UGANDA ECONOMIC UPDATE

From Crisis to Green Resilient Growth: Investing in Sustainable Land Management and Climate Smart Agriculture

17TH EDITION | JUNE 2021

WORLD BANK GROUP

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Foreword

The global crisis persists with almost every country in the world struggling to manage the devastating effects of the COVID-19 health pandemic, including its impacts on economies and livelihoods. In Uganda, which is now entering a second wave of the pandemic, the impacts have been dire following the slowdown in economic activity and fall in household incomes in 2020, when firms were closed and jobs were lost, particularly in the urban informal sector.

Following the loss of these jobs and closure of small businesses, many people returned to agriculture and other natural resource dependent activities, to manage and survive the crisis. This has put additional strain on natural resources, which were already under pressure from rapid population growth, urbanization, a refugee influx, and the drive for industrialization. Increased demand for food and energy to sustain livelihoods and create income sources have added to the already high levels of unsustainable natural resource utilization.

About 41 percent of Uganda's land is now degraded, with an unsustainable rate of soil erosion and land degradation whose cost is estimated at about 17 percent of GDP. At the same time, forest cover is declining by 2.6 percent every year, which is one of the highest rates of forest loss globally. Climate risks, including slow-onset change and extreme events, have exacerbated this natural capital degradation – contributing to economic vulnerabilities and poverty – and will continue to do so in the future.

The response of Ugandans to the pandemic have, therefore, heightened the urgency to enhance the sustainable use of natural resources. This includes sustainability increasing productivity and building resilience to enhance livelihoods, the economy and general well-being. Therefore, the macroeconomic recovery and stimulus packages must be combined with measures to address these environmental and structural issues to spur a green, resilient, and inclusive growth path for the country.

It is against this backdrop that I am pleased to introduce the Seventeenth Uganda Economic Update. This Update makes the case for promoting sustainable land management practices to protect, conserve and ensure better use of land, soil, water, and biodiversity resources, whilst restoring any degraded resources and their ecosystem functions. This will need to be accomplished alongside climate-smart agricultural practices that enhance resilience, reduce greenhouse gases emissions, and boost national food security.

In line with the structure of earlier editions of the Uganda Economic Update series, this report reviews recent economic developments – with particular attention to the economic effects of the ongoing COVID-19 pandemic – provides an outlook for the macro-economy, and then examines the special topic of how Uganda can move from the current economic crisis to a greener and more resilient growth path.

Keith E. Hansen
Country Director
Kenya, Rwanda, Somalia, and Uganda

Abbreviations and Acronyms

AU	African Union
BBL	Barrel
BOP	Balance of Payments
BoU	Bank of Uganda
CAADP	Comprehensive Africa Agriculture Development Program
CAP	Community Agriculture Promoters
CBO	Community Based Organizations
CBR	Central Bank Rate
CCAFS	CGAIR Research Program on Climate Change, Agriculture and Food Security
CCB	Capital Conservation Buffer
CEM	Country Economic Memorandum
CFMCA	Coalition of Finance Ministers for Climate Action
CGAIR	Consultative Group for International Agricultural Research
CNOOC	China National Offshore Oil Corporation
COMESA	Common Market for Eastern and Southern Africa
CPI	Consumer Price Index
CPIA	Country Policy and Institutional Assessment
CRGE	Climate Resilient Green Economy
CSA	Climate Smart Agriculture
CSA-TF	Climate-Smart Agriculture Task Force
CSO	Civil Society Organizations
DRC	Democratic Republic of Congo
DSA	Debt Sustainability Analysis
DSSI	Debt Service Suspension Initiative
EAC	East African Community
EU	European Union
FDI	Foreign Direct Investment
FY	Financial Year
GCF	Green Climate Fund
GDP	Gross Domestic Product
GHG	Green House Gas
GoU	Government of Uganda

GSOP	Ghana Social Opportunities Project
HIPC	Highly Indebted Poor Countries
IBP	Integrated Bank of Projects
ICT	Information and Communications Technology
IFC	International Finance Corporation
IMCF	Inter-Ministerial Cooperation Framework
LIPWs	Labor Intensive Public Works
M&E	Monitoring and Evaluation
MAAIF	Ministry of Agriculture Animal Industry and Fisheries
MDAs	Ministries, Departments, and Agencies
MDRI	Multilateral Debt Relief Initiative
MEMD	Ministry of Energy and Mineral Development
MFPED	Ministry of Finance, Planning and Economic Development
MINAGRI	Ministry of Agriculture
MLHUD	Ministry of Lands, Housing and Urban Development
MoH	Ministry of Health
MoLG	Ministry of Local Government
MRV	Monitoring, Reporting and Verification
MTEF	Medium Term Expenditure Framework
MWE	Ministry of Water and Environment
NAADS	National Agriculture Advisory Services (NAADS)
NAGRC&DB	National Animal Genetic Resources Centre and Data Bank
NBFP	National Budget Framework Paper
NCB	Non-Concessional Borrowing
NCCP	National Climate Change Policy
NDCs	Nationally Determined Contributions.
ND-GAIN	Notre Dame Global Adaptation
NDP	National Development Plan
NDPIII	Third National Development Plan
NEER	Nominal Effective Exchange Rate
NFA	National Forestry Authority
NGOs	Non-Governmental Organizations
NPA	National Planning Authority
NSSF	National Social Security Fund

ODA	Official Development Assistance
OECD	Organization of Economic Co0operation and Development
OPM	Office of the Prime Minister
PFMA	Public Finance Management Act
PIM	Public Investment Management
PMI	Purchaser's Manager Index
PBS	Program-Based Budgeting
PES	Payment for Ecosystem Services
PFM	Public Financial Management
PPP	Public-Private Partnership
REER	Real Effective Exchange Rate
RWA	Risk Weighted Asset
SBFP	Sector Budget Framework Paper
SLM	Sustainable Land Management
SMEs	Small and Medium-sized Enterprises
SPGS	Sawlog Production Growers Scheme
SSA	Sub-Saharan Africa
SWA	Sector Wide Approach
SWC	Soil and Water Conservation
SWG	Sector Working Group
UBOS	Uganda Bureau of Statistics
UEU	Uganda Economic Update
UGGDS	Uganda's Green Growth Development Strategy
UGX	Uganda Shillings
UNHS	Uganda National Household Survey
UNMA	Uganda National Meteorological Authority
UNRA	Uganda National Roads Authority
URA	Uganda Revenue Authority
USA	United States of America
U-SIF-SLM	Uganda Strategic Investment Framework for Sustainable Land Management
VAT	Value Added Tax
WB	World Bank
WDI	World Development Indicators

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KEY MESSAGES

State of the economy: A recovery laced with uncertainties

The Ugandan economy is recovering from a sharp contraction due to the COVID-19 shock that had slowed growth to its lowest pace in over three decades. Real GDP growth is estimated to reach above 3 percent during FY21, following the modest recovery of 0.7 percent in the first half of the FY. On a calendar year basis, real GDP had contracted by 1.1 percent in 2020, due to the almost total lockdown that lasted over four months, border closures except for essential cargo, and the spillover effects of the disruption in global demand on Ugandan exports, remittances and foreign direct investments. The services sector was particularly hard hit, contracting by over 3 percent in 2020, with activities in key sectors like education and accommodation and food services largely curtailed for most of the year. As restrictions were loosened, business and trading conditions improved both locally and globally allowing investments to pick up in the last quarter of 2020, with stronger signs of recovery in the manufacturing and construction sectors continuing into the quarter ending March 2021. Growth in agriculture has been sustained through the cash crops sector, which is relatively better than the food crop sector, in the use of improved farming practices to manage weather variability.

The COVID-19 pandemic is having a profoundly negative impact on Uganda's labor markets, poverty, inequality, and human capital formation. Although people have gone back to work since the steep decline in the employment rate between March and June 2020, household incomes have not fully recovered, and agriculture has absorbed many workers who lost their jobs in other sectors. If not temporary, the shift to agriculture would have reversed somewhat the structural transformation in the labor market (i.e. shift to off-farm and wage employment) that had been realized over the last decade. In the initial COVID-19 lockdown period to June 2020, 91 percent of households involved in non-farm family businesses received less or no income from their businesses. By February 2021, about 50 percent of non-farm family businesses still reported revenues to be below pre-COVID-19 levels, which includes about 10 percent whose businesses remain closed. At the same time, incomes from farming and wage employment also remained lower in about 40 percent of households. As a result, the number of poor people in Uganda is projected to increase by 2.6 million in the short-term. Of more concern, however, are the longer-term effects on human capital formation from the disruption in essential health services – for the treatment of malaria, routine check-ups, maternal and child health care, and HIV treatment – and widened inequalities in access to education; all on the back of a weak social protection system that reaches only 3 percent of the population.

The formal business sector has so far recorded limited benefits from the liquidity support under the Government's crisis response program, as traditional intermediation challenges have been exacerbated by the declining quality of collateral and low activity, especially in the services sector. Therefore, even as money market interest rates have remained low, lending rates have been volatile and high. Private sector credit growth remained robust only for a few sectors like the telecommunications sector, for which it grew by 123 percent in 2020, boosted by increased reliance by many economic agents and firms on digital solutions; lending to other businesses shrunk. The macro-prudential risks are rising with the increased lending to Government and non-performing assets in the banking system that doubled to 10 percent in the latter part of FY20, compared to levels from a year ago. Nonetheless, the modest economic upturn and muted demand, income uncertainty and the potential of an increase in precautionary savings, has curbed inflationary pressures, which allowed the Bank of Uganda to maintain an easy monetary policy stance and liquidity support to the financial system and wider business community. This may support a firmer recovery.

With only modest recovery in foreign direct investment, government borrowing has financed the current account deficit, which widened to 9 percent of GDP in the first half of FY21. The strong rebound in merchandise exports to US$1.2 billion (mainly supported by gold) in the first half of FY21, was overshadowed by merchandise imports, which shot to US$4.7 billion in this period as firms re-opened and global supply chains eased, as well as the sluggish return of tourism inflows. With FDI at just 2 percent of GDP, these non-debt creating flows financed 20 percent of the current account deficit

in the first half of FY21, leaving the balance to be financed by government borrowing, totaling 7.3 percent of GDP, and use of foreign reserves, which fell to US$3.6 billion or 4.5 months of import cover by March 2021 from 5.4 months by end FY20.

The fiscal expansion, while important for supporting economic activity and social spending during the crisis, has exacerbated Uganda's fiscal and debt position and compounded the deteriorating trends of the past **five years.** The fiscal deficit is estimated to widen to about 9.9 percent of GDP by end FY21, from 7.1 and 4.9 percent in FY20 and FY19 respectively. With businesses still constrained by COVID-19 related restrictions, and fiscal support to the private sector largely sustained through the exemption and deferral of tax payments, total revenues are estimated at 13.1 percent of GDP in FY21. Meanwhile, both current and development spending are estimated to have breached the budgeted levels for FY21 on the back of supplementary spending to manage the pandemic and its effects, meet classified spending needs, and sustain infrastructure spending. External financing is set to finance 60 percent of the fiscal deficit, which is ambitious and, as a result, domestic borrowing will likely increase beyond the estimated 3.9 percent of GDP for FY21. As a result, public debt will rise sharply and exceed the 50 percent of GDP threshold by FY22, while liquidity risks have increased due to increased non-concessional and domestic borrowing.

The medium-term outlook for Uganda has improved since the end of 2020 due to advances in domestic demand conditions and the continuing global recovery as COVID-19 vaccines are rolled out, but risks are tilted heavily to the downside. Investments could surge further if the Final Investment Decision agreements are signed quickly to pave the way for production of oil in Uganda. In that scenario, real GDP could grow beyond 4.6 and 6.4 percent projected for FY22 and FY23, respectively. However, if the vaccine programs do not reach a significant proportion of the population and there are additional waves of the virus globally and in Uganda, this could deter the recovery in Uganda's exports; adversely impact a rebound in FDI, tourism and remittances; and further depress the domestic economic recovery. Such developments could also worsen the external and fiscal imbalances, and lead to more severe social impacts. Near term macroeconomic management also faces major challenges and risks related to the oil sector development, shrinking fiscal space amidst rising security spending, increasing use of non-concessional borrowing and fast rising debt; and increasing concerns over governance that could reduce access to external funding. Furthermore, continued degradation of the country's natural capital combined with the increasing frequency of climatic shocks could impact many farms and households in Uganda given their limited adaptive capacity to natural disasters and climatic stressors, generally low technology adoption rates,

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and limited access to alternative off-farm income streams.

Going forward, the immediate priority remains that of saving lives by intensifying measures crucial to limit the spread of the virus, protect the most at-risk populations and overcome vaccine related challenges to avoid long-term socio-economic damage from the pandemic. In this respect, government needs to allocate adequate resources for the acquisition and deployment of vaccines, strengthening surveillance, testing, case management and community engagement to improve uptake of the various interventions. Furthermore, the government should boost the capacity of the health system to concurrently respond to the pandemic and other health conditions.

To address the huge and complex set of challenges facing Uganda's economic recovery, the government's policy response needs to integrate shorter-term post-recovery macro

management policies and longer-term actions that will spur a greener, resilient and inclusive recovery. These are highlighted below.

Post-recovery macroeconomic and macro-prudential management policies

a. **Prudent and transparent fiscal** management remains the lynchpin to recovery and resilient growth – As the crisis abates, the authorities will need to balance the risks from the growing size of debt and related vulnerabilities with a possible slowdown in the economy that could arise with fiscal tightening. Eventually, a fiscal consolidation into the medium term requires raising revenues, through removal of tax expenditures, and a budget re-prioritization that reduces security and public administration spending in favor of human capital development and improving the trade and business environment, and green investments to bolster growth prospects and steer the recovery onto a green, resilient, and inclusive development path. This will need to be accompanied with efforts to strengthen the institutional framework for fiscal policy, including considerations for revision of fiscal rules.

b. Monetary and macro-prudential policies will need to be closely **coordinated with fiscal policy to** maintain internal balances, avoid **inflation and minimize financing costs for firms.** In anticipation of a potential rise in borrower distress and hence increasing non-performing loans (NPLs) within the financial system, as the liquidity support is withdrawn, the strong capital base of the banking sector will need to be complemented with upstream reforms to the insolvency and debt resolution frameworks. This will ensure a quick resolution of the NPLs, if they increase strongly, to allow a quicker resumption of lending by banks in support of the recovery. On the other hand, while the financial system needs to be supported to provide lending for productive households and firms, it is also important to build its resilience by enhancing balance sheet transparency and cautiously phasing out the most distortive liquidity support measures.

c. Unwinding of policies that have been concurrently used to mitigate the impact of the COVID-19 crisis will require close coordination and **sequencing, and a re-think of fiscal-monetary coordination.** Learning from global experience, the tighter links between fiscal, financial, and monetary policy could have been beneficial in times of crisis but could have pitfalls under the conventional code where transparency between monetary and fiscal policy or between financial and monetary policies is crucial. Therefore, unwinding these policies will require close coordination and sequencing of these policy areas and possibly a reset of institutional arrangements that govern their interactions, alongside deepening domestic financial markets to expand the space for both monetary and fiscal policies.

Longer-term policy actions to spur a greener, resilient, and inclusive recovery

a. Protecting the livelihoods of the poor and vulnerable – The COVID-19 shock amplifies the urgency of expanding the coverage and reformulating the design of social safety nets in Uganda to avoid lasting damage of shocks to household incomes and human capital. Government needs to accelerate the development and implementation of shock responsive social protection programs, that support equity and inclusion by cushioning households from food insecurity and falling into destitution and helping to maintain and restore human capital.

b. Restoring and strengthening the education response – In addition to the gradual re-opening of education institutions that is already taking place, government needs to focus on closing the gaps in learning inequalities that have been created by the pandemic – especially with respect to learning outcomes, ensuring all students catch up for the lost school days in 2020, and proactively re-enrolling children who dropped out of school. Beyond these immediate priorities, Uganda needs to develop a robust digital agenda for education.

c. Promoting sustainable business growth and job creation – Beyond the emergency liquidity support to business and subsequent management of the unwinding of this support, government should address structural issues such as the cost of finance. More resilient businesses will also benefit from a faster pace of technology and digitalization adoption to reduce costs and raise productivity of financial systems and firms. To accelerate the adoption of digital technologies, government needs to shift its services to digital platforms, strengthen the legal and regulatory environment for the use of digital platforms, and boost the digital entrepreneurship ecosystem.

d. **Raising productivity of the agricultural sector will remain crucial to accelerate economic growth, reduce poverty and vulnerability, and improve livelihoods in Uganda.** This requires adopting practices to arrest degradation and depletion of natural capital, especially land and building up resilience to climate variability. This can allow Uganda's agriculture sector, which still employs the largest share of the population, to transition towards a higher productivity, climate resilient, inclusive, and low emission pathway – one that pursues economic growth, alongside environmentally sustainable and socially inclusive development – a green transition.

Supporting recovery by investing in green and resilient pathways for economic growth, food security and poverty reduction

Uganda needs to fundamentally shift how land and other natural resources are managed and utilized to meet growing demands on food security, economic growth and poverty reduction under a changing climate.

Whereas natural resources are a major pillar for Ugandan economy and people's livelihoods, their contribution to the economy and poverty reduction is being threatened by mismanagement and climate change. More than 80 percent of Ugandan households depend on renewable natural resources such as agricultural land, fertile soil, forests, and freshwater resources, for their livelihoods. Natural resource based economic sectors generate over one-quarter of GDP. The ability of Uganda's natural capital dependent productive sectors such as agriculture to continue playing key roles in the economy and people's livelihoods effectively dependent on the availability, use and sustainability of natural resources. Unfortunately, these resources have not been well managed leading to rapid depletion, which is intensifying economic vulnerabilities for a natural resource-dependent economy and population.

The impacts of poor natural resources management on productive sectors, the economy and poverty is already evident. Soil nutrient depletion, soil erosion, deforestation, and other manifestations of natural resource degradation have increased significantly over the past decade. About 41 percent of the country's land is now degraded. About 39 percent of the country has an unsustainable rate of mean soil loss, which in the hotspot mountainous regions average rates over 30t/ha/year. By 2019, the overall cost of soil erosion and land degradation was estimated at about 17 percent of GDP. Productivity losses per year for maize from soil erosion have been estimated in some places as high as 190 kg/ha, threatening food security and incomes of the poor and most vulnerable. Forest cover was declining by 2.6 percent every year—one of the highest rates of forest loss globally, and with forests on private land almost completely depleted. Between 1990 and 2015, forest cover loss amounted to $1.2 billion worth of economic loss. These effects are exacerbated by climate risks, whose economic cost through sectors such as agriculture has been estimated in the range of 2.3 to 4.2 billion dollars by 2025, due to crop damage, loss of export crop revenue, loss of livestock, and unmet water demand for plant and livestock production. Uganda's prospects for economic growth and poverty reduction are expected to dwindle unless the country manages its natural capital base in a sound and sustainable manner.

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The need to shift to better approaches for management of land and natural resources, and build resilience to climate and other hazards, has never been more urgent. The COVID-19 pandemic has heightened the urgency to enhance the sustainable use of natural resources. Given the loss of jobs and closure of small businesses, many people have returned to agriculture and other natural resource dependent activities to manage and survive the crisis. This has put more strain on natural capital. Climate

risks – both slow-onset change and extreme events – have exacerbated natural capital degradation, economic vulnerabilities, and poverty, and will continue to do so in the future. The vicious cycle arising from a combination of poor land and natural resource management and increasing climate vulnerability threatens livelihoods of people, the economy, and the environment. Thus, increasing productivity sustainably, and building resilience is even more important now.

A holistic and strategic approach that centers the poor and vulnerable and considers interdependencies across key productive systems is urgently required. The demands of a changing climate require an immediate shift from business as usual. For instance, continued opening of land for farming through slash and burn or expanding cultivation further into critical natural resources, like wetlands and forests, and degrading land through erosion and nutrient depletion cannot continue unabated. This means that natural resource dependent sectors, need to achieve and contribute to green growth, as part of an integrated national green agenda. This calls for greater responsibility for the environment and natural capital; a step change in uptake of technology innovations that boost productivity in key sectors of the economy especially in agriculture, forestry and other land uses that are closely tied to natural resources and livelihoods of the poor, while reducing damage to land and natural resources, and building resilience of the poor. Sustainable land management (SLM) - measures and practices that protect, conserve and ensure sustainable use of natural resources (land, soil, water and biodiversity) and restore any degraded natural resources and their ecosystem functions, will need to be adopted alongside climate-smart agricultural (CSA) practices to enhance resilience, reduce greenhouse gases emissions, and boost national food security.

Despite progress being made by Uganda, barriers to adoption of SLM and CSA continue to affect potential for green and resilient development.

Government's effort in supporting SLM and CSA innovations in Uganda notwithstanding, adoption is still encumbered by many barriers. The National Development Plan and Green Growth Development Strategy recognize the need to invest in SLM and CSA to further mainstream investments in SLM and CSA technologies and innovations in agriculture, forestry and other land uses. The implementation of these modern approaches and innovations to increase productivity sustainably and substantially beyond demonstration has been limited, especially their uptake by the rural poor who are most reliant on natural resources for their livelihoods. This is largely due to the following factors:

i. **Policy design and implementation factors: Scaling up standalone externally funded interventions (pilots) are yet to overcome coordination, political economy, and resource challenges.** The various initiatives have been implemented through different government agencies, each pursuing different aspects of SLM-CSA with limited coordination across them. In fact, different MDAs developed initiatives independently, leading to duplication and gaps. Beyond coordination and harmonization, policies and regulations issued to implement SLM-CSA, have not been fully implemented or enforced, sometimes due to capacity constraints within government (e.g. weaknesses in land administration and agricultural extension institutions) and other times, hindered by vested interests.

ii. **Finance and investment: Overall, there has been an over-reliance on disparate external funding, which tends to be piece-meal.** Not enough effort has gone to create fiscal space for SLM-CSA within the public budget. While current and past investment efforts, have been commendable for demonstrating SLM-CSA innovations, they have not been enough to generate the scaling required.

iii. **Cost of establishment and maintenance: Many SLM-CSA technologies are costly to establish and maintain, requiring significant upfront costs and labor.** Hence, they can attract mostly households that have a relatively larger labor force, and those with access to assets and financing, such as credit. This leaves out a large portion of the population who are often poor and not well endowed with assets.

iv. **Structural factors:** The size of farms, land tenure system and related land insecurity remain a major constraint to implementation of new innovations and technologies. Most land parcels are already too small for SLM-CSA practices to be cost effective when adopted by individual households. Whereas some SLM-CSA practices are area specific, no

single measure can deliver the desired benefit, requiring matching across various practices to make economic sense. These challenges could have been overcome through collective action among farmers to implement SLM-CSA practices at an efficient scale. However, collective action is inherently difficult. Poor access to markets (roads, information, etc.) negatively influences landowners and producers' investment decisions on land management since it affects local prices and their ability to profit from sustainable land management.

v. **Access to technologies and knowledge:** There is limited access to relevant technologies and knowledge, especially for rural households. This is exacerbated by the lack of expertise and low capacity within key national and local institutions that can support the expansion of SLM and CSA (e.g. extension, and local government), partly due to low level of investment in capacity building and financial facilitation from national and external resources. Given that SLM-CSA innovations can be technically complex, a lack of technical support deters adoption.

vi. **Attitudes and behavioral norms:** The decision not to invest in the new technologies could be rational given all the other factors mentioned above. However, some landowners and administrators make decisions driven by their mindsets, underpinned by social, economic, political, behavioral norms and constraints. Such mindsets sustain preference for traditional land and natural resource management and use such as slash and burn, monocropping, overstocking of grasslands, and farming on wetlands. Furthermore, attitudes towards women mean that they are regularly excluded from participating in productive enterprise through disempowerment in decision making and lack of access to land, despite being among the majority that works the land.

Strategic actions are urgently needed to support a greener transition

For Uganda to sustain productivity enhancements that will support the much-needed transformation, all stakeholders must collectively work together to effectively move a larger proportion of landowners and producers to adopt SLM-CSA practices. GOU working with its partners has a big role to play if SLM-CSA innovations are to be adopted in Uganda on a sustainable basis. Key actions that can be supported include:

a) **Increase financial support for SLM-CSA.** First the government needs to significantly increase the resources allocated towards promoting and implementing SLM-CSA practices. In addition, the resources should be allocated in a way that incentivizes stronger cross sectoral collaboration among state ministries, departments, and agencies.

b) **Provide and apply appropriate financial incentives/instruments to** overcome the cost barrier to adoption of SLM and CSA innovations, with the incentives or instruments aligned to different SLM-CSA typologies based on their cost effectiveness (administrative and economic feasibility). The government can also support labor intensive public work (LIPW) and repurpose public finance towards supporting sustainable investments. Along with partners, the government can make efforts to enhance the effectiveness of payments for ecosystem services (PES) mechanisms.

A holistic and strategic approach that centers the poor and vulnerable and considers interdependencies across key productive systems is urgently required. The demands of a changing climate require an immediate shift from business as usual

c) Strengthen institutional coordination and capacities at varying levels of national and subnational governments, and the community to effectively implement SLM-CSA in the cross-sectoral nature necessary to address multiple developmental goals. Institutions that provide communities with knowledge on SLM and CSA, to change mindsets among key stakeholders are critical. Similarly, institutions for the implementation of policies and regulations such as local land administration institutions need to be strengthened.

d) **Promote area specific technology** packages to address multiple goals of enhanced productivity

and incomes, improved and sustainable natural resource **utilization and climate resilience.** Priority should be given to hotspot areas, especially where soil erosion and nutrient depletion is high. Technology packages can range from integrated soil fertility management, and agro-forestry accompanied by erosion control infrastructures (e.g. trenches and bunds), and small-scale water harvesting and irrigation infrastructures to address erosion, nutrient deficiency, and water conservation and utilization challenges.

e) **Organize landowners and producers to ease training and passing of knowledge on the practices, sharing of experiences and lessons and reduce costs for the adoption of new technologies, including labor intensive technologies.** Organization should also help overcoming common use resources governance and enhance bargaining power to make sustainable land management more profitable. Organized communities should also be afforded access to land to overcome common fragmentation challenges among households.

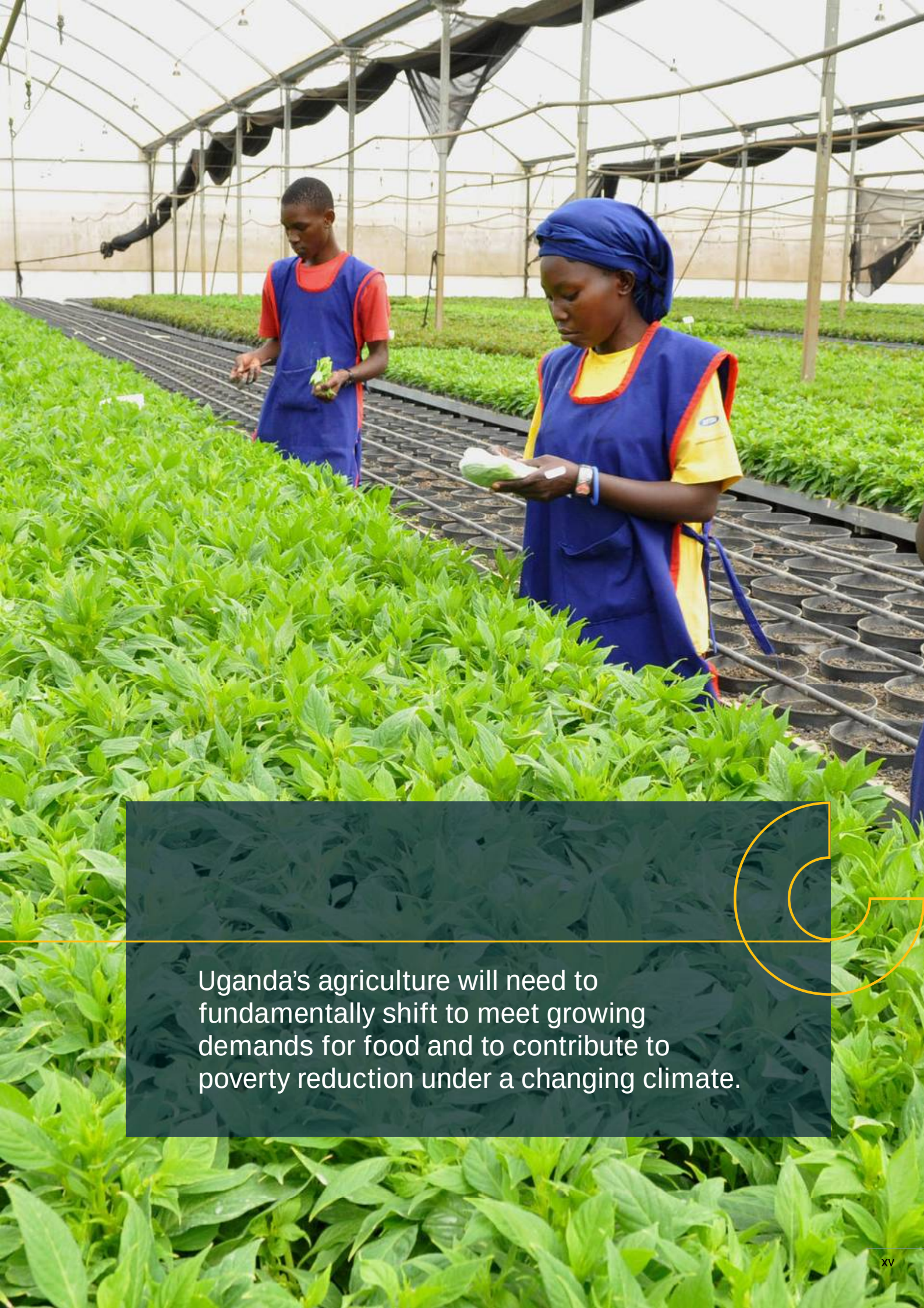
f) **Develop alternative and diverse commodity value chains.** Promoting market access for diverse agriculture, forest and other land-based commodities that do not put pressure on natural resources, and which provide opportunities for inclusion of marginalized groups and value addition is vital. Improved access to markets, infrastructure, and services, can improve land managers' incentive and ability to manage land more sustainably, through stimulating more profitable production and greater ability to produce higher-value products and use inputs more sustainably and intensively which through value addition will reduce pressure on land.

g) **Develop appropriate instruments to provide access to assets and credit to landowners and producers** to ease the costs of adopting new technologies and shifting traditional ways of managing land and natural resources.

h) **Improve land administration and secure land rights, through among others, establishing and implementing effective land use databases, and by empowering local governments and community institutions and building their capacities for land administration.** Securing land rights for the nearly 75 percent of landowners with insecure tenure, will energize the land sector. Urgently addressing land access and use right of women should be an important basis for sound land administration for SLM-CSA adoption.

i) **Support knowledge public goods through improved data collection** on climate data, land use data, and natural resource utilization to enhance knowledge management and support better policy making and targeting of interventions.

In terms of prioritization, financial incentives, and instruments to overcome initial cost barriers and manage risks associated with adoption are vital. Stronger emphasis should therefore be placed on these as the main entry point to addressing the key constraints to adoption and scale up of SML-CSA innovations.



