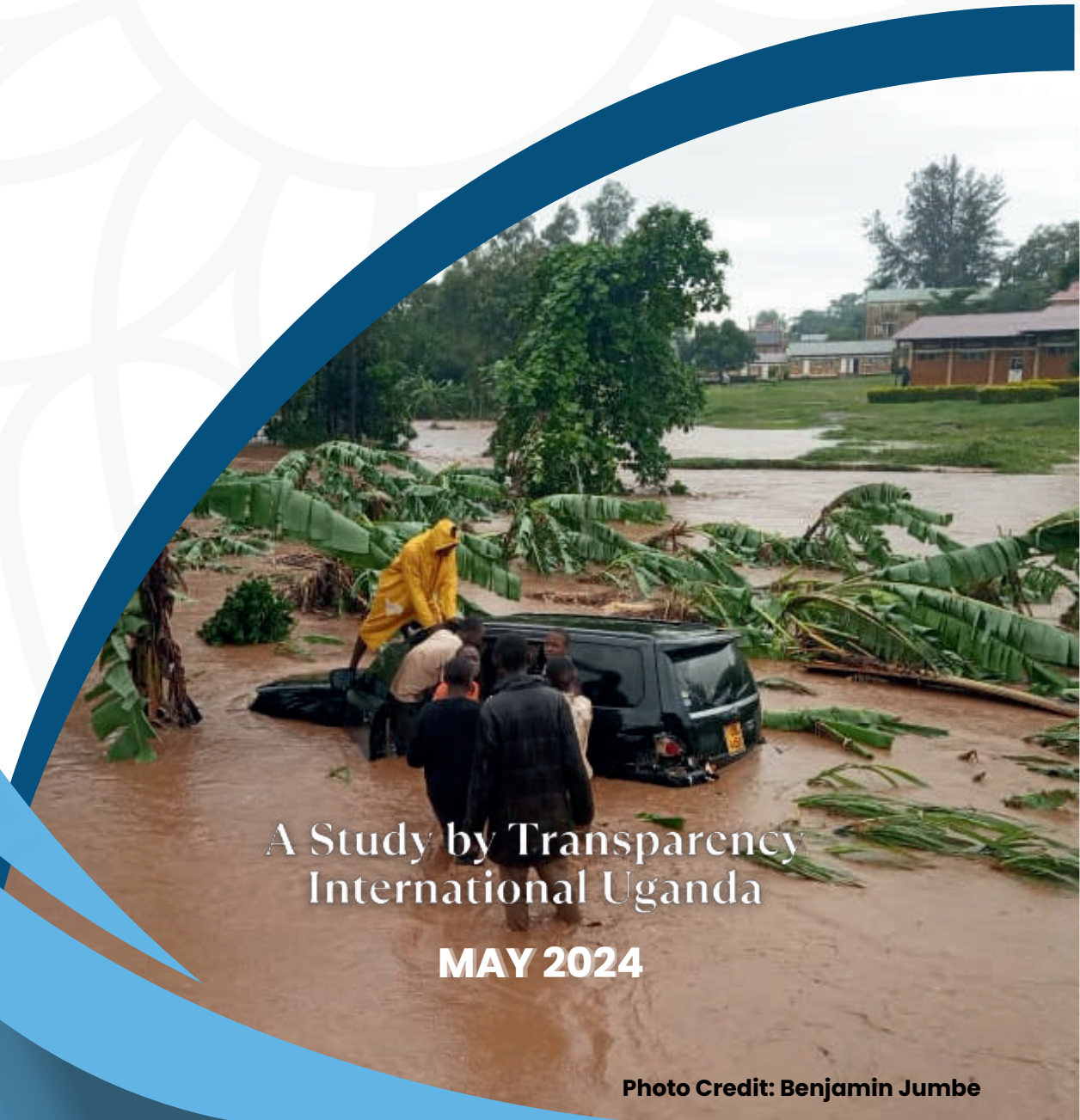
TRANSPARENCY INTERNATIONAL UGANDA

CLIMATE CHANGE POLITICS IN UGANDA

Uncovering corruption practices in systems and processes for adaptation and mitigation



A Study by Transparency International Uganda

MAY 2024

Photo Credit: Benjamin Jumbe

WAVERLEY ST FOUNDATION

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MAY 2024

ACKNOWLEDGMENTS

As we all strive to have a better world to live in and for the generations to come, I on behalf of Transparency International Uganda (TIU) express our special thanks to the different Ministries, Agencies and Departments especially the Ministry of Water and Environment, National Environment Management Authority, the District Local Governments of Kalungu and Soroti for their support, cooperation and contribution leading to this report.

I am overwhelmed in all humbleness and gratefulness to all the respondents and individuals in their different capacities who participated in the data collection exercise. Special gratitude goes to the research team led by Mr. George Tamale, Dr. Paul Mukwaya and Mr. Ronald Odong for the tireless efforts and TIU staff for technical guidance, support and assignment coordination.

I would like to express my special thanks and gratitude to Waverly Street Foundation (WSF) for the financial and technical support extended to TIU to undertake this study. I trust that it will contribute to enhancing climate governance and integrity in Uganda.

Peter Wandera

Executive Director
Transparency International Uganda.

TABLE OF CONTENTS

LIST OF ACRONYMS

CANU	Climate Action Network Uganda
CC	Climate Change
CCD	Climate Change Department
CF	Climate Fund
CID	Criminal Investigations Directorate
COP	Conference or Conference of the Parties
DLG	District Local Government
DNRO	District Natural Resources Officer
ESIA	Environmental and Social Impact Assessment
MoFPED	Ministry of Finance Planning and Economic Development
MWE	Ministry of Water and Environment
NACs	National Anti-Corruption Strategy
NCCP	National Climate Change Policy
NDC	Nationally Determined Contributions
NEMA	National Environment Management Authority
NFA	National Forestry Authority
TI	Transparency International
TIU	Transparency International Uganda
UBOS	Uganda Bureau of Statistics
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
WB	World Bank
WSF	Waverly Street Foundation

Executive Summary

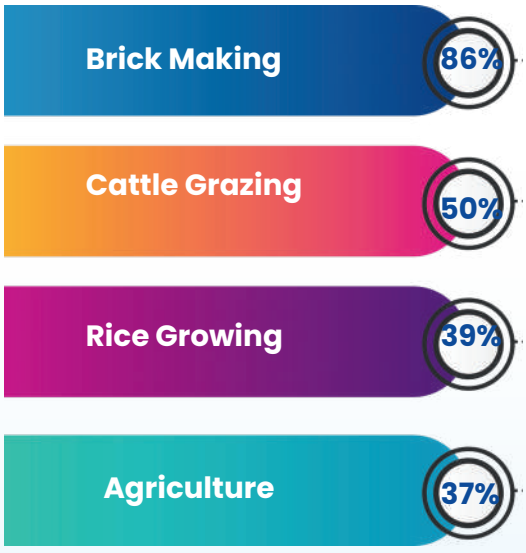
Corruption and climate change are closely linked, with corruption accelerating environmental degradation and undermining efforts to combat climate change. In Uganda, this connection is particularly evident as the effects of climate change become increasingly pervasive, impacting communities across the country. The idyllic landscapes of Uganda, home to vibrant ecosystems and diverse wildlife, increasingly face a stark reality: the shadow of potential extinction. This threat isn't solely driven by the global phenomenon of climate change but also by corruption which is its insidious accomplice within Ugandan borders. Despite efforts by government, development partners and civil society actors, environmental degradation and encroachment continue to manifest. This questions these national systems, procedures, and processes about adaptation and mitigation measures.

A study about systems, procedures and processes that may give rise to undue influence and conflict of interest while protecting the environment and dealing with climate supported by Waverly Street Foundation (WSF) and Transparency International (TI) was undertaken by Transparency International Uganda (TIU). A participatory, descriptive and qualitative research design to collect both primary and secondary data was adopted in the study.

Overview of Human Activities Impacting Wetlands

- Fishing, Sand Mining, Rice Growing, Agriculture, Vehicle Washing, Brick Making (86% prevalence), Nursery Beds, Cattle Grazing (50% prevalence), Settlement
- Firewood Selling, Charcoal Selling, Fodder Selling

Prevalence of Key Activities



Community Awareness & Impact of Degradation

- Only 49% of community members are fully aware of the impacts of wetland degradation.
- 51% lack full awareness.
- Double encroachment by Local communities believing they traditionally own the wetlands.
- Commercial investors exacerbating climate change impacts.

Corruption & Governance Challenges

- 71% of respondents believe there are instances of;
- Corruption
- Undue influence
- Conflicts of interest in environmental protection efforts.

The study found that 83% of respondents recognized tree cutting as a major contributor to climate change. It highlighted that environmental laws are often manipulated and weakened, allowing for the degradation of natural resources due to systemic loopholes and public sector corruption. Wetlands are being degraded by both legal landholders setting up factories and illegal encroachers. Additionally, 51% of community members are unaware of the full impact of wetland degradation. A significant 74% of respondents would not report environmental degradation, indicating a lack of trust in institutions responsible for environmental protection, often due to politics and corruption.

The study also revealed that many encroachers, primarily women, resort to offering sex as bribes to cultivate protected lands, exacerbating gender inequalities and health issues. Women face greater climate shocks and employ more adaptation strategies than men, including using mosquito nets, raising houses, and growing drought-tolerant crops. Communities are implementing various resilience strategies to cope with climate change impacts, such as early planting and creating water channels.

Additionally, establishing environmental courts is crucial to address the backlog in judicial processes related to environmental crimes, which require prompt resolution to prevent lasting ecological damage.

Civil Society Organizations must enhance awareness about environmental issues and climate change, aligning these efforts with anti-corruption initiatives. Targeted campaigns should be developed to meet the specific information needs of communities, while media training on environmental reporting can promote sustainable resource use.

Incorporating climate change education into school curricula will better inform the younger generation about its impacts, fostering a mindset change among resource users and encouraging youth and women's involvement in natural resource management.

CHAPTER 1: INTRODUCTION

Figure 1 The Prime Minister visits Mbale City, a flood affected place in August 2022

Figure 1 and quote above deliver valuable insights into the possible undue influence and conflict of interest in systems, procedures, and processes while protecting the environment and dealing with climate change in Uganda. It also explains that the humanitarian crisis due to climate change health is contributed to by illegal human activities in the presence of evaded legislative regimes, operational challenges in numerous government institutions, and embezzlement of colossal sums of climate funds for adaptation and mitigation interventions. The major question is: with the existing protection mechanisms and structures, why is Uganda's environment being depleted? With the available findings, why is climate change worsening? One is forced to associate the happenings to undue influence, conflict of interest and corruption at different levels.

> **"How can a big company operator in the area extract sand of that magnitude without the knowledge of Local Government Officials? There must be some kind of connivance[2]."**

[1] Interview with a Key Informant on 03/01/2024
[2] Interview with a Key Informant on 05/01/2024.

The quote above reveals that corruption related to environmental degradation is highly systemic, sustained with a connected "mafia" network. It also confirms that worsening climate changes in Uganda are happening with corruption as a key factor. However, it is concealed and so cannot be straightforwardly observed since the method of exchange is highly innovative and rarely the public is reporting or opposing it. This report is therefore the outcome of a study on systems and processes that may give rise to undue influence and conflict of interest. The study also establishes why, despite the legislations, environmental bodies, and funds, immense environmental degradation continues to happen.

This report therefore aims at shedding light on the intricate web of undue influence and conflict of interest in systems, procedures and processes while protecting the environment and dealing with climate change. By analyzing public perceptions of human activities in protected areas, scrutinizing permitting procedures, and evaluating the effectiveness of current climate change responses, we sought to identify vulnerabilities and recommend workable solutions.

This journey aimed at not only exposing the role of corruption but also offering a roadmap towards a more sustainable future for Uganda, where robust environmental governance safeguards its people and ecosystems from the looming shadow of extinction through the analysis of corruption risks and politics in climate change within Ugandan government systems that hinder effective environmental protection, potentially contributing to climate change and, in extreme scenarios, human extinction.

1.1 Environmental Management in Uganda

The idyllic landscapes of Uganda, home to vibrant ecosystems and diverse wildlife, increasingly face a stark reality: the shadow of potential extinction. This threat isn't solely driven by the global phenomenon of climate change but also by its insidious accomplice within Ugandan borders - corruption. This report delves into this complex interplay, examining how corrupt practices within government systems and environmental protection measures endanger not just Uganda's environment but potentially the very existence of its people. The urgency of this investigation stems from the alarming pace of environmental degradation in Uganda. Deforestation rates outpace national targets, with protected areas like national parks witnessing encroachment and illegal activities (NEMA, 2020). Water pollution intensifies, jeopardizing public health and ecosystems (UNEP, 2022). These challenges exacerbate the already dire consequences of climate change, with erratic rainfall patterns and extreme weather events threatening food security and displacing communities (USAID, 2020).

In this regard, Uganda is increasingly making substantial efforts to address the challenges posed by climate change. In addition to being a party to various global and regional agreements such as the Kyoto Protocol, the Paris Agreement, and the United Nations Framework Convention on Climate Change (UNFCCC), the country has integrated climate change considerations into its governance and regulatory frameworks.
The primary goal of Uganda's National Climate Change policy (2015) is to ensure that all stakeholders take appropriate measures to address the causes and impacts of climate change while concurrently promoting sustainable development and a green economy.

