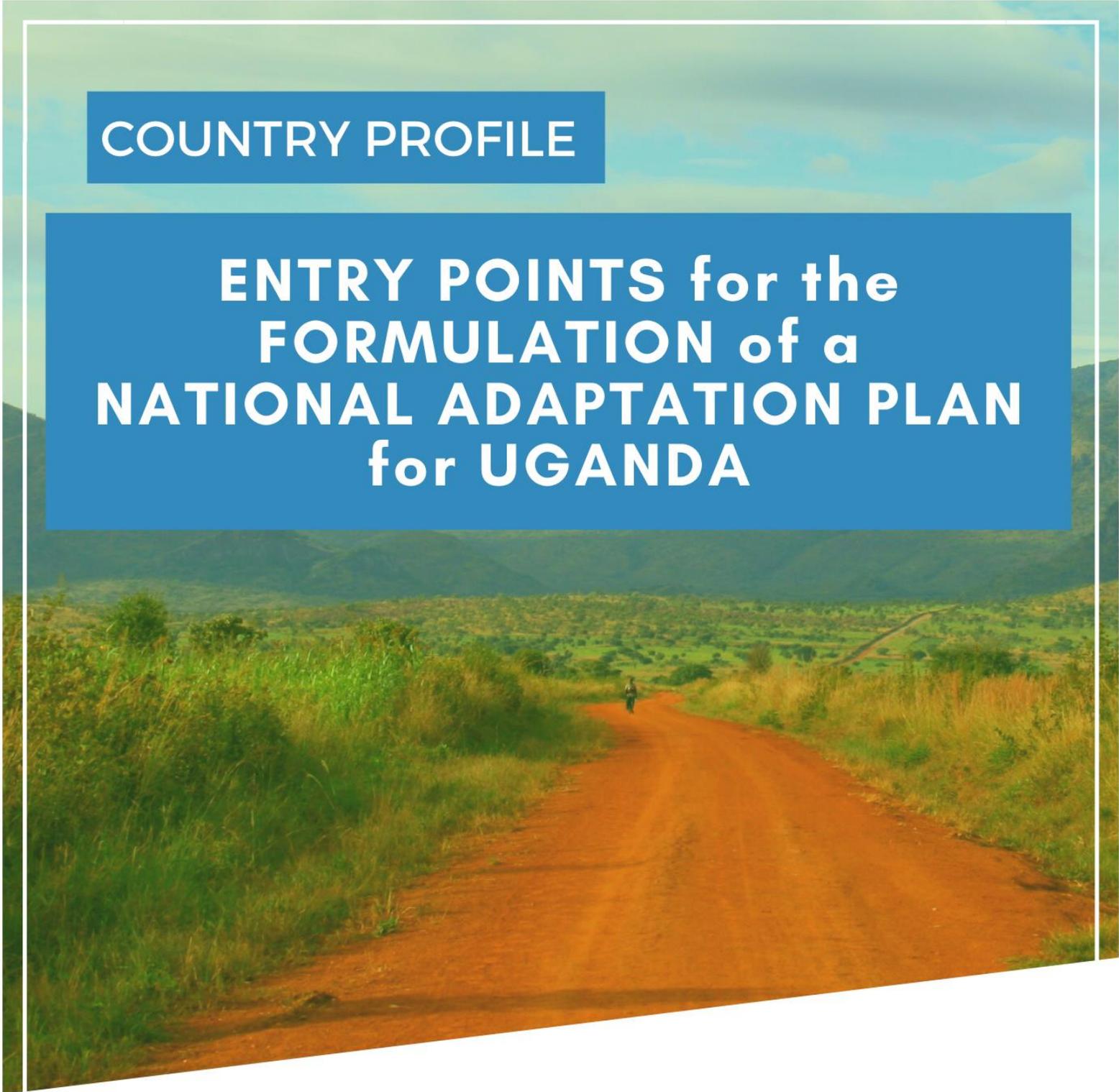


COUNTRY PROFILE

ENTRY POINTS for the FORMULATION of a NATIONAL ADAPTATION PLAN for UGANDA



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ii. Table of Abbreviations

AEZ	Agro-Ecological Zone	MEMD	Ministry of Energy and Mineral Development
AFOLU	Agriculture, Forestry and other Land Uses	M&E	Monitoring and Evaluation
AR5	IPCC Fifth Assessment Report	MIE	Multilateral Implementing Entity
BAU	Business as Usual	MoESTS	Ministry of Education, Science, Technology and Sports
CBD	Convention on Biological Diversity	MoFPED	Ministry of Finance, Planning and Economic Development
CDM	Clean Development Mechanism	MoGLSD	Ministry of Gender, Labour and Social Development
CSO	Civil Society Organization	MoH	Ministry of Health
DNA	Designated National Authority	MoLG	Ministry of Local Government
DPM	Disaster Preparedness and Management	MoLHUD	Ministry of Lands, Housing and Urban Development
EAC	East African Community	MoTIC	Ministry of Trade, Industry and Cooperatives
EIA	Environmental Impact Assessment	MoTWA	Ministry of Tourism, Wildlife and Antiquities
EMLI	Environmental Management for Livelihood Improvement Bwaise Facility	MoWT	Ministry of Works and Transport
ERP	Economic Recovery Programme	MRV	Monitoring, Reporting, and Verification
FDI	Foreign Direct Investment	MWE	Ministry of Water and Environment
GDP	Gross Domestic Product	NAP	National Adaptation Plan
GCF	Green Climate Fund	NAPA	National Adaptation Programme of Action
GEF	Global Environmental Facility	NCCAC	National Climate Change Advisory Committee
GMOs	Genetically Modified Organisms	NCCC	National Climate Change Commission
HDI	Human Development Index	NCCP	National Climate Change Policy
IAS	Invasive Alien Species	NDA	National Designated Authority
ICT	Information and Communication Technology	NDCs	Nationally Determined Contributions
INC	Initial National Communication	NDP I	First Five-Year National Development Plan (2010-2015)
INDCs	Intended Nationally Determined Contributions	NDPII	Second Five-Year National Development Plan (2015-2020)
IPM	Integrated Pest Management	NEMA	National Environment Management Authority
JPA	Joint Principles for Adaptation		
KCCA	Kampala Capital City Authority		
LDCs	Least Developed Countries		
LEDS	Low Emission Development Strategies		
LGA	Local Government Authority		
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries		
MDB	Multilateral Development Bank		

NGO	Non-Governmental Organization	STI	Science, Technology, and Innovation
NIE	National Implementing Agency	UNCCD	United Nations Convention to Combat Desertification
NPA	National Planning Authority		
OPM	Office of the Prime Minister	UNDP	United Nations Development Programme
PCE	Policy Committee on Environment	UNEP	United Nations Environment Programme
PEAP	Poverty Eradication Action Plan		
SDGs	Sustainable Development Goals	UNFCCC	United Nations Framework Conventions for Climate Change
SNC	Second National Communication to the UNFCCC	UNMA	Uganda National Meteorological Authority

iii. Executive Summary

The research paper on the Entry Points for the Formulation of a National Adaptation Plan for Uganda is developed with the aim to support an inclusive, participatory, evidence-based, and gender-responsive National Adaptation Plan process in Uganda. It further envisages to contribute and facilitate multiple actors to gain knowledge and insights to ensure that the NAP takes into consideration the climate risks, economic priorities, climate vulnerabilities, and other key factors.

Uganda is a Least Developed Country (LDC) in East Africa. Its population was estimated at 40.3 million by mid-year 2019 with annual population growth rate of 3.1%.¹ Over 76% of the households of the country live in rural areas.² The country's economy is highly dependent on agriculture, livestock, fisheries, forestry, and the exploitation of natural resources, which makes the country highly vulnerable to the adverse impacts of climate change, especially floods, droughts, and landslides.³

The key GDP sectors of Uganda are agriculture, forestry and fisheries, industry, and services.⁴ Key development policies, plans and strategies of the country focus on these, and envisage sustainable development in the sectors by addressing the sector vulnerabilities, livelihood enhancement, and resilience building.

The development planning of Uganda envisions the country to shift from a low-income country to a competitive upper middle-income country.⁵ The current development agenda is primarily based on Uganda Vision 2040, which focuses on transforming the country into a modern and prosperous country by the middle of the 21st century, promote growth, have a green economy and clean environment, eradicate poverty, and reduce the GDP share of the agricultural sector to 10% by 2040.⁶ They also take note of the challenges that climate change poses in achieving this, and includes different components related to addressing the impacts of climate change, and hazards impacting the country's growth.

Furthermore, the 2019 Human Development Report for Uganda presents the rise of a new generation of inequalities, which include climate change, gender inequality and violent conflicts.⁷ Uganda is ranked as high risk under the risk assessment for humanitarian crises and disasters.⁸

Uganda's institutional framework for climate change is led by the Climate Change Department under the Ministry of Water and Environment, which is the key coordination body for climate change issues in Uganda.⁹ Other key entities part of the climate regime in Uganda include; the Ministry of Finance, Planning and Economic Development, the National Planning Authority, and the Ministry

¹ (Government of Uganda, Uganda Bureau of Statistics, 2019)

² (Government of Uganda, Uganda Bureau of Statistics, 2019)

³ (Government of Uganda, Ministry of Water and Environment, 2015)

⁴ (Government of Uganda, Uganda Bureau of Statistics, 2019)

⁵ (Government of Uganda, National Planning Authority, 2013)

⁶ (Government of Uganda, National Planning Authority, 2013)

⁷ (UNDP, 2019)

⁸ (Irish Aid, 2018)

⁹ (Government of Uganda, Ministry of Water and Environment, 2015)

of Local Government. In addition to these government entities, non-state actors such as NGOs, INGOs, CBOs, private sector, academia media and women and youth groups also play a key role in promoting climate action at national and local level.

The climate change adaptation process of Uganda is mandated through different policies, plans and strategies. And there are active measures taken to integrate climate change adaptation to Uganda's development processes. Among these are the initiatives taken for the development of the National Adaptation Plan (NAP) for the country. The NAP provides human-driven adjustments in ecological, social, or economic systems or policy processes in response to actual or expected climate stimuli.¹⁰ The NAP process is envisaged to be continuous, progressive, and iterative, and to follow a country-driven, gender-sensitive, participatory, and fully transparent approach. It is based on nationally identified priorities, national sustainable development planning, and the adaptation component of Nationally Determined Contributions (NDCs) under the Paris Agreement.

To ensure that Uganda's NAP process is participatory, inclusive and integrated to the country's development process, six entry points for mainstreaming adaptation and integrating it into national processes have been identified by this brief. These six entry points are as follows:

1. Vision 2040 and the Uganda National Development Plan
2. Uganda Green Growth Strategy
3. Roadmap for Creating an Enabling Environment for Delivering on SDGs in Uganda
4. NDC Review Process
5. GCF Readiness Funding
6. Agri-NAP

These six entry points present the opportunity to support an inclusive and participatory NAP process, aligned with economic priorities and risks for adaptation actions, and avoid duplication of efforts and streamline climate finance which facilitate the integration of climate and development planning of the country into a multi-stakeholder driven process.