Uganda's agriculture will need to fundamentally shift to meet growing demands for food and to contribute to poverty reduction under a changing climate.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PART 1

STATE OF THE ECONOMY

The global economy has gained momentum, yet the adjustment to new COVID-19 related restrictions, policy induced stimuli, and uneven roll out of vaccination campaigns, suggest an uneven recovery across regions.

1. RECENT ECONOMIC DEVELOPMENTS

1.1 A global recovery is gaining momentum but remains uneven

1. The worldwide evolution of the COVID-19 pandemic remains unpredictable, as new waves of more transmissible and virulent strains of the virus push new infection and death records. Some countries show signs of returning to normalcy following massive vaccination drives. Yet other regions – including South Asia (and in particular India) and South America – pushed the global number of new COVID-19 cases to over 900,000 cases per day by end April 2021, almost quadrupling rates observed between February and March (Figure 1). The total number of recorded cases worldwide exceeded 150 million by end April. The pace of vaccination picked up through April as USA and other rich countries deployed vaccines more rapidly than had been expected at the beginning of 2021. By the end April 2021, almost 600 million people had received at least one shot of the vaccine – mainly in high-income countries – as progress has been slower and started only gradually in most low-income countries.

Figure 1: Global evolution COVID-19 pandemic

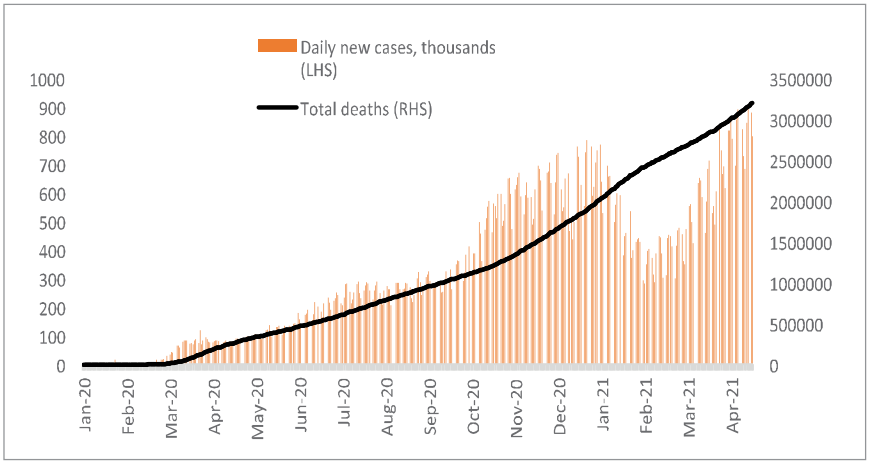
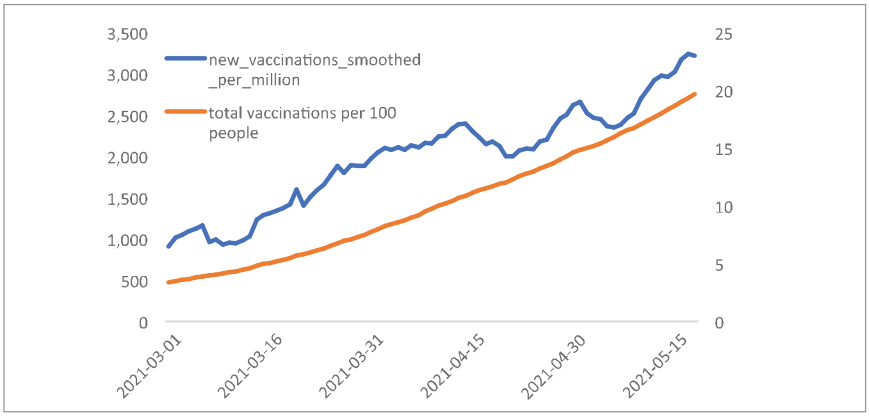


Figure 2: Global vaccination against COVID-19



Source: World Health Organization data as published by Our World in Data (https://covid.ourworldindata.org/data/owid-covid-data.xlsx

2. The poverty impacts of the COVID-19 pandemic are profound and likely to take longer to reverse, particularly for low-income households in urban areas. Latest poverty estimates by the World Bank indicate that the COVID-19 pandemic could have increased extreme poverty by between 119 million (baseline estimate) and 124 million (downside estimate) in 2020. In 2021, the extreme poor could rise further to between 143 million and 163 million, with the bulk taking place in South Asia and sub-Saharan Africa (SSA). By end of 2021, 752 million people could be living in extreme poverty, with 492 million of these located in SSA.

3. The global economy has gained momentum, yet the adjustment to new COVID-19 related restrictions, policy induced stimuli, and uneven roll out of vaccination campaigns, suggest an uneven recovery across regions. The global economy is estimated to have contracted by between 3 and 4 percent during 2020, which is less severe than had been anticipated. The recovery into 2021 is also stronger than had been projected in the January 2021 GEP[1] due to the earlier than expected upturn in China and the extraordinarily large fiscal stimulus in the U.S, even as Europe remains in a recession. According to recent high-frequency data,[2] the composite Purchasing Managers' Index (PMI) rose 1.6 points to 54.8, with both manufacturing and services indices higher than they were at least two and half years ago. Despite the surge in cases and the shift back to tighter

1. World Bank (2021, January)
2. World Bank (2021, February & March)

travel restrictions in some countries, the global Sentix Index continued its rise to 26.8 in April – its highest level in two years – with the 'expectations' component rising to the highest level in the sentiment survey's 18-year history. Increase in manufacturing trade has contributed to a lengthening of suppliers' delivery times and a rise in shipping costs (Figure 3, Panel B) and the new export orders' sub-component remains bullish. Borrowing costs also remained low due to elevated equity valuations (Figure 3, Panel C) and low interest rates. Therefore, global growth could exceed 5 percent in 2021, before moderating to about 4 percent in 2022, due to longer term effects of the pandemic. Nonetheless, uncertainties still surround the evolution of COVID-19 waves amidst sluggish and uneven vaccine rollout, the extent of new restrictions and supply disruptions, changes in consumption spending patterns, behavioral changes, and commodity price volatility.

4. Most commodity prices have sustained the rebound that started in June 2020, due to both demand and supply factors. Crude oil prices have increased (Figure 4)[3] on the back of OPEC's restraint on production,[4] and a boost to demand resulting from the stimulus packages. These prices are expected to average US$56/bbl this year and – as demand continues to recover – to increase to US$60/

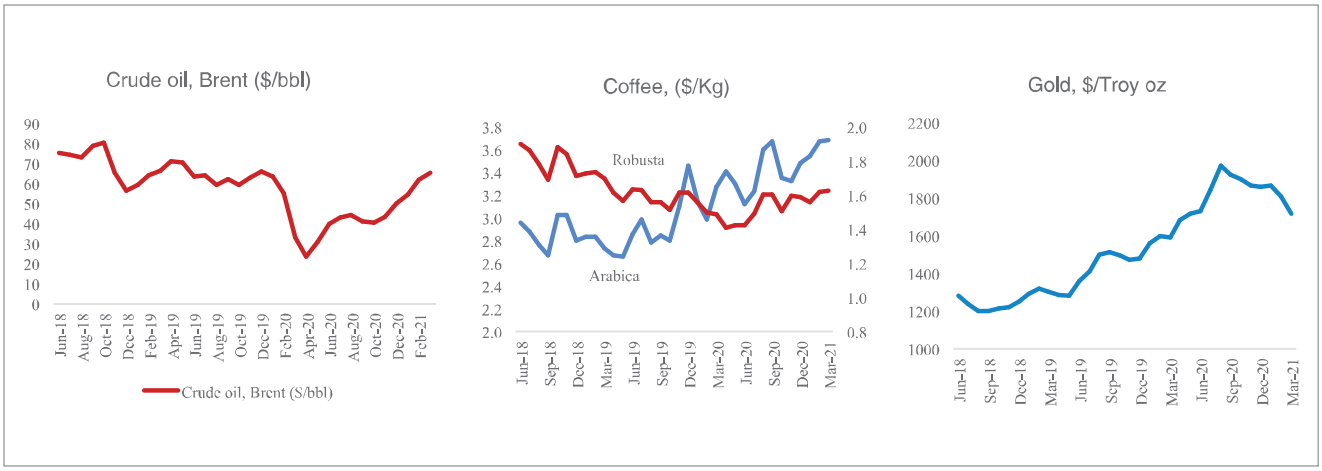
The global economy is estimated to have contracted by between 3 and 4 percent during 2020, which is less severe than had been anticipated. Most commodity prices have sustained the rebound that started in June 2020, due to both demand and supply factors.

Figure 3: Global prospects – recovering activity, trade, and financial markets

Notes Panel A. – Positive values indicate improvement. Panel B – figure shows global manufacturing suppliers' delivery times measured by the Purchasing Manager's Index (PMI) and Harpex Index for container shipping rates. PMI readings above 50 indicate expansion in economic activity; readings below 50 indicate contraction. Last observation is February 2021 for PMI and February 26, 2021 for Harpex Index. Panel C. – 10-year sovereign bond yields are computed summing the J.P. Morgan Emerging Market Bond Index spreads and the U.S. 10-year government bond yields. High-yield corporate bond yields are represented by the effective yields of the ICE BofAML High Yield Emerging Markets Corporate Plus Index. Last observation is September 11, 2020.

3. World Bank (2021a, April)
4. OPEC (2021, January) OPEC and partners' January 2021 decision to restrain production by 0.5 b/day in February and March 2021, compared to levels marketed during July-December 2020

Figure 4: Commodity prices on the international market increased recently



Source: World Bank Commodity Price Data (April 2021)

bbl in 2022,[5] a positive development for Uganda's prospects for starting to produce oil soon.[6] Gold prices have been declining since August 2020; they are likely to dent Uganda's three consecutive years leading export earner. The rise in agricultural commodity, particularly grains and coffee prices that have gained from the shortfall in production from Brazil, is positive for Uganda's export. The average price of Robusta coffee is forecast to reach US$ 1.59 per Kg in 2021 and US$1.60 in 2022.

1.2 Sub-Saharan Africa rebounded but faced headwinds into 2021

5. Economic activity in sub-Saharan Africa (SSA) rebounded during the third quarter of 2020 but has been moderated by the resurgence of the pandemic. As the first wave of the COVID-19 pandemic slackened, countries across the region eased lockdown restrictions. Jointly with the opening of the global economy and easing of international supply chains, this stabilized investments, increased exports, and slowed down the fall in private consumption, with the rebound surprisingly strong in Nigeria and South Africa. However, a second wave of COVID-19 infections, driven by a general relaxation of protective measures and new and more transmissible variants, forced many governments to re-impose restrictions. The recovery in consumption and investment faltered, and the region experienced its first recession in 25 years, even though the contraction of 2.0 percent through 2020 was much less severe than had been feared (i.e. 3.7 percent under the January 2021 Global Economic Prospects). The moderate impact of the COVID-19 virus in the region, the predominance of agriculture in most countries, and faster recovery of commodity prices, shielded overall economic activity.

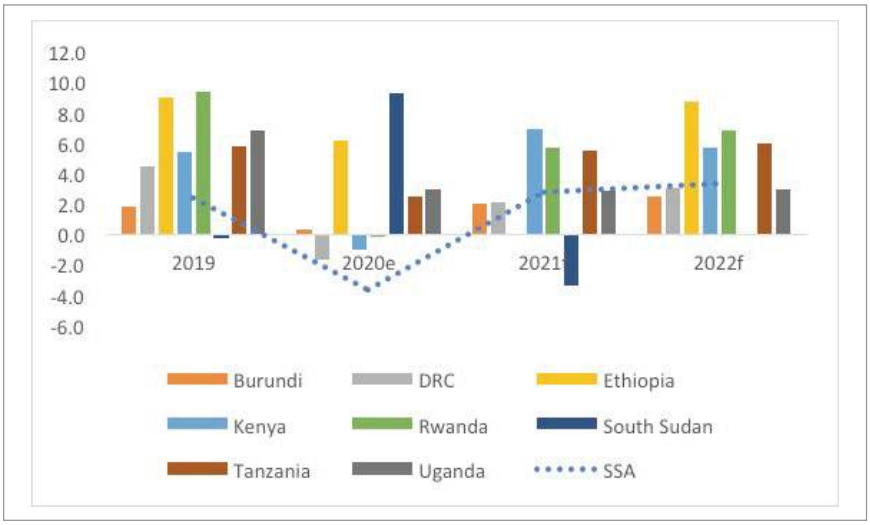
6. Recovery in economic activity in SSA is expected to be slow and uneven. Owing to the slow pace of vaccine rollouts, the economic disruption due to COVID-19 restrictions is likely to continue across the region, even as global recovery picks up the pace. In addition, many countries have limited fiscal space for more stimuli, as borrowing cost and debt vulnerabilities have increased. This is aggravated by sustained investor aversion, with capital flows returning to the region only slowly. Consequently, SSA region growth is forecast at 2.3 percent in 2021, and 3.1 percent in 2022, partly supported by higher commodity prices. For most countries in the region, growth in 2021 will remain below the pre-COVID-19 projections, maintaining the reduction in per capita incomes, and increasing the risk of long-lasting damage from the pandemic on living standards. Countries that have large tourism sectors, dependent on commodity exports and/or face fiscal vulnerabilities are expected to grow sluggishly. South Africa and Nigeria, the largest economies in SSA, are projected to grow by 1.4 and 3.0 percent, respectively, during 2021. Growth in agricultural commodity

5. World Bank (2021b, April).
6. Patey, L. (2015) estimated the breakeven price for Uganda's oil getting to the market at US$60/bbl.

exporters, like Uganda, will benefit from a sustained increase in commodity prices – although they have been partially insulated by lower prices of industrial commodity imports.

7, **Within eastern Africa, recovery could be impaired by the resurgence of COVID-19 infections.** Besides South Sudan, Uganda's main trading partners in the region are expected to experience reasonable growth in 2021 (Figure 5), even though Kenya has re-instituted mobility restrictions to contain the second wave of COVID-19. However, there are significant risks to these projections, as limited access to safe water and sanitation facilities, urban crowding, weak health systems, and large informal economies – all alongside a slow progress in vaccine roll out and insufficient fiscal space – will pose challenges to a sustained containment of the virus. Large-scale community transmission could deepen and protract disruptions to these economies, even as countries sustain easing restrictions to entry through international airports and borders.

Figure 5: Real GDP growth in Eastern Africa, including Uganda's main regional trading partners (percent y/y)



For most countries in the region, growth in 2021 will remain below the pre-COVID-19 projections, maintaining the reduction in per capita incomes, and increasing the risk of long-lasting damage from the pandemic on living standards.

Source: World Bank staff estimates
Note: e = estimate; f = forecast; Ethiopia and South Sudan are fiscal-year-based numbers

1.3 Uganda's economy contracted sharply in 2020 but is gradually recovering

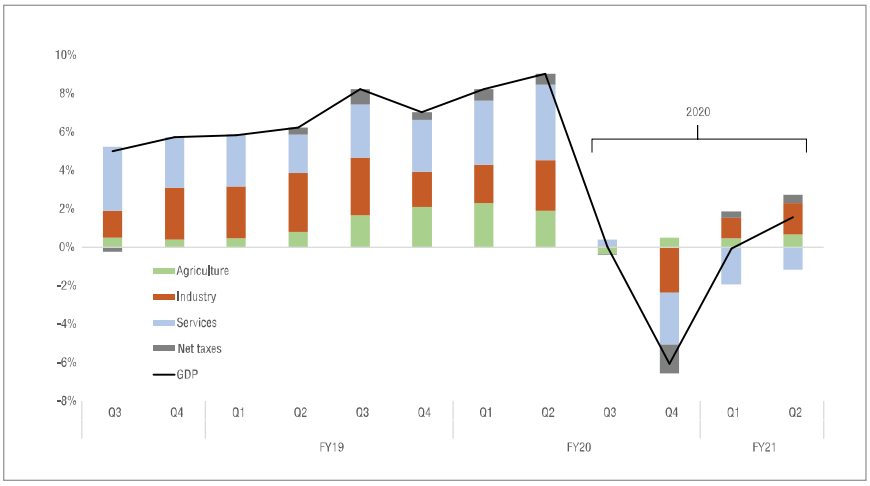
8. **COVID-19 cases in Uganda started rising in April in what could be a more severe second wave.** By May 30, 2021, the cumulative number of recorded cases of COVID-19 in Uganda stood at 46,623, with 362 officially recorded deaths. After sustaining a steady decline for about three months,[7] the number of new cases has recently accelerated, alongside a resurgence seen in neighboring Kenya and globally. Testing capacity continues to be constrained by high costs for the PCR test kits, although other options (e.g. rapid diagnostic tools) are being progressively used. The vaccination program launched in March 2021, has also progressed slowly, having covered less than 20 percent of the target groups by end April. Adequate COVID-19 vaccine coverage is not expected until later in 2021, which alongside the relaxed adherence to standard operating procedures (SOPs) could fuel the second wave of the pandemic in the country, with a possible resumption of more stringent mobility restrictions.

9. **Uganda's economy contracted by 1.1 percent in the calendar year 2020, but a slow recovery was evident towards the end of the year as COVID-19 restrictions abated.** Economic activity stalled in 2020 due to the lockdown that lasted over four months and affected domestic demand, border closures except for essential cargo, and the spillover effects of the disruption in global

7. The number of new cases drastically and progressively reduced from a seven-day daily average of 719 cases in mid-December 2020 to 144 in mid-January 2021, 28 in mid-February 2021 and 17 in mid-March. The number of admissions also reduced from 468 cases in early December 2020 to 342 in early January 2021, 114 in early February and less than 80 in early March.

demand on Ugandan exports. The services sector was particularly hard hit, contracting over 3 percent in 2020, with activities in key sectors like education and accommodation and food services largely curtailed for most of the year. Overall GDP contracted during the first three quarters of 2020, before recovering to a modest positive growth of almost 1.6 percent in the last quarter of 2020 (Figure 6).[8] The Ugandan economy contracted more deeply, compared to Kenya at -0.3 percent, but more moderately than Rwanda at -3.3 percent over this period. In per capita terms, real GDP in Uganda declined by over 4.5 percent in 2020.[9] On a financial year basis, the economy grew again in the first half of FY21 by about 0.7 percent, a recovery much stronger than had been anticipated, even though still less than a tenth of the growth of 8.6 percent realized in the corresponding period of FY20 (Figure 6).

Figure 6: Real GDP growth in Uganda by quarterly sector contributions (percent y/y)



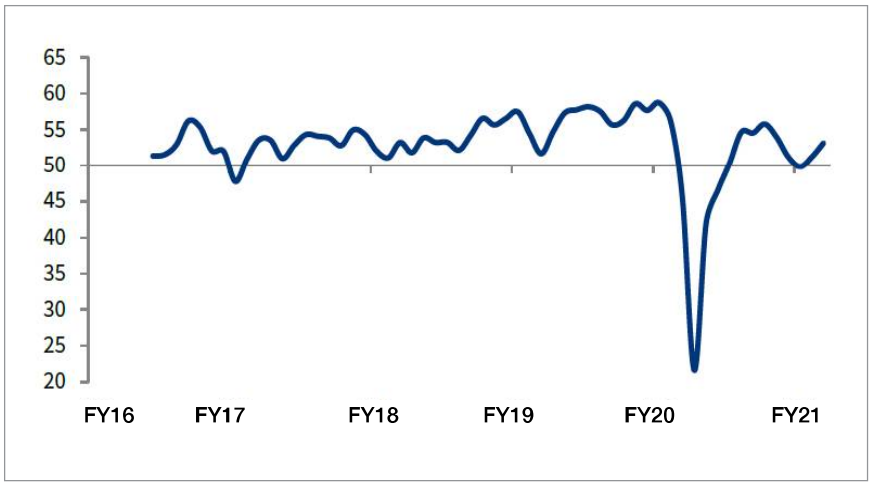
Source: UBOS

Although imports and exports both slowed in the early part of the COVID-19 crisis, the acceleration in imports and slower recovery of exports in the first two quarters of FY21

10. On the demand side, the slowdown in growth was driven by a sharp contraction in private investment, fall in consumption and slow recovery in exports. Although government's capital expenditure performed reasonably well in 2020 – at 7.1 percent of GDP compared to 6 percent in 2019 – FDI fell, averaging about 2.1 percent of GDP in 2020 compared to 2.8 and 3.5 percent in FY18 and FY19 respectively (see section 1.6). At the same time, COVID-19 containment measures and increased uncertainty slashed growth in private consumption. After falling to 21.6 in April 2020, Uganda's PMI improved steadily for eight consecutive months, to reach 51.2 in December (Figure 7), as lockdown restrictions were loosened, business and trading conditions improved and employment and purchasing activity increased.[10] Due to reduced demand during the election period, however, business conditions deteriorated in January 2021 (the PMI dipped to 49.8) as new orders and employment fell. During the post-election period, the PMI improved to 53.2 in March, signalling an improvement in business conditions and rise in new orders for the second succcessive month running. Combined with a return to a more normal economic environment and the reopening of schools, this augurs better for improved growth in the second half of FY21. Although imports and exports both slowed in the early part of the COVID-19 crisis, the acceleration in imports and slower recovery of exports in the first two quarters of FY21 (see section 1.6), strained growth in the early part of FY21. However, export growth has outpaced import growth in the third quarter of FY21,[11] which also supports a likelihood of improved overall economic growth in the second half of FY21.

8. Uganda's fiscal year is from 1 July to 30 June of the subsequent year. For FY20, this is from 1 July 2019 to 30 June 2020
9. This assumes a population growth rate of 3.6 percent in 2020.
10. The PMI is compiled monthly by IHS Markit and is sponsored by Stanbic Bank Uganda. It is a composite index, calculated as a weighted average of five individual sub-components: new orders (30%), output (25%), employment (20%), suppliers delivery times (15%), and stocks of purchases (10%). It gives an indication of business operating conditions in the Ugandan economy.
11. Bank of Uganda (2021, April)

Figure 7: Uganda PMI (>50 = improvement since previous month)



Source: Stanbic Bank, IHS Markit

11. The poor performance of the services sector is largely due to COVID-19 effects on the education, recreational and professional services sectors. The services sector has suffered the most from COVID-19 related shocks, contracting by over 4 percent in the three quarters up to the end of the second quarter of FY21, compared to about 6 percent growth in the same period of FY20. Yet, this poor performance is largely being driven by three sectors that face sustained operating and mobility restrictions. Given the protracted closure of many schools and learning institutions, the education sector contracted sharply in the last quarter of FY20 and by over 40 percent in the first half of FY21. Moreover, given the limited operating hours (a curfew is still in place between 9pm and 5am) and with no or little recovery in tourism, recreation and entertainment, the accommodation and food services sector continued its precipitous decline from the final quarter of FY20 through the first half of FY21. On the other hand, there has been a positive recovery in most other services sectors, with notable growth of 9 percent in trade and repairs in the first half of FY21, fully reversing a 0.4 percent contraction in FY20. As borders and supply chains opened across the world in the second half of 2020, traders were able to replenish inventories and meet the growing demand as mobility restrictions lessened and business conditions improved. At the same time the information and communication (IC) sector grew at over 11 percent in the first half of FY21, sustaining the growth of FY20, when firms and households adapted to the use of online solutions to ensure continuity of business and daily life amongst any remaining COVID-19 mobility restrictions.

12. The rebound in the industrial sector benefitted from both a modest recovery in manufacturing, sustained growth in utilities, and a resurgence in mining and quarrying. The industrial sector grew by over 5 percent in the first half of FY21, which, although still below the double-digit growth rates in the first half of the last few fiscal years, is a significant improvement on the more than 4 percent contraction of this sector during the second half of FY20. Besides the dip in January 2021, the improved levels of business confidence, together with fewer trade disruptions and more open regional borders, have contributed to manufacturing growth of 3.5 percent in the first half of FY21. At the same time, the mining and quarrying sector grew by over 30 percent, compared to a steep contraction of about 23 percent in the second half of FY20. This growth has been driven by a surge of activity in the gold mining sector, including a 136 percent increase in the value of gold exports in the first half of FY21, and a growing number of artisanal and small-scale miners.

13. Agricultural growth softened in the first half of FY21 as food crop output slowed down and forestry and fishing contracted. Agricultural growth slowed to 2.4 percent in the first half of FY21, compared to 8.5 percent growth in the same period of FY20. Notably, growth in food crops that had been boosted by good weather to 8.3 percent in the first half of FY20, slowed to only 3.4 percent in the same period of FY21. This slowdown could adversely affect livelihoods, given that many who had lost jobs in non-farm sectors because of the COVID-19 crisis – particularly the urban and informal poor – had shifted to the agriculture sector as a buffer against the crisis (see Section 1.4). However, cash crops have continued to grow robustly at 6.6 percent in the first half of FY21, with the value of coffee exports increasing by over 7.5 percent, despite the fall in the annual average price of Robusta coffee from US$1.62 per kg in 2019 to US$1.52 per kg in 2020.[12] While poorer weather over the first half of FY21 affected production of both food and cash crops, the latter was less affected given the higher resilience of perennial crops like coffee (which make the

12. World Bank (2021, February)

bulk of exports)[13] and benefits from better farming practices to manage the weather changes[14]. The fishing sector continues to face COVID-19 related trade disruptions, as well as sectoral challenges such as poor-quality fish stock (e.g. too few adult fish), limited access to feeds, and trade in illegal and unrecorded immature fish. The value of fish exports declined by 23 percent in the first half of FY21.

14. Given increasing weather variability and population pressures on agricultural land, Uganda needs to urgently scale up climate smart and sustainable land management (SLM) practices. COVID-19 has heightened the urgency to enhance agricultural productivity and the sustainable use of natural resources. Given the loss of jobs and closure of small businesses, many people have returned to agriculture to help see out and survive the crisis (see Section 1.4). This is putting more strain on environmental resources and partly explains the poorer performance of the food crop sector, which is mainly run by small scale farmers, the bulk of whom have not yet adopted modern farming practices to manage weather and climate change effects. Thus, increasing productivity and sustainable use of resources is more important now for livelihoods, resilience and longer-term job creation. Improving the productivity of agricultural land is also critical to supporting structural transformation (e.g. as the basis for budding agro-processing industries) and for providing jobs (i.e. supporting the movement of labor off farms) in towns and cities. Section 3 considers this further.

Table 1: Real GDP sub-sector outcomes

	FY20	FY20		FY21		FY21e
		Q3	Q4	Q1	Q2	
	Share of GDP	y/y growth rates				Growth
AGRICULTURE	23.2	-1.8	2.3	1.7	3.1	3.5
Cash crops	2.4	15.5	-5.5	-1.8	14.6	6.7
Food crops	12.2	-11.9	6.6	4.2	2.0	4.1
Livestock	3.2	8.1	7.9	7.5	7.7	7.8
Agriculture support services	0.0	-3.2	-12.4	-18.4	-16.6	1.8
Forestry	3.5	3.8	-2.5	-7.3	-3.0	2.9
Fishing	1.9	-8.4	-13.6	-12.2	-1.8	-11.1
INDUSTRY	26.7	0.1	-8.7	4.3	5.9	3.4
Mining & quarrying	1.8	-14.7	-33.4	53.2	12.9	14.5
Manufacturing	15.2	-1.2	-11.3	3.4	3.6	2.1
Electricity	1.2	9.6	-6.8	3.5	5.5	6.3
Water	2.3	4.2	3.9	4.3	4.5	4.5
Construction	6.2	5.8	-0.4	-10.2	10.1	3.0
SERVICES	43.6	0.8	-6.1	-4.6	-2.6	2.5
Trade & repairs	8.7	-1.7	-6.1	9.6	8.4	-0.4
Transportation & storage	3.2	-1.9	-8.6	-4.2	2.2	-0.7
Accommodation & food service	2.6	-3.2	-45.5	-24.0	-16.9	-0.9
Information & communication	1.9	21.2	12.8	9.4	13.1	11.9
Financial & insurance	2.8	10.4	-4.1	7.2	3.2	6.2
Real estate activities	6.7	4.8	5.5	8.8	6.5	3.9
Professional, scientific & technical	2.1	-29.3	-39.8	-63.3	-55.9	1.3
Administrative & support service	2.0	-0.9	-5.3	-5.1	-7.6	0.7
Public administration	2.8	12.1	18.4	17.4	23.9	12.8
Education	4.2	-3.8	-9.7	-42.7	-40.8	-4.0
Human health & social work	3.3	3.6	2.9	13.9	16.7	6.4
Arts, entertainment & recreation	0.2	-14.2	-42.0	-51.0	-19.5	-13.4
Other service activities	2.4	3.1	1.2	-1.6	-2.4	3.1
Activities of households	0.8	2.8	2.7	2.7	2.7	2.7
ADJUSTMENTS						
Taxes on products	6.4	-0.4	-22.0	5.3	6.1	6.8
GDP AT MARKET PRICES	100	0.0	-6.1	-0.1	1.6	3.3

Source: UBOS

13. Perennial crops such as coffee by their nature are less susceptible to short term erratic weather conditions. For instance, once coffee has flowered in the first rainy season March-June, then erratic weather in the second rainy season may only affect the yields to a much lesser extent than beans for instance that need to be planted again in the second rainy season September-December. Sometimes less rain during this period may result in better quality due to lower disease load.

14. Due to better anticipated financial benefits from cash crops, the adoption and use of improved technologies and practices (e.g. variety, optimal plant populations, and better cultural practices) for cash crops is generally higher than for food crops. This enables cash crops to better withstand weather abnormalities than food crops (usually annuals).

1.4 Inequalities and vulnerability to poverty have increased[15]

15. The COVID-19 pandemic has pushed more Ugandans into poverty and added to the already high levels of vulnerability to poverty, given the limited protection against shocks. In addition to the 21.4 percent of Ugandan households classified as poor using the national poverty line in FY17,[16] about 44 percent of households were considered vulnerable to falling into poverty in the face of a negative shock – even though they are not living below the poverty line currently.[17] These shocks can vary from natural disasters and weather events that negatively impact agricultural incomes, to health crises, or political and regional instability. The ongoing COVID-19 crisis is such a shock, especially for the vulnerable sectors of the economy.

16. COVID-19 has had a profound negative impact on Uganda's labor markets, poverty, inequality, and human capital accumulation. The number of poor people in Uganda is projected to increase by 2.6 million in the short-term due to the pandemic.[18] Following the mobility restrictions that were put in place in March 2020, 16.6 percent of respondents to the June round of the COVID-19 Uganda High-Frequency Phone Survey (UHFPS) had stopped working. As shown in Figure 8, the number of people who stopped working after the onset of the pandemic was higher in urban areas (32 percent) and service sectors (34 percent). The employment rate also declined significantly from about 87 percent in March, to 70 percent in June, before almost fully returning to pre-March levels in August.