The Vision 2040 of Uganda also acknowledges the pervasive impact of climate change on all sectors of the economy. This recognition underscores the necessity for preparedness, emphasizing the implementation of adaptation and mitigation strategies across all sectors to enhance the country's resilience to the adverse effects of climate change. Notably, the recent enactment of the National Climate Change Act (2021) proposes the establishment of a Framework Strategy on Climate Change, along with the formulation of a National Climate Action Plan and District Climate Action Plans. These plans are intricately linked to the development of regulations that facilitate the active participation of multiple stakeholders in climate change mechanisms and adaptation measures.

Additionally, the Act underscores the importance of relevant litigation processes related to climate change.

However, blaming climate change solely overlooks a critical factor: corruption. Studies reveal the prevalence of corrupt practices within permitting processes for large-scale projects, often leading to inadequate environmental impact assessments and bypassing regulations (Transparency International, 2021). Ineffective enforcement of existing environmental laws further weakens safeguards (World Bank, 2022). These interwoven issues paint a concerning picture, where unsustainable practices fueled by corruption amplify the vulnerabilities brought on by climate change.

1.2 Study Objectives

The study was commissioned to assess the systems, procedures, and processes that may give rise to undue influence and conflict of interest while protecting the environment and dealing with climate change. Specifically, it aimed at:

Assess the corruption risk factors and functionality of environmental and climate change management processes.

Analyze perceptions of corruption and human practices in protected areas (lakeshores, swamps, mining, forests, among others).

Propose recommendations for improvement for climate change adaptation and mitigation.

CHAPTER 2: SCOPE AND METHODOLOGY

2.1 Scope

This study focused on the perception and experience of corruption associated with human activities in protected areas, scrutinizing permitting procedures, and systems, and evaluating the effectiveness of the climate change responses.

2.2 Study Design

This study adopted a participatory, descriptive and qualitative research design to collect both primary and secondary data. This approach was appropriate to this study as it enhances a thorough assessment of corruption risks in the existing government systems, procedures, and processes for protecting the environment.

2.3 Study Area

This study targeted four sub counties of Gweri & Kamuda in Soroti and Lukaya Town council & Bukulula in Kalungu districts. There are several wetlands in Gweri Sub county, Soroti District, Uganda. One of the most well-known is the Awoja wetland, which borders Ngora District. The Awoja wetland is a vital part of the local ecosystem, providing habitat for a variety of plants and animals, as well as filtering water and preventing flooding. However, the wetland is under threat from human activities such as encroachment for agriculture and settlement.

In Kalungu District lies the famous Lwera Wetland, known for its variety of fresh fish and recent uncontrolled controversial sand mining and rice growing. It stretches about 20kms on the Kampala-Masaka highway and is a major water catchment area that connects several rivers and wetlands in Gomba, Mpigi, and Kalungu districts and drains directly into Lake Victoria.

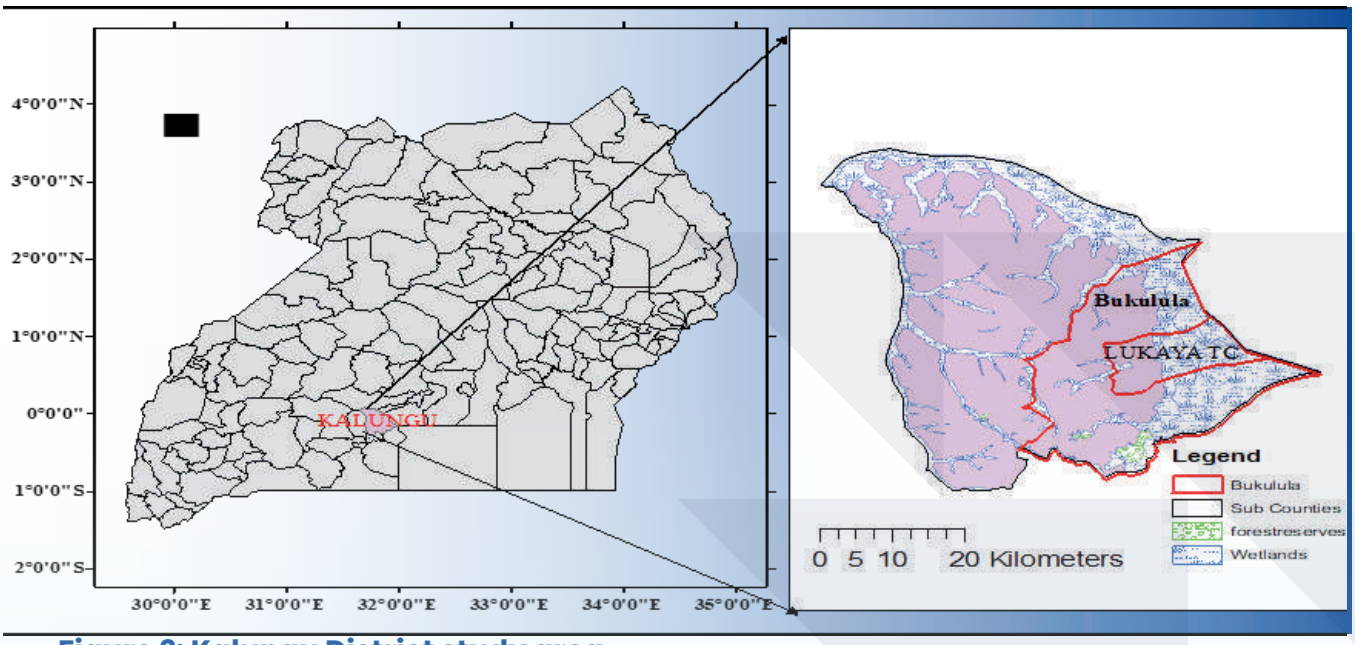


Figure 2: Kalungu District study area

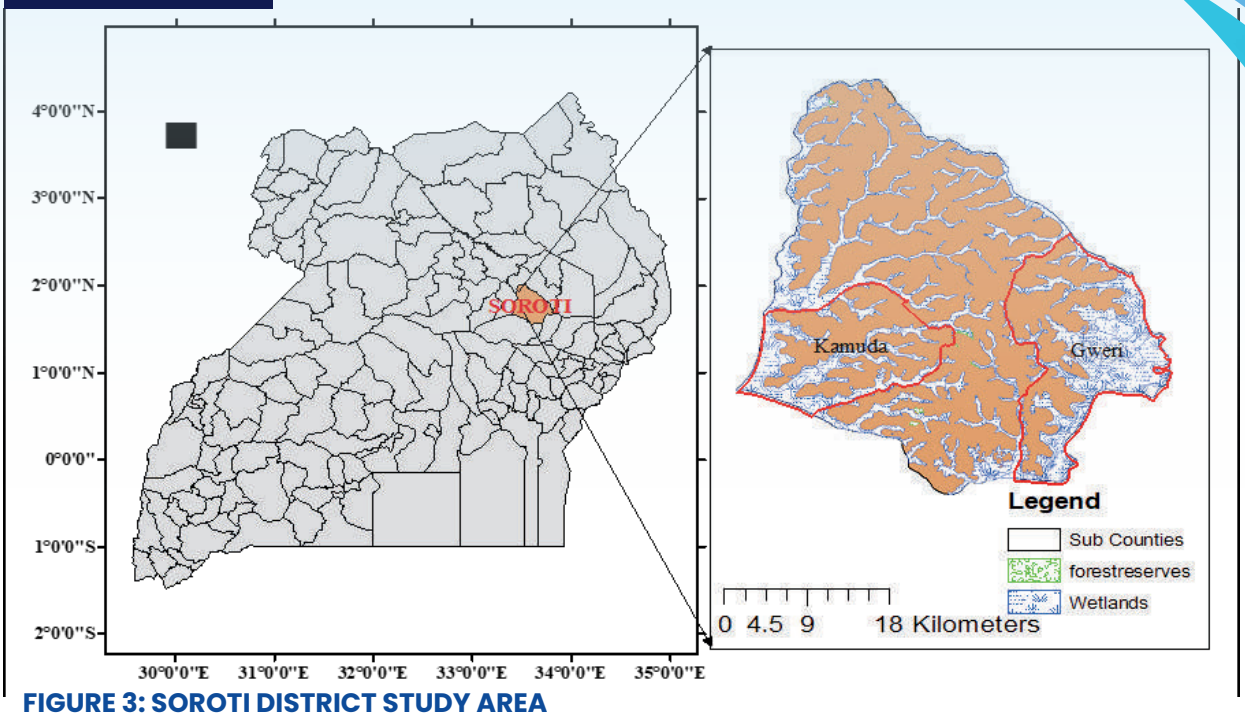


FIGURE 3: SOROTI DISTRICT STUDY AREA

2.4 Study Population

- The study targeted households in the target districts of Soroti and Kalungu. and for each of the sites,
- 65 respondents were interviewed; 55 respondents were community members and the other 6 were key respondents.
- The key informants in the community included local council leaders, District councilors, religious leaders, and opinion leaders.
- At the district level informants include; the District Water Officer, the District Environmental Officer, the District Fisheries Officer, the District Agricultural Officer, and the District Forestry Officer

2.5 Interview (Key Informant Interviews and Individual In-depth Interviews)

Conducted in-depth interviews with;

- Government officials from relevant ministries and agencies (e.g., Ministry of Environment, National Environment Management Authority).
- Representatives of civil society organizations and environmental NGOs.
- Community leaders and members living near protected areas or experiencing environmental challenges.
- Experts in climate change, environmental governance, and anti-corruption efforts.
- Business people involved in activities impacting the environment (with informed consent).

The interviews provided insights into corruption affecting environmental protection and challenges in enforcing regulations, while a literature review examined existing studies on these issues in Uganda.

Individual, in-depth interviews were used to collect information from key informants. Interviews have been credited with allowing a 'thorough examination of experiences, feelings, or opinions that closed questions could never hope to capture (Kitchin and Tate, 2000) and providing a 'framework within which respondents can express their understanding in their own terms' (Patton, 1987).

2.6 Literature Review

A thorough review of existing literature on global climate change, pollution, and environmental degradation was conducted. This provided invaluable information on what was already done, in addition to cross-validation and corroboration of the issues raised during interviews. Similarly, literature on governance in general and corruption, integrity, transparency, and ethical conduct in particular was undertaken.

Key points to note during literature review were that global climate is changing and predictions show that the climate system will experience more changes. Uganda's climate is also changing, and vulnerability to the impacts of climate variability and change is high in almost all sectors of the economy (Government of Uganda, 2014; Okaka, 2020; Twinomuhangi et al., 2021b). Between 1900 and 2009, temperatures increased by 0.8 to 1.5 °C and annual rainfall reduced at an average rate of 3.5% per decade since 1960 (Mcsweeney et al., 2010; USAID, 2013; World Bank Group, 2015).

Climate change projections indicate that within the next 50 to 80 years, Uganda's temperatures could rise by about 2 °C to 5 °C and rainfall amounts will decrease slightly across the country.

Further, according to the Amended National Environment Act of Uganda, 2019, the approved uses of wetland resources include harvesting of papyrus, medicinal plants, trees, and reeds; fishing using traps, spears, and baskets or another method, other than weirs. Other functions include water collection for domestic use or hunting subject to the provisions of the Uganda Wildlife Act. Activities like sand and clay mining require a wetland user permit from the National Environment Management Authority (NEMA) and require to undertake an Environmental and Social Impact Assessment (ESIA).

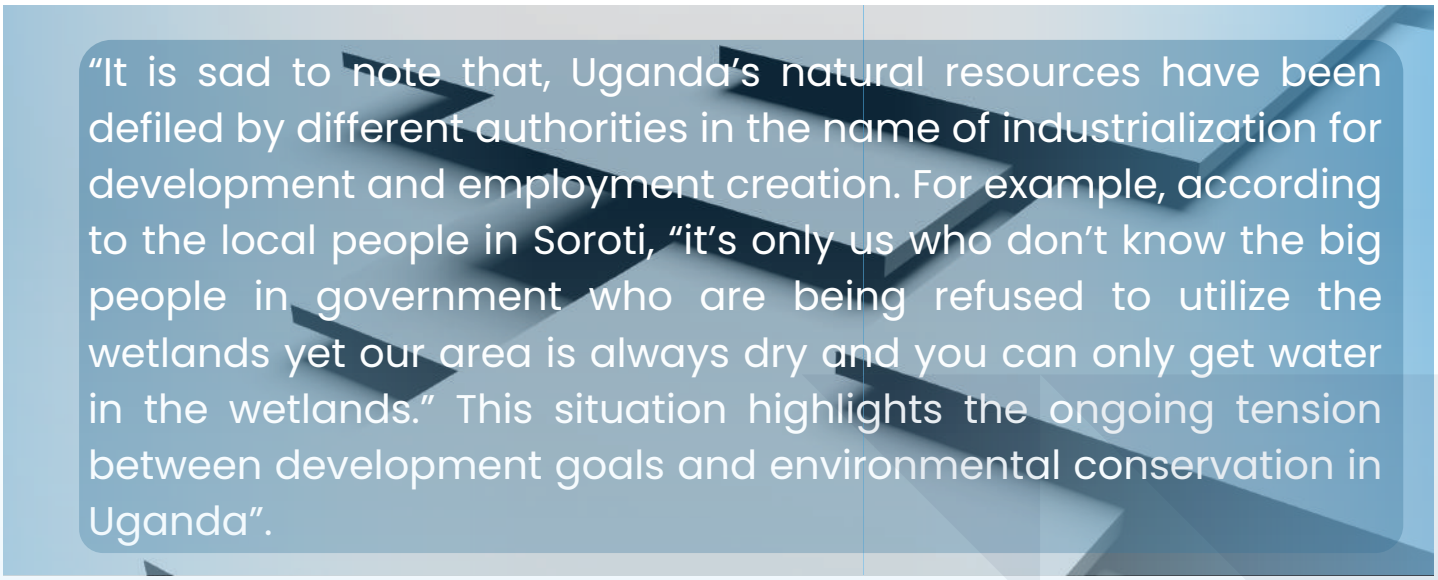
Uganda is endowed with wetlands, covering approximately 13% of the land surface (NEMA, 2006; UNDP. 2009), representing one of the most vital ecological and economic resources (Amaniga et. a!., 2010; Bakama, 2010). The National Environment Act 2019, under "Management and Utilisation of Wetlands" Section 3 (a), states that the wetland resources shall be utilised in a sustainable manner compatible with the continued presence of wetlands and their hydrological functions and services. The same act, under "Restrictions on the Use of Wetlands," states that a person shall not, without the written approval of the relevant lead agency, given in consultation with the Authority, reclaim or drain any wetland or disturb any wetland by drilling or tunneling in a manner that has or is likely to have an adverse effect on the wetland.

