0	

Degree	41	36.3
Masters	55	48.7
PhD	1	0.9
Total	**112**	**100**

Source: Field Survey, 2017

4.5. Policy actors' level of education (national and district level)

Cross tabulation, results in table 3 show policy makers and actors' level of education by national and district level. At national level, the highest level of qualification is PhD, 3.7%. While district level policy actors possessed a master's degree 37.2% as their highest qualification. The second highest level of qualifications for policy actors at national level is a master's degree, 85.2%, while 44.2% of policy actors at district level had a degree qualification as their second highest qualification. The lowest level of qualification for policy actors at national level was a degree, 11.1%, while for district level policy actors the lowest level of tertiary qualification was a diploma, 10.5%. A small proportion of district policy actors had attained a basic education qualification, 2.3% representing A'levels, O'levels and primary school. The basic education representation could be a depiction of policy makers and actors serving at political level. About the disparities observed concerning qualifications held by national and district policy makers and actors. This may indicate that the level of understanding and ability to enable adoption of climate resilient policies may be uneven. Considering that majority of the population is within rural settings and the low percentage of post graduate holders dealing with climate change policy issues at this level may mean that skills to comprehend and capacitate adoption are way below complexities associated with climate change.

In support of this statement, Howlett (2009) suggests that governments need a soundly high level of policy analytical capacity to execute the responsibilities associated with managing the policy process. Also, Qian (2017) concurs that low policy capacity is a challenge to most governments as in the case of China.

Table 3: Policy actors and makers' level of qualification at national and district level

Level	Variable	Frequency	%	n=113
National	**Education**			
	Primary	-	-	
	O 'level	-	-	
	A 'level	-	-	
	Diploma	-	-	
	Degree		11.1	
	Masters		85.2	
	PhD		3.7	
Total				
District	**Education**			
	Primary		2.3	
	O' level		2.3	
	A' Level		2.3	
	Diploma		10.5	
	Degree		44.2	
	Masters		37.2	
	Total			

Source: Field Survey; 2017

4.6. Policy actors' qualifications by sex-aggregation at national and district level

Results derived through cross tabulation indicate policy makers and actors' qualification by sex aggregation at national and district level in Table 4. At national level, 5.6% of males possess a

PhD as the highest qualification. While all the females 100% are clustered within a master's degree qualification. A greater noteworthy proportion, 77.8% of males at the national level possess a master's degree, while a smaller percentage, 16.7% hold a bachelor's degree. Analysis show that at national level more women than men possess a master's qualification with a variance of 22.2%, while men's qualifications are scattered across PhD, masters and bachelors qualifications. This also seems to reflect that even with a bachelor's degree qualification, men seem to have more opportunities at policy acting level than women who seem to have to need a higher qualification to occupy policy level positions. To explain this seemingly unbalanced representation of men and women in decision making positions regardless of qualifications. Scholars, Reskin and McBrier (2000) attest this as related to choice of recruitment by organizations which are generally in favor of men. They further explain that in the case of an open recruitment system men are still given foremost preference for the best management positions while women are considered when organizations cannot attract enough qualified men.

Moreover, at district level almost half of the men, 40.7% possessed a master's degree as the highest qualification while 29.6% of women possessed a masters as their highest qualification. An insignificantly lower proportion of men 42.4% as compared to 48.1% of women possessed a bachelor's degree. Again, a significant higher percentage of women 14.8 % hold a diploma in comparison to 8.5% of male policy actors. Consequently, across the levels of basic education only 3.7% of women possess an O'level qualification, while men hold a basic education qualification across primary, 3.4%, O'level and 3.4% A'levels. It is also worth noting that at district level more men than women possess a significant higher level of professional education. Less than fifty percent of women possess a master's qualification and more than fifty percent hold graduate and undergraduate qualifications. With these discrepancies in education levels, women and men's understanding on climate change issues may also affect the extent of motivating adoption of climate resilient issues especially at district level.

Table 4: Sex aggregated policy actors and makers' level of qualification at national and district level

Level	**Variable**				**n=112**
National	**Education**	Males	F	Females	F
	Primary	-	-	-	-
	O 'level	-	-	-	-
	A 'level	-	-	-	-
	Diploma	-	-	-	-
	Degree	16.7	3	-	-

	Masters	77.8	14	100	9
	PhD	5.6	1	-	
Total		100	18	100	9
District	**Education**				
	Primary	3.4	2	-	-
	O' level	1.7	1	3.7	1
	A' Level	3.4	2	-	-
	Diploma	8.5	5	14.8	4
	Degree	42.4	25	48.1	13
	Masters	40.7	24	29.6	8
	PhD	-	-	-	-
	Total	100	57	100	26

Source: Field Survey; 2017

4.7. Policy actors' sector of employment

It was important to determine policy actors' sector of employment for purposes of understanding policy level representation within the various sectors. Data in table 5 illustrates policy actors' sectors of employment in relation to enabling adoption of climate resilient policies and their needs. A higher percentage, 55.8% of policy actors indicated that they worked within the Local Government, while 17.7% specified that they worked in other sectors related to policy. About 8.8% of policy actors represented the agricultural sector, while 7.1% said they worked in the water and environment sector. Some 4.4% indicated that they worked in the gender and labor sector, while 3.5% indicated as working in the education and science sector, another 1.8 specified that they worked in finance and development and 0.9% said they were in works and transport. Analysis show that a majority of the policy makers and actors are concentrated within the local government sector, this is expected as the majority of population is within rural areas. T

The high percentage of policy makers and actors within local government compared to other sectors is of key importance. As it reflects on policy makers and actors ability to comprehend intricacies associated with climate change policy. This can in turn either widely positively or negatively influence adoption of climate change related policies depending on how they are recognized as critical in agenda setting(Schreurs, 2008).

Table 5: Policy actors' sectors of employment

Variable	Frequency	Percent	n=113
Local Government	63	55.8	
Education, Science and Sports	4	3.5	
Other	20	17.7	
Agriculture, Animal Industry and Fisheries	10	8.8	
Water and Environment	8	7.1	
Finance	2	1.8	
Works and Transport	1	.9	
Gender, Labor and Social Development	5	4.4	
Total	113	100	

Source: Field Survey; 2017

4.8. Policy actors' sector of employment, national and district level

Cross tabulation results indicate in Table 6 policy actors sectors of employment by national and district level. This was important for establishing the distribution of policy actors and makers between the two levels. At national level the highest percentage of policy actors 29.1% was within the category of other sectors, while at district level, the local government sector had the highest number 66.3%, of policy actors. Subsequently, 22.2% of policy actors at the national level were in the local government, while at district level, policy actors from other sectors 14% were the second highest. About 18.5% of the respondents at the national level indicated that they were within agriculture compared to 5.8% of policy actors at district level. Again another 11.1% of policy actors at national level were within the water and environment sector compared to 5.8% of their counter parts at district level. A significantly lower proportion, 7.4% at district level indicated that they were within the gender and labor sector. The concentration of policy actors at local level is fundamental in driving the adoption of climate resilient policies. They seem to provide the basis for bottom-up approaches and are considered more influential as a result of their close contact with the local population (Feiock *et al.*, 2010).

Table 6: Policy actors' sectors of employment at national and district level

Level	Variable	Frequency	%	n=113
National	**Sector employed**			
	Local government		22.2	
	Education		3.7	
	Other		29.1	
	Agriculture		18.5	
	Water and Environment		11.1	
	Finance		7.4	
	Transport		-	
	Gender and Labor		3.5	
Total				
District	**Sector employed**			
	Local government		66.3	
	Education		3.5	
	Other		14	
	Agriculture		5.8	
	Water and Environment		5.8	
	Finance		-	
	Transport		1.2	
	Gender and Labor		7.4	
Total				

Source: Field Survey; 2017

4.9. Policy actors' years of working experience

With the assumption that there is low adoption of climate resilient policies, it was important to establish the years of experience policy actors had at decision making level. This would help to

determine their capacity to influence adoption of policies. In regard to the number of years of employment, 38.8% of the policy actors had been employed for more than ten years, while 20.4% had been working for between 4-6 years. A somewhat 17.7% showed that they had been employed for a period of between 1-3 years, another 15.9% revealed that they had been in policy acting positions for period of between 7-9 years and 7.1% had been in service for less than a year. Considering that policy actors' years of experience differ, the assumption is that in relation to climate resilient policies they also vary in the quality of guidance, motivation and vision (Moser & Ekstrom, 2010a). Furthermore considering the number of climate change related policies in Uganda and their contrasting variances in objectives and years they have been in effect. Integrating these policies, as well as mainstreaming other sectorial policies within them may be of great challenge. Solutions to address these complexities will need policy makers and actors that are innovative enough to come up with complex solutions (de Oliveira, 2009). For example as shown in table some of the policies have been in effect from between 5-23 years while over 50% of policy actors having working experience of less than ten years.

Table 7: Policy actors and makers' years of experience at national and district level

Variable	Frequency	Percent	n=113
Years of working experience			
Less than a year	8	7.1	
1-3 years	20	17.7	
4-6 years	23	20.4	
7-9 years	18	15.9	
More than 10 years	44	38.9	
Total	**100**	**100**	

Source: Field Survey; 2017

4.1.0. Establish the information, communication and technology needs of policy makers and actors in adoption of climate resilient policies across government levels

Under this objective, there was need to investigate policy actors and makers needs in relation to variables such as access to climate change related policy information, ability to access climate change related policies and mechanisms in place to distribute climate change related policies.

4.1.1. Policy actors responses on easiness to access climate change related policy information

Easiness of policy actors' to access climate change related policy information determines their ability to help initiate adoption of climate resilient information. About 35% of the respondents, admitted to easily accessing climate change related information, while 21.2% remained undecided, 23% of the respondents disagreed and 10.6% strongly disagreed. Another 9.7% strongly agreed to have easy access to climate change related policy information. The analysis show that a significantly low number of respondents strongly agreed. The ability to easily access climate change information also means that policy makers and actors are at a level to perceive the risks associated with climate change and enable adoption of climate resilient policies (Tribbia & Moser, 2008). Also, figure 4 to 8 show a climate change information sharing and learning platform in Mbale and Nwoya, Luwero and Kampala districts (learning alliances). This implies that policy actors are able to access climate related information from different stakeholders even from grassroots level. While the platforms are a powerful initiative to relay and access climate information broadly. However, observations indicated low level of attendance in a majority of the meetings. This may compromise access to timely information which may affect adoption of climate resilient policies. This may also indicate that the rate and importance at which climate change information is appreciated is still very low.

Table 8: Policy actors and makers' responses on easiness to access climate change related policy information

Variable	Frequency	Percent	n=113
Easiness to access climate change related policy information			
Strongly disagree	12	10.6	
Disagree	26	23	
Undecided	24	21.2	
Agree	40	35.4	
Strongly agree	11	9.7	
Total	**113**	**100**	

Source: Field Survey; 2017

Figure 4: Climate Change Learning Alliance Meeting in Mbale District
Source: Field Survey, Uganda; 2017

Figure 5: Climate Change Learning Alliance Meeting in Nwoya District
Source: Field Survey**,** Uganda; 2017

Figure 6: Draft Sustainable Charcoal Production and Licencing Ordinance Workshop for District Councillors in Luwero District

Source: Field Survey, Uganda; 2017

Figure 7: National Policy actors from various sectors during a policy dialogue session on climate change issues in Kampala

Source: Field Survey, Uganda; 2017

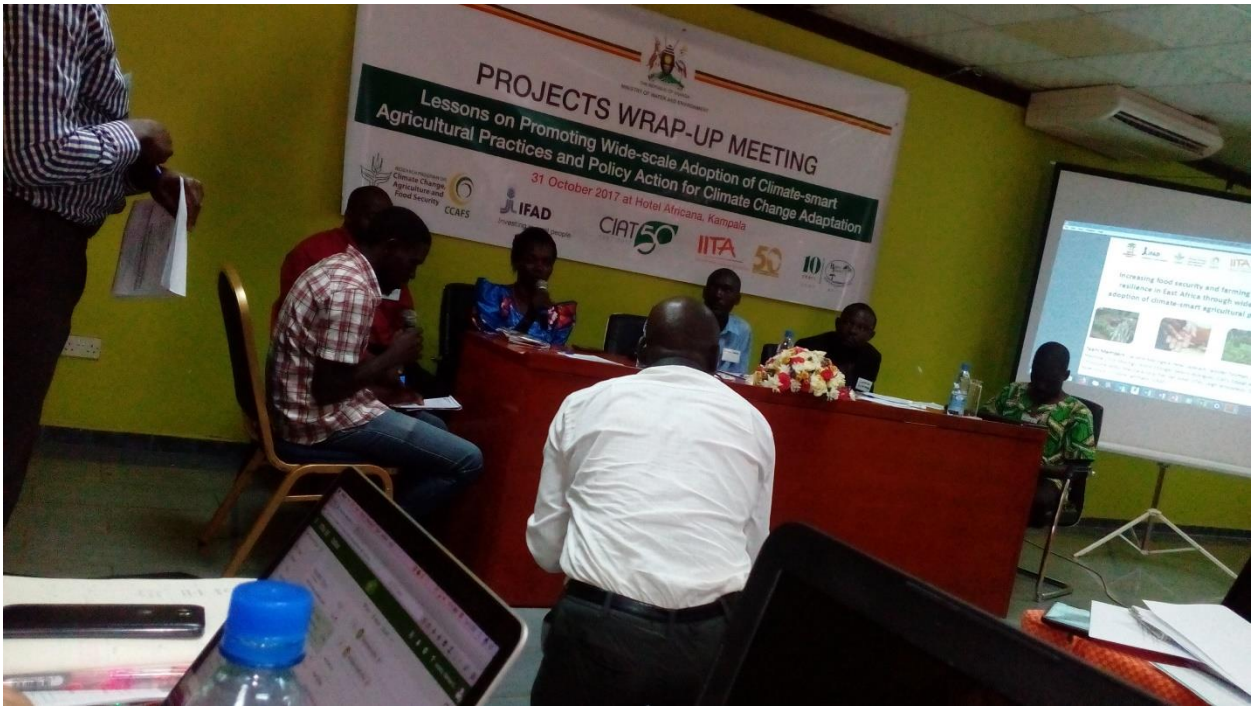


Figure 8: Farmer groups representatives and NGOs working with farmer groups during a policy dialogue session on climate change issues in Kampala
Source: Field Survey, Uganda; 2017

4.1.2. Policy actors suggestions on needs related to access of climate change information to enable adoption of climate resilient policies

Establishing needs of policy makers and actors in relation to access of climate change information is important for purposes of determining relevant and sustainable information systems. In regard to policy makers and actors needs related to access of climate change information, a substantial 61% of respondents related they needed creation of climate change information access hubs around the country. A less than half 20.2% indicated they needed strengthened ICT coverage in rural areas. Some 10% of respondents showed they needed a consolidated climate change data base. Another 5.9% showed a need for stronger partnerships to enable ICT coverage. Some 4% proposed they needed translation of climate change information into local languages. The data and analysis show that information access hubs dominated majority of other needs. The highest rated need is assumed to be the key need of the respondents.
The need for information hubs may be related to establishing, harmonizing, balancing widening and decentralization of climate related information for adoption to be effective.