17. In contrast to the relatively quick recovery in employment, the recovery of household incomes appears slow. According to the UHFPS, the COVID-19 crisis negatively affected all sectors, with non-farm family businesses being particularly hard hit. During the initial lockdown in June 2020, 91 percent of households involved in non-farm family businesses suffered income losses (i.e. less or no earnings). Household incomes then recovered throughout the rest of 2020 and into 2021, with particularly large improvements for non-farm family businesses. However, by February 2021, income had still not fully recovered for many households across all income sources, with about 50 percent still reporting business revenues to be lower than compared to their pre-COVID-19 level (Figure 10). At the same time, about 10 percent of non-farm family businesses are still closed. The recovery of household incomes in other sectors has also been slow – incomes from farming and wage employment were still lower in about 40 percent of households in February 2021, as corroborated by findings from other studies.[19]

Figure 8: Respondents who stopped working (%)

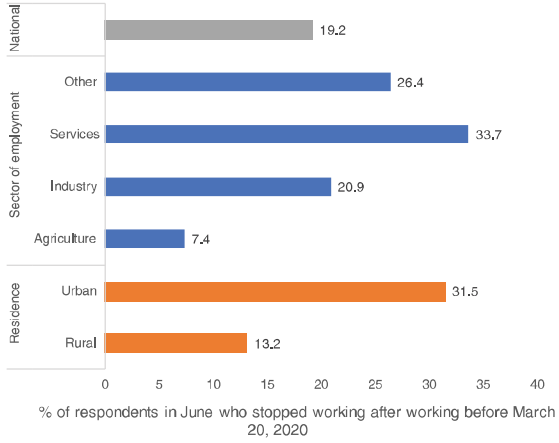
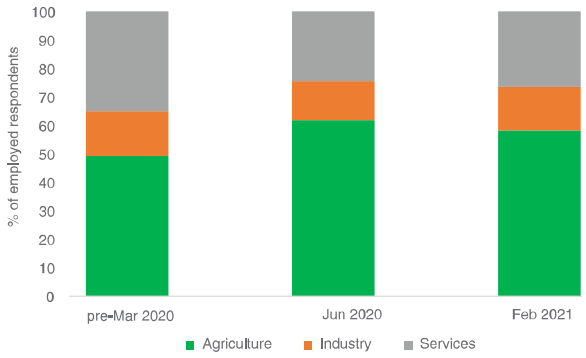


Figure 9: Sectors of employment among those working (%)



Source: UHFPS (June2020 and February 2021)

15. This section draws from the COVID-19 Uganda High-Frequency Phone Survey (UHFPS). To track the impacts of the pandemic on households in Uganda, UBOS, with the support from the World Bank, launched the UHFPS in June 2020. The survey is to be conducted periodically and will try to recontact the entire sample of households that had been interviewed during the 2019/20 round of the Uganda National Panel Survey (UNPS) – where phone numbers for at least one household member or a reference individual exist. Five rounds of data collection have been conducted starting with the 3-20 June 2020 (first round) up until the 2-21 February (fifth round). Detailed analysis from the 4th and 5th rounds can be found in Atamanov et al. (2021a)

16. UBOS (2018) According to the most recent poverty estimates from the Uganda National Household Survey (2016/17).

17 World Bank (2019, June).

18. UNDP (2020, April).

19. IGC (2020, September) estimated that about 65 percent of Ugandans had faced significant income losses since the COVID crisis started, equal to about 9.1 percent of GDP. In a study undertaken by Bachas et al. (September 2020) that included Uganda, they predict that less than half of all firms will remain profitable by the end of 2020 and firm exit rates are likely to double, compared to pre-COVID-19 data. Partnership for Evidence-Based Response to COVID-19 data (August 2020) showed that a higher share of respondents in Uganda reported loss of income compared to any other AU Member State surveyed.

Figure 10: Households with income below average monthly income during 12-month period prior to lockdown (% receiving income)

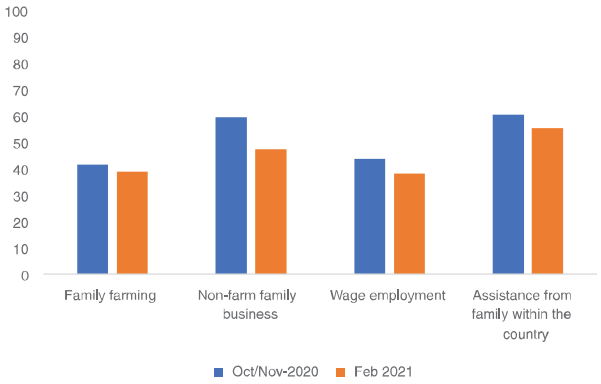
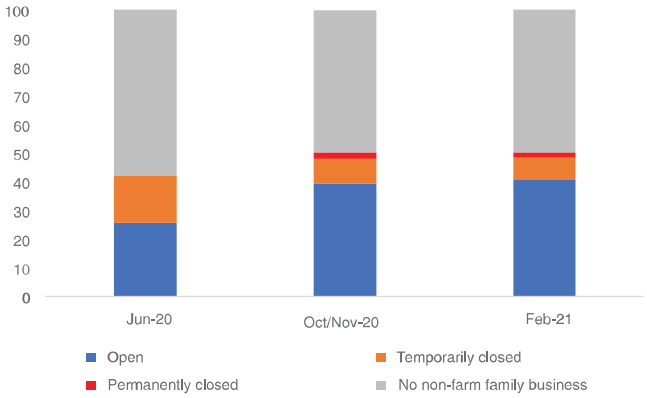


Figure 11: Status of non-farm family business (% of households)



Source: UHFPS (June and October/November 2020 and February 2021 rounds)

Uganda's health management information system shows that compared to pre-pandemic trends and seasonality, Uganda has experienced significant disruptions in service volumes since the outbreak of COVID-19.

18. The COVID-19 crisis has also forced more people back to working in agriculture, resulting in increased vulnerability to poverty. In contrast to the structural changes in employment recorded in the previous decade prior to COVID-19[20], the employment share of agriculture increased ten percentage points since its pre-COVID-19 share prior to March 2020, with this situation persisting into early 2021 (see Figure 9). There are several reasons for this: firstly, many more people in the non-farm sectors lost their jobs than in agricultural; secondly, there was a sizeable shift among working respondents from non-farm sectors to agriculture because the agriculture sector was least affected by lockdown measures; and thirdly, 2020 was a year of mostly favorable climatic conditions. However, increasing dependence on agriculture is concerning given low growth and productivity of that as well as its vulnerability to climate shocks (see Section 1.3).

19. In addition to impacts on the labor market, COVID-19 is likely to stall the progress Uganda had been making in improving health services, while widening inequalities in access. The indirect health impact of the disruption to essential health services could be substantial, with effects already felt in the treatment of malaria cases, routine check-ups, maternal and child health care, and HIV Treatment.[21] Uganda's health management information system shows that compared to pre-pandemic trends and seasonality, Uganda has experienced significant disruptions in service volumes since the outbreak of COVID-19.[22] For example, outpatient consultations and postnatal care dropped by 18 and 42 percent respectively, during the March to December 2020 period, compared to the same period in 2019. These findings are corroborated by a Global Financing Facility study, which predicted that the COVID-19 pandemic is likely to disrupt the supply and demand of maternal and child health services in Uganda; the interruption in service delivery also could increase child mortality by 22 percent and maternal mortality by 21 percent over the next year.[23] Although access to both medicine and medical treatment has improved since the initial period of lockdown, rural/urban and income-level gaps persist (Figure 13).

20. Combined with the school closures, which have substantially widened inequalities in access to education, the impact on human capital development is tremendous. Before the COVID-19 closure, the distribution of households with any child (age 3-18) enrolled in educational institutions was relatively equal across place-of-residence and income groups (at over 90 percent). However, by February 2021, only about 50 percent of these households reported having their children engaged in any learning activities again. The level of engagement was highest (at 66 percent) among the richest 20 percent of the population and lowest (at 39 percent) among the poorest 20 percent (Figure 12). Furthermore, households with children located in urban areas reported a 59 percent engagement, compared to 47 percent among rural residents (Figure 12). The negative impacts of COVID-19 have been even more significant for refugee communities (see Box 1).

20. UBOS (2021) According to UBOS panel survey data, employment in the industry and service sectors grew annually on average 12.8 and 4.7 percent between 2015 and 2019 respectively, raising the share of wage employment by about 7 percent; while the employment share in agriculture declined by about 10 percent up to the time of the COVID-19 outbreak.
21. PERC (2020, August).
22. World Bank (2020b, December)
23. World Bank (2020)

Figure 12: Households with children (3-18) participating in any educational activities (%) by February 2021

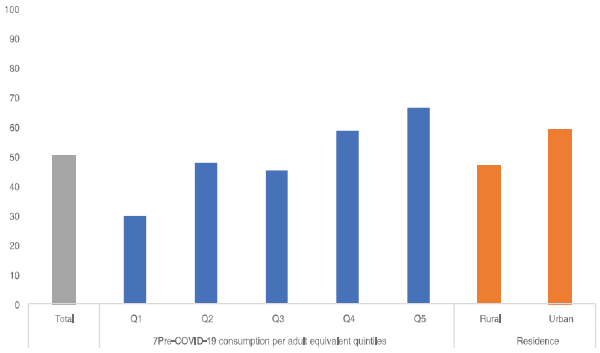
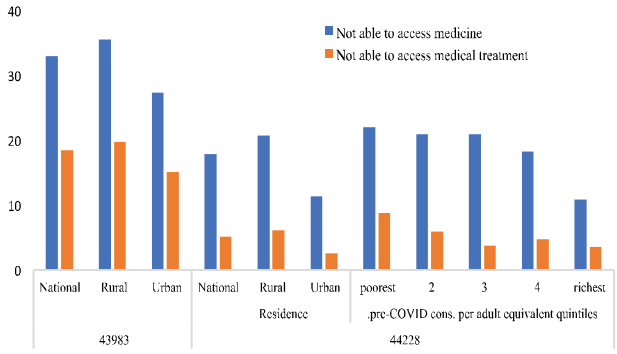


Figure 13: Households not able to access medicine and medical treatment (% of households who needed)



Source: UHFPS (June 2020 and February 2021 rounds)

21. The COVID-19 crisis has further exposed the gaps in coverage and design of the social protection programs in Uganda. The existing direct income support programs in Uganda have low coverage, with the overall reach of the two main programs[24] at only 3 percent of the population, half the outreach recorded in Kenya. By FY18, the financing of the two major programs was about 0.14 percent of GDP, again less than half of expenditures on similar programs in neighboring countries - Kenya and Rwanda spend 0.4 percent and 0.3 percent of GDP respectively, on direct income support programs. The scope and financing of social protection programs need to change to meaningfully shelter the population from shocks, reduce vulnerability and sustain human capital. Social protection is vital for building resilience and supporting households to invest in children and the youth. Given government's limited fiscal envelope, however, it is essential to improve the targeting and shock responsiveness of these programs.[25]

Warehousing facility

24. The two programs are the Northern Uganda Social Action Fund (NUSAF) which operates in the Northern region, and Senior Citizens Grant (SCG) for person aged 65 years and above. Government's planned short-term labor-intensive public works program, financed through the Road Fund, is another such mechanism.
25. World Bank (2020, January).

Box 1: The COVID-19 crisis has had a particularly negative impact on refugee communities in Uganda*

Many refugees stopped working after the lockdown in March 2020, particularly in Kampala and the South West regions. At the national level, only about 43 percent of respondents reported that they were working in the week preceding the interview in October/November 2020.** In contrast, about 13 percent of refugees stopped working after the introduction of the lockdown in March 2020 (Figure B1). Work stoppages were significantly higher among refugees in Kampala (27 percent) and the south west (23 percent), compared to West Nile (5 percent). Results from the second round, conducted in December 2020, did not show much improvement in the employment rate. Besides work stoppages, almost half of refugees reported working fewer hours compared to pre-lockdown. Overall, refugees were also underemployed, working on average about 27 hours per week only.

Family businesses were negatively affected and have not recovered. About 37 percent of refugee households had a family business before March 2020, but by December this share had dropped to 27 percent (Figure B2). Considering that only four percent of households reported to be temporarily out of business, and thus could reopen, six percent of households might have lost their family businesses permanently. Those who had a business in the non-agriculture sector were also more likely to have closed after March 2020.

Figure B1.1: Employment status of refugee respondents by region in October/November (%)

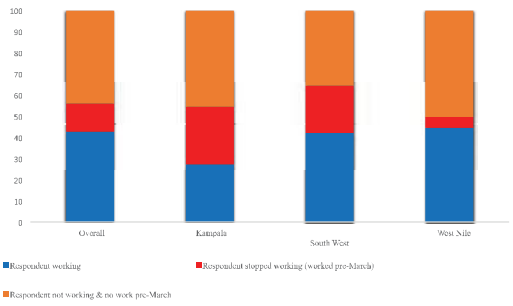
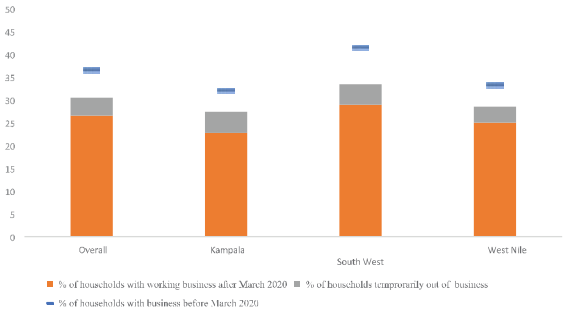


Figure B1.22: Status of family business in December among all refugee households (%)



Source: URHFPS first and second rounds, authors' calculation.

In December, income levels from key sources were still below pre-COVID-19 levels for most refugee households. On average, none of the key income sources, including farming, family business, wage employment and humanitarian assistance, had fully recovered to pre-COVID-19 levels. For example, only 25 percent of refugee households in December reported that their family business income was higher or equal to the pre-COVID-19 level. This share was higher for income from farming and wage employment – about 37 percent for both sources. Only five percent of refugees reported that income from humanitarian assistance was higher or equal to the pre-COVID-19 level.

Poverty among refugees was estimated to have **increased in October/November compared to pre-COVID-19 levels, with a gradual decline in December.** According to the preliminary estimations, poverty among refugees was assessed to have increased from 44 percent (pre-COVID-19) to 52 percent in October/November, and thereafter to have gradually declined to 49 percent in December 2020.***

*UBOS (2020). This Box relies on findings from the Uganda Refugee High-Frequency Phone Survey (URHFPS). The URHFPS was undertaken by the World Bank, in collaboration with UNHCR and UBOS.
**World Bank (2021e, 2021f,2021g). Compared to the employment rate among Ugandans, which reached almost 90 percent in September/October 2020, the employment rate among refugee respondents was very low.
***Yoshida, N, et al (2015). The URHFPS used a consumption model, which was developed by using the representative household survey of refugees and host communities conducted in 2018, to identify the strongest correlates of consumption.

1.5 Sustained liquidity support remains crucial for recovery

22. The expansionary monetary stance and liquidity support has not yet closed the output gap, to put upward pressure on prices. With economic activity subdued and some appreciation of the nominal effective exchange rate (averaging one percent y/y by March 2021), core inflation gradually slowed to 5.3 percent (y/y) in March 2021. The BoU continued its loose monetary policy and liquidity support to bolster the financial system and businesses to respond to the COVID-19 pandemic, but the upward pressure on prices continued to come from supply side factors. While also declining, transport prices have remained 20 percent higher than their levels a year ago for nine consecutive months, making it a major driver of core inflation – in response to the reduced occupancy per vehicle, as well as additional costs from extended transit times and border delays due to COVID-19 testing procedures. Deflationary pressures in food and non-alcoholic beverages allowed headline inflation to remain broadly stable at 4 percent as food crop and energy, fuel and utilities (EFU) prices continue declining, albeit at a slower pace. On the back of modest economic upturn and muted demand (see section 1.3), income uncertainty and the potential of an increase in precautionary savings, there has been no threat to inflation, which allowed BoU to maintain the policy rate at 7 percent for over 11 consecutive months.

23. Monetary policy has been effective in lowering interest rates, supported by the BoU's macro-prudential measures and abundant structural liquidity held by banks. In addition to holding the CBR at its lowest since inflation targeting was introduced in FY12, BoU stood ready to provide liquidity through its various instruments.[26] This has led to a reduction in interest rates on Government securities by about 1.5 to 2 percentage points on average over the past six months, which in turn lowered the cost of borrowing for government. Liquidity conditions improved not only due to the monetary policy actions, but also on account of macro-prudential measures introduced by the BoU in response to the COVID-19 shock[27] and because of higher deposits as economic uncertainty persists, driving up precautionary savings and dampening private consumption. As a result, the daily interbank money market rates declined and have remained stable in a 6-7 percent range since June 2020, compared to the pre-crisis 8-10 percent range (Figure 15). Other regulatory steps, including permission for all supervised financial institutions (SFIs) to restructure eligible loans of corporate and individual customers, such as debt moratoria, also eased management of liquidity. Whilst these liquidity buffers have been extended by the BoU for another six months to September 2021, the uncertain evolving COVID-19 situation, combined with a slow recovery, may force the BoU to sustain the liquidity support longer.

Figure 14: Core inflation is decelerating (monthly percent change y/y)

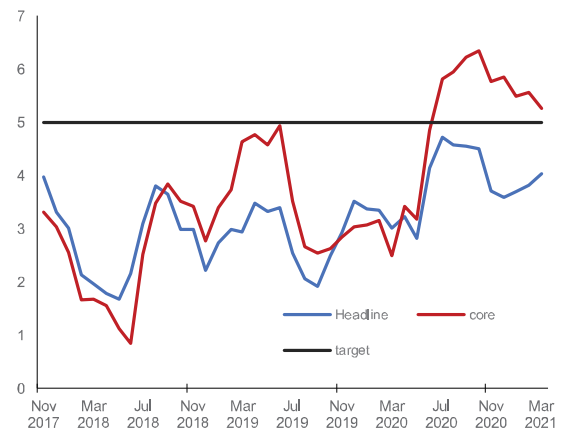
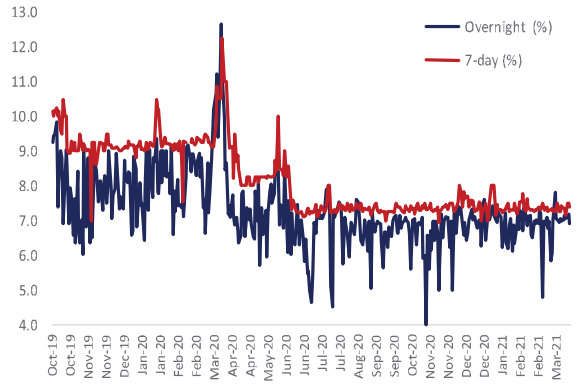


Figure 15: Overnight and 7-day interbank money (in percent)



26. These included the Lombard Facility, Standing Facility, Reverse Repos, as well as purchases of forex.

27. Bank of Uganda has been providing extra liquidity to commercial banks, microfinance deposit taking institutions and credit institutions under duress, particularly due to the COVID-19 pandemic effects of their operations, through (i) a COVID-19 Exceptional Liquidity Assistance Program (CLAP); (ii) conditions on payment of dividends and other discretionary distributions by SFIs; (iii) limits on loan-to-value ratio for residential mortgages and land purchase; and (iv) increase in rations of core and total capital to risk weighted assets

24. Financial intermediation challenges have likely affected the impact of policy measures on the private sector. In line with the developments in the money markets, deposit rates generally declined over the most recent six months. Yet, lending rates have been quite volatile, while sustaining traditionally high spreads[24] and high cost of borrowing in Uganda. The lending rates for private sector local currency borrowing increased from 19.3 percent in June 2020, to 20.9 percent in November 2020, before declining by over two percentage points in December. Whereas these rates have since declined, the weighted average interest rate on deposits in local currency has remained within a range of 2.3 and 2.7 percent over this period. The persistently high spreads, even during periods of high liquidity and low inflation, continue to portray the intermediation challenges within the financial system, and difficulty in realizing real impact of the liquidity support on the private sector.

25. The decline in quality of collateral and the jagged recovery are weighing on the effectiveness of the policy measures on the private sector. Annual domestic credit growth decelerated to about 12 percent in 2020 in real terms, compared to an annual growth rate of 22 percent in 2019. This slowdown occurred as net lending to government roughly halved to 39 percent, following growth in deposits of central government on receipt of emergence budget support from International Financial Institutions (see section 1.7). In contrast, lending to the private sector grew 8 percent (close to the rate recorded last year) but with significant differences in the lending structure. Real growth in personal and household loans remained relatively robust at roughly 5 percent, thanks to a surge in car loans, which doubled in 2020 compared to the year before. Meanwhile, lending to other businesses almost stalled, with a real growth rate of 1 percent during 2020, compared to 12 percent the year before. That said, some businesses have benefitted from lending programs from the Uganda Development Bank, for which data is not available now. Hence, the driver of the relatively high real growth rate of lending to the private sector is lending to telecommunications and community, social and other services, which grew an extraordinary 123 and 118 percent, respectively, in real terms during 2020. The lending to telecommunications could have been due to increased activity in this sector as many sectors shifted to digital solutions in response to the COVID-19 effects, which preserved cash flows in this sector. On the other hand, the surge in lending to community and social services is likely reflecting the lending through microfinance institutions under the 'Emyoga' program – a government initiative to support social groups to manage the crisis.

26. Financial sector exposure to government lending continues to grow, increasing the risk of crowding out the private sector. Domestic borrowing to finance the government budget increased to about 3.3 percent of GDP by end December 2020, from 2.8 percent of GDP by end of FY20, as government increased reliance on the domestic market to finance the growing fiscal deficit (see section 1.7). The stock of domestic debt stood at US$ 6.5 billion (compared to US$5.1 billion by end June 2020), the bulk of which is held by commercial banks in the form of short-term Treasury bills. In addition, commercial banks hold some of the state-owned enterprises debt, estimated at about 7.6 percent of GDP. This growing exposure of banks to government debt and, thus, sovereign risk, is a concern, with potential implications for financial stability. In contrast, the investment of commercial banks into government assets reduces the space for lending to the private sector.

27. Whereas the banking system remains resilient to shocks, the deterioration in the quality of financial sector assets in the latter part of FY20 aggravated the macro-financial vulnerabilities. Prior to COVID-19, systemic liquidity risk in the banking sector diminished, as liquidity buffers in all institutions improved, and Uganda's non-performing loans position was significantly better than that of peers such as Kenya or Tanzania. Since the onset of COVID-19, however, non-performing loans (NPL) to total gross loans more than doubled to 10 percent in the latter part of FY20, compared to levels from a year ago. The true size of NPLs is likely to be underestimated as liquidity injections into the system have likely led to some evergreening of obligations that would otherwise be non-performing. Uganda's banking sector nevertheless remains well capitalized. Core capital-to-risk-weighted assets (RWA) ratios for commercial banks, credit institutions and MDIs totaled around 20, 16, and 35 percent respectively at end-December 2020 – well above the statutory minimum of 10, 15, and 10 percent, respectively. The decrease in capital was largely on account of a reduction in aggregate profitability. The average cost-to-income ratio for all banking institutions rose from 86 percent in 2019 to 92 percent at the end of 2020 due to a rise in operating costs. However, domestic policy support would need to be maintained for some time to avoid a much faster increase in NPLs, which could reduce the ability of banks to support the recovery with credit growth as their balance sheets deteriorate.

28. Jefferis, K. et al. (2020, January) indicated that interest rate spreads remain high due to the high overhead costs (for staff, property, IT and infrastructure etc), high interest rates on government bonds, and high levels of bank capitalization and profits.

Table 2: Financial soundness indicators

	2018				2019				2020			
	Mar-18	Jun-18	Sep-18	Dec-18	Mar-19	Jun-19	Sep-19	Dec-19	Mar-20	Jun-20	Sep-20	Dec-20
Capital Adequacy												
Regulatory capital to risk-weighted assets	23.8	21.8	21.6	21.6	22.2	21.3	21.4	21.8	21.9	22.7	22.5	22.2
Regulatory tier 1 capital to risk-weighted assets	21.5	19.7	19.8	19.8	20.4	19.6	19.6	20.1	20.3	21.1	20.9	20.6
Asset quality												
NPLs to total gross loans	5.3	4.4	4.7	3.4	3.8	3.8	4.4	4.9	5.4	6.0	5.1	5.3
NPLs to total deposits	3.4	2.8	3.1	2.3	2.5	2.5	2.8	3.1	3.3	3.7	3.1	3.2
Large exposures to gross loans	36.4	43.2	44.5	42.9	42.6	44.3	45.0	42.8	40.6	42.0	42.6	42.5
Earnings & profitability												
Return on assets	2.6	2.8	2.8	2.5	2.8	2.7	2.8	2.9	2.8	2.6	2.6	2.4
Return on equity	15.0	16.7	16.3	14.4	15.9	15.8	16.1	16.7	15.9	15.2	15.1	14.2
Liquidity												
Liquid assets to total deposits	52.9	46.6	43.9	45.5	44.1	45.5	50.3	48.6	48.8	49.1	48.8	50.7

Source: Bank of Uganda

1.6 Trade and financial flows reflect Uganda's recovery from the crisis

28. The current account deficit sharply widened, reflecting not only the ensuing economic recovery but also the lagging comeback of tourism inflows. Trade (represented by the total value of exports and imports) reached 44.4 percent of GDP in the first half of FY21, exceeding that registered during the same period a year ago. Nonetheless, imports grew faster than exports, thus widening the current account deficit in the first half of FY21 to 9 percent of GDP, from 5 percent during the same period a year ago. The acceleration of imports to the highest level seen so far, totaling US$5.6 billion in the first half of FY21, was driven by the domestic pent-up demand, shadowing the relatively sizable rebound in exports. Gross inflows from travel services have recovered slowly, to a value of only US$196 million, which is less than one-third of the pre-COVID-19 total. As a result, the trade deficit in goods and services widened sharply to almost 12 percent in the first half of FY21, from 8.5 percent in FY20 and 8.6 percent of GDP in H1 of FY19. Meanwhile, remittances have started to gradually increase in line with the global recovery and amounted to about US$580 million, which is 70 percent of pre-COVID-19 levels, helping finance the trade deficit (see Table 3).

29. Imports of non-oil goods led the surge in imports in the first half of FY21. As firms re-opened and global supply logistics eased, imports of goods rose to US$4.7 billion in the first half of FY21, registering growth of 22 percent from the previous year. Helped by a roughly 4 percent real appreciation of the shilling, this has been the first sizable increase in imports since the pandemic started. Imports of non-monetary gold more than doubled during this period and accounted for 30 percent of all imports of goods. The gold is imported for processing and then re-exported resulting in a small trade surplus of US$19 million in the first half of FY21. Another fifth of imports, or US$0.8 billion, reflected purchases of investment goods in the form of machinery, equipment, and vehicles, which rose 20 percent compared to the same period last year. This is another indicator that the economy is entering the recovery phase. The import of vehicles was financed by the robust growth in car

Uganda'Gross inflows from travel services have recovered slowly, to a value of only US$196 million, which is less than one-third of the pre-COVID-19 total.

loans to households, the stock of which doubled in 2020 compared to the year before (see section 1.5). At the same time, imports of transport services rose 17 percent in line with larger trade volumes, while imports of business services accelerated 77 percent, largely due to technical services for infrastructure developments. Net travel inflows, the offsetting surplus in the past, is still suffering from the effects of the crisis and recorded a surplus of only US$122, roughly one-fourth of the surplus from a year ago.

Table 3: Balance of payments (percent of GDP)

	FY17/18	FY18/19	FY19/20	FY19/20	FY20/21
					H1
Current account balance	-5.3	-7.1	-6.5	-5.0	-9.0
Trade in goods and services balance	*-7.3*	*-9.4*	*-9.7*	*-8.5*	*-11.9*
Exports	16.9	18.3	14.7	15.0	15.0
o/w coffee	1.5	1.2	1.3	1.2	1.2
o/w gross travel	2.7	2.6	1.7	2.2	0.6
Imports	24.1	27.7	24.4	23.5	26.9
o/w oil	2.8	2.6	2.6	2.4	1.8
o/w government imports	1.8	2.0	0.9	1.0	0.7
Primary income, net	*-2.8*	*-2.6*	*-1.6*	*-1.5*	*-1.5*
o/w public interest payments (debit)	0.3	0.3	0.3	0.3	0.4
Secondary income, net	*4.8*	*5.0*	*4.9*	*5.1*	*4.4*
o/w personal transfers (credit)	3.8	3.9	3.5	4.2	2.7
Capital account balance	0.3	0.3	0.2	0.2	0.4
Net borrowing (balance from current and **capital a/c)**	-5.0	-6.8	-6.3	-4.8	-8.6
Financial account balance	3.4	6.9	5.5	2.7	5.8
Direct investment, net	2.8	3.5	2.6	2.8	2.0
Portfolio investment, net	-1.0	-0.5	-0.9	-0.9	0.0
Other investment, net	1.6	3.9	3.7	0.8	3.8
o/w Government loans, net	3.2	3.3	4.6	1.6	3.8
Disbursements	3.9	4.0	5.1	2.1	4.4
Repayments	0.7	0.7	0.5	0.5	0.6
Net errors and omissions	1.1	0.1	2.5	2.2	2.8
Overall balance	-0.5	0.2	1.7	0.1	0.0
Financing	0.5	-0.2	-1.7	-0.1	0.0
Central bank net reserves (- increase	0.5	-0.2	-1.7	-0.1	0.0
Memorandum					
GDP, nominal (in mil US$)	32910	35157	37308	19964	20978

Source: Bank of Uganda, World Bank estimates
Note: o/w stands for "of which"

30. The value of exports has surged, almost solely driven by gold. Total goods exports grew 34 percent as processed gold exports jumped in the first half of FY21 to US$1.2 billion or 136 percent compared to the same period last year. The value of exported gold products was close to half of the value of total goods exported during the period July-December 2020. Traditional export commodities such as coffee, tea, beans and flowers also performed well, especially coffee with higher volumes (16 percent) offsetting the drop in the average price of 7 percent. Overall, the value of exported coffee, once the leading export commodity in Uganda, totaled US$255 million in the first half of FY21, yet representing only 20 percent of the value of exported gold. Traditional agricultural export commodities such as maize, sugar, cotton, and tobacco – which recorded a fall in exports – were replaced by up-and-coming new products such as cocoa beans, fruits and vegetables, base metal products and cement.

31. Informal cross-border (ICB) exports are picking up but remain 40 percent below levels seen a year ago. These exports are particularly important for the poor along the borders with Uganda's neighbors. During the pandemic, these exports came to a complete standstill between April and June 2020, with the value of exports dropping to a monthly average of US$0.9 million from US$45 million achieved on average over the past twelve months prior to the standstill. By January-February 2021, monthly exports have risen to around US$38 million, but Kenya's import ban on Uganda's maize – citing high levels of aflatoxin in the grain – threatens to reverse this positive trend again. Kenya has also recently re-instated travel restrictions due to a resurgence in COVID-19 in that country, which could affect this trade.

32. With non-debt creating flows in the private sector remaining low, financing of the current account deficit was only manageable through higher public sector debt. Net FDI inflows have stabilized in H1 of FY21 to around 2 percent of GDP from 2.9 percent at the end of 2019, reflecting mainly a slowdown in equity and intercompany loan inflows, whereas reinvested earning held up. These largely non-debt creating flows financed 20 percent of the current account deficit in the first half of FY21(see Table 3). Net government borrowing, on the other hand, totaled US$0.8 billion or 3.8 percent of GDP, of which US$0.3 billion represented budget support from the World Bank in July. As a result, external debt increased to US$ 10.5 billion or 28 percent of GDP, by December 2020.