Legal Framework

Uganda is implementing a Zero Tolerance to Corruption Policy 2019, which aims to eradicate corruption and its effect on Uganda's society. The policy implementation involves all stakeholders, including Ministries, Departments, Agencies and Local Governments (MDALGs), Religious and Faith Organisations (RFOs), Civil Society Organisations (CSOs), development partners, the private sector and media Institutions. The country has a well-established and strong legal framework to support the fight against corruption, which includes the Constitution of the Republic of Uganda (1995); the Inspectorate of Government Act, 2002; the Leadership Code Act, 2002; the National Audit Act, 2008; the Anti-Corruption Act, 2009; the Whistleblowers Protection Act, 2010; the Anti-Money Laundering Act, 2013; the Public Finance Management Act, 2015; and many others. The laws support the detection, investigation, and prosecution of corruption crimes.

Institutional Framework;

The government has established an elaborate institutional framework to ensure efficient and effective utilization of public resources and to promote transparency and accountability. The institutions include the Inspectorate of Government, the Office of the Director of Public Prosecutions (ODPP), the Office of the Auditor General (OAG), the Internal Auditor General (IAG), the Accountant General (AG), the Criminal Investigations Directorate of the Uganda Police Force, the Anti-Corruption Division (ACD) of the High Court, the Internal Security Organisation (ISO), the State House Anti-Corruption Unit (SHACU), State House Health Monitoring Unit (SHHMU), the Public Procurement and Disposal of Public Assets Authority (PPDA), the Financial Intelligence Authority (FIA) among others. The Anti-Corruption Agencies are coordinated under the Inter Agency Forum (IAF), which is chaired by the Minister of State for Ethics and Integrity, with most of the agencies belonging to the Governance and Security Programme of the Third National Development Plan (NDPIII).



"It is sad to note that, Uganda's natural resources have been defiled by different authorities in the name of industrialization for development and employment creation. For example, according to the local people in Soroti, "it's only us who don't know the big people in government who are being refused to utilize the wetlands yet our area is always dry and you can only get water in the wetlands." This situation highlights the ongoing tension between development goals and environmental conservation in Uganda".

2.7 Photo Voice

Another method that was useful to capture the visual aspects of the field was photography. The photographs were taken while in the field to capture some of the visual aspects, particularly the degradation in the wetlands.

2.8 Challenges and Limitations

Hesitance from Respondents: Some respondents preferred not to be quoted, while others provided generalized information without reference to their areas of operation.

Access Restrictions.
accessibility to some sites with massive pollution and degradation was denied since they were heavily guarded with strict instructions on "no Photography" and "no-Entry for unauthorised visitors".

CHAPTER 3: Key Findings

3.1 Illegal Commercial Human Activities and Practices in protected areas

The study revealed that wetlands in Uganda face several commercial human activities for livelihood, survival, and economic income. The activities include fishing, sand mining, rice growing, agriculture, vehicle washing, brick making, nursery beds, cattle grazing, settlement, firewood selling, charcoal selling and fodder selling under watch of the environmental laws and institutions as indicated in Figure 4.

It is worth noting that the commonest activity in the wetlands is brick making (86%), rice growing (39%), cattle grazing (50%), and Agriculture (37%). The study revealed that increasing urbanization and industrialization have created high demand for construction materials and settlements.

.Although wetland resources in Uganda have traditionally been utilized by the people as a source of materials for construction, crafts, furniture, and hunting with fishing being allowed by law, revelations indicate widening large-scale activities to high levels of degradation. Originally, these activities were confined to villages surrounding the wetlands but now the wetlands have encroachers from all over the world in form of investors.

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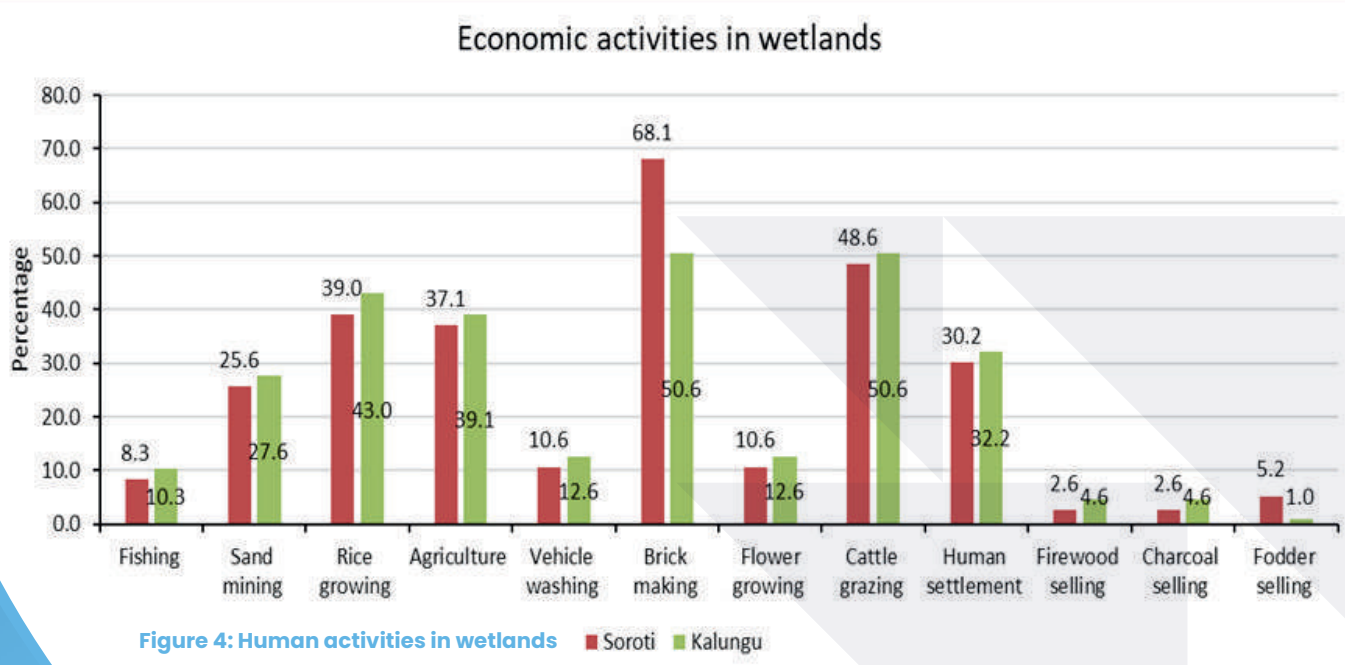


Figure 4: Human activities in wetlands

3.1.1 Sand Mining in Wetlands

Figure 5: Heavy equipment excavating sand from Lwera wetland in Kalungu District.

Photo Credit; Martins. E. Ssekweyana

Sand mining in wetlands such as Lwera and Awoja is a highly lucrative but extremely destructive business. It was established that Lwera wetland was targeted by large investors for being with the best sand in the region and for export. Despite the advantages of sand mining, it comes with severe impacts on the environment, including water pollution, destruction of vegetation, and excavated pits and trenches leading to drowning and the breeding of malaria spreading mosquitoes.

Mining, which leads to the removal of channel substrate, re-suspension of streambed sediment, clearance of vegetation, and stockpiling on the streambed, will have ecological impacts.

These impacts affect the direct loss of stream reserve habitat, disturbances of species attached to streambed deposits, reduced light penetration, reduced primary production, and reduced feeding opportunities. The extractors of sand from these wetlands are massive and continuous, with others using heavy equipment such as bulldozers and excavators. Although mining as an economic activity is acceptable, the study established that most of the informal miners neither have Artisan Miners Certification nor ESIA certifications approving these activities making these activities illegal.

"Have you ever seen any of those big investors degrading the environment being prosecuted? Do we even have independent courts that prosecute environmental crimes? That is why you can't waste your time reporting degradation or pollution[3]."

Figure 6: Sand from wetland loaded on truck in Lwera wetland in Kalungu District.

Photo Credit; Rodney Muhumuza

The above quote reveals that large-scale sand mining is carried out by "investors" with impunity. The above scenario poses key questions about regulation of this activity in the acquisition of the operational license and ESIA certification if they possess them.

3.1.2 Rice Growing in Wetlands

The study established that rice growing in the wetlands is undertaken at two levels, namely informal/food crop and commercial/mechanized with the majority being the former. Unfortunately, rice growing is a highly political issue not only in Kalungu and Soroti wetlands but in the whole country.

My grandparents have been growing rice in the wetland before even my father was born, and I and my brothers continue to cultivate in this same wetland[4].

The study established that wetlands faced double encroachment firstly; by communities who pre-supposedly traditionally owned and used them and the commercial investors who pose the greatest drive to climate change. The study revealed that the majority (51%) of community members were not fully aware of the impact of degradation of wetlands, it was only 49% of them who knew the impact of the degradation as indicated in figure 9 below.

[3] Interview with a Key Informant on 05/01/2024.

[4] Interview with a Key Informant on 04/01/2024.

Figure 7: Rice growing in Lwera wetland in Kalungu District.

Photo Credit; Al-Mahdi Ssenkabirwa

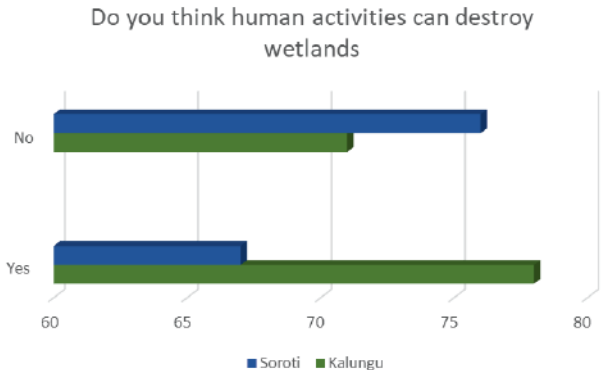


Figure 9: Knowledge of the impact of degrading wetlands

The lack of knowledge about degradation leads to encroachment on natural resources and inadequate monitoring by local leaders. Rice cultivation significantly harms wetlands, resulting in loss of species, changes in water quality, and increased water flow. While wetland agriculture can enhance food security and income, poor development practices often cause degradation and negative environmental impacts.

Human activities within and around wetlands disrupt the hydrological cycle, harming wetland ecosystems through alterations to water and sediment flow. (M McCartney et a!. 2010).

Wetland destruction leads to increased flooding, habitat loss, and disrupted ecological processes. Intensified rice cultivation creates conditions for disease vectors like mosquitoes and snails, raising the risk of malaria and schistosomiasis.

The MWE has marked wetland boundaries for municipal water systems, and efforts are underway to restore degraded areas to maintain their ecological integrity. A critical question remains regarding the ongoing degradation of wetlands for rice cultivation, despite regulations, and whether corruption is a factor.

3.1.3 Brick Making

The study established that wetlands in Soroti and Kalungu are being utilized for brick making. There are conflicts that arise out of those land use activities within the different authorities, like Kalungu and Soroti Local Governments, the Wetland Inspection Division (WID) and the National Environment Management Authority (NEMA) which continue to escalate.

There is no clear distinction between public land and government land in the legislative framework. The regulations and guidelines to control the management and use of land, including the disposal of such land, are not provided in the constitution or laws of Uganda.

It was noted that, although brick making covers smaller areas than farming and others, it is more destructive than the rest of the activities.

"Much as the law is there, as long as you have a good political connection, you will use the wetland the way you want without anyone stopping you or chasing you.[5]"

Figure 9: Wetland degradation due to brick making in Soroti District.

Figure 10: Brick making in wetland in Soroti District.

[5] Interview with a Key Informant on 06/02/2024.