Given the complexities associated with climate change, solutions in the form of information dissemination may also require complex mechanisms. Establishment of information hubs may also mean that other indicated needs may be connected or embedded within the formation of information hubs. An example is that strengthening ICT coverage means widening information hubs. Equally translation of climate change information into local languages may be within the spheres of the information hubs. Correspondingly, this need concurs with the recommendations of Beddington *et al.* (2011) for creation of widespread, collective and cohesive information systems. A key informant stated the following in regard to information access:

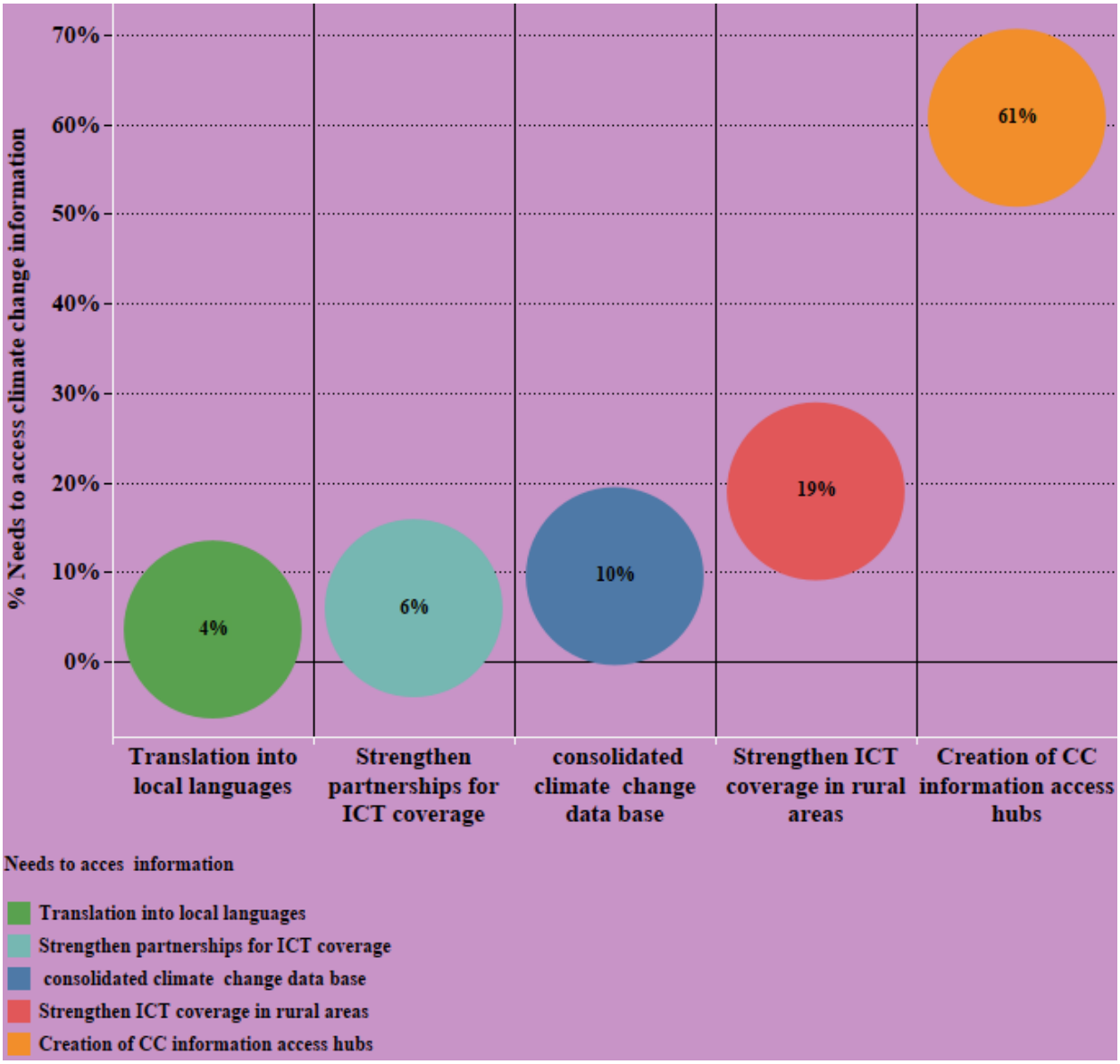
> "There are a number of changes in the policies that keep coming up and this is not easily provided for. If you sometimes don't take the initiative to look for the information it becomes difficult to implement."

The assumption is that due to these seemingly rapid changes in policies, it seems paramount that the need indicated by the policy actors is of high priority. This is because voluntary access to information as indicated in the statement may render adoption of policies inconsistent with the rate of addressing climate change issues.
Equally, the availability of information access hubs could also mean that policy makers and actors have access to indigenous knowledge as one key informant uttered the following:

> "People in the community have big, big chunks of knowledge, but the top people do not appreciate the knowledge they have. The information from the ground would be able to help put in policies that are very relevant to all communities".

The statement does in some way indicate that policy makers and actors do not necessarily have ease of access to climate change information especially, indigenous information from the local level. This could be based on their inability to comprehend the importance of this information as interpreted by the respondent. This could be linked to failure to associate the information with science. Equally, Nyong et al. (2007) also alludes to this statement by indicating that indigenous knowledge on climate change is hardly taken into consideration. Correspondingly, Orlove *et al.* (2010) agrees that indigenous knowledge in Uganda is less appreciated mainly because of hierarchal operations of climate related institutional organizations, whose mandate is more at national level where this knowledge is difficult to incorporate. The statement also depicts institutional behaviors of organizations in their perception of risk as indicated in cultural theory as by (McNeeley & Lazrus, 2014).

Figure 9: Policy actors and makers' suggestions on needs related to access of climate change related policy information



Source: Field Survey; 2017

4.1.3. Analysis of key national climate related policies in relation to suggested priority need (creation of climate change information hubs)

It was important to analyze the key national climate change policies in relation to the priority need related to dependent variable information, communication and technology. This was to help identify any existing gap between the policy priorities versus the key need. Selected policies involved eight policies related to climate change within Agriculture, natural resource management and climate change. Table 9 shows the selected policies, number of years the policy has been in effect, key need as indicated by the respondents, the identified summary policy statement in relation to ICT and key needs of the respondents and finally the analysis. Generally, all the climate change related policies mention dissemination of information on usage of the available natural resources within their spheres of operation. However they hardly mention creation of information dissemination mechanisms that show synergies among the existing policies for access to climate information. Also, it is not quite clear how the information dissemination structures will be organized.

Table 9: Summary policy analysis of key national climate related policies in relation to suggested priority need (creation of information access hubs on climate change around the country)

Policy	Priority Need	Policy Statement in summary	Policy Analysis in relation to need
Disaster Policy (2010) (GoU, 2010)	Creation of climate change information access hubs around the country.	Among other several clauses that mention dissemination of information, the policy states that "The government and all other stakeholders will ensure that relevant, reliable, up-to-date and timely information is provided to the community."	Has several considerations to disseminate climate change information especially through media, however the policy does not mention much on creation of country wide information access hubs, especially considering the diversity of the population and Uganda's varying topography which may need
Wetlands Policy (1995) (GoU, 1995)		Disseminate awareness on the importance of wetlands through leaflets, posters, radio, television and other media.	Mentions information dissemination through various information, communication and education mechanisms- leaves out organized means of information access like hubs.
Land Policy (2013) (GoU, 2013c)		Disseminate national land policy to all stakeholders in their different cadres across diverse levels.	States dissemination of policy information, without specification for creating information access hubs related to land and climate change.
The Uganda Forestry Policy (2001) (GoU, 2001)		…., facilitate the exchange and dissemination of information. NGOs and CBOs are carrying out some information dissemination, but this is mostly project-specific and covers limited geographical areas.	Only mentions dissemination of information and is silent about creation of CC information access hubs.
National Agriculture Policy (2013) (GoU, 2013b)		There will be promotion and facilitation of public access to information.	Lacks clarity on comprehensive mechanisms that will drive information accessibility.
Uganda National Climate Change Policy (2015) (GoU, 2015)		Policy recognizes the importance of availing climate change information mainly through supporting provision and transfer of climate change information.	Does not have a clear pathway for information access mechanisms.
The National Land Use Policy (2006) (GoU, 2006)		Increase the use of existing and potential avenues for disseminating land use information, including Radio, Television, Print media, Institutional Libraries and Resource Centers, Civil Society and Religious Organizations.	Acknowledges land use information dissemination without merging it climate change. Does not make provision for creation of climate change information hubs.
The Renewable Energy Policy For Uganda (2007) (GoU, 2007)		Acquire and disseminate information in order to raise public awareness and attract investments in renewable energy sources and technologies.	Recognizes acquisition and dissemination of information, does not provide for creation of CC information access centers.
National Environment Management Policy (1994) (GoU, 1994)		…Where feasible, improve the flow of climatic information to the users by involving extension workers, local official communication channels, as well as traditional methods of communication; Improve awareness among potential users and decision makers of climatic and atmospheric information including establishing demonstration projects in selected areas;	The policy is aware of the importance of disseminating information through various channels, however lacks in venturing into other pathways like the information access hubs.

4.1.4. Policy actors responses on ability to easily communicate climate change policy related information

Ability to easily communicate climate change policy related information by policy makers and actors is of key importance. This is because conveyance of climate change information relates to how it is understood by the general public which may determine adoption of policies (Newman, 2017). Ability to communicate climate change information has been indicated to be challenging, due to a disconnect in climate change being related to human influence and obscured data that fails to convince its existence (Moser, 2010).
Data in table 10 show policy actors perceptions on ability to communicate climate change information from the climate change related documents. About 44.2% of the respondents indicated that they were likely to communicate CC information while 17.7% specified that they were most likely to communicate. Some 15% showed that they were undecided on their ability to communicate. A somewhat 14.2% expressed that they were unlikely to communicate CC information. Another 8.8% also stated that were very unlikely to communicate CC information.

Table 10: Policy actors and makers' responses on ability to communicate climate change related policy information

Variable	Frequency	Percent	n=113
Ability to communicate climate change related policy information			
Very unlikely	10	8.8	
Unlikely	16	14.2	
Undecided	17	15	
Likely	50	44.2	
Very likely	20	17.7	
Total	**113**	**100**	

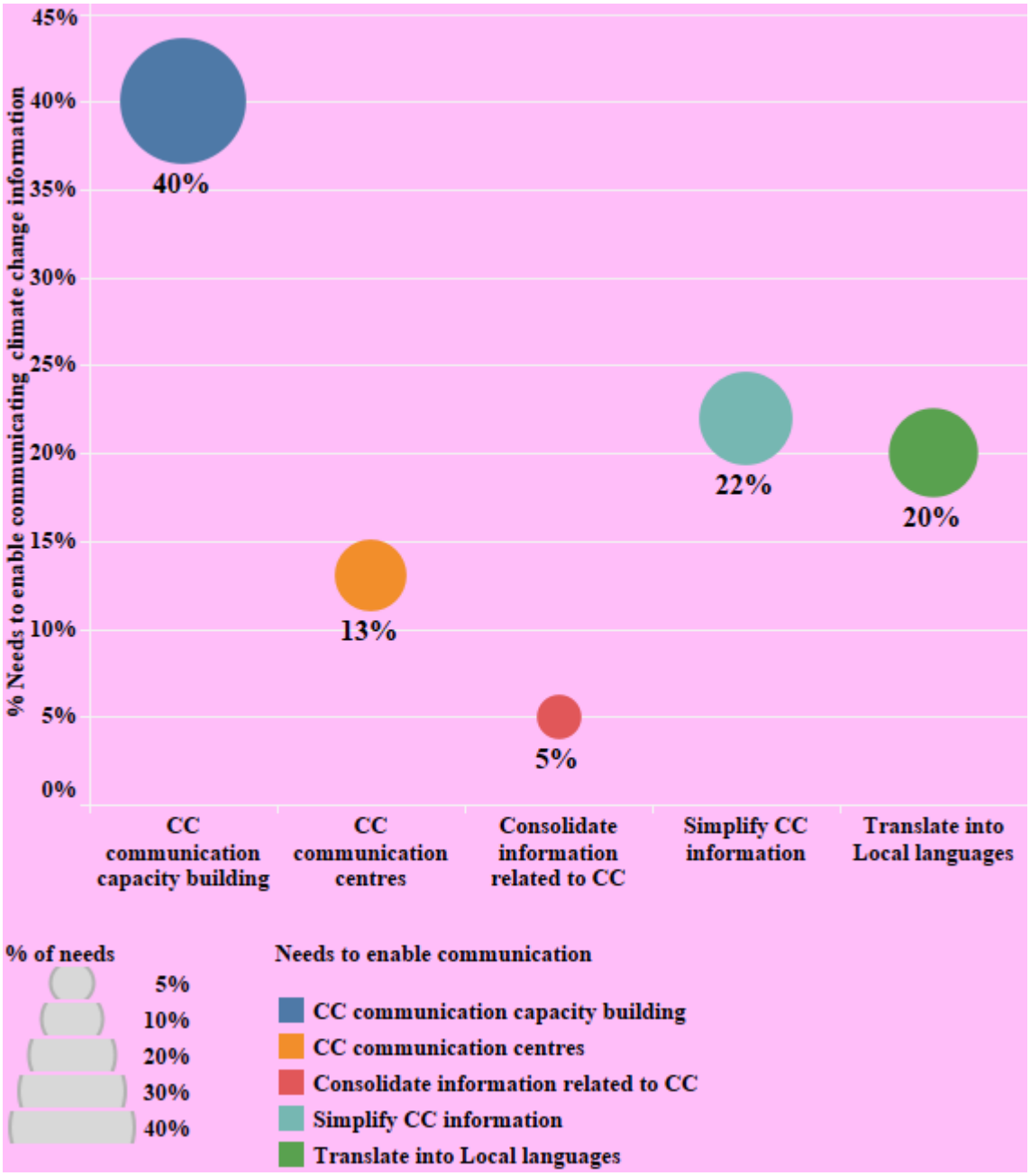
Source: Field Survey; 2017

4.1.5. Policy makers and actors suggestions on needs related to ability to communicate climate change related policy information

It was important to understand the needs of policy actors' in relation to ability to communicate climate change related policy information. Mainly for purposes of establishing areas most key for facilitating adoption of policies. Correspondingly, establishing the needs related to ability to communicate climate change policy information also indicates the policy makers and actors' aptitude to interpret climate change information (Urry, 2015) .

Figure 10 illustrates policy actors suggested needs to enable them to communicate climate change information. About 40% suggested they needed capacity building to communicate climate change information, while 22% proposed they needed simplified climate change information. Simplification of climate change information has also been suggested by (Brown *et al.*, 2012; Sterman, 2008). Another 20% of policy actors revealed they needed policies translated into local languages, 13% indicated a need for climate change communication learning centers and 5% showed a need for consolidated climate change information. From the responses capacity building stands out to be key in driving adoption of climate resilient policies. Equally, (Sitarz, 1993) cites that Agenda 21 of the United Nations emphasizes capacity building for developing countries to achieve environmental sustainability.

Figure 10: Policy actors and makers' suggestions on needs related to ability to communicate climate change related to ability to communicate climate change related information



Source: Field Survey; 2017

4.1.6. Analysis of key national climate related policies in relation to suggested priority need (climate change communication capacity building)

In relation to building capacity of policy makers and actors' on communication of climate resilient policies. Table 11 indicates a summary analysis of key national climate related policies in related to the key suggested need (climate change communication capacity building) . Generally, all the eight climate related policies are inexplicit or silent on capacity building aimed at enhancing the commmunication of policy makers and actors' on climate related issues. The vagueness and silence may somehow be an indicator that policy actors themselves are ignorant of their own needs as they generate policies. Also, the inability to comprehend the importance linked to capacitating policy makers and actors', may also be an indicator that policy formulation is in itself weak. As it fails to recognize the shortcomings associated with driving policies that lack capacitated publics to adopt and influence implementation.

Table 11: Summary policy analysis of key national climate related policies in relation to suggested priority need (Climate Change communication capacity building)

Policy	Priority Need	Policy Statement in summary	Policy Analysis in relation to need
Disaster Policy (2010) (GoU, 2010)	Climate Change communication capacity building	Among other phrases the policy cites the following " government will reach out to telephone companies, internet providers and other communication channels to ensure effective delivery of information to the people who have access to these services."	Does not mention capacity building on communicating climate change related information.
Wetlands Policy (1995) (GoU, 1995)		None	The policy has no provision for capacitating communication on climate change related information.
Land Policy (2013) (GoU, 2013c)		Mentions among other phrases to "decentralize and present the proposed land information system in a language understood by community –level managers and users.	Does not take into consideration capacity building to communicate information.
The Uganda Forestry Policy (2001) (GoU, 2001)		Mentions strengthening the organization of farmers for better communication and development of public education and communication programs to build public awareness on forestry sector issues.	Shows minute attention to enabling capacity building to communicate climate change information.
National Agriculture Policy (2013) (GoU, 2013a)		Focuses much on the processes of communication.	Silent about enabling policy actors to communicate climate change related information.
Uganda Climate Change Policy (2015) (GoU, 2015)		Acknowledges the need and importance to avail resources and methods of communication to support participation in climate change.	It lacks insight on promoting skills that enable effective communication of the methods.
The National Land Use Policy (2006) (GoU, 2006)		Strengthen the adaptive capacity to climate change and promote climate change adaptation mechanisms. Train and build capacity of local community leaders.'	Lacks insight on developing climate change communication capacity building.
The Renewable Energy Policy For Uganda (2007) (GoU, 2007)		Mentions developing the capacity to process renewable energy data.	It is silent about developing capacity building to communicate renewable energy data in relation to climate change.