¹⁰ (LDC Expert Group, 2012)

1. Introduction

The National Adaptation Plan (NAP) process was established under the Cancun Adaptation Framework (CAF). It aims to enable all developing country Parties to formulate and implement national adaptation plans (NAPs) as a means of identifying medium- and long-term adaptation needs and developing and implementing strategies and programmes to address those needs.¹¹

The NAP process is envisaged to be continuous, progressive, and iterative, and to follow a country-driven, gender-sensitive, participatory, and fully transparent approach.¹² To date, 16 countries have submitted their NAPs under the United Nations Framework Convention on Climate Change's (UNFCCC) NAP Central. Further, the Least Developed Countries (LDCs) aim to have their NAPs submitted by 2020.

A country's NAP would ideally encompass the country's developmental priorities, address its climate risks and vulnerabilities, empower the vulnerable communities, and conserve and restore vulnerable ecosystems. A holistic NAP interlinks the country's development processes with the climate adaptation process at national and subnational level. Therefore, in formulating the NAPs, it is important to consider social, economic and environmental factors to ensure that the NAPs are inclusive, participatory, and facilitate the integration of climate change adaptation into the countries' development planning processes.

Nationally Determined Contributions (NDCs) under the Paris Agreement also provide the opportunity to enhance adaptation action, and have elevated the profile of adaptation related activities. Recognising the importance of climate change adaptation, many developing countries have submitted an adaptation component in their NDCs.

With 2020 being a key year for the NDC cycle, and the review of NDCs under the Paris Agreement being of focus, the countries are presented with the opportunity to refine their existing NDCs to include comprehensive adaptation actions, and to align the country's NAP with the NDCs for adaptation. This in turn would make NAP function as a means for implementing the adaptation components of the country's NDCs.

Further, as countries develop and take actions to achieve SDGs and focus on climate action under the SDGs, they are presented with opportunities for synergies with climate change adaptation actions and the SDG process at national level. This also presents entry points for integrating climate change into national-level developmental policies and plans.

This paper focuses on Uganda's NAP process and aims to identify the best entry points which present the opportunity to build synergies among the NAP, NDC, SDGs, and the national development processes to inform the development of the country's overarching NAP.

¹¹ Decision 1/CP.16, FCCC/CP/2010/7/Add.1

¹² (LDC Expert Group, 2012)

2. Methodology

To determine priority sectors as well as existing gaps, needs, and opportunities, this research has performed an in-depth desk review of the country's National Communications to the UNFCCC, its NDCs under the Paris Agreement, and any other public document validated by the government or reputed international organizations in respect to the following aspects:

- Key climate hazards, risks, and vulnerabilities
- Key economic sectors based on GDP contribution, employment numbers, growth rate, and their importance for communities and livelihoods
- Key development priorities and their alignment with the Sustainable Development Goals (SDGs)
- Institutional framework, coordination mechanisms, institutional capacities, engagement of local government authorities, CSOs, and other stakeholders
- Key policies, plans, strategies, and laws, the way and degree to which they address climate change, and their alignment with international and national processes like the UNFCCC and the Sendai Framework for Disaster Risk Reduction
- Climate finance and funding sources on a domestic, regional, and international scale, including private sector engagement and private-public partnerships
- Monitoring and evaluation as well as reporting mechanisms
- Gender and inclusivity, the degree to which climate change adaptation in Uganda is multi-stakeholder driven and participatory, including vulnerable communities.

The desk research was supplemented and verified through small focus group discussions and key informant interviews conducted by the country partner EMLI.

Based on the study of these aspects, key entry points are identified to inform the country's NAP process as well as aspects to focus on for building resilience highlighted. The research also includes recommendations on which sectors and key aspects could be included as part of the adaptation component of the NDCs during the NDC review process facilitating the enhancing of the existing NDCs on adaptation.

The Joint Principles for Adaptation (JPA)¹³ have been used as a main reference tool during the research while analysing documents and developing recommendations for the NAP process entry points based the following principles: C (Mainstreaming and coordination), D (Local level adaptation), and E (Vulnerability and diversity including gender considerations).

In order to ensure relevance and ownership of the study, the research has been conducted in close cooperation with EMLI, the national partner for Southern Voices on Adaptation in Uganda for the purpose of this research. EMLI has contributed to data collection through conducting two focus group discussions, key informant interviews, and field visits, and a national-level validation workshop with key experts and by providing assistance in linking with the experts to facilitate the research team in gathering information and including the most updated.

The output from the study is available to all stakeholders in the NAP process, including policy makers, government officers, and CSOs

¹³ (Southern Voices on Adaptation, 2015)

working to influence the process. It is designed to provide priority areas and evidence-based advice points to highlight key sectors, communities, and ecosystems vulnerable to

climate change so as to ensure the formulation and implementation of a participatory, inclusive, and evidence-based NAP for Uganda.

3. Country Context

Uganda is a Least Developed Country (LDC) in East Africa that occupies an area of 241,554.96 km². One third of Uganda is covered by water bodies and wetlands and the country has a tropical climate with average temperatures between 18 to 28 degrees Celsius.¹⁴

Uganda's population was estimated at 40.3 million by mid-year 2019 with an annual population growth rate of 3.1%. Over 76% of households in the country live in rural areas. This population is projected to more than

double by 2050, making it one of the fastest-growing nations in the world.¹⁵

The population of Uganda is predominantly rural, with 82% of households living in rural areas. With the increasing population, and the need for resources to satisfy their needs, the impacts on Uganda's ecosystems are high.¹⁶ Uganda's GDP per capita was estimated at USD 878 in the FY 2018/19, mainly contributed to by agriculture, livestock, fisheries, forestry, manufacturing, and service sector.¹⁷

Country Overview

Total Land Area (km ²)	241,554.96
Total Population (2019, in million)	40.3
Estimated Population (2050, in million)	89.45
GDP per capita (in USD, 2019)	878
Agriculture, Livestock, Fisheries, Forestry	21.9%
Industry	27.1%
Services	43.3%
% of Labour Force in Agriculture Sector	70
% of Rural Population	76
% of Population below the poverty line	21.5
Ratified UNFCCC / Kyoto / Paris Agreement	1993 / 2002 / 2016
Submitted First NDCs/INDCS	2015
First/Second/Third National Communication	2002 / 2014

Figure 1: Country Overview¹⁸

Like many other countries in Africa, Uganda suffers climate risks and hazards. The key climate change impacts experienced by Uganda include erratic weather patterns which are projected to intensify by 2050. Sectors that are most likely to be impacted include agriculture, livestock, and fisheries.

Additionally, average temperatures are expected to rise by 1-3 degrees Celsius by 2050 and are envisaged to impact the social and economic growth and development of

¹⁴ (Government of Uganda, Ministry of Water and Environment, 2015)

¹⁵ (Government of Uganda, Uganda Bureau of Statistics, 2019), (United Nations, Department of Economic and Social Affairs, Population Division, 2019)

¹⁶ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

¹⁷ (Government of Uganda, Ministry of Water and Environment, 2015)

¹⁸ (Government of Uganda, Uganda Bureau of Statistics, 2019), (United Nations, Department of Economic and Social Affairs, Population Division, 2019), (United Nations, Department of Economic and Social Affairs, Population Division, 2018)

Uganda.¹⁹ Other impacts of climate change that are predicted include strong negative effects on coffee production and impacts on agricultural productivity due to land degradation and climate change effects. Additional impacts on the country's ecosystems are deforestation, which is estimated at 2.3% a year due to increasing demand for agricultural land, and the need for fuel wood due to population growth.²⁰

The rapid population increase and the expansion of farming and pastoralism under rising temperatures and unpredictable climate could decrease the resilience of the ecosystem and increase the climate risks on the population of Uganda. Vegetation zones shift progressively to higher altitudes and cause stress to the associated flora and fauna, which is likely to result in a loss of biodiversity.

Many crops are vulnerable to the projected rising temperatures and unpredictable rainfall

patterns, including but not limited to Arabica coffee, Robusta coffee, rice, maize, and East African Highland banana (matooke).²¹ Additionally, the country is losing over 2% of its forest cover and its wetlands annually due to increased demand for firewood as an energy source and land for cultivation and settlement. Furthermore, rangelands mainly in Uganda's cattle corridor are being degraded at an alarming rate.²²

Uganda focuses on adaptation and building climate resilience as a priority area for the country, in line with the priorities of the African Ministerial Conference on the Environment (AMCEN).²³ National policies related to development in Uganda such as Vision 2040 emphasise enhancing the ability of the country to exploit and use its national resources gainfully and sustainably, and climate change is identified as a key constraint to achieving the goals of Vision 2040.²⁴

3.1 Key Climate Hazards and Vulnerabilities

Climate change severely impacts Uganda. Since 1960, mean annual temperatures have risen by 1.3 degrees Celsius while annual rainfall has significantly decreased. Extreme weather events like droughts, floods, and landslides are becoming more common and intense and impact key sectors of the country, including agriculture, water, health, and human settlements.²⁵

Most local communities in Uganda are too vulnerable to disastrous impacts of climate change which will continue to wipe the

agricultural outputs, leading to higher food prices, impacts on the national economy as well as the export trade.²⁶

With changes in rainfall patterns in the country and heavy precipitation events, climate change is threatening Uganda's economy.²⁷ Uganda's average annual rainfall ranges from 800 mm to 1,500 mm, and falls in two seasons in the south (March to May and September to November), and in one season in the north (April to October).²⁸

¹⁹ (Government of Uganda, Ministry of Water and Environment, 2014)

²⁰ (UNDP, 2013)

²¹ (USAID/ARCC, 2013)

²² (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

²³ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

²⁴ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

²⁵ (Government of Uganda, Ministry of Water and Environment, 2015)

²⁶ Government of Uganda. (2010). The National Policy for Disaster Preparedness and Management. Kampala, Uganda: Government of Uganda

²⁷ (Irish Aid, 2018)

²⁸ (Climate Service Center Germany, 2015)

The magnitude of observed warming for Uganda is large and unprecedented, and represents a large deviation from the climate norm.²⁹ This warming trend based on some models indicate a projection for an increase of more than 2 degrees Celsius by 2030 and a warming ranging between 1.4 and 4.2 degrees Celsius is projected for the end of the century.³⁰

Climate projections based on the IPCC's Fifth Assessment Report (IPCC AR5) predict also a slight decrease in total annual rainfall in most of the country, with slightly wetter conditions over the west and north-west under the RCP 4.5 and RCP 8.5 scenarios.³¹

The draft National Vulnerability and Risk Atlas by the Office of the Prime Minister identifies floods, droughts, landslides, earthquakes, lightening and hailstorms as the seven key climate risks and hazards experienced by Uganda,³² while the Uganda Climate Change Communication Strategy (2017-2021) highlights floods, droughts, landslides, sand and dust storms, heat waves, and forest fires. The following sections will discuss three key climate-induced hazards in more detail:

3.1.1 Droughts

Droughts are among the recurrent natural disasters in Uganda, and evidence indicates that they are becoming more frequent and more severe. The western, northern, and north-eastern regions have been experiencing more frequent and longer-lasting droughts causing severe crop and livestock losses, famine and population displacement in the country.

