# MAINSTREAMING SUSTAINABLE NATURAL CAPITAL MANAGEMENT INTO UGANDA'S COVID-19 RECOVERY PACKAGES

This publication is part of a global study on nature-based recovery undertaken in partnership with the Green Economy Coalition and the International Institute for Environment and Development, and forms part of the Economics For Nature project.

The Green Economy Coalition is a diverse coalition of trade unions, businesses, NGOs, UN agencies and citizen's groups from around the world, all united by the belief that green and fair economies are possible, necessary, and achievable.

The International Institute for Environment and Development (IIED) is an independent research organisation that aims to deliver positive change on a global scale. Our mission is to build a fairer, more sustainable world, using evidence, action and influence, working in partnership with others.

Economics for Nature (E4N) is a global partnership of business, civil society and international policy institutions intent on system-wide change to restore nature.

Led by four global alliances, the Green Economy Coalition, the Green Growth Knowledge Partnership, WWF France and The Capitals Coalition, we are working together to make the value of natural capital visible in economic and business decisions.

Funded by the MAVA Foundation

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# CONTENTS

# LIST OF FIGURES



# LIST OF TABLES

# LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| ACODE | Advocates Coalition for Development and Environment |
| ANNI | Adjusted Net National Income |
| ANS | Adjusted National Savings |
| COVID-19 | Corona Virus Disease 2019 |
| ESIA | Environmental and Social Impact Assessment |
| GDP | Gross Domestic Product |
| GEC | Green Economic Coalition |
| GNI | Gross National Income |
| IIED | International Institute for Environment and Development |
| IPBES | Inter-government Science Policy Platform on Biodiversity and Ecosystem |
| LTD | Limited |
| MWE | Ministry of Water and Environment |
| NDPIII | Third National Development Plan |
| PM | Particulate Matter |
| SMEs | Small and Medium Enterprises |
| UDBL | Uganda Development Bank Limited |
| UN | United Nations |
| USD | United States Dollar |
| WHO | World Health Organization |

# ACKNOWLEDGMENT

Over the last five years, the Advocates Coalition for Development and Environment (ACODE) has been a member of Green Economy Coalition (GEC). GEC is a membership organization of 50+ members and is the world's largest civil society network dedicated to accelerating the transition to a green economy.

At the core of the transition to a green economy is the realization that natural capital degradation and biodiversity loss are pressing social, economic and environmental concerns, but they remain outside most mainstream economic decision-making. The most high-profile economic decision-making currently relates to the COVID19 pandemic and it is vital that policies that promote sustainable investment in natural capital are integrated into post COVID-19 Economic Recovery.

This report was coordinated by GEC and funded by the Economics for Nature (E4N) Programme to undertake a series of country case studies combining analysis and advocacy in Brazil (Amazonas,) Uganda, India and France. A synthesis report will be produced by IIED to identify nature-positive and nature-negative recovery investments and understand the processes that drives these economic decisions. This Ugandan case study identifies nature-positive and nature-negative recovery investments and provides an understanding about the process that drives these economic decisions.

ACODE would like to thank Aaron Werike the lead author of this report and the contributions of ACODE staff; Barbara Ntambirweki, John Okiira and GEC and IIED colleagues who provided immense intellectual oversight to this report. This study has generated generic lessons and recommendations to integrate natural capital into post COVID-19 recovery packages. This study also proposes areas for further analysis and inquiry in mainstreaming natural capital into economic decision making.

# EXECUTIVE SUMMARY

Like the rest of the world, Uganda has not been spared by the trail of damage wrecked by COVID-19, with mixed implications on the economy, society and the planet (natural capital). The 2019/2020 Uganda National Household Survey, released in May 2021, revealed that COVID-19 drove an additional two million Ugandans into poverty, shrank employment by 10 percent from 57 percent before COVID-19 to 47% during COVID-19, and increased the proportion of the population engaged in subsistence agriculture from 41 percent to 52 percent before and during COVID-19 respectively. For this reason, the country is racing towards recovering from COVID-19 effects albeit the recovery is understandably inclined to the economy, which bore the biggest brunt of the pandemic. Importantly, the UN Environment Programme Report on Green Approaches to COVID-19 Recovery (2021) urges that, for effective long term economic recovery, consideration of all dimensions of sustainable development, including the environmental pillar must be prioritized. This Report presents an analysis on the extent of mainstreaming natural capital in Uganda's COVID-19 Recovery Packages and prescribes recommendations for enhanced consideration of natural capital in the COVID-19 Recovery packages.

The report seeks to mainstream natural capital management in Uganda's COVID-19 Recovery Plans. It highlights and analyzes the existing COVID-19 Recovery Packages, their implications on natural capital, and recommends measures that will strengthen the mainstreaming of natural capital in economic decision making. The Methodological approach entails mapping out of budgetary interventions against five natural capital responsiveness parameters: (I) implication on protection of biodiversity and ecosystem services; (II)ability to generate irreversible environmental impacts; (III)implication on restoration/ reclamation of previously polluted land; (IV) ability to improve agriculture and land productivity; and (V) ability to correct existing natural capital market failures. This mapping is followed by a ranking the scale of the intervention's impact on natural capital resulting into four categories: (I) strong positive; (II) Weak Positive; (III) Strong Negative; and (IV) Weak Negative.

Specifically, Uganda's third National Development Plan (NDPIII 2020/21-2024/25) is the medium term COVID-19 response plan, and it is implemented through annual national budgets. This Report therefore assesses the costed budgetary interventions for the first two financial years (2020/21 and 2021/22) of implementing the NDPIII 2020/21-2024/25). It is noteworthy that these budgets are Uganda's annual COVID-19 Recovery plans aligned to the NDPIII 2020/21-2024/25.

With regard to findings, based on methodology explained in the preceding paragraph, a review of the financial year 2020/21 budget (amounting to USD 12.15Billion) indicated that it is 40 percent (USD 4.8Bn) responsive (positively and negatively) to natural capital management. Of the 40 percent natural capital responsive interventions, 70 percent (USD 3.36Bn) were strongly

positive, 15 percent (USD 720M) were weak positive, 15 percent (USD 720M) strong negative while there was none that was weak positive. Relatedly, the 2021/22 national budget (amounting to USD 12.1B) registered a decline in terms of natural capital responsive interventions estimated at 28 percent (USD 3.36Bn), far below the 40 percent (USD 4.8Bn) registered by the financial year 2020/21 budget. The ranking in terms of scale of intervention impact on natural capital indicated that; 60.8 percent (USD 2.04Bn) of the overall 28 percent (USD 3.36Bn) natural capital responsive interventions were strong positive, 26 percent (USD 873.6M) were weak positive, 13 percent (USD 436.8M) were strong negative while none was weak negative. The Decline between the two budgets is attributed to a decline in the allocations to the Natural Resources and Environment Programme which fell from 3.7 percent (USD 444M) of the total national budget in 2020/21 to 2 percent (USD 240M) in 2021/22. Other factors include a dip in the number of natural capital responsive interventions captured in other programmes/sectors of the 2021/22 budget.

In terms of recommendations, the Report urges the Government of Uganda to subject all its COVID-19 recovery measures and packages to a natural capital implication assessment to ensure, a holistic recovery that addresses the needs of the environment, economy and society. Equally important, the Civil Society in Uganda should undertake constructive effective dialogue with high impact decision makers who design COVID-19 recovery packages to ensure that they work for rather than against the planet. Additionally, there is need to generate cutting edge analytical research and studies that embody the role of natural capital as a spring board for sustainable development. Lastly, the government should generate environmental fiscal reforms such as tax incentives for local green enterprises to bolster the green economy transition.

This publication was produced by the Advocates Coalition for Environment and Development (ACODE) and is part of a global study on nature-based recovery that includes Brazil, France, India and Uganda. It has been undertaken in partnership with the Green Economy Coalition (GEC) and the International Institute for Environment and Development (IIED), and forms part of the Economics for Nature Project. This work is funded by the MAVA foundation.

# 1.0 INTRODUCTION

## NATURAL CAPITAL AND COVID-19 RECOVERY IN UGANDA

Uganda is one of the most naturally endowed biodiverse countries in the world with a plethora of various forms of flora and fauna[1]. Undoubtedly, natural capital is the mainstay of Uganda's economy as indicated by the sectoral composition of her Gross Domestic Product (GDP), employment, and exports. For instance, the highly organic agriculture sector accounts for about a quarter of the *GDP (24% in 2020) and 40 percent of exports while employing 66 percent of the population by occupation*[2]. Notably, Uganda's agriculture is largely supported by natural capital with negligible fertilizer application which is estimated at 1.5kg/hectare/ year; far below the Sub-Saharan Africa average of 7 Kg/ha/year and with only 2 percent of the arable land under irrigation. This implies that natural capital is the bedrock of Uganda's agriculture production, productivity, and food security. Over the years, the performance of agricultural production and productivity has *significantly affected income poverty, inflation and exchange rate*[3] with these variables worsening whenever there is a dry spell whose frequency has been increasing due to rampant deforestation. Relatedly, tourism which accounts for 7 percent of national GDP is largely motivated and driven by nature. Conservation areas such as national parks and game reserves receive the highest number of tourists with corresponding high tourism revenue and foreign exchange.

The above remarkable role notwithstanding, prioritization of natural capital in the fiscal and monetary policies remains a mirage which threatens the sustainability of Uganda's development trajectory. With the emergency of COVID-19 and its induced lockdowns that wreaked havoc on the economy and society, Government has been induced to undertake a rare hefty one off fiscal intervention in form of COVID-19 stimuli and recovery packages to resuscitate the ailing economies and societies at large. This has inadvertently presented a rare window of opportunity to ensure that natural capital conservation and management plans are the compass of these hefty expenditures. With a declining fiscal space because of a growing debt burden (35.5 percent of the 2021/22 national budget went to debt financing) coupled with competing development priorities, increasing natural capital financing from conventional national budgetary sources will increasingly dwindle, yet natural capital financing has been poised to directly contribute to the achievement of Sustainable Development Goals (IPBES, 2020). For this reason, the current hefty COVID-19 stimuli recovery packages ought to be leveraged and oriented to work for rather than against natural capital management. This write up elaborates on the state of Uganda's natural capital base, how it has been

1 Uganda National Biodiversity Strategy Action Plan 2015 - 2025
2 Uganda Bureau of Statistics 2020 Statistical Abstract
3 Uganda National Household Survey 2016/17.

affected by COVID-19, the existing and ongoing COVID-19 Recovery Packages and how they can be influenced to build back better in a way that protects, restores, conserves and sustainably manages natural capital.