National Environment Management Policy (1994) (GoU, 1994)	Does not mention capacity building	The policy is silent on issues of capacity building to enable policy makers and actors to communicate CC related information.

4.1.7. Policy actors views on clear dissemination mechanisms of climate resilient policies

Considering that climate change related policies are spread across various sectors and entities and with the unusual nature of climate change (Gough & Shackley, 2001). Dissemination mechanisms of these policies may equally determine how well the policies are adopted to achieve the climate change agenda.
Table 12 indicates policy actors' and makers' views in regard to clear dissemination mechanisms of climate resilient policies. About 29.2% of the policy actors said they agreed that dissemination mechanisms were clear. Another 26.5% remained undecided, while 15% disagreed and strongly disagreed. Also, 14.2% strongly agreed that there were clear policy dissemination mechanisms.

Table 12: Policy actors and makers' views on clear policy dissemination mechanisms of climate resilient policies

Variable	Frequency	Percent	n=113
Clear policy dissemination mechanisms			
Strongly disagree	17	15	
Disagree	17	15	
Undecided	30	26.5	
Agree	33	29.2	
Strongly agree	16	14.2	
Total	**113**	**100**	

Source: Field Survey; 2017

4.1.8. Analysis of key national climate related policies in relation to suggested priority need (more resources for policy distribution)

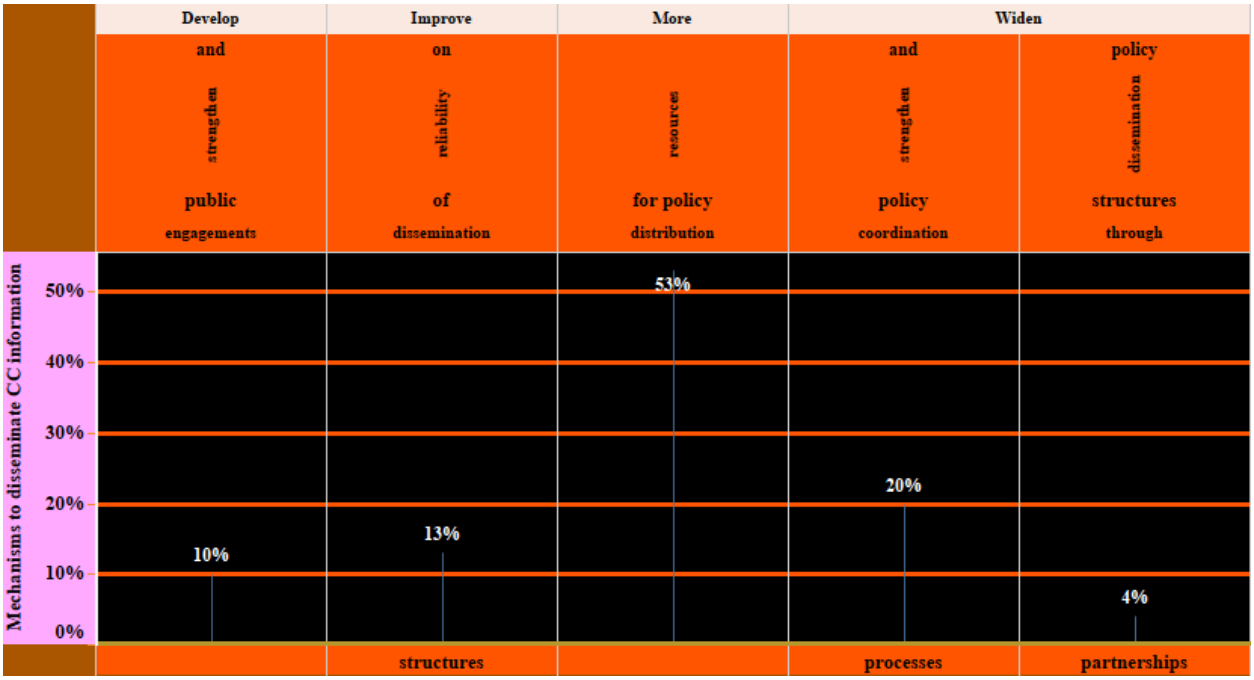
Understanding the needs of policy makers and actors' in relation to dissemination mechanisms was important. Principally for purposes of establishing their ability to comprehend the urgency linked to responsiveness to climate change issues. Similarly, needs related to dissemination

mechanisms also help determine how well climate change information is interpreted (Zia & Todd, 2010). Data in figure 11 indicate that about, 53% of policy actors opined that they needed more resources for policy distribution. It is worth noting that there is a striking difference between this response and the high percentage of respondents who agreed to clear dissemination mechanisms noted in table 12.This may mean that policy makers and actors' probably have limited understanding in the dynamics associated with climate change information. This is also highlighted by Conway and Schipper (2011) where they conclude in the case of Ethiopia that climate change is still placed into a separate silo which makes integration into other policies a challenge. Albeit this observation, it is quite clear that the need for more resources indicates that climate change is probably not a key issue due to factors that may need further investigations for Uganda's situation. Generally, as previously highlighted climate change is considered farfetched Kerr (2007) and creates no sense of urgency for major resource allocation. A key informant narrated the following which supports the extent to which issues related to climate change are perceived.

> "Natural resources is the least funded sector. The lessor the resources you have, the lesser the interventions you can do."

Furthermore, 20% suggested they needed widened and strengthened policy coordination structures. Also, 13% indicated that they needed improved and reliable policy dissemination structures. Likewise 10% showed that they needed developed and strengthened public engagement structures, 4% said they needed widened policy dissemination structures through partnerships.

Figure 11: Policy actors and makers suggestions on needs related to mechanisms for dissemination of climate change related information



Source: Field Survey;2017

4.1.9. Analysis of key national climate related policies in relation to suggested priority need (more resources for policy distribution)

In relation to clear dissemination mechanisms and the priority need-more resources for policy distribution. Analysis of the key climate change related policies in table 13 indicate the following. The policies either mention dissemination of climate change information passively or do mention dissemination without a clear road map of how this will be achieved . An example is with the Uganda Climate Change Policy GoU (2015), which states that it will support dissemination of relevant data to potential users. The policy statement does not show an active role in pioneering and harnessing dissemination of policies. Mainly in regard to availing necessary resources, more so that it is the latest policy in the environmental field. By virtue of

the policy's mandate it could be showing its ability to spearhead resource allocation mechanisms in the area of policy distribution.

The other policies also broadly mention securing resources to implement their agendas. However fail to explicitly diasgregate and prioritize the key areas that need resource allocation as in the area of policy distribution. This is the case with the Disater Policy of 2010, the National Environment Management Policy, 1995 equally, has no has no priority for resources geared towards the dissemination of the policy. Also, such is the case with the Wetlands Policy of 1995, Land Policy 2013 and the Agricultural Policy of 2011 where dissemination of the policies is made mandatory however without mention of resources linked to the obligation. Mentioning dissemination of policies without resource linkage for carrying out a mandate may render adoption of policies fruitless as sense of ownership is not achieved.

Table 13: Summary policy analysis of key national climate related policies in relation to suggested priority need (more resources for policy dissemination)

Policy	Priority Need	Policy Statement in summary	Policy Analysis in relation to need
Disaster Policy (2010) (GoU, 2010)	More resources for policy dissemination.	The ministry responsible for disasters and all ministries shall secure adequate resources to implement disaster preparedness and management activities.	Has no explicit mention for resources channeled towards information dissemination.
Wetlands Policy (1995) (GoU, 1995)		Disseminate awareness on the importance of wetlands through leaflets, posters, radio, television and other media. Disseminate the broad guidelines provided herein, to district and urban authorities, as well as wetland users, researchers, academic institutions etc.	Provides for dissemination of information without clear mandate for provision of resources for the mandate.
Land Policy (2013) (GoU, 2013c)		The policy must be internalized, popularized, translated and widely disseminated if it's to achieve its objectives.	Does not link access or provision of resources for purposes of information dissemination.
The Uganda Forestry Policy (2001) (GoU, 2001)		NGOs and CBOs are carrying out some information dissemination, but this is mostly project-specific and covers limited geographical areas.	Has no clear policy information dissemination mechanisms in place except for much dependence on NGO's and CBO's for information dissemination, which are stated to be limited by timelines and scope of coverage. Has no clear provision for resources directed to information dissemination.
National Agriculture Policy (2011) (GoU, 2013b)		Ensure the collection, analysis and dissemination of information to households and communities regarding proper use and conservation of agricultural resources	Policy is disjointed in the area of linking resources with information dissemination.
Uganda Climate Change Policy (2013) (GoU, 2015)		Mentions its role as that of supporting dissemination of relevant data and information with potential users.	Shows an element of passive role as to an active one when it comes to resources for disseminating information.

		Does not have provision for availing resources for information dissemination.
The National Land Use Policy (2006) (GoU, 2006)	…., additional efforts are required to carry out dissemination on the content of The Land Act and its implications. Mobilize resources to enable the continuous update of Uganda's LU/LC information, including providing the requisite support to the established Division and the National Repository for LU/LC information.	Does not link mobilization of resources directly for information dissemination.
The Renewable Energy Policy For Uganda (2002) (GoU, 2007)	Disseminate information and raise public awareness on the benefits and opportunities of renewable energy technologies…	There is no link between resources and dissemination of information.
National Environment Management Policy (1995) (GoU, 1994)	To mobilize increased private sector resources to achieve environmental conservation and management objectives. The mobilization of financial and other resources from donors, nongovernmental organizations and the private sector is essential for wildlife resources management.	Mentions mobilization of resources to achieve management of the environment and wildlife resources. Has no commitment to avail resources for purposes of policy distribution.

4.2.0. Determine the institutional needs of policy makers and actors affecting adoption of climate resilient policies in Uganda.

Under this objective policy makers and actors' were investigated in regard to their institutional needs affecting adoption of climate resilient policies. Variables considered key for this objective included satisfaction of the existing climate change related regulatory frameworks, consideration of key important policy stages and views on benchmarking in relation to climate resilient policies.

4.2.1. Policy actors responses on satisfaction of climate change regulatory frameworks

Regulatory frameworks are described by Rabeau (1997) as the macro-level steps that a regulator must complete in order to bring forward regulations principles, rules, or laws designed to control or govern behaviour. Relative to policy makers and actors' responses on satisfaction of climate change related regulatory frameworks, 31% of the respondents stated that they were undecided, 23.9% said they were not satisfied. Notably, the high proportion of respondents who showed their dissatisfaction on the regulatory frameworks, could be considered as a key indicator for success or failure of adoption of climate related policies. Dissatisfaction could be linked to what Payne (2001) terms as a copy and paste scenario. In that inputs into regulatory frameworks have been imported and inherited by African

countries from countries whose economic, social, institutional, and climatic conditions are quite unalike. This may also indicate that policy makers and actors lack articulation in the area of adapting regulatory frameworks within the African context. Some 19.5 indicated that they were satisfied while 17.7% were not satisfied at all, another 6.2% said they were very satisfied.

Table 14: Policy makers and actors' responses on satisfaction of climate change related frameworks

Variable	Frequency	Percent	n=111
Satisfaction on climate change regulatory frameworks			
Strongly disagree	20	17.7	
Disagree	27	23.9	
Undecided	35	31	
Agree	22	19.5	
Strongly agree	7	6.2	
Total	**111**	**100**	

Source: Field Survey; 2017

4.2.2. Policy makers and actors' suggesstions on needs related to satisfaction of climate change related regulatory frameworks

Data in figure 12 illustrate policy makers and actors' suggesstions on needs related to regulatory frameworks, 37.8% stated a need for strengthened enforcement mechanisms. The assumption drawn from this need is that despite the existing the frameworks, the level of influence they have in ensuring compliance to climate change related policies is low. An antagonostic approach in this context is the preferred route. An antagonistic approach is argued by Kirchler *et al.* (2008) as likely to cause a large social distance between authorities and society. This approach may hieghten deviant behaviour as society may not be in agreement with the enforcement mechanisms. Conversely, in the context of climate change, regulatory frameowrks may need to have a mixture of both antagonistic and synergistic approaches to achieve adoption. A key informat indicated the following in relation to regulations:

> "National Environment Management Authority has not done its job as wetlands have been completely destroyed. Environmental management committees are in existence but they are not functioning as they are not trained to make enforcements. The government is also not enforcing anything to stop cutting trees and encouraging tree planting. For people who are

> planting trees someone can come and burn them off because of land wrangles-these land wrangles have also affected the environment."

The above statement indicates that many factors are affecting the adoption of climate resilient polices in Uganda. However the issue related to land wrangles seems to be a major issue. Achieving adoption of policies may need more strategic efforts aimed at settling land disputes. Literature sources also indicate that the effects of climate change will further exacerbate already existing land conflicts as land use area becomes limited (Ide *et al.*, 2014).

Another key informat also made the following statement:

> " There should be political will for policies to be adopted, you find that big giants in politics are violating these policies that are put in place. If a big giant says, this wetland belongs to them and insists on erecting a structure now, the peasants cannot say anything. This is why adoption of policies is low. There is need to be strict with the rules and policies that are put in place and not discriminate the poor from the rich."

Again this statement indicates challenges associated with policy adoption from the political sphere. Lack of policy adoption is blamed on the politicians, while the response provided to address this challenge focuses on strict measures on regulations and policies and the rule of law to be universally applicable.

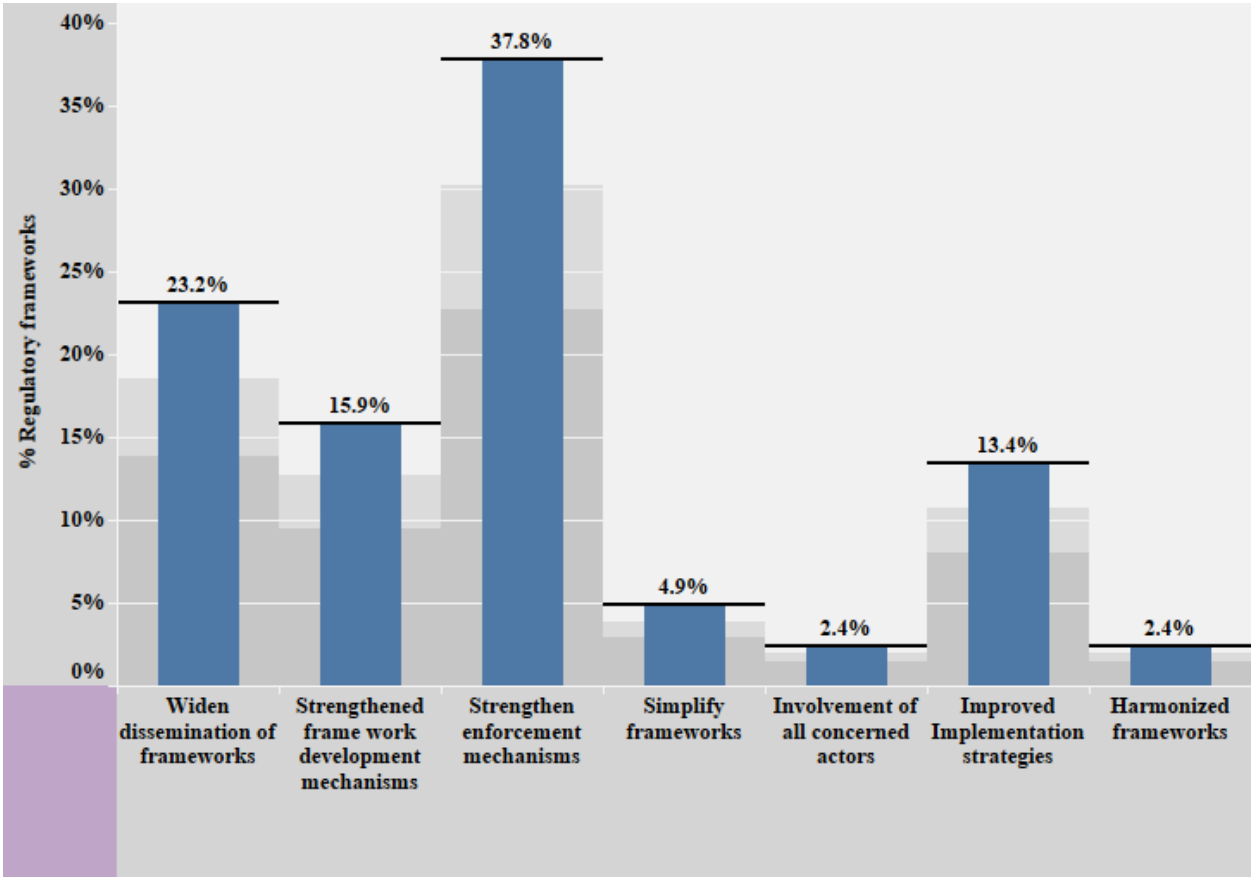
Yet another key informat accounted that:

> "Not much is being done towards adoption of policies, people are constructing in wetlands. And what is being done?nothing."