In some regions such as the north-eastern Karamoja region, as well as the rest of the cattle corridor in Uganda, impacts of erratic weather conditions such as the consecutive years of crop failure and low livestock productivity have caused threats to food security. Further, droughts have aggravated these adverse effects, worsening the food and nutrition insecurity, as well as affecting the vulnerable groups of the elderly, children and women.

Droughts also cause additional impacts such as threat to water security of the country. Uganda has a significant percentage of the country's population relying on water that is sourced from streams and other open water bodies that dry up during droughts.

Secondary impacts of droughts include degraded grazing and cropping lands, and overall environment degradation that result into drying up of water ponds, reduced surface water and river flows, drying up or reduced underground water levels, increased wild fire outbreaks, dust-storms, and increased temperatures; leading to uncomfortable hot and dry air, among others.³³

3.1.2 Floods

Flooding in Uganda occurs relatively with interlinks too El Niño or La Niña episodes, resulting in extreme weather in the country and region. In addition, the seasonal to inter-annual variability is marked in variations or shifts in the seasonal rainfall, intraseasonal dry spell occurrence and rainfall intensity, thunderstorms, lightening and hailstones.³⁴ Uganda has experienced more erratic onsets

²⁹ (UNDP, 2012)

³⁰ (Climate Service Center Germany, 2015)

³¹ (Government of Uganda, Ministry of Water and Environment, 2015)

³² Inputs received at National Validation Workshop for Uganda (2019)

³³ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

³⁴ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

and ends to rainfall seasons, and heavier and more violent rainfall events in the recent years.

In 2007, sub-regions experienced the heaviest rainfall in 35 years with an estimated 50,000 households being affected and people facing food insecurity due to the loss of their first and second season harvests. Among other difficulties suffered, there was a lack of water and sanitation facilities and an increase in water borne diseases.

Further cases of floods impacting Uganda severely were seen in March 2010 when the floods submerged crop fields and vital infrastructure; including trunk and rural roads, which disrupted transport of food markets in Butaleja District in the Eastern Uganda.³⁵ This also entailed a coffee exports drop by 60% between October and November 1999 nationally. Similar impacts to Uganda were seen in 2014 during the flooding of River Nyamwamba in the Mt. Rwenzori region which resulted in loss of food production and property as well as leaving many people homeless and without food. This also saw serious soil erosion and destruction to irrigation infrastructure.

Additionally, urban flooding is also becoming a key issue, especially in Kampala city. This is due to the poor urban planning and loss of green spaces in cities. And flooding events which are frequent, not only lead to loss of infrastructure, loss of lives and destruction of property but also creates secondary impacts such as landslides, soil erosion, silting of dams and drainage channels. This also leads to dams and river banks bursting, water logging in low lying valleys and wetlands, water leaking, displacement, outbreaks of epidemics of animal and crop diseases and pests.³⁶

3.1.3 Landslides

With the increased impacts of climate change, floods and heavy and unpredictable rainfall, Uganda is experiencing high impacts of landslides across the country. Among the key reported ones include floods and landslides in low lying and mountainous areas. One of the landslide areas is Eastern Uganda which experience serial landslides during heavy rains. Some of the worst cases being reported linked to heavy rains and flooding linked to landslides causing loss and damage to areas of Bududa, Bulambuli (in Eastern region), Bundibugyo, Kasese, Kabale, Rubanda, and Kisoro (in Western Uganda) districts.³⁷

The unusually heavy rains in March 2010 led to landslides in the Bududa district proved catastrophic to Uganda. This caused three whole villages to be buried in the Mount Elgon region, including crops and livestock. Further, in 2011 landslides had similar impacts on the District of Bulambuli resulting in losses and damages to homes and crops. Landslides are experienced frequently in south-western highlands of Uganda, and communities face destructions to crops and livestock.³⁸

Uganda focuses on addressing landslides as one of the key disasters and hazards faced by Uganda, through multi-stakeholder engagement and actions such as increasing awareness and the ability to cope with the identified disasters, donating to those affected, improving early warning preparedness and building the resilience of affected communities.³⁹

³⁵ OCHA, 2010

³⁶ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

³⁷ The Uganda National Metrological Authority (UNMA, 2018)

³⁸ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

³⁹ The Uganda Climate Change Communication Strategy (2017 – 2021)

3.1.4 Vulnerabilities to Climate Change Impacts

Uganda's increasing climate change impacts are creating environmental, social and economic vulnerabilities among its communities. With 70% of Uganda's population depending on subsistence farming, the country is highly dependent on the rainfall seasons, and vulnerabilities to climate change will have impacts on the country's food security. While some regions and districts experience food surpluses, others such as the Karamoja sub-region and some other parts of Northern Uganda experience pockets of persistent food shortage annually. Among these higher levels of vulnerability are seen mainly aligning with the cattle corridor and semi-arid zones.⁴⁰

Mainly through the contribution of the agriculture sector, Uganda has succeeded in reducing poverty over the last decades. A fifty percent reduction in poverty was made during the period between 1992 to 2013. However, the vulnerability to external shocks remains high with two out of three Ugandans who get out of poverty falling back into it. This has resulted in all regions in Uganda registering an increase in the number of poor, with the exception of the Northern region, where the level of poverty is recorded as having decreased from 44% to 33%.⁴¹

The 2019 Human Development Report for Uganda presents the rise of a new generation of inequalities, which include climate change, gender inequality and violent conflicts.⁴² Further, Uganda is ranked as high risk under the risk assessment for humanitarian crises and disasters.⁴³

Climate change impacts will increase the existing vulnerabilities in Uganda, such as

nutrient security related as well as health related. 29% of children under five years in Uganda are stunted, and 11% are underweight.⁴⁴ Also, 50% of women and 73% of children less than five years are anaemic, highlighting existing food and nutrient related vulnerabilities among Uganda's population. The vulnerabilities will be further exacerbated with predicted impacts due to climate change aggravating incidences of pests and diseases affecting agricultural production and threatening food and nutritional security.⁴⁵

In addition to agriculture, these impacts are affecting other sectors, and are worsening social and economic conditions interlinked to climatic factors. With large numbers of refugee influxes being experienced by the country, climate change impacts impacting the availability of resources, the increased pressure on natural, social and economic resources of the country is aggravating the impacts and reducing the coping capacity of the country further.⁴⁶

Further, among the key vulnerabilities is the stress on resources such as water, with reduction of water resources due to climate change, and the increase of demand for water resources due to increasing population. This includes water resources for agriculture, as well as for households. Studies on economic assessment of the impacts of climate change in Uganda indicate that between 2010 and 2050, the demand for water in Uganda is expected to increase from 408 million cubic meters to 3,963 million cubic meters, and impacts of droughts will cause shortage of water for irrigation, livestock and domestic consumption.⁴⁷

Other key vulnerabilities include energy insecurity resulting from impacts on forestry

⁴⁰ ⁴⁰ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

⁴¹ World Bank (2019)

⁴² (UNDP, 2019)

⁴³ (Irish Aid, 2018)

⁴⁴ Uganda Demographic and Health Survey (2016)

⁴⁵ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

⁴⁶ (Irish Aid, 2018)

⁴⁷ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

and threats on traditional biomass energy. Further, this will aggravate the vulnerabilities in the agriculture sector through impacts on agro-processing and hindrances to improvements in the agriculture value chains.⁴⁸

Further, among the key factors that make a household vulnerable to climate change impacts are the lower proportion of able-bodied (working) members; level of education; being a female led household; difficulties faced in selling crops or livestock; lack of participation in community groups such as producer associations, cultural or labour savings groups, and religious organizations; dependency on farm-based products and lack of or zero from off-farm sources.⁴⁹

In addition to communities, ecosystems are also vulnerable to climate change impacts. Despite Uganda being rich in water resources, access to clean water varies based on seasons, and the resources are threatened due to pollution and degradation of lakes, rivers, springs and wetlands. Threats and

vulnerabilities faced by ecosystems by impacts of climate change are aggravated by poverty, weak institutional capacity to implement and monitor the implementation of environment laws and policies, limited financial resources, poor land use planning, and an economy dependent on the exploitation of natural resources.⁵⁰

Additionally, climate change makes the livelihoods of the Ugandan population vulnerable due to several reasons such as low participation in export markets by smallholder farmers; high share of agriculture, forestry and fisheries on GDP. Additionally, displacements due to natural disasters as well as conflicts play a role in increasing existing social and economic vulnerabilities of the country. With majority of Uganda's population is rural and relies on the environment for their livelihood, higher vulnerabilities are noted in semi-arid areas of Uganda which includes the cattle corridor. Impacts to accessing clean water and sanitation are also key factors that threaten livelihoods of vulnerable communities in Uganda.⁵¹

3.2 Key Economic Sectors

Sector	GDP Contribution
Agriculture	12.6
Manufacturing	15.5
Energy	1.4
Livestock	3.5
Fisheries	2.1
Forestry	3.8

Figure 2: Key economic sectors by GDP contribution⁵²

Uganda's economy has seen a growth of 6.5% in the fiscal year of 2018/2019 with the sectors of agriculture, forestry, and fisheries sector experiencing a growth of 5.0% in FY 2018/2019

while the industry sector grew by 10.8% and the service sector by 4.9%. A key contributor to the Ugandan GDP is the service sector which amounts to 43.3% of the GDP (mainly trade and repairs, education, and real estate activities). Agriculture, forestry and fisheries sectors contribute 21.9% while industry contributes 27.1%.⁵³

Uganda's National Development Plan II priorities five areas for investment: agriculture, tourism, minerals, oil, and gas

⁴⁸ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

⁴⁹ (Government of the Netherlands, Ministry of Foreign Affairs, 2018)

⁵⁰ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

⁵¹ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

⁵² (Government of Uganda, Uganda Bureau of Statistics, 2019)

⁵³ (Government of Uganda, Uganda Bureau of Statistics, 2019)

development, infrastructure development, and human capital development. Agriculture and agro processing are considered of high importance, and the NDP II envisages agriculture production to contribute approximately 1.3 percent to Uganda's GDP, with agro-processing contributing an additional 0.5 percent on average to total GDP growth.

Another key sector highlighted by the NDP II is the tourism sector, which is seen as a key player in contributing to country's growth potential on the economy. The NDP II considers the minerals sub sector (mining) as having a multiplier effect on industries that benefit the service and supply industry, it is estimated that value addition in mineral development would contribute on average 0.5 percent to total GDP.⁵⁴

3.2.1 Agriculture

The agriculture sector is among the key sectors for achieving Uganda's development targets as indicated in the National Vision 2040 and the global commitments in Agenda 2030 Sustainable Development Goals and the National Determined Contributions (NDCs) to the Paris Agreement. The sector is one of the key sectors of Uganda's GDP and contributes through employment, food security, livelihoods improvement and overall economic development.

Uganda consists of 10 main agro-ecological zones (AEZs) which are characterized by different farming systems; determined by soil types, climate, and socio-economic and cultural factors.⁵⁵ Uganda has 17 major food crops which include cereals (maize, millet, sorghum, rice); root crops (cassava, sweet potatoes, Irish potatoes); pulses (beans, cow peas, field peas, pigeon peas); oil crops

(groundnuts, soya beans, sim sim), and plantain bananas. The total area planted in 2012 for all the crops was about 5,700,000 ha; with maize, potatoes, cassava, and bananas being among the crops with the highest production quantities.