### 1.1 State of Uganda's Natural Capital

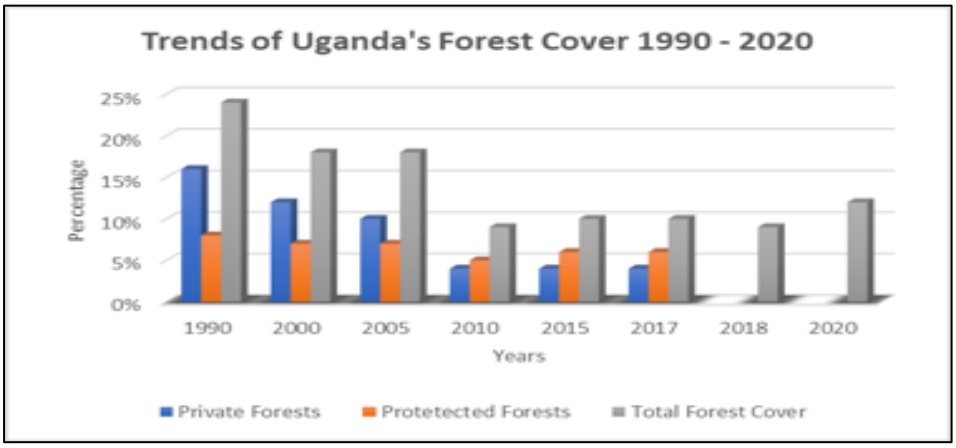
The current state of Uganda's natural capital (including forests, wetlands, fisheries, pangolins and birds) is worrying due to indiscriminate loss triggered by population pressure, income poverty agriculture expansion, industrialization, sporadic urbanization and low budgetary allocations. For instance, forest coverage declined from 24 percent in 1990 to 12 percent by 2020 while wetlands coverage plummeted from 15.5 percent to 8.9 percent over the same period.

At the same time, only 34.4 percent and 20.6 percent of forest and wetland area respectively was under management plans as of June 2020[4]. This gloomy state extended to water bodies which have become seasonal with some rivers totally drying up due to massive encroachment on catchment areas. A case in point is Lake Wamala in Mubende whose size has significantly reduced and the highly degraded River Rwizi in Mbarara. The degradation of wetlands has had economic implications such as the decline in water quality accompanied by higher costs of water treatment by the National Water and Sewerage Corporation, and partial functionality of small hydro power projects such as Nyagak located along rivers that have become seasonal due to degradation.

In light of the above state, urgent intervention is more of a must than an alternative to arrest the indiscriminate degradation of natural capital at rates that undermine its natural replenishment ability. With COVID-19 in the picture, all government efforts have been shifted to saving lives and resuscitating the economy. This poses a risk of relegating natural capital protection further in terms of budgetary prioritization if no deliberate effort is undertaken to ensure that natural capital is effectively integrated in the COVID-19 stimuli and recovery packages.

4 Water and Environment Sector Performance Report, 2020

Figure 1: Uganda's Forest Cover as a Percentage of Total Land Area 1990 – 2020




Source: Figure constructed by Author based on data drawn from the 2020 Water and Environment Sector performance Report and National Forestry Authority National Biomass Survey, 2017. N.B, there is no disaggregated data on private and protected forests for 2018 and 2020.

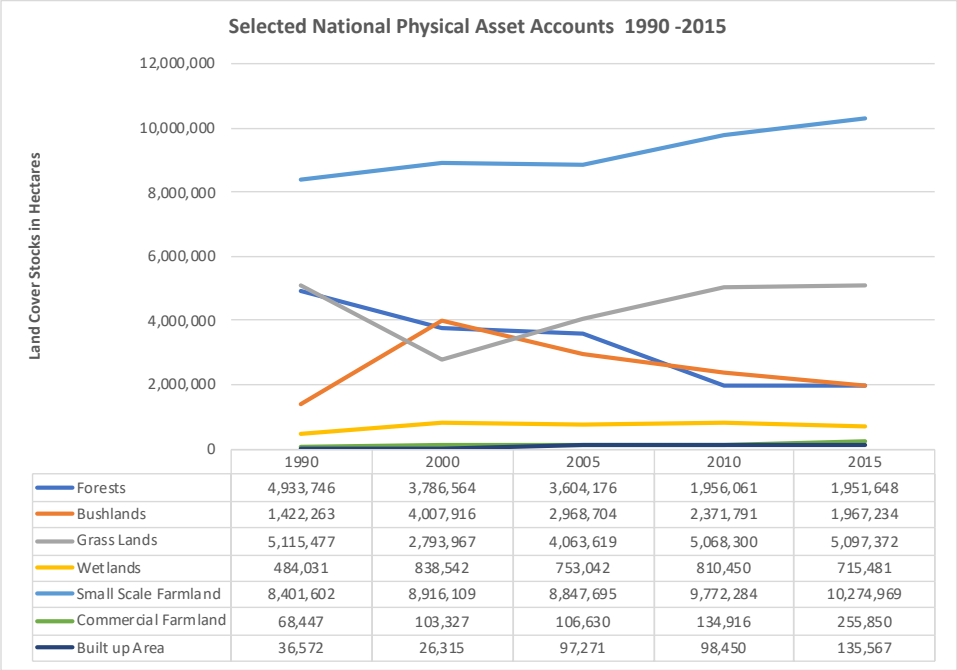
Figure 1 above indicates that Uganda is losing her forestry cover at a rate of about 2 percent annually with deforestation of private forests being the major drivers of this loss and decline. Table 1 below indicates the details of the flows of various classes of forest types

**Table 1: Forest cover by class in Uganda 1990 – 2017**

| Class | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 |
|---|---|---|---|---|---|---|
| Broad leavened plantation | 18,112.77 | 10,040.04 | 15,010.56 | 21,091.59 | 44,711.64 | 84,048.48009 |
| Conifer Plantation | 15,837.21 | 11,587.05 | 17,554.32 | 43,043.58 | 61,926.3 | 75,797.91004 |
| Tropical High Forest (THF) well stacked | 720,644.67 | 706,715.73 | 611,128.53 | 556,556.85 | 539,861.67 | 524,180.7048 |
| THF low stocked | 229,810.23 | 209,445.03 | 195,874.29 | 116,597.25 | 121,028.13 | 102,139.2 |
| Woodland | 3,892,853.97 | 2,997,859.95 | 2,533,507.92 | 1,466,134.02 | 1,175,318.46 | 1,237,198.093 |
| Total Area | 24,154,607.79 | 24,154,923.15 | 24,155,337.60 | 24,155,337.60 | 24,154,470.90 | 24,154,655.34 |
| Percent of Land Area | 24% | 19.2% | 16.5% | 10.8% | 9.5% | 9.9% |

Source: State of the National Environment Report, 2018/19.

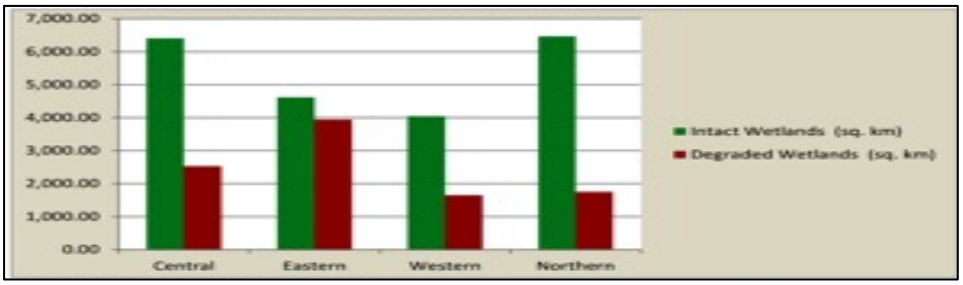
Figure 2: Trends in selected Uganda's Land Cover stocks 1990 – 2015




| | 1990 | 2000 | 2005 | 2010 | 2015 |
|---|---|---|---|---|---|
| Forests | 4,933,746 | 3,786,564 | 3,604,176 | 1,956,061 | 1,951,648 |
| Bushlands | 1,422,263 | 4,007,916 | 2,968,704 | 2,371,791 | 1,967,234 |
| Grass Lands | 5,115,477 | 2,793,967 | 4,063,619 | 5,068,300 | 5,097,372 |
| Wetlands | 484,031 | 838,542 | 753,042 | 810,450 | 715,481 |
| Small Scale Farmland | 8,401,602 | 8,916,109 | 8,847,695 | 9,772,284 | 10,274,969 |
| Commercial Farmland | 68,447 | 103,327 | 106,630 | 134,916 | 255,850 |
| Built up Area | 36,572 | 26,315 | 97,271 | 98,450 | 135,567 |

Source: Figure constructed by Author based on date drawn from a Technical Report on the National Physical Asset Account for Uganda, 2019

Figure 3: Wetlands Coverage and Degradation by Region




Source: National State of the Environment Report, 2018/19

Figure 3 above indicates that the wetland coverage has been slowly declining with the Eastern Part accounting for most of this decline. Relatedly, Uganda's poverty map indicates that Eastern Region is the poorest and lagging behind on key economic development indicators and yet with the worst environmental sustainability indicators which raises questions on whether the high poverty is partly driven by environmental degradation. The Eastern Region is predominantly engulfed in rice growing most of which is grown in wetlands. As such, agriculture expansion especially rice growing is the key driver of wetland reclamation in the Eastern Region.

### 1.1.1 Fisheries Resources

The State of Uganda's Fisheries Resources is derived from Fisheries accounts[5] in 2019 constructed to ascertain the stocks and flows of these invaluable natural resources. This is because stock monitoring is barely undertaken due to financial constraints. In instances where it is done, it is limited to the largest water body – Lake Victoria.

In terms of the *Extent of Fisheries Resources*, it was noted that Uganda's freshwater ecosystems comprise of lakes and rivers. There are 165 lakes with five major lakes accounting for the highest population of fisheries resources. These are Lake Victoria (29,584 sq.km - Ugandan side), Lake Albert (3,162sq. km- Ugandan side), Kyoga (2,583 sq.km0, Edward (675 sq.km - Ugandan side) and George (250sq.km). Additionally, there are 160 minor lakes which support vicinity communities but their role in fisheries catches has dwindled from 9 percent of total catches in 2004 to only 2 percent by 2018. This is attributed to the massive exploitation that triggered depletion of fish stocks. Also, because of their small size, they have been neglected during the enforcement of fisheries legal regulations.

