Annual State of Disaster Report (ASDR).

The crunch year 2020

A tale of anguish wrapped in a blessing

The inaugural Report

Annual State of Disaster Report 2020.

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Office of the Prime Minister
ASDR 2020

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the ASDR Online

ASDR - 2020

Know Your Risk

We live with risk! But do we Know it? Do we understand it?
Drawing: A mental illustration of a flood and elements at risk - Dara, a 6 year old.

too much rain causes a flood

Drawn by Dara
6 years

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List of Acronyms

ASDR	Annual State of Disaster Report
COVID	Corona Virus Disease
CSO	Civil Society Organisation
DCP	District Contingency Plan
DRDPM	Department of Relief, Disaster Preparedness and Management
DRR	Disaster Risk Reduction
DRM	Disaster Risk Management
FY	Financial Year
GDP	Gross Domestic Product
HC	Health Centre
IDP	Internally Displaced Person
IOM	International Organization for Migration
MOH	Ministry of Health
NDP	National Development Plan
NDPMP	National Disaster Preparedness and Management Policy
NECOC	National Emergence Operations and Coordination Centre
NRVA	National Risk and Vulnerability Atlas
OPM	Office of the Prime Minister
SDG	Sustainable Development Goals
SFDRR	Sendai Framework for Disaster Risk Reduction
SOPs	Standard Operating Procedures
UBOS	Uganda Bureau of Statistics
UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
UNHS	Uganda National Household Survey

Foreword

"In the year 2020 alone, the inextricable interaction of COVID-19 pandemic with unprecedented flooding evolved Uganda's risk into a systemic one".

Disasters, both naturally and human induced, in Uganda are becoming frequent, increasing in complexity, consequently affecting more people, livelihoods and systems than ever before. The complex nature of disasters manifests through the overlapping and interconnectivity of certain risk drivers like we saw with COVID-19 and mass flooding across the country. Such convolutions therefore, continue to test our ability as policy and decision makers to deal effectively with the ever-increasing threats and crisis drivers.

In the year 2020, the inextricable interaction of COVID-19 pandemic with unprecedented rise in water levels in Uganda evolved Uganda's risk into a systemic one. The consequences were devastating while the full impact is yet to be determined. By the end of December 2020, a total of 72 lives had been lost directly attributed to flooding, while by the end of January 2021, a total of 325 persons had succumbed to COVID-19. These are exclusive of indirectly attributable deaths, the 356,639

households affected by floods and millions of Ugandans directly and indirectly affected negatively by COVID-19 imposed lockdown and concurrent disasters especially floods.

Natural disasters in 2019/2020 caused Uganda an economic loss amounting to UGX. 563,239,697,910 (US$152.2 million). This loss was distributed across key sectors namely; Transport and infrastructure sector mainly roads and bridges - UGX 206.73billion; Commercial and Residential Housing - UGX 154.21billion; Agriculture - UGX 77.37billion; Education - 35.44billion; Environment and Natural Resources - UGX 33.75billion; Health - UGX31.86billion and Water and Sanitation - UGX 23.88billion.

This inaugural National State of Disaster Report therefore, is an evidence based documentation of disasters that devastated lives, livelihoods and undermined our socio-economic development gains in the year 2020. Some of the profiled impact sadly, reveals vital inadequacy in our current paradigm of managing disaster risks and crisis drivers.

In December 2020, Government of Uganda finalized the first ever National Risk and Vulnerability Atlas which highlights seven major hazards that have potential to impact all the sectors of Uganda's economy in multiple ways. Coupled with risk drivers notably climate change,

environmental degradation and unplanned urbanization, the profiled hazards remain a major hindrance to resilience of individuals, communities, infrastructure and livelihoods to disaster impact.

I therefore call upon technocrats both in government and non-government agencies, planners, policy and decision makers to move beyond fire-fighting methods of doing things and instead explore innovative ways of dealing with what 'could be' while harnessing the transformative value of technology in generating predictions to guide anticipatory action. It is only then that we shall achieve our development aspirations as outlined in the NDPIII and realize our national targets for SDG 2030, the Sendai Framework for Disaster Risk Reduction 2030, and achieve Uganda Vision 2040. Vulnerable communities and the general public need to draw upon their experiences on living with and managing risk to continuously step up efforts to reduce exposure while self-empowering to engage in early action. It suffices to say that disaster risk reduction and management is everybody's responsibility.

Eng. Hilary O. Onek (MP)
Minister for Relief, Disaster Management and Refugees.

$152.2M

ECONOMIC LOSS DUE TO NATURAL DISASTERS FOR YR 2020

An aerial view of flooded Butiaba Landing Site on the shores of L. Albert.

Besides human settlements and commercial facilities, social services were damaged including a health centre, water points, roads, docking station and a fish processing plant. Most of these facilities were built near the lake shore.

Opening Note

Paragraph XXIII of the National Objectives and Directive Principles of State Policy of the 1995 Constitution obliges the state to institute effective machinery for dealing with any hazard or disaster arising out of natural calamities or any situation resulting in the general displacement of people or general disruption of normal life. To fulfil this constitutional obligation, Office of the Prime Minister (OPM) was mandated to coordinate disaster risk management issues through the Department of Relief, Disaster Preparedness and Management (DRDPM).

To ensure disaster risk management is well coordinated, OPM spearheaded the development of the National Disaster Preparedness and Management Policy (NDPM) in 2011. According to the NDPM Policy, the DRDPM is the lead agency responsible for disaster preparedness and management in Uganda and coordinates disaster risk reduction, prevention, preparedness, mitigation and response actions. This is done working closely with other government and non-government entities.

Accordingly, the policy assigns the DRDPM several functions including; mapping hazard, risk and vulnerability of the country and keeping such data up to date; developing national and sub-national contingency plans; forecasting, producing and disseminating early warning information for disaster risks; leading and coordinating disaster needs assessments and emergency response operations; and compiling and publishing an annual national state of disaster report by the end of February; among other functions.

Additionally, the Policy emphasizes the need to consider social, economic and environmental costs of disasters during the planning and development processes both for public and private stakeholders. The National Development Plan III recognizes disasters as a major threat to the planned development interventions, outcomes and economic growth (Section 2.3.1). To enhance disaster risk management capacities in order to combat the recognized threat, it is important to have a fair understanding of the exact disasters and their impact on the various sectors of the economy. This annual state of disaster report thus presents the disaster incidents in a given year, and for this inaugural edition, disaster incidents in 2020 and their human, social, economic and environmental impact to inform prevention, mitigation and recovery planning.

We implore all individuals, communities, institutions, organizations, public and private stakeholders who have any roles and responsibilities, whether directly or indirectly, in anticipating, preventing, mitigating, preparing for, responding to, and / or supporting rehabilitation and recovery from disasters and emergencies to read and internalize this ASDR. The documented impact, response and recovery needs point to an urgent need for collective and proactive action if we are to effectively risk-proof Uganda's citizens, flora and fauna, infrastructure, livelihoods, and broader socio-economic aspirations from the harsh reality of disasters.

Hon Musa Ecweru
State Minister for Disaster Preparedness and Management

Statement of Purpose

The 2020 edition of the Uganda Annual State of Disaster Report (ASDR) is therefore an illustration of the disaster incidents that happened in the country in 2020 and their accruing impact. It is a synthesis of reports, ground experiences of victims and responders in affected communities. The report highlights the critical needs of affected persons and the response measures put in place by government and partners, as well as pending recovery needs.

The ASDR 2020 is the inaugural report and will therefore form the First Edition. Every edition is aimed at showcasing a selected theme related to enhancing risk awareness, prevention, preparedness, better response, sustainable recovery and resilience building. The theme for ASDR 2020 is **"Know Your Risk"** to amplify the first ever Uganda National Risk and Vulnerability Atlas which points out the hazards, risks, vulnerability and exposure of all sectors of the Ugandan society to devastating impact of disasters, and provides guiding actions that need to be undertaken to mitigate risk.

By publishing the disaster occurrences and their multi-sectoral impact, the ASDR 2020 is informing the public of what risks comprise danger to lives, livelihoods, property, infrastructure and social services; as well as what they can do to proactively minimize damage and loss.

The ASDR 2020 is a product of qualitative and quantitative methodologies. Secondary data analysis formed the main source of information since throughout the year, Government and humanitarian partners conduct assessments as events happen. To generate an annual report, the various reports are analyzed, synthesized and complemented with selected case studies as applicable. Case studies of hazard, risk and disaster profiles and incidences were profiled to highlight the ever present and increasing reality of our days – disasters defying human ingenuity.

Climate change, weather variability, environmental degradation, unplanned urbanization among others, are increasing the vulnerability of Ugandan citizens, livelihoods and infrastructure to the negative impact of disasters. Unfortunately, efforts to manage the disaster risk is partially hindered by lack of well documented disaster data including impact on the various sectors of society as well as tools to measure and gauge progress towards resilience.

James Collins Dombo
Ag Permanent Secretary, Office of the Prime Minister

ASDR Context

Chapter

01

ASDR - 2020

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ASDR 2020

ASDR Overall Goal

"

The overall goal of the ASDR is to inform the government and non-government stakeholders, private sector, development partners, civil society, communities and members of the public about the status of disaster occurrences, progress in responding and managing disaster risks, gaps and recommendations for enhancing disaster risk management.

ASDR Objectives

Objective One

Profile and present disaster events that devastated the country through the year 2020.

Objective Two

Highlight the socio-economic and environmental impact of such disasters in 2020.

Objective Three

Provide a disaster forecast for the year 2021 and recommend mitigating actions.

Objective Four

Identify gaps in disaster risk management and propose recommendations for improvements.

About ASDR

The ASDR is an annual publication by the Department of Relief, Disaster Preparedness and management, to profile disaster and emergency events that happen in a given year. Throughout the year, the Department receives reports about disaster occurences from various government agencies, districts, partners like NGOs and CSOs operating in communities, Uganda Red Cross Society, community reports and situational reports from the National Emergency Coordination and Operations Centre. These are complemented by validation exercises and field assessments condicted by the Department's technical staff. Additional information is obtained from sources like the monthly disaster Infographic reports produced by the IOM, and verifiable media sources. The above data is then subjected to rigorous analysis and corroboration to derive the annual state of disaster reports highlighting the critical needs of affected persons & the response measures put in place by government & partners, as well as pending recovery needs. The ASDR 2020 was made possible through effort and contribution from technical officers from OPM, other Ministries, District Disaster Management Committes, UN Agencies like UNDP, IOM, UNICEF and others.

The world as we knew it is in calamitous transition, and without deliberate effort to prevent, mitigate and adapt, the present and future we desire is at stake, due to increasing vulnerability, hazards, risks and consequently disasters.

Introduction

The year 2020 was unprecedented in more ways than one.

Prolonged torrential rains pounded several parts of Uganda triggering multi-sectoral flooding impact in 82 districts out of the 135 districts. Besides the usual flooding, a twist to the 2020 flooding was an unprecedented rise in water levels of the major lakes i.e. Lake Victoria, Kyoga and Albert, as well as River Nile and Sezibwa, among others. The rise in water levels elicited in-land flooding in all communities neighboring lake shores and river banks, up to 3km inland in some communities. Landing sites and entire villages in Buliisa, Kayunga and Nakasongola, for example, have been sub-merged and turned into fully-fledged extensions of the water bodies.

Needless to say, on Saturday 21st March 2020, Uganda registered her first positive case of Corona Virus Disease 2019 (COVID19) and the measures that followed, albeit necessary, stifled lives and livelihoods, introduced 'a new normal' in innumerable ways. One year later, the country is yet to regain

normalcy. With a cumulative 39,606 COVID19 positive cases and 325 deaths as at January 31st 2021 (MoH Uganda, 2021), several sectors of the economy still not operational and others operating at half capacity due to lockdown measures, the impact of COVID19 on lives, livelihoods and systems lingers on, yet to be measured because the pandemic is still raging.

After nearly 70 years, East Africa witnessed the resurgence of desert locusts. The desert locusts made land fall in North-Eastern Uganda on February 9th 2019, affected crops and vegetation mainly in the Karamoja districts and Teso. To-date, the desert locusts still prevail, but thanks to strong cross-border initiatives across East Africa, the success in fighting the invasion in Kenya often translated to reduced risk of invasion in Uganda.

"Serving a little better everyday"

Although the cardinal role of the security forces is to preserve and defend the sovereignty and territorial integrity of Uganda, the need for them to engage in saving lives during disasters and emergencies, and to ensure advancement of agendas for resillient communities has never been more vital.

This role is embedded in the history, culture and socio economic factors accentuated by the Constitution which provides among others the UPDF "to cooperate with the Civilian authority in emergency situations and in cases of natural disasters"

The engagement of the security forces in disaster management therefore cannot be over-emphasised. Many times the forces have been first line responders during disaster incidents.

Evidently, when the country had a desert locust invasion in 2019/20, the UPDF was out to battle the unconventional enemy in the fields.

Recently, as the world was shaken by an unprecedented COVID 19 Pandemic that compelled the country into a lockdown the forces were out supporting the door to door distribution of relief food to save and sustain lives of the vulnerable persons. This is in addition to the numerous operations that security forces have supported in response to landslides, floods, displacements and civil unrest.

In addition the UPDF and UPF contiinue to support the NECOC with technical capacity.

Brig Gen. Stephen Oluka
Head of NECOC - OPM

Background

—

Floods, drought, landslides, hail/wind storms, fire, terrorist attacks, pests and diseases, earthquake, human and livestock epidemics are not a new phenomenon in Uganda. These hazards are recurrent in some communities and sporadic in others, depending on natural geography, ecosystem, structural and social vulnerability. What is novel however, is, the magnitude, intensity and scope of impact, that these hazards are manifesting into disasters.

Whereas the natural hazards have largely remained the same, the vulnerability and risk factors have evolved, albeit negatively. Additionally, human induced especially socio-technological hazards are increasingly changing the disaster risk landscape.

Uganda's hard-won development gains are increasingly prone to erosion by naturally and human induced disasters, hence undermining socio-economic development aspirations. With increasing disasters, it is increasingly becoming unlikely that Uganda will meet the targets of the Sustainable Development Goals (SDGs) by 2030 and the Sendai Framework for Disaster Risk Reduction (SFDRR) 2030. Climate change and hydro-meteorological disasters are challenging the established agricultural based livelihoods of over 80% communities in Uganda. Whatever plans and preparations for a desired future - Uganda therefore should not be devoid of measures to combat climate change and its consequent weather- related vagaries.

Predictions show that by 2050, two-thirds of the World's population will be living in cities and urban areas (UNDRR,2020), which drives us to a conclusion that our future is urban. Uganda has started her urbanization journey with the creation of an additional 7 cities in 2020 and more 8 planned by 2023. By end of 2019, 6.0% of Uganda's population was

urban, and this trend is predicted to increase every year. With the current cities and more in offing, comes more urban centers, which raises the need to make urban living safe and practical for everyone. Existing and emerging cities and urban centers in Uganda are however still challenged with systemic risk, climate change and disasters, especially flooding, pollution, fire and other socio-technological risk drivers.

The urban risk continues to be exacerbated by rapid population growth, high rural-urban migration, inequality, among others, which factors provide a conducive environment for unplanned settlements / housing and slums. For example, the rise in the water levels of Lake Victoria in 2020 revealed a harsh reality of the adverse cost of unplanned urbanization and environmental degradation in metropolitan Kampala and surrounding areas of Wakiso and Mukono. Unplanned urbanization also strains effective social service delivery, yet this is critical to building urban resilience.

The urban risk reduction agenda can therefore only be sustainable if it is spearheaded by city, urban and local government authorities, since these are not only the first responders but also hold the primary responsibility for risk-informed physical and land use planning. With unprecedented challenges heightened by climate change and rural-urban immigration, there is urgent need to strengthen the capacities of urban authorities to reduce and manage risk in an effective and sustainable manner.

NECOC Officers using a drone to validate reports in the aftermath of floods and landslide in Bundibugyo District.

Overview of Disaster Impact in Uganda.

—

Disaster impacts have continued to erode Uganda's national development gains, in public and private sector investments. In the process of compiling the National Risk and Vulnerability Atlas, it was established that disaster losses due to prevalence of different hazards were costing Uganda a significant percentage of the GDP. For example, parts of Nakasongola, Kayunga, Buliisa, and Ntoroko have been sub-merged and turned into fully-fledged extension of the water bodies.

-3.5%

Average reduction of GDP perfomance due to disaster (case period 2010 - 2014)

$756m

Total Loss due to damages and losses of disasters between 2010 - 2011.

Cost of Relief
$89.3
billions

An estimated 2,718 Ugandans have lost lives due to landslides - (1900 - 2018).

Food Insecure
5M PEOPLE

Cost of Relief
$6.7
millions

In 2016, drought left approx 5million people food insecure and about UGX 25 billion diverted from development activities to relief.

Affected
50,000 PEOPLE

Cost of Relief
$62
millions

Each year, the impact of floods in Uganda is estimated at USD 62million in GDP, and directly affecting 50,000 people and between 1993 -2018, flood had destroyed 65,458 houses.

Destroyed
10,458 HOUSES

Cost of Relief
$22.14
millions

Earthquake Risk analysis shows average annual loss[1] of USD 22.14 million and by 2018, earth quake had destroyed 10,458 houses, making it the second most destructive after floods. Even though with a long return period, when earthquake occurs, the damage and loss is enormous.

Events
2,066 INCIDENTS

Deaths
1,332 PEOPLE

Between January 2016 and June 30th 2018, a total of 2,066 drowning events were reported out of which 1,332 (64%) died and 734 (36%) survived.

Strikes
70 STRIKES/KM

Deaths
586 PEOPLE

Uganda suffers approximately 70 lightning strikes per kilometer per year and between 2007 – 2014, 586 people, (395 of whom were learners) were killed and 727 injured by lightning.

[1]Average Annual Loss (AAL) is the long term expected losses per year, averaged over many years and linked to the approximate return periods of specific hazard with significant intensity events.

Regaining
development gains

Elevating
risk awareness
—

The National Risk and Vulnerability Atlas (NRVA) should be localized at community level to enable communities especially those living in disaster risk zones play more proactive roles in risk and disaster threat identification as well in developing and implementing preventive, mitigation and preparedness actions against the identified risks.

2020 - The Crunch Year:
A tale of anguish wrapped in a blessing.

—

Disasters are by no means strange to Ugandans but the year 2020 was unprecedented. Notably, two major events stand out from the various disasters that occurred in 2020. COVID-19 and floods which happened in an overlapping fashion triggering cascading multi-sectoral negative impact.

Ideally, extensive rains signify large of amounts of water, which is crucial to improved soil moisture conditions hence a flourishing agricultural output; adequate water reservoirs for crop and livestock production; sufficient water volumes to power hydro-electricity generation; extended breeding grounds for fish reproduction; and everything lush and green. Undoubtedly, water is a blessing!

However, the heavy rains in 2020 brought with them a twist to the blessing – increased water triggered a historical

record of a rise in water levels of all the major rivers, lakes and wetland systems in Uganda. The rise in water levels hence pushed the river banks, lake shores and wetland boundaries exponentially inland, invading farm lands, gardens, protected areas, sub-merging infrastructure, settlements, health and education facilities, leaving a trail of destruction including displacement of entire villages. Moreover, the flooding triggered by rise in water levels happened concurrently with the periodic flooding of low-lying communities, and flash flooding in urban areas. The Floods were further accompanied by hailstorms, landslides, lightning and windstorms among others. In the end, the 2020 heavy rains turned out to be a 'tale of anguish wrapped in a blessing'.