Agriculture sector is of high importance to Uganda. 80% of Uganda rural population of which the majority are small holder farmers, rely on subsistence agricultural production. 70% of Ugandans are employed in agriculture, mainly on a subsistence basis. With an average of one million youth in Uganda expected to reach working age between 2030-2040, the sector presents one of the key livelihood opportunities for this tranche of population.⁵⁶

The GDP contribution by the agriculture sector consists of crops (67%), livestock (16%); fisheries (12%) and forestry (4%). It also provides 100% of all material resources for agro-based industries and food crop production.⁵⁷

Further, agriculture is one of the four priority development areas in NDP II. The sector is considered central to the country's economic growth, poverty reduction strategy, and industrialisation (agroprocessing and light manufacturing). The NDP II focuses on agricultural investments in enterprises related to cotton, coffee, tea, maize, rice, cassava, beans, fish, beef, milk, citrus and bananas. The agricultural value chain related to these focus areas are expected to be enhanced at all stages which includes production, transportation, storage, processing, as well as, marketing and distribution.⁵⁸

3.2.2 Livestock

The livestock sector is a key producer contributing to Uganda's economy. The sector

⁵⁴ (Government of Uganda, 2015)

⁵⁵ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

⁵⁶ (The World Bank, 2019)

⁵⁷ National Adaptation Plan for the Agriculture Sector, Uganda (2018)

⁵⁸ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

supports the livelihoods of pastoralists and agro-pastoralists in the rangelands and semi-arid areas, and the cattle corridor.⁵⁹

Further, livestock rearing provides subsistence livelihoods. It also contributes to food security and to the generation of export earnings. Its contribution to GDP in Uganda is currently estimated at 1.9%. Despite this, the productivity of the sector remains low which is attributed as due to poor husbandry practices such as feeding and nutrition, poor breeding and animal health, as well as the dominance of indigenous breeds.⁶⁰ The projected average weekly milk production is estimated at 8.5 litres, with egg production being per week at 4 and 5 for exotic layers and indigenous chicken, respectively.⁶¹

Pastoralism remains the key livestock practice in Uganda, which is predominant in the cattle corridor. Climate change impacts pose threats to the pastoral practices due to increased occurrences of extreme weather events, constraining these livelihoods. Prolonged impacts of climate change, such as dry spells and drought project impacts such as severe water shortage, loss of animals, low production of milk, food insecurity and negative impacts on the economy.⁶²

3.2.3 Fisheries

The Ugandan fisheries sector is primarily dependent on natural water bodies. 90% of the total fish catch is from lakes, while 10% is through aquaculture in fishponds and fish cages. The fisheries sector contributes to 2.7 percent of Uganda's GDP, and provides livelihoods for close to 1.5 million Ugandans,

70-87% of which are women and youth. While the sector has the potential to generate 1,000,000MT of fish per annum, the present production remains 460,000MT of capture fisheries and 100,000MT from aquaculture.⁶³

The fisheries sector faces the challenges of over exploitation of fishing resources, and proliferation of invasive water weeds such as the water hyacinth, affecting fish breeding sites. The sector is projected to face impacts of climate change such as reduction of water levels in lakes and aquaculture basins, flood and landslides which could lead to silting of lakes, transmission of fish diseases, and destruction of aquaculture.⁶⁴ These are attributed to an increase in mean air temperature, changes in rainfall patterns, and an increase in extreme weather events.⁶⁵ In addition to impacts of climate change, the fisheries sector also faces adverse impacts due to pollution.⁶⁶

3.2.4 Tourism

The tourism sector contributes to 5.9% of Uganda's GDP and is considered as one of the sectors with potential for growth.⁶⁷ Despite fluctuations in the sector, the sector has seen growth during the timeframe of 1999-2018. In 2018, the country has registered 1.5 million tourist arrivals, with an income generation of USD 1.6Bn for the country. The sector has also created close to 667,600 jobs for the year.⁶⁸ Among the key focuses of tourists arriving in Uganda are wildlife parks, and nature conservation sites.

Uganda has a total of 720 protected areas for wildlife and forests, representing roughly

⁵⁹ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

⁶⁰ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

⁶¹ Uganda Livestock Census (2008)

⁶² (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

⁶³ Draft Fisheries policy 2017

⁶⁴ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

⁶⁵ (Timmers, 2012)

⁶⁶ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

⁶⁷ World Bank data (2018)

⁶⁸ Public statement, James Lukwago, Director – Tourism, Wildlife and Antiquities Ministry

thirty percent of the country's entire land area. Many of these national parks, reserves, and wetland complexes are highly threatened by the impacts of climate change, including temperature increase that will affect local fauna and flora, lead to an influx of invasive species, and make the ecosystems more vulnerable to wildfires, other disasters, pests, and diseases. In turn, this will escalate human-wildlife conflicts and lead to declining wildlife populations, negatively impacting wildlife tourism as well as other livelihoods connected to biodiversity.⁶⁹

The Ugandan government aims to grow tourism to 4 million arrivals per year by 2020, and the country's key development policies and plans include the sector as one of the key investments for the country, with a potential for high growth and contribution to Uganda's economy.

3.2.5 Energy

Uganda's energy sector contributes to 5.9% of the GDP,⁷⁰ and is a key focus area for the country's development processes and low emission and sustainable energy is included in the development policies and plans as a key priority.

3.3 Key Development Priorities

Uganda's current development agenda is primarily based on Uganda Vision 2040, approved by the Cabinet of Uganda in 2007. It aims to transform Uganda into a modern and prosperous country by the middle of the 21st century, promote growth, have a green economy and clean environment, eradicate

The NDCs of Uganda also focuses on affordable and modern energy aligning with the SDGs, and 2030 Agenda.⁷¹

The NDCs identify energy sector among the priority sectors for action under climate change, and include actions to be taken such as increasing the efficiency in the use of biomass in the traditional energy sector; promoting renewable energy and other energy sources; Increasing the efficiency in the modern energy sector, mainly of electricity; and ensuring the best use of hydropower by careful management of the water resources⁷².

3.2.6 Forestry

The forestry sector significantly contributes to Uganda's development through ecosystem services, raw materials, fuel, and industrial activities. In the years 2007, 2008, 2009, 2010, and 2011, it contributed about 3.5 percent, 3.5 percent, 3.6 percent, 3.4 percent and 3.0 percent respectively to the country's GDP.

In most districts, the existing forest cover has reduced by more than 50 percent since the 1990s, and the country aims to restore the national forest cover to 30 percent of its land area.⁷³

poverty, and reduce the GDP share of the agricultural sector to 10% by 2040.⁷⁴ The Vision aims to transform Uganda from a low-income country to a competitive upper middle-income country.⁷⁵

⁶⁹ (USAID, 2014)

⁷⁰ World Bank data (2018)

⁷¹ Nationally Determined Contributions of Uganda (2016)

⁷² Nationally Determined Contributions of Uganda (2016)

⁷³ (Government of Uganda, Ministry of Water and Environment, 2014)

⁷⁴ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

⁷⁵ (Government of Uganda, National Planning Authority, 2013)

Among the key policies, strategies and plans that relate to development in Uganda include:

3.3.1 Second Development Plan (2015/16 – 2019/20)

The Second Development Plan of Uganda aims to move the country towards middle income status by 2020, in line with Vision 2040. Further, its objectives include strengthening Uganda's competitiveness for sustainable wealth creation, employment, and inclusive growth.

The Plan prioritizes investment in five areas which are agriculture; tourism; minerals; oil and gas, infrastructure development; human capital development. It also aims to achieve within the 5-year period 4 objectives, which include increasing sustainable production, productivity and value addition in key growth opportunities; increasing the stock and quality of strategic infrastructure to accelerate the country's competitiveness; enhancing human capital development; strengthening mechanisms for quality, effective and efficient service delivery.⁷⁶

To achieve these objectives, the Plan also envisages strengthening existing institutional implementation arrangements which includes reforms such the establishment of a delivery unit in the (Office of the Prime Minister (OPM)); setting up Sector Working Groups (SWGs) that will be institutionalized. The implementation of the Plan also includes the identification and articulation of the roles of the non-state actors such as the private sector, civil society and development partners will be clearly articulated during implementation of the Plan, and a Private Sector/Civil Society Forum is to be established to discuss progress in the

⁷⁶ (Government of Uganda, National Planning Authority, 2015)

⁷⁷ (Government of Uganda, National Planning Authority, 2015)

⁷⁸ (Government of Uganda, National Planning Authority, 2015)

implementation of the NDP II by Non-State Actors.⁷⁷

The NDPII consists of a section on climate change, and includes it as a primary concern which hinders development, with rising temperatures, as well as more erratic and extreme weather events presenting the potential to create disproportionate impacts on Uganda. The NDPII identifies impacts of climate change (droughts, floods, storms, heat waves and landslides) as reducing the benefits derived from the natural resource base which will create negative impacts on agricultural production, food security, forests, water supply, infrastructure, health systems, incomes, livelihoods and overall development.⁷⁸

The Plan also includes development strategies which focus on urbanization, strengthening governance, and integrating cross-cutting issues into programmes and projects. The cross-cutting aspects include gender, environment, human rights, climate change, nutrition, social protection.⁷⁹

3.3.2 Roadmap for Creating and Enabling Environment for Delivering on SDGs in Uganda⁸⁰

The development of the SDG Road Map for Uganda was initiated in 2016 under the leadership of the Office of the Prime Minister, with the aim of developing a framework to guide the coordination of the implementation of the 2030 Agenda. The National Coordination Framework for SDGs was approved by Cabinet and Parliament in 2016, and anchored within the existing government coordination

⁷⁹ (Government of Uganda, National Planning Authority, 2015)

⁸⁰ Roadmap for Creating an Enabling Environment for Delivering on SDGs in Uganda (2018)

structures. The Framework provides strategic guidance on the roles and responsibilities of key institutions, and is steered by a multi-stakeholder SDG National Taskforce.⁸¹

The Roadmap does not have the authority to assume the roles and responsibilities of Ministries, Departments and Agencies (MDAs), sub-national institutions and non-state actors in implementing the Agenda. It consists of the aim to create an enabling environment to empower all relevant actors in contributing to achieve SDGs.

The long-term Comprehensive National Development Planning Framework (CNDPF) is aimed to facilitate the implementation of the 2030 Agenda, of which Uganda is currently implementing its Second National Development Plan (NDPII) (2015/16-2019/20) under the national Vision 2040.

The National SDG Coordination Framework coordinates the implementation of SDGs in Uganda. It provides mandates for planning, reporting, monitoring, resource mobilization, communication, advocacy and decision-making related to the implementation of the SDGs.⁸² The SDG Roadmap operationalises the Framework and provides priority actions for the implementation of SDGs across the country during the NDPII period (2015/16-2019/20).

SDGs are integrated through a national mechanism, and to the national processes are through the National Standard Indicator (NSI) Framework which includes four-levels that focus on policy, strategic, programme and operational functions of the Government. The NSI has the role of operationalizing the indicators in the NDPII, including additional prioritised standard indicators for monitoring regional and international development frameworks such as the 2030 Agenda.