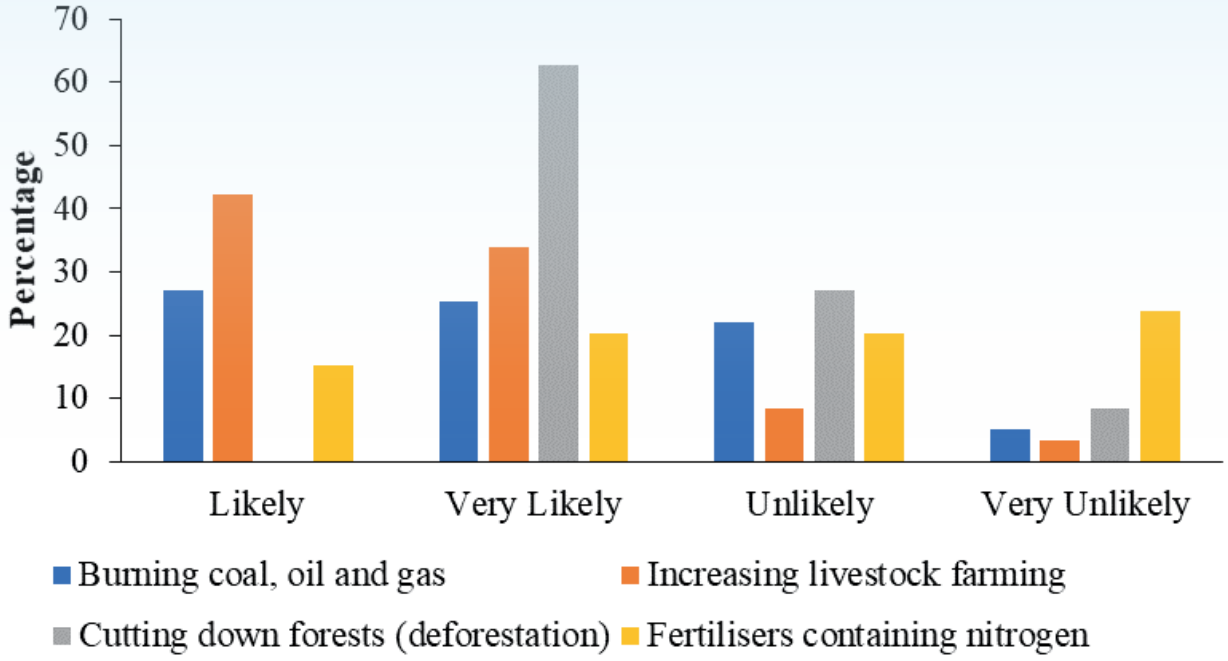


Figure 11: What the respondents thought were the causes of climate change

Directly, wetlands are sources of water supply and other products such as fish and plant resources, clay, papyrus, and sand and they are also centres of recreation while indirectly, they perform environmental functions vital in the maintenance and protection of human systems through services like the preservation of water quality, flood attenuation, nutrient retention, groundwater recharge and climatic regulation.

Due to their socio-economic importance, wetlands have attracted significant portions of human populations who survive by exploiting their resources through different resource utilization activities, often driven by economic and financial motives. This has resulted in the degradation and modification of these valuable stocks of natural capital. Although the act of brick making may be considered traditional use of wetlands, its destruction of the environment has far reaching consequences.

The study revealed that the majority (83%) of the respondents believed that they were experiencing climate change in their respective areas as indicated in Figure 12

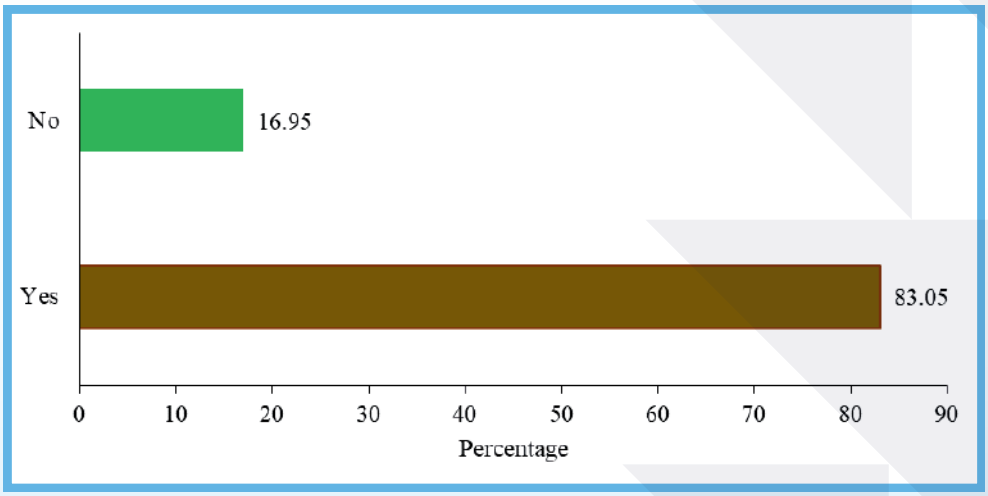


Figure 12: Climate change experiences in Soroti and Kalungu District.

3.1.4 Cattle Grazing

Figure 14: Cattle grazing in a wetland in Soroti District

Photo Credit; Alexander Okori

Grazing of cattle is one of the human activities rampant in Uganda's wetlands. Considered a no-man's land, wetlands, commonly known as swamps, are a gazetted natural resource. The study revealed that cattle grazing was rampant in Soroti and Kalungu districts due to high reserves of pastures even during drought seasons as indicated in figure 16 below.

Cattle grazing drives successional change in wetland vegetation by removing tall grasses and other vegetation leading to climate change.

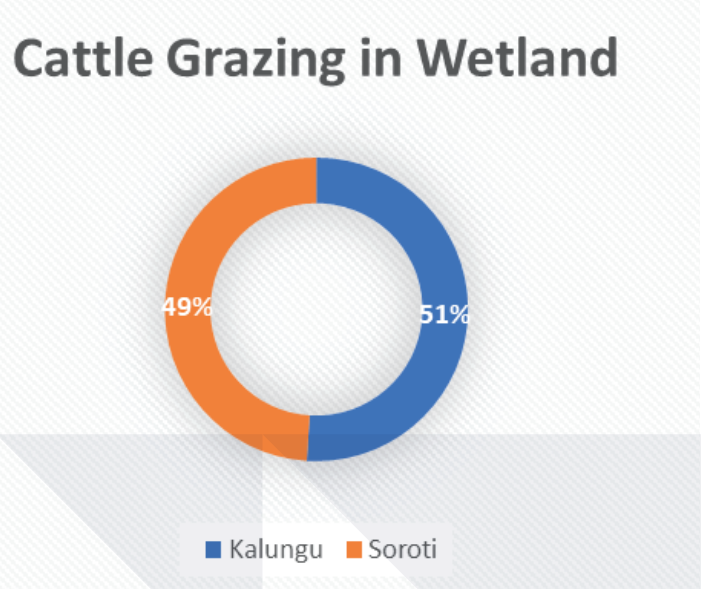


Figure 15: Cattle Grazing in Wetland

3.1.5 Human Settlement in Wetlands

Figure 16: Settlement in Wetland in Kalungu District.

The study established that the wetlands are being degraded by legal occupants (with land titles) for setting up factories, businesses and illegal encroachers for settlement. Others have been victims of land evictions and gender-based violence who then look for alternative areas to stay.

3.1.6 Agriculture in Wetlands

The study established that illegal farming by small-scale farmers is taking advantage of fertile wetlands.

"I know that it is illegal to grow crops here in the swamp but we do not know what to do to earn a living. At least we can grow food to eat here.[6]"

However, this practice significantly contributes to climate change. Agriculture in wetlands disrupts the natural water filtration processes and carbon storage capabilities of these ecosystems. The drainage of wetlands for farming leads to the release of stored carbon dioxide (CO_2) and methane (CH_4) into the atmosphere, both potent greenhouse gases that exacerbate global warming. Furthermore, the conversion of wetlands into agricultural land reduces their ability to act as carbon sinks, diminishing their role in mitigating climate change.

The detrimental effects of climate change, such as frequent and prolonged dry spells and erratic rainfall, have already impacted agriculture, amplifying the vulnerability of populations reliant on rain-fed agriculture. However, the reverse is also true: the encroachment of agriculture into wetlands contributes to climate change by releasing greenhouse gases and degrading the natural environment, creating a destructive feedback loop. As agricultural activities continue to encroach upon these critical ecosystems, the ability of wetlands to mitigate climate change diminishes, further exacerbating the problem.

[6] Interview with a Key Informant on 06/02/2024.

3.1.7 Tree Cutting for Firewood and Charcoal Burning

The study revealed that cutting of indigenous trees for firewood and charcoal burning is a prevalent human activity. Despite widespread recognition of the environmental damage caused by these activities, they continue unabated. The majority (83%) of respondents acknowledged that cutting down trees is a major contributor to climate change, yet this practice remains common, as illustrated in Figure 17. Some sections of the wetlands have been replaced by planting eucalyptus trees as a means of permanent encroachment and ownership and also for business. Charcoal burning, particularly in and around natural resources significantly contributes to environmental degradation and global warming

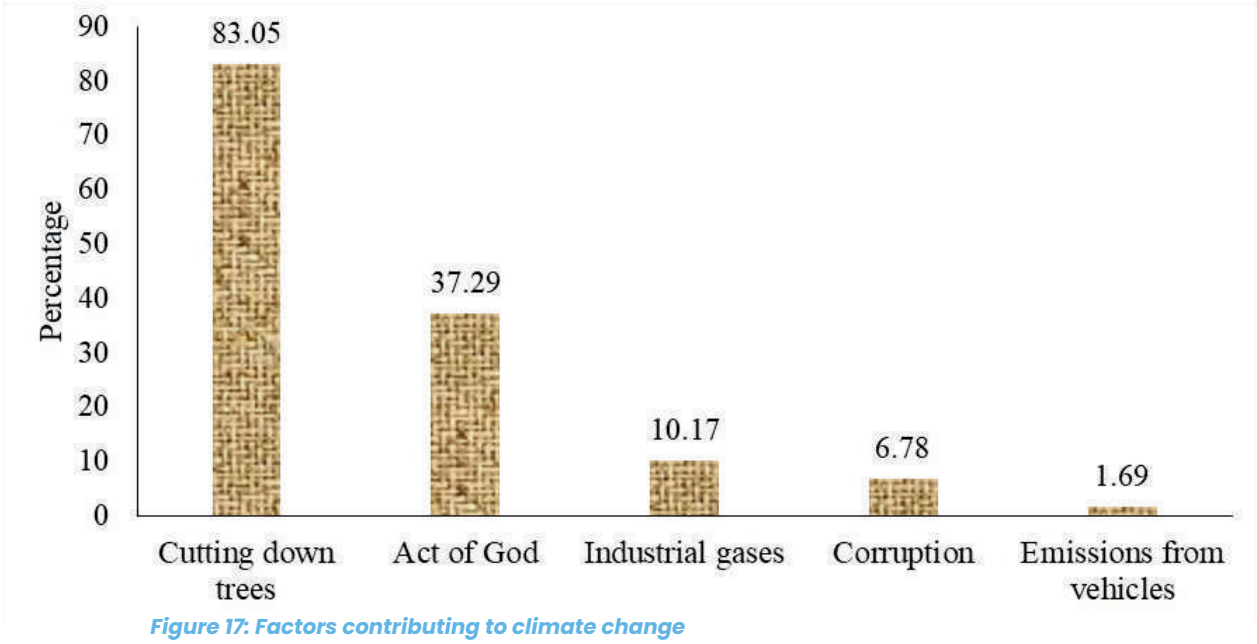


Figure 17: Factors contributing to climate change

According to the National Forest Authority (NFA), more than 73,000 hectares of private forest are cleared every year across the country, and over 7,000ha of protected forest reserves are destroyed annually for timber and charcoal. Charcoal burning also contributes to global warming and helps threaten Earth's climate stability. "It is estimated that traditional wood energy (fuelwood and charcoal) emits 1-2.4 Gt [gigatons] of carbon dioxide equivalent (CO_2e) per year, which is 2-7 percent of total anthropogenic GHG [greenhouse gas] emissions. (FAO)

Figure 18: Tree Cutting

According to the NFA and the Tree Planting Act of 2003, neither national nor local governments are allowed ownership of trees or have authority over forest production on private lands. However, the law also states that a District Forest Officer may issue directions to the owner of trees or forest produce situated on private property, requiring them to manage the resource in a professional and sustainable manner.

The study established that all charcoal producers are required to have a charcoal production license from the National Forestry Authority and the Ministry of Energy and Mineral Development, but it should be noted that the charcoal burning license under the Act is not fully enforced leaving it to serve as a revenue generating license for the local government. Therefore, most of the charcoal burning in Uganda is illegal, despite being practiced around natural resources.

"The persistent drought that is being experienced in the district and neighboring areas is attributed to various factors, including tree cutting and poor farming practices, causing climatic change[7]. "

The respondents (11%), however sighted being allowed to encroach the swamps by the District top officials after paying some money. "We pay some money to be allowed to use this place because it is for the government although no receipt is issued to us."

3.1.8 Fish Farming in Wetlands

Among the activities of wetland encroachment in the areas of Arapai, Lale, Ochokchan, and some areas of Kamuda Sub-county is fish farming in ponds. Statistics from the fisheries directorate at the Ministry of Agriculture, Animal industry, and Fisheries indicate that currently there are over 3000 fish ponds in Uganda.

Photo Credit; Jaguza Livestock Ltd

Figure 19: Fishponds in wetland

[7] Interview with a Key Informant on 08/01/2024.

"Previously those who did fish farming ensured that the fish ponds constructed within a wetland were on the sloping sides of the wetland with feeds meeting a given standard to ensure that no dangerous substance found its way into the water cycle, and by regular monitoring by environment authorities both at the local government and NEMA. However, since 2021, NEMA has ceased the issuance of new permits for fish farming in wetlands, save for those who had obtained them before, as a new measure of preserving and protecting the environment. [8]"

Until recently, most fish farmers in Uganda were poor people in villages who practiced aquaculture for subsistence with ponds of usually less than 500m² constructed using family labour. It was established that the fish ponds in wetlands are owned for commercial purposes not for domestic use. These developments are driven by the commercial interests of farmers with access to land and reasonably large families that provide labour or who have the ability to harness labour. Therefore, illegal encroachment on the wetlands is a widespread phenomenon caused by the unethical practices of the authorities in charge, which should be curbed to deter climate change.