From the given statements it is apparent that regulatory frameworks are not as efficient as they should be. Again the statements indicate that suggestion for need to strenghten enforcement mechanisms are an urgent call for action if adoption of policies is to be achieved. It was also observed during the interviews that the policy makers and actors' appreciated that climate change is real and somehow seemed helpless unless concerted effort inolving various institutions took place.

Furthermore another 23.2% of the respondents said they needed widened dissemination of frameworks. Another 15.9% showed that they needed strengthened mechanisms for framework development, 13,4% indicated a need for improved implementation mechanisms. Some 4.9% specified a need for simplified frameworks, 2.4% indicated a need for inolvement of all parties and harmonization of frameworks.

Figure 12: Policy makers and actors' suggestions on needs related to regulatory frameworks



Source: Field Survey; 2017

4.2.3. Analysis of key national climate related policies in relation to suggested priority need (strengthen enforcement measures)

An analysis of the selected climate related policies in relation to the suggested priority indicated need indicated the following. In regard to the Disaster policy, it realizes that enforcement measures are weak, however it is silent on mechanisms to strengthen enforcement. Instead it shifts the responsibility for enforcement to other sectors, making its role passive, adoption of climate resilient policies in this regard maybe compromised.

Equally, the Wetlands policy acknowledges the need for strong enforcement mechanisms as a result of the compromised state of wetlands. Nonetheless it does not provide for measures to strengthen enforcement measures. Correspondingly, in relation to the Land policy, it commits to reviewing the regulatory frameworks relative to natural resource access rights without provision to strengthen enforcement measures. Also, the Forestry policy supports the development of a strong regulatory framework for control and monitoring purposes with no provision to strengthen enforcement mechanisms. The Agriculture policy appreciates the need for the development of a regulatory framework in agriculture within the section of biotechnology and is equally silent about strengthening enforcement mechanisms.

In regard to the Climate Change policy, there is consensus for the need of a regulatory framework yet lacks input in regard to enhancing enforcement mechanisms. Again, the Land Use policy also supports formulation of a regulatory framework in relation to agricultural zones. Conversley, it lacks insight in regard to strengthening enforcement measures to fulfill its mandate. The Renewable energy policy acknowledges the need to expand the existing regulatory framework in relation to the Electricity Act, contrariwise it does not provide for mechanisms to strengthen enforcement to reach its obligation. Also, the Environment Management Policy, recommends for a synergized form of regulatory system that applies to the many government agencies. However like the other related policies it does not suggest the enforcement mechanisms to fulfill this task.

Despite all the policies having provision for regulatory frameworks for various obligations , they lack direction to provide for mechanisms that strengthen enforcement mechanisms. This probably contributes to lack of selfwill by policy makers and actors and actors to adopt the policies.

Table 15: Summary policy analysis of key national climate related policies in relation to suggested priority need (strengthen enforcement mechanisms)

Policy	Priority Need	Policy Statement in summary	Policy Analysis in relation to need
Disaster Policy (2010) (GoU, 2010)	Strengthen enforcement mechanisms	Enforcement of legislation on risk avoidance is weak such that disruptions arising from disasters have continued to grow without corresponding lessons-learnt measures. The government organs responsible for setting and enforcement of standards will define and enforce standards for relevant goods and services and guarantee occupational health.	Realizes that enforcement measures are weak, however it is silent on mechanisms to strengthen enforcement.
Wetlands Policy (1995) (GoU, 1995)		Wetlands have been marginalised and regarded as 'wastelands'. They therefore, need a strong government institutional arrangement and a sectoral national legislation in order to reverse the high rate of degradation and ensure sustainable management.	Acknowledges that there is need for strong enforcement measures. Does not provide for enforcement mechanisms.
Land Policy (2013) (GoU, 2013c)		Review the regulatory framework for natural resources to clarify and specify guidelines on who may have access to what natural resource products and define the rights of access use guaranteed to the communities living in such areas.	Comprehends the need for review of regulatory framework in relation to natural resource use. However it does not necessarily provide for the need to strengthen enforcement mechanisms.
The Uganda Forestry Policy (2001) (GoU, 2001)		The government will develop and maintain a strong regulatory framework, which will control illegal practices, monitor best practice, measure environmental and social impacts, and collect dues.	It is sensitive to the need for a strong regulatory framework.
National Agriculture Policy (2011) (GoU, 2013a)		Develop and implement a policy and regulatory framework for biotechnology (GoU, 2006)in agriculture.	Recognizes the need for a regulatory framework however it does not have provision for ensuring strengthening enforcement mechanisms.
Uganda Climate Change Policy (2013) (GoU, 2015)		There is need for a legal and regulatory framework for climate that provides legitimacy, regulate conduct and establish sanctions that can ensure compliance. Absence of such a framework is an obstacle in translating the identified policy priorities into implementable actions with tangible climate change benefits.	Consents to the need for a regulatory framework to ensure compliance, however no provision to capacitate strengthening enforcement mechanisms is in place.
The National Land Use Policy (2006) (GoU, 2006)		Formulate policy and regulatory framework for agricultural zones.	Has provision for a regulatory framework, conversely lacks insight in regard to strengthening enforcement measures.
The Renewable Energy Policy For Uganda (2002) (GoU, 2007)		Detail the light regulatory framework provided for under the Electricity Act.	Provides for expansion of regulatory framework, contrariwise it does not provide for mechanisms to strengthen enforcement.
National Environment Management policy (1995) (GoU, 2015)		The enforcement responsibilities of many government agencies should be reduced to a critical set of regulations which can be effectively enforced;	Recommends a synergized form of regulation that cuts across government

	sectors, does not provide for mechanisms to strengthen enforcement.

4.2.4. Policy makers and actors' responses on priority stages of policy

Establishing the policy stages considered as priority to policy makers and actors' was important for purposes of understanding how they influence their capacity to adopt climate resilient policies. For example if policy makers and actors' indicated that implementation is key, as is the case here. Then it may mean that full adoption of the policies can be enabled once implementation processes during the policy cycle are understood and embraced. Bearing in mind that climate change related policies are cross-cutting and embedded within several sectors. The adoption of these policies may as a result, be challenging as the different sectors in which these policies operate may not be capable of collectively harmonizing them to operate simultaneously. This maybe based on several factors Chappin *et al.* (2009) some linked to lack of capacity and may in this context need to have some areas strengthened to enhance full adoption. If they indicate that the policy initiation stage is key then it may mean that their capacity to adopt climate resilient policies is still low. This may mean revisiting the policies in order to get high consensus for adoption.

Data in table 16 explains policy makers and actors' responses on the priority stages of policy, a reasonable 50.9% indicated that implementation was the most important stage of policy. It can be concluded that if implementation is considered key, then leveraging for adoption calls for more efforts. This is essential as climate change is considered complex and has many dimensions to it, (Nerlich & Koteyko, 2009). Without the necessary interventions this may create accumulation of policies aimed at addressing factors related to climate change with an unfulfilled mandate (Chappin et al., 2009). As a result strategies aimed at enabling adoption would need to be unique. Another 27.3% specified that the policy initiation stage was more important. Considering that policy initiation was rated as the second highest, this too may indicate that this part of the policy stage affects adoption of policies. And as previously explained, this could be associated with the complexities of climate change and directing the existing policies to consecutively address these complexities may need revisiting the policy initiation process. About 10.9% showed a preference for monitoring and evaluation, 6.4% considered decision making as key and 4.5% suggested a preference for policy analysis.

Table 16: Policy makers and actors' responses on priority policy stages

Variable	Frequency	Percent	n=110
Key important policy making process			
Policy initiation/identification	30	27.3	
Policy analysis	5	4.5	
Decision-making	7	6.4	

Implementation	56	50.9
Monitoring and evaluation	12	10.9
Total	**110**	**100**

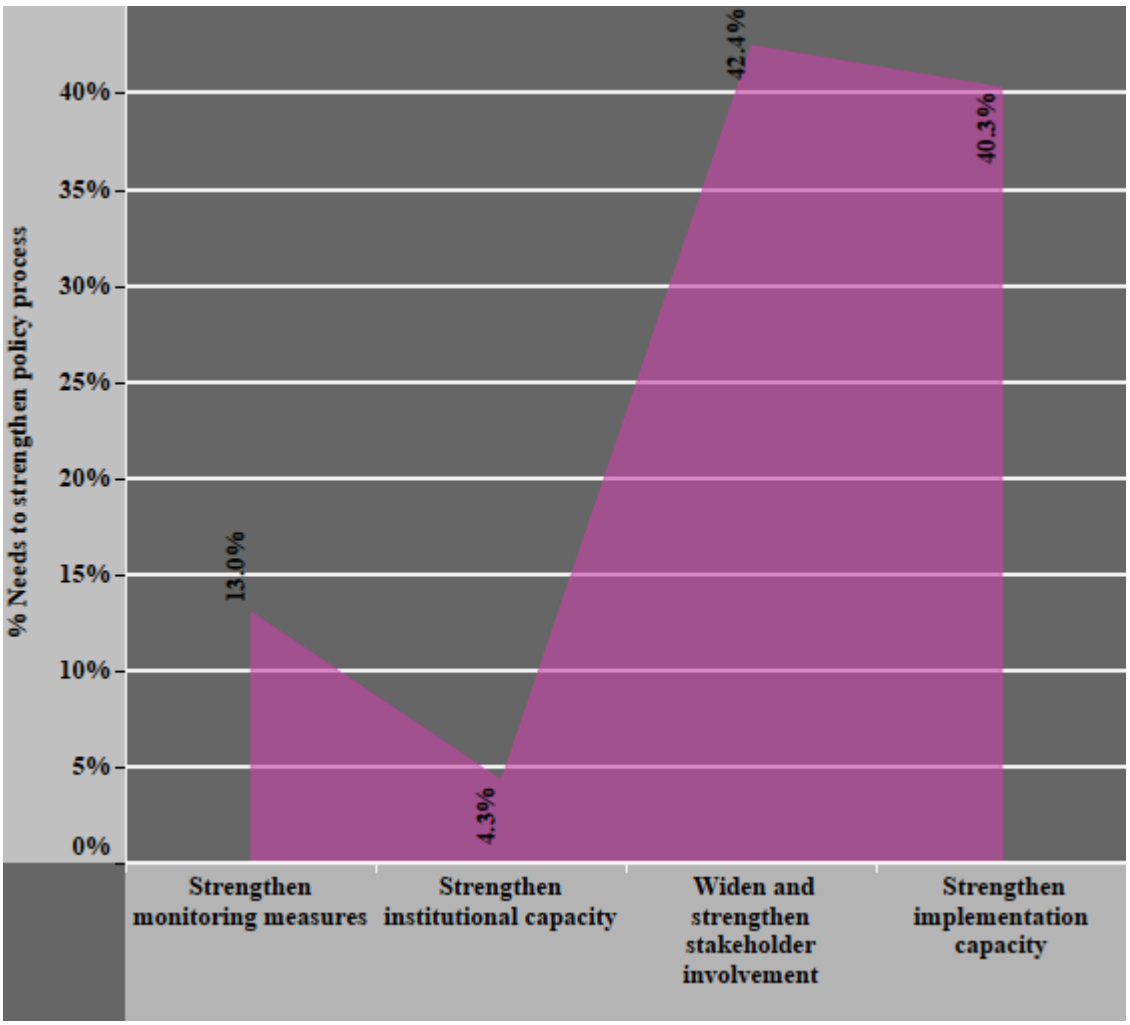
Source: Field Survey; 2017

4.2.5. Policy makers and actors' suggesstions on needs related to priority policy stages

About needs related to priority policy stages , a majority of the respondents 42% indicated that they needed widened and strengthened stakeholder involvement. The high response shown for this need possibly indicates that existing stakeholders maybe inadequate and unsystematically involved in matters relating to climate change policies. With the realization that climate change has to it complex dimensions, adoption would need a wide and strong network of stakeholders . However having wide and strong stakeholder involvement can be possible if policy makers and actors' themselves create the necessary atmosphere. This may equally mean that policy makers and actors be equipped with necessary skills to enhance such a calibre of stakeholders within manageable spheres (Kloprogge & Van Der Sluijs, 2006). Likewise Pitt (2010) based on a study conducted in some cities of the USA, suggests that achieving adoption of climate change policies involves an active multi-level stakeholder relationship.

Moreover, 40% specified that they needed their implemention capacity strenghtened. An additional 13% showed a need for better monitoring measures and 4% said they needed capacitation on institutional operations. In relation to strengthening implementation capacity, it is assumed that policy makers and actors' would most likely not adopt a policy unless they feel equipped enough to carry out implementation. For example, considering Uganda's current climate change policies, they involve several sectors such as water, forestry, ecosystems and agriculture. Among these some would need reactive measures as in in the case of the agricultural sector where adaptation measures would be as a result occuring climate changes. While some would need anticipatory measures as in the case of water resources where measures would have to be taken in adavance of climate change (Smith & Lenhart, 1996). As a result policy makers and actors would need to ensure that they are capable of handling such diversities in order to adopt.

Figure 13: Policy makers and actors' responses on needs related to strengthening policy stages



Source: Field Survey;2017

4.2.6. Analysis of key national climate related policies in relation to suggested priority need (widen and strengthen stakeholder involvement)

Analysis of the key national climate related policies in relation to the suggested priority need-widen and strengthen stakeholder involvement indicated the following. All of the selected policies show the importance of involving stakeholders. However they differ in their perception of extent and depth of involvement. Only the Climate Change, Land Use and Wetlands policies seem to consider stakeholders as equal partners and embrace the involvement of all stakeholders. An example drawn from the Land Use Policy which shows a more all-inclusive and explicit approach to stakeholder involvement. While a majority of the policies describe the involvement of partners on a selective basis by using words such as "other stakeholders". Some, like the Forestry Policy indicate a less collaborative involvement as they seem to shift the role of implementation to stakeholders. Again the involvement of stakeholders in some of the policies such as the Disaster, Land and Renewable Energy policies is considered needed at implementation level while other stages of policy seem not to need stakeholder involvement. Similarly, the National Environment Management policy has no provision for stakeholder networking for policy implementation, it only recognizes stakeholder involvement for resource rights at the community level. Though the policies are related in nature, however the inconsistencies noted in their perception of level of stakeholder involvement poses a risk for low adoption. Different interpretations and dialogues in climate related instruments have been highlighted in several studies including in Mozambique (O'Brien *et al.*, 2007). This has been found to be based on contextual issues in relation to sectoral mandates. However, without

adequate networking and capacity to fine-tune the language of the related policy instruments to relate to each other, this may be detrimental to achieving adoption of policies.