The Coordination Framework tracks the implementation and progress towards the achievement of SDGs in Uganda, and the Working Groups that are set up for the implementation of the Roadmap provide quarterly progress reports to the National SDG Taskforce, whereby the Taskforce provides bi-annual progress reports to the SDG Implementation Steering Committee (SDGISC). Bi-annual reporting is made to both Cabinet and Parliament on the process of the implementation of activities related to achieving the SDGs in Uganda.

The National SDG Coordination Framework consists of five multi-stakeholder Technical Working Groups (TWGs) comprising of Sector Working Groups (SWGs); Development Partners; Private Sector; and Civil Society. And cross-cutting issues, such as human rights, environment and gender are included in the discussions and prioritized through the TWGs.

The Roadmap recognizes the contribution of non-state actors to achieving sustainable development. The non-state actors are identified as including development partners, civil society and private sector, and are represented at all levels of the National SDG Coordination Framework. It further provides that the work of non-state actors is complementary to government initiatives, and as needing to be aligned to national development priorities.

The total cost for the Roadmap amounts to 6.6 bn Uganda Shillings and includes actions to be implemented in the remaining NDPII period.⁸³

⁸¹ Roadmap for Creating an Enabling Environment for Delivering on SDGs in Uganda (2018)

⁸² Roadmap for Creating an Enabling Environment for Delivering on SDGs in Uganda (2018)

⁸³ Roadmap for Creating an Enabling Environment for Delivering on SDGs in Uganda (2018)

3.3.3 Uganda Green Growth Development Strategy (2017/18- 2030/31)

To operationalize green growth principles and accelerate the implementation of global development goals, Uganda Vision 2040 and the second National Development Plan (NDP II) the Government of Uganda has developed the Uganda Green Growth Development Strategy (UGGDS).

The Strategy consists of principles such as resource efficiency, equity and social inclusiveness, low emissions and sustainable economic growth, green growth presents an innovative growth path that simultaneously generates inclusive economic development and environment sustainability. It also focuses on social inclusiveness that should shape all development efforts, and has as its goal to achieve an inclusive low emissions economic growth process that emphasizes effective and efficient use of natural, human and physical capital while ensuring that natural assets continue to provide for present and future generations.^{84, 85}

The UGGDS aims to ensure that the goals of the Uganda Vision 2040 and the NDPII 2015/16-2019/20 are attained in a sustainable manner.⁸⁶ It consists of five core investment areas:⁸⁷

- i. Sustainable agriculture production through upgrading the value chain of strategic commodities and enterprises with a focus on irrigation and integrated soil fertility management.
- ii. Natural capital management and development which focuses on tourism development, sustainable forestry, wetlands and optimal water resources management;
- iii. Planned urbanization and development of green cities;
- iv. Sustainable transport with a concentration on multi-modal and mass transport systems for urban areas and development;
- v. Energy for green growth with increased emphasis on renewable energy investment.⁸⁸

The Strategy also aims to unpack and operationalize the broad principles of green growth included in Uganda Vision 2040 and the second National Development Plan, and support the Uganda's accelerated transition to middle-income status.⁸⁹ It aimed to achieve 8 development areas among which are income and livelihoods enhancement; decent green jobs; climate change mitigation and adaptation; environment and natural resources management; food and nutrition security; resource use efficiency; social inclusiveness; economic transformation at national and sub-national level.⁹⁰

The UGGDS is to be implemented within the existing institutional framework⁹¹ and in two parts. An initial period from FY2017/18 to FY2020/21 (1 July-30 June) and full-scale implementation is for the period between FY2020/21 and FY2030/31. The Strategy will be integrated into the implementation of the 10-year National Development Plan 2020/21 to

⁸⁴ Uganda Green Growth Development Strategy (2017/18- 2030/31)⁸⁴

⁸⁵ (Government of Uganda, National Planning Authority, 2017)

⁸⁶ (Government of Uganda, National Planning Authority, 2017)

⁸⁷ (Government of Uganda, National Planning Authority, 2017)

⁸⁸ (Government of Uganda, National Planning Authority, 2017)

⁸⁹ (Government of Uganda, National Planning Authority, 2017)

⁹⁰ (Government of Uganda, National Planning Authority, 2017)

⁹¹ (Government of Uganda, National Planning Authority, 2017)

2030/31, NDP III (2020/21-2024/25) and NDP IV (2025/26- 2030/31).⁹²

⁹² (Government of Uganda, National Planning Authority, 2017)

4. Climate Change Adaptation in Uganda

4.1 Institutional Framework

The Climate Change Department of the Ministry of Water and Environment is the key coordination body and the apex body for climate change in Uganda. It also provides secretarial services to the Policy Committee on Environment (PCE), which was established under the 1995 National Environment Act and is chaired by the Prime Minister.⁹³

The Ministry of Finance, Planning and Economic Development (MoFPED), the National Planning Authority (NPA), and the Ministry of Local Government (MoLG) also have key functions which relate to ensuring climate finance mobilization, integration of climate change into annual plans, and implementation on the local level as provided in Uganda's 2015 Climate Change Policy.

In addition to these institutions, the following government ministries, agencies, and departments play key roles in mainstreaming and implementation of climate change adaptation in Uganda:

- Ministry of Agriculture, Animal Industry and Fisheries (MAAIF)
- Ministry of Works and Transport (MoWT)
- Ministry of Energy and Mineral Development (MEMD)
- Ministry of Health (MoH)
- Ministry of Lands, Housing and Urban Development (MoLHUD)
- Ministry of Tourism, Wildlife and Antiquities (MoTWA)

- Ministry of Gender, Labour and Social Development (MoGLSD)
- Ministry of Trade, Industry and Cooperatives (MoTIC)
- Ministry of Education, Science, Technology and Sports (MoESTS)
- Office of the Prime Minister (OPM)
- Kampala Capital City Authority (KCCA)⁹⁴

In 2019, Uganda launched the Parliamentary Standing committee on Climate change aimed at scrutinizing all bills related to climate change mitigation and adaptation, make recommendations to Parliament on legal and institutional mechanisms to address climate change among other mandates.

The Parliamentary Forum on Climate Change Uganda (PFCC-U) was formed in 2008 by members of the 8th parliament to respond to the pressing environmental, social and economic issues presented by Climate Change.

In addition, non-state actors such as NGOs, INGOs, CBOs, and women and youth groups play a key role in climate action at national and local level. Other actors include academia, media and the private sector which contribute to the adaptation action in the country. Therefore, consultation and coordination with these institutions will be paramount in the development and implementation of the NAP.

⁹³ (Government of Uganda, Ministry of Water and Environment, 2015)

⁹⁴ (Ampaire, et al., 2017)

4.2 Key Policies, Plans, and Strategies

Uganda is signatory to the UNFCCC, the Kyoto Protocol, and the Paris Agreement, and has continued in developing laws, policies and plans for the implementation of commitments, and actions related to addressing climate change impacts.

The National Constitution of Uganda⁹⁵ provides for the implementation of climate change activities, and provides authority and the regulatory framework for the implementation of the National Climate Change Policy. Among the key policies and plans related to climate change adaptation are the Country Vision 2040 and Uganda's National Development Plan; National Climate Change Policy (NCCP) 2015; National Adaptation Program of Action 2007; National Climate Change Mainstreaming Guidelines 2014; Uganda Strategic Program for Climate Resilience 2017; Climate Change Mainstreaming Guidelines for Agricultural Sector 2018; Climate Change Mainstreaming Guidelines For Urban and Lands Sector 2019; Standard National climate Change Indicators 2018 and the 2015 Nationally Determined Contributions for Uganda under the Paris Agreement.

At present, Uganda has a draft National Climate Change Bill that is yet to be table before parliament. Among other laws, policies and plans of high relevance are the National Environment Act (2019); National Adaptation Plan for Agriculture Sector 2018. East African Community (EAC) climate change policy of 2010; draft Energy policy (2019), the Uganda National Policy on Disaster Preparedness and management 2010, the Uganda Meteorology Act of 2012 and Uganda Green Growth Development Strategy 2017/18 – 2030/31. For the purpose of identifying key areas of focus

for identifying NAP entry points for Uganda, the following are further elaborated:

4.2.1 The National Adaptation Programme of Action (NAPA)

In 2007, Uganda developed its National Adaptation Programme of Action (NAPA) with the goal of facilitating the country's development goals, eradicating extreme poverty and hunger, ensuring environmental sustainability and gender equity, and combating major diseases. It outlines seventeen intervention strategies across six sectors, namely agriculture, forestry, water resources, wildlife, health, and weather and climate information.

To implement these strategies, the NAPA focuses on nine priority projects that address land management, deforestation, afforestation, meteorological data, water and sanitation, pest and disease control, and the utilization of indigenous knowledge:

- Community Tree Growing Project
- Land Degradation Management Project
- Strengthening Meteorological Services
- Community Water and Sanitation Project
- Water for Production Project
- Drought Adaptation Project
- Vectors, Pests and Disease Control Project
- Indigenous Knowledge (IK) and Natural Resources Management Project
- Climate Change and Development Planning Project

The total cost to implement these nine projects is estimated at USD 39.8 million or USD 23.3 million if limited to high-risk areas only.

⁹⁵ The Constitution of Uganda (1995)

4.2.2 The Uganda National Climate Change Policy

Acknowledging that taking efforts to combat climate change at local and national level to combat climate change impacts, while global actions are needed at the same time, Uganda has developed a National Climate Change Policy (NCCP) which aims to guide climate change activities and interventions in the country.⁹⁶

Uganda's Climate Change Policy was introduced in 2015, and its specific objectives include identifying the top-priority adaptation and mitigation issues for the country; supporting appropriate awareness raising, information exchange, capacity building and technology transfer in addressing climate change; supporting the integration of climate change issues into planning, decision making and investments in all sectors and trans-sectoral themes; supporting research and the dissemination of scientific information and innovations on climate change; developing and implementing appropriate climate change adaptation strategies; developing and implementing appropriate climate change mitigation strategies; and facilitating the mobilisation of financial resources to address climate change in Uganda.⁹⁷

The key issues of focus of the Policy include adaptation, mitigation, research and observation. Further, the Policy emphasises climate change adaptation as a key priority and is integrated into the second National Development Plan.⁹⁸

⁹⁶ (Government of Uganda, Ministry of Water and Environment, 2015)

⁹⁷ (Government of Uganda, Ministry of Water and Environment, 2015)

4.2.3 Nationally Determined Contributions of Uganda

Uganda's NDCs comprise seven adaptation sectors (agriculture, forestry, water, infrastructure, energy, health, and risk management) as well as three mitigation sectors (energy, forestry, and wetlands). Similar to the National Climate Change Policy of Uganda, the NDCs also indicate the adaptation as a national priority.

The outlined adaptation actions include investing in agriculture and rendering it more climate-resilient, promoting forest conservation, restoration, and agro-forestry, managing water resources, making existing and future infrastructure more climate-resilient, increasing efficiency in biomass use for energy and promoting renewable energy sources, turning the health sector more climate-sensitive, and mainstreaming climate resilience and risk mapping into all sectors. The cost of implementation of the country's Nationally Determined Contribution (NDC) has been estimated at USD 5.523 billion, with total cost of USD 3.093 billion for implementing adaptation actions in the priority sectors.⁹⁹

Mitigation actions focus on offsetting deforestation and emissions from wood and charcoal burning through rural electrification and enhancing the country's electrical infrastructure as well as conservation and afforestation of existing forest and wetland cover. In addition, the NDCs include mitigation actions contingent on sufficient international support, including solar energy, energy efficiency, cleaner fuel, climate-smart agriculture, and livestock breeding research.