33. The drawdown of foreign exchange reserves, too, financed the current account deficit, but it is not sustainable. Foreign exchange reserves continued receding from its peak in June and July 2020, when the country accessed sizable emergency financing inflows from international financial institutions (IFIs). Whilst the Bank of Uganda has made net purchases of up to US$ 370 million between July and March 2021, the sharp demand for foreign exchange over this period driven by the acceleration in government imports, has resulted in a steep decline in foreign exchange reserves to about US$3.6 billion, or 4.5 months of import cover by end of March 2021. This decline of almost US$600 million is not sustainable over the medium term unless FDIs accelerate and/or the current account deficit shrinks. However, an acceleration in direct investments is likely to be associated with a sizable increase in imports.

34. Demand factors have been more significant in the foreign exchange market than the flows with the balance of payments. Between February 17 and March 25, 2020, the shilling depreciated 6.1 percent as capital outflows accelerated and panic gripped the market[29] at the start of the pandemic, further buoyed by US dollar appreciation internationally. In order to stabilize the market and smooth out excess volatility, the BoU provided an injection of US$200 million into the market. After the foreign exchange market was stabilized, the shilling appreciated in December 2020 and remained at the level corresponding to the pre-crisis period. (Figures 16 and 17).

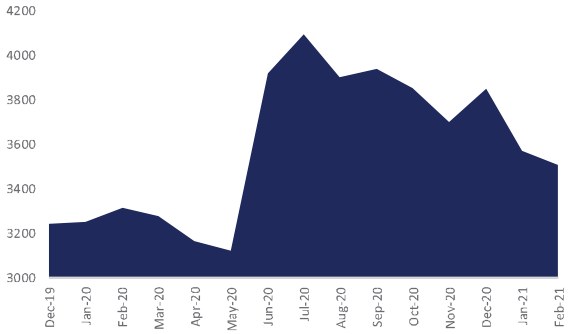
Traditional agricultural export commodities such as maize, sugar, cotton, and tobacco - which recorded a fall in exports - were replaced by up-and-coming new products such as cocoa beans, fruits and vegetables, base metal products and cement.

29. BoU pursues a flexible exchange rate and only intervenes in exceptional circumstances to smooth excessive exchange rate volatility.

Figure 16: Nominal exchange rate (USh/US$)

Source: Bank of Uganda

Figure 17: Foreign exchange reserves in US$ million



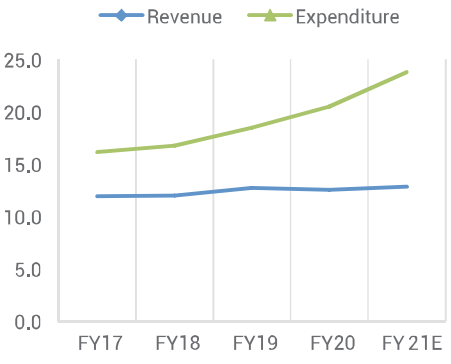
1.7 Escalating debt risks blur pro-recovery fiscal management

35. The COVID-19 crisis has exacerbated Uganda's fiscal and debt position that has been deteriorating over the past five years. Prior to the COVID-19 crisis, the fiscal deficit expanded substantially and trended well above the government's Charter for Fiscal Responsibility that had intended to narrow the deficit to 3 percent of GDP by FY21. Uganda's revenue effort has been chronically low, with tax collections averaging just about 11.6 percent of GDP over this period, well below the government's medium-term target of 16 percent of GDP and the SSA average of about 18 percent. In contrast, expenditures have accelerated to finance poorly managed infrastructure investments, at the expense of human capital and social development. Together, these factors have significantly raised the debt risks - while still sustainable, public debt rose close to 50 percent of GDP, but debt vulnerabilities have increased.

1.7.1 Revenue shortfalls and unbudgeted spending priorities characterized FY21 budget execution

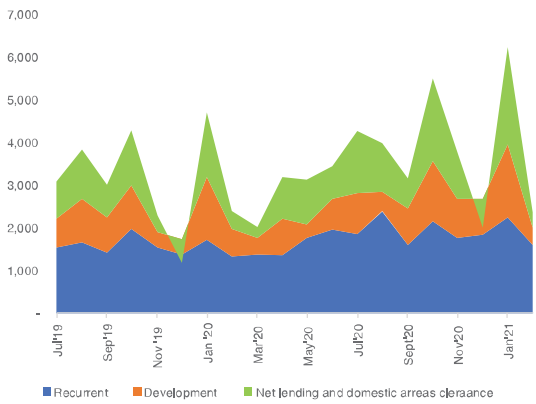
36. The fiscal deficit is estimated to have almost doubled compared to its pre-crisis levels, as government sustains its investment drive amidst revenue shortfalls. Domestic revenues continued to underperform targets during the first half of FY21. With businesses still constrained by COVID-19 related restrictions, and the fiscal support to the private sector sustained largely through the exemptions and deferral of tax payments, total taxes collected were 10 percent lower than had been planned. Meanwhile, total expenditures sharply rose during the first half of FY21, sustaining the upward trajectory observed since FY18, with both current and development spending increasing sharply (Figure 19). By the end of FY21, the fiscal deficit is expected to widen considerably to about 9.9 percent of GDP, from 7.1 percent in FY20 and 4.9 percent during FY19 (Table 4). By April, this had created a fiscal financing gap in FY21, which government estimated at about US$730 million or 1.7 percent of GDP.

Figure 18: Total revenues and expenditures (% of GDP)



Source: MoFPED and World Bank calculations

Figure 19: Nominal exchange rate (USh/US$)



Source: MoFPED and World Bank calculations

Geoffrey Basalirwa, fruit vendor in Nakawa Market

37. At the projected 12.1 percent for FY21, the tax-to-GDP ratio is expected to remain below pre-crisis levels as the Uganda Revenue Authority (URA) has struggled to meet the revenue targets. Besides the slow recovery in economic activity, the tax measures to ensure critical access to medical materials and equipment and to support the private sector liquidity also reduced collections during the first half of the year. Whilst the laws enacting these measures were only passed in November 2020, the URA did not enforce collection of these taxes in the manufacturing, tourism, horticulture, floriculture, and education sectors between April and December 2020. As a result, during the first half of FY21, revenues collected from all tax heads in GDP stagnated, compared to the year before. The projected outturn of revenues and grants in FY21 of 14.6 percent of GDP, falls short of the budgeted revenues target of 15.4 percent (see Table 4).

Table 4: **Key fiscal indicators, FY18-FY21 (percent of GDP)**

	FY18	FY19	FY20	H1FY20	H1FY21	FY21 est.	FY21 Budget
Total revenue and grants	12.7	13.6	13.2	14.4	14.5	14.6	15.4
Revenue	12.0	12.7	12.4	13.1	13.2	13.1	14.3
Tax	11.7	12.3	11.4	12.2	12.2	12.1	13.3
International trade taxes	1.4	1.4	0.9	1.4	1.4	1.3	
Income taxes	3.9	4.2	4.3	4.5	4.5	4.4	
Taxes on goods and services	6.4	6.7	6.3	6.2	6.3	6.8	
Nontax	0.4	0.4	1.0	0.9	1.0	1.0	1.0
Grants	0.6	0.9	0.8	0.9	1.3	1.5	1.1
Expenditures and net lending	16.8	18.5	20.3	21.0	23.4	24.5	24.0
Current expenditures	9.1	9.4	10.8	13.5	14.9	12.5	11.6
Wages and salaries	2.9	3.2	3.5	3.4	3.4	3.5	3.3
Interest payments	1.9	1.9	2.1	2.3	2.8	2.8	2.7
Domestic	1.6	1.5	1.7	2.0	2.0	2.1	2.0
External	0.3	0.4	0.4	0.4	0.8	0.7	0.6
Other current expenditures	4.3	4.3	5.2	7.8	8.7	6.2	5.6
Development expenditures	6.3	7.8	8.6	6.0	7.0	10.4	11.3
External	2.7	3.2	2.8	1.8	2.2	3.7	5.7
Domestic	3.6	4.6	5.8	4.2	4.7	6.7	5.6
Net lending and investment	1.2	1.1	0.6	1.1	0.7	1.0	0.9
Hydro-power projects	1.2	1.1	0.5	0.7	0.1	0.4	0.5
Recapitalization/1	0.0	0.0	0.1	0.3	0.6	0.6	0.3
Clearance of domestic arrears	0.3	0.3	0.3	0.4	0.8	0.5	0.3
Primary balance	-2.2	-3.0	-5.0	-4.7	-6.0	-7.1	-5.9
Overall balance	-4.1	-4.9	-7.1	-6.6	-8.9	-9.9	-8.6
Financing	4.1	4.9	7.1	6.6	8.9	9.9	8.6
External financing (net)	2.9	2.8	4.4	2.3	4.8	6.0	6.2
Disbursement (+)	3.6	3.7	5.0	2.9	5.4	6.8	7.0
projects	3.5	3.6	2.8	2.9	3.6	3.0	5.2
budget support	0.1	0.1	2.2	0.0	1.8	3.8	1.8
Amortization (−)	0.7	0.9	0.6	0.6	0.6	0.8	0.8
Domestic financing (net)	1.1	1.9	2.8	3.5	3.8	3.9	2.3
Bank financing	0.2	1.0	1.5	2.1	1.2	2.0	1.3
Bank of Uganda	-0.1	0.6	-2.9	1.9	-1.4	-5.8	-4.6
Commercial banks	0.3	0.8	4.4	0.2	2.6	7.8	5.9
Nonbank financing	0.9	0.9	1.3	1.4	2.6	1.9	1.0
Errors and ommissions	0.1	0.0	-0.1	0.8	0.3	0.0	0.1
Memorandum:							
Interest payments (as % of revenue)	15.7	15.0	16.9	17.6	21.2	21.4	18.9
Debt service-to-revenue ratio (%)	51.4	51.1	52.4	...	...	50.9	50.0

Notes: 1/ Recaptalization is for Bank of Uganda, except in FY20 where an additional 0.3 percent of GDP is for Uganda Development Bank

Source: Ugandan authorities; World Bank staff estimates

38. Given the pressures on current spending during the first half of the year, it is likely to breach the budgeted levels for FY21. In the first half of the year, current spending rose to 14.9 percent of GDP, from 13.5 percent of GDP the year before, driven by the use of goods and services, transfers to other agencies, and higher interest payments on debt. Outlays to other agencies, particularly emergency security and election related spending, rose by 0.8 percent of GDP. Interest payments increased by 0.5 percent of GDP, on account of interest on external debt that rose 0.4 percent of GDP. In contrast, interest on domestic debt remained constant, at 2.0 percent of GDP in this period, following a 'Bond switch' that extended the maturity of securities worth close to UGX 500 billion or 0.3 percent of GDP. The level of current spending for FY21 is projected at 12.5 percent of GDP, compared to budget of 10.8 percent.

39. Higher capital spending during FY21 has shifted the spending balance back towards development expenditures, which could support a faster recovery. Both domestic and externally financed development spending increased in the first half FY21, driving total development expenditures up to 7.0 percent of GDP in the first half of FY21, from 6.0 percent in the same period last year. Domestically financed investments went into the construction of roads, bridges, and other structures. The new spending pressures to manage the COVD-19 pandemic notwithstanding, the government maintained the pre-COVID-19 level of expenditures for infrastructure investments. If successfully executed, capital spending is projected to increase to 10.4 percent of GDP, from 8.6 percent of the previous year, with its share in the total budget rising a percentage point to 46 percent. Meanwhile, net lending declined to 0.7 percent of GDP, from 1.1 percent in the same period of FY20, mostly due to the reduced financing for the completed Isimba and Karuma hydropower dams and the one-off recapitalization of UDB and BoU in FY20 (Table 4).

40. As part of the COVID-19 response plan, Government increased payments for domestic arrears to 0.8 percent of GDP during the first half of FY21, from 0.4 percent of the same period the year before. The stock of domestic arrears had been maintained at 2.7 percent of GDP by end of FY20, the same level recorded in FY19. During the first half of FY21, the allocation of funding to domestic arrears was part of government efforts to provide liquidity to the private sector and manage the effects of the pandemic; this included a moratorium on disconnecting electricity and water services, funding for expansion of the e-voucher system to improve efficiency in distribution of agricultural inputs, and fund transfer to the Uganda Development Bank to support the manufacturing sector affected by the COVID-19 pandemic. Therefore, on the development side, arrears for service providers, suppliers of coffee seedlings, and verified utility arrears were paid, while recurrent domestic arrears went into land, cooperatives, and rent, among others. Due to the tight fiscal situation, new arrears may have been accumulated.

41. Spending pressures have been managed through supplementary budgets as Government maintained its investment program. With increased spending needed to finance the COVID-19 pandemic response, emergency security and other 'classified' activities, supplementary expenditures had increased to a record 10.6 percent of the approved budget by the end of the third quarter. In this period, overall expenditures were raised by a cumulative UGX 4.8 trillion – an estimated 3.4 percent of GDP. Up to 27 percent of this additional spending was financing the government's COVID-19 response, yet about 34 percent of this additional spending went for classified Ministry of Defence and State House expenditures (see Box 2). In addition to distorting the budget process, supplementary budgeting ought to be limited to emergency situations, otherwise it could distort national spending priorities.

42. Across sectors, security spending continues to increase at the expense of education, health, and other social sectors, which has severe implications on human capital development. During FY21, security spending is estimated to have accounted for 14.3 percent of the budget, only second to the works and transport sector, with 18.1 percent. Security spending has more than quadrupled over the past four years; it is growing faster than the revenue base and constraining the fiscal space for other priorities (see Box 3) – while some response programs to the COVID-19 shock remained unfunded due to the resource squeeze, the security budget was increased, with supplementary budgets funded through unplanned domestic borrowing. The agricultural sector, too, remains meagrely funded, with the bulk of resources marked for provision of inputs, leaving programs that could support the adoption of modern technologies unfunded.

Box 2: Persistent Supplementary budgeting denting Uganda's Budget Credibility

Supplementary spending was increasing in the recent pre-COVID period and spiked further since the COVID-19 outbreak (Figure B2.1). Up to the end of Q2 FY20/21, approved supplementary spending was already more than 9 percent of the approved Budget for FY20/21. Of these funds, only about 27 percent went to support the direct COVID-19 response, including: payment of domestic arrears; funding for education capitation grants and primary healthcare at the local government level; support to scientists and innovators engaged in COVID-19 scientific research; to the Ministry of Health for the COVID-19 response; provision of agricultural inputs and support for the e-voucher system; recapitalization of UDB; support to SACCOs through the MFSC; and funding for Emyoga. Despite defence and security receiving a significant share of the National Budget over the years (e.g. during the last five FYs, defence was, on average, allocated the second largest share of the National Budget), the Ministry of Defence (MoD), State House and the Presidency have so far received the biggest share (at 37 percent) of supplementary resources in FY20/21 (Figure B2.2). The supplementary spending under MoD and State House is classified and thus it cannot be scrutinized by Parliament.

Figure B2.1: Total value and share os supplementary

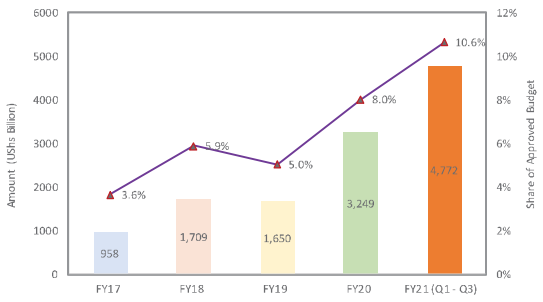
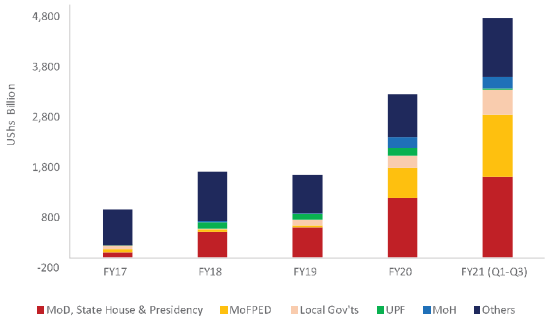


Figure B2.2: Supplementary Budget beneficiaries



Supplementary spending is increasingly undermining the credibility of the annual planning and budgeting cycle and is drawing resources away from critical national development priorities. Although supplementary expenditures are provided for within Uganda's legal framework, the majority of recent supplementary spending (i.e. wages, purchase of vehicles) do not meet the conditions under the Public Finance Management Regulations (2016) of being unavoidable and unforeseeable; thus, this undermines the credibility of annual planning and budgeting. In addition to distorting the budget, some of the classified spending does not align with national development priorities and reduces the resources that could otherwise be used for the provision of critical public goods and services.

Source: MFPED

43. The rising deficit has been largely funded by external borrowing. Government external borrowing to finance projects is estimated at 3.0 percent of GDP during FY21, higher than 2.8 percent attained in FY20, but well below the budget of 5.2 percent of GDP. However, the shortfall has been met by increased access to external budget support – mainly as a response from IFIs to support the country in managing the pandemic and its effects on the economy. In addition, the GoU has established a borrowing line with Stanbic and Trade Development Bank from which it accessed budget support totalling US$670 million (1.8 percent of GDP) in FY20, with the same amounts expected to close the financing gap during FY21. Therefore, total budget support financing would have increased to 3.8 percent of the GDP, from 2.2 percent in the previous year.

Box 3: Defense and security spending is using an increasing share of fiscal resources

Defense and security spending is rising fast and at a time when resources are tight. This spending has more than quadrupled in real terms – from UGX 901 billion in FY09 to UGX 3,974 billion in FY20 (Figure B3.1). In addition, supplementary funding (which is largely classified) is an increasing share of this expanded defense spending (see Box 2). Even during the COVID-19 pandemic (when fiscal space has been highly constrained), defense spending increased sharply, and is expected to reach UGX 4,667 billion in FY21 and UGX 4,038 billion in FY22 (Figure B3.2).

Figure B3.1: Defense spending (real amounts)

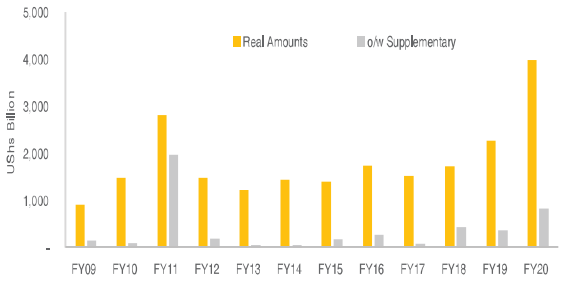
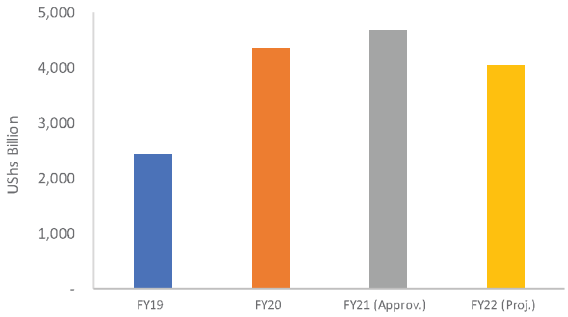


Figure B3.2: Defense spending (nominal amounts)



Defense and security spending is using an increasing share of the resources available for spending on all national development priorities. As a share of Uganda's total revenues (excluding grants) and total national budget, defense spending is projected to reach 30 and 17 percent, respectively, in FY21 (Figure B3.3). The recent increase comes on the back of a pandemic, when revenues have fallen dramatically, and whilst Uganda's vulnerability to debt distress is rising. Furthermore, during the last four years, growth in defense spending has significantly outstripped growth in both the national budget and revenues (Figure B3.4).

Figure B3.3: Defense spending (allocation & supplementary)

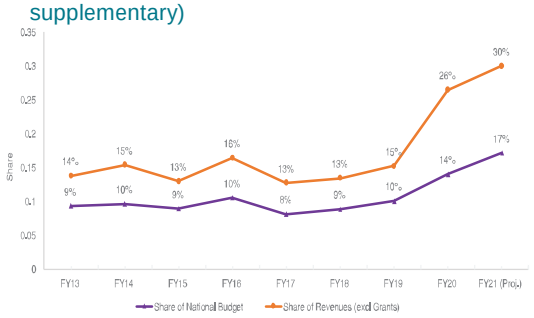
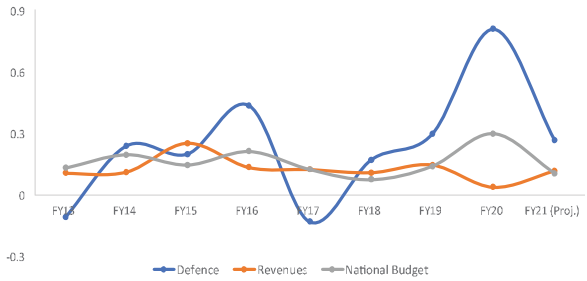


Figure B3.4: Spending and revenue (excl.grants growth rates (y/y)



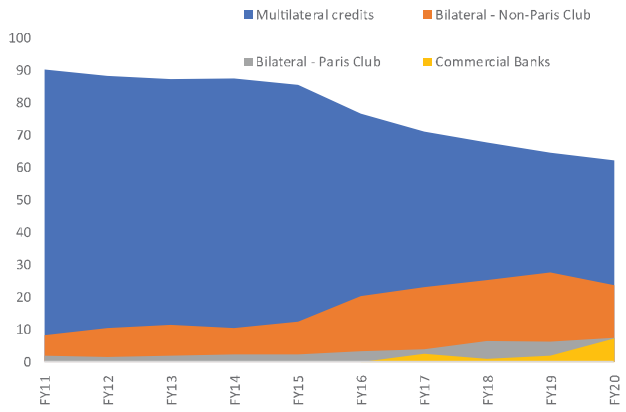
Source: MoFPED

44. Domestic borrowing is also playing a more prominent role and estimated to have expanded to 3.9 percent of GDP by end of FY21, more than doubling this kind of borrowing since FY19. External debt disbursement allowed Government to increase its deposits in the Bank of Uganda. Nonetheless, borrowing through commercial banks expanded by 3.45 percent of GDP over the same period, driving the overall net borrowing from the banking system to reach 7.8 percent, based on estimated FY21 GDP outturn.

1.7.2 Debt risks are increasing

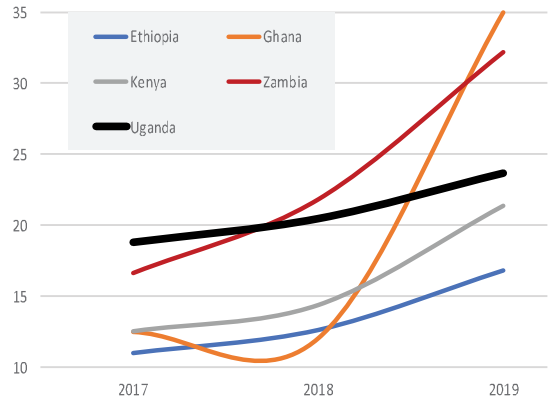
45. Rising fiscal deficits continue to drive public debt, estimated to have reached about US$17.96 billion, or 47 percent of GDP by end-December 2020. Public debt grew by 20 percent of GDP over the past five years. Faster borrowing in FY20 and FY21 was to close financing gaps induced by the COVID-19 pandemic, amidst accelerated infrastructure investments. The public debt to GDP ratio is projected to exceed 50 percent by FY23, before gradually declining. In net present value terms, total debt is expected to increase to 39.3 percent of GDP in FY21 and to the peak of 42.9 percent in FY23. Thanks to the relatively strong policies and debt management institutions, high foreign exchange reserves, and dominance of concessional borrowing in its debt portfolio,[30] Uganda's debt seems still sustainable. At the same time, the rising debt-to-GDP ratio, comes along with higher risks, which for the first time since the country received debt relief in 2006, raises the country's risk of debt distress from a 'low' risk - as was jointly assessed by the World Bank and IMF in May 2020[31] - to 'moderate' risk according to the latest Government of Uganda debt sustainability analysis.[32]

Figure 20: Evolution of external debt FY11-FY20 (% share)



Source: MFPED and World Bank calculations

Figure 21: External debt service to revenue ratio in selected peer countries (%)



Source: MoFPED and World Bank calculations

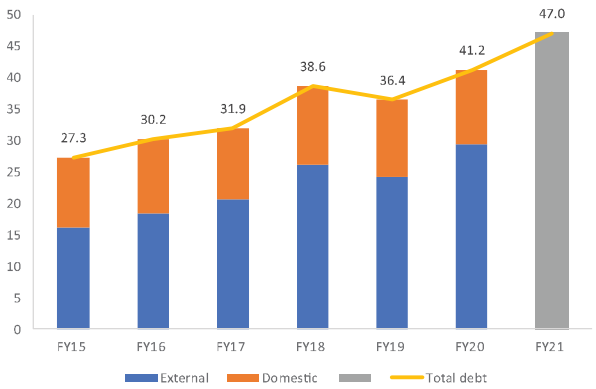
46. Uganda also faces heightened liquidity risks, partly on account of increased use of non-concessional borrowing. By 2019, Uganda's external debt service to revenue ratio had risen to 23.7 percent, which was comparable to peers, but already above the threshold of 18 percent for medium performers under the LIC DSF. Domestic debt has risen fast recently, and accounts for 70 percent of interest payments, due to the high cost of domestic government paper. This form of borrowing also requires to be paid much faster – the average time to maturity[33] for Uganda's domestic debt stood at 4.3 years by June 2020. On the other hand, the average time to maturity for external debt has also been declining as Government increases its exposure to non-concessional borrowing, which has shorter maturity time than traditional concessional borrowing (Figure 23). The total debt-service-to-revenue ratio is expected to rise to 53 percent by end of FY21, from 40 percent recorded in FY20, according to Government of Uganda debt sustainability analysis.

47. Therefore, the strategy to close the widening financing gap through more non-concessional external borrowing and shorter-term debt in the domestic market, will increase the debt-service-to-revenue ratio to over 70 percent by FY22. This would leave

30. About two-thirds (US$8.5 billion) of outstanding public debt is owed to external creditors, largely for energy and infrastructure projects, and with a weighted average interest rate of about 2 percent. Domestic debt totaled US$4.3 billion, with roughly three-fourths in Treasury Bonds with maturities from 2 to 15 years, while the rest is in short-term Treasury Bills.
31. World Bank (2020, May)
32. GoU MFPED (2020, December)
33. This is the time it would take to roll over or refine the debt portfolio.

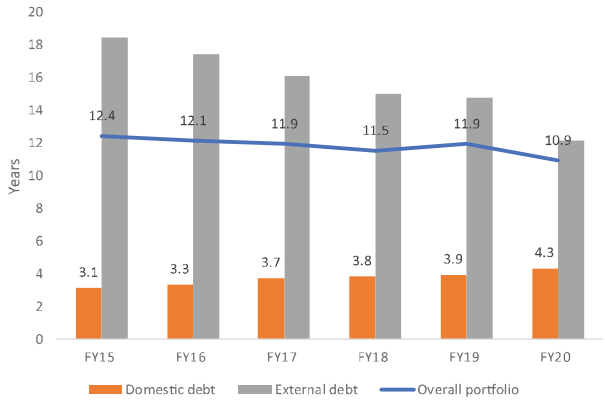
Uganda's debt service-to-revenue ratio more than double that of many other comparator countries, including those even at 'high' risk of debt distress. For instance, none of the countries at high risk of debt distress exceeded 37 percent in 2019. In addition to making the country vulnerable and raising the fiscal risks, persistently large interest payments will reduce fiscal space for investments in the country's development priorities. In FY20, the value of interest payments (domestic and external) is about the same as the total spending on the road and works programs.

Figure 22: Total public debt (% GDP)



Source: BOU, UBOS and World Bank calculations

Figure 23: Average time to maturity (years)



Source: MFPED, World Bank Calculations

48. The Debt Service Suspension Initiative (DSSI) by the G20 countries provided Uganda with an opportunity to postpone debt service payments from May 2020 to December 2021. In April 2020, the G20 Finance Ministers endorsed the DSSI in response to a call by the World Bank and the IMF for the suspension of debt servicing by poorer countries, in order to free up resources to help manage the impacts of the COVID-19 pandemic. The suspension implies a postponement of debt service payments to a later date, but with no reduction in the value of these payments. Borrowers then commit to use freed-up resources to increase social, health or economic spending in response to the crisis. Beneficiaries also commit to disclose all public sector financial commitments (involving debt and debt-like instruments). MoFPED requested for the suspension of debt servicing from Paris Club and non-Paris Club creditors. However, the related Memorandum of Understanding was signed in March 2021 and hence Uganda has continued servicing its debt until March 2021. Nonetheless, Uganda is still eligible for an estimated US$90 million postponement of debt service payments under the original DSSI which should increase to over US$ 250 million under the extended DSSI, now running through December 2021.

Fish markst stall

In April 2020, the G20 Finance Ministers endorsed the DSSI in response to a call by the World Bank and the IMF for the suspension of debt servicing by poorer countries, in order to free up resources to help manage the impacts of the COVID-19 pandemic.

2. ECONOMIC OUTLOOK

2.1. A modest economic recovery expected amidst uncertainties

49. Significant uncertainty remains on the evolution of the COVID-19 pandemic and its effects in Uganda. A resurgence of the virus could turn into a second wave in Uganda, which could peak around July 2021. Whereas the vaccination campaign targeting health workers, teachers, security personnel, the elderly (over 50 years of age), and those with co-morbidities has been underway since March 2021, its outreach is still small, with just 0.85 doses delivered per 100 people. The percentage of the population that has been vaccinated could only rise gradually from 2 doses per 100 persons by June 2021 to about 30 percent, due to both reluctancy of some sections of the population to vaccinate and due to limited supply of the vaccines. With the general population not keen on abiding by the preventive standard operating procedures[34] , a resurgence could result in Government re-instating more mobility restrictions, and thereby affect the economic recovery.

50. The economy is expected to continue its recovery. Under this baseline scenario, real GDP growth is expected to reach closer to 5 percent in FY22 and above 5 percent into FY23 (Table 6 and Figure 24), which is broadly in line with the range forecast in the December 2020 Uganda Economic Update. This growth will likely be driven by a pick-up in private consumption – as household incomes recover in the second half of 2021 and beyond. The expected increase in investment is supported by a recovery in exports as the global economy stabilises. The latter is assumed to benefit from the global rollout of COVID-19 vaccines in 2021. This forecast is also supported by recent PMI data, which suggests that, as uncertainty around the election period dissipates, business activity will increase over the coming year.[35] If, however, the Final Investment Decision (FID) on domestic oil production is taken before the end of FY21[36] (see Box 3) – stronger private and public investments could push real GDP growth in FY22 beyond 6 percent. Even with stronger real GDP growth in FY22, the level of per capita GDP will remain well below its pre-COVID trajectory (Figure 24). It is only into FY23 that per capita income growth could recover fully, if GDP accelerates to 6.4 percent under this scenario.