Policy	Priority Need	Policy Statement in summary	Policy Analysis in relation to need
Disaster Policy (2010) (GoU, 2010)	Widen and strengthen stakeholder involvement	Involvement of stakeholders in driving implementation is considered as needing promotion at grassroots level. ….., include mainstreaming disaster risk management in the Ministries annual work plan and budget and the promotion and coordination of disaster risk management amongst stakeholders of the sector.	Does not mention approach to widen and strengthen stakeholder involvement.
Wetlands Policy (1995) (GoU, 1995)		…., in consultation with all stakeholders has prepared a National Policy for the Conservation and Management of Wetland Resources.	Deficient in strategic promotion widening and strengthening stake holder involvement.
Land Policy (2013) (GoU, 2013c)		Stakeholders should participate and be constructively engaged at all levels of policy implementation.	Has a strategic approach to persuade active involvement of stakeholders, however no clear pathway for widening and strengthening stakeholder involvement.
The Uganda Forestry Policy (2001) (GoU, 2001)		Central government should withdraw from activities that can be carried out more effectively by the private sector or other stakeholders, but maintain core functions of policy development and regulation.	Encourages stakeholder participation however repeatedly references stakeholders as "other" which does not seem to encourage a widening and strengthening stakeholder involvement.
National Agriculture Policy (2011) (GoU, 2013b)		Dialogue with government and other stakeholders on strategic actions needed for agricultural development.	Recognizes the importance of stakeholder participation, however does not have a clear mandate to widen and strengthen stakeholder participation.
Uganda Climate Change Policy (2013) (GoU, 2015)		…, ensure that all stakeholders address climate change impacts and their causes through appropriate measures.	Shows no building blocks for widening and strengthening stakeholder involvement.
The National Land Use Policy (2006) (GoU, 2006)		…, Government should ensure collaboration among all stakeholders at all levels, both external and internal, in pursuit of these policy goals.	Emphasizes collaboration lacks specific plan to widen and strengthen stakeholder involvement.
The Renewable Energy Policy For Uganda (2002) (GoU, 2007)		…, oversee and coordinate the implementation of this policy by various stakeholders…	Acknowledges stakeholder involvement, makes no provision for widening and strengthening involvement.
National Environment Management Policy (1995) (GoU, 1994)		To vest resource ownership rights in resource stakeholders (e.g., individuals and communities).	Links stakeholder involvement in resource ownership

Table 17: Summary policy analysis of key national climate related policies in relation to suggested priority need (widen and strengthen stakeholder involvement)

4.2.7. Policy makers and actors' responses on recommendations to benchmarking on climate related policies

Establishing the views of policy makers and actors' in relation to benchmarking was important in order to understand their poise on adoption of climate resilient policies. According to (Anand & Kodali, 2008) benchmarking is described as

> "a continuous analysis of strategies, functions, processes, products or services, performances, etc. compared within or between best-in-class organisations by obtaining information through appropriate data collection method, with the intention of assessing an organisation's current standards and thereby carry out self-improvement by implementing changes to scale or exceed those standards."

Benchmarking is considered important by (Papaioannou, 2007), as it provides a platform to enhance knowledge on best practice. However, advises that its practice should be done with caution as it may interfere with a country's governing principles. Papaioannou further points out that this is in relation to the risk of copy and paste as to seeking best practices and application within contextual parameters.

Respondents were asked to indicate their views on reccommendations to benchmark climate resilient policies. About 32.1% expressed that they would likely recommend benchmarking, the response to benchmark indicates that policy makers and actors may be having inconsistencies that need to be addressed in order to enable adoption. These inconsistencies may be as a result of inadequacy of existing learning tools specific to complexities involved in addressing climate change through existing multi-dimensional policies as cited by (Tschakert & Dietrich, 2010). Congruently, Stone (2001) suggests that literature that concerns knowledge transfer on the use of policies across various political settings is mounting. This suggests that with the availability of this knowledge, tapping from such settings through benchmarking may increase chances of enabling adoption of policies.

Another 23.2% stated that they would very likely recommend benchmarking. Drawing from this response it is ostensible that a majority of policy makers and actors' associate shared learning experiences to adoption of policies. Equally another 23.2% were undecided, 11.6% were of the view they were unlikely to reccommemend benchmarking and 9.8% held that that they were very unlikely to recommend benchmarking.

Table 18: Policy makers and actors' responses on recommendation to benchmark climate related policies

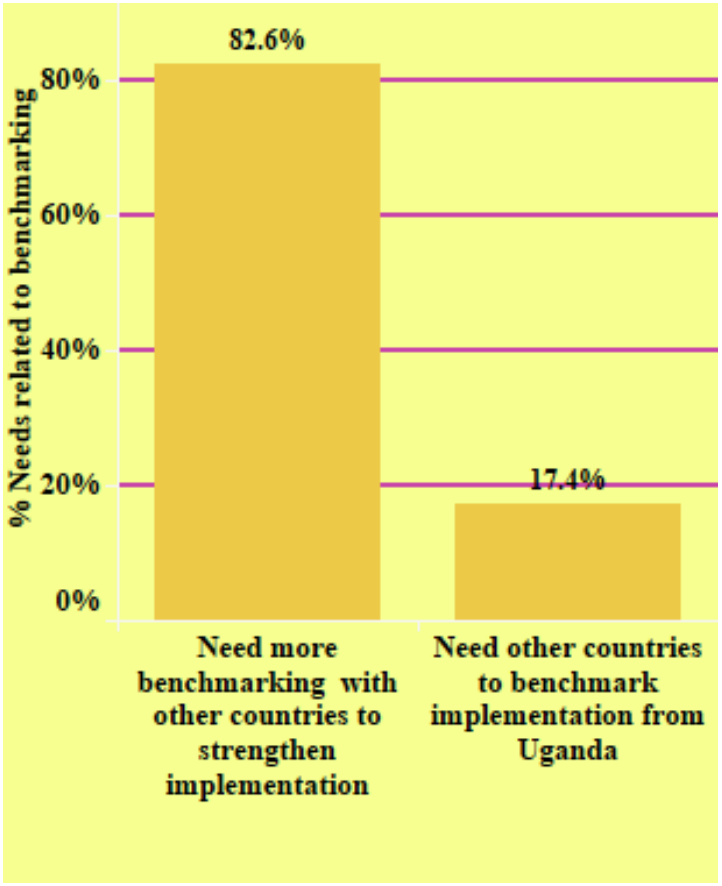
Variable	Frequency	Percent	n=112
Benchmarking climate resilient policies			
Very unlikely	11	9.8	
Unlikely	13	11.6	
Undecided	26	23.2	
Likely	36	32.1	
Very Likely	26	23.2	
Total	**112**	**100**	

Source: Field Survey;2017

4.2.8. Policy makers and actors' responses on needs related to benchmarking

In regard to policy actors' responses on needs related to benchmarking, an exceptionally high percentage, 82.6% of respondents showed a need for more benchmarking with other countries to strengthen implementation of climate resilient policies. The high indication for this need seems to outscale other indicated needs gathered in this study. This may be related with the global and complex occurrence of climate change (Karl *et al*., 2009; Wheeler & Von Braun, 2013). As a result adoption of policies would need to be preceded with understanding the relationship of policy processes within countries. This would initiate ability to determine the capacity these policies to relate with other policies at a global level, to achieve objectives at country specific level while meeting global goals . Enhancing multilateral relations for purposes of achieving benchmarking climate change policy implementation in this perspective will need distinctive approaches. Similarly Steves *et al*. (2011) and Anderson (2016) state that some countries adopt and while others do not adopt climate change policies as this is dependant on factors related to the international context and this affects how governments approach climate policy. Also, 17.4% indicated the need for other other countries to learn from the Uganda policy implementation process. It is quite evident from the needs expressed by policy makers and actors' that they consider adoption of climate resilient policies dependant upon many other factors such as benchmarking implementation.

Figure 14: Policy makers and actors' responses on needs related to benchmarking



Source: Field Survey;2017

4.2.9. Analysis of key national climate related policies in relation to suggested priority need (benchmarking with other countries to strengthen implementation)

An analysis of the climate related policies in relation to the key need- benchmarking with other countries to strenghten implementation showed the following. Policies that were found to mention benchmarking at international level were specifically the Renewable Energy policy for and the Climate Change policy. However focus is narrow as benchmarking is focused on technologies for skills transfer. The Disaster , Uganda Forestry , National Agriculture, National Environment Management policy and the National Land Use policies do not mention anything on benchmarking implementation. The Weltlands and Land Policies only mention the need for joint implementation with other countries and remain silent on the issue of benchmarking discourses to carry out implementation. The discrepancies observed in these policies in regard to implemention of climate change related issues poses an imbalance in harmonizing the mandate of the policies to address climate change. It is vital that the policies be revised to accommodate each other if the obligation of climate change is to be achieved. An example is drawn from Europe where organized transnational municipal networks (MTNs) have been formed to address transnational issues in relation to climate change. These networks allow for bencmarking to enhance local capacities for addressing climate change and promote exchange of experience and transfer of expertise. Again because of the organizational structures of the MTNs this facilitates member countries to access resources to implement climate change policies (Kern & Bulkeley, 2009).

Table 19: Summary policy analysis of key national climate related policies in relation to suggested priority need (need more benchmarking with other countries to strengthen implementation)

Policy	Priority Need	Policy Statement in summary	Policy Analysis in relation to need
Disaster Policy (2010) (GoU, 2010)	Need more benchmarking with other countries to strengthen implementation	None	Does not mention the need to benchmark implementation from other countries.
Wetlands Policy (1995) (GoU, 1995)		…, encourage the involvement of other countries in the conservation of wetland resources.	Does not clearly stipulate its position on benchmarking implementation from other countries.
Land Policy (2013) (GoU, 2013c)		Jointly implement with neighboring countries, measures for effective border management control and supervision.	Has no priority for benchmarking implementation.
The Uganda Forestry Policy (2001) (GoU, 2001)		None	Does not mention the need to benchmark implementation from other countries
National Agriculture Policy (2011) (GoU, 2013b)		None	Does not make mention of benchmarking implementation from other countries.
Uganda Climate Change Policy (2013) (GoU, 2015)		Is emphatic about the need to transfer various technologies from other countries to necessitate adaptation and mitigation.	There is almost no mention of benchmarking implementation mechanisms from other countries.
The National Land Use Policy (2006) (GoU, 2006)		None	Has no provision for benchmarking implementation from other countries.
The Renewable Energy Policy For Uganda (2002) (GoU, 2007)		Identify and enhance mechanisms to gain from technology skills transfer and from international experience.	Appreciates the need for benchmarking for skills transfer.
National Environment Management Policy (1995) (GoU, 1994)		None	Does not have any provision for benchmarking implementation

4.3.0. Investigate the needs of policy makers and actors' in relation to gender and climate change for adoption of climate resilient policies across government levels

Under this objective it was important to investigate policy makers and actors' needs related to gender and climate change for adoption of climate resilient policies .Variables such as gender mainstreaming, implementation and importance of gender in relation to climate change were invesigated. Additionally needs of policy makers and actors' in relation to the variables were established. Analysis of the key national climate related policies was conducted to establish their linkage with the suggested priority need.

4.3.1. Policy makers and actors' responses in relation to understanding gender mainstreaming in climate resilient policies

Understanding gender mainstreaming in relation to climate resilient policies was important as climate change affects both men and women at varying degrees (Chaudhury *et al.*, 2012). According to (ECOSO, 1997) gender mainstreaming is defined as:

> "Mainstreaming a gender perspective is the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality".

Policy actors indicated their position in regard to understanding gender mainstreaming in climate resilient policies. A somewhat 42.7% agreed that they understood the idea of gender mainstreaming in climate change change. While about 31.8% also strongly agreed. In general , the preliminary point for gender mainstreaming seems precisely positive (Moser, 2005; Verloo, 2005) as indicated by policy makers and actors under this variable. Another 14.5% remained undecided, 6.4% and 4.5% represented those who diasgreed and strongly disagreed.

Table 20: Policy makers and actors' responses in relation to understanding gender mainstreaming in climate related policies.

Variable	Frequency	Percent	n=110

Understanding gender mainstreaming in climate resilient policies		
Strongly disagree	7	6.4
Disagree	5	4.5
Undecided	16	14.5
Agree	47	42.7
Strongly Agree	35	31.8
Total	**110**	**100**

Source: Field Survey;2017

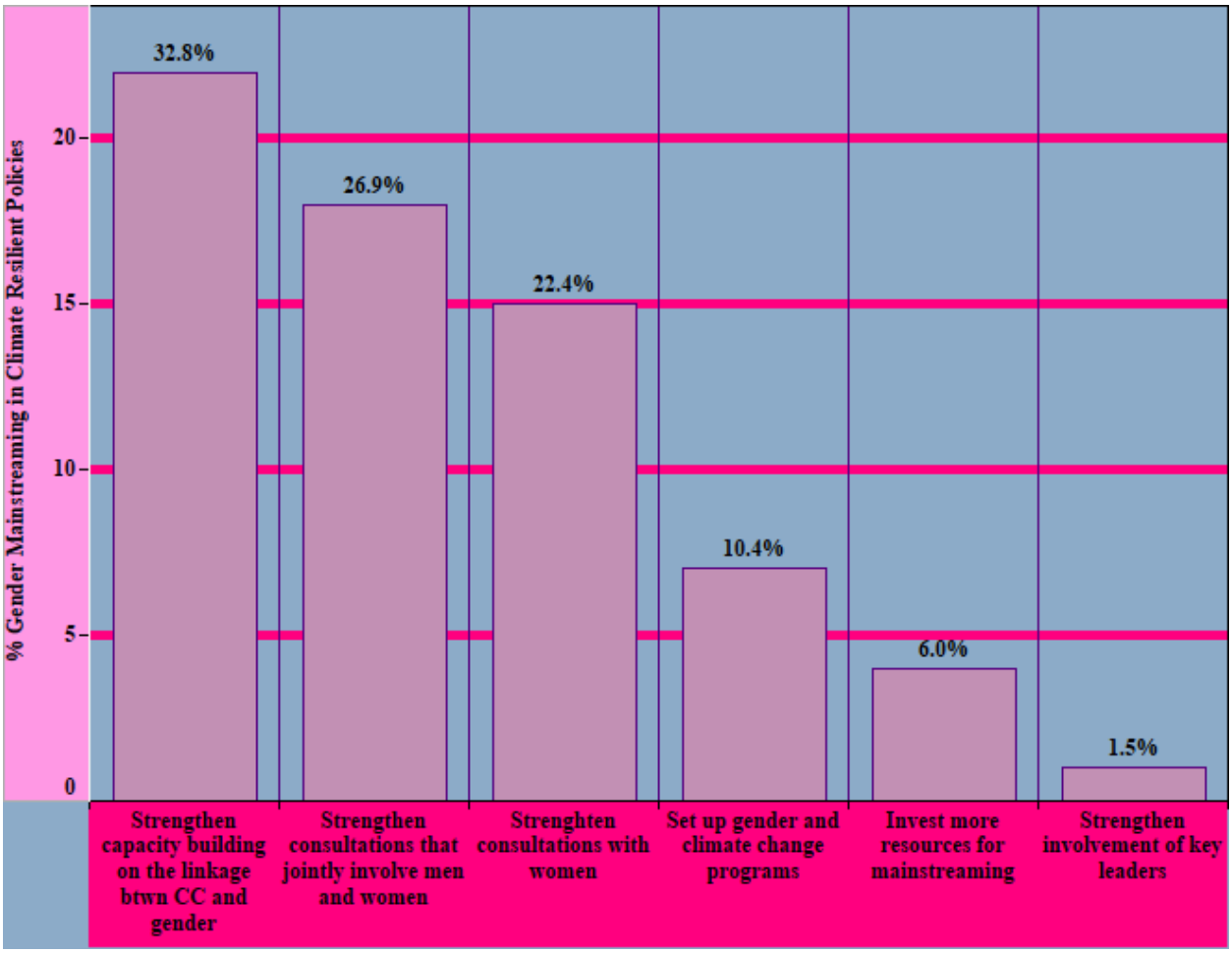
4.3.2. Policy actors responses on needs related to gender mainstreaming in climate related policies

Though a majority of policy makers and actors' indicated that they understood gender mainstreaming as shown in table 19. Responses on the needs of policy makers and actors' in relation to gender mainstreaming in climate resilient policies present a somewhat different view than that shown in the table 19. About 32.8% of the respondents showed a need for strengthened capacity building to link climate change and gender. This seems to depict that the high response in regard to understanding gender mainstreaming as shown in table 19 could be indicative of misunderstandings associated with the concept of gender. Furthermore, this also indicates that linking theory into practice could be the challenge, as indicated by the need for capacity building. In view of this need, adoption of climate resilient policies may be challenging.

Practically , gender mainstreaming in climate change related policies is shown to be commonly lagging behind due to policy makers and actors' inability to comprehend the issue (Alston, 2014; Nelson *et al.*, 2002; Rodenberg, 2009). However Lambrou and Piana (2006) attribute lack of gender mainstreaming in climate change to preference of scientific and technological measures to soft policies tackling behavior and social diffrences. In view of the literature showing non interest by policy makers and actors' to include gender issues in the climate change agenda. Capacity building to build interest in this milieu is advisably a starting point if progress on adoption of policies is to be achieved. Another 26.9% indicated a need for strengthening consultations which jointly involve men and women. This need is viewed as of relative importance, as it may help policy makers and actors' balance their understanding of men's and women's issues. This is mainly because climate change has supposedly been found to affect the lives of both men and women though at different scales (Denton, 2002). Understanding needs of both men and women within the same platform would be necessary to further establish this authentication.