Analysis from Post Disaster Assessment

According to an OPM/UNDP Disaster Needs assessment report (2020) carried out in 84 districts in the 11 sub-regions of Uganda, respondents reported devastating multi-sectoral impact from floods, landslides, lightning, windstorms, hailstorms, desert locusts, and drought.

2020 Direct Economic Loss
According to the assessment findings, in 2020 disasters caused direct economic losses worth UGX 563.24billion, which is equivalent to 0.42% of the nominal GDP of Uganda with losses to sectors (fig 1).

Fig 1: 2020 Direct economic loss

Sector	Value	%
Water	23.88 Bn	4%
Education	35.44 Bn	6%
Housing	154.21 Bn	27%
Health	31.86 Bn	6%
Agriculture	77.37 Bn	14%
Transport	206.73 Bn	37%
Environment	33.75 Bn	6%

Sectoral Impacts

Chapter
02

Persons Affected

356,639 H/Holds

direct effect on 356,639 households with 1,759,079 persons.

Persons Displaced

26,056 H/Holds

26,056 households with 126,182 persons were displaced.

Deaths

72 Persons

Flooding caused deaths of 72 people
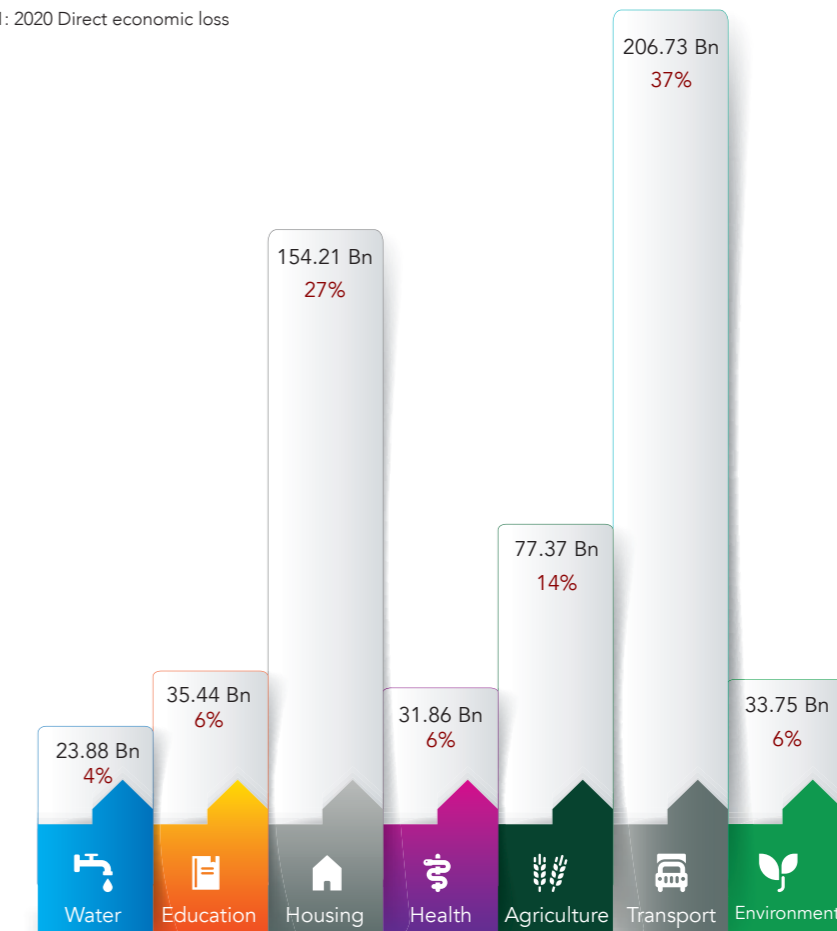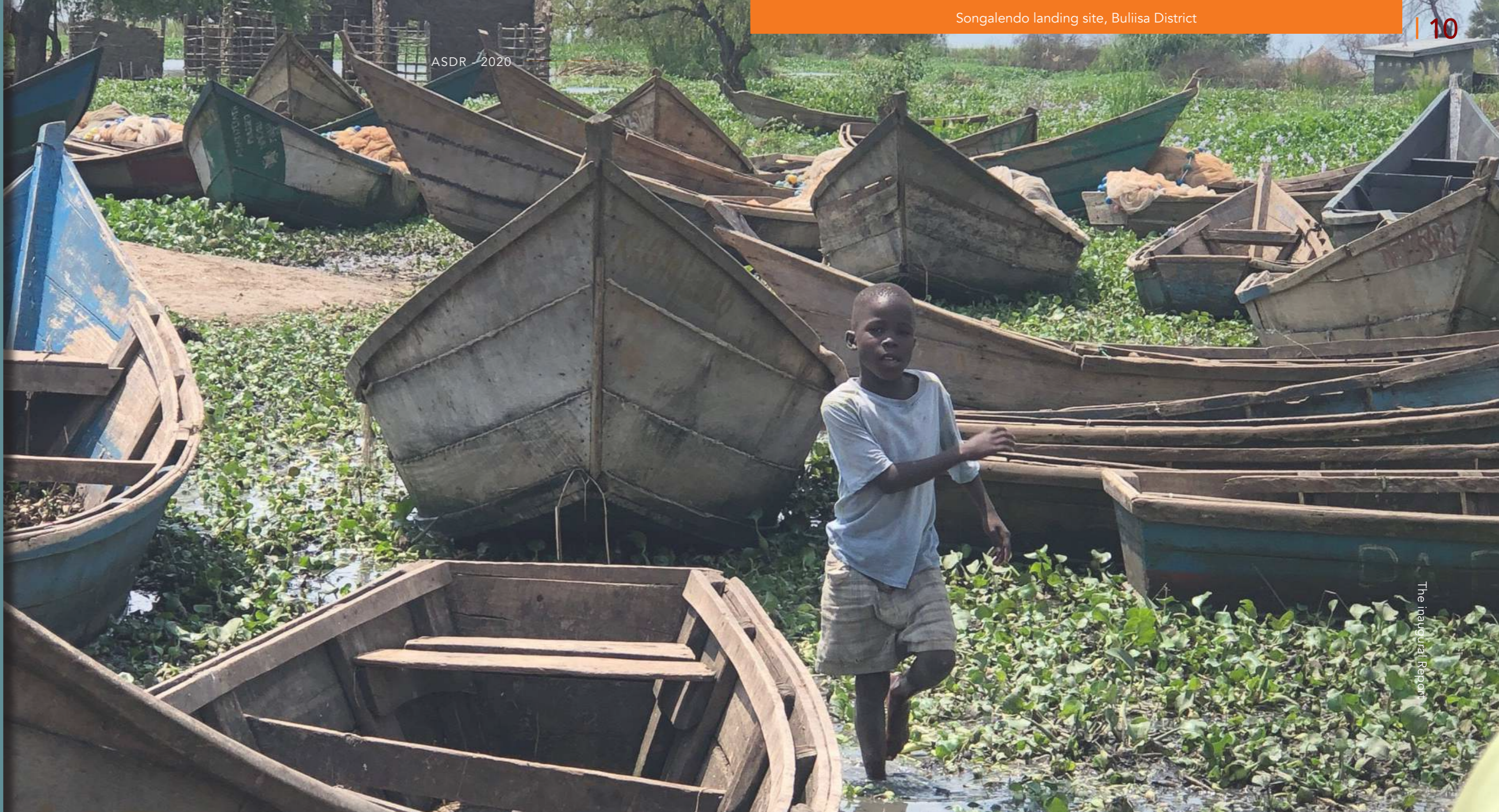
An inundated homestead in Mpigi District

2020 Sectoral Disaster Impacts

The 2019/20 flooding caused death, injuries and displacement; loss of livelihood sources; destruction of infrastructure, property and gardens; limited access to critical facilities (schools and health centers); reduction of cattle prices in major markets; sexual and gender-based violence; and increased crime cases in disaster-hit areas.

The last quarter of 2019 was characterized by heavy rains which continued in the second, third and fourth quarters of 2020. The prolonged heavy rains caused flash floods in urban areas, water logging and flooding in most parts of Western, Central, Eastern and Northern Uganda. Additionally, the heavy rains caused a record setting rise of water levels in major lakes i.e. Lake Victoria, Lake Albert and Lake Kyoga; and major rivers namely River Nile, River Sezibwa and their tributaries. Major wetland systems also saw a rise in water levels with some submerged into water bodies.

The flood affected population lost food crops, livelihood sources and houses. Social service delivery was greatly disrupted by enormous damage to roads and bridges, health facilities, water points, among others. The affected population especially the IDPs lack access to food, safe water, shelter and other basic services.

356,639 Households Affected with **1,759,079** Persons

26,056 Households Displaced with **126,182** Persons

72 DEATHS
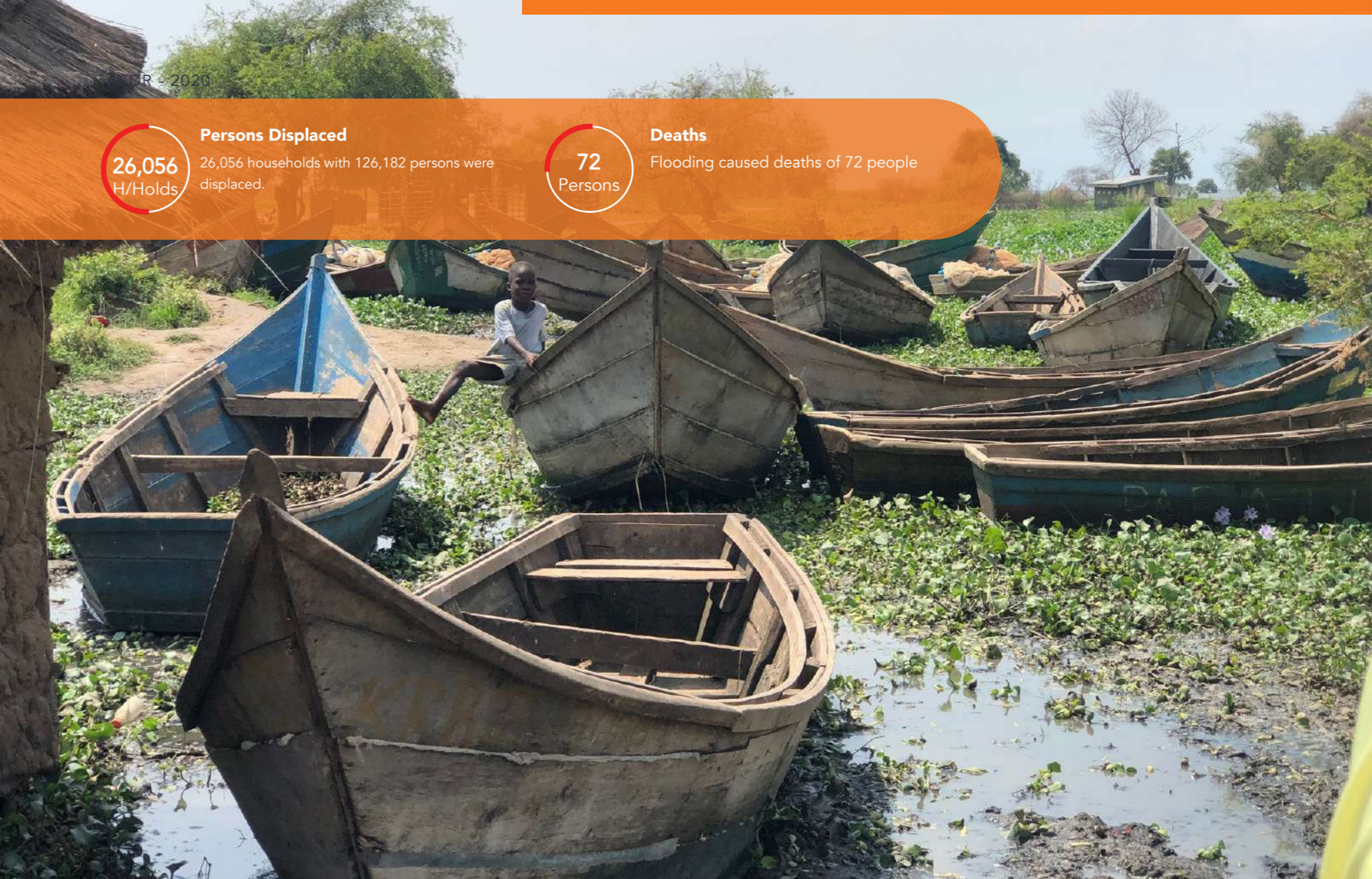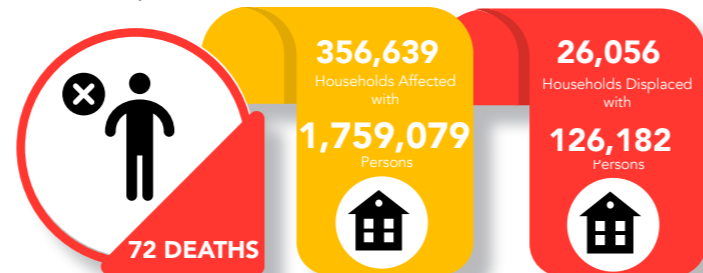
The rise in water levels of the various water bodies did not only displace communities, but also devastated livelihoods especially for the fishing communities. The picture above shows idle fishing canoes since the owners could nolonger access the lake.

Disaster Impact by sub-region

The Post Disaster Assessment revealed that Karamoja, South Western, Central and Lango experienced the biggest number of disasters during 2019/2020

Busoga
Buyende, Luuka, Namayingo, Kamuli, Jinja, and Mayuge

Elgon
Kapchorwa, Bukwo, Kween, Tororo, Mbale, Sironko, and Manafwa

Central
Rakai, Kyotera, Masaka, Mpigi, Nakasongola and Luwero, Mukono, Kayunga

Karamoja
Napak, Nakapiripiti, Moroto, and Amudat

Rwenzori
Kyegegwa, Kyenjojo, Kamwenge, Ntoroko, Bundibugyo and Kasese.

South-Western
Rubanda, Rukungiri, Kisoro, Kabale, Rukiga and Isingiro

Lango
Amolatar, Otuke, Kwania, Alebtong, Apac, Dokolo

West Nile
Arua, Packwach, Nebbi, Yumbe, Moyo, Obongi, Adjumani, Zombo

Key:
Drought
Desert Locust
Earthquake
Windstorm
Floods
Hailstorm
Landslides
Lightning

Disaster Impact by sector

The assessment showed that floods had the greatest multi-sectoral impact, followed by Landslides and windstorms affecting 80% of the sectors. Desert locusts and hailstorms had the least multi-sectoral impact. The gender sector was the most affected by all profiled disasters; followed by agriculture and food security sector which was affected by 90% of the disasters. Housing, education, health, environment, and sociodemographic sectors were affected by 57% of the disasters. The transport sector experienced the least number of hazards, but recorded the greatest damage.

Sociodemographic & economic
Water & Sanitation
Agriculture & Food Security
Housing
Health
Education
Transport
Environment
Gender
Security

Loss due to the 2020 disasters by sector and region

The 2019/2020 disasters in Uganda led to an estimated loss of about 563.2 billion shillings to all sectors. The sectors that experienced the biggest loss were transport and housing with 206.7 billion shillings and 154.2 billion shillings respectively whereas the sector that experienced the least loss due to disasters was water and sanitation with 23.8 billion shillings (table 1). Regionally, Central and Busoga regions suffered the most due to disasters with an estimated loss of 99.1 billion shillings and 96.8 billion shillings respectively whereas the West Nile experienced the least loss of about 2.7 billion shillings.

Table 01: Loss due to the 2020 disasters by sector and region

	Transport	Housing	Agriculture	Environment	Education	Health	Water	Total
Elgon	26,076,700,000	39,880,000,-000	6,859,786,200	935,000,000	5,126,299,671	-	6,829,291,000	85,707,076,871
Bunyoro	1,990,417,048	9,672,000,000	-	193,000,000	562,880,000	-	-	12,418,297,048
Busoga	29,247,000,000	39,060,000,000	22,051,233,208	-	6,378,900,000	-	91,000,000	96,828,133,208
Central	52,392,000,000	13,500,000,000	700,959,000	24,103,000,000	4,469,865,771	75,600,000	3,867,000,000	99,108,424,771
Karamoja	16,487,000,000	15,226,000,000	8,127,215,000	7,606,000,000	2,509,435,000	1,262,766,000	3,004,698,000	54,223,114,000
Lango	21,776,400,000	22,240,000,004	18,255,294,524	-	7,138,000,000	-	-	69,409,694,528
Rwenzori	35,736,000,000	12,111,500,000	8,794,723,450	720,000,000	4,787,760,000	30,139,195,000	3,428,000,000	95,717,178,450
South West	21,033,651,900	2,519,000,000	12,582,907,573	-	3,904,822,513	385,100,000	6,656,000,000	47,081,481,986
West Nile	1,990,417,048	-	-	193,000,000	562,880,000	-	-	2,746,297,048
	206,729,585,996	154,208,500,004	77,372,118,955	33,750,000,000	35,440,842,955	31,862,661,000	23,875,989,000	563,239,697,910

ECONOMIC SLOW DOWN DUE TO COVID 19

Besides the direct economic losses above, COVID-19 caused slowdown in economic growth especially in the second half of the FY, and increased government borrowing aimed at mitigating effects of the lockdown. There was negative GDP growth of -3.2% by second quarter of FY2019/20, loss of over 1,000 jobs in tourism, and deficit in Non-Tax Revenue (UGX 628.30 billion) due to disruption of hospitality industry. In addition, the country experienced a 50% reduction in business activity and international trade tax collections registered a shortfall of UGX 1,220.25 billion in the FY 2019/20 (OPM 2021).

Ugx 563,239,697,910

TOTAL LOSS DUE TO DISASTERS

+14%
Increament from year 2019

Traffic, Road safety, Fire and Rescue emergencies.