The means of implementation of the adaptation actions include; capacity building, technology transfer, and finance and these are identified as the most important needs for

⁹⁸ (Government of Uganda, Ministry of Water and Environment, 2015)

⁹⁹ (Government of Uganda, Ministry of Water and Environment, 2018)

Uganda, as well as private sector involvement, public-private partnerships, improving policies and legislation, building climate information systems, and gender mainstreaming. In response to the country needs, the Government of Uganda commits to promote climate change education and awareness, support climate-sensitive policies and programmes, promote climate change research and development, promote technology development and transfer, and encourage gender mainstreaming in climate change issues.

4.2.4 Uganda NDC Partnership Plan

In 2018, Uganda launched the NDC Partnership plan which is a resource mobilization tool facilitating and contributing to the implementation of NDC. The Plan refers to the strategy to deliver on commitments under the Paris Agreement. The Plan compliments the vision of NDCs, and serves as an accelerator for action. It identifies five priority areas for the implementation of NDCs, and focuses on connecting the priorities to available partner and program resources from across the NDC Partnership and its network.¹⁰⁰

These priorities focus on strengthened operational and gender-responsive policy and institutional frameworks and effective governance; increased climate financing for planning and budgeting on the national and local levels; effective and institutionalized measurement, reporting and verification (MRV) systems to monitor climate action, including gender-responsive adaptation measures; strengthened capacity of multiple stakeholders including government officials, civil society, the private sector and academia to effectively integrate NDC and Sustainable Development Goal (SDG) commitments in line

with gender responsiveness; and accelerated project financing for NDC implementation.¹⁰¹

The Partnership Plan focuses also on raising ambition by advancing timelines set for NDCs, and seeks to mainstream climate resilience across sectors. It aims also to develop early warning systems and robust monitoring systems by 2020, and create an enabling environment for the country's NDC and create transformative change in the country.¹⁰²

Among its activities, the Plan also includes the enactment of a legal framework for climate action; developing a project pipeline of investment-ready projects for funding across priority sectors; establishing and strengthening national climate change funding mechanisms; modelling climate hazard scenarios such as national temperature and precipitation and extreme events.¹⁰³

4.2.5 National Adaptation Plan for the Agriculture Sector (Agri-NAP)

Agri-NAP of 2018 focuses on addressing climate change impacts to Uganda's agriculture sector and aims to promote climate resilient and sustainable agricultural sector contributing towards achievement of the Uganda Vision 2040. It is considered as part of the National Adaptation Plan process for Uganda, and supports the NAP process by integrating agricultural policies and sustainable development into climate change adaptation and building capacities for the formulation of the country's NAP.¹⁰⁴

Further, Agri-NAP promotes climate-smart agriculture practices, and aims to increase resilience and ensure food security, livelihood improvement, the eradication of poverty, and

¹⁰⁰ (Government of Uganda, 2018)

¹⁰¹ (Government of Uganda, 2018)

¹⁰² (Government of Uganda, 2018)

¹⁰³ (Government of Uganda, 2018)

¹⁰⁴ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

sustainable development in line with the goals of the Uganda Vision 2040.¹⁰⁵

Uganda's Agri-NAP identifies twenty-one priority adaptation options which focus on crop and livestock production, fisheries management, climate information, early warning and disaster preparedness, forestry, land, and natural resources management, and research and knowledge management.¹⁰⁶

Agri-NAP highlights partnerships as a key element in addressing climate change impacts, and highlights the benefits of multi-stakeholder partnerships across sectors among government MDAs, local governments, development partners, civil society and the private sector.¹⁰⁷

4.3 Key Sectors of Focus for Uganda's NAP

Uganda has set itself the overarching goal of ensuring that all stakeholders address both the causes and impacts of climate change through appropriate measures while promoting sustainable development and green growth at the same time.

Uganda's key sectors and priority areas have been mapped out based on the following

documents: National Adaptation Programme of Action (NAPA), Second National Communication (SNC), Nationally Determined Contributions (NDCs), National Climate Change Policy (NCCP), Second National Development Plan 2015/16-2019/20 (NDPII), and the Uganda Green Growth Development Strategy 2017/18-2030/31 (UGGS).

NAPA	SNC	NDCs	NCCP	NDPII	UGGS
Agriculture	Agriculture and Forestry	Agriculture	Agriculture and Livestock	Agriculture	Sustainable agriculture production and value chains
Forestry		Forestry	Forestry	Water and Environmental Resources	
Wildlife			Wildlife and Tourism		
Water Resources	Water Resources, Wetlands, Fisheries and Biodiversity	Water	Water Fisheries and Aquaculture Wetlands	Climate Change	Natural Capital Management and Development (Tourism, Forestry, Wetlands, Water Resources)
		Infrastructure, Human Settlements, Social	Human Settlements and Social Infrastructure	Works and Transport	

¹⁰⁵ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

¹⁰⁶ (FAO, 2018)

¹⁰⁷ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

		Infrastructure, Transport	Transport and Works		Sustainable Transport
		Energy	Energy	Energy and Mineral Development	Promotion of Renewable Energy Investments
Health	Health	Health	Health		
Weather and Climate Information		Risk Management	Disaster Risk Management Vulnerable Groups		

Figure 3: Sector mapping

By analysing existing strategies and plans for climate change adaptation and sustainable development, a number of highest-priority actions have been identified for each sector (based on the above documents and the National Adaptation Plan for the Agricultural Sector).

To prioritize adaptation actions, this research has analysed key documents related to climate change adaptation in Uganda and collected their respective adaptation actions into one table per sector. Within the sectors, the actions have been ranked based upon the number of documents they are listed in; for instance, the agricultural sector lists “improvement of agricultural land and water

management” in all five key documents, giving it the highest priority and importance. The documents analysed for this are the NAPA, the SNC, the NDCs, the NCCP, the NDPII, the UGGS, and the Agri-NAP.

The country’s climate change adaptation policies focus on reducing vulnerability in the following priority sectors: agriculture and livestock, forestry, infrastructure (with an emphasis on human settlements, social infrastructure and transport), water, energy, health, and disaster risk management as a crosscutting issue.

Sector	Priority Adaptation Actions
Agriculture	Expand agricultural diversification, value addition, post-harvest handling and access to markets
	Promote conservation agriculture
	Expand extension services and support community-based adaptation
	Promote sustainable management of rangelands and pastures
	Expand small scale water infrastructure
	Promote highly adaptive and productive crop varieties
	Promote highly adaptive and productive livestock breeds
	Promote sustainable irrigation systems for agriculture
Forestry	Promote intensified and sustained forest restoration
	Encourage agro-forestry
	Conserve habitats through careful use and good management practices
	Strengthen and re-orient the conservation practice through research
	Build on efforts to strengthen sustainable land management in fragile ecosystems
	Encourage collaborative management and sustainable use of biodiversity and ecosystems
Water	Promote appropriate and sustainable water harvesting, storage and utilization

	Promote and strengthen the conservation of watersheds, catchments etc.
	Promote water harvesting and storage
	Managing water resource systems, including wetlands, to prevent floods and conserve resources
	Maintain current wetlands cover
	Promote integrated water resources management
	Promote and encourage climate resilient fishing practices
	Promote sustainable fish farming
	Strengthen existing national wetland policy
	Promote and intensify wetland protection and restoration
	Strengthen collaborative and participatory management of wetland resources
Infrastructure, Human Settlements, Social Infrastructure, Transport Sector	Ensure land use plans and building codes for climate-resilience
	Integrate climate change into existing infrastructure risk assessment
Energy	Promote renewable energy and other energy sources
	Ensure the best use of hydropower
	Increase the efficiency in the use of biomass
Health	Strengthen public health systems by building and supplying hospitals
	Conduct vulnerability assessments of health sector to climate change
	Assess the impacts of climate change on human health
	Improve early warning systems for disease outbreaks
	Make provision for a safe water chain and sanitation facilities
	Improve and expand health infrastructure
Risk Management	Improve early-warning systems and preparedness
	Promote vulnerability risk mapping of the whole country and all sectors
	Improve emergency related institutions and establish a contingency fund
Tourism (not an NDC sector)	Encourage mechanisms of improving local vulnerable populations' livelihoods through tourism
	Develop and diversify tourism products that are less sensitive to climate change

Figure 4: Priority adaptation actions

4.3.1 Cross-Cutting Issues

5.3.2.1. Gender and Climate Change

Climate change, while felt by all, create different impacts on men and women, boys and girls. Taking this into consideration, the NDCs of Uganda highlight the need to focus human rights and gender-responsive climate change actions as cross-cutting aspects related to climate action. Uganda's NDCs addresses this need by including the protection of

vulnerable groups, including women as a crosscutting priority.¹⁰⁸

In Uganda, women do not have equal access to resources and livelihoods in many areas, which leads to lesser resilience for women compared to men.¹⁰⁹ Women are at most times responsible for providing food in households. They work in subsistence agriculture,¹¹⁰ but their access to land and agricultural inputs is lesser than that of men. Research indicates that closing the gender gap in agricultural productivity would lead to an increase in the

¹⁰⁸ (Government of Uganda, Ministry of Water and Environment, 2015)

¹⁰⁹ (UNDP, 2019)

¹¹⁰ (FAO, 2011)

overall crop production by seven to nineteen percent in Uganda.¹¹¹

Ensuring that the NAP of Uganda is gender responsive remains a priority for ensuring climate resilience, and equitable adaptation action in Uganda. This could include elements of participation in the decision making processes, access to resources and opportunities related to livelihoods, as well as actions such as promotion of gendered climate smart agriculture programme to reduce the vulnerability of women, youth and other disadvantaged groups.¹¹² It is important that this approach is integrated in a holistic manner to all sectors of focus of the NAP, as well as other key aspects related to the NAP process.

5.3.2.2. Conflicts, Refugees and Climate Adaptation in Uganda¹¹³

Uganda has the third highest number of refugees in the world. The country had over 1.19 million refugees by December 2018 who sought refuge in the country due to wars, violence and persecution in neighboring countries such as the South Sudan, Democratic Republic of the Congo (DRC) and Burundi.

Sixty-two percent of these refugees are under the age of 18, and are highly vulnerable.

Twelve districts in Uganda host most of the refugees. 95% of them live in settlements alongside the local communities with 62 percent in northern Uganda or West Nile (Adjumani, Yumbe, Arua, Moyo, Lamwo and Koboko), 21 percent in southwestern Uganda or South West (Kyegegwa, Kamwenge and Isingiro) and 12 percent in central or mid-west Uganda (Kiryandongo and Kikuube).

With projected refugee influxes from countries such as DRC (120,000), South Sudan (70,000) and Burundi (7,000) throughout the period covered by the RRP, Uganda is expected to host approximately 1.3 million refugees by the end of 2020.

