



NCA Development in Uganda: Achievements, Challenges, Lessons Learnt

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Presentation Outline

- Overview of Uganda's NCA program supported by the World Bank – WAVES partnership
- Achievements of the program
- Lessons learnt
- Potential policy uses
- Way forward



Uganda NCA Overview

WAVES Program October 2018 - October 2020

The **objective** the Uganda NCA Program

- To mainstream natural capital into development policy dialogue and planning in Uganda by integrating a set of accounts to inform the National Development Plan (NDP3) and other national and sectoral policies
- To increase understanding on the real contribution of natural assets and the ecosystem services to the economy and the economy and its sectors affect this natural asset base

BUSINESS

Moving Beyond GDP: Uganda Launches Natural Capital Accounting Program



By Benjamin Emuk

Posted on October 24, 2018



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Uganda NCA Overview

The program period is organized in three components



1. Accounts development

- Land physical asset accounts
- Forest and wood resources accounts
- Initial ecosystem accounts

2. Studies and issue papers

- Adjusted macro-economic indicators
- Woodfuels assessment
- Statistical and Economic Analysis of Tourism
- NCA and NDP3 thematic paper

3. Institutional engagement, capacity building and policy dialogue

- Trainings
- Knowledge sharing
- Inter-institutional dialogue
- Communications

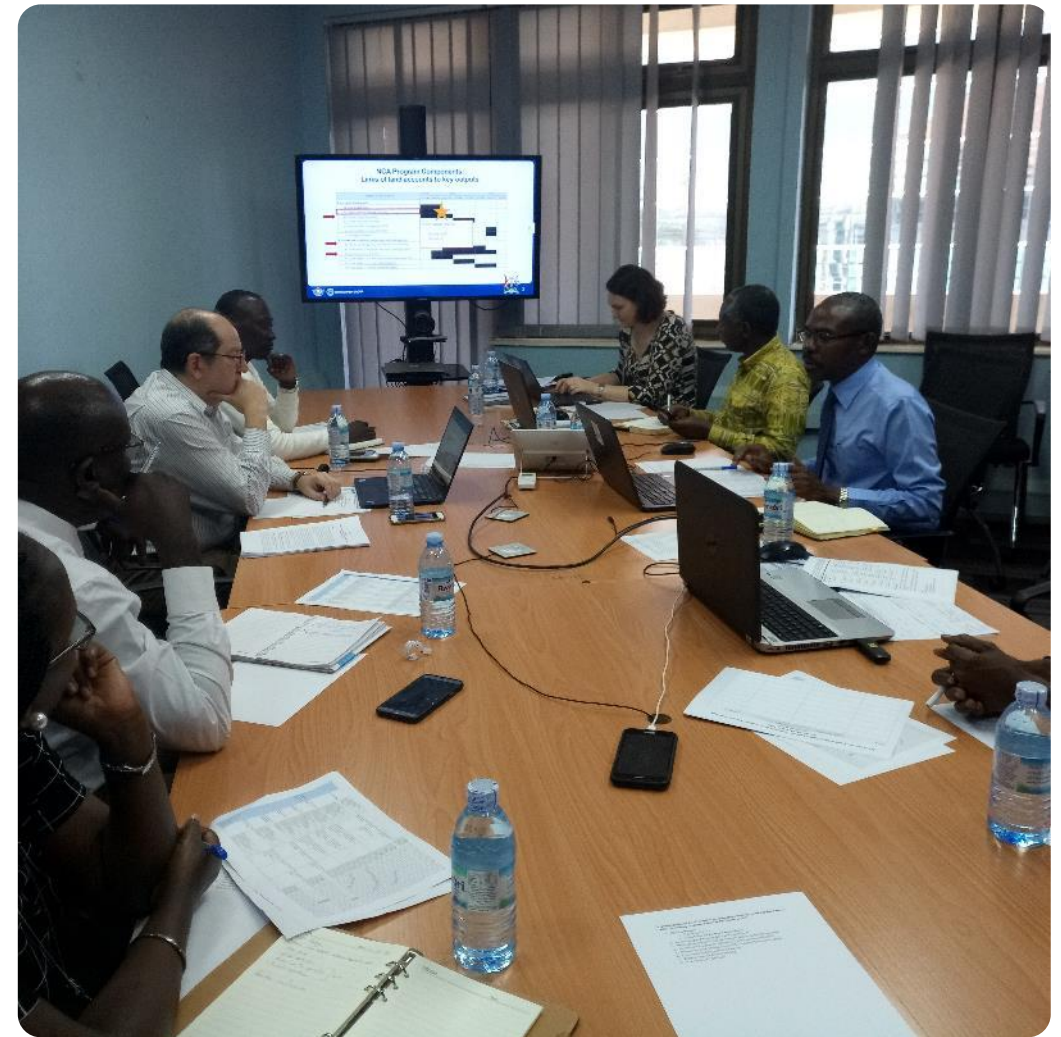


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Program implementation arrangements

- Program implementation spearheaded by a Technical Working Group co-chaired by the Uganda Bureau of Statistics (UBOS), Ministry of Finance, Planning and Economic Development and the National Planning Authority.
- TWG brought together agencies that are data providers, data users and policy makers.
- The program's success was hinged on multiagency collaboration amongst key stakeholder institutions.