With regards to *Fish Asset Accounts*, it was established that while Uganda has over 500 fish species, only four exist in commercially viable quantities – Nile Perch, Nile Tilapia, Mukene (Silver Cyprinid) and Muziri Neobola bredoi). Due to financial resource constraints, periodical stock monitoring is only undertaken on the largest water body – Lake Victoria. As such, the Fisheries Asset accounts indicated that Lake Victoria had registered a decline in the stocks of Silver Cyprinid, Haplochromines between 2009 and 2019. On the other hand, the stocks of Nile Perch had significantly improved over the same period albeit, with a negligible decline noted in 2016 and 2019 owing to over fishing, and use of illegal and unregulated fishing gears. One of the factors advanced for the decline of Haplochromines was the increased stock of Nile Perch which is a predator to the declining fishery resources.

The *Physical Supply and Use Tables* were deployed to track the ability of fish ecosystems to supply provisioning services – fish. Notably, lakes and rivers account for the major ecosystems supplying fish in Uganda with capture fisheries accounting for 80 percent of total national fish harvest and aquaculture contributing 20 percent. Generally, fish catches have registered fluctuations over the last decade. For instance, between 2011 and 2018, fish catches dipped from 493,840 metric tons to 345,000 metric tons (lowest in over 15 years) due to indiscriminate fishing and use of illegal fishing gear such as beach seines and fish finders. This decline in stocks has direly implicated the fisheries sub-sectors economic indicators. Key among these includes a plunge in export volumes from 36,000 metric tons in 2005 to 16,594 metric tons in 2016. However, with enhanced enforcement of fishing regulations to arrest a further detrimental decline in fisheries stocks, resuscitation has been observed

5 Fisheries Resources Accounts for Uganda (March 2021)

with exports increasing from 16,594 metric tons in 2016 to 20,364 metric tons in 2018. In monetary terms, revenue from fisheries including aquaculture increased from USD 140.2M in 2009 to USD 469M in 2016 and registered a decline to USD 345.6M with these values computed based on beach value prices of the catch.

### 1.1.2 Wildlife Populations

Wildlife particularly in protected natural ecosystems indicates a mixed trend with certain species increasing, others declining while some have gone extinct. The latest National State of the Environment Report (2018/19) indicates that; the Mountain Gorilla population increased from 292 in 1995 to over 400 in 2017, the Elephant population almost tripled from 2000 in 1995 to 5,808 in 2017, Buffaloes increased from 18,000 in 1995 to 37,045 in 2017, Giraffe population increased from 250 in 1995 to 880 in 2017 while Chimpanzee population increased from 3,300 in 1997 to 4,950 in 2003 with studies to establish current population ongoing.

Conversely, the Eastern Black rhino, Northern White rhino and the Lord derby's Eland remarkably declined to extinction while the Black rhinos have significantly increased in captivity from 8 in 2004 to 22 in 2017. Wildlife populations outside protected areas are threatened by land use changes through conversion of species habitats to farmland, illegal hunting and illegal wildlife trade. Furthermore, reported Human-Wildlife Conflict has increased from 1,704 to 3,116 between 2016 and 2018 with species associated with these conflicts including; elephants, baboons, monkeys, lions, and hippopotamus. The increase is attributed to an exponential population growth which results into communities settling close to wildlife habitats.

## 1.2 Existing Legal, Policy, Planning and Institutional Frameworks for Natural Capital

Government has demonstrated remarkable efforts in ensuring sustainable management of natural capital. These have been at legal, policy, planning and institutional level although, with weak enforcement of some of committed effort. This has undermined the achievement of set goals. Key among these efforts includes:

i. In terms of legal frameworks, Uganda has a relatively new National Environmental Act (2019) which provides the legal framework for the use and management of natural capital. This followed a review of the previous National Environmental Act (1994) to provide legal guidance on key emerging issues such electronic waste, international obligations and a burgeoning ambitious industrial agenda. Key among the commendable novel sections and clauses in the Act is Section 25 which provides for the establishment of an Environmental Police Force to enforce legal provisions of the Act, Section 29 which mandates Parliament to appropriate a conditional grant each financial year to support natural resources departments in local governments, and section 45 which obligates

selected Agencies to prepare Environmental Action Plans and submit quarterly monitoring reports to the National Environmental Management Authority. This makes the natural capital integration at Agency level more effective since the law obliges the government to quarterly report on the performance of their environmental action plans.

ii. The National Environmental Management Policy (1994) is currently undergoing review to capture key emerging issues and integrate lessons learned during its 27 years of implementation.

iii. Regarding Planning, the third National Development Plan (NDPIII 2020/21-2024/25) devotes a full Program to Environment and Natural Resources with clear results to be realized over its tenure. These include; increased land area covered by forests from 9.1 percent to 15 percent, increased land area covered by wetlands from 8.9 percent to 9.57 percent, and increased permit holders compliance with Environment and Social Impact Assessment (ESIA) conditions at the time of spot check from 40 percent to 90 percent between 2020/21 and 2024/25. The NDPIII further stipulates and recommends the development of natural capital accounts to not only monitor the stocks and flows of natural capital, but to also enable accurate estimation of the impact of economic development on the natural capital base. The Green Growth Development Strategy (2017/18-2029/30) also stipulates interventions that must be adopted to ensure that economic development and socioeconomic transformation does not come at the expense of natural capital degradation.

iv. At institutional level, there are fully fledged institutions mandated to regulate, conserve and sustainably manage natural capital. These include – the National Environment Management Authority, National Forestry Authority, Ministry of Water and Environment and Uganda Wildlife Authority. However, the existence of these institutions has not necessarily resulted into improved environmental quality or reduced degradation and encroachment raising questions on the requisite reforms that must be undertaken to enhance the effectiveness of Agencies tasked with sustainable management of natural capital.

Evidently, the above interventions are commendable, however, it is prudent to note that they are largely inclined to creating enabling processes and environment rather than actual restoration, conservation and management of natural capital. For instance, inclusion of natural capital in all the aforementioned planning and legal instruments has proven not to be a guarantee for budget prioritization, a key means of implementation for natural capital restoration and management interventions.

### 1.3 Integration of Natural Capital Accounting in Planning and Policy

Besides the broad general natural capital responsive government interventions highlighted in the preceding section, there are other ongoing specific

interventions that are directly associated with the natural capital base. One of these is the ongoing construction of natural capital accounts to inform policy and planning decisions in line with the recommendations of the Third National Development Plan (2020/21-2024/25). The spirit of constructing natural capital accounts is to a shift away from the conventional narrow measure of economic progress based on Gross Domestic Product (GDP) to a more holistic approach that also captures the impact of economic progress on the natural capital base.

The National State of the Environment Report 2018/19 indicates that Natural Capital Accounting provides detailed integrated statistics on how natural resources contribute to the economy and how the economy affects natural resources. Therefore, the envisaged results of constructing natural capital accounts is to create a critical pool of natural capital stocks and flows data that can be integrated in the National Accounting System. Construction of Natural Capital Accounts is being led by selected Government Agencies including; the National Planning Authority, Ministry of Finance, Planning and Economic Development, Uganda Bureau of Statistics, National Environment Management Authority and the Ministry of Water and Environment. While still in its nascent stages, institutionalization of Natural Capital Accounting is gaining traction indicated by a growing cooperation between the Government Planning and Budgeting Agencies and the institutions mandated with natural resource management, policy, governance and regulation. It is noteworthy that previously developed Natural Capital Accounts were developed by an inter-agency technical committee comprised of representation from the; National Planning Authority, Ministry of Finance, Planning and Economic Development, Uganda Bureau of Statistics, National Environment Management Authority and the Ministry of Water and Environment. This cooperation seamless aligns with the Third National Development Plan (NDPIII 2020/21-2024/25) recommendation of institutionalizing Natural Capital Accounting across relevant government agencies. Accordingly, five natural capital accounts (Forests, Wetlands, Fisheries, Water, and Tourism) have already been constructed accompanied with adjusted macroeconomic indicators as elaborated in the subsequent section.

### 1.3.1 Land Accounts

Physical Asset Accounts for Land (1990 – 2015) have been developed with a goal of ensuring efficient, effective and optimal utilization and management of land resources for wealth creation and socioeconomic transformation. This is in line with the policy objective of Uganda's 2013 National Land Policy. In terms of approach and methodology, the land accounts construction leveraged the UN and World Bank methodology of System for Environmental Economic Accounting which combines land cover and land use based on data generated by Agencies such as National Environment Management Authority, National Forestry Authority, Uganda Bureau of Statistics and the Ministry of Finance, Planning and Economic Development.

Key findings from the Land Accounts are enumerated below:

i. The accounts indicated significant land cover changes with remarkable negative changes in Forestry Cover where about 70 percent of woodlands were lost between 1990 and 2015; the remarkable change is attributed to clearance for small-scale farmland. For instance, in the northern region, 1.54million hectares have been lost between 1990 and 2015 with a paltry 0.34million hectares left to date.

### 1.3.2 Forest Accounts

Published in June 2020, Uganda's forest accounts are in monetary and physical terms which entails areas of forestry coverage coupled with selected assets and wood products thereof for the period 1990 to 2015. Like for Land accounts, Forest Accounts were developed using methods recommended by the UN System for Environmental Economic Accounting using data which is usually a combination of satellite imagery and ground surveys undertaken by Agencies mandated to conserve and manage forestry resources. Results from the forestry accounts are captured in Table 1 and they indicate sharp declines in woodlands, slight increases in broadleaved and coniferous plantations and large declines in tropical highland forest. In terms of monetary forest accounts, it was revealed that albeit Uganda's forest area declined by 60 percent between 1990 and 2015, total value of forest land increased by 26.7 percent with the average price of a hectare increasing further by about 2.5 times. This ascension in price and value is attributed to; massive deforestation which made forested land scarce, and demand for land for infrastructure projects, largescale agricultural projects which increased demand for land.

### 1.3.3 Experimental Ecosystem Accounts

Whilst the full set of ecosystem accounts is not yet complete, there has been remarkable progress using data and modelling tools to create the accounts particularly for selected ecosystems such as forests and wetlands. Capitalizing on the System for Environmental Ecosystem Accounting framework methodology, land cover was used as a proxy for ecosystems during the experimental development of these accounts. Generally, the accounts generated estimates for physical measures for carbon sequestration, carbon storage, water yield and sediment retention in eight river basins and by land cover type. The flows and changes in the aforementioned physical measures were compared to changes in land cover – especially declining forestry area owing to land use change to farmland. Results indicated that the ecosystem services providing climate regulation (carbon sequestration and carbon storage) increased between 1990 and 2005 but nosedived between 2005 and 2015 with the latter decline attributed to deforestation. Furthermore, water yield is estimated to have increased, implying that more rainwater ended up in rivers (albeit changes in rainfall patterns are also a key determinant when estimating this). Conversely, soil retention is reported to have declined during the reporting time partly due to the conversion of forests and woodlands to

farmland because the latter is relatively prone to erosion than forests and woodlands in the early growing seasons when the full ground cover is still inadequate.