Fire and Rescue emergencies: There was a 1.6% increase in incidents, from 999 incidents in 2019 to 1,015 in 2020. Fire incidents were mainly caused by unattended charcoal stoves/candle wax/matchbox, Electrical short circuit, and heated appliances.
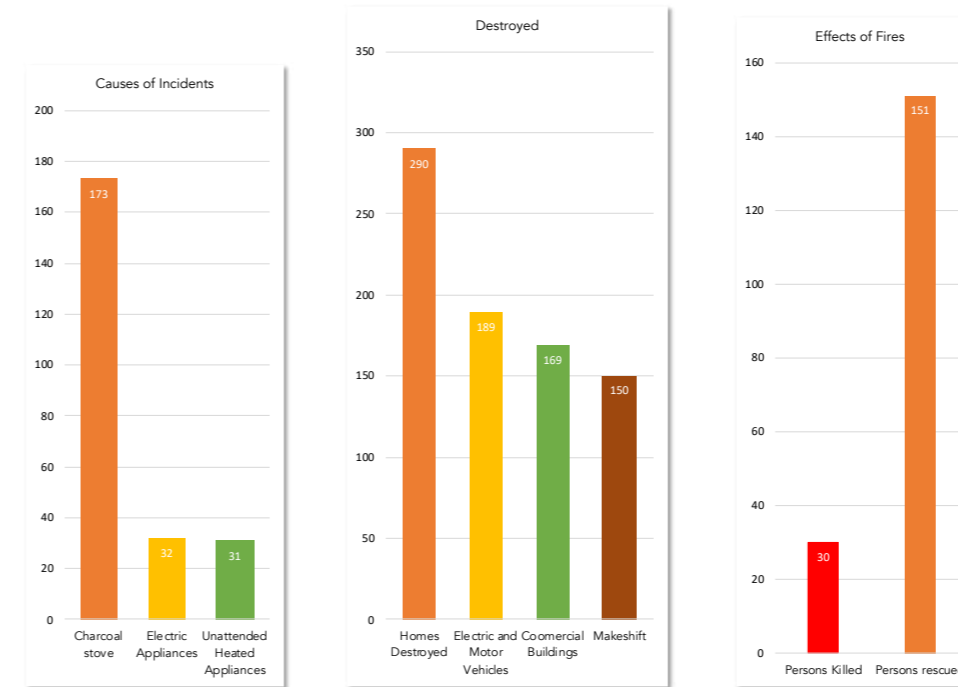
Road safety: There was a 4.7% reduction in the number of crashes reported in 2020 from 12,858 crashes reported in 2019 to 12,249 crashes reported in 2020.

Fatal crashes reduced by 4.1%, serious crashes reduced by 3.2%, and minor crashes reduced by 8.2%.

With 13,012 casualties/victims from crashes in 2020 compared to 14,690 casualties in 2019, representing a reduction of 11%.

Causes of Incidents

Destroyed

Effects of Fires

Comparison of crashes between 2019 & 2020

Fatalities from crashes

Casualities
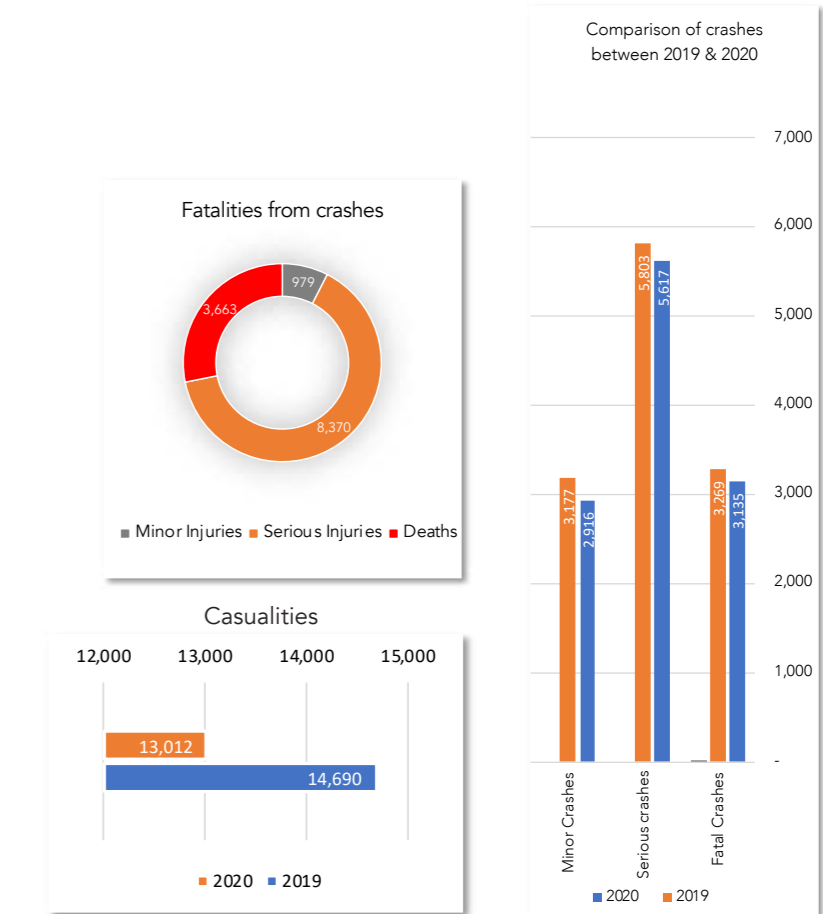
Socio-demographic and Economic sector

80 DISTRICTS

REPORTED ADVERSE EFFECTS OF FLOODS, LANDSLIDES, HAILSTORMS AND WINDSTORMS IN 2020

A comprehensive assessment of the damage and loss was conducted in 54 districts. 72 deaths and 1,326 injuries were reported as directly caused by the disasters. A total of 1,759,079 people or 356,963 families were affected (IOM/OPM Info sheet November 2020; OPM disaster assessment reports, 2020).

46%

54%

17.7%   7.7%

37.2%

37.4%

■ Senior Citizens   ■ Youth(18-49)   ■ Children(5-18)   ■ Babies(<5)
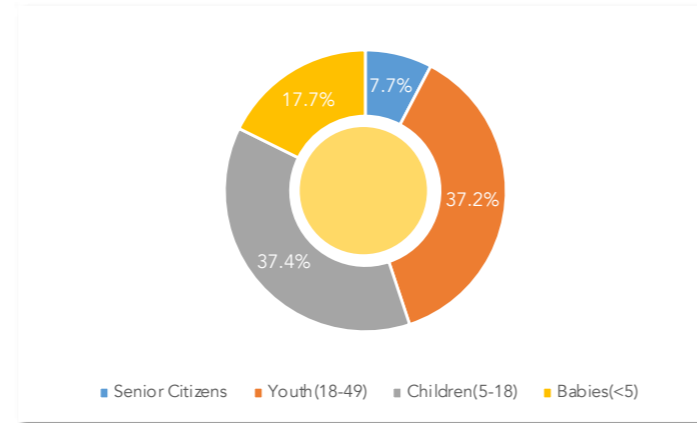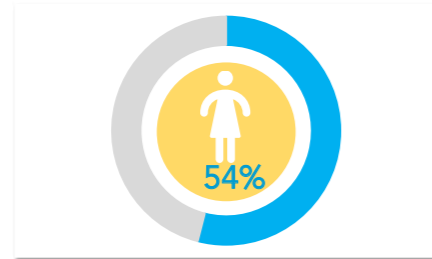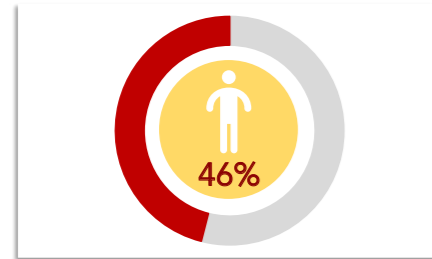
In terms of gender and age: 54% were women and 46% were men, 17.7% babies with age less than 5 years, 37.4% children between age of 5 and 18 years, 37.2% youth with age from 18 to 49 years and the remaining 7.7% seniors above 50 years (National Population and Housing, Census 2014). 13,695 of the total affected population were Persons with Special Needs (PSNs).

Locals in numbers in Aloet Community Market, Soroti District without much regard to COVID 19 SOPs

Summary of the socio-demographic and economic characteristics of the disaster affected sub-regions

> The greatest number of people affected by disasters were in Busoga sub-region whereas the biggest number of displaced people due to disasters were found in Western (Kasese, Ntoroko, Buliisa) and Lango sub-region. Most deaths due to disasters were reported in South Western Uganda, while the biggest number of injured people were recorded in Busoga sub-region (table 3). The key informants revealed that the elderly and children were mostly affected by disasters. This group had difficulty in fleeing the affected areas and the children were highly affected by water-borne diseases.

Table 02: Socio-demographic and economic characteristics of the assessed sub-regions

Sub-region	Population	HH Size (%) by Gender		HH Average age group	Litracy level (%)	HH Income range (Monthly in UGX)
		Male	Female			
Bunyoro	1,423,937	48.3	51.7	19-25	61.8	100,000 - 300,000
Busoga	3,250,328	47.7	52.3	19-25	52.6	100,000 - 300,000
Central	1,972,686	48.7	51.3	13-18	68.8	100,000 - 300,000
Elgon	1,865,599	48.8	51.2	19-25	66.7	Less than 50,000
Karamoja	857,174	48.1	51.9	26-35	31.8	50,000 - 100,000
Lango	1,290,471	49.7	50.3	19-25	68.7	100,000 - 300,000
Rwenzori	2,519,910	48.9	51.1	13-18	62.8	100,000 - 300,000
South Western	1,824,490	48.6	51.4	19-25	70.7	100,000 - 300,000
West Nile	789,927	49.7	50.3	19-25	62.5	50,000 - 100,000

Table 03: Population and households affected by disasters in the different sub-regions

Sub-region	Affected		Displaced		Deaths	Injured
	Household	People	Household	People	People	People
Bunyoro	18,266	131,101	6,008	18,053	-	7
Busoga	70,852	310,399	500	-	-	700
Central	15,076	72,097	1,574	6,838	17	-
Elgon (Incl. Sebei)	-	150,929	-	-	4	-
Karamoja	48,257	241,471	10,146	15,913	1	-
Lango	47,324	267,005	1,361	49,385	15	49
Rwenzori	2,538	12,690	1,737	8,685	9	85
South Western	104,006	305,396	1,654	15,468	30	485
West Nile	46,320	267,991	3,076	11,840	-	-

Note: The table above was updated to included affected persons / households from Kayunga and Bullisa districts which were not part of the post disaster assessment.

Internal Displacement.

126,182 persons were internally displaced translating to 26,056 households. 29,508 people or 5,902 families had returned to their places of origin by December 2020. Most of the displaced people sought temporary shelter in their relatives' houses. Others continue to temporarily reside in schools, churches and public centers in very crowded conditions lacking beds, hygiene items and food. The crowded displacement conditions increase the risk of COVID-19 transmission. As schools re-opened, IDPs in schools were asked to vacate which heightened their plight.

Table 04: Relief Internventions

Relief items	Quantity
Maize Flour	3,212,288 Kgs
Beans	1,043,578 Kgs
Rice	1,000 Kgs
Cooking Oil	800 ltrs
Sugar	26,401 Kgs
Milk	2,810 Ltrs
Juice	3,400 ltrs
Mosquito nets	1,861,744 pieces
Blankets	2,300 pieces
Jerry cans	113,666 pieces
Basins	2,900 pieces
Iron Sheets	5,160 pieces
Tarpaulins	29,935 pieces
Soap	424 bars
Powder detergent	200 Kgs
Face Masks	180,000 pieces
Sanitary pads	3,880 packets

Response interventions for affected population.

Government of Uganda and partners provided relief food and non-food items to the disaster victims in different parts of Uganda covering a total of 72 districts. The items are itemized in table 04 on the left:

Recommendations for socio-demographic sector.

To ensure the disaster victims' needs are well identified and responded to, there is need to;
- Identify and assess the affected people by disaggregating them by age and sex since different age groups and gender have varying needs.
- Provide communities access to soft credit to restart their livelihoods.
- Provide psychosocial support to the affected community members
- Carry out registration of village household members to obtain baseline data for recovery interventions
- Sensitize the communities about risks and hazards, environmental management, population control measures and income generating programs
- Promote Disaster Risk Insurance Mechanisms

Agriculture and food security

A total of 5,424.5 acres of crops were destroyed by floods (OPM/UNDP Flood needs assessment report), while geospatial analysis estimated 50,000 hectares of agricultural land affected by flooding in November 2020 alone, with Karamoja, West Nile, Western and parts of Central Uganda as most affected. In Kayunga district alone, over 6,000 acres of land were submerged by rising water levels of Lake Kyoga, River Nile and River Sezibwa, and most of this land was crop gardens and farm lands.

The 2020 disasters led to an estimated loss of about 77.4 billion shillings to the agriculture sector. Food crops were mostly affected with an estimated loss of about 49.9 billion shillings and cash crops were least affected with an estimated loss of about 5.8 billion shillings. The most affected food crops were beans, maize and banana plantations whereas the most affected cash crops were coffee and rice. A total of 228,453 livestock were affected by disasters with an estimated loss of about 21.7 billion shillings. Busoga region experienced the biggest loss of agricultural resources of about 22.1 billion shillings due to the 2020 disasters and the Central region experienced the least loss (table 5).
The flood induced crop and livestock production shortfalls are expected to continue in 2021 since most of the submerged and inundated crop and farm lands are still inaccessible

77.4+ Billion (Ugx)

Estimated loss to the Agriculture and food security sector

A flooded maize garden resulting from rising water levels of R. Nile in Kayunga District

36% Direct Employment

A vast number of Ugandans indirectly rely on agricultural related activities as their major source of livelihood. The impact on agriculture therefore directly contributed to reduced household incomes.

30% Contribution to GDP.

According to the UNHS (2016), Agriculture directly employs 36% of Ugandans contributing 20-30% of the GDP.

Table 05: Damage and Loss of agricultural resources in the different regions of Uganda due to the 2019/2020 disasters

	SUB-REGION							DAMAGE	LOSS (UGX)
Livestock	Busoga	Lango	South West	Rwenzori	Karamoja	Elgon	Central		
Chicken	102,566	95,618	200	86	569	30	631	199,700	1,999,278,000
Cows	1,013	16,350	124	403	58	10	42	18,000	18,096,600,000
Ducks	2,013	-	-	-	-	-	-	2,013	30,195,000
Goats	1,361	1,250	330	279	33	18	76	3,347	492,789,524
Pigs	-	2,006	-	73	-	-	2	2,081	524,359,000
Sheep	568	1,300	405	-	27	-	-	2,300	445,940,000
Turkey	1,012	-	-	-	-	-	-	1,012	70,840,000
Food Crops (Acres Damaged)								**228,453**	**21,660,001,524**
Bananas	300,000	-	75	1,914	-	316	96	302,401	993,599,220
Beans	360,000	-	11,561	3,870	-	2,780	15	378,225	13,535,984,150
Cabbages	-	-	594	-	-	-	148	742	152,800,000
Carrots	-	-	126	-	-	-	-	126	12,600,000
Cassava	-	-	-	2,161	17,500	15,000	3	34,664	3,395,384,370
Ground Nuts	-	-	-	-	16,000	3,750	-	19,750	3,672,500,000
Irish Potatoes	-	-	9,503	2,100	-	1,042	-	12,645	2,820,862,333
Maize	220,000	-	51	9,529	5,000	14,678	158	249,416	11,012,535,760
Passion fruits	-	-	10,007	-	-	-	3	10,009	4,997,998,200
Peas	8,000	-	834	-	-	-	-	834	334,720,000
Pineapples	-	-	26	-	-	-	18	44	190,200,000
Sorghum	-	-	1,120	-	10,500	-	-	11,620	1,050,075,000
Sweet Potatoes	3,200	-	2,857	220	12,500	1,000	221	19,998	1,613,249,408
Tomatoes	-	-	331	-	-	50	246	627	159,423,990
Vegetables	300,000	-	-	-	-	-	-	300,000	55,500,000
Water Melon	-	-	-	-	-	20	-	20	10,000,000
Cash Crops (Acres Damaged)								**1,686,171**	**49,939,232,431**
Cocoa	-	-	-	719	-	-	-	719	1,438,200,000
Coffe	15,000,000	-	34	3,039	-	-	46	15,003,119	3,549,832,500
Horticulture	-	-	120	-	-	37	-	157	128,400,000
Rice	340,000	-	45	-	-	5,000	-	345,045	5,971,800,000
Tea	-	-	-	23	-	-	-	23	14,040,000
Vanilla	-	-	-	172	-	-	-	172	214,562,500
Wheat	-	-	191	-	-	-	-	191	382,850,000
								15,004,426	**5,772,885,000**
Total	**22,051,233,208**	**18,255,294,524**	**12,582,907,573**	**8,794,723,450**	**8,127,215,000**	**6,859,786,200**	**700,959,000**		**77,372,118,955**

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Above: Masereka Daniel pointing to what was part of Cocoa Farm destroyed by mudslide in Bundibugyo District
Left: Flooded sorghum garden in Butaleja District.

Response interventions for the Agriculture and food security sector.

Government of Uganda and partners provided food relief to disaster victims in the year 2020 amounting to; 3,212,288 Kgs of Maize flour; 1,043,578 Kgs of Beans; 1,000 Kgs of Rice; 800 litres of Cooking oil; 26,401 Kgs of Sugar; 2,810 litres of milk; and 3,400 litres of juice.

Recovery Actions.

The following recovery actions were identified for the Agriculture and food security sector (OPM, National Recovery Plan 2020)

03 months
Short-term

OPM, National Recovery Plan 2020
—

a)	Provide the affected communities with farm inputs like fast-maturing seed varieties, fertilizers, pesticides and equipment like ox-ploughs, tractors and spray pumps to boost production.
b)	Offer credit to poor agricultural households at affordable rates.
d)	Strengthen the already established or engage farmers using the farmer field schools model
e)	Provide technical and advisory support to the affected farmers on post-harvest handling, produce storage, value addition, etc.
f)	Procure and replace affected/lost livestock, damaged beehives
g)	Supply livestock feeds and supplements to communities that cannot access grazing land.
h)	Provision of poultry chicks to families that

have lost their livelihoods to floods.
i)	Provide multiple vaccinations and deworming alternatives for livestock for example in Kwania district where cattle dips have been submerged by the floods.
j)	Support construction and repair of partially damaged fish ponds, stocking and providing fish feeds, Procurement of poly tanks (2000Ltrs) and solar water pump for fish tanks
k)	Construction of spillways on vulnerable ponds
l)	Allocate a post COVID19 marketing budget of USD 0.5M for the export crops to regain market share, to be channelled through the Uganda Export Promotion Board once supply chains open.
m)	Promote the Lead Firm structure model (business linkages) for the domestic market-agribusiness to widen the customer base
n)	Set up at least $2M fund to support research on production technologies, markets (domestic & manufacturing)

12 months
Medium-term

OPM, National Recovery Plan 2020
—

a)	Support the breeding of bulls at the community level to support livestock farming, construct water reservoirs and valley dams; support animal quarantines, vaccinations against diseases especially rabies and new castle, train community-based animal health workers.
b)	Construct silos to communities to increase food security; construct small-scale irrigation schemes.
c)	Strengthen the provision of extension services and popularizing government livelihood programmes such as Operation Wealth Creation, NUSAF III, Youth livelihood fund etc; Transportation of extension staff to offer technical services to the farmer communities
d)	Protect, restore and improve the livelihoods of affected communities.
e)	Sensitize communities about the Sustainable Land and Water Management (SLWM) techniques such as cover cropping, terracing and mulching
f)	Promote avenues for household income diversification

36+ months
Long-term

OPM, National Recovery Plan 2020
—

a)	Planning: Integrate disaster risk reduction into development and land use planning and support the development of community resilience plans.
b)	Financial support: Financial/capital investments should support community engagement in the promotion of climate-smart agriculture, particularly soil and water conservation structures. Support should also be extended to agricultural credit and insurance services.
c)	Infrastructure: Support communities that require machinery for post-harvest handling e.g. bean sorters and maize huller machines, maize mills to store farm produce. Strengthen community infrastructure through the construction of wells, dams, water ponds etc. Enhance structures to enable farmers to adopt surface irrigation.

d)	Sustainable land management: There is a need to enforce the construction of contours to control water run-off in the areas that are fragile such as hilly areas south-western Uganda
e)	Establishment of demonstration sites: In drought-prone regions, support the establishment of vegetable nurseries and training of farmers of how their farms can be irrigated by solar pumped water
f)	Promote pasture management: Train pastoralists on pasture conservation and management and making hay
g)	Sensitization, education and training: Sensitize farming communities on sustainable land management practices; strengthen the capacity of fish farmers in disaster coping strategies and management; and post-harvest handling techniques. Strengthen the provision of extension services in the affected areas.