Literature sources also indicate that women are mostly under represented in decision making processes (Hannan, 2009). Avenues such as joint consultation platforms would also help address the dynamics that involve men's and women's decision making practices. However, more effort is needed to come up with a platform that has a strong joint consultation process to achieve gender mainstreaming. Additionally, 22.4% specified the need to reinforce consultations with women, while 10.4% pointed that they needed a set up of gender and climate change programs, 6% showed they needed more resources invested to enable mainstreaming and 1.5% indicated a need for strenghtened involvement of key leaders.

Figure 15: Policy makers and actors' responses on needs related to gender mainstreaming in climate related policies



Source: Field Survey;2018

4.3.3. Analysis of key national climate related policies in relation to suggested priority need (strengthen capacity building on the linkage between climate change and gender)

Establising policy provision in relation to the suggested priority need-strengthen capacity building on the linkage between climate change and gender in relation gender mainstreaming was vital. This was to help identify existing policy gaps . All of the policies with the exception of the Wetlands policy mention gender mainstreaming as mandatory.

However policies that mention gender mainstreaming also vary in their understanding of the term gender and in their execution of gender mainstreaming. For instance the Disaster policy empasizes the need to understanding the relevance of gender in disaster issues and is not clear whether that will determine mainstreaming or not. As a result the policy has no provision for building capacity that will link its mandate to gender mainstreaming. In regard to the Land policy, its mandate to mainstream gender has no provision for capacity building to enable mainstreaming. It also links gender mainstreaming to women while excluding men.

Likewise, the Uganda Forestry policy provides for gender mainstreaming, however it does not provide for capacity building as a roadmap for achieving mainstreaming. Again the policy links gender with women and youth and excludes men. Equally, the National Agriculture policy suggests that it will ensure gender equity in driving its mandate, nevertheless like some of the aforementioned policies it does not provide a roadmap that includes capacity building to mainstream. The National Environment Management policy has several clauses that mention gender integration. It however does not mention of mainstreaming and as a result has no provision for capacity that links climate change related issues with gender.

The Climate Change policy has provision for gender mainstreaming however links gender to women and children without mention of men. An example is a statement in section 3.4.8. qouted as “Furthermore the policy holds the view that mainstreaming of gender issues is focused on women…”, this leaves out issues related to men. Equally, it does not mention capacity building as an approach to enable mainstreaming. The position of the CC policy in regard to gender mainstreaming and climate change lacks balance in this regard. As it also fails to recognize the term gender as that describing the socially ascribed roles of men and women because of biological orientation. The term is instead used as a synonym for the actual biological orientation of women and men. It must also be apprecited that the policy makes provision for

strengthening capacity of relevant stakeholders at both national and local level in relation to gender. However the challenge with this statement is that it is built upon a misconception of the term gender furthermore, it lacks understanding of the composites of gender. This shows a need to have the policy makers and actors' understand gender as a term and its link with climate change.

In relation to the Land Use policy gender mainstreaming is mentioned for concerns that relate to gender but also does not mention capacity building as method to mainstream. Relative to the Renewable Energy policy gender mainstreaming is mentioned as part of its obligation. Conversely it does not have capacity building as a mechanism to drive this obligation furthermore, it links gender to women while excluding men.

The inconsistencies observed in the climate related policies in relation to terminology of gender as refering to women and either youth and children with exclusion of men distorts the term. Equally, this creates policy misdirection in fulfilling interventions related to gender issues which affects adoption of the policies.

Policy	Need	Policy Statement in summary	Policy Analysis in relation to need
Disaster Policy (2010) (GoU, 2010)	Strengthen capacity building on the linkage between climate change and gender	….. necessary to analyze and understand the relevancy and implications of gender roles in disaster preparedness and management.	Does not mention capacity building to link gender in its mandate.
Wetlands Policy (1995) (GoU, 1995)		None	Has no provision for gender in its mandate.
Land Policy (2013) (GoU, 2013c)		Mainstream gender into development planning so as to improve the status of women.	Has provision to mainstream gender into development planning, does not strategize on capacity building to link with gender. Links gender to women while excluding men.
The Uganda Forestry Policy (2001) (GoU, 2001)		…, ensure the integration of gender concerns and issues into the development of the forest sector. Strategies for implementing the Forestry Policy will specifically account for gender differences in the perceptions and uses of forest products. This will include efforts to: * increase security of tenure over forest resources for women and youth.	Commits to ensuring integration of gender concerns into the forest sector, only relates gender to women and youth and excludes men. Does not show efforts to strengthen capacity building to link gender with climate change.
National Agriculture Policy (2011) (GoU, 2013b)		Agricultural development services will be provided to all farmer categories as individuals or in groups, ensuring gender equity	Commits to ensuring gender equity to all farmer categories with no mention of capacity building to link gender with climate change.
Uganda Climate Change Policy (2013) (GoU, 2015)		Mainstream gender issues in climate change adaptation and mitigation approaches in order to reduce the vulnerability of women and children to the impacts of climate change and recognise their key role in tackling this issue.	Acknowledges mainstreaming gender in climate change approaches, lacks approach on building capacity to enable linking the two. Lacks clear definition of gender as it relates gender with women and children and excludes men.
The National Land Use Policy (2006) (GoU, 2006)		…., ensure adequate and effective integration of gender concerns in all programmes geared towards the implementation of this policy.	Recognizes integration of gender issues in the policy however not clearly linked to climate change and lacks roadmap on strengthening capacity building to link with gender with climate change.
The Renewable Energy Policy For Uganda (2002) (GoU, 2007)		Mainstream gender and poverty issues in renewable energy development strategies to improve the socio-economic well-being of women and the poor in general.	Appreciates mainstreaming gender in renewable energy, has no provision for building capacity to link gender with climate change issues.
National Environment Management Policy (1995) (GoU, 1994)		…ensure public participation and gender integration in environmental management processes	Has several other clauses on gender integration, however does not explicitly mention capacity building to link cc with gender.

Table 21: Summary policy analysis of key national climate related policies in relation to priority suggested need (strengthen capacity building on the linkage between climate change and gender)

4.3.4. Policy actors' responses in relation to understanding gender related issues to enable implementation of climate resilient policies

It was important to comprehend policy makers and actors' ability to understand gender related issues in relation to enabling implementation climate resilient policies. If policy makers and actors' can within the policy process relate gender to implementation , then this would also determine their ability to adopt climate resilient policies. Policy actors' indicated their understanding on gender related issues for implementation as follows; 42.6% indicated they agreed with the idea that they understood gender and its relation to climate change for enablement of climate resilient policies. While (Carr & Thompson, 2014) argue that gender is widely misunderstood, a majority would assume that they understand gender as a result . It is not surprising that while the term gender has been found to be misinterpreted in policies used in this research. A majority of policy makers and actors would indicate that they understand gender to such an extent that they could implement climate resilient policies. About 25% indicated they strongly agreed, while 22.2% were undecided, those who disagreed accounted for 7.4% and 2.8% strongly disagreed.

Table 22: Policy makers and actors' responses in relation to understanding gender related issues to enable implementation of climate resilient policies

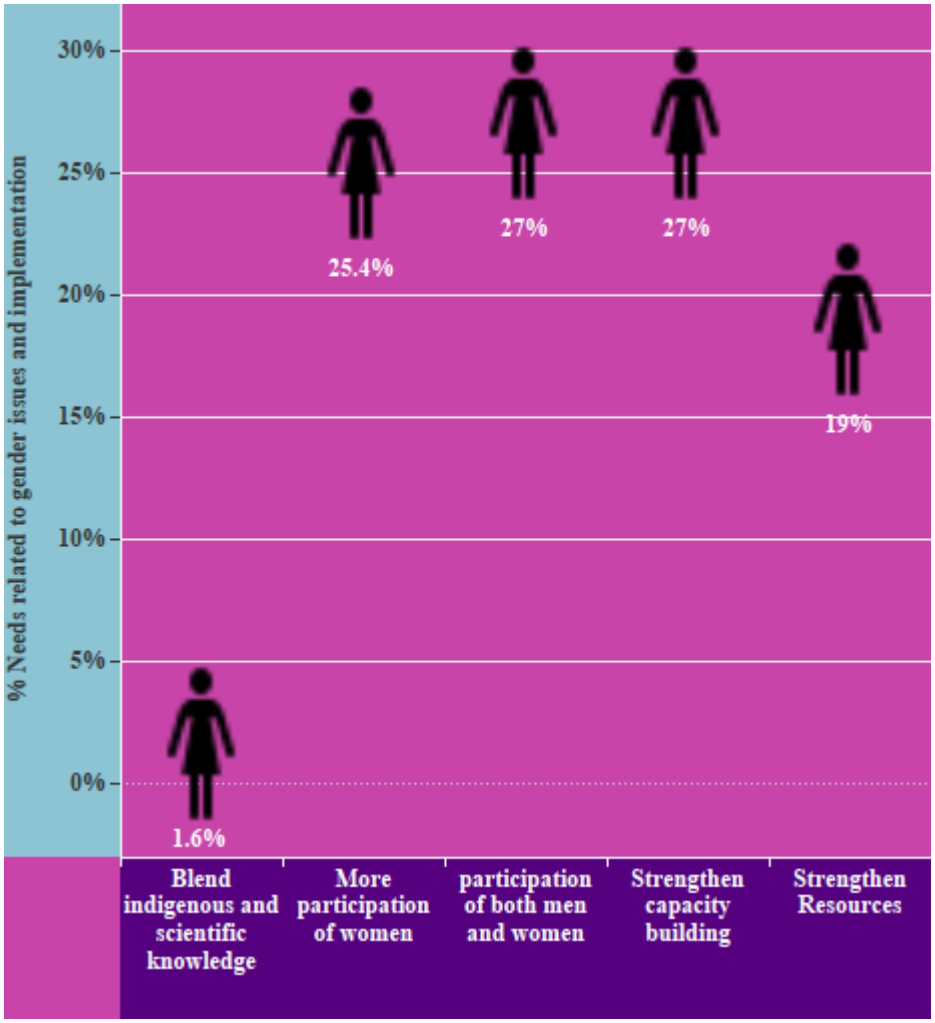
Variable	Frequency	Percent	n=108
Understanding gender related issues for implementation of climate resilient policies			
Strongly disagree	3	2.8	
Disagree	8	7.4	
Undecided	24	22.2	
Agree	46	42.6	
Strongly Agree	27	25	
Total	**108**	**100**	

Source: Field Survey;2017

4.3.5. Policy makers and actors' responses on needs related to gender and implementation of climate resilient policies

Respondents were asked to indicate their needs in relation to gender and implementation of climate resilient policies. Data in figure 16 show that a somewhat 27% of the respondents indicated a need for the participation of both men and women in gender and climate change issues to enable adoption of climate resilient policies. This need indicates that adoption of climate resilent policies could be affected as a result of lack of partcipation of both men and women. A number of studies indicate that gender issues in relation to climate change have been given less priority in the UNFCC and Kytoto protocol (Denton, 2002; Skutsch, 2002). Equally, women's partcipation in decision making has been cited to be low (Denton, 2002). For example, in the Congo Basin, studies indicate that despite the use of forestry resources by both men and women . There exists a gap in undesranding how women are impacted by climate change as a result of their limited participation (Brown, 2011).This contributes to misunderstanding and misrepresention of gender related issues for both men and women. However, worth noting is that the position of leaders in decision making spheres, whether male and female, should enable them to equally represent gender based issues that relate to both groups . This can however be possible when both men's and women's voices are heard on equal platforms. Partcipation of both groups could aslo help address issues of binary approaches to gender as the experiences of both women and men are drawn on a single platform. Another 27% showed a need for strengthened capacity building on gender and climate change. Furthermore, 25.4% stated that they needed more participation of women to enable adoption. Still, 19% of the respondents highlighted a need to strengthen resources and 1.6% cited a need for blended and indigenous and scientific knowledge.

Figure 16: Policy makers and actors' responses on needs related to gender and implementation of climate related policies



Source:Field Survey; 2017

4.3.6. Analysis of key national climate related policies in relation to suggested priority need (participation of both men and women)

An analysis of the key national climate related policies in relation to gender issues and implementation and the suggested priority need –participation of both men and women was done. This was to help establish the position of the policies in their involvement of both men and women and their effect on adoption of climate resilient policies.

As previously mentioned, all the climate related policies with the exception of the Wetlands policy have included gender issues. However content analysis in relation to the variables helps gain in-depth understanding of how the policies define and incorporate gender. For instance the Disaster policy mentions integration of gender concerns without consideration of participation of both men and women to ensure a true reflection of both groups.

In regard to the Land policy it puts emphasis on focusing on women's participation to drive its mandate while it excludes men as part of the participation process. In this regard the policy discriminates against men, this could equally make men feel alienated from issues relating to gender as in this context it is associated with women. In this regard this may build resistance towards initiatives that are related with gender.

The forestry policy has two contradicting statements which make the policy inconsistent in its mandate. The first statement appreciates the need for participation of all men and women in forestry development initiatives, this is viewed as an enabler for adoption of policies as it recognizes the intersectional approach to men and women's issues. The second statement seems to use the binary approach (men versus women) Carr and Thompson (2014) as it seemingly describes women as bearing the harsher consequences of use of forestry resources as they face land tenure insecurities as a result of men. The former approach would place both men and women as having life experiences which are either privileges or oppressions as a result of varying systems.

Also, the National Agricultural policy appreciates taking into account the needs of both men and women in agricultural interventions. The policy is however not transparent in its methodology to achieve this as it is silent on the participation of both men and women. Again, the National Land Use policy only recognizes women and youth in participation in decision making processes. Men are excluded as joint participants with women for implementation. This creates an understanding that men are far ahead in participation as far as decision making is concerned, making their involvement unnecessary.

The Renewable Energy policy, recognizes that only women have been left behind in participation on decision making processes, however has no provision to incorporate joint participation process to address this gap. Commendably, The National Environment policy recognizes the participation of both men and women in information, education and communication (IEC) and decision making on natural resource management. However the policy has no provision for participation that is focused on gender and implementation of climate resilient policies.

Moreover the Climate Change Policy has a disarrayed approach on gender, as it appreciates that issues on gender need to be given adequate attention in climate change. However the policy describes gender as a biological orientation rather than an issue of ascribed roles. It equally does not recognize participation of both men and women to understand gender issues to achieve implementation of policies.

Policy	Need	Policy Statement in summary	Policy analysis in relation to need
Disaster Policy (2010) (GoU, 2010)	Participation of both men and women	Integrate gender concerns into disaster preparedness, emergency planning, decision making and implementation at all levels.	Does not mention implementation based on the participation of men and women
Wetlands Policy (1995) (GoU, 1995)		None	Silent about gender and men and women's participation to drive implementation
Land Policy (2013) (GoU, 2013c)		Redress gender inequity and inequality to inheritance and ownership of land in statutory law. Ensure women's full integration in all decision-making structures and processes in access to and use of land.	Focuses on women and excludes men. Does not include participation of both men and women as an approach to driving implementation. Pushes for coercive approaches to gender balancing more than persuasive approaches that would bring men and women together.
The Uganda Forestry Policy (2001) (GoU, 2001)		The active participation and affirmative action of all women and men…... should be integrated into forest sector development.	Acknowledges the participation of both men and women in forestry development.
		Specifies how both men and women differently make use of forestry resources and shows women to be more limited in use of forestry resources due to land tenure insecurities therefore affecting their ability to manage and make decisions	Shows only women as victims due to men's control over resources and resource control. Therefore does not encourage a participatory approach to influence implementation.
National Agriculture Policy (2013) (GoU, 2013b)		Agricultural development services will be provided to all farmer categories as individuals or in groups, ensuring gender equity. In so doing agricultural interventions will be balanced across the different regions, agricultural zones and across genders. …., incorporate gender issues in all agricultural interventions taking into account diverse livelihood needs of women, men…	There is no recognition of ensuring gender equity across genders, incorporation of gender issues through participation to implement the policy.
Uganda Climate Change Policy (2015) (GoU, 2015)		… Adequate attention must be given to issues such as …, gender… Notably, the background studies for this policy revealed that the genders are affected differently by climate change.	Recognizes the need to give attention to gender issues, does not appreciate need for participation of both men and women.
National Land Use Policy (2006) (GoU, 2006)		Encourage participation of women and youth in land use decision making, especially where they are directly or indirectly affected.	Recognizes participation of women and youth, has no provision for participation of both men and women
Renewable Energy Policy (2002) (GoU, 2007)		…lack of recognition of women as key participants in technology use and innovations	Has no provision for participation of both men and women, singles women out as not recognized in participation.