### 1.3.4 Adjustment of National Macroeconomic Indicators

Besides the natural capital accounts, macroeconomic indicators in the National Accounting System has also been adjusted to enable assessment of long term sustainability of the national economy. This was essential for a natural capital based economy like Uganda. Accordingly, two sets of economic indicators were developed entailing:

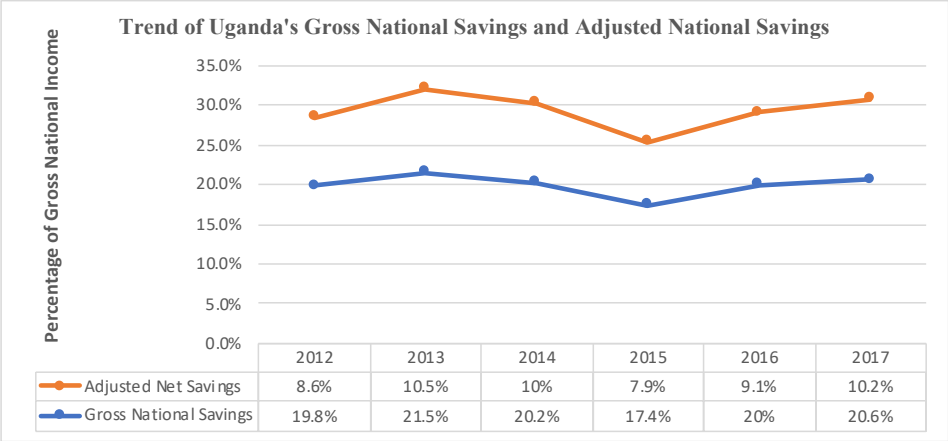
i. Adjusted macroeconomic measures of national income and savings to reflect flows and stocks of natural capital while integrating environmental damage and income saved for investment in natural capital;

ii. Information on natural wealth entailing an elaborate measure of different types of assets which include renewable and non-renewable resources, human capital, produced capital and financial assets.

The adjusted macroeconomic indicators include; Adjusted Net National Income (ANNI) which measures the extent to which national income is sustainable in the short term while the wealth indicates the prospects for maintaining the ANNI in the long term. On the other hand, Adjusted National Savings (ANS) elaborates the relationship between income and wealth. In terms of approach, the adjustment of National Macroeconomic Indicators adapted concepts and data used by the World Bank in the Changing Wealth of Nations indicators sets. Adjusted Net National Income considers the conventional Gross National Income (GNI) and deducts the value of depletion of assets including produced capital (consumption of fixed capital) and natural capital. Relatedly, Adjusted National Savings takes conventional Gross National Savings and adds the value of education expenditure (as a proxy for investment in human capital), deducts the value of depletion of assets and deducts the value of pollution damage.

The Experimental Ecosystem Accounts indicated that between 2010 and 2017, renewable natural capital has been depleted implying that renewable resources were harvested at rates higher than their replenishment rate and irreversibly in some instance. Nonetheless, the depletion of renewable natural capital was and is being compensated by investment in other forms of capital such as human capital and produced capital – infrastructure. In terms of Adjusted National Savings, the accounts indicated a positive trend that peaked at 10.5 percent in 2013 but dipped to its lowest at 7.9 percent in 2015. Importantly, whilst Adjusted National Savings and Gross National Savings were positively correlated, the former was lower than the latter by a margin of about 10 percent implying that the consumption of produced and natural capital coupled with the damage triggered by pollution was less than investment in education.

Figure 4: Variation Between Gross National Savings and Adjusted National Savings




| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|
| Adjusted Net Savings | 8.6% | 10.5% | 10% | 7.9% | 9.1% | 10.2% |
| Gross National Savings | 19.8% | 21.5% | 20.2% | 17.4% | 20% | 20.6% |

Source: Figure constructed by Author using data derived from World Bank Report on Natural Capital Accounting: Informing Policy Decisions and Management of Uganda's Natural Resources

## 1.4 Policies with provision that may direly affect Natural Capital Conservation and Management

The favourable policies on natural capital management notwithstanding, there are also government policies that continue to work against natural capital protection thereby watering down Government's commitment and will to conserve, restore and protect biodiversity and ecosystems. These are highlighted below:

i. *The National Physical Planning Guidelines of 2011* that declare the entire country as a planning area implying that even gazetted protected areas can be converted to infrastructure corridors. This will be more prevalent given that in Uganda, land belongs to the People as per the National Constitution and as such, Government has to continually purchase land from citizens to construct or expand infrastructure - a venture that has reported to be expensive. To circumvent land compensation costs, Government in the past has resorted to use of gazetted fragile ecosystems as infrastructure pathways and this will only worsen with existence of a legal instrument that empowers government to acquire any land for development projects.

ii. *Reversal of the ban on the use of plastic bags:* In 2015, Uganda's Natural Capital Base Regulator imposed a ban on the production and use of single use plastic bags. This was however contested by the business community highlighting that the estimated USD 9M plastic bag industry employed over 6,000 Ugandans. This triggered the Office of the Prime Minister to recall the ban after two months of implementation thereby thwarting all recycling and paper bags practice that had picked up. Plastic bags pose a significant threat to soil and water resources and the biodiversity thereof.

iii. *Conversion of Reserved Forested Land into Farm Land:* 5,570 hectares of Bugoma Forest Reserve have been leased to Hoima Sugar Limited to establish commercial sugarcane plantations. This will have dire implications on natural capital in the short, medium and long term because Bugoma Forest Reserve is a highly biodiverse tropical natural forest with endangered Chimpanzees. The tropical natural forest is a water catchment area for Lake Albert and other rivers such as Ewaso Nyiro and Mara in addition to being a migratory corridor for wildlife connecting to neighbouring national and game parks. Unfortunately, the encroacher – Hoima Sugar Limited has acquired legal ownership of the contested tropical natural forest area with a Certificate of Approval of the Environmental and Social Impact Assessment from the National Environmental Regulator and a land title issued by another government Agency. These actions contradict local and global government commitments to sustainable development in addition to breeding grounds for future zoonotic disease outbreaks. One of the project's Environment and Social Impact Assessment recommendations is the planting of trees in the buffer zones which is inadequate to compensate for the ecosystem services provided by a tropical natural forest. Although there are ongoing advocacy protests dubbed #SaveBugomaForest, forest area clearance by the encroacher's workers is already underway in the 5,570 acres area being protected by armed police and private security guards.

iv. *Unabated encroachment on Lwera Swamp through sand mining and expansion of rice fields:* Lwera Swamp is located in Kalungu district and stretches about 20KM on the Kampala-Masaka highway. It continues to face unprecedented encroachment triggered by intensive sand mining and rice growing under the auspices of big private companies. One of the companies is Chinese - Zhong Industries LTD that continues to expand its rice fields claiming to have legally acquired 1,600 acres of land that stretches to Lwera swamp and Lake Victoria shores, with claims of clearance from the National Environment Management Authority and the Ministry of Agriculture, Animal Industry and Fisheries. None of the named Government Agencies have formally come up to refute the claims or condemn the encroachment. This rampant encroachment is not only driving biodiversity loss but also poses a threat of flooding to neighbouring towns. At the same time, the Kampala- Masaka highway has of late suffered sudden huge holes and collapses in something that is projected to worsen with growing encroachment on the Lwera Swamp ecosystem.

### 1.5 COVID-19 and how it has implicated Uganda, and its Natural Capital

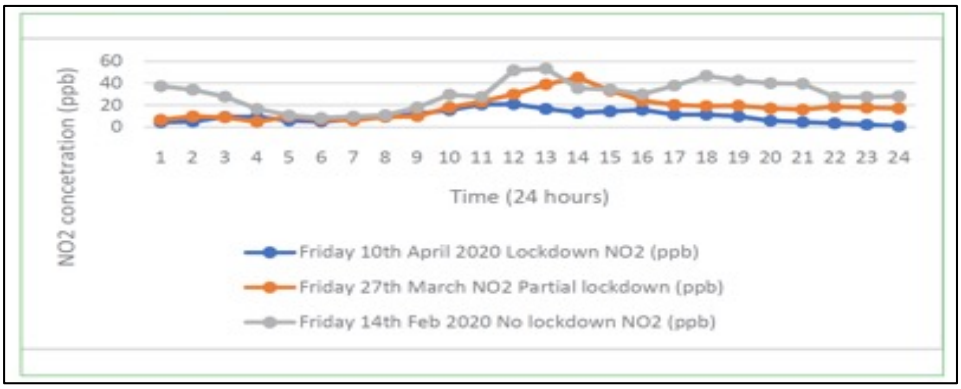
Like many other countries on the globe, Uganda has not been spared the devastating effects of the Corona Virus (COVID-19) which was declared a pandemic on 11th March 2020. As of 4th June, 2021, Uganda's Ministry of

Health website indicated that COVID-19 confirmed cases stood at 49,759 with 47,760 cumulative recoveries and 365 deaths. Whilst the health-related impacts of COVID-19 have not been lethal to Uganda compared to other countries, the dire natural capital and socioeconomic impacts emanating from COVID-19 containment measures such as partial and total lockdowns are palpable. Also, with COVID-19 being zoonotic in nature, it confirms the intricate intertwined relationship between human health and the health of the planet or ecosystems. This sends a stern message to countries like Uganda on the dangers of indiscriminate natural capital degradation. Generally, the implications of COVID-19 on Uganda can be categorized into environmental or natural capital effects and socioeconomic in nature as discussed in the subsequent section.

### 1.5.1 Environmental / Natural Capital Implications

In the short term, Uganda experienced fortuitous transitory natural capital achievements albeit accompanied by medium to long term challenges. One of the temporary natural capital achievements was the improved air quality (using Nitrogen dioxide, Ozone and PM2.5 as air quality parameters) owing to the partial and total lockdowns (imposed on 18th March 2020) that halted economic activity, and public and private transport. According to the 2020 Water and Environment Sector Performance Report, the lockdowns triggered a reduction in nitrogen dioxide (NO2) concentrations by 41 percent while overall greenhouse gas emissions reduced by 68.1 percent. This implies that prior to the lockdown, Uganda's nitrogen dioxide concentrations were beyond the World Health Organization (WHO) ambient air quality standards of (40µg/m3). The unintentional positive implication of COVID-19 lockdowns on nitrogen dioxide concentrations in the atmosphere is indicated in Figure 5 below.