Table 6: Baseline macroeconomic outlook (annual percent change unless indicated otherwise)

	FY20	FY21 estimate	FY22 forecast	FY23 forecast
Real GDP growth (baseline)	2.9	2.6	4.6	6.4
Private consumption	1.2	2.9	3.2	4.0
Government consumption	6.0	11.2	-1.6	5.6
Gross fixed capital investment	0.7	2.8	8.9	10.1
Exports (goods and services)	0.4	3.2	14.6	14.2
Imports (goods and services)	-6.2	8.3	10.2	9.1
Agriculture growth	4.8	3.2	4.2	4.2
Industry growth	2.2	6.2	6.4	7.6
Services growth	2.9	0.1	3.5	6.9
Inflation (consumer price index)	3.0	4.0	4.5	5.0
Current account balance (percent of GDP)	-5.9	-8.3	-7.7	-7.0
Net foreign direct investment (percent of GDP)	2.6	2.3	2.8	3.1
Fiscal balance (percent of GDP)	-7.2	-9.6	-5.6	-4.5
Public debt (percent of GDP)	41.2	47.2	50.3	51.4

Source: UBOS and World Bank estimates

34. GoU, MoH (2021, May)
35. Stanbic Bank, Uganda (2021, April)
36. THE INDEPENDENT, Uganda (2021, January 28)

Box 4: Uganda's path to producing oil is still bumpy

This Over the past 15 years, Uganda has undertaken a series of legal, institutional, structural and policy **reforms to enable it to tap into the sizable oil** reserves it discovered in the Albertine region. The recoverable reserves, estimated at 1.7 billion barrels of crude oil, could earn Government about $1.5 billion a year in revenues (4 percent of FY20 GDP) over 25 years. During the development phase, Uganda could receive up to US$20 billion investments inflow to put the production infrastructure in place. Some of these flows could benefit local suppliers - as per the country's local content policy - and local communities. In addition to the investment flows and growth effects in the short to medium-term, oil has the potential to substantially raise government revenues, increase exports and drive close to double digit growth rates, over the longer term. These actual size of impacts will vary depending on the international prices, production profile and structural changes in the global oil industry over the last five years and a global push for investments in green energy that may reduce demand for carbon based energy within the next decade.

The recent signing of key agreements related to the development of the EACOP oil pipeline, has re-ignited expectations that Uganda could start the actual development phase for its oil soon. On April 11, 2021, Uganda signed key agreements: (i) the Host Government Agreement between GoU and EACOP Company; (ii) the Shareholders Agreement between Uganda National Oil Company (15 percent shares) and the Joint Venture Partners, including Total E&P Uganda Limited (62 percent shares) and CNOOC Uganda (8 percent shares), and Tanzania Petroleum Development Cooperation (15 percent shares), hence constituting the EACOP Company, its funding shareholders, finance structure and governance arrangements; and (iii) the Tariff and Transportation Agreement (TTA) between EACOP Co. (the transporter) and the Shippers comprised of the Government of Uganda, UNOC, Total E&P Uganda Limited and CNOOC Uganda Limited. These, together with the general agreement on the principles of the future tax regime between GoU and oil Companies, and the Host Government Agreement between GoU, GoZ and Total E&P Uganda Limited, for the development of the oil pipeline, signed earlier in September 2020, address the major obstacles considered to have been the main reasons for the delay in the final investment decision (FID) by private oil companies. By April 2021, GoU was ready to approve and award contracts to the main Engineering, Procurement and Construction (EPC) contractors to start construction work for the US$3.5 billion oil pipeline project, expected to be undertaken between 36 to 48 months.

The pipeline adds to other major infrastructure investments that are already underway or planned. These include the Hoima-Kaiso-Tonya road, which connects different oil wells in the Albertine region, and the Nyamasoga Oil Treatment Plant. The contract for an oil refinery, which is expected to domestically process one third of the oil produced, was signed in 2018 with the intention that it will be finalised by 2021. Two thirds of oil produced is to be exported via a pipeline to the port of Tanga (Tanzania). Uganda and Tanzania have concluded an Inter Government Agreement (IGA) to develop this about US$8 billion investment. The works on Hoima (Kabaale) International Airport were disrupted by COVID-19 but reached 50 percent completion by end December 2020.

A more fundamental and intractable challenge to development of the Albertine oil reserves comes from the high cost and marginal economics of the **oil fields, and the environmental concerns.** High pipeline transportation costs and poor crude oil quality will result in wellhead netback prices that are deeply discounted from global crude oil prices, and hence cut into government revenues. Whereas the maritime industry recently increased demand for low-sulphur fuel oil to meet greenhouse gas limits, which generated a premium of about US$ 1.3 per barrel in the niche markets, it is yet to be established whether such markets will be sustained given the fast evolving climate change landscape. In addition, the remoteness and environmental sensitivity of the Lake Albert region result in high operating costs. Under existing fiscal terms, the breakeven global Brent crude oil price for the Albertine developments is between US$50 and US$60 per barrel versus an average price of approximately US$41 per barrel in 2020. At this price level, unless the premium rises to between US$10

and US$20 per barrel, project economics are unlikely to stack up well against other investments in the portfolios of Total and CNOOC. Whereas oil prices have surged to above US$60 per barrel during 2021, the risk of downward price pressures, underpinned by changes in the global environment (including climate change and the sustained COVID-19 shock) remain real, if the transition into clean energy technologies shifts demand completely out of petroleum-based energy. The latter could make Uganda's oil production project a risky venture for prospective investors, as these challenges affect access to capital (e.g. climate-change driven investments, growth in renewable energy investments), the cost basis (e.g. carbon taxes, carbon border adjustments), and long term natural gas/oil demand growth. Already, concerned about the environmental impact of the 1,440 km pipeline, a group of over 250 civil society organizations (both local and international) have petitioned commercial banks not to finance the project.

Source: Compiled by World Bank staff from interviews and data from Ministry of Energy and Mineral Development, and Petroleum Authority.

51. The sluggish recovery in the services sector will undermine the rebound in industry and sustained growth in agriculture. The services sector will take time to fully recover from the devastating impact of the COVID-19 crisis on the education, travel, accommodation, and food services sectors. The tourism sector may lose more than US$5 billion in revenues over the next five years[37] and it remains questionable to what extent employment in the sector will recover over the medium term. The recent resurgence in COVID-19 cases and related mobility restrictions in Kenya, as well as imposed trade restrictions in other parts of the world, will also further dampen prospects in the transportation and storage sector into FY22. Agriculture is projected to grow at an average of 3.5 percent in FY22, supported by favourable weather conditions, continuity of agriculture and rural-to-urban supply chains, robust growth in livestock, and an eventual recovery in fish exports. The industrial sector too is expected to pick up, as manufacturing benefits from stabilization of global supply chains and Government's drive for import substitution, and acceleration of activities in both construction and the minerals sector (driven by gold exports).

52. Inflation is expected to remain close to the target of 5 percent over the medium term. Whereas high international oil prices could exert non-food inflationary pressures, this is expected to be subdued by the continued muted demand in some key services sectors, particularly accommodation, food, and restaurants. Non-oil imported price inflation is also assumed to remain muted as pandemic related supply interruptions ease over the medium term and the shilling continues to exhibit gradual appreciative pressures. Food price inflation, while volatile, is expected to normalize at a lower average, with improved weather. The BoU is therefore expected to maintain its current accommodative policy stance into FY22, to support a stronger recovery.

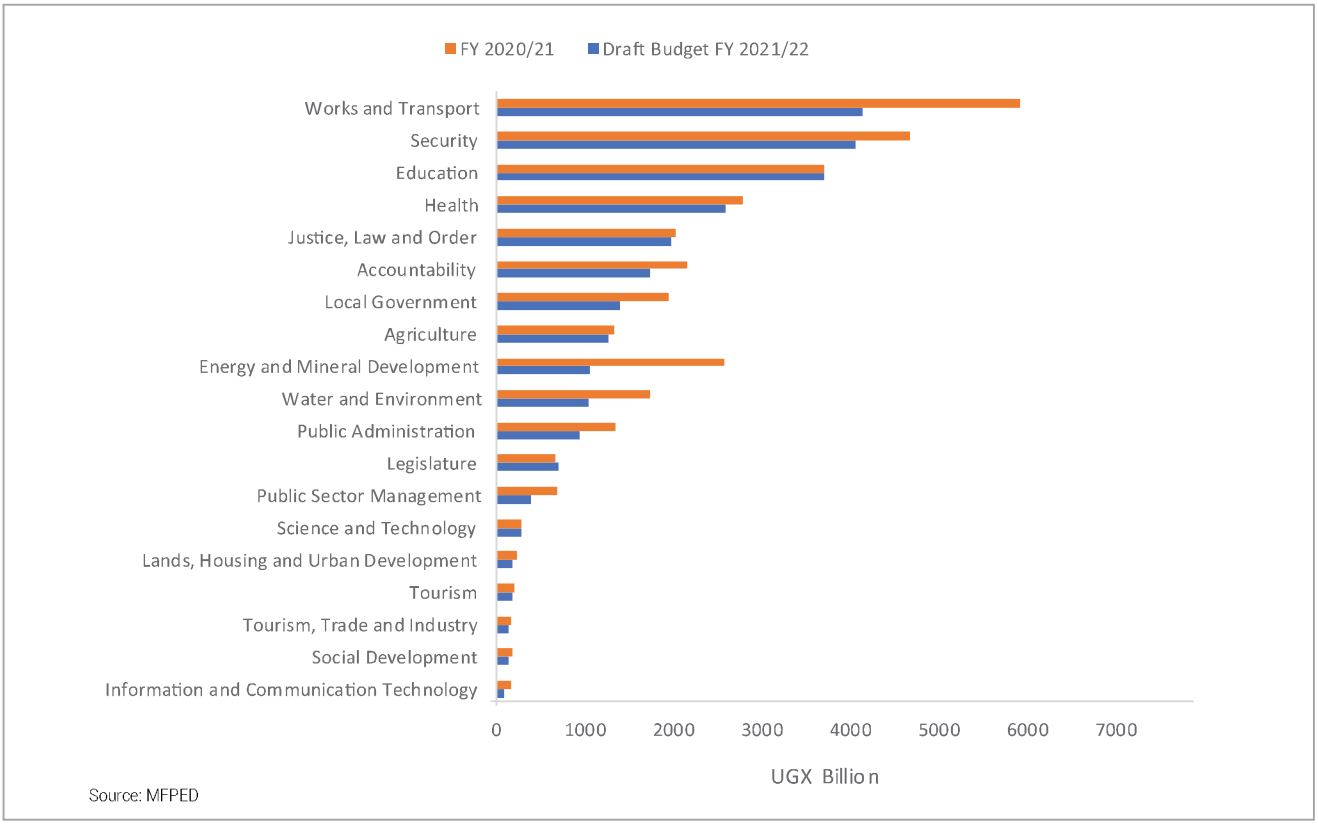
53. The current account deficit is projected to narrow to about 7 percent of GDP by FY23, from the estimate of 8.7 percent of GDP in FY21, as exports accelerate under a stronger global economy and improved domestic production. This will also build on the commodity price recovery, with the price outlook for Uganda's major exports – such as Robusta coffee, maize, cotton, and tea – being positive over the next three to five years.[38]Whilst the recovery of remittances will largely depend on employment income recovery in sending countries and be expected to strengthen with global economy, there is still significant uncertainty about services (mainly driven by travel habits in a post-COVID world), with implications to corresponding tourism inflows to Uganda, currently forecast to remain well below the net inflow of 2.3 percent of GDP in FY20. With the slow recovery of FDI to only 3.1 percent of GDP in FY22 and FY23, the current account deficit is expected to be largely financed through government borrowing, partly through concessional borrowing from IFIs and drawdown of foreign exchange reserves.

54. Fiscal policy in FY22 aims to sustain economic recovery and to address the social economic impacts of the COVID-19 pandemic, while progressing implementation of the third National Development Plan.[39] As the pandemic, emergency security and election related spending pressures slow down, and as government

37.United Nations Uganda (2020, June)
38. World Bank (2021a, April)
38. GoU NPA (2020, July) The Third National Development Plan was approved by parliament in June 2020, and hence will be in its second year of implementation during FY22.

reprioritizes its public investment program, overall spending is expected to reduce by almost 3 percentage points of GDP to about 23 percent of GDP. According to the FY22 Budget Draft Estimates, expenditure cuts will be broad, which supports a fiscal consolidation to avoid escalating the fiscal sustainability risks. The most significant cuts will be in energy and mineral development, works and transport, and information and technology sectors (Figure 24). However, works and transport will still take the largest share of the budget, closely followed by security. Meanwhile, the proportion of the budget allocated for education and health, will increase to 14.2 percent and 9.9 percent, respectively, from respective shares of 11.3 percent and 8.5 percent in FY20, which is noble for supporting human capital development.

Figure 24: Sector budget allocations FY22 support fiscal consolidation



55. Improved revenue performance as the economy picks up, augurs well **with a fiscal consolidation aiming to reduce the deficit by almost 3** percentage points of GDP in FY22, followed by another percentage point in FY23. While declining into FY22 and FY23, the deficit will remain high as public capital expenditures continue to meet investment demands of oil-related infrastructure, power transmission and distribution networks to special economic zones and rural growth centres. Yet, a large share of the proposed FY22 and FY23 deficit remains unfunded, which may require expenditure adjustments or a build-up of debt.

56. If the projected deficits materialize, total public debt is expected to rise to almost 54 percent of GDP by FY23. According to the latest GoU DSA published in January 2021,[40] the lower projectile - compared to that published in the December 2020 Economic Update[41] - benefits from government strategy to lower cost and refinance risks by minimizing domestic

40. GoU MFPED (2021, January)
41. World Bank (2020a, December)

borrowing and taking measures to elongate the tenure of securities. Despite the steep trajectory in nominal terms, in present value terms, debt is projected to reach 43 percent of GDP in FY23, which is still lower than 50 percent committed to under the Charter of Fiscal Responsibility and the Convergence Criteria under the East African Monetary Union Protocol.

Nevertheless, the profile of total debt service (interest and principal due) is expected to surge to around 60 percent of government revenues over the next four years, which exposes the government to higher liquidity risks. Moreover, external debt service to exports of goods and services goes well above the threshold by FY26, with the breach much more significant into the medium term if exports growth decline more strongly. This could push Uganda into a 'moderate' risk of debt-distress according to the World Bank-IMF Low-Income Countries Debt Sustainability Framework (LIC-DSA).[42]

Table 7: Fiscal outlook (percent of GDP)

	Actual FY20	Proj. Outturn FY21	Proj. Budget FY22
Total revenue and grants	13.2	14.6	14.4
Total revenue	12.4	13.1	13.2
Grants	0.8	1.5	1.2
Expenditure	20.3	24.5	21.4
Current expenditure	10.8	12.5	11.3
Development expenditure	8.6	10.4	10.1
Primary balance	-5.0	-7.1	-4.6
Overall balance	-7.1	-9.9	-7.0

Source: MoFPED

2.2. Risks remain tilted heavily to the downside

57. The macroeconomic outlook faces **significant downside risks, mostly** from COVID-19. Whilst the COVID-19 vaccination program has begun in many countries including Uganda, there is still significant uncertainty about the timing of effective roll out to a significant part of the population and the response of countries in easing restrictions, worsened by resurgence into second and/or third waves of the virus in some countries. Protracted or even extended domestic mobility restrictions (currently still limited to the entertainment sector and curfew hours for every sector) will continue to mute domestic demand and production. At the global level, cycles of outbreaks and lockdowns, restricted international borders, financial stress, and elevated debt levels increase the volatility of the global economy, and deter the recovery in Uganda's exports, FDI, tourism and remittances. This could lead severely affect health and livelihoods, and distort macroeconomic variables, including slower growth and worse external and fiscal imbalances.

58. Spending pressures and adjustments to government's debt **profile could jeopardize Uganda's** hard-earned macroeconomic stability. Uganda's spending boom has been mainly related to infrastructure investments, but additional pressures may arise as the new government takes on fresh programs to show results, if security threats increase, and if the oil sector requires higher and faster cash outlays from government. Furthermore, weak implementation of new tax-enhancing measures and reforms may strain the government's ability to raise additional revenue to offset higher expenditures. A significant shift in debt towards more non-concessional borrowing and/or the issuance of a Eurobond would disrupt the smooth repayment profile Uganda currently enjoys, raise debt burden trajectories and further increase debt vulnerabilities.

59. Political uncertainty and security threats could undermine investments, tourism activity and the economic recovery. While factored into the outlook, political risks could be more pronounced, if pronouncements in

Western capitals on the violation of human rights and travel bans on individuals that may have been implicated in these vices, escalate into sanctions across several economic important partners. This could diminish longer-term investor sentiments (both domestic and international). This may also slow oil investments and deter a recovery in the tourism sector.

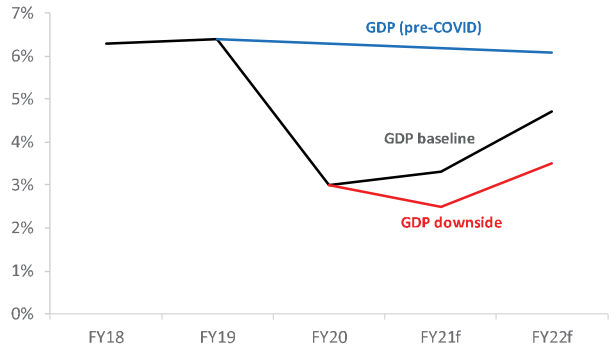
60. Businesses continue to face critical constraints such as access **and cost of finance, skills and** electricity, and an uncertain regulatory environment. Premature withdrawal of liquidity support and macro-prudential policies that have supported commercial banks' balance sheets during the crisis may cause a sharper deterioration in the asset quality of the banking sector, which may increase cost and constrain further access to finance for firms in the next few years. Despite the heavy infrastructure investments by the government, infrastructure services remain a key binding constraint to many firm operations and inhibit productivity growth and resilience. Moreover, remaining difficulties in investment licensing, the regulatory environment and contract enforcement, may further frustrate the post-COVID rebound in private sector activity.

61. Climate shocks are a risk to economic recovery. Uganda continues to be amongst the world's most vulnerable countries to climate shocks, and their increasing frequency (e.g. drought and floods) could impact many farms and households in Uganda given the limited adaptive capacity to natural disasters and climatic stressors; generally low technology adoption rates and limited access to alternative off-farm income streams. Uganda also lags its East African peers in water management, storage and irrigation, which is key to building resilience of the agriculture sector.[43] Any weather-related shock over the next 1-2 years would certainly impede the post-COVID recovery.

2.3. The downside scenario envisages slower recovery

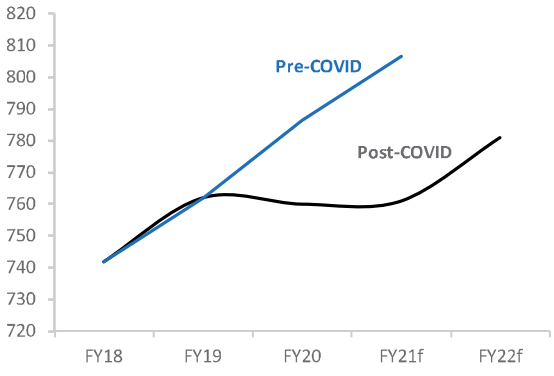
62.Under a downside scenario, growth could be more muted and recovery slow and delayed into FY23. This scenario assumes that some of the risks above materialize, and Uganda experiences a combination of: additional waves of infections throughout 2021 and into 2022; widespread coverage of the vaccine is only achieved by early 2022; re-introduction of ad-hoc mobility restrictions at certain times until early 2022; premature scaling back of support to vulnerable persons and businesses; financial sector conditions deteriorate markedly; tourists only start traveling to Uganda in larger numbers in the second half of 2022 onwards; and/or average oil prices suddenly dip below US$50/bbl and/or the FID is taken in FY22. Under such circumstances, growth could be more muted and stay at 3.5 percent in FY22, and per capital income growth stagnate.

Figure 25: Real GDP growth rate (percent)



Source: UBOS and World Bank estimates

Figure 26: Real GDP per capita (US$)



Source: World Bank estimates

43. According to World Bank (2018, June), only about 7,000 ha of cultivated land is under formal irrigation - about 1.2 percent of an estimated irrigation potential of 600,000 ha.

Table 8: **COVID-19 health and economic assumptions**

Key variables	Baseline scenario	Downside scenario
Health Number of daily cases Widespread coverage of vaccine/1	Declining through 2021 By mid-2021	Additional waves into early 2022 By early 2022
Economic		
Lockdown and mobility restrictions Support to firms and vulnerable h/holds Financial sector conditions Oil price, Brent (average US$/bbl)	Fully lifted through 2021 Continued in 2021 and first half of 2022 Stable through 2021	Ad-hoc restrictions until early 2022 Fully scaled back in 2022 Deteriorate through 2021 <$40 in FY21 and <$50 in FY22
Key commodity prices (coffee and gold) Tourism rebound	$50 in FY21 and $60 in FY22 Moderate In late 2021	Weak In late 2022

Source: World Bank

Notes:

1/ 'Widespread' means having covered 90 percent of the most vulnerable population (health workers, security personnel, teachers, persons of 50 years and above, and persons with co-morbidities) and at least 10 percent of the non-vulnerable population (i.e. 30 percent of the population).

2.4. Policy actions for recovery and transition to a greener, resilient, and inclusive growth

63. The socioeconomic disruptions from the COVID-19 pandemic and subsequent risks to recovery need to be carefully managed for the country to regain normalcy. Uganda has remained vigilant against the pandemic, even as the second wave driven by more contagious and virulent strains threatened the country. Public health measures (including vaccination of vulnerable groups) to stop the spread of the virus have continued, followed with monetary, macro-prudential and fiscal policies to cushion the economy, solvent businesses, and vulnerable populations, against the adverse effects of the pandemic. Nonetheless, the livelihood of many Ugandans has been severely disrupted, and poverty and inequality increased. Reversing these effects is further complicated by the loss in longer-term productivity through lower human capital investment, loss in learning-adjusted school years and prolonged spells of unemployment, let alone the overwhelming effects of declining natural capital and climate change. Hence, the economic recovery is still expected to be modest and uneven, facing a multitude of other risks. Additional government interventions are likely to be constrained by the limited fiscal space due to scanty revenues and rising public debt vulnerabilities.

64. Going forward, the immediate priority remains that of saving lives by intensifying measures crucial to limit the spread of the virus, protect the most at-risk populations and overcome vaccine-related challenges to avoid long-term, socio-economic damage from the pandemic. In this respect, government needs to allocate adequate resources for the acquisition and deployment of vaccines, strengthening surveillance, testing, case management and community engagement to improve uptake of the various interventions. So far, global cooperation has allowed countries to overcome financing[44] and logistical constraints in accessing the vaccine. Government has put in place measures for the bulk of the vulnerable population to access the vaccine. Nonetheless, it will need to engage in more sensitization, knowledge, and awareness programs, to promote stronger acceptance and more successful vaccination programs. Furthermore, the government needs to boost the capacity of the health system to concurrently respond to the

44. The World Bank approved US$6 billion on April 2, 2020 to support countries in responding to the COVID-19 pandemic, and a further US$12 billion on October 13, 2020 to support the procurement and deployment of COVID-19 vaccines.

pandemic and other health conditions, such as malaria, maternal and child health cares, and HIV treatment, where the gaps left due to the pandemic are already impacting lives.

65. Uganda's economic recovery faces a huge and complex set of challenges, which can only be overcome through an integrated response across shorter-term recovery macro management policies and longer-term actions that will spur a greener, more resilient, and inclusive recovery. These policies are highlighted below:

Pro-recovery macroeconomic and macro-prudential management policies

a) Prudent and transparent fiscal management remains the lynchpin to recovery and resilient growth - As the crisis abates, the authorities will need to balance the risks from the growing size of debt and related vulnerabilities with a possible slowdown in the economy through premature monetary and fiscal tightening. Eventually, a fiscal consolidation into the medium term will be necessary for Uganda to return to a post-crisis fiscally sustainable path. This fiscal strategy needs to do the following:

(i) Raise tax revenues to avoid **significant debt liquidity pressures.** It can also form part of a strategy to reduce interest rates in the domestic debt market if it leads to lower domestic borrowing. Yet, tax measures need to be closely calibrated with economic performance, especially for sectors that may be struggling to get back to normal business post-COVID-19. A key first step is to remove tax exemptions in the post-election period and adopt a tax expenditure fiscal governance framework to streamline processes for managing such incentives.

(ii) Adjust expenditures to support the economy in the near term, followed with policies that facilitate employment in high growth sectors, protect vulnerable groups, reduce trade costs. The budget re-allocation required to implement such policies will also have to increase investments in education, connectivity, and green infrastructure to bolster growth prospects and steer the recovery onto a green, resilient, and inclusive development path.

(iii) Carefully calibrate the sources of **financing to avoid unnecessarily high cost financing.** Whilst Government has recently increased the level of non-concessional borrowing to finance its fiscal deficits, scaling back on this form of deficit financing, in line with its medium-term debt strategy, will ensure debt remains manageable and avoid liquidity problems. This can be supported by careful debt management that would limit expensive domestic financing, elongate the maturity of domestic debt, and maximize highly concessional external borrowing. Such an approach would also reduce the crowding out of the private sector, with positive spillover effects for economic growth. Moreover, the revenue enhancement and expenditure reallocation (in a. and b. above) will encourage broader financing participation from external development partners. As will credibility in management of resources, considering instances of resource mismanagement in the government's response to COVID-19.[45] To be able to access concessional external borrowing, the government will need to consider postponing non-essential infrastructure projects and reprioritize the budget toward spending more on human capital. In addition, enhanced public debt transparency and transparency of resources spent on COVID-19 activities would give donors confidence that the country is on the right track and may also help bring bilateral creditors back to the table to discuss budget support.

(iv) Strengthen the institutional **framework for fiscal policy,** by introducing institutional arrangements for independent fiscal policy such as stronger fiscal rules.

b) **Monetary and financial sector** policies will need to be closely **coordinated with fiscal policy** to maintain internal balances, **avoid inflation and minimize the financing costs for firms.** First, Government needs to limit domestic borrowing to moderate benchmark costs for interest rates. As the liquidity support is withdrawn, borrower distress may rise and the share of non-performing loans within the financial system increase sharply. This will drag down capital adequacy and raise cost of borrowing. BoU's action to increase the capital requirements in the financial system to prepare the financial system for such eventualities, will need to be followed with upstream reforms to the insolvency and debt resolution frameworks to ensure that the NPLs are resolved quickly. This will support quicker resumption of lending by banks in support of the recovery. This could also be accompanied with a framework for

45. THE DAILY MONITOR (2020, April 29).

restructuring and recapitalization of private sector firms balance sheets or creating domestic distressed assets markets. On the other hand, while the financial system needs to be supported to provide lending for productive households and firms, it is also important to build its resilience by enhancing balance sheet transparency and cautiously phasing out the most distortive liquidity support measures. Other policy actions to further reduce lending rates could include encouraging the consolidation of smaller banks, sharing of infrastructure, increasing competition, improving banking supervision and risk management, and encouraging savings.

c) Unwinding of policies that have been concurrently used to mitigate the impact of the COVID-19 crisis will require close coordination and sequencing, and a re-think of fiscal-monetary coordination. In Uganda, like many other countries, the response to the crisis called for doing things in unconventional ways, that could have tightened links between fiscal, monetary, and financial sector polices. These tighter links could have been beneficial in times of crisis. Global best practices, for instance calls for clear separation between instrument issuance for fiscal operations and that for monetary policy, or between structural liquidity support to banks and monetary operations. Therefore, unwinding these policies will require close coordination and sequencing of these policy areas and possibly a reset of institutional arrangements that govern their interactions, such as institutions for fiscal-monetary coordination, institutions for greater fiscal independency, such as stronger fiscal rules. It might be worthwhile to also consider the issue of unwinding policies in the Ugandan context in more detail.

Longer-term policy actions to spur a green, resilient, and inclusive recovery

a) Investing in the health of the population – Beyond COVID-19, the health system needs to be adequately developed to concurrently respond to the pandemic and other health conditions. To overcome the resource and capabilities constraints at national, sub-national and health facility levels (see section 1.4), smarter investments are required in the health sector. This needs to be complemented by key reforms including deepening results-based financing in the sector, introducing a prepayment mechanism through operationalization of the national health insurance scheme, and digitalization of healthcare, as proposed under our fifteenth economic update.[46]

b) Protecting the livelihood of the poor and vulnerable - To avoid lasting damage to household incomes and human capital, it is imperative to develop and implement shock responsive social protection programs, restore human capital, and support equity and inclusion. The COVID-19 shock amplifies the urgency of expanding coverage and reformulating the designs of social safety nets in Uganda, also recommended under our 12th Uganda Economic Update.[47] These programs will provide an effective protection for households exposed to increasing shocks and put them in a better position to recover after a shock. The programs also cushion households from food insecurity and falling into destitution, and from long-term, often irreversible damages to physical assets and human capital.

c) Restoring and strengthening education response to human capital development – The education of children and young adults needs to be prioritized throughout and post-crisis. Human capital loss from school closures in an environment where digital options are very limited for poorer and rural households, can be grave. Government's decision to gradually return children to school, including allowing even those who may have married or became pregnant during the prolonged closure of schools was a prudent measure. As recommended under the previous Update,[48] in addition to the loan facility that has been made available to teachers in private schools, greater support also needs to be given to private providers of education[49], so they remain afloat to sustain a reasonable level of education. Furthermore, a greater focus will be required on learning outcomes – to ensure students catch up for the lost school days in 2020 – and proactively re-enrolling children who dropped out of school.

46. World Bank (2020, July).
47. World Bank (2020a, December)
48. Ibid.
49. Ministry of Education and Sports. This is particularly important for secondary education where private schools account for over 50 percent of secondary school going children. According to the MoES, there are about 4000 private schools in the secondary sub-sector, which is more than double the number of government-funded schools.

Beyond these immediate priorities, Uganda needs to develop a robust digital agenda for education.

d) Promoting sustainable businesses growth and job creation – Government responded aptly to support businesses to manage the crisis through loans, tax payment deferrals, reduction of financing costs, suspension of payments to utilities, ensuring a stable currency, and accelerating payment of arrears. It also extended the liquidity support windows at Bank of Uganda to December 2021 (see section 1.5). The withdrawal of this support will need to be delicately calibrated with the health of the financial system and the business sector as the pandemic evolves, while ensuring that unviable businesses will be allowed to fail. However, beyond these emergency measures, building a resilient economy requires addressing the structural and policy issues that constrain business growth and could have been accentuated by the current developments. One key area is to accelerate the pace of technology and digitalization to reduce cost and raise productivity of financial systems and firms. Digital solutions can support delivery of essential services for firms (e.g. utility and tax payments, access to markets via digital platforms and e-commerce, and digital SME finance), consumers (e.g. mobile money, remittances and e-commerce) and the most vulnerable (e.g. expanded and new short-term social safety nets). In this COVID-19 recovery, early evidence suggests that firms that could adopt digitalization, incurred less losses due to the shock.[50] To accelerate the pace of adoption of digital technologies, Government needs to shift its services to digital platforms, strengthen the legal and regulatory environment for the use of digital platforms, and boosting the digital entrepreneurship ecosystem.[51]

e) Raising productivity of the agricultural sector will remain crucial to accelerate economic growth, reduce poverty and vulnerability, and improve livelihoods in Uganda. This requires adopting practices to arrest degradation and depletion of its natural, especially land, and building up resilience to climate variability. This can allow Uganda's agriculture sector, which still employs the largest share of the population, to transition towards a higher productivity, climate resilient, inclusive, and low emission pathway – one that pursues economic growth, alongside environmentally sustainable and socially inclusive development - a green transition. This is expounded upon in the second part of this report.