[8] Interview with a Key Informant on 05/01/2024

3.2 Corruption in Environmental Degradation

The Access to Information Act (2005) provides for the right to access public information. Although NEMA and the local governments publish annual and biannual state of the environment reports, it is difficult to access ESIA reports, which are public documents. The public and environmentalists have been denied access to ESIA reports of projects established in wetlands and other natural resources, which brings about suspicion on existence of corruption. This limited access to environmental information constrains public participation in ESIA because, access to information enables citizens to participate meaningfully in decisions that directly affect their livelihood and to be able to monitor government activities.

3.2.1. Impunity and Politics

"When you cultivate rice in the swamps, you are committing a big crime. This must stop. I don't know what the scientist told you but here in Uganda, 60 percent of the rain is from the oceans and 40 percent is from wetland [9]".

President Museveni's repeated directives to halt rice farming in Uganda's wetlands reveal deep issues of impunity and institutional failure. Despite over seven orders from 2019 to 2023 aimed at relocating farmers and factories, enforcement has been weak due to systemic shortcomings in environmental protection agencies.

The government's failure to act decisively against encroachers reflects a culture of impunity. While the President advocates for sustainable practices, many, including foreign investors, continue exploiting wetlands without repercussions, leading to accusations of double standards.

Political dynamics complicate environmental management, as private interests often overshadow ecological sustainability. Corruption among officials further exacerbates the issue, with some ignoring illegal activities for personal gain.

Historically, Uganda has lost over 30% of its wetlands in the last two decades due to agriculture and industry. Government measures like taxes and permits have failed to stem this trend. Farmers argue they have no viable alternatives to wetland farming, perpetuating environmental degradation.

Museveni's orders highlight a struggle against entrenched interests and institutional weaknesses, emphasizing the need for effective enforcement and addressing the political and economic barriers to proper environmental governance

"This issue of rice growing is a highly political issue with a lot of corruption involved. We have tried to stop rice growing but we have been warned to leave the voters or investors alone[10]."

[9] Statement at Inter-Ministerial Conference on Migration, Environment and Climate Change, Kampala, July 2022
[10] Interview with a Key Informant on 06/02/2024.

Figure 20: President Museveni orders the stop of rice growing in swamps in July 2022

3.2.2 Erratic Practices among MDAs

Since 1995, land titles have been issued to over 782 plots wholly or partially located in wetlands in central Uganda (Auditor General Report 2018) attributed to unethical practices and poor coordination between the Wetland Management Department and districts regarding the dissemination of information on wetland boundaries, interference and pressure from powerful politicians or high-ranking government officials, and possible corruption of officials from the Uganda Land Commission, District Land Boards, and Area Land Committees. The IG report (2021) estimates that the loss of environmental resources to corruption is nearly UGX 2.28 trillion, while the cost of environmental pollution and degradation amounts to UGX 536.8 billion and the cost of corruption in contract royalties of UGX 868 billion per year.The study has proven that despite the different legislation, interventions and funding, encroachment on Uganda's wetlands continues to rise.

"NEMA confirms that the high level of corruption among local leaders has frustrated all efforts to restore wetlands and other water sources. On several occasions, the President has given directives to wetland encroachers to vacate immediately, but with no success due to corruption and a lack of political will among local leaders[11]."

The above quotation and Figure 20 vividly illustrate that corruption, undue influence, and conflict of interest exist as major drivers of wetland degradation. Observations have revealed land titles issued in wetlands, and many have been cancelled thereafter. The key questions to ask are: How were they issued in the first place? What is happening on the said land after the cancellation? Has the wetland been restored?

[11] Interview with a Key Informant on 28/01/2024

Photo Credit; The Independent Magazine

Figure 21: Wetland used for rice growing in Soroti District

The government has in place environmental structures at all levels in local councils, but we have found a major challenge of corruption among leaders who promise to cover-up in case there is an attempt to be evicted (NEMA).

The different drivers such as urbanization, poverty, and high population growth, will continue to be around us but if strong enforcement of environmental laws was happening, encroachment would be controlled.

3.2.3 Bribery

The study reveals that community members involved in illegal wetland use often bribe law enforcement officers, using both in-kind payments like food and monetary bribes as indicated in Figure 22.

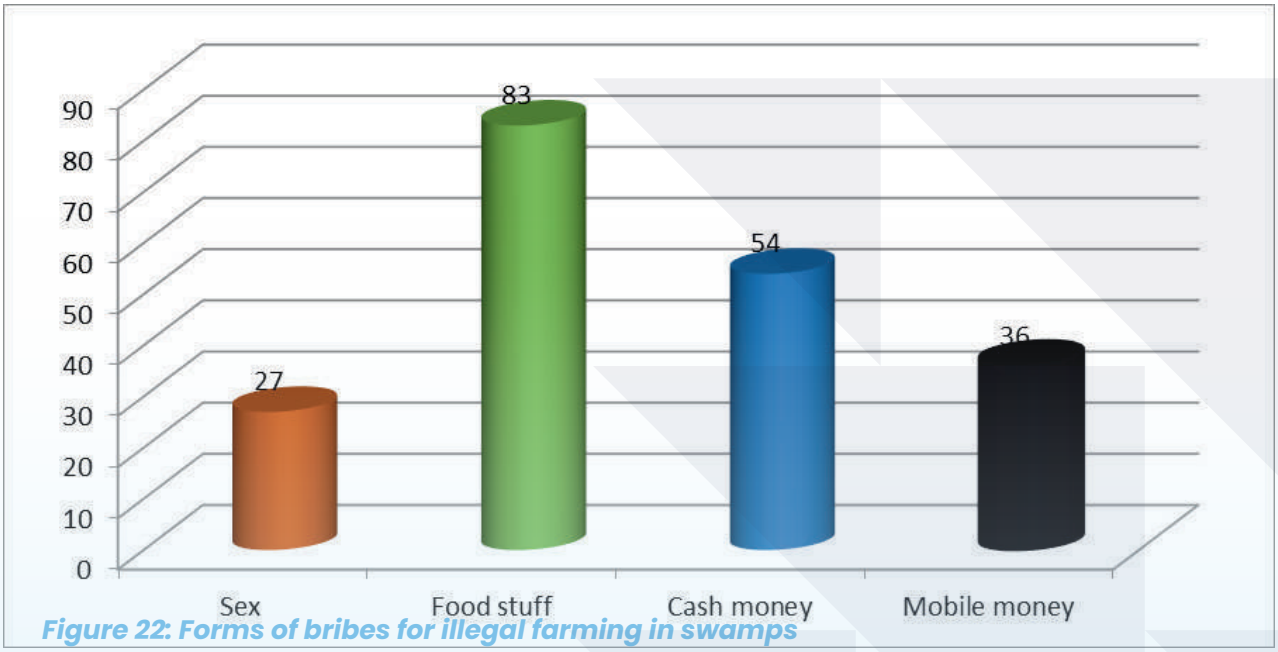


Figure 22: Forms of bribes for illegal farming in swamps

3.2.3.1 Gender and Climate Change

Alarmingly, some encroachers, mainly women, resort to offering sexual favors for permission to cultivate in protected areas, highlighting their desperation and raising serious health and human rights concerns.
Bribery in this context is closely linked to gender inequality. Marginalized women, facing various barriers, feel compelled to engage in corrupt practices to secure necessary resources for survival. The climate crisis worsens these inequalities, making it harder for women to obtain livelihoods without resorting to unethical means.

Corruption undermines environmental regulations, leading to lower emissions standards and ineffective clean energy initiatives. Misallocated funds often support undeserving projects, increasing deforestation and reliance on non-renewable energy, which hinders climate reduction efforts.

Corruption also affects adaptation measures for climate change. Fraud diminishes funding for crucial activities like adaptive infrastructure and resilient agricultural practices, often overlooking vulnerable communities led by women in favor of less deserving recipients.

Bribery in illegal wetland usage reflects broader systemic issues of gender inequality and corruption that impede effective environmental governance. Addressing these challenges requires a multifaceted approach that links social justice with climate action, empowering women and ensuring their representation in decision-making to create equitable and sustainable solutions.

3.2.4 Non-reporting of Environmental Degradation

The study established that the majority of the respondents (74%) would not report environmental degradation or pollution of any natural resource. Only 18% would report and these were those in leadership or empowered positions. This clearly shows that either people do not have faith in the institutions mandated with protecting the environment or they see it as a waste of time due to politics, corruption and undue influence, and conflict of interest while protecting the environment and dealing with climate change. The above also shows that the public is not aware of the laws protecting the environment. Even those who were aware, noted that these laws are not available to the public which makes it difficult to report encroachment or environmental degradation. This lack of information fuels both more corruption and encroachment.

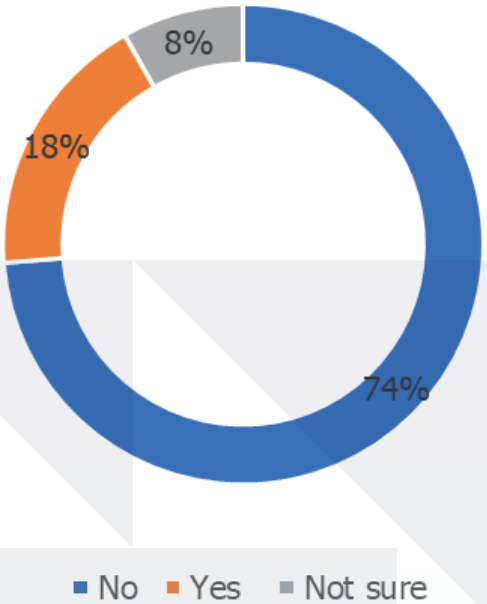


Figure 23: Reporting pollution and degradation of environment

3.2.6 Anti-Corruption Agencies' Involvement in Environment and Climate Change corruption business.

Figure 24 shows the devastating nature of corruption, and the study findings indicated that majority (75%) of the respondents were not aware of the agencies fighting corruption. Further investigation revealed that out of the over twenty agencies responsible for curbing corruption in Uganda, respondents were aware of only Uganda police, Statehouse and IG offices. There was limited knowledge about other anti-corruption agencies(12).

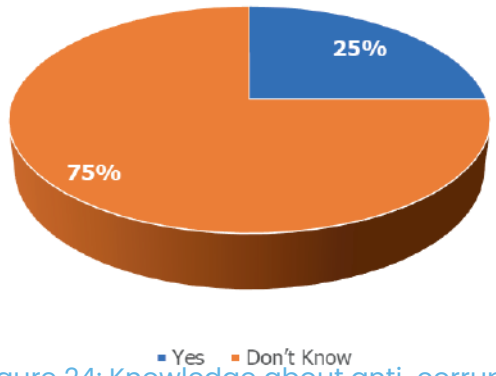


Figure 24: Knowledge about anti-corruption agencies

3.3 Corruption Risks and Vulnerabilities Fueling Climate Change

71% of respondents believed that there were instances of corruption and undue influence including conflict of interest while protecting the environment and dealing with climate change. Further analysis revealed manipulation brought about by the inherent systematic loopholes in institutions. These include;

- Expenditure of funds without requisite documentation
- Operating without approved service delivery standards and clear outputs
- Creating fictitious suppliers that receive funds for non-existent work
- Low and delayed salaries, and a lack of stringent punishments for corruption
- Limited staffing of AC agencies for example; ODPP has 38% capacity, ie 316 prosecutors out of an approved 862 prosecutors (Monitor Newspaper 28/04/2024), the number of leaders increased from 25,000 to 350,000 due to the amendment of the leadership code but the staffing did not increase resulting in large volumes of work at the Inspectorate of Government. The limited staffing has also caused delays in hearing of some cases at the High Court Anti-Corruption Division.
- Funding limitations of government agencies to deal with current syndicated corruption and systematic administrative injustices. Agencies lack advanced equipment, forensic teams, and specialized staff such as engineers, valuers, and quantity surveyors
- Limited skills-set among staff to investigate cybercrime. CID is faced with an acute lack of specialized skills and competencies to investigate sophisticated and syndicated fraud cases. This has, in most cases, resulted from laxity in entry academic standards and accreditation of the institutions
- Delays in the appeal process which directly impacts on enforcement of asserted recovery orders.
- Political interference at DLG fuels corruption and tends to dictate service delivery priorities
- Poor exhibit management due to inadequate infrastructure as well as specialized facilities to safely keep exhibits in their original form from the time of recovery to when they are tendered to conviction.

[12] Directorate for Ethics and Integrity (DEI), Criminal Investigation Directorate (CID), Directorate of Public Prosecutions (DPP), Public Procurement and Disposal of Public Assets Authority (PPDA), Office of the Auditor General (OAG), Uganda Revenue Authority, Anti-Corruption Court, Internal Security Organization, Accountant General Office, Judicial Service Commission, Public Service Commission, Education Service Commission, Local Government Finance Commission, Ministry of Public Service (Inspectorate), Ministry of Local Government (Inspectorate), Inspectorate of Courts, Justice Law and Order Secretariat and Accountability Sector Secretariat.

- Corruption in the use of fast-start adaptation finance could also work against efforts to secure stable, ongoing sources of funding for adaptation in the medium and long term, with serious consequences for many vulnerable populations.
- Fragmentation of funds and the pressure to disburse funds quickly have reduced the effectiveness of aid projects, increased their vulnerability to corruption, and could potentially create similar risks for adaptation. There is considerable diversity and overlap in the nature, purposes and governance of climate funds.