Water and Sanitation

Floods in most regions contaminated the water sources with pollutants and/ or filled and washed away people's latrines. In communities affected by rising water levels especially communities and landing sites in Kayunga, Bullisa, Nakasongola and Ntoroko, safe water points (boreholes and yard taps) were submerged as well as pit latrines and public toilets. In other areas, protected springs and deep boreholes were reported as most affected. As a result, access to safe water became a challenge and sanitation was compromised with people opting for open defecation.

Assessment findings showed a reduction in the number of operational water sources after disaster events and also, the average distance travelled to access water increased for some water sources by more than 30 minutes. Women and children were most affected as the distance to access water increased.

It was further revealed that the latrine coverage reduced by 5-20% in flood and landslide affected areas. This was because the latrine facilities were either covered by mudslides/landslides or filled and washed by floodwaters. This left some households with no latrine facility to use hence resorting to using polythene bags and bushes as means of defecation. Continuation of heavy rains after flood events led to the washing of the fecal matter and solid waste into water sources and clogging of drainage channels.

The disaster events also covered the burning or dumping sites for solid waste thus, during and immediately after the events, there were no waste dumping sites and this led to the disposal of waste in open water and any other open spaces. The damaged roads further made the collection of solid waste by municipal councils a challenge and this led to the accumulation of solid waste in the disaster-affected urban areas. Some people were discouraged from constructing new latrine facilities due to fear that disaster events may continue. However, some community members picked up interest after disasters and constructed pit latrines.

Poor sanitation and lack of access to safe water increased the risk of water-borne epidemics like cholera and other poor hygiene-related diseases. Disasters caused an estimated loss of 23.6 billion shillings to the water and sanitation sector.

Fig 2: Categories of safe water supply technology: Src MWE June 2018
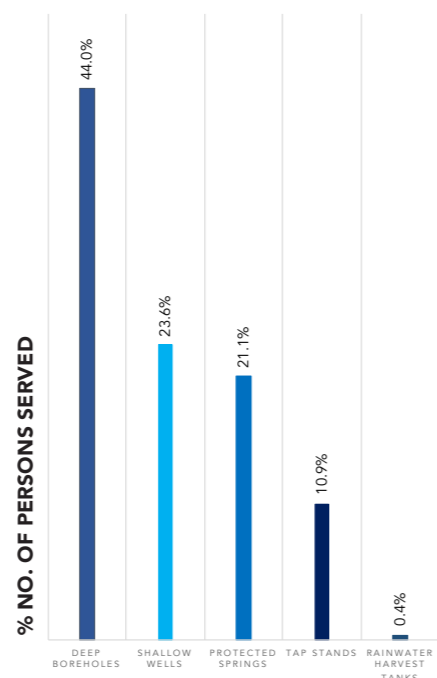
Access to safe water and proper sanitation was adversely affected by disasters especially floods and landslides. The most common water sources in Uganda are boreholes and shallow wells (fig 2) above.

80%

Ugandans have access to improved water sources

97%

Households are within 3 kilometres of their main water source.

83%
Of households in Uganda use pit latrines

3%
Use flush toilets

7%
Do not have a latrine facility or use open defecation

16%
Households in Uganda have handwashing facilities

6%
of the facilities are equipped with soap and water.

Sources: UNHS 2016.

23.6+
Billions (Ugx)

Estimated loss to the Water and Sanitation sector

Table 06: Damage and Loss of water sources in the different regions of Uganda due to disasters in 2019/2020

WATER SOURCES	SUB-REGION						DAMAGE
	Elgon	South West	Central	Rwenzori	Karamoja	Busoga	
Deep Boreholes	193	22	129	129	14	2	489
Gravitational Flow Schemes	-	1	-	-	-		1
Protected Springs	61	447	15	2	13	1	539
Rainwater Harvesting Tanks	158	119	107	-	-	3	387
Shallow Wells	128	19	84	2	35	2	270
Water Points on Rivers	1	-	-	-	200	-	201
Yard Taps for Public Use	47	381	10	14	-	4	456
Total	**588**	**989**	**345**	**147**	**262**	**12**	**2,343**
Loss (UGX)	**6,829,291,000**	**6,656,000,000**	**3,867,000,000**	**3,428,000,000**	**3,004,698,000**	**91,000,000**	**23,875,989,000**

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Flooded settlement on the shores of L. Victoria in Luzira Port Bell (Source: URN Online). The unattended to gabbage awash with flood waters created sanitation challenges.

Recovery Actions

The following recovery actions were identified for the Water and Sanitation sector (OPM, National Recovery Plan 2020)

03 months
Short-term

OPM, National Recovery Plan 2020

–

Provide: Clean drinking water, water tablets, hand washing facilities and detergent / soap, and mobile toilets to the affected communities

Water supply: Repair damaged water sources

12 months
Medium-term

OPM, National Recovery Plan 2020

–

Infrastructure: Strengthen already constructed floodwalls, construction and rehabilitation of destroyed and damaged water sources to increase access to safe water services; rehabilitation of shallow wells, boreholes, and springs that were swept away by storms; and creation of bigger banks or the valley tanks to check storm waters.

Improve latrine construction technology: Construct Ventilated Improved Pit latrines at the landing sites, markets, and trading centres, which can be emptied when full; and construct Ecological Sanitation (Eco-San) latrines for low lying areas that have a high-water table.

36+ months
Long-term

OPM, National Recovery Plan 2020

–

Equipment and technology: Establish small to large scale irrigation schemes to support agricultural production so that the communities that had encroached wetlands can quit; Install Dry Box technology for waste disposal in communities near swamps and underground water sources

Development of management plans: Support the development of wetland and catchment/micro catchment management plans; strengthen water user committees, wetland and catchment management committees

Solid waste management: Construct landfills to improve waste management

Installation of hydro meteorological early warning systems: Support regular issuance of seasonal climate outlooks; and Installation of flood forecasting systems/equipment on the major water systems. Document traditional early warning knowledge on disasters

Water facility development and maintenance: Construction of valley tanks, deep boreholes, to conserve water for the dry season; formation of water user committees; Installing solar-powered water pumps to enable semi-automatic water distribution in the urban centres; protection of water sources; desilting of valley tanks; monitoring water sources for possible drying up; planting of drought-resistant trees to moderate the microclimate.

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On the Left: A borehole rendered inaccesible due to flooding in Buliisa District.
On the right: A woman fetching water from an unprotected water source in Nambyeso, Kwania District.

Health Sector

60% HH within 5Kms of nearby health facility

The health sector is impacted by disasters mainly through damage to health infrastructure, medical equipment and constrained service delivery due to increase in disease burden.

Health infrastructure includes private and public health facilities ranging from clinics, health centres and hospitals.

The public health facilities are composed of health centre II, health centre III, health centre IV, regional referral hospitals and national referral hospitals (fig 3). According to UBOS (2014), 60% of the households in Uganda are within 5 kilometres of the nearby health facility.

Disaster Impacts on the Health Sector

The health sector was majorly affected by floods, windstorms, landslides, and lightning. The disasters damaged/destroyed the health facilities and equipment like medicine, shelves, drug fridges, shelves, registers, microscopes, furniture, ambulances and testing kits, and the transportation costs increased due to blocked roads.

There were several referrals of severe cases which were not manageable; reduced immunization rates in disaster-affected areas; the increased prevalence of malaria; increased cases of malnutrition; reduced hospital visits of HIV patients; delay in the delivery of medical stocks due to bad roads; delay in access to emergency health services; increased mortality cases due to malaria; and the paediatric ward in Kilembe Mines hospital was completely destroyed by floods.
In addition, Inaccessibility of roads due to disasters led to low antenatal attendance, increased malaria cases in pregnant women; low turn up for family planning services; increased cases of home deliveries; increased gender-based violence cases; increased maternal mortalities; and increased number of teenage pregnancies.

Health workers and community structures intensified on their surveillance beyond their routine and this increased resource utilization in terms of frequent ambulance services provided; the proliferation of new diseases such as pneumonia and bilharzia due to wet conditions; rise in communicable and water-borne diseases due to contaminated water sources; difficulty in surveillance due to impassable roads; the disease reporting tools and sheets were destroyed by floods; and a point of entry screening infrastructure was destroyed by floods in Kikuube district.

The 2019/2020 disasters led to an estimated loss of about 31.9 billion shillings to the health sector and the health
infrastructure were mostly affected with about 98%. Other health structural facilities that were affected included hospital beds, iron sheets and placenta kits (Table 7). The Rwenzori sub-region was the most affected area, where Kilembe hospital was greatly damaged and the Central region was least affected. In Buliisa district, a newly refurbished Butiaba Health Centre III was submerged by lake waters and currently patients are accessing temporary services from the neighbouring Wantembo Marine barracks health facility.

31.8+
Billion (Ugx)

Estimated loss to the Health sector

98% Effect on health facilities (2019/2020)

Figure 3: Types of health facilities in Uganda. | Data Source: MoH, 2017

Clinics 44.2 — HC II 35.7 — HC III 17.1 — HC IV 2.7 — Regional Referrals 0.2 — National Referrals 0.03
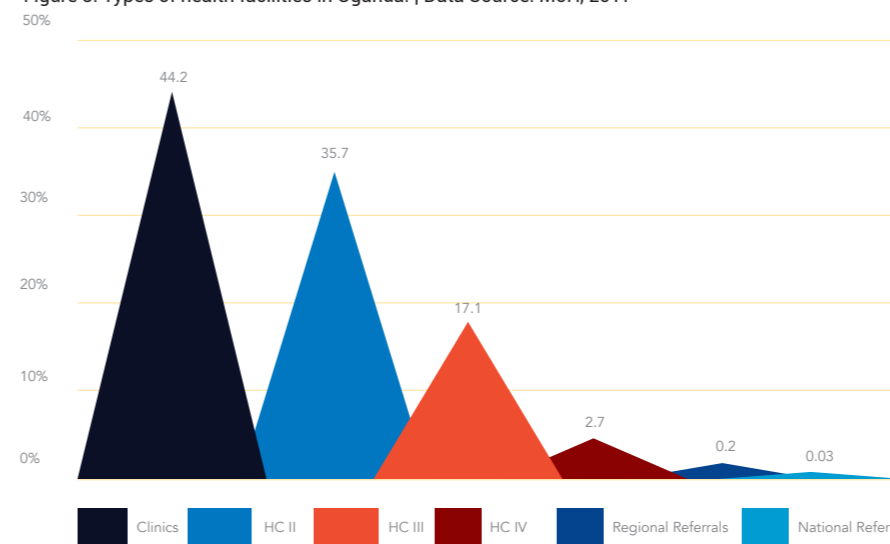
Table 07: Damage and loss of the health sector due to the 2019/2020 disasters

Items	Rwenzori	Karamoja	South West	Central	Damage	Loss (UGX
Boilers	-	7	-	2	9	9,000,000
Drugs (cartons)	5	-	12	-	17	24,500,000
Electricity wiring system	1	-	-	-	1	11,800,000
Fridges	-	8	2	2	12	40,000,000
Hospital Beds	2	33	-	38	73	28,500,000
Infrastructure Rehabilitation	9	6	3	2	20	31,209,811,000
Iron Sheets	125	-	93	-	218	11,750,000
Latrines	-	-	2	-	2	77,000,000
Mattresses	5	40	-	38	83	64,700,000
Medical equipment	-	-	7	-	7	2,100,000
Placenta kits	-	-	-	200	200	364,500,000
Solar Panel	4	-	3	-	7	19,000,000
Loss (UGX)	30,139,195,000	1,262,766,000	385,100,000	75,600,000		31,862,661,000

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Newly rehabilitated Butiaba Health Centre III in Buliisa District submerged by floods resulting from rising water levels of L. Albert. Notably, it is important for all stakeholders to undertake risk assesments for any development or social service project.

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People crossing flood water to access Rwangara Health Centre III in Ntoroko district

Recovery Actions

The following recovery actions were identified for the health sector (OPM, National Recovery Plan 2020)

03 months
Short-term

OPM, National Recovery Plan 2020

-

a)	Laboratory testing: Support diagnostic testing for pandemics (COVID-19) is critical to tracking the virus, understanding epidemiology, informing case management, and to suppress transmission.
b)	Logistics and supplies: Support government's initiative to distribute mosquito nets as one of the most cost-effective preventative measures for malaria control
c)	Budgetary allocation: Advocate for an increase in the budget to the National Medical Stores and health supplies. The

government budget allocation is 7.2% which is still far from the 15% target
d)	Public health: Provide mobile toilets at evacuation centres, camps and settlements and installation of community water and rainwater harvesting tanks. Construction of at least 6 stance latrines at the affected health facilities; and de-silting of the affected health facilities
e)	Standard operating procedures (SOPs): Strengthen the development and dissemination of health standard operating procedures astride the country. This is because there are many SOPs that have already been established however there is still limited implementation and adherence to them and development of procedures that support efficiency and smooth operations

of multisectoral stakeholders during the handling of complex disaster incidences.
f)	Medical logistics and supplies: Restock affected health facilities with medical and equipment supplies; deal with malnutrition, supply malaria treatment kits and mosquito nets to the most affected areas with higher malaria burden; supply temporary medical treatment facilities (tents); provide ambulances to health facilities (i.e. HCII, HCIII, and hospitals); Set up tents, and provide emergency drugs
g)	Medical treatment: Support immunization against diseases like trachoma, river blindness, elephantiasis etc.; and equip the health centres with necessary drugs and personnel

12 months
Medium-term

OPM, National Recovery Plan 2020

-

a)	Development of guidelines: Support the National guidelines for Quarantine in the context of COVID19 and guidelines for the use of masks
b)	Surveillance data management: Strengthen the disease outbreak surveillance and reporting department in the country
c)	Dissemination of health information: Advocate for the dissemination of health information through radio talk shows, and ensure that bulletins are shared to all

the stakeholders
d)	Capacity building: Support the health sector in the training of staff in the areas of system alerts, contact tracing, quarantine, laboratory and port health, and basic emergency care
e)	Medical logistics and supplies: Restock affected health facilities with medical and equipment supplies; deal with malnutrition, supply malaria treatment kits and mosquito nets to the most affected areas with higher malaria burden; supply temporary medical treatment facilities (tents); provide ambulances to health facilities (i.e. HCII, HCIII, and hospitals)

36+ months
Long-term

OPM, National Recovery Plan 2020

-

a)	Upgrading of health facilities: Plan and support the upgrading of the health facilities at all levels with better wage provision to attract and retain human resource personnel
b)	Human resource: Support the recruitment of health workers because the health worker (doctors, nurse and midwives) population ratio of 1.92 health workers per 1,000 population is still below the World Health Organisation recommendation of 2.8 per 1,000 population to achieve health care. Strengthen household health inspections; recruit more health staff to strengthen psychosocial support to communities and health workers; recruit more medical workers, and conduct training and placement of volunteers.
c)	Legislation: Support the enactment of the National Health In-

surance Bill, 2019 that seeks to create a National Health Insurance Scheme
d)	Health infrastructure: Support the increase of health facilities to increase access to quality health services, there is also need to renovate and expand regional health facilities to improve on the secondary care services, construct more modern pallet space warehouse for the National Medical Store. There is a need to establish specialized rehabilitation centres and construction and rehabilitation of completely and damaged health facilities and staff houses. Relocation and construction of hospitals in risky areas.
e)	Information management systems: Support the operationalisation and maintenance of the National Laboratory Information Management System
f)	Develop a Comprehensive Community Health Promotion Program Strategy: Support the development and implementation of a Comprehensive Health Communica-

tion Strategy for the Health Sector
g)	Research and innovation: Advocate for more funding to be increased to improve research in the recovery of outbreaks
h)	Sensitization, education and training: Support community sensitization on disaster management, empowerment of health workers on disaster management; community sensitization on WASH issues; and strengthen the VHTs with skills of mobilizing locals to visit health facilities for services.
i)	Planning and policy: Strengthen the integration processes of mainstreaming DRR in the District Development Plans, projects and programmes among others; Integrate health issues in disaster risk reduction strategies.
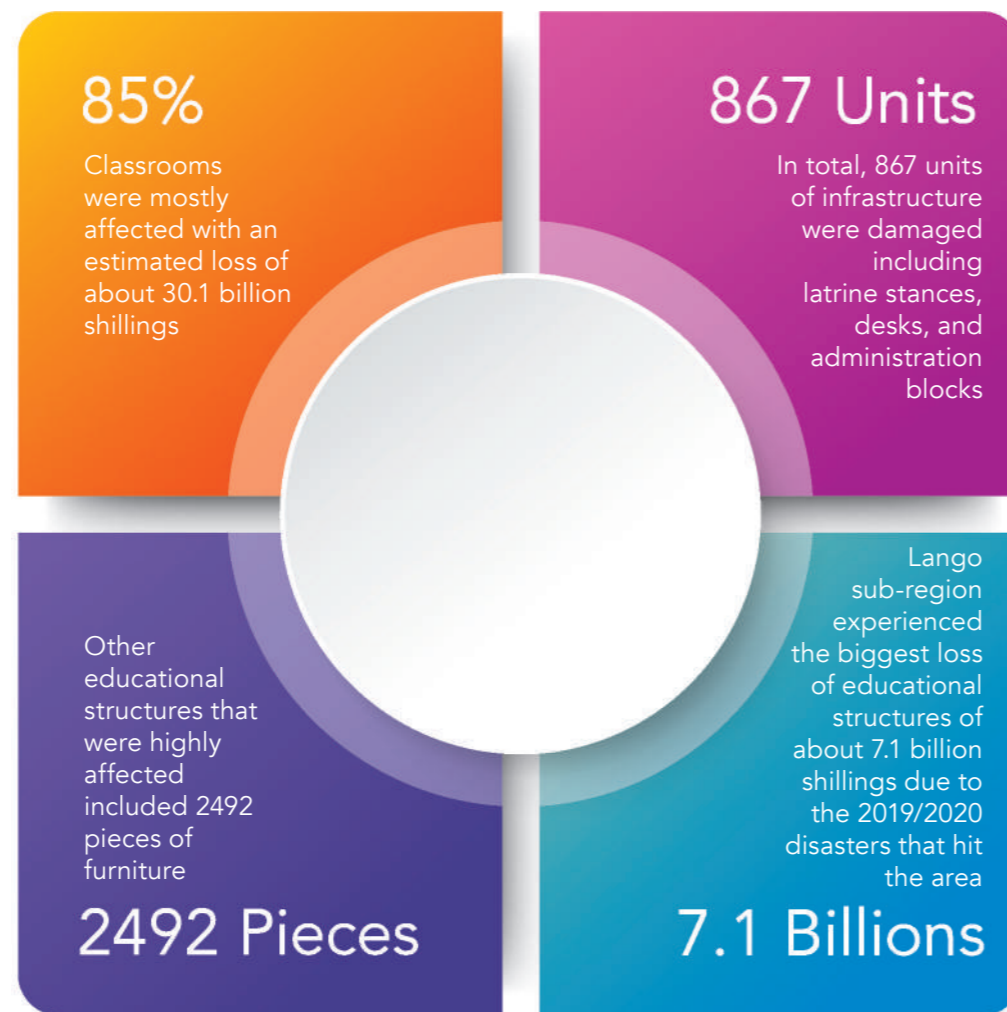
Education Sector

35.4+
Billion (Ugx)

Estimated loss to the Education sector

The disasters had a financial implication on the schools' budget and yet schools did not have contingency plans and budgets for such emergencies. Some of the schools used their finances to repair the damaged furniture, construct drainage channels and also renovate some parts of the infrastructure. Some schools introduced an extra fee through the Parents Teacher Association (PTA) of 1,000 Ugx and more for renovation or to be used in case of emergencies but this was seen as a challenge to the parents.