Figure 5: Trend of Nitrogen dioxide concentrations in Uganda's Capital City , Kampala before and during the COVID-19 induced lockdown imposed on 18th March 2020

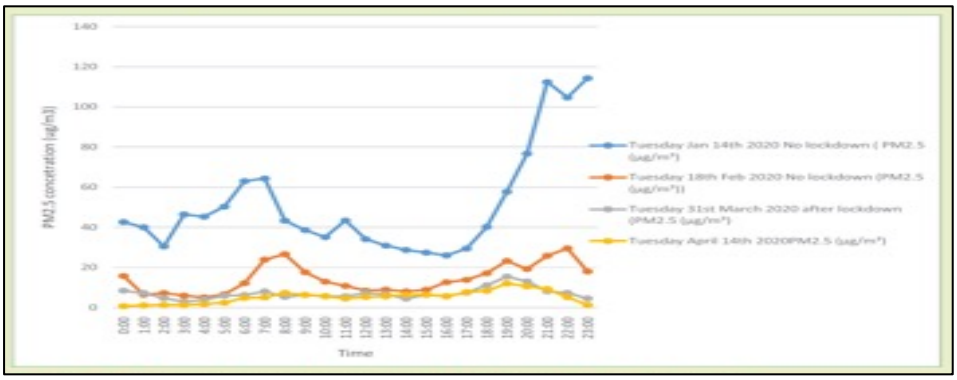



Source: Adopted from the Water and Environment Sector Performance Report, 2020

Besides Nitrogen Oxide, the variations of Particulate Matter (PM2.5) changed for the better by falling during the COVID-19 induced lockdowns. Monitoring

of Particulate Matter (PM2.5) indicated an 83.9 percent reduction in PM2.5 concentrations before and during the total lockdown and a 79% fall during the partial lockdown. It is noteworthy that concentration of PM2.5 in Kampala is largely driven by vehicular emissions and the intensity spikes during traffic rush hours. According to the Kampala Capital City Authority[6], prior to the lockdown, Kampala's air quality in terms of Particulate Matter (PM2.5) concentration was estimated at (62.8µg/m3) far above the global ambient standards (25µg/m3) recommended by the WHO. However, during the COVID-19 lockdown, the concentration dipped from 62.8µg/m3 to 11.7µg/m3 largely due to reduced traffic flow as indicated in figure 6 below:

Figure 6: Variations of Particulate Matter (PM2.5) before and during the lockdown




Sourced from the Water and Environment Sector Performance Report, 2020.

On the negative side, COVID-19 triggered a new strain of waste of non-reusable and non-biodegradable face masks that are likely to end up in water resources and choke biodiversity. This new strain of waste is likely to exacerbate the already ailing solid waste management infrastructure whose existing capacity only collects 40 percent[7] of the total waste generated in the Central Business District - Kampala. This implies that majority of the generated waste (60 percent) ends up poorly disposed of in illegal dumpsites which is washed away into drainage channels during the rainy season and thus ending up in water resources such as lakes, rivers and swamps. This implies that absence of interventions to manage COVID-19 related waste such as non-biodegradable face masks and single use sanitizer bottles poses a formidable threat to Uganda's aquatic biodiversity and soil resources.

However, it is important to note that the inadvertent positive implications on natural capital such as improved air quality triggered by partial and total lockdowns are not sustainable, since they were not based on deliberate policy intervention and will thus be wiped out as economic activity recovers and the remaining COVID-19 induced restrictions loosened. Sustaining these achievements will depend on the direction of COVID-19 stimuli and

6 https://www.kcca.go.ug/news/316/#.YIr0CbUzY2w
7 Kampala Capital City Authority Strategic Plan 2020 - 2025

recovery packages. The window of opportunity presented by one off colossal expenditures to dissipate away COVID-19 effects presents an opportunity to ensure that they are aligned in a way that supports the sustenance of accrued natural capital gains emanating from COVID-19 induced lockdowns.

### 1.5.2 Socioeconomic Implications of COVID-19

The tightly controlled response to COVID-19 by the Ugandan Government evidently produced positive health outcomes. However, the same cannot be said about the socioeconomic impacts of these tight measures especially on the vulnerable groups, poorest of the poor, and micro, small and medium enterprises that partly comprise Uganda's informal sector which constitutes 50 percent of the economy while employing 98 percent of working age labour force[8]. COVID-19 exposed and worsened existing social inequities and vulnerabilities. An additional 2.6 million people are anticipated to fall back into income poverty in addition to the existing 8 million who were living in poverty in the pre-COVID-19 era. Since majority of urban dwellers are engaged in the informal sector (not registered by government and thus barely benefit from formal government support earmarked for businesses) and rely on casual jobs for daily hand to mouth income earnings, they bore the greatest brunt from the collapse of several informal businesses due to COVID-19 containment restrictions and the accompanying economic meltdown. It is noteworthy that even rural dwellers are vulnerable to fall back into poverty because of the 68 percent of the population that relies on subsistence agriculture whose productivity has dwindled due to declining soil fertility, poor unsustainable agronomic practices and soil erosion. The need to contain COVID-19 implications and resuscitation of the economy also implied reduction in expenditure on social protection interventions for the elderly, lagging regions and people with disability. In terms of direct impacts on the economy, the World Bank Economic Update for Uganda released in December 2020 revealed that COVID-19 plummeted Uganda's economic growth from 6.8 percent in 2019/20 to 3.1 percent in 2020/21 while three million additional Ugandans fell back into poverty thus reversing gains in poverty reduction.

8 Development Initiatives: Socioeconomic Impact of COVID-19 in Uganda

# 2 UGANDA'S COVID-19 RECOVERY PACKAGE AND HOW IT ADDRESSES / IMPLICATES NATURAL CAPITAL

Uganda's COVID-19 response has largely been through the fiscal policy with slight alterations of the monetary policy. However, the recovery packages defined by Government expenditure through its budgetary expenditures have been guided by the medium term National Development Plan (NDPIII 2020/21-2024/25) whose drafting and completion coincided with the COVID-19 pandemic and as such, integrated appropriate responsive interventions. The overall development plan which has guided all the COVID-19 recovery packages is discussed in the subsequent section accompanied with the recovery packages and their implication for natural capital management.

## 2.1 Methodology

The COVID-19 pandemic coincided with Uganda's medium term planning transition period where the second five-year National Development Plan (NDPIII 2015/16-2019/20) was ending paving way for the third National Development Plan (NDPIII 2020/21-2024/25). This provided a window of opportunity to integrate COVID-19 response in the new medium term plan (NDPIII 2020/21-2024/25). As such, unlike other countries, Uganda has no standalone COVID-19 recovery plan, rather, its response is part of the mainstream annual National Budgeting which currently implements the third National Development Plan (2020/21-2024/25).

Accordingly, the last two national budgets for Financial Years 2020/21 and 2021/22, were restructured and dubbed as COVID-19 recovery budgets in a bid to cushion and resuscitate the economy due to the devastation trail left by the COVID-19 Pandemic. Therefore, these two national budgets formed the major unit of analysis of Uganda's COVID-19 Recovery Packages. Relatedly, the prevailing fiscal and monetary policies were also assessed in light of their impact on natural capital. Specifically, the national budget is structured along sectors/programmes which are accorded a percentage financial allocation that is further demystified into costed interventions. The interventions and allocations in these budgets have been analyzed through the lens of their impact on natural capital – positive and negative. To ascertain and gauge the budgetary interventions with the highest natural capital impact (both positive and negative), the analysis leveraged the World Bank Sustainability Checklist for Assessing Economic Recovery Interventions (April, 2020). This COVID-19 Economic Recovery Interventions checklist elaborates an assessment criterion of evaluating COVID-19 Recovery measures in terms of contribution to natural capital and sustainable growth. Specifically, the checklist proposes that for COVID-19 recovery measures to work for natural capital, they must be assessed against the following measures: Will the intervention protect biodiversity and ecosystem services?

i. Could the intervention generate irreversible environmental impacts - such as increased deforestation, wetland development or damage to cultural heritage sites?

ii. Will the intervention support the reclamation of previously polluted land so that it can be (re) developed?

iii. Will the intervention improve agriculture and land productivity?

iv. Will the interventions address market failures such as prices that fail to account for externalities?

Therefore, interventions encapsulated in Uganda's COVID-19 recovery packages or budgets were analyzed to sieve out those with an impact on natural capital. This was followed by a further analysis of the sieved natural capital responsive interventions to establish the scale of their positive or negative impact on natural capital. This last step of analysis resulted into four categories of interventions with varying scales of impact on natural capital namely:

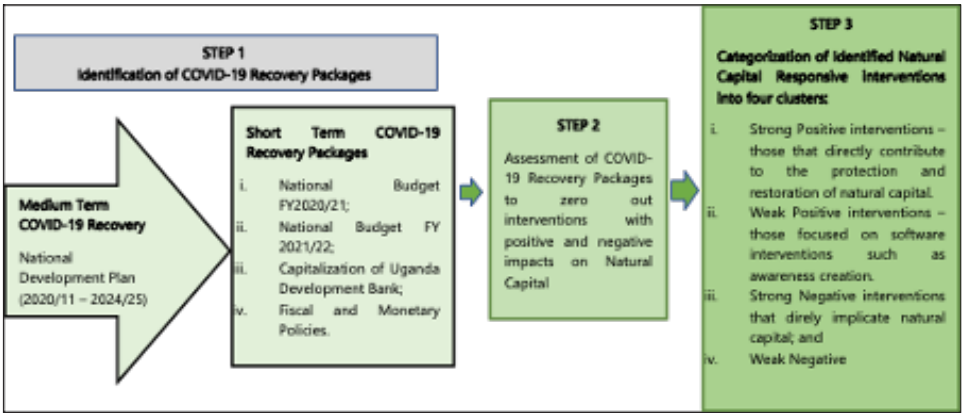
i. Strong positive – direct core natural capital interventions such as; restoration of hectares of forests and wetlands, enforcement of environment management regulations, construction of waste recycling facilities among others;

ii. Weak Positive – indirect natural capital interventions such as citizenry sensitization campaigns that also capture natural resource management, enhancing coordination of government agencies etc;

iii. Strong Negative – direct natural capital deleterious interventions such as bush burning, conversion of forested land to palm oil and sugar cane plantations; and

iv. Weak Negative – interventions that indirectly decimate natural capital such as increasing household waste collection fees by the City Council which in turn triggers illegal waste disposal into wetlands and drainage channels as a result of exorbitant city council waste collection fees.