There are inherent risks for corruption in CC interventions brought about by a number of factors namely; the large amounts of money involved, unclear and evolving rules, complex institutions and disbursement mechanisms, inadequate monitoring, highly technical science that is not well understood by others, endemic corruption in key sectors such as construction, energy, and forestry, multiple actors with varying anti-corruption controls, and a spending imperative due to urgency (the climate crisis) that can detract from illegal behavior.

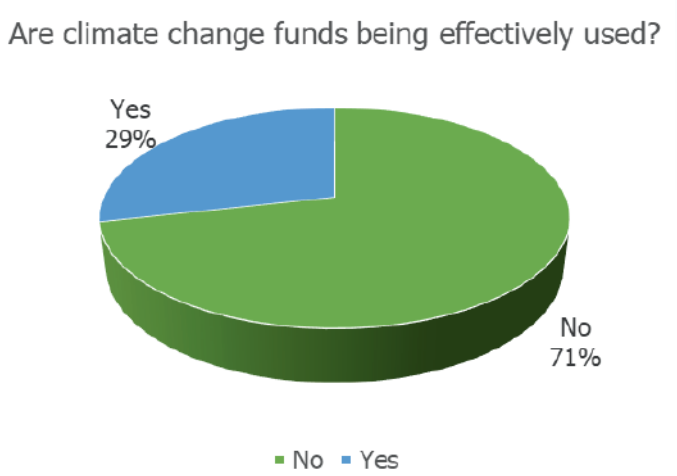


Figure 25: Perception on climate change funds

3.3.1 Manifestation of Corruption in Key Selected Processes.

Corruption risks in the ESIA(Environment Social Impact Assessment)

ESIA conducted by NEMA is one of those important processes and measures taken to ensure sustainable natural resource use. It analyzes the positive and negative effects of a proposed project, plan, or activity on the environment including thorough studies on the weather, flora and fauna, soil, human health, including physical, social, biological, economic, and cultural impacts. The National Environment (Wetlands, River Banks And Lake Shores Management) Regulations, No. 3/2000 provides for an ESIA process which is represented in figure 27 below, includes;

- Submission of a project brief to the NEMA.
- Screening by the NEMA in consultation with the lead agency to determine if an ESIA is required and of what scale (environmental impact review, environmental evaluation or full ESIA).
- Development of terms of reference (ToR) by the developer in consultation with the NEMA and the lead agency for approval,
- Conducting the study while ensuring full and effective participation of the public and the affected community.
- Preparation of ESIA report which is submitted to NEMA and transmitted to the lead agency for comments.
- Review of the ESIA report and approval decision

The study highlights risks and potential undue influence in the Environmental and Social Impact Assessment (ESIA) certification process due to grey areas. Key conflicts of interest involve project approvals reliant on Terms of Reference (ToR), feedback from lead agencies, public comments, and other considerations, all of which can be manipulated by corruption. This manipulation poses a threat to environmental standards and contributes to climate change. The study emphasizes the urgent need for transparency and integrity in the ESIA process to safeguard the environment.

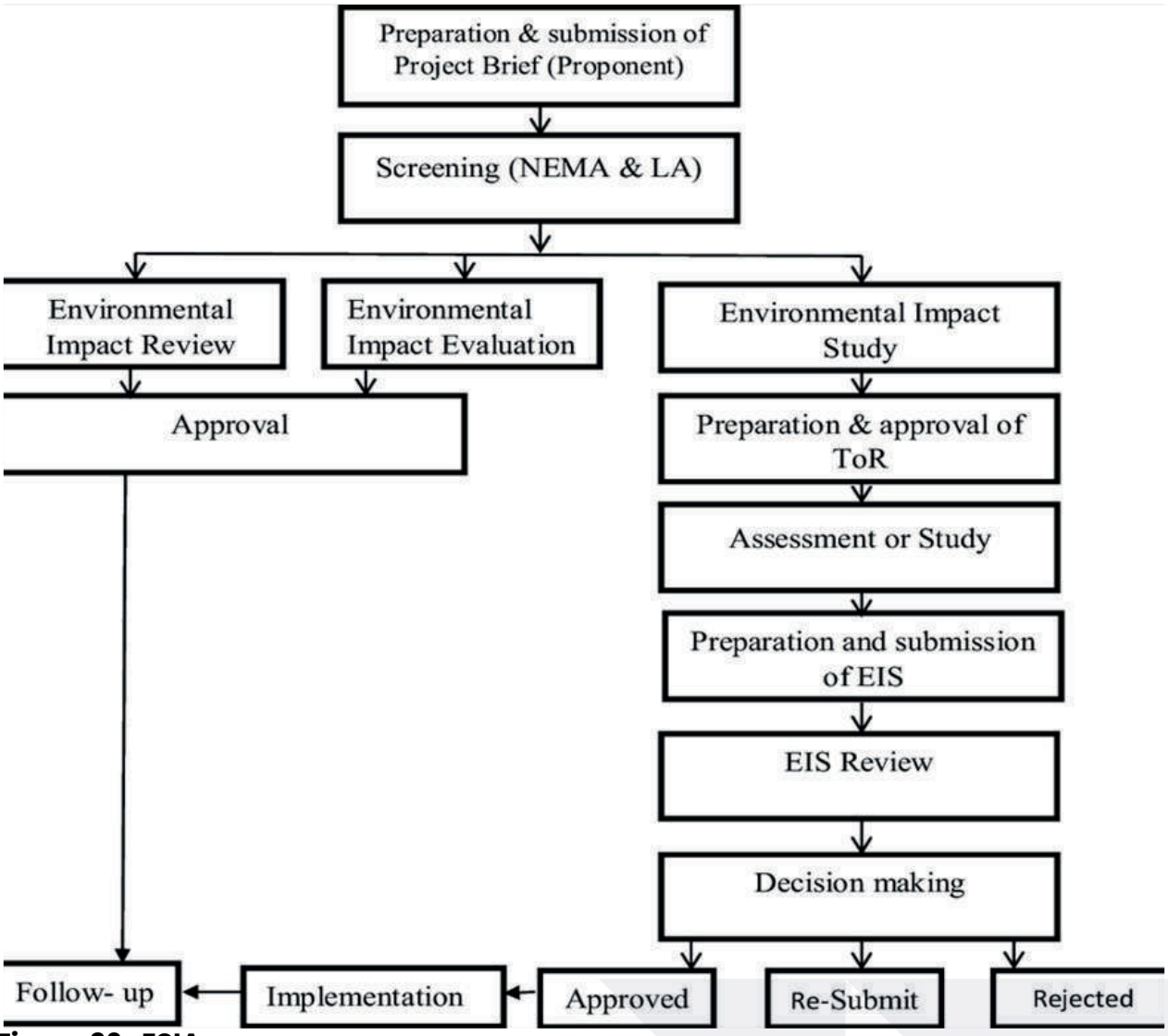


Figure 26: ESIA process

3.3.1.1 Bribery of a Private ESIA Practitioner

The ESIA is undertaken by an expert (environmental practitioner) approved by the NEMA in accordance with the Conduct and Certification of Environmental Practitioners Regulations 2003. The expert on behalf of the developer leads the consultation process, and this remains a challenge in terms of transparency and effectiveness. NEMA is obliged to monitor the process but sometimes it is done and, in some instances not; because of corruption which is sometimes disguised as a lack of institutional facilitation. The critical question is whether the DLGs can monitor this process since some are understaffed while others are being created. The monitoring visits conducted were mostly reactive rather than proactive after community tip-offs or observations. This implies that compliance by private sector entities is not enforced resulting in a low level of implementation of mitigation measures.

3.3.1.2 Influencing Developer-Led Environmental Audits

NEMA is obligated to conduct a systematic environmental audit. However, due to institutional operational challenges, self-environmental audits are not being done, and if conducted by the developer, money can exchange hands. This lack of post environmental auditing is also reported in other studies (Wang et al., 2019). It is revealed (Glasson, 2005) that post-environmental audit and monitoring serve to identify the errors between predicted and actual impacts and improve project management in a local community by maximizing project benefits and minimizing negative impacts. Therefore, post-environmental audit and monitoring is another corruption opportunity and risk.

3.3.1.3 Influencing the NEMA Decision by appeal

Under NEMA, an appeal against a decision of the authority that is deemed erroneous by an individual or group of individuals can be lodged through the high court of Uganda. Although there is a right to appeal an unjustly denied ESIA certificate by NEMA, most times the appeals end in defeat because of the alleged corruption in the judicial system. Transparency International East African Bribery Index Report (2015) noted that 31-45% of the correspondents in Uganda claimed to have paid a bribe in court; therefore, since the developers have money, the appeals are ruled in their favor.

The Afro barometer, dispatch 77, of 28th March 2016. "Public perceptions of corruption in the judiciary continue to worsen, as 45% stated that most judges and magistrates were corrupt." Although the appeal mechanism has been successful to some extent in reversing some decisions of the NEMA, such as in the case of Advocate Coalition for Development and Environment v. Attorney General & NEMA (2004), which sought the high court to declare illegal the issuance of a permit to Kakira Sugar Works limited to convert Butamira Forest Reserve to sugar cane plantations without submission of a project brief or carrying out an ESIA, corruption exists in the judicial system in handling some cases.

3.3.1.4 Denial to Access ESIA Information.

The Access to Information Act (2005) provides for the right to access to public information. Although NEMA and the local governments publish annual and biannual state of the environment reports, it is difficult to access ESIA reports which are public documents. Failure to access ESIA information raises a lot of questions among the public because they cannot monitor and play an oversight role.

Photo Credit; The New Vision

Figure 27: Human settlement in wetland in Kampala District.

3.3.1.5 Evading Restoration of a Degraded Environment

NEMA and courts have authority to issue environmental restoration orders respectively. Sections 95 through 101 NEMA ACT (2019) stipulate offences and penalties related to different aspects of the ESIA. It is stipulated that any person who commits offences related to degradation and pollution is liable on conviction to imprisonment for a term not exceeding 18 months on average or to a fine not less than 188,572/¼ (US $51) on average and not more than 18,000,000/¼ (US$ 4,865) on average or both. However, this could give rise to influence peddling, selective prosecution and bribery.

3.3.1.6 Using ISO (International Organization for Standardization Certification to equate to ESIA.

The recent drive to repeal environmental laws, particularly within the framework of he Oil and Gas Policy (2008) and the Petroleum (Exploration, Development, tand Production) Act (2013), introduces significant corruption risks. The Act, which requires entities in the oil and gas sector to meet specific health, safety, and environmental standards, also opens avenues for corruption. The demand for ISO certifications, such as ISO 14000 (Environmental Management Systems), managed by the Uganda National Bureau of Standards, can be compromised if oversight is weak. Corruption risks include bribery, where companies might pay officials to fast-track certifications or bypass rigorous environmental assessments, and conflicts of interest, where officials with financial stakes in oil projects could overlook violations. Furthermore, regulatory capture could occur, where powerful industry interests influence the enforcement of these standards, leading to environmental degradation and public health risks. This creates a situation where the intended environmental protections are undermined, exacerbating the potential for environmental harm and corruption.

3.3.1.7 Inadequate and Ineffective Public Participation in ESIA.

Scoping is the stage that sets out what needs to be assessed in the ESIA to help define how to approach the assessment and what information may be needed to identify the likely significant effects of the development. The inadequate and ineffective public participation in all windows for public participation in the ESIA process, particularly scoping, ESIA study, and review was caused by limited knowledge of ESIA legislation, limited access to ESIA information, poverty and unemployment, the developer – led consultation process, and a lack of transparency in public participation, particularly during public hearings.

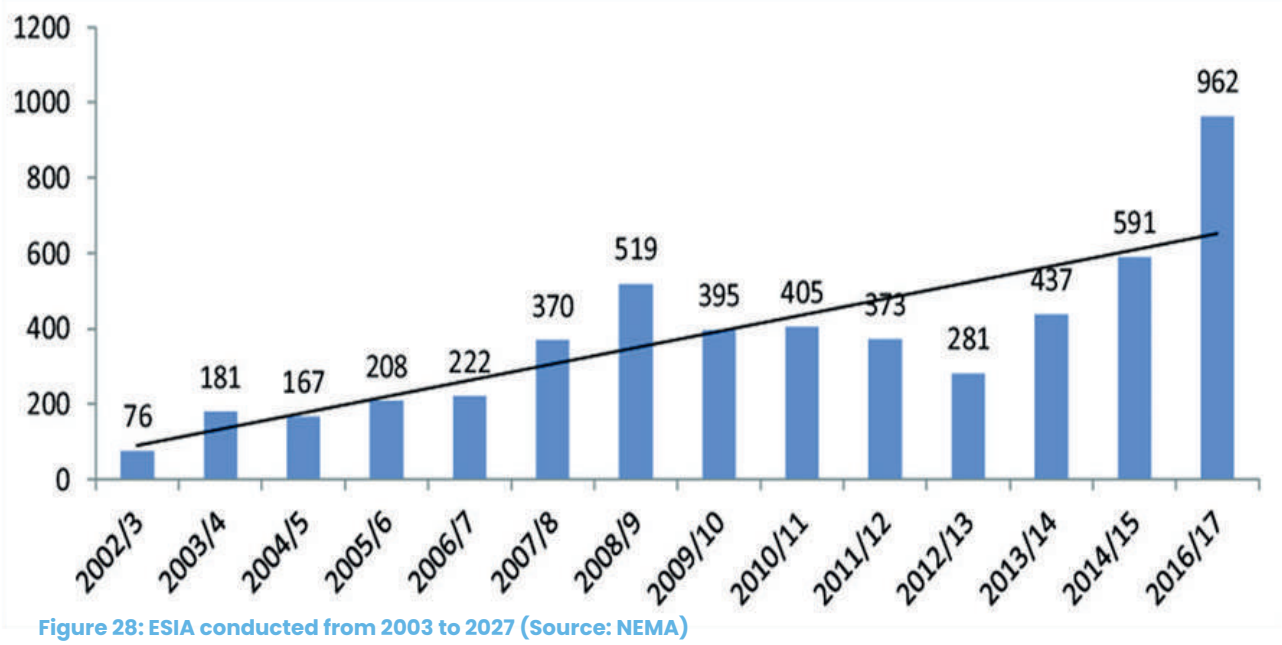


Figure 28: ESIA conducted from 2003 to 2027 (Source: NEMA)

Although the above figure 29 shows the increasing number of ESIAs conducted in Uganda, much more needs to be done. If you compare the number of business and investment establishments shown in the figure 30 below, there is a huge difference, which is a clear indication that only a few ESIAs are being done. The Census of Business Establishments (COBE 2010/11) indicated in figure 30 the country had 458,106 establishments and therefore relatively equal or close ESIA would be done.