50. Bachas, P.J. (2020)
51. World Bank (2020, July)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PART 2

INVESTING IN GREEN AND RESILIENT PATHWAYS FOR ECONOMIC GROWTH, FOOD SECURITY AND POVERTY REDUCTION

Uganda's economy and and prospects for inclusive growth and poverty reduction fundamentally depend on her natural resources.

3. UGANDA'S PROSPERITY HINGES ON THE HEALTH OF ITS NATURAL CAPITAL

3.1. Natural resource degradation in Uganda.

66. Uganda's economy and people are highly dependent on its natural resources, namely agricultural land (pastureland and cropland), forests, water bodies, soils, and other resources. These resources are the foundation of the country's main economic activities, including industry and agriculture.[52] Consequently, more than 80 percent of Ugandan households depend on natural resources for their livelihoods, these being agricultural land, fertile soils, forests, and freshwater resources. The stock of natural resources (also referred to as the country's natural capital) is a significant portion of Uganda's comprehensive wealth (Figure 27). The renewable part alone, comprising agricultural land (pastureland, cropland), forests, wetlands and water bodies, made up 38 percent of Uganda's wealth in 2014.[53] A large part of this natural capital wealth is agricultural land, with cropland and pastureland taking up 65.4 percent and 21.1 percent, respectively. The non-agricultural land comprises protected areas (12.7 percent), forests (0.7 percent), minerals and fossil fuel energy (0.1 percent).

Figure 27: Comprehensive Wealth in Uganda

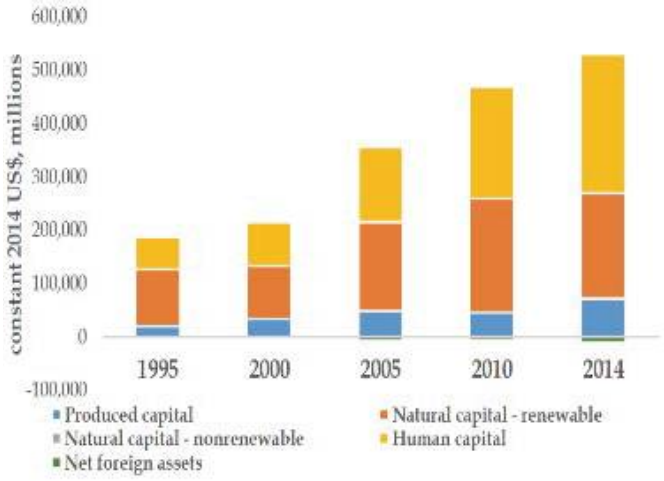
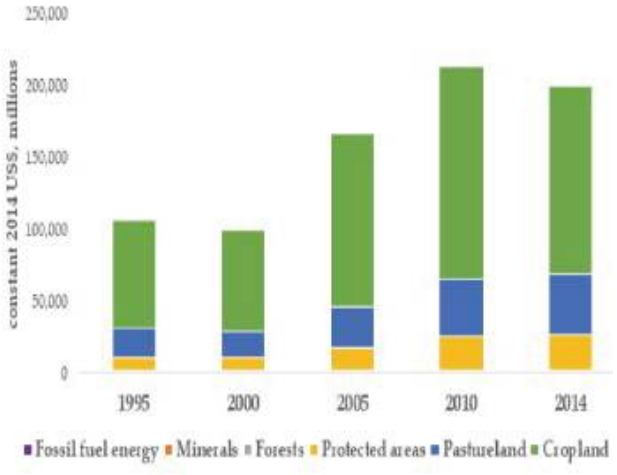


Figure 28: Natural Capital Wealth in Uganda



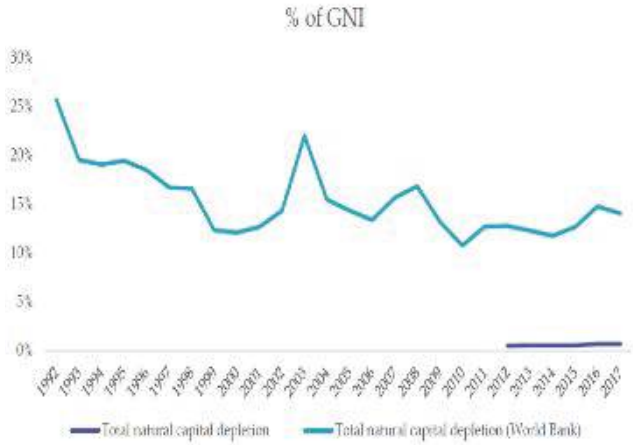
Source: World Bank. 2020

67. There is enormous pressure on and rapid depletion of natural resources in Uganda driven by both natural and human factors. Uganda's natural capital wealth has generally been declining since the early 1990s (Figure 29). This in turn shows that renewable resources are being exploited faster than they are being renewed. Pressure on the country's natural resource base is driven mainly by population growth, land conversion for farming, urbanization, biomass energy use, the country's topography, refugee influx, and the drive for industrialization to promote economic growth. Between 1990 and 2015, agricultural land expansion occurred at the expense of woodland/forestland (Figure 30).

Pressure on the country's natural resource base is driven mainly by population growth, land conversion for farming, urbanization, biomass energy use, the country's topography, refugee influx, and the drive for industrialization to promote economic growth.

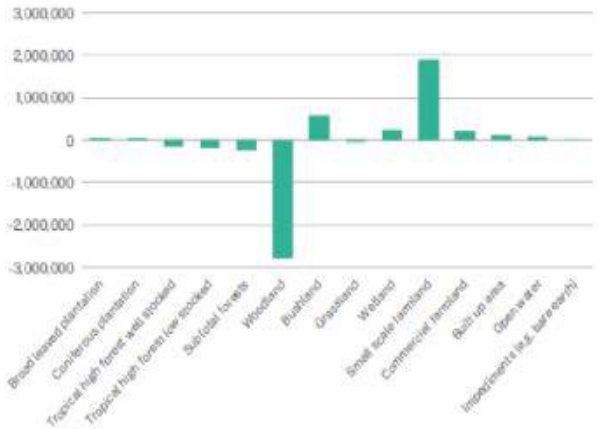
52. GOU, NEMA (2019)
53. World Bank (2020, October)

Figure 29: Total Natural Capital Depletion ($ of GNI)



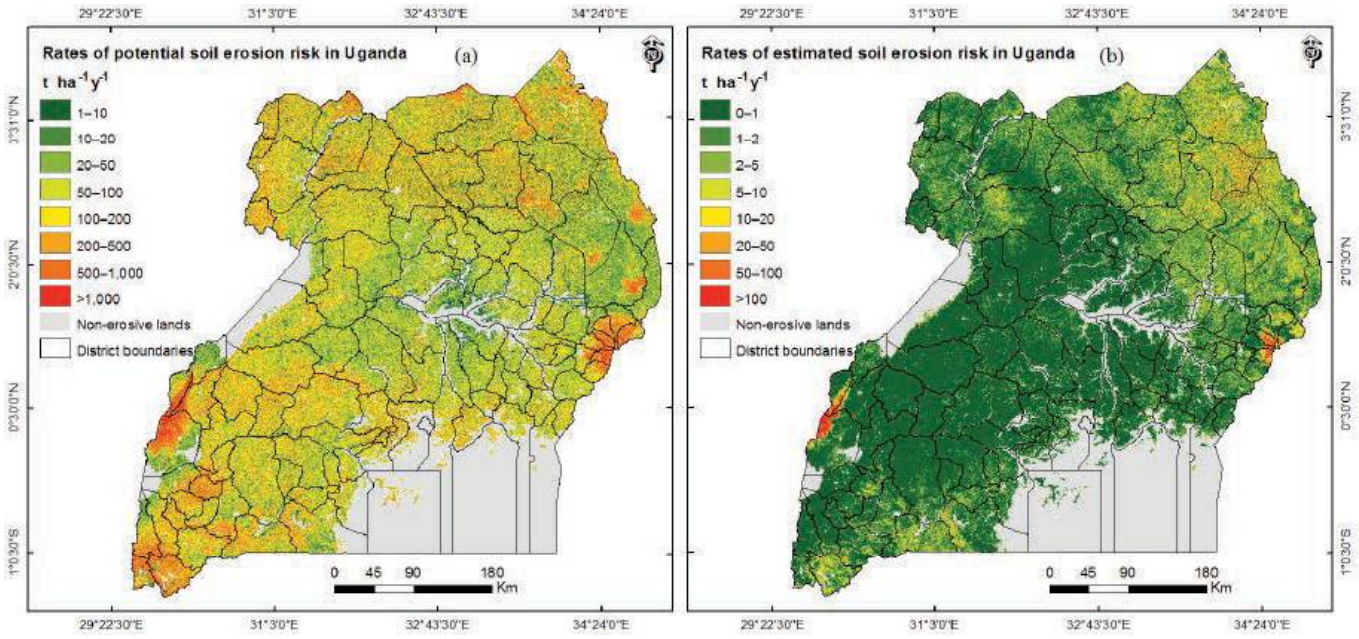
Source: MoFPED (2019).

Figure 30: Changes in landcover area – 1990-2015



Source: World Bank. (2019).

Figure 31: Potential and Estimated Soil Erosion Risk in Uganda



Source: Karamage, F. et al. (2017)

68. Land degradation is a leading form of natural resource degradation in Uganda, especially in the highlands and cattle corridor. About 41 percent of the country's land is now degraded, of which 12 percent is severely degraded. Soil erosion affects around 85 percent of degraded land,[54] with the highlands of Kabale and Kisoro severely affected (85–90 percent), while Mbale, Rakai and the cattle corridor districts are badly affected (75–80 percent).[55] By 2014, the mean rate of soil risk erosion was estimated at 3.2 ton per ha per year within erosion prone areas, and at more than 1 ton per ha per year in 66 of 112 districts (Figure. 31).[56] However, there is significant spatial variation in these rates of soil loss across the country. In the hotspot highland regions, annual soil loss can exceed 30 tons per ha per year. Natural factors such as abundant tropical rainfall, a steep topography, and high weathering rates have increased soil erosion in the highlands.[57] High rainfall in the steeply bare slopes of the highlands of eastern, northern and western Uganda have eroded soils towards the central plains of the country, silting a vast network of wetlands. Human factors have also led to land degradation through soil erosion and nutrient depletion. Crop farming has contributed to land degradation through soil fertility mining, slash and burn, and unsustainable soil and water management practices. Poor grazing management also significantly contributes to high erosion rates in the cattle corridor.[58]

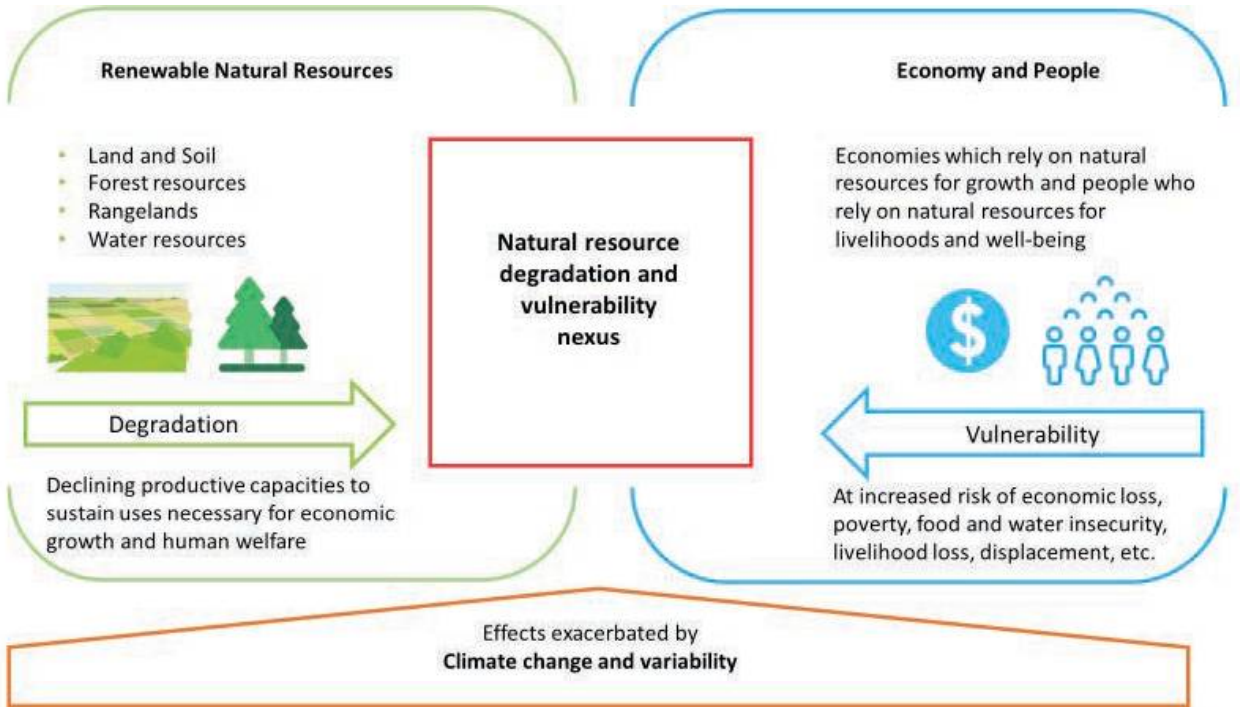
69. Uganda has witnessed severe degradation of forestland and wetlands, mainly driven by primary land conversion for agriculture and biomass energy use. Over the past 60 years, Uganda's forest cover declined at a rate of 2.6 percent per year—one of the highest rates of forest loss globally - with forests on private land almost completely depleted. Overall, the share of natural forest in Uganda's total surface area declined from 54 percent in the 1950s to 20 percent in 2015, implying the country lost more than 50 percent of its forest cover.[59] The high demand for wood biomass for energy and the conversion of forest land to farming land has driven the forest degradation. About 90 percent of Uganda's energy is still sourced from biomass, comprised of 79 percent from firewood, 6 percent from charcoal and 5 percent from crop residues.[60] Uganda's wetland coverage, has also reduced from 15.5 percent in 1994 to 13 percent in 2017. Of the remaining wetland, 4.1 percent is degraded, leaving only 8.9 percent intact.[61] The country's expansive water resources have not been spared in spite of their critical role in supporting a large and varied fish population, 50 percent of which is from Lake Victoria.[62] However, Lake Victoria along with its catchment, which includes wetlands from Bushenyi, Mbala, Mbarara, Ntungamo, Lyantonde, Rakai and Isingiro, has been adversely impacted by the establishment of farming activities. For instance, dairy cattle keeping in the wetlands along the river Rwizi-Rufuha, leading to a large loss of wetlands across this major catchment.[63] Wetland degradation is highest in Lake Kyoga basin, where wetlands are also being converted to subsistence cultivation of mainly rice, sugarcane and maize.

3.2 The nexus between natural resource degradation, agriculture, poverty and climate change

70. A strong relationship exists between natural resource degradation, poverty, and economic loss. Rapid natural resource degradation contributes to economic loss and poverty due to negative impacts on agriculture and the reduction of valuable goods and services like wood and hydro energy, construction materials, and ecosystem services derived from natural capital. Between 1990 and 2015, forest cover loss amounted to $1.2 billion worth of economic loss.[64] Wetland degradation has led to biodiversity and habitats destruction, deterioration of water quality, and impeded natural drainage patterns leading to frequent flooding of farmlands. While estimates of the costs of wetland degradation are limited, degradation can lead to a loss of around US$200 per capita worth of goods and services that are derived from wetlands, or affect up to US$ 1.5 million per year of potential economic value of wetlands.[65] By as far back as 2003, the annual cost of soil nutrient loss due primarily to erosion was already about US$ 625 million per year. Poverty can in turn contribute to natural resource degradation through unsustainable exploitation of natural resources to derive short-term benefits, and poor investment in their conservation and improvement (Figure 32).[66]

54. CIAT; BFS/USAID (2017).
55. Ibid.
56. Karamage, F. et al (2017)
57. Ibid
58. World Bank (2020, June).
59. GoU UBOS (2020, June).
60. Bamwesigye, D. et al (2020).
61. GoU NEMA (2019).
62. GoU (2015a).
63. World Bank (2020, June).
64. World Bank (2020, June).
65. UNDP-UNEP-NEMA, (2009).
66. Nkonya E. et al (2008).

Figure 32: The interplay between natural resource degradation and vulnerability of natural resource dependent economies and people



Source: Adapted from World Bank (2021d, April)

71. Agriculture is a dominant pathway through which natural resource degradation is experienced by the economy and people. While natural resource degradation can impact poverty and economic performance directly, the outsized contribution of the agriculture sector to the economy and people's livelihoods makes it a dominant pathway for natural resource degradation to affect livelihoods and the economy. Agriculture provides primary employment to about 60–70 percent of the labor force, generates around one-quarter of GDP, and is the main source of income for the bottom 40 percent of rural households.[67]

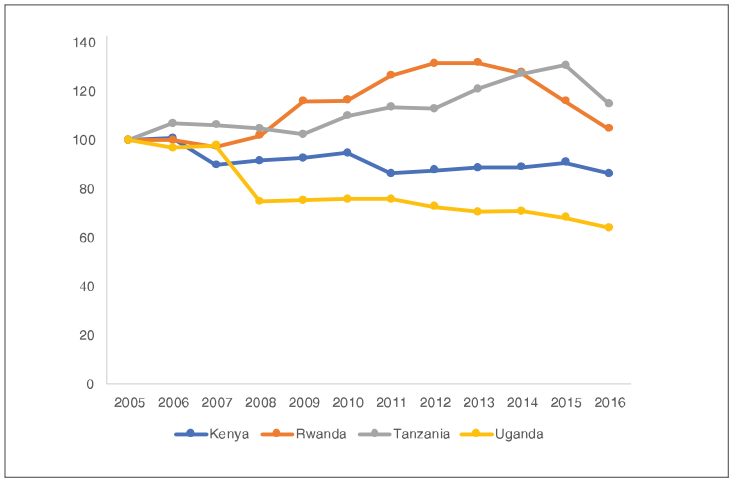
Crop farming covers over about 44 percent of total land area in the country and grasslands, dominated by grazing livestock cover 21 percent.[68] However, Uganda's agriculture total factor productivity – a measure of productivity which accounts for the land, labor, capital, and material resources employed in production – has declined consistently relative to its East African neighbors over the 2005-2016 period (Figure 33). This trend underscores the underperformance of the sector, relative to its immense potential. While many factors are at play, natural resources degradation contributes to the underperformance.

It is estimated that up to 27 percent of agricultural GDP can be lost from environmental degradation.[69] Productivity losses per year for maize from soil erosion have been estimated in some places as high as 190 kg/ha, which increases pressure on food security.[70] On the other hand, due to its large environmental footprint, agriculture is also a major contributor to natural resource degradation, and economic loss. Agricultural production has contributed to 85 percent of land degradation being experienced via soil erosion and nutrient loss. Soil erosion and land degradation alone in 2019 were estimated to costs about 17 percent of GDP.

67. GoU UBOS (2014, November)
68. GoU NEMA (2019).
69. Ibid
70. GoU MAAIF (2010).

72. Climate risks, both slow onset change and extreme events, are exacerbating the negative relationship between agriculture and natural resources degradation. In Uganda, climate hazards act as threat multipliers (Figure 32), with consequences such as poverty and food insecurity and in some cases, migration. Uganda is among the countries that are most vulnerable but least adapted to climate change, ranking 166 out of 181 countries on the ND-GAIN index.[71] In particular, the country's exposure to agriculture-related risks like pests, diseases, torrential rains, floods, and drought spells is high and their incidence and severity are projected to increase under climate change.[72] In fact, severe weather events have already lowered agricultural productivity and performance by increasing the uncertainty of cropping calendars, production losses, and post-harvest damages. The agricultural sector is highly sensitive to climate change and variability because more than 95 percent of cropland is rainfed and subsistent.[73] This vulnerability is exacerbated by natural resource degradation. For instance, degradation of wetlands has increased the incidence of flooding in lowlands, affecting farmland. Flooding in lowlands impacts at least 50,000 people annually and costs over $62 million.[74] All other factors being constant, soils in the hot and arid climates of the cattle corridor have been more prone to degradation and desertification due to extreme temperatures and the decrease in mean annual precipitation.[75]

Figure 33: Uganda's Low and Declining Agriculture Total Factor Productivity (2005-2016)



Source: USDA Economic Research Service

73. Climate change is also imposing significant economic costs and contributing to growing poverty. Severe weather events have already degraded infrastructure systems, human health, and impacted agricultural productivity, further compounding the country's poverty situation. The rise in the poverty rate in Uganda from 19.7 percent in FY 2016/17 to 21.4 percent in FY 2018/19, was spatially concentrated in sub-national regions facing high levels of natural resource degradation.[76] Climate change inaction is projected to cost Uganda about 2-4 percent of the GDP annually, with damages to agriculture, water, infrastructure and energy estimated to cost equivalent to $7- $11 billion per annum over the 2010-2050 period.[77] The economic cost resulting from crop damage, loss of export crop revenue, loss of livestock, and unmet water demand for production (irrigation and livestock) is projected to be in the range of $2.3 – $4.2 billion by 2025. The largest drops in crop production are predicted for cassava, potato, and sweet potato, which could decline by as much as 40 percent by 2050.[78]

74. Overall, the prospects for economic growth, poverty reduction and improved livelihoods in Uganda will dwindle if the country does not arrest natural resource degradation, build resilience to climate change, and boost agriculture productivity sustainably. The country's land and natural resources need to be managed in a sound and sustainable manner, including managing the risks posed by climate change and variability. The agriculture sector's large footprint in terms of GDP, rural livelihoods, and natural resources degradation need

71. The ND-GAIN Country Index summarizes a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience. It aims to help governments, businesses and communities better prioritize investments for a more efficient response to the immediate global challenges ahead.
72. CIAT; BFS/USAID (2017).
73. Sridharan, V. et al (2019)
74. World Bank (2020, June).
75. Department of Disaster Preparedness and Management (2011).
76. The most severely affected areas or regions being Mount Elgon region (Elgon and Bukedi), eastern lowlands of the Kyoga plains (Teso and Lango), and the Karamoja region. The poverty analysis results from the Uganda Bureau of Statistics reveals that, the same regions have higher poverty levels.
77. Markandya, A. et al (2015).
78. GoU MWE Climate Change Department (2015c).

to be considered and utilized, to build resilience in Uganda's development pathway and contribute to sustainable economic growth and poverty reduction. It is critical that as the country's efforts to transition towards a higher productivity, climate resilient, inclusive, and low emission pathway (one that pursues economic growth, alongside environmentally sustainable and socially inclusive development i.e. green transition), that it pays close attention to boosting agricultural productivity sustainably, accompanied by building resilience to climate change and reducing natural resource degradation. Uganda's agriculture sector contributes to 38 percent (22.38 Mt CO2e) of the country's total GHG emissions. Combined with land use changes like deforestation and desertification of fragile land, this share grows to about 83 percent.[79] As such, sustainable agriculture sector development and natural resources management can contribute towards the country's commitments to addressing climate change.

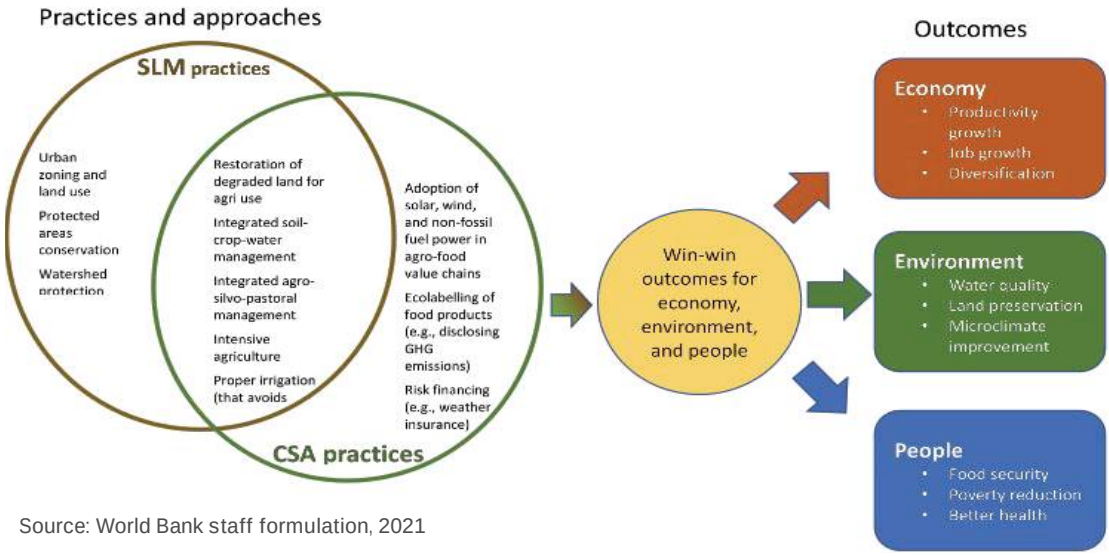
3.3 What will it take to achieve a green transition in Uganda's development?

75. For a green and resilient transition in Uganda's development, the development agenda or interventions need to be viewed not only from the perspective of inclusive economic and social outcomes but also sustainable environment and natural resources management outcomes. This broad-based green approach to development, addresses multiple development problems – food security and nutrition, natural capital management, poverty reduction and economic growth through addressing risks and constraints emerging from land and natural degradation, poor agricultural performance, and climate hazards. This holistic approach considers the end-to-end range of issues from farms to landscapes to value chains, and maximizes benefits for the economy, people and the environment (Figure 34). The impact of the COVID-19 pandemic that has slowed growth in Uganda, increased poverty, and threatens to reverse the structural transformation realized in the country's labor market over the last three decades,[80] has heightened the urgency of such an approach. With many people returning to agriculture and natural resources for surviving the crisis, improved agriculture and natural resources management is not only crucial for transitioning to a more resilient and sustainable development, but it is central to a green, inclusive, and resilient recovery of the economy.

76. A green transition can partly be achieved through scaling sustainable land management and climate smart agriculture. Sustainable land management (SLM) is the use and management of land resources – land, soil, water, animals, and plants – to produce goods to meet changing human needs, while ensuring the long-term productive potential of these resources and maintenance of environmental functions.[81] SLM can help sustain or restore the productive capacity of land, including cropland, grassland, and forestland, to deliver public and private goods. Many SLM practices also contribute to sequestering carbon in soils and vegetation, reducing emissions of greenhouse gases and use of fossil fuels and agrochemicals. It also contributes to reduction of environmental pollution (water and air) and better waste management. Still, even under such practices, climate change can continue to cause havoc. Therefore, deliberate climate smart agriculture (CSA) innovations, and management practices will help to address climate change effects. CSA as an approach helps agricultural systems respond effectively to climate change through the triple objectives of sustainably increasing productivity and incomes, building adaptation capacity and resilience, and reducing greenhouse gas emissions where possible.[82] There is a massive overlap between SLM and CSA. The adoption of SLM and CSA as an integrated framework will improve agricultural performance (resilience, productivity and incomes), protect natural resources, and sustainably provide opportunities to maximize win-win outcomes and minimize trade-offs across the three main developmental outcomes, economy, people, and environment (Figure 34).

79. GoU MWE (2015b).
80. World Bank (2021c, April).
81. FAO (2017).
82. FAO (2010)

Figure 34: Relationship between SLM, CSA and the triple bottom-line



Source: World Bank staff formulation, 2021

77. **SLM-CSA innovations do not act alone to achieve a green transition.** While SLM-CSA relates to technical actions in croplands, pasturelands, forest/woodlands and beyond, they also incorporate policies, behaviors, institutions, and investment. The following section explores how Uganda can leverage its experience, to overcome the constraints and challenges to the use of SLM and CSA at scale to achieve a green transition that supports resilient, sustainable and low emissions growth, especially through actions in agriculture production and natural resources management.

Digging contours in Bududa to reduce erosion and landslides

4. STEPS HAVE BEEN MADE TOWARDS A GREEN TRANSITION, YET BARRIERS REMAIN

4.1 SLM-CSA innovations in Uganda have increased productivity, and incomes, but adoption is still low.

78. Several SLM and CSA innovations have been tested in Uganda, largely through pilots. The SLM-CSA practices that have been implemented in Uganda have varied widely, from region to region and in some cases from one plot of land to another. However, there is generally a strong overlap across SLM and CSA practices (Table 9). On croplands, SLM-CSA practices mainly focus on agronomic and soil fertility management. Off croplands, they seek to address broader landscape and natural resource degradation. Forest and woodland related SLM-CSA include forest fire management, afforestation, and agroforestry. On grasslands, SLM-CSA in Uganda focuses largely on revegetation and management of grasslands, and more recently, zero grazing, improvements of livestock breeds and feeding regimes. These practices have realized tangible benefits to producers as discussed below.

On grasslands, SLM-CSA in Uganda focuses largely on revegetation and management of grasslands, and more recently, zero grazing, improvements of livestock breeds and feeding regimes.