With population growth which is among the highest in the world, and the growing numbers of refugees entering Uganda due to diverse reasons, it is pivotal that Uganda's NAP takes into consideration the resource needs of these communities, and actions to build resilience to climate change impacts as their existing vulnerabilities would exacerbate with the adverse effects of climate impacts.

4.4 Gaps and Needs for an Effective NAP Process

The consultative process initiated for the preparation of this paper engaged key stakeholders to identify central gaps and needs related to the NAP process:¹¹⁴ Through their

inputs, the following gaps and needs were identified as prevalent in Uganda, as posing challenges for an effective NAP process for the country.

Institutional, operational, and coordination gaps and needs	<ul style="list-style-type: none"> • Gaps in coordination of adaptation actions • Lack of a systematic cost-based analysis for adaptation actions in the different strategies • Limited documentation on processes, actions, interventions and results
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¹¹¹ (UNDP, 2019)

¹¹² (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

¹¹³

<https://data2.unhcr.org/en/documents/download/69674>

¹¹⁴ National Stakeholder Workshop organized by EMLI in Uganda

	<ul style="list-style-type: none"> • Continuous integration of adaptation planning in all existing national and sectoral policies, strategies, and frameworks is needed • Enhancement of crosscutting coordination and collaboration • Establishing an effective monitoring system for all levels of the NAP process • Promoting inclusive and participatory decision-making processes • Improving stakeholder participation in climate change adaptation processes
Capacity and technical gaps and needs	<ul style="list-style-type: none"> • Facilitating capacity development and awareness creation on climate change adaptation among stakeholders and the public • Building capacity of local governments to integrate climate change adaptation into plans and budgeting processes • Closing gaps in technical capacity to mainstream climate change adaptation to national and local government processes including skills and human resource gaps • Closing capacity gaps in climate change reporting, and sharing of climate actions in report format
Data gaps and lacks of knowledge and science	<ul style="list-style-type: none"> • Increasing availability of vulnerability assessments at the national level to inform adaptation interventions • Utilizing indigenous knowledge and scientific knowledge to implement informed adaptation actions by promoting linkages between indigenous knowledge and scientific research • Gather baseline data for adaptation actions and indicators to enhance the consolidation of targets included in M&E systems • Strengthening the dissemination of accurate climate information in accessible and user-friendly formats • Enhancing climate vulnerability assessments with specific indicators and dimensions including hazards, sensitivity and adaptive capacity-based indicators, and climate risk mapping for key development sectors of Uganda • Establishing an inventory of adaptation actions to ease prioritization of actions • Interlinking climate science and climate action in Uganda, enhanced climate change information and communication including a registry of national adaptation activities
Cross-cutting gaps and needs	<ul style="list-style-type: none"> • Mainstreaming gender responsiveness in adaptation plans and actions which includes promoting gender equality, recognition of gender aspects interlinked with social and economic facts and aligning how they relate to impacts and vulnerabilities created due to climate change
Means of implementation	<ul style="list-style-type: none"> • Increasing mobilisation of climate finance • Facilitating the mobilisation of private sector adaptation finance

Figure 5: Identified gaps and needs

4.5 Climate Finance

In the 2007-08 fiscal year, climate change damages were estimated as equivalent to 4.4% of the national budget¹¹⁵ and further studies indicate that in the absence of adaptation actions, the cost of climate change for the agriculture, water, infrastructure, and energy sectors of Uganda would be between USD 270 and 332 billion over the 40-year period 2010-2050, with the potential for annual costs being USD 3.2 billion for these sectors.¹¹⁶

Uganda has accessed international funding for climate action through international adaptation finance and multilateral mechanisms such as the Adaptation Fund (AF), the Green Climate Fund (GCF) Least Developed Countries Fund (LDCF) of the UNFCCC, the Climate Investment Funds (CIFs) of the World Bank, Global Environment Facility (GEF). Additionally, the country also received adaptation finance through bilateral donors among others USAID, European Union (EU), GIZ, Japan International Cooperation Agency (JICA), and Department for International development (DFID).

Ministry of Water and Environment (MWE) of Uganda is accredited by the GCF as the National Accredited Entity to promote direct access to GCF by the country, and is also the national accredited entity of the Adaptation Fund.

Among the key projects for adaptation finance for Uganda focusing on resilience building, and adapting to climate change impacts, are the GCF Acumen Resilient Agriculture Fund project which targets an anticipated number of increased resilience for 10 million people in the three countries of focus. It has a total project investment which amounts to USD 56 million and aims to build resilience in the areas of

health, food and water security, livelihoods people and communities.¹¹⁷ Further, it focuses on zero hunger to achieve sustainable development, and builds synergies between climate change adaptation and SDGs.

Among other projects funded by the GCF in Uganda is the project Building Resilience Communities, Wetlands Ecosystems, and Associated Catchments in Uganda.¹¹⁸ It focuses on the themes of livelihoods of people and communities, ecosystems and ecosystem services which includes an anticipated amount of 4.8 beneficiaries, and included on gender through the engagement of women in all aspects of the project implementation, with specific benefits such as improving wetlands management skills; increasing water availability; strengthening of alternative livelihoods.¹¹⁹ The total project investment is USD 44.3 million, with 24.1 million being allocated by GCF. The additional amounts include 2 million worth finance from UNDP, and 18 million from the Ugandan government.¹²⁰

Additionally, there is also the Transforming Financial Systems for Climate¹²¹ which is a co-benefits-based project. The key focuses of the project which relate to adaptation actions in Uganda include health, water and food security; livelihoods of people and communities; forests and land use; infrastructure and built environment.¹²² The project includes approximately 1,000,000 beneficiaries and was approved in October 2018, and extends for 7 years.

Other sources of funding for climate action in Uganda includes independent donor funding, and private sector investments.

¹¹⁵ (Government of Uganda, Ministry of Water and Environment, 2015)

¹¹⁶ (Government of Uganda, Ministry of Water and Environment, 2015)

¹¹⁷ (Green Climate Fund, 2018)

¹¹⁸ (Green Climate Fund, 2016)

¹¹⁹ (Green Climate Fund, 2016)

¹²⁰ (Green Climate Fund, 2016)

¹²¹ (Green Climate Fund, 2018)

¹²² (Green Climate Fund, 2018)

4.6 Monitoring, Evaluation, and Reporting

Uganda has several M&E structures which interlink with climate change activities. Among these are the Performance Measurement Framework for National Climate Change Policy of Uganda, the Standard National Climate Change Indicators and Reference Sheets prepared by the Ministry of Water and Environment of Uganda¹²³ provides for indicators for programme-based budgeting systems as well as different indicators for climate action for multiple sectors.

Additionally, the country is developing an MRV Framework for climate change related

activities, which is in progress, and the M&E activities related to the implementation of SDGs, and the SDG Roadmap has provided opportunities and avenues for engaging multiple stakeholders in the tracking of climate change activities in the country. The CSOs and non-state actors have engaged in M&E processes such as the Process of the Joint Sector Review of the Environment and Natural Resources Civil Society Organization (ENR CSO) Performance Report, as well as development of voluntary reports.

¹²³ Standard National Climate Change Indicators and Reference Sheets, Ministry of Water and Environment of Uganda (2018)

5. NAP Entry Points for Uganda

Uganda has many existing systems and processes that could be considered as NAP entry points, which could be built on to enhance the potential of the country's NAP, and avoid duplication of actions related to formulation of the NAP for Uganda. Among these the key ones are the development planning processes, which include Uganda Vision 2040, and the Uganda National Development Plan III, Uganda Green Growth

Strategy; Uganda SDG Road Map; NAP Readiness activities of the GCF; NDC Review/Updating Process; and Ongoing Climate Adaptation Projects. The following section will study these key entry points in detail to identify the overlaps between them and the NAP process, and the elements that could serve as entry points for an inclusive, participatory NAP process in Uganda.

Overview: Entry Points and Actions

Entry Point 1: Vision 2040 and the Uganda National Development Plan	Integrate with key areas of focus in the Uganda Vision 2040 on tourism, water resources, agriculture, labor force, infrastructure, STEI, land use and management, urbanization, human resources, and peace, security, and defense
	Take actions related to these areas into consideration to build adaptation measures on national priorities
	Ensure that key areas of the NAP align with national development priorities
	Align NAP with NPDIII development and priority sectors
Entry Point 2: Uganda Green Growth Strategy	Integrate NAP and UGGDS to ensure equity and social inclusiveness, low emissions and sustainable economic growth, sustainable development and environment sustainability
	Build on existing UGGDS activities without duplicating efforts
	Integrate SDGs into adaptation planning parallel to their integration into development planning
	Utilize UGGDS as an entry point through inclusion of climate change adaptation as a key component, as well as other key priorities such as food and nutrition security, environment and natural resource management, livelihood enhancement as well as social inclusiveness
Entry Point 3: Roadmap for Creating an Enabling Environment for Delivering on SDGs in Uganda	Benefit from alignment of the UGGDS implementation timeline with the National Development Plan and the NDPIII to integrate NAP process
	Build on SDG Roadmap which includes integration of sustainable development, multi-stakeholder participation, strengthening of institutions, setting up data and information systems, and initiating MRV processes
	Use National Coordination Framework for SDGs as an entry point for the NAP process to mainstream climate change adaptation to government coordination structures
	Engage and extend the contribution of multi-stakeholder SDG National Taskforce to the NAP process
	Build on mandates for the Roadmap and the Framework related to SDGs actions by integrating the processes of climate change adaptation and sustainable development in Uganda
	Align and integrate NDCs and NAP process through NDC update and review

Entry Point 4: NDC Review Process	Ensure that development priorities, climate hazards and risks, and the key sectors for climate change adaptation are reflected in the NDCs
	Build on the NDC priorities for elaboration and implementation
	Facilitate Uganda to have an integrated planning process for climate change and development planning by aligning NDCs, the NAP process, and development plans
	Exploit synergies and co-benefits between the NAP process and commitments under the Paris Agreement
Entry Point 5: GCF Readiness Funding	Enhance institutional capacity of the governance system related to climate change through GCF NDA Readiness Funding
	Use activities funded under this category to enhance coordination mechanisms and processes related to multi-stakeholder input and develop a monitoring and oversight system
	Address coordination gaps of adaptation actions by integrating NAP process with NDA readiness funding components
	Utilize NAP Readiness funding to facilitate an inclusive, participatory and evidence-based NAP for Uganda
Entry Point 6: Agri-NAP	Enhance NAP activities commitments and actions in Agri-NAP areas related to crop and livestock production, fisheries management, climate information, early warning and disaster preparedness, forestry, land, and natural resources management
	Align NAP process with Agri-NAP to support and strengthen stakeholder partnerships among multiple stakeholders across sectors

Figure 6: Overview of entry points and actions

5.1 Entry Point 1: Vision 2040 and the Uganda National Development Plan

It is important to integrate the NAP of a country to the development planning process. Similarly, the development planning process would integrate climate change adaptation into the priorities of the country. In Uganda, Vision 2040 focuses on strengthening the fundamentals of the economy and has key areas of focus that overlap with the priority sectors identified for the NAP process. Among these key areas are tourism, water resources, agriculture, labor force which are vital for climate change adaptation in the country. Further, Vision 2040 aims to strengthen infrastructure (energy, transport, water, oil and gas, and ICT); Science, Technology, Engineering and Innovation (STEI); land use

and management; urbanization; human resource; and peace, security and defense.