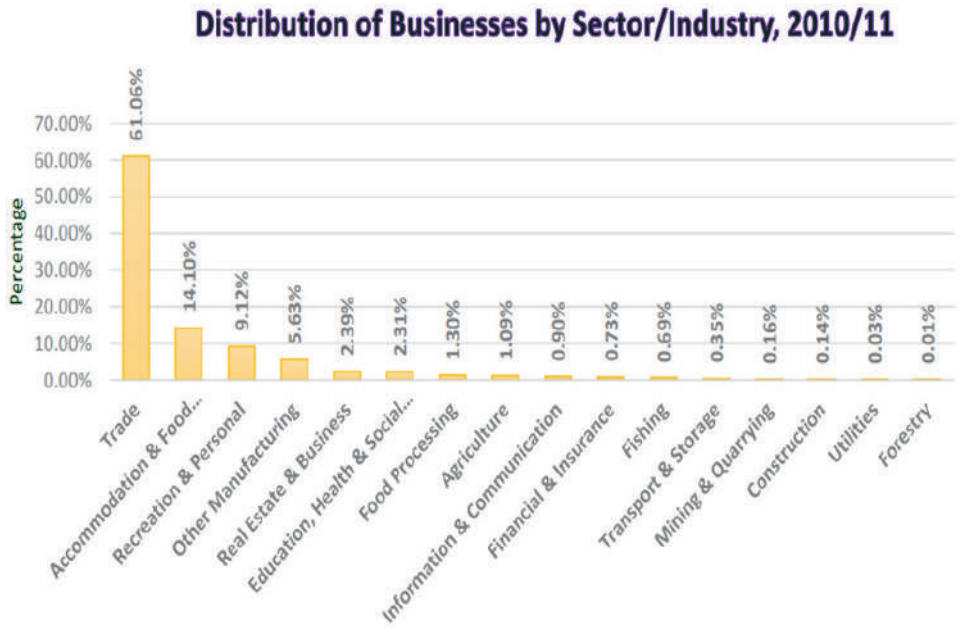


Figure 39 Census of business 2010/11: (Source: UBOS)

With the current level of poverty of 21.4% (UBOS: NHS 2016/2017) and unemployment of 1.74% (World Bank 2010–2020 macro trends), many communities are more vulnerable to ESIA manipulation by developers and consultants. The Social benefits of manufacturing industries were given emphasis in ESIA reporting to seek project approval, which determines the pay of environmental practitioners (consultants). Such ESIA manipulation by giving false information, exaggerating information, withholding information, undervaluing or overvaluing of impacts by both the developers and the ESIA consultants has been identified in other studies (Enríquez-de-Salamanca, 2018).

ESIA is a highly political process because it involves investors, and if you over-insist, you will be labeled as sabotaging development, which can lead to even loss of life.[13]

The above quotes connote that most of the ESIA that is done already has the upper hand to favour the planned investment at all costs, but the ESIA is looked at by some people as a mere formality. It should be noted that there are a number of projects sighted that commenced despite resistance for being unfriendly to the environment, such as Kalangala District, where already more than 10,000 ha of forests on the Bugala and Bunyama Islands have been converted to a palm oil project. There are plans for an additional 40,000 ha to be planted to this industrial crop (Kalangala District NGO Forum (KDNF), 2009; NFA, 2008). In addition, the former wetlands within Kampala city are the current sites of the biggest shopping malls (Garden City, Lugogo Shoprite, and Nakumat) or restaurant parks (Centenary Park) (Titeca, 2010). Even more of Kampala's wetlands are lost to urbanization, due to the for accessible land for industrial building (National Environment Management Authority, NEMA, 2006).

3.3.2 Corruption Risks in Obtaining Freehold Land Titles on Public Land

Reports have indicated corruption is inherent in obtaining freehold land titles on government resources. The figure 30 below is a title for Block 934, Buddu. This further elaborated in the next section.

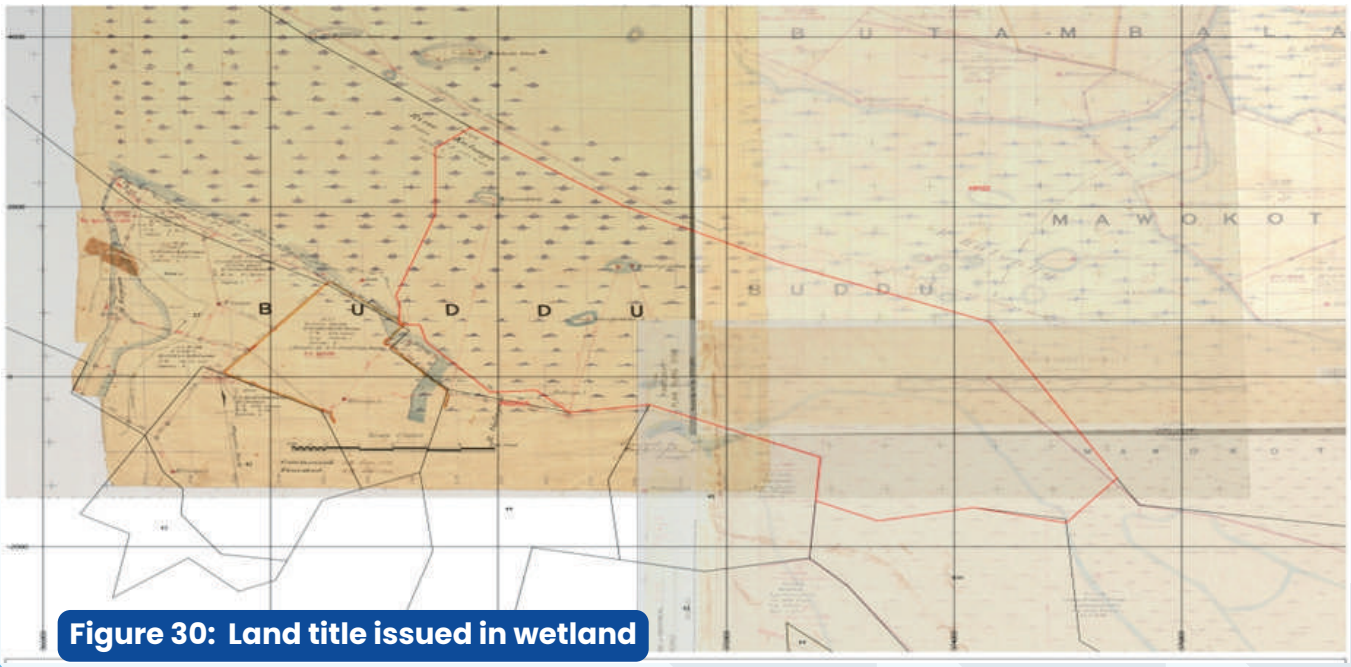


Figure 30: Land title issued in wetland

[13] Interview with a Key Informant on 03/01/2024 in Soroti District.

3.3.2.1 Process of Obtaining Freehold Title

The process of obtaining freehold land titles is a detailed one that involves five key steps, as listed in Figure 32 below. There is no clear distinction between public land and government land in the legislative framework. The regulations and guidelines to control the management and use of land, including the disposal of these lands, are not provided in the constitution or laws of Uganda.

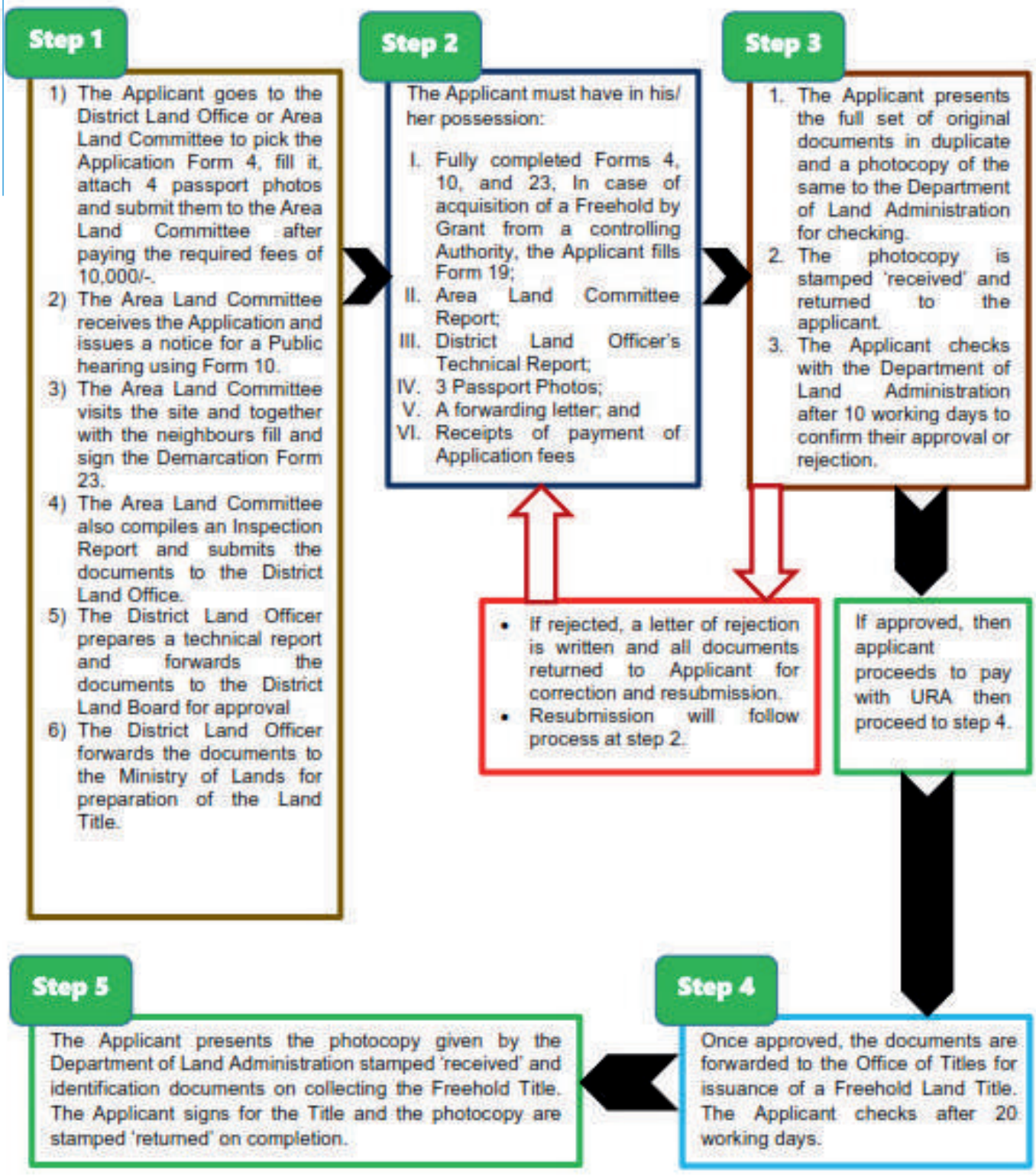


Figure 31: Process of obtaining Freehold title

3.3.2.2 Bribery of the Area Land Committees

The major corruption risks are in steps one and two. In the first step, the process of the Area Land Committee visiting the site and together with the neighbors, filling out and signing the demarcation form. This is facilitated by the applicant which further compromises the process and influences the Committee Inspection Report.

Additionally, the public hearing is corrupted with a transport refund and lunch to endorse the application.

3.3.2.3 Influencing District Land's Technical Report

In step two of figure 32, corruption risk is in the Area Land Committee Report where in most cases the committee is compromised.

The same bribery is happening at the District Land Office whose technical report can be influenced by kickbacks. There is no way a title can be issued by a land administration officer without verifying the actual location with coordinates before issuing a land title if it is not corruption.

3.3.2.4 Unqualified Land Surveyors

Unqualified land surveyors who have deliberately failed to adhere to professional standards, "mistakes are done during boundary openings and the problem is serious due to increased number of 'undercover' surveyors." Some of the valuations are conducted by unqualified surveyors and unethical in undertaking the tasks. Figure 33 shows a title issued clearly in a wetland.