Table 9. **Typology of SLM and CSA practices interventions in Uganda.**

Sustainable Land Management	Climate Smart Agriculture
Cropland: Soil and water conservation	
• Terracing • Contour ridges (soil/grass/bunds/) • Water retention ditches • Infiltration pits • Flood control measures (e.g. cut-off drains) • Water harvesting (e.g. from rainwater) • Small scale irrigation • Gulley control measures • Waste recycling	• Permanent planting basins • Small-scale irrigation • Water efficient crop varieties • Renewable energy and energy efficient equipment and machinery
Cropland: Soil fertility and agronomic management	
• Mulching and crop residue • Intercropping • Crop rotation • Manure use • Fallowing • No/Low till • Composting/green manure • Integrated pest management	• Integration of biogas • Green manuring • Improved seeds and crop varieties • Crop diversification • Mulching • Intercropping • Crop rotation • Manure use

Forestland	
• Community-based afforestation • Institutional Based Afforestation • Integrated community agroforestry • Woodlots • Forest fire management	• Agroforestry • Clean cook stoves • Biogas energy
Rangeland	
• Re-vegetation of rangelands • Agroforestry on grazing systems • Bush fire management	• Silvo pastoral systems • Adoption of improved breeds • Improved livestock feeding regimes • Improved access to quality water • Improved animal health management • Grazing land management
Water systems	
• Weed management e. g water hyacinth • Treatment of fish production wastewater before discharge • Integration of aquaculture • Water quality improvement	• Improved farm siting and design. • Use indigenous or non-reproducing stocks to minimize biodiversity impacts and selective breeding

Source: Uganda CSA country profile (2017) and World Bank. 2020

79. On croplands, the probability of technologies improving output depends on the livelihood and agricultural enterprise of the farmer, as well as the region. For crop farmers, a combination of soil fertility management, and erosion control where necessary are critical in increasing productivity, reducing damage and enhancing profitability of crop enterprises. Common SLM-CSA practices vary from one region to another in Uganda, and within regions. However, the more common practices for restoring soil fertility are; short-term soil and water conservation practices (such as zero tillage), crop rotation, fertilizer application, and the use of organic matter (manure and coffee husks). Improved management of organic sources is encouraged since it significantly increases soil organic matter (which is vital for soil health) and reduces nutrient loss. In fact, Uganda has a very high use rate of organic inputs relative to other African countries. Up to 68 percent of households use organic fertilizers over inorganic.[83] Legume cover crops are also favored as they can produce high quality fodder as well as green manure and other soil enhancing properties. Establishing cover crops was found to be cheap in Gulu, with very limited maintenance costs (Figure 37). Ground cover is critical to reduce erosion and fertility losses associated with erosion and hence has been widely promoted. Rotational systems with legumes have proven to lead to high returns, even better than fertilizer application in some cases.[84] Other benefits observed include; productivity increase by 40 percent through mulching in Amuru, yields and farm incomes increased by 50 percent through introduction of green manure in Bulambuli. 6-fold increase in productivity through intercropping maize and soya in Gulu, 66 percent increase in farmer incomes through integration of multi-purpose trees in pastures in Nwoya.[85]

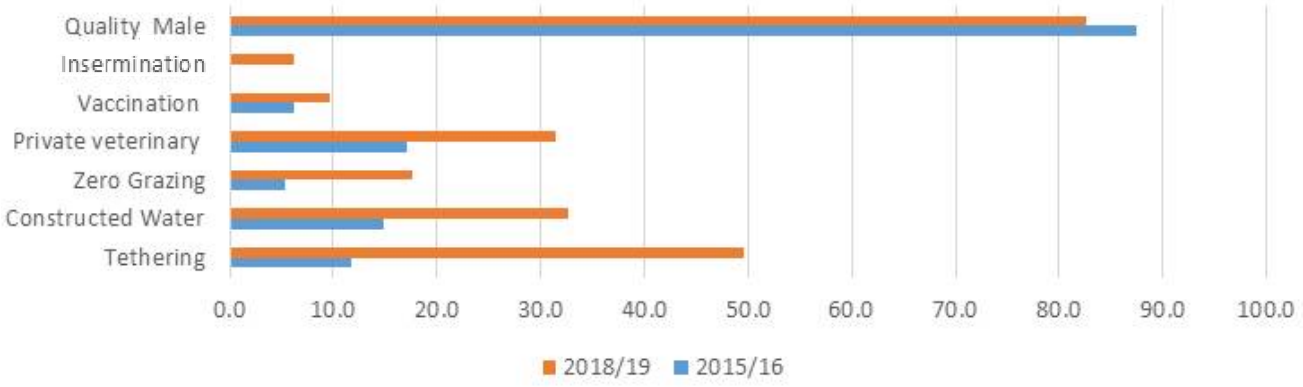
78. Erosion control infrastructure has historically been used to address land degradation, especially in the highland regions. The main soil erosion control technologies used by farmers singly or in combination include terraces, contours, trenches, and planting of trees and grass. These structures are relatively cheap to establish (Figure 37) but require a lot of labor. Cost varies depending on whether farmers use vegetation to stabilize contours and terraces, with the costs highest when trees are used over grasses. Labor costs vary greatly depending on the type of technology, the number of structures - contours/terraces or trenches - the size (dimensions) of the structures, and the spacing used. Generally siting contours and digging trenches are the most labor-intensive technologies.[86] However, few farmers

83. Nkonya E. et al. (2016a)
84. Ibid
85. Uganda Landcare Network (2020).
86. Barungi, M. et al (2013).

(as low as 10 percent in some places) see erosion as a major problem for farm productivity.[87] In the highlands, such as in Kabale, it is not unusual to see erosion control structures like contour bunds neglected, and in some cases have simply becoming field boundary markers.

80. SLM-CSA on grasslands has largely sought to address **overstocking, and overgrazing,** especially in the cattle corridor, where productive livestock production is concentrated. Ordinarily, free range grazing where grazers had open access to resources were dominant in Uganda.[88] However, in the recent past, efforts to improve grassland management through controlled grazing (e.g. rotational) to promote natural regrowth of grasslands, and silvopastoral systems among other amenable practices have been demonstrated in the cattle corridor.[89] Some livestock keepers have been shifting towards zero-grazing, tethering, and supplementary feeding and watering (Figure 36), with manure regularly applied to crop fields, thereby raising incomes and improving food security and nutrition (Box 5).[90] Intervention in breed improvement took off with the establishment of the National Animal Genetic Resources Centre and Data Bank (NAGRC&DB) under the Animal Breeding Act of 2001. Most farmers now appreciate the need to have better breeds of livestock and have adopted different breeding technologies including artificial insemination services, use of improved or quality males, and females, with tremendous gains in productivity (milk production and livestock value). This has incentivized improved livestock management. Breed improvement is however quite expensive. Artificial insemination can cost up to US$2000.

Figure 35: Changes in livestock management



Source: Ministry of Agriculture, Animal Industries and Fisheries

Box 5: Zero Grazing in Sironko and Bulambuli.

This Zero grazed dairy cattle supported by the Heifer Project in Sironko and Bulambuli contributed substantially to rural household welfare and incomes, food security and improved community social networks. Average annual income from dairy farming was approximately US$ 894. Through use of cow dung manure from the zero grazing units, average crop yields significantly increased relative to higher amongst the project participants contributing to an average annual income more than 3 times households without zero grazing.

Households practicing dairy zero grazing diversified into seven more income sources as compared to only four for the non-dairy cattle zero grazing households indicating increased livelihood options. However, challenges of sustainability of the zero grazing practice included that:

1. *Farmers could only access Artificial Insemination (AI) services when the pilot projects were ongoing and couldn't pay for services beyond the project.*
2. *Farmers had no progeny.*
3. *Government extension services were unable to reach farmers, build and sustain their capacity to engage in sustainable livestock agriculture.*

87. Ibid.
88. Mugerwa, S., & Emmanuel, Z. (2014).
89. Thornton, P. et al (2019).
90. Zimbe, J. J. (2012).
91. Edimu et al. (2018)

81. Some fishing communities are shifting to aquaculture, helping to reduce pressure on dwindling water resources and fisheries while increasing production and export of fish. Integrated aquaculture has applied for its multiple benefits. It promotes efficient use of resources for example water from the ponds can be used to irrigate fruits and vegetables. In other cases, a channel for fish is constructed along the edge of rice fields. Other innovations include the placing of poultry pens over a fishpond, which reduces the cost of feed. One of the greatest threats to Ugandan fisheries – the water hyacinth – was initially controlled through chemicals, which had negative environmental effects. Recently, Uganda has harvested water hyacinth as feedstock for biogas generation to manage the weeds. With this innovation, it is estimated that up to 23.9MWh of energy can be generated monthly from the 1641.92 tons of water hyacinth harvested. The amount of energy generated can service about 305 domestic households in Uganda with an average monthly energy consumption of 78.1kWh.[91]

82. To reverse fast tree cover loss in Uganda, individuals and communities have taken up tree planting with the aim of having regular access to products that satisfy household needs and income generation. Various programs, such as the Sawlog Production Growers Scheme (SPGS), targeted large plantation farmers in the past but later extended to small-holder farmers to increase tree/shrub cover, since these own most – approximately 70 percent – of the land in Uganda. In Mayuge district, tree species were prioritized based on the products they offer to the households, such as the edible fruits, firewood, timber, and construction wood/poles. Households and communities tend to favor tree planting activities that are subsidized, and have clear income and household service benefits. Community-based tree planting projects have also been piloted in many places across the country with relative success, largely through the support of grants and other incentives (Box 6), thereby providing environmental conservation benefits while also providing communities access to diversified income sources. A range of biomass energy saving technologies have also been promoted and piloted in Uganda to reduce reliance on firewood for energy. These include the use of solar energy, biogas, and energy saving clean cook stoves.

Box 6: Women Group Community tree planting in Nwoya

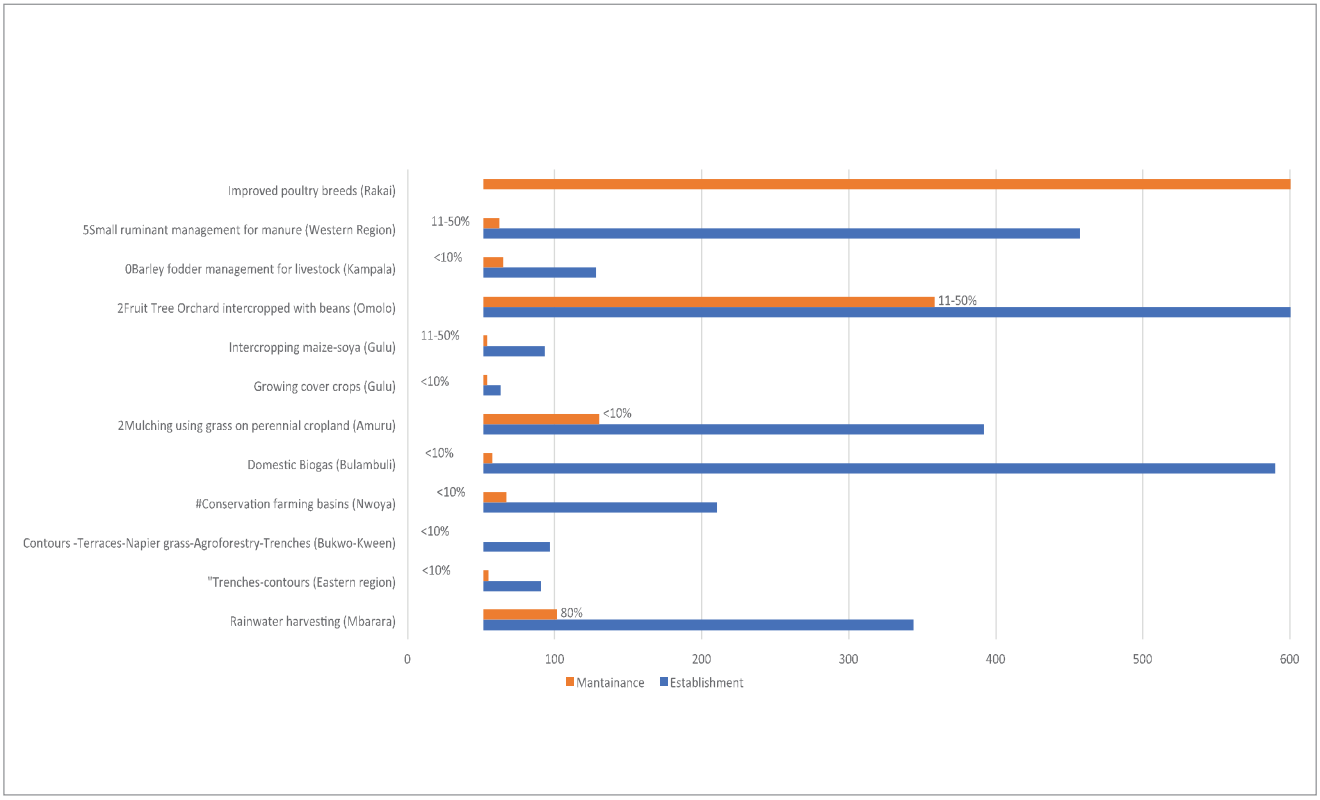
The WALA women's tree planting group was established for environmental conservation through tree planting, to improve sawlog production, for **sustainable land utilization, and to improve the** incomes of women. The initiative was supported by Small Production Grants Scheme (SPGS). The group was linked to Saw log production scheme Grant (SPGS) by National Forestry Authority (NFA) who supported the women with tree seedlings, forest tools and technical to support tree planting.

The approach demanded that beneficiaries be organized into groups of at least 37 women with a leadership committee and constitution to guide the group activities. Each member dedicated 0.20-4 ha of their land to tree planting. The group also received access to communal land for tree planting, leading to a dual approach of tree planting on private and communal land.

Successes of the approach are attributable to: (i) Site trainings, farmer-to-farmer learning, and demonstration plots, (ii) access to information and decision support on commercial forest plantation establishment, (iii) sale of products and income earning, (iv) access to a social network, (v) availability of subsidies for inputs such as seedlings and equipment, and (vi) access to a savings and credit organization.

92. Kyarikunda, M. et al (2017).
93. Institute of Development Studies (2017).

Figure 36: Select SLM-CSA practices in Uganda: establishment and maintenance cost (US$), and adoption rate (percent).



Source: Compiled by World Bank staff (authors) from a review of literature, especially compiled by IFAD, and expert knowledge (Uganda Landcare Network, 2020). Estimated costs were in some cases converted from Ugandan Shillings by the authors, so costs are not exact but largely indicative.

83. On average, adoption of SLM-CSA in Uganda is still low. Based on a select set of projects, adoption rates vary from below 10 percent up to 87 percent in some cases (Figure 37). Even though weak community data collection systems used to assess the impacts are not suited for the collection of the SLM-CSA data, there is some degree of uncertainty in adoption of technologies across different practices and locations. The data challenges notwithstanding, adoption rates in Uganda average around 30 percent,[94]which is comparable to rates achieved within the East African region - adoption rates of CSA in Tanzania are estimated at 20-34 percent.[95] Similar rates of adoption are achieved in other parts of Africa - in Mali they ranged from 21-89 percent.[96]

84. Success in adoption is driven by a host of factors determined by location and type of intervention. Where adoption has been high, contributing factors included: (i) commercialization or semi-commercialization (with significant financial returns) and good access to land. Adoption is higher for more costly activities such as improving livestock breeds through artificial insemination, management of small ruminants, and integration of fruit trees and beans (Figure 37), partly because these are associated with commercial enterprises; (ii) organization in groups and cash or non-cash incentives (Box 6); (iii) innovative engagement by farmers with diverse stakeholders including experts; (iv) definite and immediate productivity and income benefits; and (v) access to information and technical training (see Box 7). The next section explores the reasons for low adoption.

94. CIAT; BFS/USAID. (2017)
95. Kurgat, B. K. et al (2020).
96. Ouédraogo, M. et al (2019).

Box 7: SLM-CSA Innovations adoption through information services and training.

BRAC Uganda, an NGO promoting SLM-CSA in Uganda, designed and operated an agriculture extension program for smallholder women farmers. The program promoted improved technologies (high yielding variety seeds, manure usage, intercropping, crop rotation, and irrigation, using a network of model farmers as examples to encourage adoption and Community Agriculture Promoters (CAP). Model farmers were responsible for setting up a demonstration plot using learned techniques and providing a three-day training activity for fifty other farmers in their villages It showed that adoption of SLM-CSA can be improved with access to information and training. Within a 6 km radius from model farmers, adoption rates of manure use increased by 4.5 percent, intercropping by 6 percent, crop rotation by 5.4 percent, and irrigation by 2.8 percent (Smith et al. 2017).

4.2 Why has adoption of SLM and CSA at scale been low?

85. Despite some successes, highlighted in the previous section, the adoption of SLM-CSA innovations in Uganda remains low and highly uncertain. The reasons for Uganda not being able to translate the benefits of SLM-CSA in increasing productivity, incomes, and ecological benefits, from demonstrations and pilots to rapid adoption at scale are explained below.

(i) Gaps in institutional arrangements, capacities, and coordination

86. The Government of Uganda (GoU) has taken some steps frameworks and action plans. An elaborate towards mainstreaming SLM and CSA practices into development set of policies, strategies and plans (see Box 8) is supported by other sector specific policies on land, environment, forest, fish and rangeland and climate change, that have assisted the country to have a holistic policy environment for SLM-CSA implementation.

Box 8: SLM-CSA Policy Landscape in Uganda.

- *The Third National Development Plan (NDPIII) 2020/21 to 2024/25 recognizes the need to invest in SLM and CSA to achieve sustainable industrialization for inclusive growth, employment, and sustainable wealth creation. The plan has Climate Change, Natural Resources, Environment, Land and Water Management program that emphasizes the promotion of SLM and CSA practices.*
- *Uganda's Green Growth Development Strategy aims to achieve an inclusive low emissions economic growth process that emphasizes effective and efficient use of the country's natural, human, and physical capital.*
- *The Uganda Strategic Investment Framework for Sustainable Land Management (U-SIF SLM) under the stewardship of the Ministry of Agriculture Animal Industry and Fisheries (MAAIF) aimed to scale up and mainstream SLM and CSA into the national development agenda and across sectors.*
- *Uganda has ratified the Paris Agreement and submitted their Nationally Determined Contributions (NDCs). The ratification means that the Government of Uganda is ready to mainstream SLM and CSA throughout national and sectoral planning instruments; strengthen institutional coordination and technical capacities; improve methodologies for assessing the climate change impacts on agriculture and related sectors; and address data gaps.*
- *Uganda's COVID-19 recovery plan seeks to (i) enhance the provision of improved agricultural inputs to farmers, (ii) upscale agriculture extension services, (iii) provide seed capital to organised special interest groups such as women and youth, (iv) provide relief aid in response to natural disasters such as the locust invasion and climate change crisis.*

87. **Institutional frameworks for implementation of SLM-CSA policies also spreads over various sectors.** On the SLM side, Uganda Strategic Investment Framework for Sustainable Land Management (U-SIF SLM) as a multi-sector national initiative, sought to set up an integrated cross-sector approach to investing in solutions to crosscutting SLM challenges.[97] Core natural resources management related government line ministries, including MAAIF, Ministry of Water and Environment (MWE), the Ministry of Energy and Mineral Development (MEMD) and the Ministry of Lands, Housing and Urban Development (MLHUD), undertook to collectively pursue objectives of mainstreaming work on SLM as a critical component of the new agriculture drive. Some of these institutions are also responsible for CSA-related activities. An Inter-Ministerial Cooperation Framework (IMCF) on SLM was signed in 2007 to enhance collaboration and joint action between the sectors.

88. **An Inter-Ministerial National Steering Committee composed of Permanent Secretaries (MFPED, [MFPED, MAAIF, MWE, MLHUD, MEMD, MTTI, and the Ministry of Local Government (MoLG)] was also set up to provide policy guidance and oversight.** This was supported at the technical level by an Inter-Ministerial Technical Working Committee (IMTC).[98] The Climate-Smart Agriculture Task Force, which comprises various key stakeholders on CSA, is chaired by the Sustainable Land Management (SLM) Unit of MAAIF. There are national platforms for SLM and CSA, which convene key implementers and other stakeholders in one forum for coordination, sharing information, harmonizing protocols for data collection, and providing an opportunity for participatory monitoring. NGOs, CSOs, CBOs, private sector organizations, local governments, other government institutions and donors, are also represented on these platforms.

89. **Although the policy frameworks are supported through a comprehensive multi-sectoral institutional framework, they are not fully operationalized.** This is largely because of the gaps in land use policies, such as not being area specific; lack of technical and financial resources; and weakness in enforcement of the laws. In addition, activities related to land management and climate change mitigation through SLM-CSA, are not prioritized during budgeting, thus constraining their operationalization. However, the establishment of the institutional frameworks has led to the increase in the interest of the government and other key stakeholders to investment in SLM-CSA as evidenced by the number of programs or projects that have been lined up for investment. Currently, the climate change and natural resource program has about 9 projects and 24 more new projects being lined up for investment. This hopefully, will support faster and more extensive operationalization of these programs.

90. **The operation and funding of public institutions can hinder effective coordination in design and implementation of SLM-CSA at scale.** As such, scaling up standalone externally funded pilots are yet to overcome coordination, political economy, and resource challenges. Various initiatives have been implemented through different government agencies, each pursuing different aspects of SLM-CSA without coordination across them. In fact, different ministries, departments, and agencies (MDAs) have ordinarily developed initiatives independently, leading to duplication and gaps. While policies and institutional frameworks do support SLM-CSA to a large extent, public financing does not easily lend itself to support multi-sector approaches needed to implement SLM-CSA at scale. Budgets are allocated based on individual ministries and are not set up for cross-sectoral and integrated implementation of SLM-CSA. Ministries and MDAs therefore continue to operate independently of other relevant institutions and mechanisms for multi-sector engagement when they design and implement projects and programs. Moreover, even within ministries, budgets are allocated based on individual departments without accounting for the integrated cross departmental implementation.

91. **Key institutions for land administration and agricultural extension have weak capacities.** Currently, the ratio of extension worker to farming households is about 1:1800, which is lower than the internationally accepted ratio of 1:500.[99] Furthermore, extension system staff do not have adequate capacity and knowledge of SLM and CSA, and the interrelations between them; climate change, soil, water, agro-biodiversity and integrated ecosystem management. Their training does not usually extend beyond the agriculture sector. The national extension services also have poor linkages to other key national institutions like Uganda National Meteorological Authority (UNMA) and hydrological service providers. Additionally, relationships with non-state providers of SLM-CSA related technologies, information, and services such as NGOs, private sector, and civil society, are weak. As such, the delivery of what are in many instances are well-laid plans at national level to farmers and communities lag policy because of the poor capacity

97. GoU (2010, March).
98. Ibid
99.GoU MFPED BMAU (2019).

and fractured approaches. Similarly, land administration institutions and policy are a major barrier to the adoption of good land management practices. The leading constraints are weak land and land-use policies, which do not effectively protect over 85 percent of the total land under customary tenure.[100] This is made worse by existing and new regulations for implementing SLM, that are not fully enforced, sometimes due to capacity constraints within government, and other times hindered by vested interests. At local levels, land management institutions are weak, such that they are unable to resolve land conflicts to the detriment of investments.

79. The location specificity of SLM-CSA practices means that scaling will rely strongly on local action, making local institutions vital. However, these institutions are few and far between, and where they exist, they are poorly capacitated. Practices that work in one location do not necessarily work in another, meaning local knowledge and understanding of local contexts are important for implementation of SLM-CSA at scale. At the local level, evidence from past projects shows that implementation of activities is more successful when implemented by groups as key main entry points for SLM-CSA at the grassroots i.e. farmer groups and environmental committees. Because of the considerable initial costs and non-negligible maintenance costs (Figure 37), SLM-CSA are sometimes better managed through pooling funds and resources. Yet, in a lot of areas in Uganda, these groupings do not exist or are too weak to sustain the continued demands of maintaining SLM-CSA activities at community level, administratively and financially. Collective action is also inherently difficult.

(ii) Poor access to appropriate technologies and knowledge

92. Producers and land managers have limited access to locally **specific and relevant technologies** and information. Without appropriate technologies and the right information, producers risk investing in inappropriate technologies and wasting meagre resources. Limited presence and involvement of extension services is a key factor. Studies show that access to extension services and to information such as climate information are some of the major factors in determining adoption of CSA,[101] more so if the services are participatory, fostering experiential and iterative learning, and in some cases farmer-led. There is a lack of expertise in extension services for SLM and CSA and the extension services aren't inherently participatory. This is partly attributable to low investments in knowledge institutions [such as the National Agricultural Research Organization (NARO), and extension and advisory services (NAADS)]. Moreover, improving extension and research linkages would play a greater role in building the capacity of the extension of officers to demonstrate, train farmers and provide advice on soil, water, crop, livestock SLM and CSA practices.

93. Institutions that promote SLM-CSA usually do not match technology recommendations with prevailing household circumstances, and land tenure systems.[102] This is so even though there are significant differences in some land management practices across different land tenure types.[103] In Uganda, crop rotation and short-term soil and water conservation (SWC) practices are less likely to be practiced on plots under customary tenure than plots under freehold or leasehold. Use of SWC practices is less common on *mailo* than freehold and leasehold plots. However, use of organic matter is more likely on plots under *mailo* tenure than those under freehold and leasehold tenure, likely due to traditional customs among farmers in the Lake Victoria crescent region, where *mailo* tenure is common, of growing perennial crops and applying organic manure.[104]

94. There is a lack of actionable weather and climate information to inform producers' actions and choice of climate resilient practices. Weather prediction in Uganda has been known to be unreliable and uncertain. Effective disseminating climate information is known to trigger producers to adopt appropriate SLM-CSA technologies.[105] However, when this information is inaccurate often enough, trust is lost, and use of climate information dips significantly. However, a lack of data collection and management equipment and poor capacities for developing climate services continues to bedevil Uganda's climate service providers, thereby affecting SLM-CSA adoption at scale.

100. Bannada (2019)
101. Acevedo, M. et al (2020)
102. There are presently four types of land tenure systems in Uganda: customary, *mailo*, freehold and leasehold. (i) Leasehold: land is held based on an agreement between lessor and the lessee. Customary systems: land is owned and disposed of under customary regulations. The land can be owned by an individual, a family or a community, and is the most dominant system in Uganda. Under this tenure, proper records are not kept which makes it difficult to purchase land and resolve land-related conflicts. Freehold system: ownership of land freely with no time limit. *Mailo*: land is privately held in perpetuity with no limited period. *Mailo* land can only be owned by Ugandans, organizations, or companies.
103. Nkonya E. et al (2008)
104. Ibid
105. Acevedo, M. et al (2020)

(iii) Low Government funding and uncoordinated investment financing

95. Public investment in SLM-CSA is still low, leaving the bulk of interventions to be funded through external development partners. In 2008, external development partners spending on SLM was estimated at 83 percent of total spending on SLM in Uganda. It is also assumed that 70 percent of the cost of implementation of the National Climate Change Policy, expected to cover most of the proposed CSA investments is to be raised from external partners. Over the past decade, the government has spent less than 4 percent of its budget on the land-based sectors (agriculture, forestry, and wildlife) and fisheries, even though these sectors account for about 25 percent of the GDP on average.

96. The costs of Uganda's Framework for Sustainable Land Management were estimated at US$ 245 million over 10 years. The agriculture sector is a key source of SLM funding. While Uganda has committed at least a 10 percent target of spending in the sector, under the Malabo-CAADP declaration, spending continues to be off target, even though it has improved over the years, and relative to other African countries. As of the FY 2019/2020, Uganda's spending on Agriculture was 5.68 percent, yet the contribution to GDP was about 23percent[111]. This means the country is not on track to meet the CAADP commitment by 2025. Setting up structures to scale SLM-CSA is costly for Government, particularly at the sub-national level, to deliver and disseminate technologies at scale. The fiscal space within the public budget to make SLM-CSA priority issues has been limited given competing national priorities. This has left a lot of potential SLM-CSA activities unfunded and therefore failing to scale.

97. Reliance on donor funding for implementation has limitations, including coherence, coordination, and reliability. The amount of off-budget support to SLM-CSA in Uganda via NGOs, and international development partners, is encouraging, as it means that SLM and CSA demonstrations will continue to occur and evidence of the utility of the approaches to support conservation, productivity, mitigation and resilience will continue to mount. However, the delivery fostered via such funding channels does not always lead to coherent, coordinated, and integrated approaches needed for SLM-CSA at scale via the necessary mix of interventions; technologies, extension, and cross-sectoral engagement. These financing channels tend to result in interventions scattered across different places and concentrated on limited interventions. Without higher levels of commitment of public funds towards a more holistic approach to SLM-CSA, there will continue to be untapped potential for SLM-CSA at scale in Uganda.

98. The high costs of establishing and implementing SLM-CSA practices on small pieces of land can deter producers with limited assets and access to credit to adopt them. As shown in Figure 37, the estimated costs of establishing SLM-CSA practices vary by technologies and locations and can be very high. The costs for maintaining the SLM-CSA interventions are also non-negligible. Many SLM-CSA practices are labor intensive both at establishment and during maintenance and hence can be attractive only to households that have a relatively larger labor force. The problem is compounded by the high cost of labor, as workers shift to other (normally more rewarding) forms of employment. Households with access to less family labor relative to their land are less likely to use more labor-intensive practices such as frequent tilling, conservation agriculture, tree planting, applying manure or mulch, or water conservation. Yet, the dynamics of access to labor and uptake of SLM-CSA are not always considered when CSA-SLM is promoted. Furthermore, rural households have limited access to credit because they do not have assets to put forward. Community groups such as self-help revolving funds and women's community groups can be very helpful in defraying the costs of establishing and maintaining SLM-CSA, such as tree planting (Box 6). However, these would need to be well established and administratively strong, and with strong roots in trust to be effective, which isn't always the case with available groups in Uganda.

99. Payments for ecosystem service (PES) mechanisms have been operated in Uganda to incentivize the adoption of SLM-CSA, especially **afforestation/reforestation with**

106. World Bank. (2008).
107. CIAT; BFS/USAID. (2017)
108. Nkonya E. et al (2016a)
109. GoU (2010, March)
110. ESAFF (2020).
111. World Bank (2021, January)

reasonable success. However, the amounts of advance capital required by PES projects has regularly limited the scaling of successes. Since adoption of SLM-CSA can improve ecosystems services such as water quality for downstream users, PES projects, where farmers are paid to adopt specific practices have been implemented in Uganda, mainly through agreements/collaboration between government agencies, private sector/companies, and nongovernmental organizations. PESs are commonly supported by payments from water users, such as bottling plants, purification utilities, and breweries. They tend to make use of established community groups, providing technical advice and capacity building, and payments to farmers, in some cases as early as the first year of the program, which defrays costs of establishing the SLM-CSA practices. These combinations of activities that have accompanied SLM-CSA under PES programs in Uganda have contributed to the relative effectiveness in establishing and maintaining the SLM-CSA as they included some of the key levers of adoption of CSA-SLM i.e. incentive payments, technical training, and multi-stakeholder engagement. However, the high amounts of advance capital required by Payment for Ecosystem Services (PES) projects has regularly limited the scaling of successes. Project managers of PES programs in Uganda (e.g. ECOTRUST) usually must put up a lot of capital to buy credits up front for credit registries to make them available to larger groups of buyers. Limited financing means that the amounts of participants that can be drawn into such programs is limited even where demand to join exists. Furthermore, there are significant costs related to training, and monitoring, reporting and verification (MRV), which may mean that the payments to participants are not always the most attractive to incentivize adoption.

Women are not empowered to make decisions about important changes in farmland management given that many do not hold title to land, and men are usually the primary decision-makers

100. **Poor data on land use and impacts of adoption of the SLM-CSA on natural resources, agriculture productivity weaken the targeting of innovations.** There is a lack of data on the true value of natural resources and SLM-CSA practices on producers and landowners due to weakness in data collection and M&E systems, as well as natural capital accounting. Often measurements of the adoption of SLM-CSA practices such as crop residue cover are dependent on the self-estimate which tend to be inaccurate and variable. Data on the true value of natural resources on the economy and livelihoods is also sparse and highly uncertain. As such, planning for resource management and judicious exploitation is hampered.