85%
Classrooms were mostly affected with an estimated loss of about 30.1 billion shillings

867 Units
In total, 867 units of infrastructure were damaged including latrine stances, desks, and administration blocks

Other educational structures that were highly affected included 2492 pieces of furniture
2492 Pieces

Lango sub-region experienced the biggest loss of educational structures of about 7.1 billion shillings due to the 2019/2020 disasters that hit the area
7.1 Billions

Impacts on the Education Sector

The education sector is majorly affected by floods, lightning, landslides, and windstorms. The disasters damaged/destroyed the classrooms, administration blocks, latrines, bathrooms as well as school furniture such as desks, chairs, blackboards among others. Some of the school gardens for example the sweet potato gardens of Ngariam and Obulengorok Primary schools in Katakwi district were also destroyed by floods.

The disasters affected the performance of students in the following ways; increased absenteeism from school and subsequent school dropout due to trauma; reduced access to school premises as the road networks were cut off by floods; inadequate food for students as floods destroyed school gardens; filled latrines with water which led to open defecation and exposure of learners to disease outbreaks, and all these led to the declined performance of students in national examinations. These effects were mainly registered in the third term of 2019 and term 1 of 2020, after which schools were closed in March due to the COVID-19 pandemic outbreak.

The 2019/2020 disasters in Uganda led to an estimated loss of about 35.4 billion shillings to the education sector and classrooms were mostly affected with an estimated loss of about 30.1 billion shillings (85%). Other educational structures that were highly affected included latrine stances, desks, and administration blocks. In total, 867 units of infrastructure were damaged and 2,492 pieces of furniture. Lango sub-region experienced the biggest loss of educational structures of about 7.1 billion shillings due to the 2019/2020 disasters that hit the area (table 08).

In some communities where people were displaced by floods, the displaced sought shelter in schools or school compounds. As such they were using school sanitation facilities like pit latrines which have now become full. The occupation also triggers damage to school furniture like desks and chairs. This therefore makes schools spend a significant part of the education budget towards the reconstruction of latrines, and replacement of damaged furniture.

Table 08: Damage and loss of the education sector of Uganda due to the 2019/2020 disasters

Items	Lango	Busoga	Elgon	Rwenzori	Central	South West	Karamoja	West Nile	Bunyoro	Damage	Loss (UGX)
Admin Blocks	3	4	-	8	10	4	2	-	-	28	361,230,000
Bathrooms	2	-	-	14	14	-	12	-	-	40	12,600,000
Blackboards	45	13	-	130	-	7	-	-	-	150	96,900,000
Chairs	158	15	-	200	-	12	-	-	-	227	24,560,000
Classrooms	105	92	58	135	64	52	52	24	24	501	30,112,277,955
Computer labs	-	0	-	4	-	-	-	-	-	4	32,000,000
Cupboards	13	4	-	17	-	5	-	-	-	26	22,630,000
Desks	527	184	519	425	770	270	193	192	192	2,745	435,095,000
Kitchens	-	12	-	12	4	1	1	-	-	30	95,050,000
Latrine Stances	18	137	50	55	62	23	-	-	-	327	4,241,700,000
Reception grounds	-	3	-	4	3	-	2	-	-	12	2,000,000
Solar Panels	-	-	-	-	-	-	-	16	16	32	4,800,000
Loss (UGX)	7,138,000,000	6,378,900,000	5,126,299,671	4,787,760,000	4,469,865,771	3,904,822,513	2,509,435,000	562,880,000	562,880,000		35,440,842,955

Recovery Actions

The following recovery actions were identified for the Education sector (OPM, National Recovery Plan 2020)

03months
Short-term

OPM, National Recovery Plan 2020

–

a)	Education human resource development: Improve academic and non-academic staffing in the affected schools; the communities in collaboration with the education department at district level should put in place an emergency committee to see how and where to relocate learners for continuity of learning. Mobilisation of teachers to support the learners relocated to safer schools

b)	Temporary relocation of schools: Support relocation of learners to safer schools and flat areas so that learning can continue; establishment of tents, permanent and semi-permanent

structures for the affected learners; and coding of schools affected by the disasters

c)	Educational logistics and supplies: Supply lower and old age dual desks for primary and secondary schools; procure assorted textbooks and chairs; supply assorted laboratory equipment, and supply of wooden cupboards destroyed; provision of food and non-food items to the affected learners.

d)	Support schools to develop contingency plans and an emergency fund. This will prevent schools from closing when disasters occur or diverting funds meant for other equally important activities.

e)	Develop a health contingency plan and put in place prevention and response actions that are supportable by development and humanitarian partners.

12months
Medium-term

OPM, National Recovery Plan 2020

–

a)	Continued learning: Support continued learning in established temporal structures

b)	School disaster management committees: Set-up school disaster management committees to empower the students about disaster mitigation and management in schools and communities

OPM, National Recovery Plan 2020

–

a)	Education financial support: Provide additional funds to the sector; commit and set aside additional funding to address cases of collapsed and damaged structures in the short term; provide funding for the dissemination of disaster risk information in lower, upper and post-primary schools

b)	Education infrastructure and equipment support: Rehabilitation, construction and equipping of educational facilities with learning resources; construction of classrooms, laboratories, libraries and offices affected and construction of stance VIP toilets and latrines affected; installation of lightning arrestors on buildings

in all schools

c)	Sensitization, education and training: Strengthen the training of Teachers, Pupils and School Managers on WASH issues; Disaster Risk Management and training teachers in psycho-social support for the affected schools

d)	Integration of DRR in school curriculums: Support the integration of DRR in learning areas such as social sciences (geography) and science subjects like biology; training and capacity building of the ministry of education staff on disaster risk management and interpretation of disseminated early warning messages

e)	Temporary relocation of schools: Relocation of schools to new safer and flat areas for landslide victims; in these new areas more facilities should be established (primary, secondary and vocational institutions) and the established

36+months
Long-term

structures should be strong and retrofitted.

f)	Development and dissemination of DRR strategy: Support the implementation of disaster risk management guidelines in the lower, upper and post-primary schools

g)	Development of education sector strategic plan: Support the disaster risk management provisions that have been developed and ready for implementation.

h)	Development of education plans: Support the implementation of district developed education plans that have integrated disaster risk reduction strategies

i)	Research and development: Support professionalization and research in disaster risk reduction in higher learning institutes.

Two classroom blocks of Wanseko Primary school Annex inundated by flood water from rising water levels of Lake Albert.

Housing and Shelter

Most of the households in Uganda (67%) reside in detached houses (single or multi-storey) however, the proportion of households that live in tenements (mizigo) in urban areas is five times more than those in rural areas (UBOS, 2014).

The average household size in Uganda is about 4.6 people per household (UNHS, 2016). Most of the households in Uganda use a single room for sleeping with a bigger percentage of these in urban areas.

The walls of houses in Uganda are constructed using permanent and temporary materials (Fig 4). Majority of Ugandans (56.3%) live in houses constructed with temporary materials and the most common material is mud and pole and these are used mostly in rural areas (UBOS, 2014).
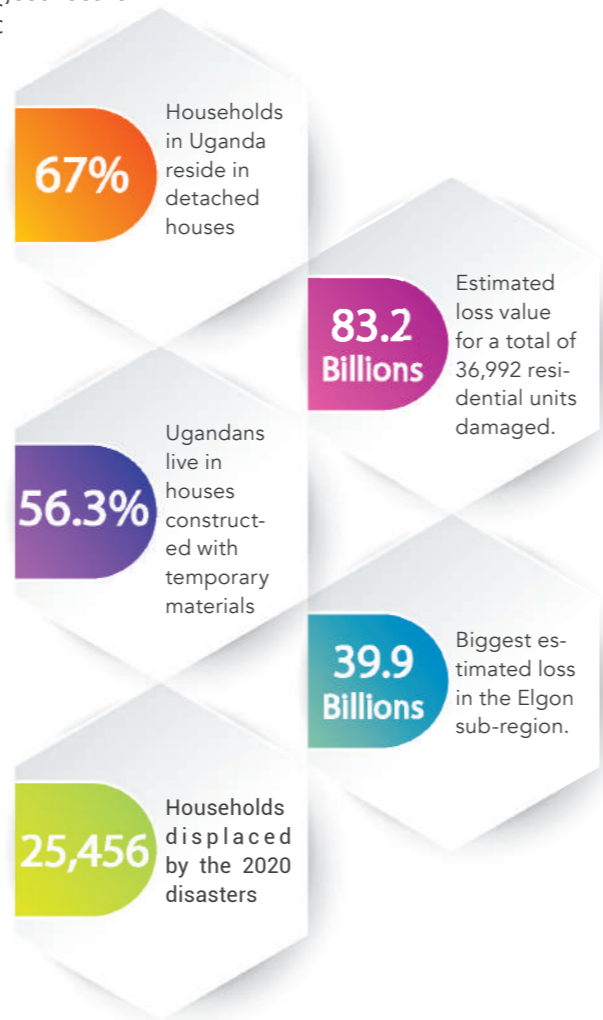
The most common construction-permanent material for walls is burnt/stabilized bricks and these are very common in urban areas. The disasters that affect the houses in Uganda such as floods, earthquakes, and landslides majorly affect the walls of houses.

The housing sector was affected by floods, landslides, windstorms and lightning. The disasters displaced people in some parts of the country, destroyed people's household items, blew off the roofs, killed some people, and damaged the walls, foundation and floors of some buildings. Some of the affected buildings were schools and health facilities. In districts like Buliisa, Kayunga, Ntoroko, Nakasongola, Wakiso, among others, the rising water levels submerged temporary and permanent structures alike.

The 2020 disasters displaced 25,456 households

in Uganda. A total of 36,992 residential units were damaged with an estimated value of loss at 83.2 billion shillings, while 11,435 residential units were damaged. The 2019/2020 disasters led to an estimated loss of about 154.2 billion shillings to the housing sector and the Elgon sub-region experienced the biggest loss of about 39.9 billion shillings as reflected in tab

Figure 4: Materials used by households in wall construction | Data Source: UBOS Census, 2014

HOUSEHOLD WALL TYPE

67% Households in Uganda reside in detached houses

83.2 Billions Estimated loss value for a total of 36,992 residential units damaged.

56.3% Ugandans live in houses constructed with temporary materials

39.9 Billions Biggest estimated loss in the Elgon sub-region.

25,456 Households displaced by the 2020 disasters
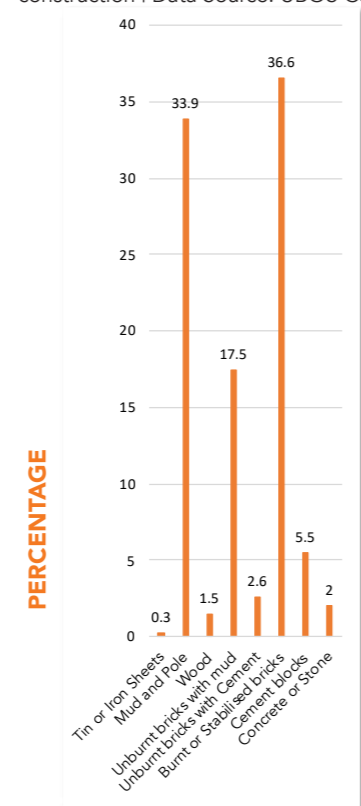
154.2 Billion (Ugx)

Estimated loss to the Housing and Shelter sector

Table 09: Damage and loss in the housing sector of Uganda due to the 2019/2020 disasters

SUB-REGION	HH Affected	HH Displaced	Lives lost	Residential	Commercial	Semi Permanent	Temporary	Permanent	Loss (UGX)
Busoga	19,354	113,246	-	2,418	4,727	-	-	-	39,060,000,000
Bunyoro	18,266	6,008	-	1,946	639	-	-	-	9,672,000,000
Central	15,076	1,574	17	9,120	-	900	-	-	13,500,000,000
Elgon	-	-	-	7,611	280	-	-	-	39,880,000,000
Karamoja	48,257	10,146	-	-	-	-	4,169	492	15,226,000,000
Lango	47,324	1,361	15	11,365	3,495	-	-	-	22,240,000,004
Rwenzori	2,538	1,737	8	8,629	653	-	-	-	12,111,500,000
South West	104,006	1,654	30	705	223	-	-	-	2,519,000,000
Damage	67,611	132,512	3	41,794	10,017	900	4,169	492	
Loss (UGX)				83,226,500,004	46,756,000,000	9,000,000,000	8,338,000,000	6,888,000,000	154,208,500,004

River Lubhiriha through Lubhiriha town- Kasese District

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Recovery Actions

The following recovery actions were identified for the Housing and Shelter sector (OPM, National Recovery Plan 2020)

03months

Short-term

OPM, National Recovery Plan 2020

–

a)	Resettlement: Identify safe places for resettling the affected communities
b)	Regulate land use and prohibit settlements in disaster-prone areas
c)	Provision of rapid post-disaster recovery assessment: Support the rapid pre-disaster and post-disaster recovery assessments planned by the sector
d)	Social networks: Improve the re-establishment of social networks and community facilities (such as community meeting facilities, houses of worship, and schools)
e)	Capacity building: Build the capacity of national and local authorities to promote, supervise, and guide planning and construction processes of recovery structures.

12months
Medium-term

OPM, National Recovery Plan 2020

–

a)	Operationalisation of housing development committee: Strengthen the housing development committees such as the National Building Review Board to oversee if the housing activities are compliant with the established guidelines.
b)	Community Engagement in Disaster recovery: Engage local communities in the development schemes of hazard-proof construction if the modified disaster resilient housing designs are to be accepted.
c)	Relocation of victims: Consider voluntary relocation of the most affected households and those in prone-areas to avoid future calamities.

36+months

Long-term

OPM, National Recovery Plan 2020

–

a)	Development of housing plans: Support the development of housing prototype plans to be used in the reconstruction of buildings that are disaster-resilient model houses
b)	Provision of technical support and quality Control: Strengthen the quality control monitoring mechanisms in the house constructions; testing of building materials and undertaking geotechnical designs; and development of bills of quantities
c)	Construction supervision: Support supervision of the contractors in the implementation recovery interventions; ensure reconstruction of strong reinforced and retrofitted housing units.

d)	Development of earthquake building guidelines: Support the operationalisation of developed earthquake-resistant construction guidelines to strengthen buildings in the prone corridor
e)	Capacity building and sensitisation programs: Support the trainings for the skilled and unskilled labour in the earthquake disaster-prone areas to learn how to build resilient buildings; construction of demonstration houses during the trainings; educate the public about building regulations and safety.
f)	Building codes: Building codes need to be revised based on region-specific hazards with multi-hazard resilient construction designs considered.
g)	Development of master and physical plans: Support the development of

site master plans and detailed physical development plans of the affected disaster areas to help communities build back better
h)	Land surveying: Advocate for the surveying of land for resettlement and associated buildings (opening boundaries); identify potential land for resettling the disaster victims and develop resettlement plans.
i)	Installation of lightning conductors: Support the installation of conductors/arrestors to handle any would be lightning strikes.
j)	Regulation of Real Estate: Establish a regulator for real estate to eliminate haphazard mixed development, slums; coordinate and control sector players for effective planning, zoning, designs and approvals, supervision and implementation.

ASDR - 2020

A residential house destroyed by a landslide in Lubhiriha, Bunndibugyo District

Houses constructed by government for resettlement of disaster victims and persons at high risk in Bunambutye, Bulambuli District.

Transport and Infrastructure Sector

208.6
Billion (Ugx) Estimated loss to the Transport and infrastructure sector

With over 90% of cargo freight and passengers in Uganda moving by road, road transport is the core and dominant mode of transport (WTDP, 2015-2019). The road network in Uganda is categorized as national, district, community access, and urban, some of which are tarmacked. As of July 2020, the Uganda National Roads Authority (UNRA) confirmed that Uganda has a total of 8,588 km of tarmacked roads. The disasters that hit the transport sector of Uganda majorly damaged/destroyed road networks and bridges.

Damage to the transport Sector (Kms)

Partially	
3,486.4 kms	Community access roads

Completely	
2,130.4 kms	Community access roads

Partially	
1,539.62 kms	District roads

Completely	
1,563.9 kms	District roads

Partially	
1,233.6 kms	National roads

Completely	
73.5 kms	National roads

Impacts on the Transport Sector

The transport sector was majorly affected by floods and landslides. Floodwaters blocked some parts of the roads and the debris from landslides also blocked part and, in some cases, the whole road width. The bridges were also washed away due to bursting of rivers or damaged by the enormous volumes of floodwater. Transportation costs increased in disaster-hit areas. This majorly affected the agriculture sector as access to gardens for planting, weeding, harvesting and transport of farm produce to markets was delayed as the roads were cut off for some good time.

Accessibility to social services like schools, health facilities was also made difficult. Movement of commodities to markets was also hindered and this greatly affected small-scale businesses in the affected areas. This led to losses as perishable crops were not delivered to the market and also buyers or consumers found it hard to access products due to the damaged road network. Maintenance costs for cars and motorcycles also increased due to bad roads with potholes created by disasters. Some people got injured and others died due to walking and driving/riding in flooded areas. The drainage structures on the roads were also severely affected by disasters.

The 2020 disasters led to an estimated loss of about 208.6 billion shillings to the transport sector in Uganda. The most damaged transport infrastructure was partially damaged community access roads equivalent to 3,486.4km. 2,130.4 kms of community roads were completely damaged, 1,539.62 district roads partially damaged and 1,563.9 Kms completely damaged; while 1,233.6 Kms of national roads were partially damaged and 73.5 completely damaged. In terms of the economic loss, partially damaged national roads were mostly affected with an estimated loss of about 62.1 billion shillings (table 10). A total of 10,027.42 km of the road network was damaged (completely and partially) by the 2020 disasters. A total of 13 bridges were also reported to have been damaged in Rwenzori and South Western regions with an estimated economic loss of about 3.1 billion shillings. The central region experienced the biggest economic loss of its transport infrastructure estimated at 52.4 billion shillings followed by Rwenzori sub-region with 37.6 billion shillings. Few transport infrastructures were reported in West Nile and Bunyoro sub-regions to have been affected by disasters.