Figure 7: Conceptualization of the Analyzing COIVD-19 Recovery Packages




## 2.2 Overall COVID-19 Medium Term Response Plan

Uganda's third National Development Plan (NDPIII 2020/21-2024/25) recognizes the growing biological threats from emerging diseases such as COVID-19 which threaten to reverse development gains. Importantly, COVID-19 being zoonotic and thus linked to biodiversity loss and environmental degradation, prescribed interventions and recovery packages ought to be cognizant of and prioritize natural capital restoration and management to avert contributing to future zoonotic diseases that reverse development. For instance, the NDPIII indicates that due to COVID-19 containment measures, Uganda lost USD 400m as of June 2020, was forecasted to lose an additional USD 1.6 billion by June 2021 coupled with loss of 600,000 jobs in the tourism sector alone.

To weather the trail of losses left by COVID-19, the development plan prescribes measures entailing scaling up of health and social protection emergency funds, availing economic stimulus for corporations and SMEs, supporting import substitution and export promotions and extending affordable credit to household enterprises operating within the subsistence economy. Albeit natural capital management does not directly feature in the prescribed COVID-19 recovery interventions, the NDPIII which is comprised of eighteen programmes devotes a whole programme to Natural Resources, Environment, Climate Change, Water and Land Management whose goal is reduced environmental degradation and the adverse effects of climate change while improving the utilization of natural resources for sustainable economic growth and livelihood security. Some of the key results of this programme include;

i. Increase compliance of water permit holders with permit conditions at the time of spot check:
    a. Surface water abstraction – from 78 percent to 82 percent;
    b. Ground water abstraction – from 76 percent to 81 percent;

c. Waste water discharge – from 63 percent to 68 percent;

iv. Increase land area covered by forests from 9.1 percent to 15 percent

v. Increase land area covered by wetlands from 8.9 percent to 15 percent; and

vi. Increase permit holders compliance with Environmental and Social Impact Assessment conditions at the time of spot check from 40 percent to 90 percent.

To achieve the above results, the five year development plan proposed several objectives and intervention such as; promotion of natural resource accounting to improve national income measurement, undertaking economic valuation of selected ecosystems and their services, integrating natural capital and ecosystem services accounting into the system of national accounts, building sectoral, institutional and local government capacity in natural capital accounting, increasing forest and wetland coverage while restoring bare hills, rangelands and protection of mountain ecosystems, maintaining and restoring a clean, health and productive environment, increasing incomes and employment through sustainable use and value addition to water forests and other natural resources.

From the above elaboration, it can be concluded that the overall COVID-19 response plan is green and responsive to sustainable natural capital management. However, it is important to note that planning is a necessary but not a sufficient condition to ensure transformative natural capital management results. The planned interventions must feature in the recovery packages to complete the cycle. As such, the following section examines and analyses various forms of COVID-19 Recovery packages issued by Government through a natural capital management lens.

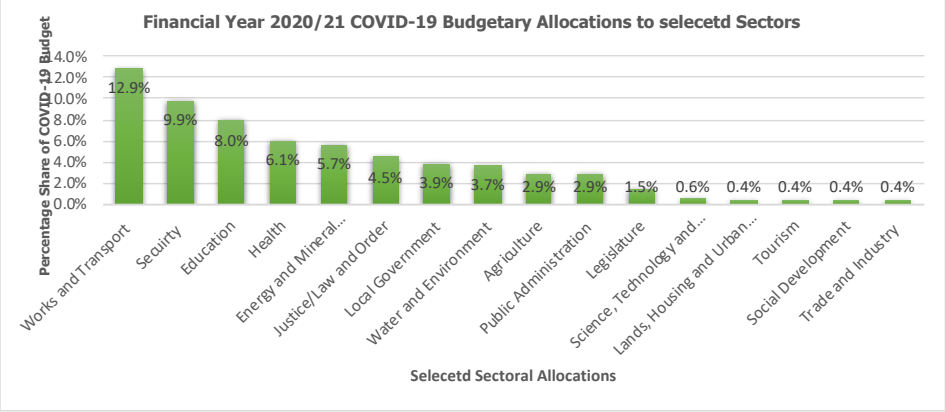
# 3 FINDINGS AND ANALYSIS OF COVID-19 RECOVERY PACKAGES BUDGETARY ALLOCATIONS, FISCAL, AND MONETARY POLICY

As mentioned in the preceding section, Uganda's COVID-19 recovery packages is elaborated in; National Budgets for Financial Year 2020/21 and 2021/22, and the fiscal and monetary policies as detailed in the subsequent sections.

## 3.1 National Budget for Financial Year 2020/21

Uganda's national budget for the financial year 2020/21 was dubbed the COVID-19 Budget and amounted to USD 12.15Billion. It was themed on Stimulating the Economy to safeguard Livelihoods, Jobs, Business and Industrial Recovery with three objectives: (I) Improving wellbeing of Ugandans; (II) Boosting economic transformation; and (III) Improving peace, security and good governance. Whilst the theme may seem devoid of natural capital conservation in wording, it is directly linked to natural capital since Uganda's economy is hinged on natural resources with the livelihoods of all Ugandans in form of food security and access to basic services assured by the state of natural capital.

Figure 8: Allocations to Selected Natural Capital Relevant Sectors by 2020/21 COVID-19 Budget




Source: Graph constructed using data from National Approved Budgetary Estimate

## 3.2 Impact of the Financial Year 2020/21 National Budget on Natural Capital

A review of the financial year 2020/21 budget ascertained that 40 percent[9] of the interventions in the budget impacted natural capital both positively and

9 Computation Approach elaborated in Text Box 1 on Pg 21

negatively while the reminder 60 percent was neutral to natural capital covering peace and security, and the Public debt which is estimated at 49.9 percent of GDP. A further dissection of the 40 natural capital positively and negatively responsive interventions revealed that; 70 percent were strongly positive, 15 percent were weak positive, while the reminder 15 percent was strong negative as illustrated in figure 8. None of the interventions fell in the weak negative category. Notably, albeit the overall budgetary allocation to water and environment, and agriculture sectors was a meagre 3.7% (USD 444M) and 2.9 percent (USD 348M) respectively of the total financial resource envelope (USD 12.1Billion), there were other relevant natural capital interventions identified in other sectors such as works and transport, energy, and mineral development, lands and urbanization, trade, industry and cooperatives and social development as elaborated in Table 2 below:

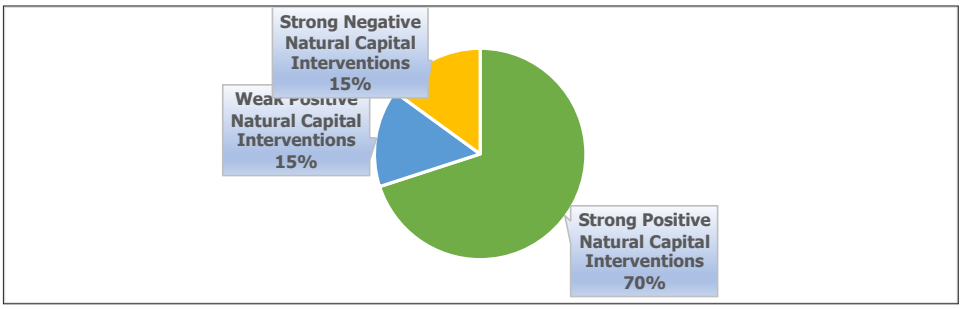
**Table 2: Natural Capital Responsive interventions in other Sectors besides Water**

| Sector /Programme | Natural Capital Responsive Interventions | Budget |
|---|---|---|
| Lands, Housing and Urban Development | i. Promote awareness, knowledge and attitudes of sustainable workplace environment management<br>ii. Hold regular coordination meetings on protection of fragile ecosystems and mitigation of the impacts of climate change.<br>iii. Implement the sector's Occupation, Health and Safety policy | USD 74,864 |
| Works and Transport | i. Review and update policies and guidelines on environmental and social standards for works and transport;<br>ii. Undertake 60 district environmental audit reports;<br>iii. Conduct an Environment and Social assessment and develop an Environment and Social Management Plan<br>iv. Develop 4 regional Environment and Social Management Plans | USD 94,594 |
| Energy and Mineral Development | i. Develop 4 quarterly Environment and Social Impact Assessment Reports;<br>ii. Review 8 Environment and Social Impact Assessments;<br>iii. Harmonize Health, Safety and Environmental issues with National programs;<br>iv. Substitute wooden electricity poles with concrete poles;<br>v. Ensure sustainable waste management and disposal during project implementation;<br>vi. Undertake tree planting, preserve natural landscape , trees and shrubbery | USD 324,324 |

| Sector /Programme | Natural Capital Responsive Interventions | Budget |
|---|---|---|
| Tourism, Wildlife and Antiquities | i. Mitigate negative impacts caused by activities of oil and gas in wildlife protected areas;<br>ii. Undertake compliance monitoring, Environment Impact Assessment Review, Biodiversity offset guidelines, capacity building and development of monitoring tools;<br>iii. Develop guidelines for payment of ecosystem services. | USD 165,405 |
| Education and Sports | i. Develop an Environment in Education Policy.<br>ii. Conduct environment education awareness (tree planting, waste disposal and management) in school institutions;<br>iii. Organize and celebrate International Environment Day in schools/institutions | USD 10,810 |
| Agriculture, Animal Industry and Fisheries | i. Design and construct 2 aquaculture parks to reduce pressure on natural fishery resources;<br>ii. Provide Sustainable land management services to 42% of farmers;<br>iii. Clear 7,000 hectares of land bush;<br>iv. Promote climate smart agriculture | USD 5,405,405 |

Source: Ministerial Policy Statements and Budget Framework Paper for FY 2020/21

Figure 9: Scale and Likely impact of Prioritized Natural Capital Relevant Interventions




Source: Constructed based on analysis of the Uganda 's 2020/21 COVID-19 Recovery Budget

Box 1: Computation Method used for ascertaining the percentage of budgetary interventions that are responsive to Natural Capital

To establish the extent of responsiveness (positive and negative) of budgetary interventions to natural capital, a blend of qualitative and quantitative methods were used through the following steps:

i. Development of a tabular framework (table 2)that maps budgetary interventions against the natural capital responsiveness/implication assessment framework;
ii. Selection of interventions that have direct and indirect negative and positive implications on natural capital;
iii. In depth further disaggregation of natural capital positively and negatively responsive interventions;
iv. Establishment of the scale of impact of interventions on natural capital resulting into ranking categories of; strong positive, weak positive, strong negative, and weak negative;
v. Summation of interventions captured under different ranking categories; and
vi. Expression of each summed category (strong positive, weak positive, strong negative, weak negative) as a percentage of the total natural capital responsive interventions identified in step 2