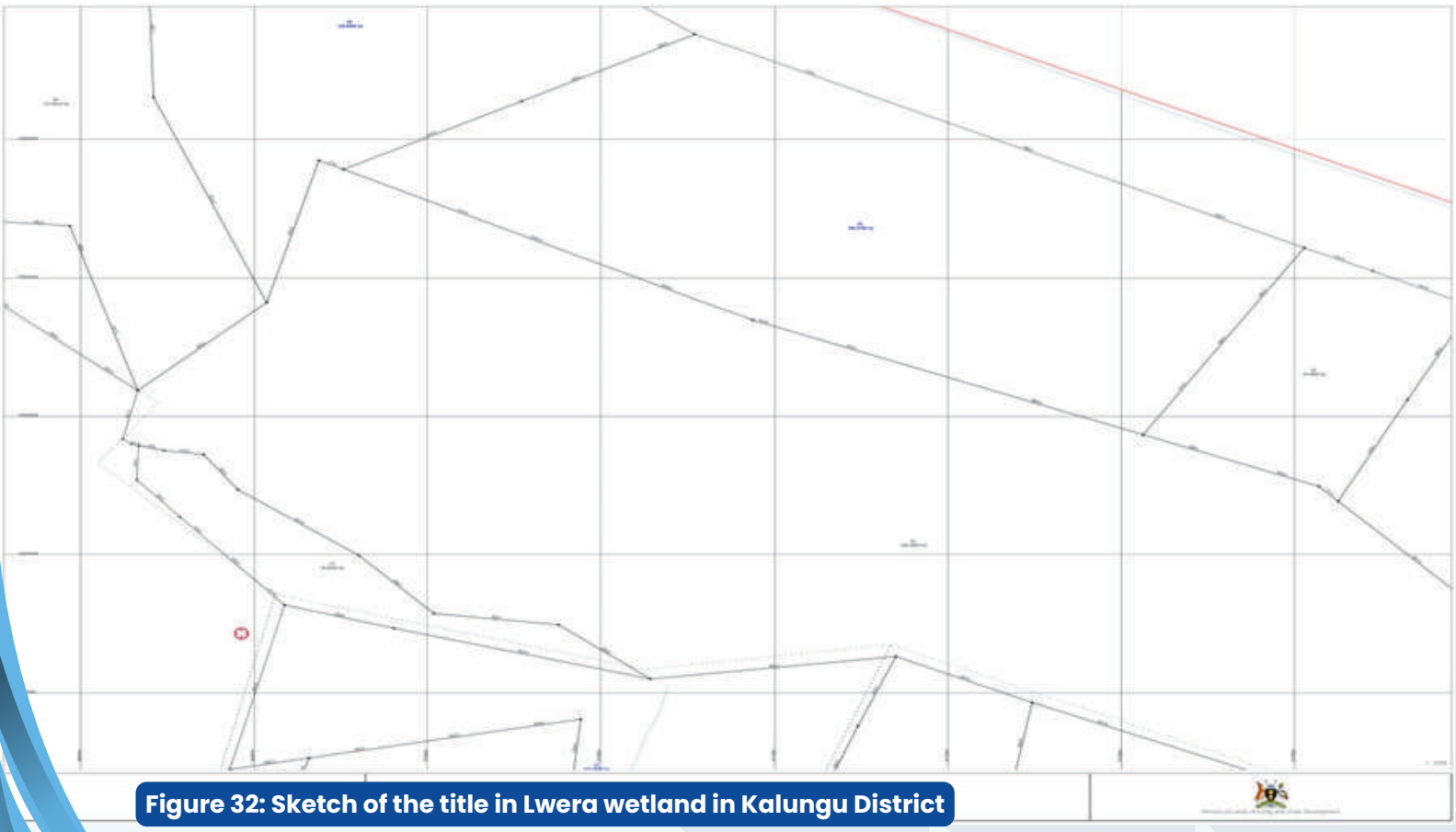


Figure 32: Sketch of the title in Lwera wetland in Kalungu District

3.4 Response to Climate Change

3.4.1 Adaptation and Mitigation

The responses to climate change could be underscored from five major phases including but not limited to mitigation and adaptation. Other related areas of response consider disaster risk reduction, loss and damage assessment and gender based approaches to climate change Figure 34

Disasters induced by extreme climate change events such as extreme floods, delays in the start of rain, less rain, or frequent droughts, combined with a general increased variability in agricultural seasons, have exerted enormous pressure on the rural population of Uganda. The study established that in order to deal with climate change vulnerability since they were in water catchment areas, communities were resilient by implementing a number of adaptation strategies indicated in Table 1.

The majority of the respondents strongly agree that corruption is the most significant obstacle to environmental conservation. Several adaptation strategies have been employed by the farmers, both women and men, who are local residents in areas bordering wetlands. Unfortunately, due to lack of information and inadequate awareness about conservation, degradation continues which further propels climate change.

Figure 33: Phases of response to climate change

Table 1: Community adaptation and response to climate change

Hazard	Impact on Households	Community Adaptation Strategies
Waterlogging	Disease vectors	• Sleeping under mosquito nets· • Spraying with insecticides. • Raising houses • Cutting down wetland vegetation so that it dries up
Drought	Crop failure/ low yields	• Drought-tolerant crops (sorghum, cassava) • Early planting and land preparation • Community tree-growing
	Fuel wood shortage	• Increasing labor for firewood collection • Planting of trees
Erratic rains and seasonal changes	Crop failure/ poor yields	• Labor for food • Field drainage during the crop cycle • Selling livestock and household assets • Barter trade
Flooding	Loss of property and settlement displacement	• Use of contour lines • Creating water channels • Planting eucalyptus in a waterlogged area • Access to climate and early warning information

3.5 Conclusion and Recommendations

3.5.1 CONCLUSION

A number of challenges still exist in the established systems, procedures, and processes which give rise to undue influence and conflict of interest while protecting the environment and dealing with climate change which require urgent corrective action. These include poor management of natural resources including land, water, and environment coupled with the worsening effects of climate change due to:

(i) poor land use and insecurity of tenure; **(ii)** limited capacity for climate change adaptation and mitigation

(iii) low disaster risk planning

(iv) rampant degradation of the environment and natural resources caused by low enforcement capacity, limited environmental education and awareness, limited alternative sources of livelihoods and limited research, innovation and adoption of appropriate technology

(v) limited access and uptake of meteorological information (inaccuracy in information) due to low technology and equipment for early warning and preparedness and ineffective systems and mechanisms for addressing vulnerabilities

(vi) poor coordination and institutional capacity gaps in planning and implementation; and

(vii) the absence of appropriate incentives for good environmental management practices.

Combating climate change and preventing human extinction requires a multi-pronged approach that tackles corruption alongside other challenges. Ensuring that corruption risks are minimized will be critical to the effectiveness of adaptation implementation. There is need for governance and institutional strengthening to deal with the current climate change challenges and unethical conduct of duty bearers and actors.

Maximizing the effectiveness of climate finance must include steps to reduce the risks of corruption, as large influxes of resources coupled with an imperative to spend can create conditions ripe for corruption. The experience of development assistance shows that corruption can seriously compromise development outcomes, diverting funds away from intended beneficiaries and undermining the development of local knowledge, skills, governance and institutional capacity.

3.5.2 RECOMMENDATIONS

Improve transparency and accountability standards of ESIA processes.

To mitigate corruption risks in the ESIA process, it is essential to review and digitalize high-risk procedures. The government must play a critical role by implementing robust regulatory frameworks, enforcing professional standards, and ensuring adherence to the code of conduct. This includes re-skilling private sector ESIA experts to align with evolving corruption trends, fostering a culture of professionalism, and enhancing accountability.

Government oversight is crucial in enforcing these standards, ensuring that digitalization efforts are effectively implemented, and maintaining transparency throughout the ESIA process. By taking these steps, the government can help reduce unprofessionalism and corruption in environmental management practices.

Enhance Inter-Agency Coordination of all Environmental Institutions

Strengthening inter-agency collaboration and strategic partnerships and alliances among anti-corruption and environmental stakeholders towards coordination of all activities should be prioritized.

"Much of the environmental degradation is attributable to poor governance, characterized by corruption, lack of transparency and integrity, wrongful allocation of protected water resources for development, and failure to enforce rules and regulations[14]".

As noted in the quotation above, in order to manage corruption risks in environmental management and climate change, there is a need to enhance transparency and accountability in permitting processes, strengthen enforcement of environmental regulations, raise public awareness about the link between human activities and climate change, invest in sustainable development practices and climate-resilient infrastructure and promote collaboration between government, civil society, and the private sector.

There is a need for integrated decision-making, cooperation, and coordination among all state agencies involved in environmental governance and protection within and across the government, including bringing on board all stakeholders and actors in the natural resource sector. Further, the government should popularize environmental days, monetization of environmental and natural resources; coordination and integration of all existing laws on governance and utilization of natural resources.

Expand climate information and early warning systems

In order to adapt to changes in agriculture, it is vital to take measures such as sharing climate information and early warning systems widely, expanding rangeland management and Climate-Smart Agriculture (CSA), diversifying crops and livestock, expending small scale water infrastructure; among others . Actions for forestry: include promoting intensified and sustained forest restoration efforts (afforestation and reforestation programmes, including in urban areas), promoting biodiversity and watershed conservation (including the re-establishment of wildlife corridors), and encouraging agro-forestry, among others.

Relatedly actions for risk management in climate change require mainstreaming climate resilience in all sectors, developing vulnerability risk mapping based on better data on climate change impacts at the sectoral and regional level, identifying better drainage plans, building more effective early warning systems, improving emergency-related institutions, and establishing a contingency fund to take care of emergency needs following an extreme climate event.

[14] Interview with a Key Informant on 3/02/2024

Demarcate and sensitize communities

The wetlands which have been demarcated by the Wetland Management Committees allow communities can graze cattle and grow rice from 200-300 meters buffer zone beyond wetland boundaries. However, to ensure the long-term conservation and protection of the environment, there is need to enhance and strengthen capacity of the communities to conserve and protect the environment for watershed management and co-exist harmoniously with the wildlife. This can be done through training, raising awareness and promoting economically beneficial communities' participating in the restoration of habitats, watersheds and populations of wildlife species to avoid uncontrolled cutting of trees, encroaching on wetlands, bush burning and discouraging others from unsustainable fishing.

Engage local stakeholders considering contexts

Civil society and private sector representatives can play important roles, albeit varying by context. Sometimes, it can be local power brokers who are best placed to monitor whether climate adaptation investments are well executed. Involving local communities in forest management is increasingly considered critical to sustainable success but it appears most effective when they have an overall stronger role in decision-making.

Engage both international and local investors to support climate change mitigation

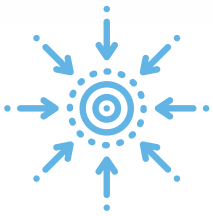
Private sector investments play a crucial role in addressing climate change. Investors can help identify gaps and opportunities to accelerate investment scaling while also addressing the potential corruption risks that impact the viability of investments.

Strengthening vertical and horizontal communication

Strengthening vertical and horizontal communication through multi stakeholder climate action platforms should be prioritized. The government of Uganda needs to revitalize decentralization principles through (re)decentralizing decision-making power to the local governments, including reinstituting the functionality of the lower councils responsible for enforcing policies. Reversing the trend will require targeted capacity building by politicians and technocrats in many aspects, including their roles in development planning and working with multiple partners for effective delivery.

Strengthen policy and institutional framework

In order to remove emergency response expenditures that do not pass through PPDA and related processes, there is a need to strengthen the policy, legal, and institutional framework for effective disaster risk governance and management. There is also need to enhance inter agency coordination and collaboration with entities such NEMA, MoWE, OPM, MoLG, LGs, MoJCA, Parliament, Office of the President, MoFPED, MoIA, UPF, MoD, UPDF. Resources should be mobilized and increase financial resources from all sources to conserve and sustainably use natural resources and allocate a percentage to their management.



Establish district focal points for the Uganda National Meteorological Authority.

In order to enhance the dissemination of meteorological climate information at local governments levels, there is need to have district focal points. Currently, this responsibility falls on the District Natural Resource and Environmental Officers, who already have a wide range of tasks, and this approach has proven ineffective over the years.

Public awareness of climate change impact

TCSOs and other stakeholders should enhance public awareness of climate change impacts to complement anti-corruption efforts, similar to initiatives focused on democracy, governance, infrastructure, and social issues. Targeted sensitization campaigns can effectively reach diverse audiences by tailoring information to their specific needs and preferences.

Media engagement on climate change

To promote sustainable utilization of natural resources in Uganda, the media should receive training on environmental issues. Public awareness is crucial for addressing climate change, but it must be complemented by education and training. Integrating climate change education into the school curriculum will empower future generations to tackle this complex issue. However, a significant gap in climate change expertise persists, requiring interdisciplinary approaches and sectoral integration. A mindset shift is necessary, involving youth and women in resource planning and management. Raising awareness about the value of environmental protection and the costs of degradation can drive behavior change and support climate action.

Strengthen community participation in decision making-regarding appropriate adaptation

Limited community participation in decision making processes has hindered the integration of indigenous knowledge into mainstream adaptation strategies. As a result, local people have benefited little from adaptation efforts, most of which are based on top-down development models. Climate change adaptation policies seem distant from grassroot realities. Effective implementation of the convention depends on the level of awareness of the population at the various levels of society. Gender stereotypes and income disparities discourage women from reporting environmental degradation, citing concerns about repercussions, costs, and time constraints. Addressing these barriers is crucial for inclusive and effective adaptation efforts.

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