Table 10: Damage and loss in the transport sector of Uganda due to the 2019/2020 disasters

Transport Structure	Central	Rwenzori	Busoga	Elgon	Lango	South West	Karamoja	West Nile	Bunyoro	Damage	Loss (Ugx)
Community Access Roads Damaged (Length in Km)											
Partially	-	350	736	896	575	211	373	129	129	3,048	37,540,279,710
Completely	260	141	504	589	80	156	400	-	-	1,729	35,240,920,635
District Roads Damaged (Length in Km)											
Partially	-	152	345	-	256	252	192	98	98	1,240	22,792,654,386
Completely	608	291	132	-	218	228	86	-	-	664	46,387,382,799
National Roads Damaged (Length in Km)											
Partially	640	-	185	-	172	42	178	-	-	577	62,153,748,466
Completely	-	-	44	-	-	30	-	-	-	74	1,364,000,000
Bridges Damaged	-	11	-	-	-	2	-	-	-	13	3,100,000,000
Loss (UGX)	52,392,000,000	37,585,400,000	29,247,000,000	26,076,700,000	21,776,400,000	21,033,651,900	16,487,000,000	1,990,417,048	1,990,417,048		208,578,985,996

Recovery Actions

The following recovery actions were identified for the Transport sector (OPM, National Recovery Plan 2020)

03months
Short-term

OPM, National Recovery Plan 2020

-

a)   Reconstruction: Support full rehabilitation of the affected roads including drainage works; reconstruction of affected road sections; grading, reshaping and gravelling of affected roads including drainage systems; desilting and removing boulders from the affected rivers; replacement of the broken and swept away timber bridges; repair of approaches and construction of gabion protection; replace the damaged guard rails, and remove displaced material blocking watercourses

b)   Sensitization of communities on slope management: Support community sensitization on the dangers of over-cultivation along the slopes that are sensitive to landslides

12months
Medium-term

OPM, National Recovery Plan 2020

-

a)   Reconstruction: Support the securing of contractors or using force account mechanism for grading, gravelling and installation of culverts

b)   Demarcation of road reserves: Support definition of road reserves and protection by supporting tree planting campaigns

c)   Information: Most of the disaster hotspots have been profiled and georeferenced by the sector

36+months
Long-term

OPM, National Recovery Plan 2020

-

a)   Financial support: There is need to increase district infrastructure development funding to facilitate the renovation of partially damaged district and community roads caused by floods and other disasters, and UNRA to rehabilitate national-al roads and bridges. Additional support should be provided for the maintenance budgets for the already existing road equipment.

b)   Detailed engineering designs: Support carrying out detailed investigations and risk assessments to inform designs of new bridges and roads to be constructed; and demarcation of road reserves

c)   Restoration: Support landscaping initiatives; and planting of trees; and repair of damaged water supply systems

d)   Development of a bottleneck approach: Strengthen the localised monitoring system of roads along with the mapped wetlands systems for easier reconstruction

A section of Bukalasi Road, Bududa District damaged by landslides being reopened using Local Government works equipment.

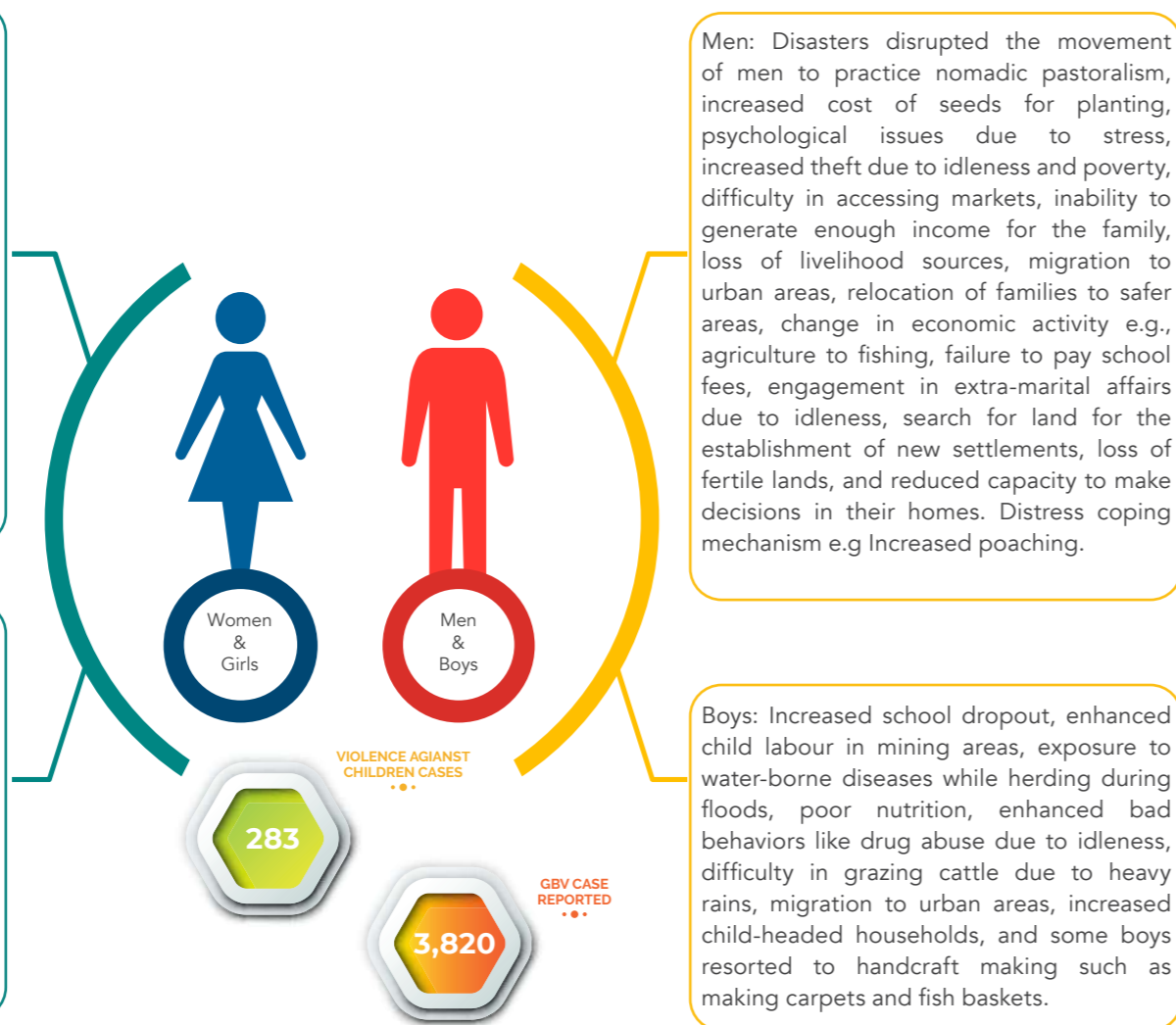ASDR- 2020 ‖ info@necoc-opm.go.ug ‖ www.necoc-opm.go.ug

Above: An assessment team inspecting a partially damaged road in Bulembia Division, Kasese district.
On the left: Hon Musa Ecweru (under umbrela) during onspot assesment along a debri covered section of Fortportal -Bundibugyo - Lamia road.

Protection and Gender

Disasters brought about reduced incomes in households and as a way to survive, family heads gave away their young daughters (13-16 years) to secure dowry that can be used during times of disasters. Disasters also affected the roles of every family member in the homesteads for instance, when floods came, families became idle and were confined at home and this caused misunderstandings and led to sexual and gender-based violence. The disasters affected the roles played by the different members in society in the following ways;

Women: Increased effort in looking for food and firewood, reduced nutrition, destruction of their gardens, increased domestic violence, increased responsibility in caring for family members hit by disasters, resource stress, reduced participation in community activities, increased workload in the farms and homes, increase in the number of women-headed households, limited access to health facilities, involvement in petty trade to provide for their families, providing casual labour in exchange for food, increased cases of malaria, increased distance to access safe water, loan defaulting due to property loss, and elderly women were unable to respond to the disasters.

Men: Disasters disrupted the movement of men to practice nomadic pastoralism, increased cost of seeds for planting, psychological issues due to stress, increased theft due to idleness and poverty, difficulty in accessing markets, inability to generate enough income for the family, loss of livelihood sources, migration to urban areas, relocation of families to safer areas, change in economic activity e.g., agriculture to fishing, failure to pay school fees, engagement in extra-marital affairs due to idleness, search for land for the establishment of new settlements, loss of fertile lands, and reduced capacity to make decisions in their homes. Distress coping mechanism e.g Increased poaching.

Girls: Difficulties in crossing rivers and small streams to the gardens, increased school dropout and enhanced early marriages, poor nutrition, increased workloads in households, and exposure to sexual violence, sexual abuse, difficulty in collecting firewood and food from gardens, increased child labour; poor hygiene, loss of self-esteem, engaged in commercial sex, lack of privacy in displaced camps affected girls psychologically, and increased child labour and teenage pregnancies.

Boys: Increased school dropout, enhanced child labour in mining areas, exposure to water-borne diseases while herding during floods, poor nutrition, enhanced bad behaviors like drug abuse due to idleness, difficulty in grazing cattle due to heavy rains, migration to urban areas, increased child-headed households, and some boys resorted to handcraft making such as making carpets and fish baskets.

Women & Girls

Men & Boys

VIOLENCE AGIANST CHILDREN CASES
283

GBV CASE REPORTED
3,820

The manifestation of Sexual and Gender-Based Violence (SGBV) due to disasters

Sexual and gender-based violence due to disasters manifested in the following ways;
• Sexual abuses and teenage pregnancies were concealed by family and communities and considered as a way of making ends meet especially by the girl's parents.
• Men controlled all the resources and made decisions like selling land without consulting their wives which led to violence.
• Dispalcement forced family heads to look for alternative shelter and other sources of livelihood. This exposed women and girls to strangers who would in turn ploy them into sex.
• Dispalcement also forced the family members to separate and some ended up in other people's homes, schools and churches. This also exposed women and girls to sexual and gender-based violence.
• Failure of family heads to provide basic needs brought tension and thus violence in homes.
• Negligence of parental responsibilities exposed children to gender-based violence.
• Failure to mutually agree on conjugal obligations during times of hardship also led to SGBV.
• Due to disasters, family members slept in congested rooms and hence young girls ended up being sexually abused by relatives.

Response interventions for the Gender and Protection sector.

The district and community structures played the following roles to respond to the disaster impacts in the gender sector;
• Sensitizing communities on the dangers of SGBV,
• Handling SGBV issues depending on the extent of impact e.g., mediation, referrals, community dialogues etc.,
• Establishment of patrols on SGBV at community levels,
• Provision of guidance and counselling services to victims of SGBV as well as reporting those cases to courts of law,
• Guidance on safe evacuation places during disasters,
• Reviewing the referral pathway to handle cases of SGBV and violence against children,
• Dissemination of standard operating procedures on handling the cases of SGBV,
• Training health workers on clinical care for sexual assault survivors in the district,
• Installation of an SGBV database in some areas for keeping a record of cases,
• Linking survivors to livelihood programmes like UWEP.

• Integration of SGBV survivors in communities,
• Sensitization and counselling of the disaster victims,
• Provision of basic needs mostly food from the central government(OPM),
• Temporary settlement of displaced persons and establishment of camp leadership,
• In Amolatar district, the District Council was in the process of preparing to debate the Domestic Violence Bill for approval as an ordinance (Domestic Violence Ordinance 2020),
• Strengthening local and community structures to be able to identify, refer and report cases of GBV,
• Community dialogue meetings to emphasize cultural norms and practices,
• Provision of mental and psychosocial support to the victims and survivors through home visits and family dialogue,
• Joint participation with other stakeholders to provide immediate relief items,
• Supporting community policing initiatives,
• Distribution of mosquito nets to affected communities through health centres.

Recovery Actions

The following recovery actions were identified for the protection and gender sector (OPM, National Recovery Plan 2020)

03 months

Short-term

OPM, National Recovery Plan 2020

–

a)   Assess the social risk of disasters in the affected communities and provide para-social workers and village health teams.
b)   Sensitization, education and training: Continuous sensitization of communities about the dangers of sexual and gender-based violence, disaster preparedness strategies for their survival and group savings; Provision of psychosocial support; and introduction of community counselling services
c)   Legislation: support prosecution of gender-based violence cases; and establishment of probation offices at the district, and mediate cases of sexual and gender-based violence
d)   Introduce child protection facilities at the district and community levels
e)   Promote dialogue across community platforms

12 months

Medium-term

OPM, National Recovery Plan 2020

–

a)   Financial support and capacity building: Support and promote development projects for the vulnerable categories e.g. through the Uganda Women Entrepreneurship Programme (UWEP) which is aimed at improving access to financial services for women and equipping them with skills for enterprise growth, value addition and marketing of their products and services.
b)   Youth Livelihood Programme: Support the government of Uganda to increase funding of youths in the recovery processes in response to the high unemployment rate and poverty among the youth in the affected areas
c)   Community Rehabilitation Programme for the Disabled (CBR): Advocate for, and promote effective service delivery to PWDs across all sectors and increase Effective participation of People with Disabilities (PWDs) in development activities

Women defying the odds to keep on duty by their market stalls in Ggaba landing site market following flooding triggered by rising water levels in L.Victoria (Source: Online).

Environment and Natural Resources

Impacts on the Environment Sector

The environment sector was majorly affected by floods, drought, landslides, and windstorms. In 2020disaster impacts on the sector included water-logging of protected areas; killing of fauna in protected areas; displacement of fauna such as crocodiles and snakes as well as people living around the environmental resources; soil erosion that led to silting of rivers, lakes and swamps; change of attitude among people towards environmental protection and conservation; destruction of breeding grounds for some species like the crested crane; and damage to the environmental facilities such as valley dams.

The elements affected as a result of disasters included vegetation, birds, trees, crops, and animals. The community practices that can be termed as drivers of disasters as a result of environmental degradation included the cutting of timber for firewood, burning of charcoal, growing of rice in swamps, cultivation along streams and river banks, poor solid waste management, bricklaying in sensitive areas, vegetation clearing for firewood, bush burning, mining, wetland encroachment, poor farming methods, degradation of hilly areas and steep slopes, settlement in fragile ecosystems, wetland backfilling, use of agrochemicals, and overgrazing in ecological areas.

The disasters have changed these practices in the following ways; mining pits have been filled with water and used as fish farms, cultivation in wetlands has somehow reduced due to increased water levels, charcoal burning reduced as the conditions were unfavorable and roads were non-motorable, some communities have planted trees on steep slopes to reduce soil erosion, and some communities have begun to practice good farming practices.

The 2019/2020 disasters led to an estimated loss of about 29.9 billion shillings to the environmental sector and related facilities in Uganda (Table 11 below). The most affected environmental resource was central forest reserves with an estimated loss of about 5.6 billion shillings whereas the most affected environment-related facility was fish handling tables/slabs with an estimated loss of about 14.1 billion shillings. Other environment-related facilities that were highly affected included valley dams, valley tanks, bridges along rivers among others (Table 11). The biggest number of environmental resources that were affected by disasters were situated in Rwenzori sub-region. In general, the Central region experienced the biggest loss of environmental resources and related facilities with an estimated loss of about 20.2 billion shillings.

Tabl 11 Damage and Loss in the environment sector and related facilities due to the 2019/2020 disasters in Uganda

Item	Central	Karamoja	Elgon	Rwenzori	West Nile	Bunyoro	Damage	Loss
ENVIRONMENTAL RESOURCES								
Central forest reserves	5	-	3	6	2	3	19	5,564,000,000
Local forest reserves	3	-	-	-	-	-	3	80,000,000
National parks	-	-	-	2	-	-	2	200,000,000
Riverbanks	-	7	2	5	-	-	14	566,000,000
Wetlands	9	-	-	13	5	5	32	275,000,000
Wildlife Reserves	-	2	-	-	-	-	2	16,000,000
FACILITIES RELATED TO ENVIRONMENTAL RESOURCES								
Bridges along rivers	-	-	7	-	-	-	7	509,000,000
Farmlands	-	23	-	-	31	31	85	95,000,000
Fish handling tables/slabs	6	-	-	-	-	-	6	14,101,000,000
Landing sites	13	-	-	-	-	-	13	500,000,000
Pipes and ponds	-	-	17	-	-	-	17	60,000,000
Roads to lakes	2	1	-	-	1	1	5	435,000,000
Valley dams	-	5	-	-	2	1	8	5,650,000,000
Valley tanks	-	3	-	-	-	-	3	1,500,000,000
Water conservation structure	-	-	3	-	-	-	3	300,000,000
Loss (UGX)	20,204,000,000	7,606,000,000	935,000,000	720,000,000	193,000,000	193,000,000		29,851,000,000

Response interventions in the Environment and Natural Resource sector.

Disaster response measures in the environment sector included the following;

a)   policy dissemination on wetlands management,

b)   demarcation of wetland boundaries and other sensitive areas,

c)   community policing on wildlife conservation,

d)   community sensitization on afforestation, disaster occurrences and wise use of the environment and natural resources,

e)   control of charcoal burning in fragile areas and impounding of trucks carrying charcoal and timber,

f)   forestry regulation and enforcement,

g)   wetlands compliance, monitoring and enforcement,

h)   encouraging the communities to store more food,

i)   relocating the affected communities,

j)   bamboo planting to reduce riverbank erosion and mobilizing communities to plant trees,

k)   developing catchment management plans,

l)   conserving wetlands, catchment areas and protected areas,

m)   training communities in soil and water management practices,

n)   provision of improved seed varieties to affected communities,

o)   restoration of degraded areas and catchments,

p)   formulation of environmental bye-laws,

q)   providing relief to the affected communities,

r)   conducting a needs assessment of the affected resources,

s)   Issuance of restoration orders by NEMA,

t)   Promotion of energy-saving technologies in communities,

u)   Lobbying from the government and other development partners for funding.

29.9 Billion (Ugx)

Estimated loss to the Environment sector

The environment and natural resources sector is composed of national parks, central forest reserves, local forest reserves, wildlife reserves, wetlands, rivers, lakes, Ramsar sites, species of fauna and flora among others. Uganda is among the top ten most biodiverse countries in the world with over 18,000 recorded species of fauna and flora (Pomeroy et al, 2017). Wetlands in Uganda cover 13% of Uganda's total surface area (NSOER, 2018/2019).

Recovery Actions

The following recovery actions were identified for the Environment sector (OPM, National Recovery Plan 2020)

03 months

Short-term

OPM, National Recovery Plan 2020

–

Logistics and supplies: Supply solid waste collection tools such as waste bins, waste collection trucks; provision of tree seedling for planting along the river, forest and wetland buffer zones and promote and supply energy-saving stoves to reduce environmental degradation.

Sensitize the communities on the dangers of environmental degradation and ways of protecting the environment.

12 months

Medium-term

OPM, National Recovery Plan 2020

–

Legislation: Strengthen enforcement of environmental laws; formulation of bye-laws and ordinance enactment which will help in the enforcement of environmental laws and increase vigilance and law enforcement; support the review and enactment of wetland bill; as well as the issuance of water permits

36+ months

Long-term

OPM, National Recovery Plan 2020

–

a)   Sensitization, education and training: Support sensitization of the communities on river bank restoration and management; training on soil and water conservation programmes e.g. construction of trenches and check dams; training of environmental inspectors in ecological integrity and sustainability of the green and brown environment; mass mobilization of communities to plant trees; carry out regular water quality tests; conducting public radio talk shows on environmental protection and conservation;
b)   continuous community sensitization on disaster risk reduction measures e.g. soil and land management in highland and low land areas; train and empower communities to use biogas as an alternative source of clean

energy to prevent tree cutting for charcoal burning.

c)Establish, train and strengthen environment management and wetland and catchment management committees at local levels.
d)   Enforcement: Integration of Environment Protection Force in environment
e)   Livelihood support: Provision of alternative livelihood options like the construction of fish ponds
f)   Restoration: Wetland demarcation and restoration of hotspots; support designation of RAMSAR sites; promote tree planting; and establishment of tree nursery beds;
g)   Installation of hydrometeorological early warning systems: Support regular issuance and dissemination of seasonal forecasts; installation of manual and automatic weather stations and radars; the regular compilation of climate information in sector report.