It is important for the NAP process to take into consideration the actions related to the areas mentioned so as to ensure that adaptation measures proposed could be built on county's priorities, and also to ensure that the key areas of the NAP and the development priorities of the country align together.¹²⁴

Of equal importance for the NAP process to be aligned with the development processes of Uganda is the the Third Development Plan of Uganda which is to commence its five-year cycle upon the completion of NDPII in 2020. The Uganda NDP aims to move the country towards middle income status and has as its

¹²⁴ Uganda Vision 2040, Government of Uganda (approved by the Cabinet of Uganda in 2007)

objectives to strengthen Uganda's competitiveness for sustainable wealth creation, employment and inclusive growth.¹²⁵

The NPDIII development and the alignment with many priority sectors identified as key for the NAP of Uganda presents a timely entry

point to the NAP of Uganda. Alignment and integrating the priorities of NPDIII and the NAP would allow for climate adaptation action in Uganda, and development trajectory to be merged leading to enhanced climate resilience.

5.2 Entry Point 2: Uganda Green Growth Strategy

Uganda Green Growth Development Strategy (UGGDS) presents another opportunity to enhance the impact of Uganda's NAP, and serves as an entry point for developing an inclusive, participatory and holistic NAP for the country. The principles of the Strategy align with the key principles of the NAP process, such as equity and social inclusiveness, low emissions and sustainable economic growth, sustainable development and environment sustainability. Additionally, the integrating of UGGDS and the NAP provides the opportunity to ensure social inclusiveness is enshrined in Uganda's NAP, and allows the NAP process to build on the already existing activities related to these elements without duplicating of efforts.¹²⁶

Additionally, identifying the UGGDS as an entry points also provides the possibility to ensure

the integration of SDGs into adaptation planning, parallel to its efforts to integrate them to Uganda's development planning as well as the priorities related to the Paris Agreement.

Inclusion of the UGGDS as an entry point to the NAP process of Uganda is enforced through the inclusion of climate change adaptation as a key component, as well as other key priorities such as food and nutrition security, environment and natural resource management, livelihood enhancement as well as social inclusiveness. Further, the timeline for full scale implementation of the Strategy aligns with the National Development Plan, and the commences with the NPDIII allowing the integration of the NAP process, with the key development planning policies and plans of Uganda.

5.3 Entry Point 3: Roadmap for Creating an Enabling Environment for Delivering on SDGs in Uganda

Uganda's SDG Road Map which was initiated in 2016 provides several entry points for different levels of the NAP process. This includes the integration of sustainable development in different sectors and key areas of development in Uganda, as well as the participation of multiple stakeholders, institutional strengthening, setting up data and information systems for national and local

actions, as well as initiating MRV processes for climate change adaptation.

The National Coordination Framework for SDGs of the Roadmap is an entry point for the NAP process to mainstream climate change adaptation to government coordination structures, and provides strategic guidance on the roles and responsibilities of key institutions. Aspects of inclusivity and

¹²⁵ (Government of Uganda, National Planning Authority, 2015)

¹²⁶ (Government of Uganda, National Planning Authority, 2017)

participation would also be addressed by engaging and extending the contribution of multi-stakeholder SDG National Taskforce to the NAP process which will allow the inclusion of different stakeholders into Uganda's NAP process.¹²⁷

Additionally, the mandates for the Roadmap and the Framework related to SDGs actions in Uganda, provides also opportunities for the NAP process to build on, by integrating the processes of climate change adaptation and sustainable development in Uganda, in areas

such as planning, reporting, monitoring, resource mobilization, communication, advocacy and decision-making related to the implementation of the SDGs.¹²⁸ Also, the NSI Framework of the SDG process provides the opportunity to identify key indicators for different sectors, to monitor actions conducted. This will also contribute to developing climate risk and vulnerability assessments which would facilitate to establish an evidence and science-based NAP process for Uganda.

5.4 Entry Point 4: NDC Review Process

Uganda submitted the first NDCs in 2015, and launched the NDC Partnership plan in 2018, which is a resource mobilization tool facilitating and contributing to the implementation of NDC. NDCs are in the process of update and review globally, for submission in 2020, as part of the five-year cycle for NDCs under the Paris Agreement. This process of updating and reviewing the NDCs provide the opportunity to align and integrate the NDCs and the NAP process.

With the key institutions for NDC and NAP process being the same for Uganda as part of the climate change regime for the country, the NDC review process provides the opportunity to ensure that the development priorities, climate hazards and risks, and the key sectors for climate change adaptation are reflected in the NDCs, whereby the NAP process could build on for elaboration and implementation.

Since the development and implementation of both the NDCs and the NAP requires broad

participation of society, government agencies, CSO, academia, and the private sector, clear institutional leadership, strong links between national and subnational policies and processes, appropriate M&E systems, and adequate capacity building especially on the local level, there is a potential for synergies and co-benefits between the NAP process and commitments under the Paris Agreement.

Additionally, the alignment of updated NDCs, the NAP process (aligned with country's development policies, plans and strategies) would facilitate Uganda to have an integrated planning process for climate change, and development planning which avoids duplication of actions, enhances coordination and cooperation, mobilise finance and put it to efficient and effective action, as well as ensure a wider stakeholder participation to address climate, economic, social and environment vulnerabilities and risks.

5.5 Entry Point 5: GCF Readiness Funding

Uganda has GCF funded projects that are at present being implemented in the country.

Among these, there are those that directly link with elements of the NAP process for the

¹²⁷ Roadmap for Creating an Enabling Environment for Delivering on SDGs in Uganda (2018)

¹²⁸ Roadmap for Creating an Enabling Environment for Delivering on SDGs in Uganda (2018)

country such as the GCF Readiness Funding connected to Nationally Designated Entity Readiness and NDC Readiness.

GCF Readiness Funding received by Uganda is presently focused on strengthening the country's NDA for engagement with the GCF. The project sought readiness support for establishing and strengthening NDAs or focal points; strategic frameworks, including the preparation of country programmes; support for accreditation and accredited direct access entities; adaptation planning and was approved in March 2019 and has received a total of USD 700,000 as readiness support.¹²⁹

The NDA Readiness Funding could be considered as an entry point as it would contribute to enhancing the institutional capacity of the governance system related to climate change, including key ones related to climate change adaptation. The activities funded under this category would consist of strengthening country capacity by enhancing coordination mechanisms and processes related to multi-stakeholder input; development of the monitoring and oversight system; as well as support in establishing a broad-based multi-stakeholder engagement process.

Additionally, some key components of the NDA readiness funding such as 1) the preparation of five concept notes for climate change adaptation projects in priority sectors for submission to the GCF creates an opportunity to integrate the NAP as part of the concept note development process to facilitate

implementation of the NAP related activities; 2) private sector engagement aimed at improving the availability of finance for climate change projects also provides an avenue for adaptation finance mobilisation through enhanced private sector investment in related climate change adaptation projects; and 3) Strengthen country capacity by enhancing coordination mechanisms also provides an opportunity to address coordination gaps of adaptation actions when NAP is integrated in the process.

As at 31 July 2019, Uganda is one of the 48 countries that has submitted a NAP Readiness proposal to the GCF. The Proposal is titled as Strengthening Adaptation Planning in Uganda and has as its objective to develop the overarching NAP led by CCD/MWE and requests for 2.8 Million for a timeline of 3.5 years.

The objective is to secure resources for adaptation through capacity, tools and systems development for adaptation planning.

Key outcomes of the NAP readiness proposal are 1) Strengthened capacity for NAP planning and replication of future NAP processes; 2) Finance for adaptation secured from regular investment planning, 3) Lessons learned about NAP process disseminated.

NAP Readiness remains one of the key activities among the entry points to facilitate an inclusive, participatory and evidence-based NAP for Uganda.

5.6 Entry Point 6: Agri-NAP

Uganda's Agri-NAP of 2018 focuses on a climate resilient and sustainable agricultural sector which contributes to achieving Uganda Vision 2040. It forms part of the National Adaptation Plan process for Uganda and aims

to integrate agricultural policies and sustainable development into climate change adaptation, as well as building capacities for the formulation of the country's NAP.¹³⁰

¹²⁹ (Green Climate Fund, 2019)

¹³⁰ (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

With key sectors identified for priorities for climate change adaptation in Uganda, as well as including twenty-one priority adaptation options which focus on among others crop and livestock production, fisheries management, climate information, early warning and disaster preparedness, forestry, land, and

natural resources management, the Agri-NAP provides avenues to enhance the activities of these areas for the holistic NAP for Uganda¹³¹ while also supporting and strengthening stakeholder partnerships among multiple stakeholders across sectors.¹³²

¹³¹ (FAO, 2018)

¹³² (Government of Uganda, Ministry of Agriculture, Animal Industry, and Fisheries, 2018)

6. Conclusion

Uganda has taken proactive measures to address climate change impacts on the country, and to achieve sustainable development through multi-sectorial and multi-stakeholder driven approach. These actions aim to address the country's social, economic and environmental vulnerabilities, taking into consideration the challenges posed by the climate risks and impacts. To ensure that sustainable development is achieved, climate change adaptation planning is a key element for Uganda.

The country does face different challenges, gaps, and needs to be addressed to ensure that effective and efficient adaptation planning is implemented in the country. Among these the key gaps and needs to be addressed relate to institutional and coordinating capacity and technical expertise; data and knowledge; and means of implementation. There exist cross-cutting ones as well, which focus on issues such as gender, impacts from conflicts and those related to resource access and management of the population of Uganda in the face of increasing numbers of refugees in the country.

To ensure that Uganda's population and ecosystems are resilience to climate change impacts, a holistic NAP for the country is important. And efforts to formulate one has already been put together with the multiple actions on overall climate change planning, and donor aided processes. It is important that the ongoing activities related to climate change adaptation planning, and implementation of adaptation actions in Uganda are integrated to the NAP process of

the country, and these would provide the opportunity to integrate ongoing actions to the overall NAP process, and avoid duplication of actions as well as an isolated NAP process that will restart an all new activity list on climate change adaptation which does not take into consideration the efforts made by the country to achieve climate resilience in the country.

The findings of this research indicate that 2020 is a key year for ensuring that the different processes on climate change adaptation in Uganda are integrated, and coordinated together to ensure a participatory, inclusive and efficient NAP process. To achieve these, the key entry points recommended to multiple stakeholders to build on are Vision 2040 and the Uganda National Development Plan; Uganda Green Growth Strategy; Roadmap for Creating an Enabling Environment for Delivering on SDGs in Uganda; NDC Review Process; GCF Readiness Funding; and the Agri-NAP. With many of these listing the year 2020 as a key moment for review and update of the identified actions and measures, and the overlaps with global processes which focus on climate change, and specifically on NAPs development for LDC countries.

Additionally, it would be pivotal that the NAP process of Uganda, build on these processes to ensure that the NAP of Uganda is holistic, inclusive, evidence-based, and multi-stakeholder driven with an ultimate objective to achieve climate resilience for all, reduce vulnerabilities among communities and ecosystems, while facilitating sustainable development of Uganda.

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