Table 2: Assessment framework

| Natural Capital Impact Variable | Programme/ Sector | Intervention | Strong Positive | Weak Positive | Strong Negative | Weak Negative |
|---|---|---|---|---|---|---|
| Implication on protection of biodiversity and ecosystem services | | | | | | |
| Ability to generate irreversible environmental impacts (deforestation, wetland damage etc) | | | | | | |
| Implication on restoration/reclamation of previously polluted land | | | | | | |
| Ability to improve agriculture and land productivity | | | | | | |
| Ability to correct existing natural capital market failures | | | | | | |

Determination of Natural Capital Responsive Interventions

### 3.2.1 Strong positive interventions for Natural Capital Management

i. Increase the percentage of farmers accessing Sustainable Land Management services from 31.7 percent to 42 percent;

ii. Enforce compliance to environmental and social standards in road construction projects;

iii. Continue to use alternatives to wooden electricity poles like concrete poles;

iv. Undertake and enforce proper waste disposal during project implementation;

v. Preserve natural landscape, trees and shrubbery;

vi. Undertake 15,000 patrols in protected areas to curb poaching and other illegal activities on wildlife;

vii. Develop guidelines for Payment of Ecosystem Services;

viii. Develop biodiversity offset guidelines and restore 7485 hectares of degraded Central Forest Reserves;

ix. Plant 11,020 hectares of plantation forests and establish 2,000 hectares of commercial tree plantations with a survival rate of over 70 percent;

x. Digitize and demarcate 559km of forest boundaries;

xi. Undertake 1,500 environmental audits and support 115 District Local Governments to integrate environmental concerns;

xii. Restore and protect 16,500 hectares of degraded wetlands, demarcate 700km of wetland boundaries and develop seven wetland management plans.

xiii. Undertake 4 Environmental and Social Impact Assessments for District Roads and Community Access Roads.

xiv. Plant trees along completed low-cost sealed roads.

### 3.2.2 Weak Positive Interventions for Natural Capital Management

i. Awareness on the protection of fragile ecosystems;

ii. Undertake four sensitization campaigns in schools;

iii. Conduct four quarterly Reports on Environmental and Social Impact Assessment

### 3.2.3 Strong Negative interventions for Natural Capital

i. Increase in the number of hectares of land bush cleared from 7,000 hectares to 7,500 hectares;

ii. Prioritization of crops such as sugarcane among the 14 agricultural enterprises despite their previous impact on environmental degradation with potential to further accelerate environmental degradation. Sugarcane cultivation was at the epicenter of a campaign to convert part of Mabira Forest to a sugar can plantation in 2007 and is currently threatening to curve out over 4,000 hectares of Bugoma Forest for sugarcane plantations;

iii. Also, a paltry allocation of 3.7 percent to the water and environmental sector relative to the 12.6 percent and 5.7 percent allocations to the Works and Transport and Energy and Mineral development respectively negates

the budget's goal of promoting environmental conservation to ensure food security, secure livelihoods and enable recovery from COVID-19.

### 3.3 COVID-19 Recovery National Budget 2021/22

The financial year 2021/22 national budget resource envelope amounted to USD 12.1 Billion themed on Industrialization for Inclusive Growth, Employment and Wealth Creation. The Budget had three objectives: (I) Restoring the economy back to the medium-term growth path – of 7 percent; (II) Improving the wellbeing of the population to ensure a healthy and skilled workforce; and (III) Providing Peace, Security and Good Governance.

### 3.4 Implication of Financial Year 2021/22 National Budget

An assessment of the financial year 2021/22 national budget through the natural capital responsiveness lens indicated revealed that it is 28 percent[10] (USD 3.36Bn) responsive (positive and negative) to sustainable natural capital management representing a significant decline from the 40 (USD 4.8Bn) percent compliance score noted under the FY 2020/21 budget assessment highlighted in the preceding section. The 28 percent natural capital responsiveness entails budgetary interventions that have both positive and negative implications on natural capital. The reminder 72 percent of the budget was deemed neutral with no implication on natural capital since Recurrent Expenditure alone (wages, statutory interest payments, and non-wage) took 58.7 percent of the total budget. Results of the disaggregation (figure 10) of the 28 percent (USD 3.36Bn) natural capital responsive budgetary interventions highlighted that; 60.8 percent (USD 2.042Bn) of the natural capital responsive budgetary interventions were found to be strongly positive, 26 percent (USD 873.6M)) were weak positive, 13 percent (USD 436.8M) were strong negative while none turned out to be weak negative. Notably, a decline in the percentage of natural capital responsive budgetary interventions between the two budgets for financial years 2020/21 and 2021/22 was observed having dipped from 40 percent in 2020/21 to 28 percent in 2021/22. This decline is attributed to both the decline in the allocation to the Natural Resources, Environment, Climate Change, Water and Land Management Programme which dipped from 3.7 percent (USD 444M) in FY 2020/21 budget to a paltry 2 percent (USD 240M) in the FY 2021/22[11]. Also, in its current state, the budget is inclined to industrialization and petroleum development, there are no resources allocated to procurement of adequate equipment for effective monitoring of oil and gas activities for environmental compliance, making it more deleterious to natural capital.

Relatedly, electronic waste is an emerging strain of waste that is growing exponentially due to the increasing use of electronic gadgets such as phones and computers. Disposal of electronic waste is prohibited at all landfills which

10 Box 1 Illustrates the methodology used to derive this figure
11 National Budget Framework Paper for Financial Year 2021/22

creates a collection and disposal challenge thus breeding grounds for illegal dumping in wetlands and drainage channels in response to absence of a designated dumping site. Current efforts to manage this waste are being thwarted by lack of prioritization by the budget. Effective management of COVID-19 related waste such as single use disposable masks and spike in plastic waste driven by sanitizer bottles is conspicuously missing in the COVID-19 Recovery budget.

Whilst the budget allocation process is still ongoing until when the cycle is completed by end of June, the National Budget Framework Paper FY 2021/22 provides estimated allocations to each programme. It has been proven over time that these estimated allocations in the budget framework paper barely change significantly in the final budget reading. In terms of strategy, the 2021/22 budget is themed "Industrialization for Inclusive Growth, Employment and Wealth Creation" and will seek to achieve the following:

i. Increase investment in the real economy in order to generate employment and increase products for import substitution;

ii. Enhanced quality of social services to build human capital;

iii. Enhanced efficiency of physical infrastructure to boost productivity;

iv. Improved provision of affordable financing to unlock entrepreneurial potential and improve competitiveness; and

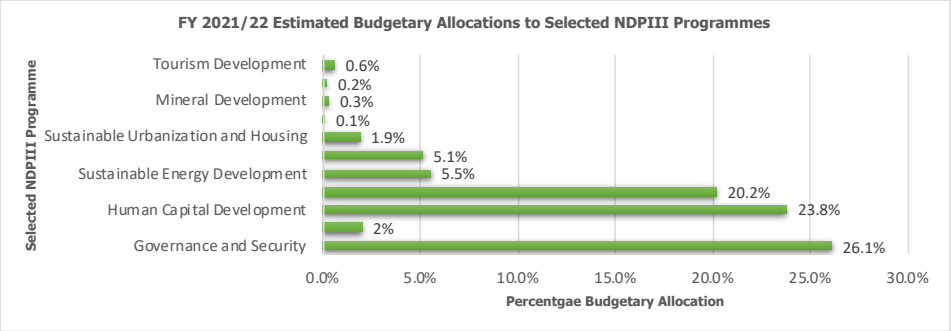
v. Enhanced efficiency of government spending and development as well as effectiveness of public service delivery.

It is important to note that Uganda's industrialization is not only based on natural resources but also inclined to agro-based products which account for over 40 percent of the exports. Moreover, industrialization directly and indirectly affects natural capital through resource extraction, scarring of landscapes, noise and air pollution, and biodiversity loss through discharge of untreated waste in highly biodiverse ecosystems such as wetlands, lakes and rivers. It is therefore unfortunate and ironic that a budget themed on an industrialization agenda that directly and indirectly implicates natural capital is silent on natural capital management and conservation with a paltry allocation of only 2 percent to the Natural Resources, Environment, Climate Change, Water and Land Management Programme.

Ideally, it was expected that a COVID-19 Recovery budget that also sought to bolster Uganda's industrialization agenda would significantly be natural capital base responsive. This would imply deliberate allocation of resources for interventions that neutralize dire environment effects that are triggered by industrialization such as; air, noise, soil and water pollution, solid waste management, and biodiversity offsets especially for the planned petroleum activities most of which lie in fragile biodiverse ecosystems. This would squarely align with the medium term of improving the quality of life and increasing household incomes through enhancement of population economic

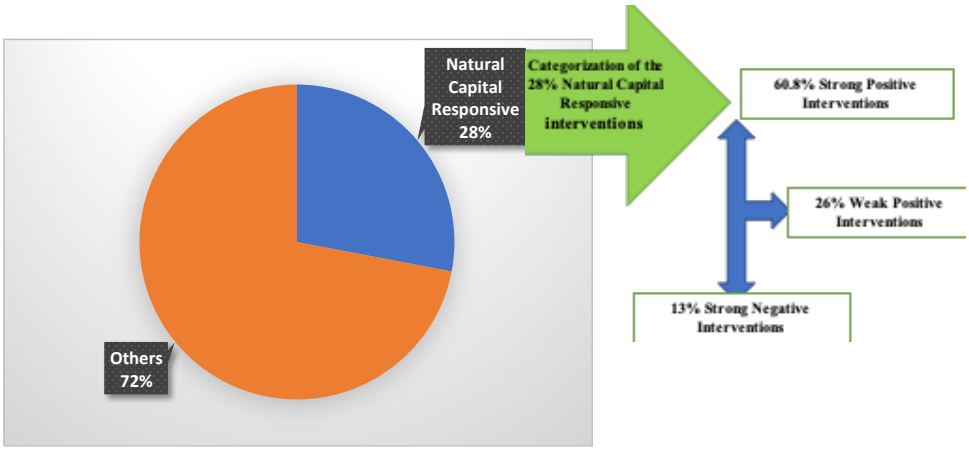
productivity and social wellbeing. Figure 9 indicates the FY 2021/22 budgetary allocations to selected programmes as indicated in the National Budget Framework Paper for the Financial Year 2021/22.

Figure 10: Estimated Budgetary Allocation to selected NDPIII Programmes for the FY 2021/22




Source: Figure constructed from estimated allocations stipulated in the National Budget Framework Paper FY 2021/22

Figure 11: Only 28% of the 2021/22 COVID-19 Recovery Budget supports Natural Capital Management




Source: Constructed using data drawn from the National Budget Framework Paper 2021/22

The subsequent section enumerates natural capital responsive interventions which are categorized as strong positive, weak positive, strong negative and weak negative.