National Environmental Management Policy (1995) (GoU, 1994)		Facilitate participation of both men and women in formal and informal education, training, public awareness campaigns and decision making in environmental and natural resource management;	Has provision for participation of both men and women on information, education and communication (IEC) and decision making on natural resource management.

Table 23: Summary policy analysis of key national climate related policies in relation to suggested priority need (participation of both men and women)

4.3.7. Perceptions of policy makers and actors' relative to their understanding on the importance of climate change and gender in enabling adoption of climate related policies

It was vital to establish the perceptions of policy makers and actors' relative to their understanding on the importance of climate change and gender in enabling adoption of climate related policies. This was to establish the extent to which policy makers and actors' are able to respond to adoption of policies. Data in table 24 show that a majority of respondents 60.6% rated their perceptions as average relative to their understanding of the importance of climate change and gender issues. The average rating may be based on the assumption that gender and climate change are relatively issues that are still treated with pessimism. Largely, literature shows that climate change and gender issues are still far fetched as a result of lack of data and evidence (Arora-Jonsson, 2011; MacGregor, 2010). This demands for more research to provide a more thriving for both climate change and gender issues. Approximately 25.7% regarded their perceptions as good, while some 8.3% ranked perceptions as poor and 5.5% showed perceptions as excellent.

Table 24: Perceptions of policy makers and actors' relative to their understanding on the importance of gender and climate change in enabling adoption of climate related policies

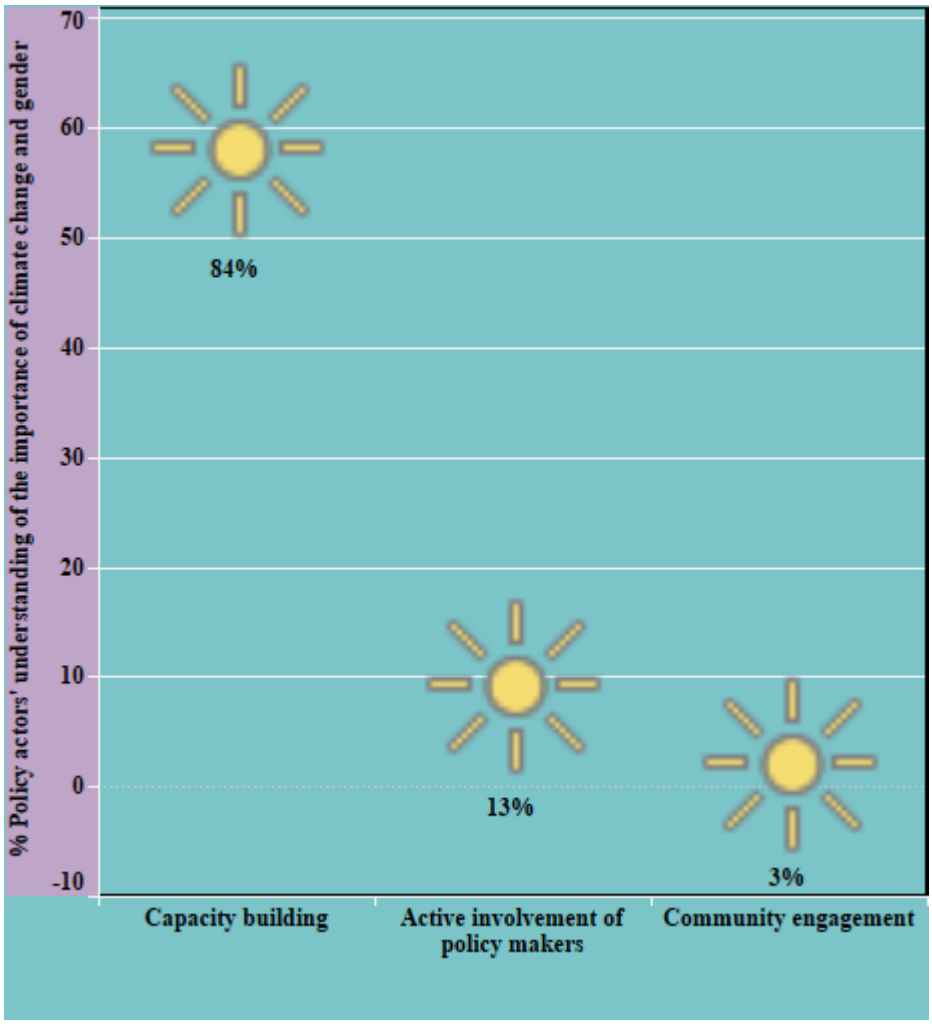
Variable	Frequency	Percent	n=109
Perceptions of policy actors in relation to understanding the importance of gender and climate change			
Poor	9	8.3	
Average	66	60.6	
Good	28	25.7	
Excellent	6	5.5	
Total	**109**	**100**	

Source: Field Survey; 2017

4.3.8. Policy makers and actors' responses in relation to needs related to understanding the importance of gender and climate change

Policy makers and actors' were asked to state their needs in regard to understanding the importance of gender related issues and climate change to enable adoption of climate resilient policies. A somewhat 84% of policy actors indicated they needed capacity building to understand the importance of gender and climate change. This high somewhat indicates that policy makers and actors' lack the necessary approaches to identify and tackle the most important issues concerning the interaction of the two variables (Nilsson *et al.*, 2016). Similarly, Masika (2002) argues that gender in relation to climate has been given less attention. As a result making it less important while the aggravating effects of climate change continue to have severe social impacts. Another 13% of respondents specified they needed active involvement of policy makers and actors' and 3% emphasized a need for more community involvement.

Figure 17: Policy makers and actors' responses in relation to needs related to understanding the importance of gender and climate change



Source: Field Survey; 2017

4.3.9. Analysis of key national climate related policies in relation to suggested priority need (capacity building to understand the importance of climate change and gender)

A review of the climate change response policies in relation to the key need- capacity building on the importance of gender and climate change indicated the following. Notwithstanding the Wetlands policy which has no mention of gender issues, all the selected policies do mention issues of gender. However none of these policies have provision for capacity building aimed at promoting the importance of gender and climate change. For instance, the disaster policy seems not to clearly depict its mandate on climate related issues as it still shows a need to understand the relevence and importance of gender issues. While in the case of the land policy, the objective to amend historical injustices to protect land rights of groups and communities marginalized by gender lacks support of promoting the importance gender and climate change. Though having a seemingly clear and strong mandate that supports behaviour change to address gender issues. The policy is not relevant in relation to promoting the importance of gender and climate change.

Also, despite presenting a gender sensitive approach towards the implementation of its mandate, the national agricultural policy still lacks clarity in promoting the importance of gender and climate change to fullfil its objective. The Climate Change policy portrays a steering role that ensures that climate change response policies are aligned to fulfilling the climate change objectives. However, though the policy realizes the need to strengthen the capacity of stakeholders to promote gender sensitive approaches. The policy does not relate this to ensuring the realization of the importance of gender and climate change. A key informat highleted the following:

> " The gender dialogue is about cognitive advocacy, but there is need for evidence to convince people. All that evidence we need for programming and policy development can be possible if we have the statistics and evidence to back up, that strengthens correctional management of gender disaggregated data in all government ministries, departments and agencies, what is currently being done is not enough"

The statement shows that policy makers and actors' still need mehanisms that can better inform them about gender issues. This also seems to imply that extra efforts may need to be in place to produce convincing data, for policy makers and actors' to appreciate the importance of gender.

Table 25: Summary policy analysis of key national climate related policies in relation to suggested need priority need (capacity building on the importance of gender and climate gender)

Policy	Need	Policy Statement in summary	Policy analysis in relation to need
Disaster Policy (2010) (GoU, 2010)	Capacity building on the importance of gender and climate change	It is necessary to analyze and understand the relevancy and implications of gender roles in disaster preparedness and management.	Has no provision for promoting the importance of gender and climate change through capacity building.
Wetlands Policy (1995) (GoU, 1995)		None	No mention of gender issues and is in this context silent about promoting the importance of gender and climate change through capacity building.
Land Policy (2013) (GoU, 2013c)		Redress historical injustices to protect the land rights of groups and communities marginalized by history or on the basis of gender….	Mentions equalizing land rights on the basis of gender however there is no mention of capacity building that aims at encouraging the importance of gender and climate change in land rights issues.
The Uganda Forestry Policy (2001) (GoU, 2001)		Promote changes in attitudes and organisational cultures, to break down gender barriers and to provide mutual respect and dignity for all people irrespective of social group, gender or background.	Acknowledges the need to address gender issues through behavior change, however has no mention of capacity building as a strategy to promote the importance of gender and climate change.
National Agriculture Policy (2011) (GoU, 2013b)		Agricultural development services will be provided to all farmer categories as individuals or in groups, ensuring gender equity. In so doing agricultural interventions will be balanced across the different regions, agricultural zones and across genders. …., incorporate gender issues in all agricultural interventions taking into account diverse livelihood needs of women, men…	Although there is recognition to address gender issues, promoting the importance of gender and climate change is not prioritized.
Uganda Climate Change Policy (2013) (GoU, 2015)		Climate change response policies and activities must be gender sensitive, and the capacity of relevant stakeholders at national and local levels to promote gender-sensitive approaches to climate change adaptation must be strengthened.	Realizes the need to strengthen capacity of relevant stakeholders at both national and local level in gender issues. There is no mention of enabling the stakeholders to realize the importance of gender and climate change.
National Land Use Policy (2006) (GoU, 2006)		Recognizing gender roles in the use of land is a pre-requisite to appropriate land use planning; To promote practices and strategies that minimize the impact of climate variability and change	Policy addresses gender and climate change on different scales, it does not provide for capacity building to enable understanding the two.
Renewable Energy Policy (2002) (GoU, 2007)		This Policy is based on the need to address the challenges observed… as well as those threats posed by the increasing energy prices, environmental degradation, climate change, as well as Government's commitment to poverty and gender responsive energy actions	The policy realizes the need to address climate change and gender based on threats posed by increasing energy prices, has no provision to bring about understanding on climate change and gender.

National Environment Management Policy (1995) (GoU, 1994)		Participate actively in regional and international efforts towards sound management and conservation of environmental resources especially in the areas of… climate change, etc.;	Mentions gender and climate change on different agendas, has no provision to enable understanding of the importance of the two through capacity building.

4.3.10. Perceptions on adoption of climate resilient policies (Multiple responses)

It was imperative to understand the policy actors perceptions on the adoption of climate resilient policies. Data in table 26 show respondents multiple responses on inclusion and involvement of stakeholders in climate related issues and incorpotation of climate change in key instruments. In terms of incorporation of climate change related issues in development plans 41% agreed that climate change issues were incorporated in development plans. These issues include ensuring integration of climate change in relate policies. Again in relation to involvement of all concerned parties in the policy cycle process, a majority 34% of the respondents stated that they disagreed. Concerned parties involve government, NGOs and community memebers. Policy actors also expressed their opinion in concern to understanding the needs of men and women in relation to climate change to enable adoption of climate resilient policies. Most of the respondents 31.5% agreed that they understood the needs of both men and women related to climate change to enable adoption of climate resilient policies. These needs involve adaption and mitigation measures relevant and suitable to enhance the potential and capacity of both men and women without exposing them to risks.

In regard to enough technical expertise to enable adoption of climate resilient policies, (30%) agreed. Technical expertise would in this context mean adequate advise based on sufficient evidence to inform policy makers and actors' to respond timely on issues relate to climate change. Once more, relative to sufficiency of indigenous knowledge practices of both men and women in relation to climate change and adoption of climate resilient policies, (30%) agreed. Sufficient indigenous knowledge would include measures that men and women have used overtime to respond to environmental factors which can help inform policy direction.

Table 26: Perceptions on adoption of climate related policies (multiple responses)

Statement*	Strongly agree	Agree	Undecided	Disagree	Strongly Disagree	Total
There is clear incorporation of climate change related issues in development plans	33 (29.7)**	46 (41.4)	15 (13.5)	16 (14.4)	1 (0.9)	111 (100)

All concerned parties are involved in every stage of the policy cycle process in relation to climate change issues	11 (9.9)	32 (28.8)	25 (22.5)	38 (34.2)	5 (4.5)	111 (100)
As policy makers and actors' we understand the needs of both men and women in relation to climate change such that adoption of climate resilient policies is smooth.	33 (27.7)	35 (31.5)	15 (13.5)	25 (22.5)	3 (2.7)	111 (100)
There is enough technical expertise to enable adoption of climate resilient policies in this country	16 (14.5)	33 (30)	20 (18.2)	33 (30)	8 (7.3)	110 (100)
We have sufficient indigenous knowledge practices on climate change that embraces both men and women to link with scientific climate change knowledge to enable adoption of climate resilient policies.	30 (27.3)	33 (30)	27 (24.5)	18 (16.4)	2 (1.8)	110 (100)

*Multiple Responses
**Percentages in Parenthesis ( )
Source: Field Survey, 2017

4.3.11. Independent variable considered most key to drive adoption of climate resilient policies

Respondents specified their preference for the most key independent variable to drive adoption of climate resilient policies. Most (62.4%) selected information, communication and

technology as key while (28.4%) chose institutional set ups and a smaller proportion 9.2% indicated gender issues.

Table 27: Independent variable considered key in driving adoption of climate related policies

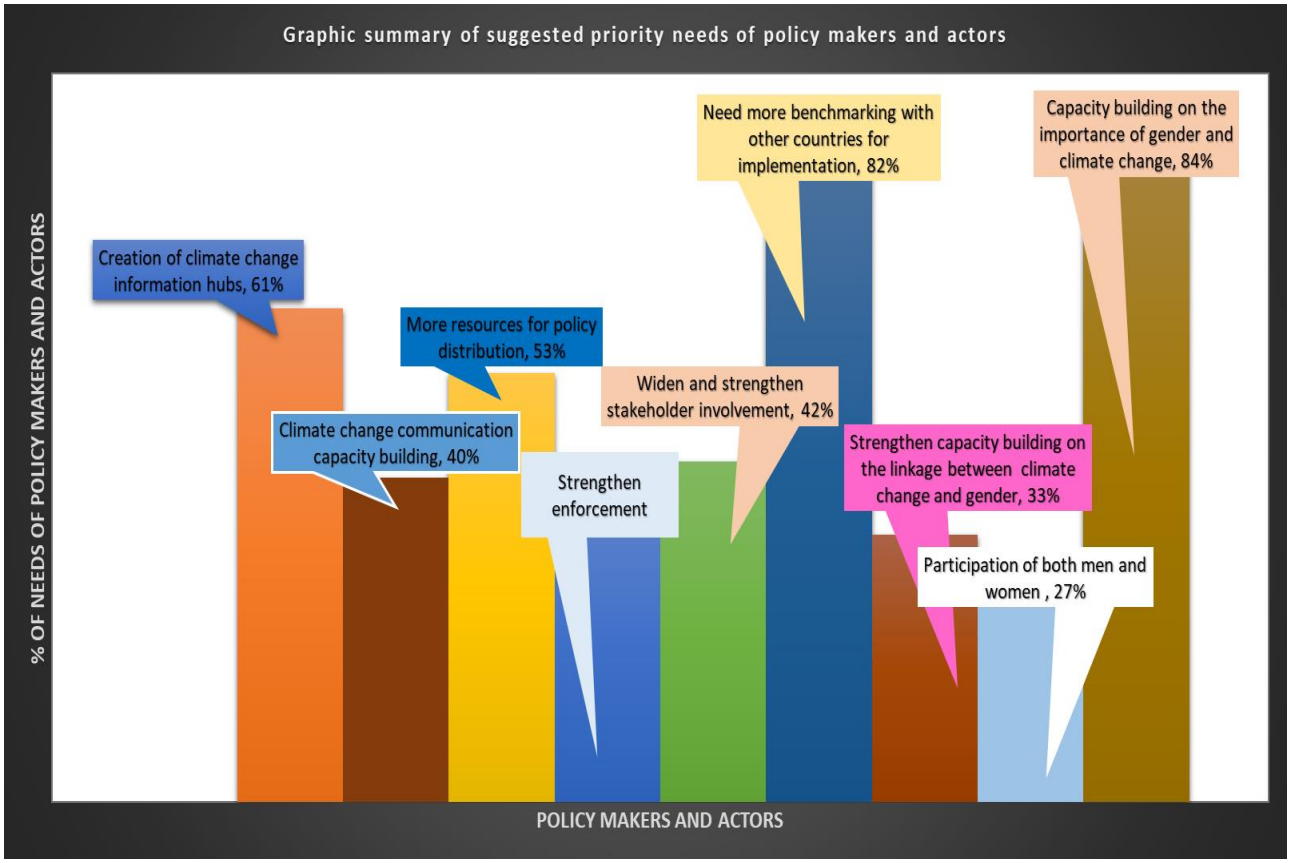
Variable	Frequency	Percent	n=109
Independent variable most key to drive adoption of climate resilient policies			
Information, communication and technology	68	62.4	
Institutional set ups	31	28.4	
Gender issues	10	9.2	
Total	**109**	**100**	

Source: Field Survey; 2017

4.3.12. Summary on the priority needs of policy makers and actors' in relation to climate change

Figure 18 shows a graphic summary of the suggested priority needs of policy makers and actors' in relation to climate change. These are needs based on factors relating to ICT, institutional and gender. The highest considered needs were on capacity building on the importance of gender and climate change 84%. The need for benchmarking to implement climate related policies was the second highest need with 82% respondents under institutional needs. The need for creation of hubs that relay climate change information had the third highest rated need 61% under ICT. The needs showing the highest rating are priority areas for policy makers and actors' to invest for adoption of climate related policies.