(iv) Social factors, behavioral characteristics and norms resistant to modern technologies

101. **The decision not to invest in or adopt new technologies by farmers, communities and administrators is partially informed by mindsets and underpinned by social and behavioral norms.** Predominant cultural mindsets in Uganda sustain preferences and bias for specific agricultural activities and practices; traditional farming practices, modern inputs with less attention to SLM-CSA practices; commercialization of agriculture, thus promoting mechanized land opening, monocropping; and other practices. Many producers are accustomed to thinking of the ox-drawn plough as an essential part of agriculture and farming culture and continue to find it difficult to overcome the idea that ploughing is not a required part of successful farming. Others still prefer to use plant biomass as fodder for livestock rather than to place them on fields as mulch. Many communities in Uganda tend to prefer slash and burn to clear land for use at the expense of forests and biodiversity, simply because it is easier, and has been practiced for generations. Such mindsets make it difficult to promote some SLM-CSA practices that disrupts long standing traditions and practices.

102. **Poverty, and limited livelihood alternatives make it difficult to adopt good land management practices.** Limited livelihoods alternative for producers mean that they would prefer to invest where returns are immediate or at least apparent in the short term. However, some SLM-CSA practices can be costly, and can take long before benefits can be realized and are technically complex. Furthermore, poor households that depend entirely on their land often overmine the soil for their sustenance.

103. **Women are not empowered to make decisions about important changes in farmland management given that many do not hold title to land, and men are usually the primary decision-makers.** This is despite being a large proportion of the land managers, and labor (women

contribute up to 75 percent of total agricultural labor; 55 percent of land preparation, 65 percent of planting, and 90 percent of weeding and food processing). In Lango sub-region, close to 70 percent of the land was owned by men, while 25 percent was jointly owned by a married couple and family land inherited from the man's family. Women owned only 5 percent of the land [112]. Given the investment demands of some SLM-CSA practices, women in Uganda are inclined to only adopt a limited set of SLM-CSA practices, particularly low investment practices like agronomic managements (e.g. cover cropping and intercropping). This exclusion of women is a missed opportunity, especially given that the proportion of farm area owned by female members of the household is positively associated with higher crop productivity[113]. Membership in women's groups has often presented opportunities for women to participate in more diverse SLM-CSA activities like tree planting.[114] In fact, access to community groups, among other social infrastructure like revolving credit funds and loan and savings schemes, present strong opportunities for women and other farmers/pastoralists to adopt SLM-CSA. Yet, this social capital is usually not at the disposal of farmers/pastoralists, to the detriment of adoption and scaling.

(v) Land fragmentation, uncertain land rights and poor access to markets

104. Land tenure system and related land insecurity remain major constraints to implementation of new technologies. Most land plots are already too small for SLM-CSA practices to be cost effective when adopted by individual farmers, yet **farm size continues to diminish.** From 2006 to 2016, the share of small household farms, with less than 2 hectares of land, rose to 83 percent from 75 percent. The average net land size operated fell from 1.7 to 1.2 hectares per household [115]. This limits the amount of investments farmers can make. Lack of secure access to private property is commonly viewed as a major constraint to SLM and improved livelihoods of the poor. To an extent, formalization of land rights can be considered a prerequisite to SLM-CSA. This is particularly so for investments that are long lasting, and costly, such as irrigation. Investors have been unable to secure land for purchasing or for renting on a large scale due to the customary land ownership that prevails in some areas in Uganda, such as the northern and north Eastern regions. Farmers or community groups who use land under customary arrangements cannot participate in land markets or enter contracts with investors because they do not have legal title to the land they work. Weak land administration institutions in these areas also mean that land disputes are not uncommon and often go unresolved. The impact of land disputes on agriculture has been estimated at 5-11 percent of agricultural production being lost [116]. Gender in-equalities around land ownership and related decision-making in Uganda threaten the greening of the agriculture sector and sustainable management of natural capital further.

105. Poor access to markets **and roads negatively influences** farmer investment decisions on land management, since it affects local prices, availability of inputs and market information, and other socioeconomic aspects. Existing and new commodity value chains can contribute to the green transformation through increasing profitability from agriculture and natural resources, by preserving natural capital through becoming as green as possible themselves, that is operate efficiently, be inclusive, minimize the destruction of existing natural resources and

Rose Najjuma, a model farmer in Kulambiro, Nakawa, in her vegetable garden

112. Kaweesa, S. et al (2018).
113. Nkonya E. et al (2008)
114. Uganda Landcare Network (2020)
115. Nkonya E et al. (2008)
116. Deininger, K. and R. Castagnini (2004

minimize pollution and carbon emissions. However, value chains are not inclusive. Producers in Uganda regularly lose value to other actors along the value chain due to value chain bottlenecks such as access to markets and information asymmetries, among others. For banana for instance, the loss of value along the value chain can range between 29 and 40 percent, before reaching the market.[117] Producers with greater market access adopt better land management practices than those in remote areas.[118] Poor access to markets and roads disfavors farmer adoption of purchased inputs, by reducing their availability and increasing their costs relative to farm-level commodity prices. Lack of market access also disfavors the commercial production of higher-value crops, such a tree crops, some legumes and roots and tubers, which are very important for land degradation management. A lack of all-weather roads in Uganda has been associated with the practice of slash and burn, where the diminished returns of labor and other inputs invested in the effort to prepare land sustainably far from roads, disincentivize the use of the labor intensive approaches and encourage slash and burn despite the potential natural resource damage effects.[119] In Uganda, there is low access to and poor adoption of new and green technologies for production, post-harvest storage, processing, and transport of agriculture and forest related commodities. This is despite the fact many means of raising profitability also conserve natural resources and protect the environment.[120]

A boy ploughs to open up the feilds as they prepare for planting

117. Westlake, M.J. (2014)
118. Nkonya E. et al (2008).
119. Ibid
120. Nkonya E. et al. (2016a)

5. STRATEGIES TO ACCELERATE ADOPTION OF INNOVATIONS FOR A GREEN TRANSITION

Drying coffee on sacks in Bushenyi

106. For Uganda to maximize the potential of its natural resources dependent sectors to promote a green, resilient, and inclusive growth agenda, it will have to sustainably raise productivity of agriculture and support effective management and preservation of natural capital. This requires overcoming barriers to adoption of innovations to improved management of land and natural resources, and climate resilience. Uganda will need to target scaling up of high impact SLM-CSA at all scales supported by appropriate polices and institutional arrangements and capacity building, behavioral changes, and financing and investments. The key actions to achieve this are elaborated below.

a) *Increase budgetary funding and provide incentives for uptake of SML-CSA innovations*

107. Increase public funding in SLM-CSA that supports a shift from projects towards more programmatic approaches and from siloed sectoral approaches to multi-sector implementation. A cross-sectoral approach is needed for SLM-CSA implementation. This will require involvement of many public agencies working together in a coordinated and integrated way. However, central to that will be the stepping up of public financing towards SLM-CSA to significantly increase the share of public financing going towards SLM-CSA. As such, apart from the usual environment and land sectors, the country's Ministry of Finance, Planning and Economic Development will be central in not only financing such an approach but also actively facilitating and leading. Uganda was one of the first African countries to sign up for the Coalition of Finance Ministers for Climate Action, which recognizes that finance ministers hold the key to unlocking climate action and are capable of incentivizing climate informed public expenditure by utilizing climate fiscal tools to support a green economy transition. Under the coalition's Helsinki Principles, through MFPED, the country would seek to align policies to the Paris Agreement and support NDC implementation, account for climate change in public investment management, budgeting, fiscal planning and macro-economic policy, and mobilize private sector sources of finance to support investments in adaptation and mitigation. Significantly increasing funding towards SLM-CSA will be a major step for MFPED towards honoring the Helsinki Principles. On-going support from the World Bank to enhance government-led processes of identification, measurement, and monitoring of climate-relevant public expenditures through climate budget tagging will provide a better understanding of where climate funding is being prioritized and where gaps exists for MFPED to prioritize future funding.

108. Design and implement creative public support programs and related policy reforms that promote sustainable, and judicious natural resources management and use. The Ugandan government needs to creatively apply the economic instruments at its disposal to enhance the effectiveness of available public support and incentivize landowners to improve management of their land and provide some essential ecological functions and services through uptake of appropriate and environmentally friendly technologies.

121. World Bank (2019b).

Distortive public sector support and policies need to be repurposed. Agricultural subsidies, such as those for fertilizer, which have been increasing in Uganda[121] should be repurposed to reduce their distortionary effect on incentives to adopt other more holistic practices such as ISFM, natural resource regenerative practices (e.g. mulching, rotation, and intercropping), and integrated agro-silvopastoral systems, which can help restore the functioning and fertility of cropland, and restore biodiversity on grasslands and forests. To succeed, such programs should prioritize hot-spot regions such as the highlands, and the cattle corridor. Policy reform and other financial incentives should also go towards private sector players who have green businesses that stimulate growth in climate smart and environmentally sustainable goods and services e.g. through tax breaks. Government should also make use of the power of public procurement and shift towards greener procurements to encourage sustainable production and natural capital exploitation, efficiency, minimal pollution, and waste generating products and value chains. Given that labor intensity and cost are a major barrier for SLM-CSA, the government could also support programs for labor intensive public works (LIPWs). LIPWs will act as both a social safety net coming out of the COVID-19 pandemic and provide the much-needed labor for communal and landscape-based SLM infrastructure e.g. erosion control trenches, and gulley reclamation, and biodiversity restoration activities. Such programs can be targeted at unemployed youth. Evidence from Ghana shows that such programs have multiple benefits; job creation, poverty reduction and biodiversity restoration (Box 9).[122]

Box 9: Using Labor Intensive Public Works to Scale Up Slm-Csa, Create Jobs and Reduce Poverty: The Case for Ghana

The World Bank supported Ghana Social Opportunities Project (GSOP) was a 7 year project that ran from 2010 to 2018, which aimed to avail income earning opportunities for poor households in northern Ghana through a public works program that contributes to rehabilitating local infrastructure and reforestation through Labor Intensive Public Works (LIPWs).

The project carried out a total of 902 LIPW sub-projects in 1125 communities; Of these, 250 climate change mitigation initiatives (tree planting) were completed covering 2,268.24 ha and 349 feeder roads covering a total of 1,336 km and 263 small earth dams and dugouts were rehabilitated and/or complete. The project provided short-term employment to 167,243 people living in extreme poverty (61% of whom are women) and paid more than $17 million in wage earnings.

The implementation of LIPW, was accompanied by policy reform, including the formulation of a national labor-intensive public works policy under GSOP aimed at institutionalizing the LIPW as a tool for employment creation in Ghana.

Lessons:

1. *LIPW can reduction in extreme poverty incidence. In Ghana, extreme poverty declined by 3.7 percentage points over control households.*
2. *GSOP-LIPW can generate reliable employment. About 19,023 full time employment annually was created in Ghana, and it was found that LIPW was a good response to the massive youth unemployment in Ghana.*

109. Give a new impetus to the payment for ecosystem services (PES) mechanisms that have been piloted to broadly address the loss of ecosystem services. Evidence exists that incentive payments for environmental services in Uganda achieve positive results for SLM-CSA uptake.[123] However, to make the financial incentive mechanisms for SLM-CSA implementation more attractive and to encourage conservation in Uganda, the PES mechanisms need to be more targeted and large enough. Pay outs for landowners need to be meaningful, otherwise they will not be taken up or will not be sustained. The pool of potential sources of payments need to be expanded beyond the water sector, which is

121. World Bank (2019b).
122. World Bank (2018c).
123. Jayachandran, S. et al (2018)

currently dominant to other actors, such as through carbon emissions reduction payments. Uganda does not currently have much access to large carbon emission reduction purchase arrangements and is ineligible for support from various facilities such as the carbon fund or Biocarbon fund. However, the government needs to explore new opportunities such as through the green climate fund (GCF), and voluntary carbon markets. Setting up monitoring, reporting and verification (MRV) systems for tracking carbon changes and other environmental indicators will be a vital tool for supporting PES and providing access to a larger pool of climate and environmental finance. The government should also consider financing PES systems that operate on large scales, with larger funds, for more efficiency due to economies of scale. This is in line with the National Environment Act, which calls for the setting up of mechanisms for payment for ecosystem services. However, there is need to build strengthen capacities to design PES in government. The design of PES will need to be flexible and account for heterogeneity in landowners' payment preferences. PES should emphasize upfront payment (cash or inputs) to offset initial high costs of adoption**,** accompanied by periodic payments to support continued application of SLM and CSA**.** Such PES will need to find a balance between individual payments and communal payments to cater for farmers preferences. A level of aversion to communal payments exists due to perceptions of bureaucracy and corruption, which create distrust of local authorities. Furthermore, in-kind payments will need to be a key complementary component of such incentives. Labor assistance, and tools, are known to increase willingness to accept PES contracts in Uganda.[124]

110. Promote market access for diverse agriculture and natural resource-based commodities that does not put pressure on natural resources, and which provide opportunities for inclusion and value addition. Improved access to markets, infrastructure, and services, can improve land managers' incentive and ability to manage land more sustainably, through stimulating more profitable production and greater ability to produce higher-value products and use inputs more intensively. As such, for SLM-CSA technologies to be adopted at scale, they need to have attractive investment return profiles and serve multiple purposes. The Uganda government needs to create markets and/or access to markets. To overcome major barriers to markets, inadequate market information, high transport costs, and poor storage and handling facilities, the Government should aim at expanding markets for more diverse commodities and should be committed to addressing some of the obstacles to their marketing. Farmers should be linked to local markets and to regional and export markets depending on the commodity profiles they manage. Locally, markets for vegetables, legumes, small livestock, and poultry where women are most active can be promoted. Market support should cover access

A tarmac road in Malaba

124. Geussens, K., et al (2019).

to improved climate resilient crop and tree seed/seedlings, and affordable animal breeding services. At the beginning, the priority can be placed on postharvest storage and feeder roads. Producers should be assisted to organize into groups, to collectively manage post-harvest activities, reduce costs of processing and boost bargaining power. Technologies that reduce the negative impact of commodity value chain activities on the environment such as through carbon emissions, pollution and loss and waste should also be identified and supported, say through renewable energy and energy efficient equipment for processing and storage.

b) Promote location specific complementary technologies that address multiple objectives

111. Invest in site specific SLM-CSA packages, which prioritize addressing erosion and nutrient deficiency on cropland. Several SLM-CSA innovations can be scaled-up in Uganda. However, SLM-CSA to be promoted must be chosen to suit soil type, climate, physiography, and social/economic/cultural factors following a well thought out action plan. Table 10 shows the SLM-CSA packages that can be promoted in different regions of Uganda. Given the highly degraded and nutrient depleted soils, integrated soil fertility management (ISFM) systems ought to be applied across all regions, along with intercropping and manure applications. Crop rotation with legumes such as beans should also form part of SLM-CSA packages on cropland, especially with cereal crops. Organic manure application is already well practiced in the country and would be easy to integrate. Erosion control infrastructure will need to be a part of priority SLM-CSA packages. Terraces, contour bunds, and trenches, should be integrated on farms and productive landscapes accompanied by grass (e.g. Napier) and multipurpose trees, which will ensure structure stability, while serving other purposes (fodder and tree products). In the highlands, where they have been neglected, reviving such infrastructure will need to be accompanied by better communication about how they fit into farmers' livelihood strategies, and incentives to drive individual and community action for their construction and to ensure their permanence. Experiences from Rwanda show successful implementation of erosion control measures like terracing (Box 10).

Pupils learning about fish farming in Kisubi

112. Agro-forestry accompanied by energy saving technologies should be a leading entry point for addressing forest and grasslands degradation. Agro-forestry in Uganda can take advantage of already dominant activities of tree crop production, and horticultural production on private land in the country. Agro-forestry accompanied by clean cookstoves to reduce pressure on wood biomass energy can considerably reduce forest degradation. On grasslands, integrated silvo-pastoral systems, can be scaled up in the cattle corridor with integration of improved cattle breeds and feeding regimes to reduce land and forest degradation, while reversing desertification. Smaller ruminant livestock and poultry that are less land intensive but good for manure production will also be key to integrate at scale in production systems.

Table 10. SLM-CSA practices implemented in Uganda – both climate smart and with potential for regional scale-up.

SLM-CSA Interventions	Commodity	Combinations of technical options	Relevant regions
Integrated soil fertility management (ISFM)	Maize	Cover crops and organic manure application	All of Uganda
	Coffee	Intercropping with beans, soybean	Eastern and Central
		Integrating horticultural production, banana, and other fruit trees.	
	Cassava	Intercropping with legumes e.g. beans	All of Uganda
	Banana	Cover crops, mulching, organic manure application, and intercropping with legumes	Central, Eastern and Southwestern humid highlands
Crop rotation	Soybean	With cereal crops, supported by early planting	Northern, Eastern, and Western
	Beans	Rotation with cereal crops	Eastern, Northern and Southwestern
Silvo-pastoral systems	Cattle	Trees and shrubs planted interspersed among fodder crops e.g. Napier and Rhodes grass	Southwest cattle corridor Central
		Improved cattle breeds and feeding regimes	
		Rotational Grazing	
		Integration of small livestock and poultry (pigs and poultry)	
Agroforestry	Tea	Integrating horticultural production of fruit trees like banana, orange, mango.	Central and Western
	N/A	Household energy saving clean cook stoves	All of Uganda
Diversification from monocropping	Maize	Diversifying to high-value climate resilient crops: Tree crops, fruits, legumes, and roots & tubers (sweet potato, cassava).	All of Uganda
Climate Resilient Varieties	Sweet potato	Pest and disease resistant, and early maturing varieties	Northern, Central and Eastern

Box 10: Implementing Erosion Control Infrasturucture in Rwanda.

The Rwanda Land Husbandry, Water Harvesting and Hillside Irrigation Project (LWH), funded by the World Bank and implemented over 5 years from 2011 had the stated objective to "increase the productivity and commercialization of hillside agriculture in target areas". The project invested in a landscape approach to introduce sustainable land husbandry measures for hillside agriculture, terraces, and hillside irrigation. The suite of LWH interventions was integral to the Ministry of Agriculture (MINAGRI)'s goal of transforming the rural economy.

LWH benefitted more than 280,000 farmers over five years – about one-half were women. The project successfully achieved its two main objectives of increasing both productivity and the commercialization rate of farm produce.

To achieve its stated outcomes, the project disseminated improved technologies to farmers that addressed issues such as erosion control, productivity enhancement, and soil fertility. Before the project, less than 30 percent of farmers in the project area reported using these technologies. By mid-2016, almost all farmers were using some of these technologies. Furthermore, the project irrigated 1,356 hectares of land, protected about 88 percent of hilly land areas against soil erosion, and reduced the volume of sediment yield or soil washed down from hilly slopes during heavy rain in project areas by 89 percent. The project also strengthened farmers' organizations to effectively support farmers in their transition to move to higher value chain activities.

A major lesson emerging from the project is that there is a need for flexibility. Site specific conditions were critical for determining what type of land husbandry package should be applied. The initial model of implementing all three components of L (land husbandry), W (water harvesting dam) and H (hillside irrigation) did not universally meet the needs of all sites. Flexibility had to be introduced, therefore, to ensure cost-effectiveness and technical soundness.

c) *Streamline natural resource governance policies and institutions for consistency, comprehensiveness and effectiveness across all levels of governance - from national to local.*

113. Natural resource governance policies in Uganda need to be more coherent and cross-sectoral to support rapid transition towards, higher productivity, climate resilience, and environmental sustainability. Taking the case of agroforestry, Uganda's Forestry Policy recognizes 'farm forestry' as one of its pillars. However, strategies to implement agroforestry are limited or incoherent. Sustainable land Management and Climate Smart Agriculture are found under the Ministry of Agriculture (MIAAF), presenting a challenge, in budgeting for investment in agroforestry. All policies related to SLM-CSA must be aligned and institutional arrangements improved to ensure that cross-sectoral project/ program design and implementation can occur seamlessly.

114. Land policies should effectively accommodate customary land tenure and open up access to land to a broader set of actors, including women. With only 15-20 percent of the national land registered with land rights protected under *mailo*, freehold and leasehold tenure systems, the most serious challenge to introducing SLM-CSA remains insecurity of land tenure. Increasing the value of common pool resources (such as degraded grazing land) without clear land use and rights agreements can lead to predation by elites and encroachment. As such protecting land use rights is critical. In addition, Uganda needs to urgently address land access and use right of women as an important basis for sound land administration. Given that SLM-CSA suits differently depending on land tenure systems, the government should take the opportunity that implementing SLM-CSA provides for deeper engagement on land tenure security and gender inequality in land access and ownership. Implementing SLM-CSA can catalyze the process of land demarcation and definition of land ownership and land use rights. To address the challenge of fragmented land, which deters investments in technology innovations, the government should implement land policies that facilitate access to land for organized groups of producers, with commitments to adopt SLM-CSA and judiciously manage natural capital as one criteria for access to land. Women's groups can be prioritized for such arrangements.

115. Institutional coordination at the national level needs to be enhanced, especially across key national and sub-national institutions through green economy focused institutional arrangement and related budgeting. The goal of reducing natural resources degradation, enhancing agricultural productivity, and promoting climate resilience and mitigation, cannot be achieved through independent sectoral action. Rather, it will require implementing an encompassing government green growth agenda and institutionalizing co-ordination processes for meeting the goals of a green economy as espoused in Uganda's green growth development strategy (UGGDS). The inter-ministerial and cross-sectoral institutional frameworks articulated in UGGDS and U-SIF SLM such as inter-ministerial committees and a technical steering committees led by MFPED and based on major "green" ministries, MAAIF, MWE, MLHUD, and MEMD and including other key ministries like MoLG can be the basis of governance and implementation of green growth agenda. However, these frameworks and institutional arrangements already set up need to be better implemented with mandates at the highest level of government and political leadership as demonstrated by Ethiopia's example (Box 11). Ethiopia's example also shows that a dedicated funding body, which can rapidly mobilize funds to support the implementation of an economy-wide green agenda can be very useful. Ultimately however, the allocation of public budgets will need to reflect the economy-wide approach to enhance more collaboration between ministries and agencies.

116. Strengthen the link between the national, local, and community-based institutions to effectively close the gap between policy and implementation. Building institutions at the local and community level should be a priority. Strong local and community institutions will facilitate adoption of SLM-CSA, for instance through community action required to establish some SLM-CSA such as trenches. Local institutions can be the main entry point for national and sub-national state institutions like the extension service, and UNMA to deliver agroclimatic services to farmers. They can be launchpads for community credit and savings schemes, such as revolving funds, addressing the lack of collateralizable land titles for loans. Community institutions can also enable smallholder farmers to engage in collective bargaining, carry out value addition and processing activities that open opportunities to access markets. Concerted efforts should be made to help organize farmers, set up community groups, build their capacities for effective administration, and where appropriate register them as legal entities. Farmer groups should be the anchor of community institutions; however, other institutions should be supported depending on the goals. For extension or agro-climate services, farmer field schools and climate field schools should be considered. Catchment or district level institutions should be supported, such as environmental committees, and catchment management committees, to support landscape level SLM-CSA interventions.

Box 11: Implementantion of Ethiopia's Climate Resilient Green Economy – CGRE

The Government of the Federal Democratic Republic of Ethiopia initiated the Climate-Resilient Green Economy (CRGE) initiative to protect the country from the adverse effects of climate change and to build a green economy that will help realise its ambition of reaching middle income status before 2025. The CRGE initiative, which was initiated under the leadership of the Prime Minister's Office as a strategy to build a green economy identifying green economy opportunities, could help Ethiopia reach its stated ambitions. The CGRE climate leadership has been applauded by the international community. Some lessons emerging from the CGRE for implementing an economy wide transition are summarized below:

i. *Develop a clear, ambitious vision: The CGRE was set in motion through the unveiling of the CRGE strategy in 2011. The strategy unveiled ambitions for reaching middle income status by 2025 and coupled this goal with a zero net carbon growth goal. The strategy was followed by the development of climate-resilient sectoral strategies for agriculture, forestry, water, energy and transport, which were aligned to long-standing national priorities. The strategy developed nearly 150 projects and programs were identified.*

ii. *Secure political commitment at the highest level: Having champions for the CGRE at the highest level of government gave impetus to the CGRE and aided rapid action. The late prime Minister Meles Zenawi was deeply committed to acting on climate change at national, regional, and international levels and gave impetus to the agenda. While maintaining political support through the years has had its ups and downs, the CGRE remains central to Ethiopia's ten-year development plan.*

iii. *Link national and international priorities: The country's focus on a national priority was useful to support the creation of country specific cross-sector commitments. However, these were tied up to the international interests and commitments in low-carbon transition, which drove a very strong engagement with the international community, and therefore also helped to generate funding for investments under CGRE from the international community.*

iv. *Establish a dedicated climate funding body: Establishing a dedicated climate funding body allowed the rapid mobilization of resources to execute the CRGE strategy and other climate commitments. The Green Economy pillar of the CRGE strategy alone was costed at US$150 billion. The Ministry of Finance went on to establish a CRGE Facility to mobilize resources from bilateral donors and international climate finance institutions, this was managed jointly with the Ministry of Environment, Forest and Climate Change (MEFCC). The Facility received accreditation with Climate Change Funds like Adaptation Fund, and Green Climate Fund and has been able to secure funding from them.*

v. *Establish an economy wide institutional framework: The CRGE Initiative was initiated under the leadership of and overseen by the prime-minister's office (PMO), Ministry of Environment and Forestry (MEF), and Ministry of Finance and Economic Development (MOFED). The secretariat and facility were hosted by MOFED, while MEFCC provided the technical team. A ministerial steering committee representing each ministry of the economy and chaired by the PMO had overall responsibility and authority over the CRGE Facility and provided overall guidance to the work conducted by the CGRE.*

d) Increase access to data and knowledge, and deepen stakeholder engagement for better policy formulation and behavioral change

117. Fast track integration of systems for land, crop production and environmental accounting data to improve policy making and project implementation. What cannot be measured and tracked cannot be well managed. Ugandan government should make efforts to improve measurement, assessment, and reporting on key land and natural resource exploiting activities. Implementation of a land database is crucial to support and inform national land-use policies and planning. The government should aim to operationalize a database that supports mapping, enumeration and inventory of the existing land use and land rights of producers, and streamline the data systems all the way to village levels for monitoring, reporting and verification of the impact of SLM-CSA investments. The system for routine collection of production data on croplands formerly conducted by National Agricultural Advisory Services (NAADS)-MAAIF, which broke down many years ago due to internal instability and to lack of resource needs to be revitalized. The government should also rapidly integrate environmental economic accounts to improve attribution of economic activities that deplete or appreciate natural resources and to better allocate responsibilities for resource management and improve regulation.

118. Facilitate knowledge dissemination including lessons learned and good practices from pilot projects. Uganda government needs to create a broader awareness and increase understanding, facilitate buy in and uptake of greener approaches to production and natural resources use among key stakeholders, especially the public and producers. Multiple pilots have demonstrated promising innovations but will need to be promoted to broader stakeholders. These efforts can have powerful impacts on attitudes and perceptions concerning key SLM-CSA technologies and innovations. Some powerful mindset change interventions include peer-to-peer learning and demonstrations. Producers willing to experiment with SLM-CSA should be fully supported so that skeptics can observe first-hand the benefits of SLM-CSA among their peers. Peer to peer learning in Uganda can be up to 6 times more effective in influencing adoption of CSA practices.[125] Beyond community champions and first movers, it is useful to organize learning and knowledge sharing, including well-targeted field visits, so that officials, practitioners, and producers learn about positive experiences in neighboring communities and landscapes, across the basin and even from other basins that have had successes. Learning alliances at the landscape-level facilitated through institutions like local government, environmental committees and watershed management committees can drive knowledge exchange, social learning and behavioral change, which can spur adoption of SLM-CSA innovations at scale. Learning alliances (Box 12) can also support, vertical and horizontal integration of SLM and CSA interventions through inclusive stakeholder engagements.

119. To optimize access to knowledge for farmers, the government should prioritize investments in research and development, extension, and climate services, and create an environment for non-state actors in knowledge services. Knowledge providers like extension and meteorological services (Uganda National Meteorological Agency) will need support to build their knowledge value-chains from data collection, management, information service design and delivery to deliver information for decision making on SLM-CSA. This will entail support for data collection equipment, and capacity building to modernize skills in line with emerging demands from climate change. Many of UNMA's weather stations are not operational due to lack of staffing, inadequate maintenance, or vandalism. The density of ground weather stations is also far too low.[126]

In addition, government should create enabling environments for non-state actors such as NGOs, and private companies to deliver knowledge services. However, public institutions will still need to be active to provide knowledge public goods. Extension services and UNMA should build partnerships with other non-state actors to plug knowledge gaps and take advantage of their comparative advantages. Public-Private Partnership (PPP) arrangements can significantly boost delivery of information and knowledge to farmers which will help boost SLM-CSA adoption. The Ag-Observatory, which has been set up in Uganda with World Bank support presents an opportunity to build such partnerships through bringing together actors such as researchers, extensions services, NGOs, and entrepreneurs to innovate and develop tailored climate services using private sector data innovations.

125. CCAFS, (2017).
126. World Bank (2019c).

120. Engage SLM-CSA implementing communities on an equal footing to build trust and instill confidence. Participatory activities with farmer and community groups have proved to be useful in improving existing indigenous knowledge about SLM-CSA and opening the minds of the communities to not only depend on bad traditional practices. When it comes to adoption of SLM-CSA, how communities are engaged, and the extent to which diverse knowledge is explored matters[127]. Genuinely participatory approaches to SLM-CSA intervention implementation can give producers and land owners the confidence that their knowledge, experience and views are valued and that they are agent participants in, rather than recipients of interventions in which they are powerless to direct. By so doing, they are more receptive to new innovations and changes to traditional practices such as biomass burning for fuel, slash and burn, and monocultures. A strong link is required between farmers, the extension system, agricultural research and other delivery institutions like NGOs to develop and disseminate technologies that respond to farmer and community needs. Learning Alliances can anchor such engagements to drive adoption of CSA-SLM.

Box 12: Learning Alliances – what are they and how could they help scale SLM-CSA in uganda.

The Learning Alliances approach was designed to overcome new technologies and techniques and social innovations remaining confined to small pockets of success, and inaccessible to others. LAs enable knowledge sharing and build capacity in a learning environment that is demand-led, practice-based, and flexible enough to meet the needs of diverse participants. Since the approach involves the adaptation of good practices to meet the specific needs of communities, it is most suitable for location specific SLM-CSA. The LA approach is an iterative learning process among multiple stakeholders and draws on knowledge and information from different actors and across multiple scales, from local to national and beyond, while equally valuing the contributed knowledge. Learning Alliances typically include a diverse range of participants: rural women, men, and young people, extension service and NGO workers, SMEs, local government, and scientists.

In Uganda, LAs were demonstrated through the CCAFS-PACCA initiative. The LAs approach was implemented through district level learning alliances, where platforms/spaces at the district level (i.e. four districts) were created to facilitate not just co-learning and knowledge sharing but also to promote local policy engagement activities and development of tools and strategies. The LAs were created to jointly learn and share knowledge and experiences about climate change and gender related issues, across actors ranging from NGOs and farmer associations, to academics and local governments, among others. It was successful in improving understanding of climate change and its impacts, and enabling public institutions, farmers, and other non-state actors to adopt CSA. Lessons for successful implementation of LAs generated include the need to;

i. Foster strong leadership

ii. Build trust among members of the leaning alliance ***and finding common goals and interest***

iii. Establish solid coordination mechanisms and regular meetings

iv. Enhance local government support

127. Eriksen, S. H. et al (2019)

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