### 3.4.1 Strong Positive Interventions

i. Restore 190 hectares of degraded river banks and 138 hectares of wetlands;

ii. Demarcate 100km of degraded river banks with concrete pillars;

iii. Support 8 private tree nurseries to produce seedlings;

iv. Procure and distribute 20,000,000 assorted tree species in refugee hosting communities in the Albertine and West Nile Regions;

v. Restore 10,560 hectares of degraded forests;

vi. Weed, thin and prune 7,255 hectares of tree plantations;

vii. Resurvey and mark with concrete pillars 700km of forest boundary;

viii. Raise and sell 18,490,000 tree seedlings;

ix. Certify 13 tree nurseries;

x. Raise and sell 11,510,000 tree seedlings;

xi. Plant 1,000 hectares of tree plantations with 70 percent survival rate

xii. Integrate Environment and sustainability concerns in 80 Government Agencies' plans and policies and 117 District Local Governments;

xiii. Undertake 1,900 environmental audits and inspections;

xiv. Use of alternatives to wooden electricity poles like concrete poles to lessen pressure on forest

### 3.4.2 Weak Positive

i. Renovated zonal Water Management Zone office buildings;

ii. Undertake 40 environmental conservation education and public awareness campaigns;

iii. Issue 900 Environmental Impact Assessment Certificates;

iv. Support 30 institutions to integrate education for sustainable development in all forms of learning (formal and informal);

v. Collaborate with Civil Society Organizations to implement 7 environmentally friendly interventions. The lack of clarity on the particular interventions to be implemented blurs the efficacy of this intervention. Besides, the private sector impacts the environment more than civil society yet the former is neglected;

vi. Activate and establish new wildlife clubs in schools neighboring protected areas.

### 3.4.3 Strong Negative

i. Purchase of land for oil palm production in Buvuma and Bubeke islands without a clear biodiversity off set plan. Palm Oil growing is responsible for the forest cover loss in Kalangala district due to absence of biodiversity offsets;

ii. Lack of resource appropriation to electronic waste management which continues to threaten biodiversity in soil and water resources. This waste is prohibited at all landfills yet there continue to be no resources allocated to its recycling or management.

iii. Absence of resource appropriate to procure modern equipment for effective monitoring, inspection and regulation of ongoing Petroleum Development activities. This is perilous since these activities are being undertaken in fragile biodiversity hotspots.

### 3.5 Capitalization of Uganda Development Bank Limited to a tune of USD 281.7M

As part of the COVID-19 Recovery Package, the Government of Uganda committed to capitalize Uganda Development Bank to a tune of USD 281.7m. As of August 2020, USD 128.2m of the total commitment had been disbursed to the Development Finance Institution. Whilst there is still a dearth of data regarding the certainty in terms of amounts that was natural capital management responsive, information on the sectoral distribution of the USD 128.2m stimuli packages has been published on the Uganda Development Bank's website. Table below indicates the allocations per investment area;

Table 2: Disbursement of UDBL COVID-19 Recovery Package by Investment Area

| Investment Area | Percentage Allocation |
|---|---|
| Primary Agriculture | 34% |
| Agro-Industrialization | 30% |
| Manufacturing | 23% |
| Tourism and Hospitality | 5% |
| Infrastructure | 3% |
| Health Services | 2% |
| Others | 3% |

Source: Uganda Development Bank Limited Website, 2021

Although the natural capital impact of these disbursements by investment area cannot be ascertained, there is a high degree of likeliness that natural capital sustainability was effectively integrated. This is hinged on the fact that UDBL was declared a Sustainability Certified Institution in 2019 and its new strategy is also based on the principle of sustainability which seeks to ensure that all pillars of sustainability are embedded in its operations as part of its corporate responsibility. At the same time, the Bank has three high impact goals that resonate with natural capital sustainability. These are:

- Reduce poverty in Uganda while protecting the natural environment;
- Build a Sustainable Food System for Uganda; and

- Promote Sustainable Industrialization in Uganda.

### 3.6 Fiscal Policy Strategy

According to the National Budget Framework Paper 2020/21, Government's overall fiscal strategy is to maintain macroeconomic stability and fiscal sustainability while achieving inclusive growth. The mainly expansionary fiscal policy driven by public investment in large scale infrastructure projects largely through deficit financing remotely addresses natural capital management and sustainability. This is indicated by the 3 percent allocation to the Water and Environment sector relative to 12 percent allocation to the Works and Transport sector and the 5.7 percent allocation to Energy and Mineral Development in 2020/21. Also, the fiscal decision to merge all revenue into one consolidated fund as stipulated by Section 29(3)(a) of the Public Finance Management Act 2015 (Amended) may direly impact natural capital management given its implication on the National Environmental Fund. This is because once environmental fines and levies are mixed with other sources of revenue in the consolidated fund, it because difficult to track whether this money is ploughed back to natural capital management.

All is not gloomy for natural capital with regards to Uganda's expansionary fiscal policy that is largely realized through deficit financing. A case in point is a recent loan (USD 80.6M) that was approved by Parliament to improve management of 1,157,073 hectares of forested land in 28 Central Forest Reserves, seven National Parks and four wildlife reserves in the Albertine and West Nile regions. It can therefore be concluded that Uganda's fiscal policy remotely addresses natural capital management if the budgetary appropriations to natural capital responsive interventions are anything to go by.

Relatedly, the 2021/22 National Budget Framework Paper indicates that the fiscal strategy and operations for the upcoming Financial Year (FY2021/22) will focus on policy interventions to sustain recovery from the socioeconomic setbacks caused by the COVID-19 pandemic as well as the development objectives set out in the third National Development Plan (NDPIII). This is envisaged to be realized through maintaining a stable macroeconomic environment, boosting domestic revenue mobilization, mobilizing additional external borrowing, rationalizing domestic borrowing and undertaking stable reforms to improve public investment management to realize growth dividends thereof.

### 3.7 Monetary Policy Strategy

The Bank of Uganda Monthly Monetary Policy Statement (April 2021) indicates that Uganda's medium term (2 to 3 years) monetary policy objective is to maintain price stability by ensuring low and stable inflation coupled with a stable and competitive exchange rate. The target therefore is to maintain annual core inflation at 5 percent. Achievement of the targeted monetary policy goal of a maximum of 5 percent annual core inflation target is intricately

linked to the state of Uganda's natural capital. According to the Bank of Uganda, August 2021 Monetary Statement Release, Uganda's headline and core inflation averaged 2.4 and 3.4 respectively between August 2020 and August 2021, which is below the medium term target of 5 percent. A decline in natural resources owing to environmental degradation creates scarcity which inevitably drives prices up with direct implications on inflation.

For instance, the declining soil productivity due to deforestation and poor agronomic practices increases the cost of food production through purchase of chemical fertilizers to enhance production and productivity. The increased costs of production on the supply side of the food chain are reflected in food prices thereby triggering hyper-inflation. It has been proven that Uganda's inflation is largely driven by food prices which solidifies the nexus between the state of natural capital and the achievement of monetary policy goals. Therefore, whilst the monetary policy remotely addresses natural capital by ensuring price stability, prioritization of effective sustainable natural capital management ought to be appreciated as one of the determinants for the achievement of monetary policy targets on inflation and exchange rate.

# 4 RECOMMENDATIONS/ADVOCACY STRATEGY ON HOW TO GREEN THE RECOVERY PACKAGES

1. *The Government of Uganda should subject all COVID-19 Recovery measures and packages to a natural capital implication assessment.* This will ensure that the Recovery is holistic and addresses the three dimensions of sustainable development – economy, social and environmental pillars.
2. *Initiate and undertake constructive effective dialogue with high impact decision making stakeholders.* Ensuring that the COVID-19 Recovery packages work for rather than against natural capital calls for deliberate engagement with influential stakeholders in charge of national planning and expenditure decisions. One of the envisaged strategies is leveraging the legislature arm of Government which approves the COVID-19 Recovery packages in form of national budgets and any supplementary budgets thereof. The Parliamentary Committee on Environment and Natural Resources will be leveraged as an entry point to sensitize Parliament on how and why the COVID-19 recovery packages are designed to build back better in a way that prevents environmentally destructive expenditures and investments. Other targeted committees will involve the Parliamentary Committee on the National Economy and Budget to enable it to assess all submitted budgets through a sustainable natural capital management lens.
3. *Generate cutting edge analytical studies that clearly elaborate the nexus between the state of natural capital and achievement of planned development goals.* This strategy will entail generating facts on why a natural resource based economy like Uganda must attach a price to its natural capital to not only limit indiscriminate encroachment but also safeguard the achievement of development goals, and fiscal and monetary policy targets.
4. *Lobby for adherence to social inclusiveness and equity in the design of COVID-19 Recovery Packages so as to move beyond mere economic recovery to a broad socioeconomic recovery.* The pattern of Uganda's COVID-19 stimuli and recovery packages has not been socially inclusive and mainly targeting the formal sectors such as big corporate companies and urban residents, yet, majority of the population is engaged in the informal sector. Besides, micro, small and medium enterprise largely owned by youths and women were the worst hit by the pandemic given their size and small cash flows that are not resilient enough to survive several months of closure. For this reason, advocating for social inclusiveness and equity will go a long way in generating positive sustainable natural

capital management spillovers. This is because poverty is both a cause and an effect of environmental degradation.

5. *Establishment of strategic partnerships to foster circularity and enhance enforcement of compliance to environmental standards.* Uganda's ambitious industrial agenda is gaining traction as demonstrated by generous allocation to manufacturing enterprises by the COVID-19 recovery budgets for the Financial Year 2020/21 and 2021/22. As such deliberate efforts in form of sensitization and capacity building sessions on circularity for manufacturers will be organized and held to ensure that Uganda does not address one challenge (COVID-19 economic meltdown) while worsening environmental quality through water, air and soil pollution.
6. *Advocate for environmental fiscal reforms such as tax incentives for local green enterprises while emphasizing a shift from Corporate Social Responsibility inclined Annual Reporting to Corporate Sustainability Reporting.* The current reporting by large corporations targets shareholders and is largely on financial performance with remote inclusion of social issues and completely silent on the natural capital component. Corporations accessing COVID-19 Recover packages ought to be conditioned to commit to Corporate Sustainability Reporting.

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## ABOUT ACODE

The Advocates Coalition for Development and Environment (ACODE) is an independent public policy research and advocacy think tank based in Uganda. ACODE's work focuses on four programme areas: Economic Governance; Environment and Natural Resources Governance; Democracy, Peace and Security; Science, Technology and Innovation. For the last eight consecutive years, ACODE has been ranked as the best think tank in Uganda and one of the top 100 think tanks in Sub-Saharan Africa and globally in the Global Think Tanks Index Report published by the University of Pennsylvania's Think Tanks and Civil Societies Program (TTCSP).

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