Figure 18: Graphic summary of suggested priority needs of policy makers and actors' in relation to climate change



CHAPTER FIVE

5. Summary, conclusions and recommendations

5.1 Summary

This study examined the needs of policy makers and actors in Uganda in enabling adoption of climate resilient policies. Selected districts included Nwoya, Mbale, Kampala, and Luwero, as they were representative of the CCAFS-IFAD and PACCA projects in which overall coordination of policies across sectoral institutions is low. Policy makers and actors' in these districts were the subjects that informed the study. It was vital to understand their perceptions concerning climate resilient policies, as Uganda is heavily dependent on rain fed agriculture and environmental resources (Jagger, 2012).

In relation to policy makers and actors' level of education, a majority of the policy makers and actors at both national and district level had a master's degree as the highest qualification. However males at both district and national possessed higher

qualifications than females. In addition, a greater proportion of men occupied decision-making positions than women. About years of working experience at decision making level, 39 percent of the policy actors had over ten years working experience.

Analysis on ICT indicated that policy makers, actors, and actors (35%) agreed to easily accessing climate change information. Needs related to accessing information showed that a proportion of the respondents (61%) needed the creation of climate change information access hubs around the country. Climate and climate change related policies in relation to need for creation of information hubs were found to vary in their strategies for information dissemination. However, none mentioned creation of information access hubs. While 44 percent of the respondents indicated that they were likely to communicate climate change related information, (40%) of the respondents also indicated that they needed capacity building in order to communicate climate change information. Climate and climate change related policies were found to have no clear provision for capacity building that relates to enabling communication of climate change information. A somewhat (29%) of the respondents were found to have agreed to clear dissemination mechanisms of climate resilient policies. Equally, (53%) of the respondents indicated a need for more resources to enable dissemination of climate resilient policies.

Relative to institutional needs, 24 percent of the respondents indicated that they were not satisfied with the regulatory frameworks, while (38%) indicated a need for strengthened enforcement mechanisms to augment the objectives stated in the frameworks. Climate and climate change in relation to the suggested need were found lacking in accommodating strengthening enforcement mechanisms to ensure operation of the frameworks. Concerning the key policy stage, respondents (51%) specified implementation as the most important. With needs related to this policy stage. Respondents, 42 percent, stated the need for widened and strengthened stakeholder involvement as the most vital to enable adoption of climate related policies. In relation to this need, selected policies showed inconsistencies in their approach to stakeholder involvement, most of them were found to have no creation of diverse and strong stakeholder network. Equally, about benchmarking, (32%) of the respondents indicated that they would recommend benchmarking on climate change issues. Related to this response (83%) of the respondents indicated that they needed to benchmark climate change related concerns with other countries. Equally, most of the climate and climate change related policies were found to have no provision for country to country benchmarking.

Comparatively, in relation to gender issues, (42%) of the respondents agreed that they understood gender mainstreaming in climate change. About needs (33%) of the respondents indicated a need for strengthened capacity building to enable them to link climate change and gender. Again, an introspection of the climate and climate change related policies showed that most of the policies mentioned gender mainstreaming.

However interpreted gender mainstreaming differently and did not show any provision for capacity building to help link climate change with gender. Likewise, under gender and implementation (43%) of the respondents indicated that they understood gender issues in a manner that they could implement climate change policies. To better facilitate implementation 27 percent showed a need for participation of both men and women. A reflection of the climate related policies in regard to participation of both men and women indicated that despite mention of inclusion of gender issues, participation is not incorporated or mainly limited to women. With the importance of climate change and gender (36%) respondents were rated as having an average understanding of the importance of climate change and gender. About needs related to this variable, a greater proportion (84%) of the respondents indicated a need for capacity building to enable them to understand the importance of climate change and gender. Likewise, an evaluation of the climate related policies indicated that despite mention of gender issues, policies did not incorporate capacity building to promote the importance of issues related to climate change and gender. Moreover, gender issues received the least rating 9 percent as key to enabling adoption of climate resilient policies.

5.2 Conclusion and Recommendations

Findings showed that the needs of policy makers and actors in relation to adoption of climate resilient policies in Uganda are of paramount importance. Most importantly, these help establish the extent to which climate change issues are viewed and how they affect adoption of policies. Although policy makers and actors and actors possessed generally high qualifications to assume climate change related policies. The needs indicated show a knowledge application gap that affects ability to adopt policies. A more comprehensive approach is needed to address this gap, especially investment related to mental transformation towards behaviour change to influence adoption of policies.

The needs indicated by policy makers and actors in relation to ICT show that, policy makers and actors view ICT as an important mechanism for policy communication and dissemination to enable adoption of policies. It is similarly important to leverage an adequate ICT structure to invest for a knowledge economy that aims at enhancing policy makers and actors' capabilities to interpret and understand policies. Again, a strong ICT system would help overcome distance and expenditure, Fonseca (2006) associated with needs that have to involve massive resource usage such as for benchmarking and capacity building.
Still in relation to ICT, it may be necessary for the various climate related sectors and entities to consider a joint tier resource allocation strategy. That commits all the concerned sectors to allocate resources aimed at improving ICT for effective and efficient dissemination of policies and climate related information.

Consequently, the climate related policies were found to interpret and approach climate related issues contrarily, principally in relation to ICT services, institutional set ups and gender issues. This seemingly affects ability to influence systematic adoption of policies by policy makers and actors and actors. A more synergised approach that involves defining and agreeing on the parameters related to use of lexica that can be nationally accepted across the policy environment, would help synchronise policy makers and actors understanding of policies at equal standards. Moreover, reflecting on the selected policies, to address the issue of climate related policies that have been out run by time. With consideration that climate and climate change, related issues are global and complex in nature. There is need for robust mechanisms that cater for review and adjustment of these policies to align with the global agenda. In general, Uganda is said to have some of the best policies but not implemented accordingly due to lack of coordination.

Subsequently, there is need for the government to address the mystification associated with lack of satisfaction with regulatory frameworks. This may need the government to open up to a collaborative platform that can enable the harvesting of indigenous enforcement measures through indigenous knowledge systems. Blending such mechanisms with the governments enforcement mechanisms may help strengthen policy makers and actors' ability to enable adoption policies. Mainly because this could create universal ownership of the policies as they would embed with communities' norms and value systems which both policy makers and actors and communities relate with. To further enhance the adoption of climate resilient policies it may be essential to consider coming up with time bound legally binding policy implementation regulatory structures and procedures. Regulatory frameworks are meant to safeguard reaching irreversible impacts associated with climate change implicated with depletion and encroachment into natural resources such as the wetlands.

In addition, in relation to gender, analysis indicated that most policies confuse the term gender for either as relating to women and or children and youth. In some policies, it is used as a physiological description of men and women. There is need to reverse this ideology possibly through the setup of strong perception transformation capacity building strategies. Such strategies could help address challenges associated with low rating of gender as important in climate change among policy makers and actors and actors because of lack of understanding.

Data collection and observations seemed to indicate that policy makers and actors' mostly possessed the hierarchist typology. This was, because of their interest and emphasis to have more evidence and capacity building on climate change and gender and policy implementation. Again, their emphasis for benchmarking to implement climate related policies also indicates the hierarchist typology. Equally, they stressed the need for stringent enforcement measures in relation to depletion of natural resources like the wetlands, which equally also shows the hierarchist typology.

In addition, with reference to the Cultural Theory, it may be even more useful to understand the position of policy makers and actors' concerning their take on climate change issues through the typologies. This is especially important to establish initiatives that can help policy makers and actors' develop a common understanding on policy issues before or during a policy cycle stage.

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APPENDICES

APPENDIX A: POLICY MAKERS AND ACTORS QUESTIONNAIRE TEMPLATE

Questionnaire #	
Date administered:	
Country	Uganda
District	
Sub County	
Town/Village	

Dear Respondent!

.

My name is Lingani M Matlou, I'm a Masters in Development Practice (MDP) student with the University of Botswana. I am serving a field practicum with the International Institute of Tropical Agriculture, Uganda. I am undertaking a study to determine the information, communication and technology, institutional and gender related needs of policy makers that can enable adoption of climate resilient policies across government sectors (national, district, local) in Uganda.

The findings of this study will help policy makers, reseachers, rural development practitioners and stakeholders better understand the dynamics related to needs of policy/decision makers in relation to enabling adoption of climate resilient policies. This will also help them to initiate

appropriate integrated sustainable development initiatives aimed at addressing climate change in Uganda.

It is against this background that I humbly seek your inputs and participation on this subject matter. It will take less than 30 minutes of your time. Your input is of great importance to the study and will be treated with confidentiality; we will ensure that all responses remain anonymous.

Thank you in advance for your contribution.

Objective 1. To establish the information, communication and technology needs of different policy makers that affect adoption of climate resilient policies in Uganda.

Section A: Demographic and socio-economic Information

1. **Sex** (tick right option)
   - ☐ M
   - ☐ F

2. Level of Education attained

   - ☐ Primary
   - ☐ O'level
   - ☐ A 'Level
   - ☐ Diploma
   - ☐ Degree
   - ☐ Masters
   - ☐ PhD

3. Which ministry do you represent?

   - ☐ Local government
   - ☐ Agriculture, Animal Industry and Fisheries
   - ☐ Water and Environment
   - ☐ Finance
   - ☐ Works and Transport

- ☐ Energy and Mineral development
- ☐ Lands Housing and Urban development
- ☐ Gender, Labour and Social development
- ☐ Trade Industry and Cooperatives
- ☐ Education, Science, Technology and Sports
- ☐ Other (specify)_____

4. Number of years working currently at national ☐ district ☐ local level ☐ (tick ✓ appropriate box)
   - ☐ Less than a year
   - ☐ 1-3years
   - ☐ 4-6years
   - ☐ 7-9years
   - ☐ More than 10 years

Section B: Establish the information, communication and technology needs of policy/decision makers in adoption of climate resilient policies across government levels.

Tick the only one appropriate answer, (1-strongly disagree, 2-disagree, 3- neutral,4-agree, 5-strongly agree)

5. It is easy to access information on climate change to help one initiate adoption of climate resilient policies.

   Please circle the number that represents your opinion

   Strongly disagree ---1---2---3---4---5 strongly agree

   Briefly explain your answer and give a suggestion for improvement.

   _____

   _____

_____
_____

6. I am able to communicate the information in the climate change policy documents in a manner that enables practitioners adopt climate resilient policies.

   Very unlikely ---1---2---3---4---5 Very likely

   Briefly explain your answer and give a suggestion for improvement.

   _____
   _____
   _____
   _____

7. There are processes in place to help distribute policies.

   Strongly disagree ---1---2---3---4---5 strongly agree

   Give an explanation and suggestion for improvement based on your answer.

_____
_____
_____
_____

SECTION B

Objective 2: Determine the institutional needs of policy makers affecting adoption of climate resilient policies across government levels in Uganda.

8. I am satisfied that the climate change regulatory frameworks are sufficient to facilitate uptake of climate resilient policies in Uganda.

   Not satisfied at all 1---2---3---4---5----Very satisfied

   Kindly explain and give a suggestion for improvement based on your answer.

_____
_____

_____
_____

9. Of all the stages in the policy making process, which one do you consider of key importance to drive adoption of climate resilient policies (tick one answer ✓)

   ☐ Policy initiation/identification
   ☐ Policy analysis
   ☐ Decision-making
   ☐ Implementation
   ☐ Monitoring and evaluation

   Give a suggestion on what is needed to strengthen the process.

_____
_____
_____
_____

10. I would recommend that other governments' benchmark Uganda's climate change policy implementation processes.

    Very unlikely---1---2---3---4---5---Very likely

    Kindly elaborate/give suggestions for improvement based on your answer.

    _____
    _____
    _____
    _____

SECTION C

OBJECTIVE 3: Investigate the needs of policy makers in relation to gender and climate change that affect adoption of climate resilient policies across government levels in Uganda.

11. I understand gender related issues in relation to climate change in a way that can enable mainstreaming gender in policies.

Strongly disagree---1---2---3---4---5--- Strongly agree

Give insights and suggestions for improvement based on your answer.

_____
_____
_____
_____

12. I understand gender related issues in relation to climate change in a way that can enable implementation of policies.

Strongly disagree---1---2---3---4---5--- Strongly agree

Give insights and suggestions for improvement based on your answer.

_____
_____
_____
_____

13. Rate your views on the perception of policy makers in relation to their understanding of the importance of climate change and gender related issues in support of adoption of climate resilient policies.

Poor--- 1---Fair---2---Average---3---Good---4---Excellent---5

Give a brief explanation and suggestion for improvement based on your answer.

_____
_____
_____
_____

14. DEPENDANT VARIABLE
Adoption of climate resilient policies

Pease respond to the following set of statement as to whether you strongly agree (SA); agree (A); undecided (U); disagree (D); and strongly disagree /*Tick one answer for each*

	Statements	SA[5]	A[4]	U[3]	D[2]	SD[1]
1.	There is clear incorporation of climate change related issues in development plans.					
2.	All concerned parties are involved in every stage of the policy cycle process in relation to climate change issues.					
3.	As policy makers, we understand the needs of both men and women in relation to climate change such that adoption of climate resilient policies is smooth.					
5.	There is enough technical expertise to enable adoption of climate resilient policies in this country.					
6.	We have sufficient indigenous knowledge practices on climate change of both men and women to link with scientific climate change knowledge as an enabler for adoption of climate resilient policies.					

15. Which of these do you consider most important to drive adoption of climate resilient policies? Choose one.

☐ Information, communication and technology

☐ Institutional set ups

☐ Gender issues

Thank you for your participation

APPENDIX B: KEY INFORMANTS QUESTIONNAIRE TEMPLATE

IITA KEY INFORMANT QUESTIONNAIRE (FOR POLICY MAKERS AND ACTORS)

Dear Respondent!

.

My name is Lingani M Matlou, I'm a Masters in Development Practice (MDP) student with the University of Botswana. I am serving a field practicum with the International Institute of Tropical Agriculture, Uganda. I am undertaking a study to determine the information, communication and technology, institutional and gender related needs of policy makers that can enable adoption of climate resilient policies across government sectors (national, district, local) in Uganda.

The findings of this study will help policy makers, researchers', rural development practitioners and stakeholders have a better understanding the dynamics related to needs of policy/decision makers in relation to enabling adoption of climate resilient policies. This will also help them to initiate appropriate integrated sustainable development initiatives aimed at addressing climate change in Uganda.

It is against this background that I humbly seek your inputs and participation on this subject matter. It will take less than 30 minutes of your time. Your input is of great importance to the study and will be treated with confidentiality; we will ensure that all responses remain anonymous.

Thank you in advance for your contribution.

Consideration the efforts made in the formulation of climate resilient policies across key sectors of the government of Uganda.

1. Do you think enough is being done towards enabling adoption of the policies at both national and local level?

2. What do you think are the key priority areas needed by policy makers to enable adoption of the climate resilient policies in the context of the following?

i. Information, communication and technology

ii. Institutional set ups and processes

iii. Gender issues in relation to climate change