Indiscriminate tree cutting, earth digging and bush burning are some of the major forms of enviromental degredation accross uganda. The youths in picture were burning bricks in Aloet, Soroti District. Whereas they may consider this as a livelihood source it is detrimental to the environment, contributes to drought hazard and gradually climate change and global warming.

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Above: Community land subjected to Bush burning in Kabolwa Parish, Buliisa.
On the left: A degraded hill in Bundibugyo district, with lower part affected by landslides.

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ASDR - 2020

Cross-cutting recovery actions and recommendations.

Coordination structures and bureaucracy:
The capacity of NECOC to coordinate disaster preparedness and response needs to be enhanced to ensure timely generation and dissemination of early warning information, and timely response to disasters and emergencies. At district level, The DDMCs are always activated whenever there is a disaster, otherwise they don't have resources to conduct training, meetings; and a lot of bureaucracy to access resources.

Financial support:
The budget allocation to disaster risk management should be increased to respond to the disaster recovery needs.

Sensitization:
Conduct sensitization about the roles and responsibilities of the different stakeholders in disaster management.

District Disaster Management Committees (DDMCs): Establish DDMCs where they do not exist and operationalize them through orientations, trainings and resource mobilization.

Resource allocation:
Establish, allocate resources and make the Disaster Emergency Coordination and Operational Centres (DECOCs) operational Increase funding and resource allocation to support activities of NECOC, DECOCs and DDMCs. Develop standard operating procedures that support efficiency and smooth operations of multisectoral stakeholders during the handling of complex disasters.
Disaster loss database: Ensure updating of disaster-related information and incident facts in the des-inventar for the respective districts.

Community awareness and sensitization:
Conduct regular community awareness on disaster occurrences and prevention and getting feedback from them (about their perceptions of disasters).

Legislation: Develop a disaster preparedness and management law to strengthen the implementation of disaster risk management activities; and Support the development and implementation of bye-laws.

Data collection:
Develop capacity of district officials in data collection, undertaking rapid disaster needs assessments, and development of disaster recovery strategies and plans. Additionally, develop data collection tools and templates that can be used repeatedly for data collection and updating disaster-related information from the sub-counties to the districts

Capacity building and training:
Disaster risk reduction information modules should be embedded in the roles and responsibilities of extension staff especially MAAIF in the department of extension, disaster models are included in the training etc. to prevent and recover from disasters.

Mainstreaming:
The relevant sectors should mainstream disaster risk reduction measures in their development programmes and activities to minimize disaster damage and losses. Districts should also be supported to integrate DRM in the district development plans.

Hazard and Risk Maps:
Districts should continue to update and regularly utilize the hazard, risk and vulnerability (HRV) profiles to enrich and guide their sector-specific activities. The HRV profiles should also be used to develop District Contingency Plans.

H.E Yoweri Kaguta Museveni, PS Mrs. Christine Guwatudde Kintu and Hon. Minister Hillary Onek at the commissioning of Bunambutye resettlement project in Bulambuli district.

The Complex Shift

Chapter
03
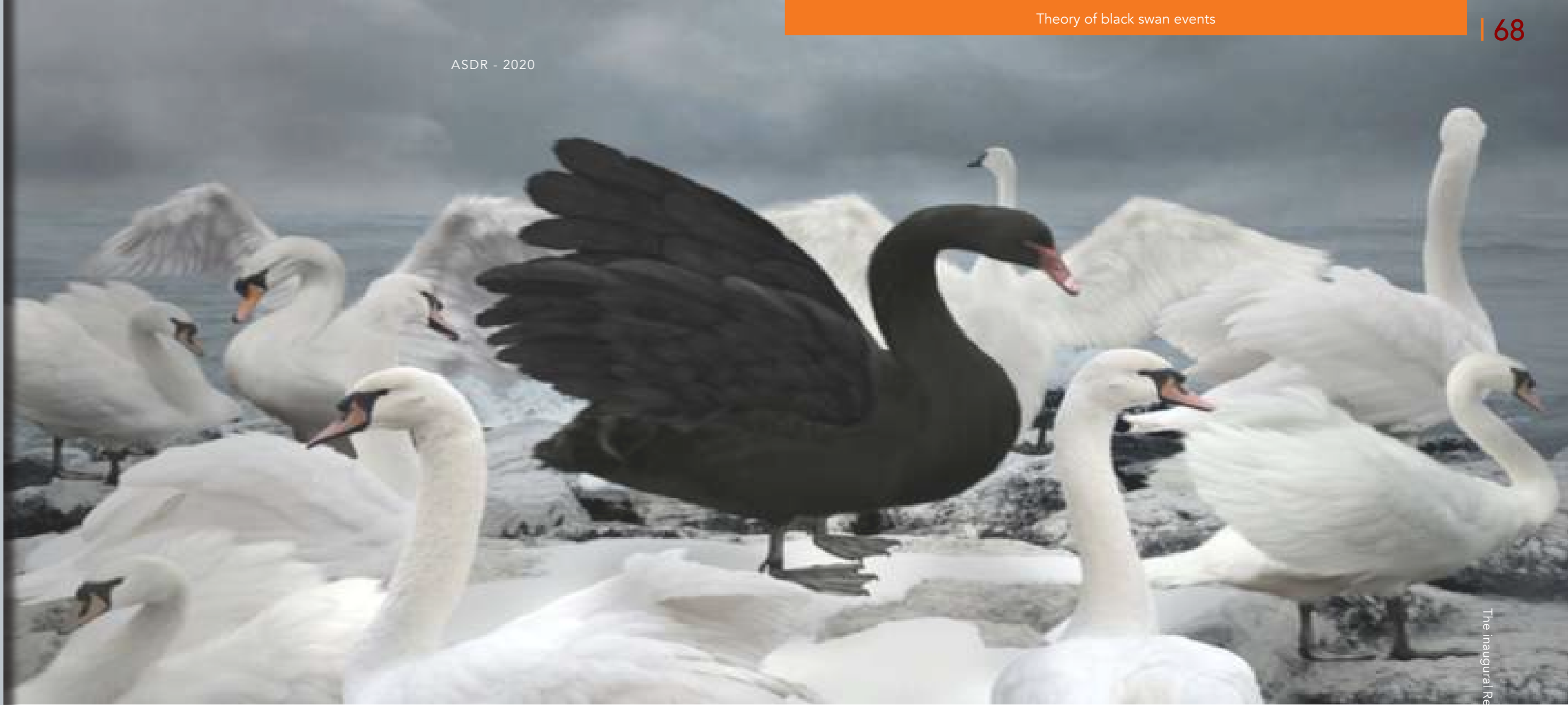
COVID-19 Pandemic:
A tale of tension and unprecedented uncertainty.

December 1st 2019:
A new disease was identified in Wuhan Province of China. The novel disease was caused by the transmission of Severe Acute Respiratory Syndrome Corona Virus 2 (SARS-CoV-2).

March 11th 2020:
Officially named it the novel disease as Corona Virus Disease 2019 (COVID-19) on 11th February 2020, and a month later on 11th March 2020 WHO declared the global outbreak a pandemic.

March 18th 2021:
In Uganda, the first positive case of COVID-19 was recorded in March 2020. One year later in March 2021, a cumulative 891,637 samples have been tested for COVID-19 out of which 40,464 samples tested positive, 15,065 recoveries, while 334 persons have succumbed to the disease

Source:
https://covid19.who.int/
https://www.health.go.ug/
https://www.who.int/emergencies/diseases/
novel-coronavirus-2019/events-as-they-happen

January 30th 2020:
The virus was fast spreading that by 30th January 2020, the World Health Organization (WHO) declared it a Public Health Emergency of International Concern.

March 7th 2021:
a cumulative total of 116,135,492 positive cases of COVID-19 have been recorded globally including 2,581,976 deaths. COVID-19 was highly contagious that it has spread its contagions across the globe in 3 months.

Over the time:
TA survey conducted by WHO in May 2020 in 155 countries revealed that COVID-19 impacted on prevention and treatment services for non-communicable diseases, where countries surveyed said they had partially or completely disrupted services for treatment of hypertension (53%), diabetes (49%), cancer (42%) and cardiovascular emergencies (31%)

A tale of tension and unprecedented uncertainty.

Severe disruption in social service delivery including health services as most expertise and resources were diverted and reassigned from other diseases to managing COVID-19, was one of the most visible outcomes when the COVID-19 pandemic arrived. Regular patient-doctor consultations become remote and virtual, while in some contexts, the sheer anxiety, fear and trauma associated with the unfamiliar manifestation of COVID-19 simply forced people to keep away from health facilities. It may not sound an exaggeration to say that globally health systems were caught off-guard and unprepared to deal with COVID-19 pandemic.

That is not to say that COVID-19 is the first pandemic the world has seen, but rather should be a significant pointer to how we have or have not made sufficient effort to learn from hindsight, to document and learn from lessons profiled with past pandemics such as; the 1918 'Spanish' Influenza (H1N1), the 1957 Asian Influenza (H2N2) and the 1968 Hong Kong Influenza (H3N2) which had fatality rates in millions. The reflective question for all countries, institutions and responders should be to what extent if any, have the lessons learned from the past pandemics been applied in managing response to COVID-19.

Besides causing human deaths, COVID-19 has had far reaching negative impact on the social economic fabric of communities and nations alike, and this impact is yet to be exhaustively measured since the pandemic is yet to abate.
The panic, last-minute preparedness mode, strategic risky decisions, and flaws that emerged in the process of saving lives from the deadly COVID-19 revealed a worrying veracity that governments, systems and emergency / disaster management institutions are not thinking about the unthinkable, even though ample lessons from the past exist to inform the present and the future.

Among the many lessons to learn from COVID-19 therefore, is to absorb the fact that with globalization and its consequent increase in worldwide travel for business and pleasure, will continue to lay favorable conditions for pathogen movements. It is therefore imperative to re-examine current disaster and emergency preparedness and planning processes to incorporate valuable foresight accruing from current and anticipated trends.

UPDF Personnel supporting the relief food distribution in Naka-wa Division as part of the COVID 19 response in Uganda.

As part of Government's response to COVID-19, relief food was distributed to the most vulnerable persons in Kampala, Mukono and Wakiso districts, as well as people in orphanges, homes for elderly and other special needs groups. In total, 2,025,957 persons were provided with 11,942,670Kgs of maize flour, 6,021,091Kgs of beans, 54,829Kgs of milk and 109,170Kgs of sugar.

The Risk:
A dynamic and more complex shift

Risk is changing, becoming dynamic and more complex. Population growth, urbanization, industrialization, technological advancement with all their positive attributes, once they interact with natural environment are making the risk landscape more unpredictable yet interconnected. Risk is becoming increasingly systemic.

The National Development Plan (NDP) III under section 2.3.1 recognizes disasters as a major threat to the planned development interventions, outcomes and economic growth, thus stressing the need to Institutionalize and enhance capacities in risk management at all levels. To ensure that Uganda realizes her development aspirations as envisaged in the NDPIII, Vision 2040 and The Sustainable Development Goals, the NDPIII has mainstreamed disaster risk management across various programmes. Notably, disaster risk management is highlighted under Objective 6 of Programme 9 on Natural Resources, Environment, Climate Change, Land and Water Management, with six interventions aimed at reducing economic loss from natural hazards and disasters.

The mainstreaming risk management agenda was partly informed by the National Risk and Vulnerability Atlas (NRVA), whose recommendations were incorporated in the NDPIII to inform disaster risk management across programs. The findings of the NRVA process were specifically outlined under objective 5.1a-d that called for reduced human and economic loss from natural hazards and disasters through the measures outlined in the plan (Including; development of checklist for integration of Disaster Risk Reduction in plans, projects and budgets of all sectors, Developing the National Disaster Risk Management Plan, undertaking risk screening of NDPIII and generating information to inform implementation of the NDPIII.

The National Risk and Vulnerability Atlas

To create an evidence based understanding of how disaster risks impede Uganda's development programmes and creating risk awareness, Office of the Prime Minister with funding support from the UNDP Uganda office undertook a process to assess, profile and document the major natural hazards that often result in devastating impact on lives, livelihoods, infrastructure and systems of Uganda. Using a combination of hindsight, current experiences and foresight informed by technology, a team of social and natural science experts from government and academia worked over a period of 4 years to produce the atlas. Seven hazards were profiled and these are; floods, landslides, earthquake, drought, lightning, hailstorms and windstorms. It is important to note that seven hazards are the most frequent but not the only hazards Uganda is prone to.

What is in the National Risk and Vulnerability Atlas?

The NRVA (2020) is a compilation of hazard, risk and vulnerability products, including;
• Risk maps of the identified hazards and the corresponding vulnerabilities
• Exposure, Damageability and Replacement cost matrices
• Estimates of annual average losses (AAL)
• Potential damages and costs
• Hazard Intensity graphs and tables
• Prioritized risk reduction measures

The NRVA will therefore benefit all public and private stakeholders at local and national level involved in the national development planning process, to ensure sufficient risk assessments and advisories underpin all investments so as to risk proof development and social interventions.

If effectively utilized, NRVA will help stakeholders in the Country to;
• Understand disaster risks and their spatial distribution to guide in investment planning
• Hazard determination to support the risk management, a requirement by NDPIII.
• Prediction of likelihood to enhance preparedness
• Identification and feasibility assessments for Building Back Better
• Enhance the importance of Disaster Risk Management
• Document in line with the global trends in Disaster Risk Management trends and the NDPIII.

Lastly, the NRVA should also be localized at community level to enable communities especially those living in disaster risk zones play more proactive roles in risk and disaster threat identification as well in developing and implementing preventive, mitigation and preparedness actions against the identified risks.

ASDR - 2020

The inaugural Report

Office of the Prime Minister
ASDR 2020

Wrap-up

Chapter
04

The inaugural Report
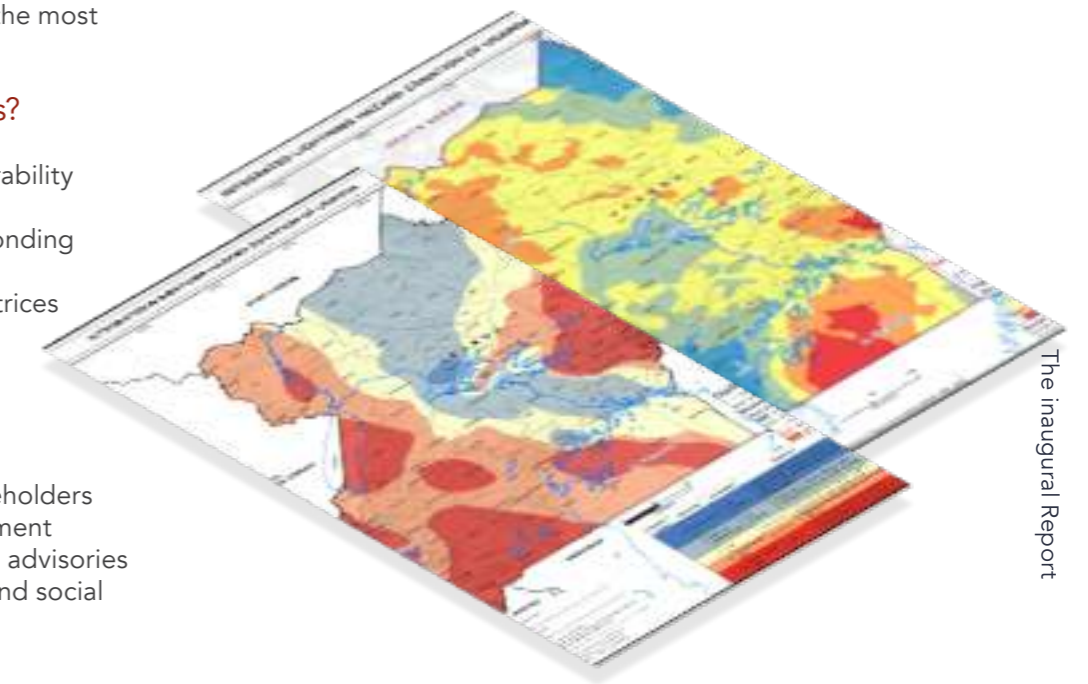
Reflections.

The floods displaced thousands of people mainly river bank and lake shore communities in Buliisa, Ntoroko, Kayunga, Kasese, Nakasongola, Obongi, Pakwach, Mukono, Wakiso, to mention a few. Through interviews with affected communities, it was revealed that similar massive flooding but to a lesser extent, happened in 1960-1961.

On one angle, the magnitude, intensity and timeframe of the 2020 floods, to some extent highlights the consequences of climate change reality.

On another angle however, considering the patterns of damage and destruction to infrastructure, shelter and livelihoods in all the areas affected by rising water levels, it can be argued that this flooding recurrence 60 years later is indicative that we are seldom using hindsight to inform current interventions and generate foresight for risk-informed planning.

Moving forward, it is therefore critical for planners, decision makers, implementers and communities alike to reflect on dynamic disaster trends, and importantly on crisis drivers and systemic risks which are increasingly defying established hazard and risk patterns to trigger cascading long-term impact.

Notably, policy and decision makers working with planners need to acknowledge the likely evolution where disaster risks will not only

cause impact that we are too often acquainted with e.g. damage to shelter, roads, bridges, temporary disruption of social services, damage to crops and livelihoods, interruption to food, poor sanitation and lack of access to safe water.

The 2020 floods triggered by rise in water levels already demonstrate such a transition from the familiar to sustained multi-dimensional impact including permanent displacement, total destruction of public infrastructure like roads, health centers, commercial facilities, houses, schools, water sources, electricity lines, etc.

The year 2020 also revealed a disturbing reality of how distinct disasters can occur concurrently and undermine available capacities of responders and systems to effectively address the needs of victims and support their recovery.

Needless to say, 2020 floods coincided with COVID-19 which was characterized by varying degrees of uncertainty, resource pressures, inadequate preparedness, critical containment measures that directly undermined people's resilience and coping abilities, albeit necessary to mitigate the spread of COVID-19.
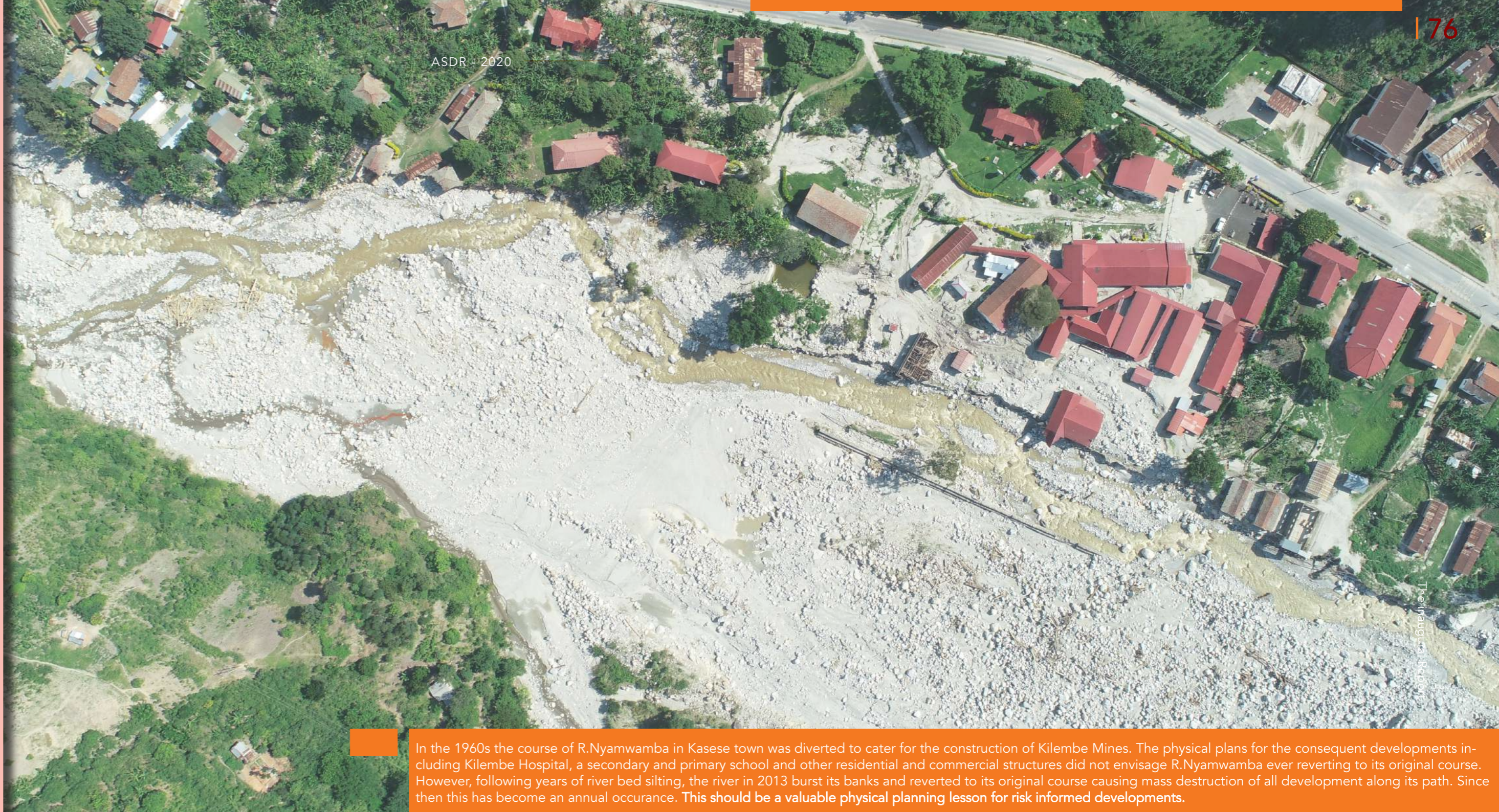
In the 1960s the course of R.Nyamwamba in Kasese town was diverted to cater for the construction of Kilembe Mines. The physical plans for the consequent developments including Kilembe Hospital, a secondary and primary school and other residential and commercial structures did not envisage R.Nyamwamba ever reverting to its original course. However, following years of river bed silting, the river in 2013 burst its banks and reverted to its original course causing mass destruction of all development along its path. Since then this has become an annual occurance. **This should be a valuable physical planning lesson for risk informed developments.**

Conclusion.

The 2020 disaster incidents had widespread effects on lives, infrastructure, people's livelihoods while causing the country an economic loss of 563.2 billion shillings.

The disasters affected all people however, women, children, the elderly and the disabled were affected most.

Floods killed and injured humans and livestock, destroyed crops, gardens and farmlands, exposing people to food insecurity and poverty.

Bridges and roads were greatly damaged by flood waters making the road infrastructure sector as the most economically affected, people's houses rendering thousands homeless, destroyed personal property and communal assets, health, education and commercial facilities inundated and damaged by excessive water.

In lake shore and river bank communities of Ntoroko, Buliisa, Kayunga, Nakasongola, Wakiso, Masaka, Kampala and Mukono among others, entire villages were submerged and it will take several years for the water levels to recede to pre-flood levels.

Moreover, the rising water levels in Lakes Victoria, Albert and Kyoga, and River Nile affected docking stations along lakeshores disrupting marine transport, while fishing as an economic activity was rendered difficult and unfeasible.

The floods also cut off some road networks hence paralyzing continuation of business activities in different regions and this greatly affected access to critical facilities like health centres, schools and disruption of trade.

Flooding further impeded other key economic activities like mining where mines were filled with water and hence deserted.

In addition to flood impact, hailstorms and windstorms destroyed crops and plantations affecting major perennial crops like bananas, cassava, maize etc., which does not only affect food security but negatively affects household incomes since most farmers rely on crop production as an economic activity.

The districts and communities as first responders had limited capacity to respond to these disaster events.

Local people in communities are not only the main victims of disaster occurrences, but are also the first responders in any disaster or emergency, and will often stay longer when other responders have gone.

Effective disaster and emergency response therefore, should not be measured only through saving lives but also in how the capacities and capabilities of communities have been enhanced to prepare against, and respond to any other future disaster occurrence within their vicinity.

Although several efforts have been made by the district structures and partners to respond to disasters, more needs to be done to help people recover completely from disasters. Therefore, with support from government and development partners, all the national planning sectors need to implement measures in the short, medium and long term to fully recover from the 2020 disasters, and some of such recovery actions have been highlighted in this report for all the sectors affected. A detailed National Disaster Recovery Plan can be accessed on https://www.necoc-opm.go.ug

Lastly, the COVID-19 pandemic outbreak in Uganda had far reaching negative effects on all sectors of the economy. The tourism sector is one of the most affected sectors because of internal and international travels restrictions.

The inevitable lockdown with resultant 'stay-home' measures and restricted movement paralyzed business operations across the country. Vulnerable urban dwellers who rely on daily business for their subsistence needs were given relief items from the government, humanitarian partners and well-wishers as a coping mechanism. *The real impact of COVID-19 is yet to be profiled and measured.*

The Last Word:

COVID-19 pandemic and extended flooding in 2020 point to growing uncertainty about non-conventional disaster risks – those that come up without prior warning; and we still lack adequate capacities and capabilities to generate foresight for disasters that we could potentially predict before they happen and prepare for them accordingly.

Government of Uganda with support from key partners like UNDP is increasingly enhancing capacities for both national and local players to generate and disseminate early warning information to vulnerable communities ahead of disasters. Since 2014, OPM has been publishing the monthly Uganda National Intergrated Early Warning System (UNIEWS) bulletin, now in its 53rd Volume. This effort has resulted in reduced loss of lives even when disasters continue to occur, because vulnerable persons are able to undertake early action and evacuate in time.

Through Contingency funding from Government, the ability to meet the most pressing needs of disaster victims has also been enhanced, especially provision of relief food and non-food items. Government is also committed to providing durable solutions to disaster victims and vulnerable persons through interventions like the Bunambutye Resettlement Programme for persons at high risk of landslides in Mt. Elgon sub-region. Although this is just a fraction of the required durable solutions, it is a step in the right direction. Despite the above-normal rains in almost all parts of the country in 2020, only one death

was recorded in Bugisu sub region as a result of landslides compared to the hundreds that were dying in the past. This achievement was attributed to enhanced awareness about the landslide risk and timely early warning.

The above strides notwithstanding, the country still grapples with limited technical capacity at all government levels to map and assess risk, vulnerability and capacities of disaster prone communities and translate the same into contingency and preparedness plans. There is also still insufficient effort to mainstream disaster risk reduction across sectors and programmes, and inadequate resources to implement prevention, mitigation, preparedness and resilience interventions. The challenge to anticipate and plan for future risks more effectively therefore is pegged on the ability of principally government entities (technocrats, policy analysts, planners and decision makers) to harness the potential and opportunity there-is in the civil society and private sector to mobilize much needed resources for disaster risk reduction, preparedness and response.

Importantly, there is need to recognize, assess and make use of the capacities that exist amongst the vulnerable communities themselves, through making them aware of their risk, vulnerability and responsibility towards proactively designing and implementing solutions to their disaster risks, starting with indigenous and locally feasible solutions.

We urge all stakeholders to utilize the ASDR 2020 in their planning and to disseminate to all stakeholders to inform their disaster risk management plans for 2021. Additionally, ASDR 2020 will contribute to the promotion of education, sensitization and general awareness amongst the public on disasters, disaster impact, emergency response and relief measures. The report is also an important tool for advocacy and mobilization of resources for disaster preparedness and response, including lobbying government and partners for increased support to prevention, mitigation and preparedness, emergency response capacity and capabilities, and assistance to disaster victims.

Rose Nakabugo Bwenvu
Ag. Commissioner, Relief, Disaster Preparedness and management.

The Headway:

Disaster Forecast for 2021

COVID-19: The pandemic is still in active phase in Uganda. Although the country is now undertaking vaccination, the vaccines are still limited and hence prioritized for the specific categories who are considered at high risk namely; Health workers, Security personnel, Teachers and persons with underlying health conditions. Government is cognizant that the pandemic is still ranging and hence is cautiously relaxing the 'lock-down' measures. It is therefore imperative for every individual to continue observing the Standard Operating Procedures for COVID-19 as provided by the Ministry of Health. Individual precaution is the best tool to fight COVID-19 infection.

Weather Forecast: According to UNMA, the onset of the March, April and May (MAM) rainfall was expected in late February in the Southern parts of Uganda and Lake Victoria basin with a gradual progression through Eastern, Northern and North-Eastern at around late March to mid-April. This therefore means the rainy season is on. UNMA pointed out that the onset was expected to be characterized by lightning, thunder and hailstorms.
According to the MAM forecast, there is an increased likelihood of closer to above average rainfall in some parts of the country. Above average rains translate to above normal rains which cause much wetter conditions and these are forecasted for mostly South Western region, parts of central region through Eastern to Karamoja sub region.

Considering the above forecast, the communities in the areas especially where much wetter conditions are expected should look out for and prepare for hazards namely; floods including flash flooding in urban areas, waterlogging, wind/hailstorms, land/mudslides, lightning strikes, and high risk of malaria and cholera outbreak, among others. Early warning information and proposed early action measures can be found in the monthly UNIEWS publication by NECOC - OPM.

UNIEWS - **The forecast companion**

The Uganda National Integrated Multi Hazard Early Warning System (U-NIEWS) is a monthly bulletin to facilitate an understanding of the conditions of crops and pasture, food insecurity, weather/climate forecast and to determine the anticipated disasters, as well as provide disaster and humanitarian response status update based on monthly statistics. The information can also be used as baseline information for planning purposes at different levels. The UNIEWS can be accessed on https://www.necoc-opm. go.ug | To subscribe to recieve the UNIEWS, please email info@ necoc-opm.go.ug

Land and mud slides

Legend
- Districts likely to be affected
- Primary Roads
- Secondary Roads
- Open Water
- Districts
- Sub-Regions
- Neighbouring countries
- Capital

Elements at risk
- Human beings
- Livestock
- Crops
- Houses
- Roads and bridges

Preparedness actions

Potential effects

Potential effects:
- Loss of human and livestock lives
- Injuries
- Destruction of crops and livelihoods
- Damage to infrastructure like roads, bridges, houses, water facilities

Preparedness actions:
- Sensitize communities to move away from landslide prone areas
- Disseminate timely early warning information on heavy rains
- Map and profile hazard prone areas
- Disseminate information (posters) on mapped prone areas with advisories and emergence contacts
- Prepositioning relief stocks

Scale 0 37.5 75 150 km

Map Projection
GCS: WGS 1984
WKID: 4326 Authority: EPSG
Angular Unit: Degree (0.0174532925199433)
Prime Meridian: Greenwich (0.0)
Datum: D_WGS_1984
Spheroid: WGS_1984
Semimajor Axis: 6378137.0
Semiminor Axis: 6356752.314245179

Data Source:
OPM (Department of Relief, Disaster Preparedness and Management)

Disclaimer This map is not authority on delineation of international and national administrative boundary

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Floods & water logging

Legend
- Districts likely to be affected
- Primary Roads
- Secondary Roads
- Open Water
- Districts
- Sub-Regions
- Neighbouring countries
- Capital

Elements at risk
- Human beings
- Livestock
- Crops
- Infrastructure
- Water and sanitation facilities
- Health centers
- Schools and market places

Preparedness actions

Potential effects

Potential effects:
- Loss of lives (human and livestock)
- Displacement
- Damage to roads & bridges
- Destruction of crops
- Destruction of livelihoods
- Damage to houses both residential and commercial
- Damage to and contamination of water sources
- Food insecurity and hunger
- Water borne disease outbreaks

Preparedness actions:
- Dissemination of early warning information to vulnerable communities
- Digging trenches to release excess water
- Rehabilitating damaged / weak roads and bridges
- Improving drainage systems
- Temporary relocation to high areas.
- Stock some relief for possible interventions

Scale 0 37.5 75 150 km

Map Projection
GCS: WGS 1984
WKID: 4326 Authority: EPSG
Angular Unit: Degree (0.0174532925199433)
Prime Meridian: Greenwich (0.0)
Datum: D_WGS_1984
Spheroid: WGS_1984
Semimajor Axis: 6378137.0
Semiminor Axis: 6356752.314245179

Data Source:
OPM (Department of Relief, Disaster Preparedness and Management)

Disclaimer This map is not authority on delineation of international and national administrative boundary

Lightning strikes

Legend
- Districts likely to be affected
- Primary Roads
- Secondary Roads
- Open Water
- Districts
- Sub-Regions
- Neighbouring countries
- Capital

Elements at risk

Preparedness actions

Potential effects

- Human beings
- Livestock
- Vegetation
- Infrastructure

- Loss of human and livestock lives
- Injury
- Damage to infrastructure

- Install lightning arrestors on buildings
- Sensitize communities to avoid movements during thunderstorms
- Sensitize communities to avoid taking shelter under trees during rain

Scale
0   37.5   75   150 km

Map Projection
GCS_WGS 1984
WKID: 4326 Authority: EPSG
Angular Unit: Degree (0.017453292519943)
Prime Meridian: Greenwich (0.0)
Datum: D_WGS_1984
Spheroid: WGS_1984
Semimajor Axis: 6378137.0
Semiminor Axis: 6356752.314245179

Data Source:
OPM (Department of Relief, Disaster Preparedness and Management)

Disclaimer: This map is not authority on delineation of international and national administrative boundary

Republic of Uganda

Wind and Hail storms

Legend
- Districts likely to be affected
- Primary Roads
- Secondary Roads
- Open Water
- Districts
- Sub-Regions
- Neighbouring countries
- Capital

Elements at risk

Preparedness actions

Potential effects

- Human beings
- Crops
- Vegetation
- Telecommunication infrastructure
- Electricity poles

- Loss of human and livestock lives
- Injuries
- Damage to houses
- Destruction of crops and plantations
- Damage to infrastructure like communication and electricity infrastructure

- Plant wind breakers around buildings and houses
- Reinforce telecommunication infrastructure

Scale
0   37.5   75   150 km

Map Projection
GCS_WGS 1984
WKID: 4326 Authority: EPSG
Angular Unit: Degree (0.017453292519943)
Prime Meridian: Greenwich (0.0)
Datum: D_WGS_1984
Spheroid: WGS_1984
Semimajor Axis: 6378137.0
Semiminor Axis: 6356752.314245179

Data Source:
OPM (Department of Relief, Disaster Preparedness and Management)

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Republic of Uganda

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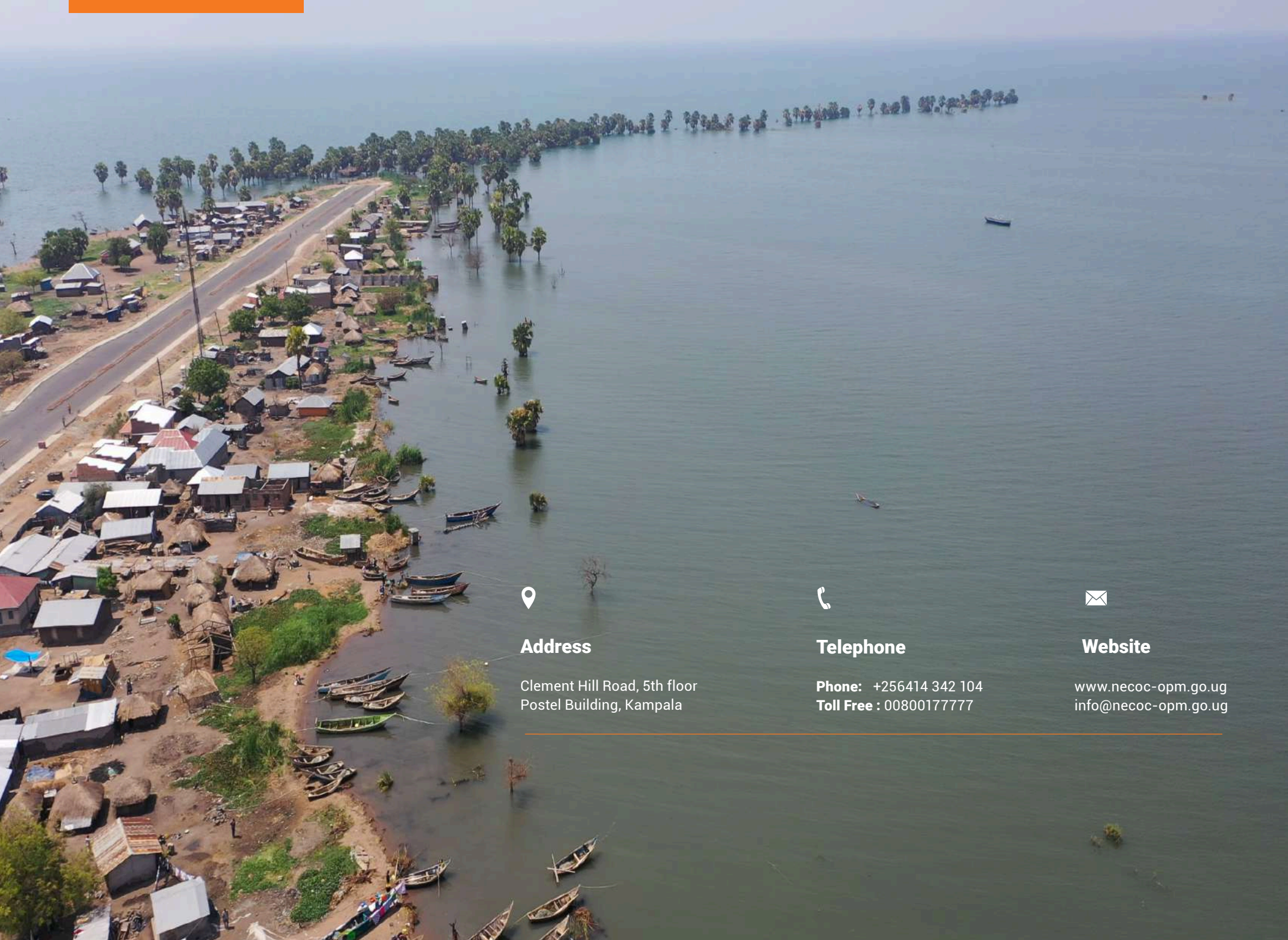
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