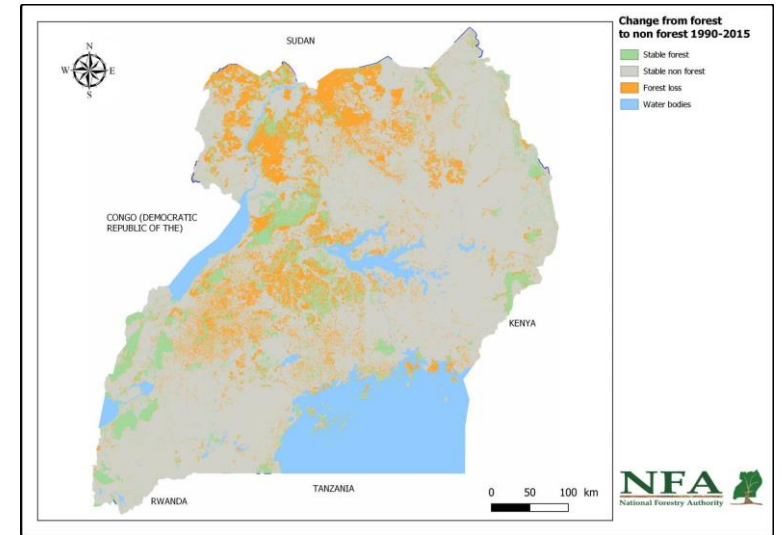
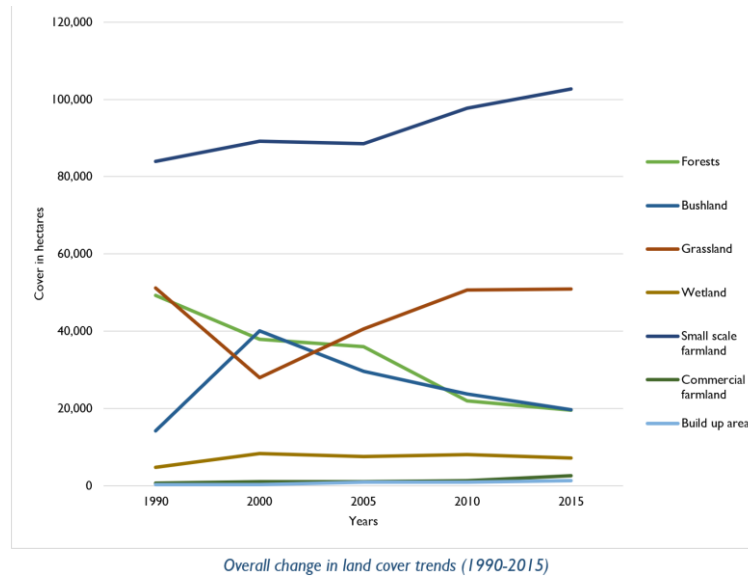
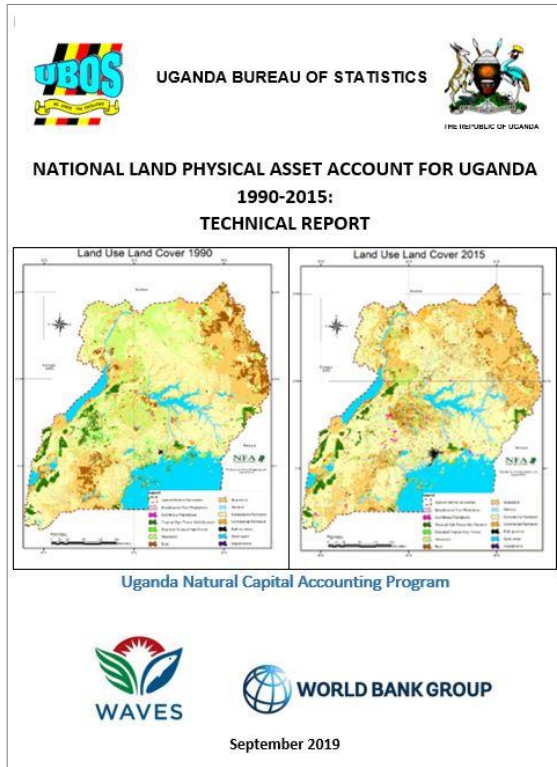
Led by the Technical Working Group | Chaired by MOFPED, NPA, and UBOS | Including: MWE, NFA, UWA

Program Achievements

Component 1: Accounts Development

- Prepared and launched the land physical asset accounts report (2019) and brief detailing the physical changes of Uganda's land use and land cover over the period 1990 to 2015
- Completed the Wood Asset and Forest Resources Accounts report (2020) and brief
- Initiated the creation of ecosystem accounts outlined in the report 'Towards Ecosystem Accounts for Uganda' using available data





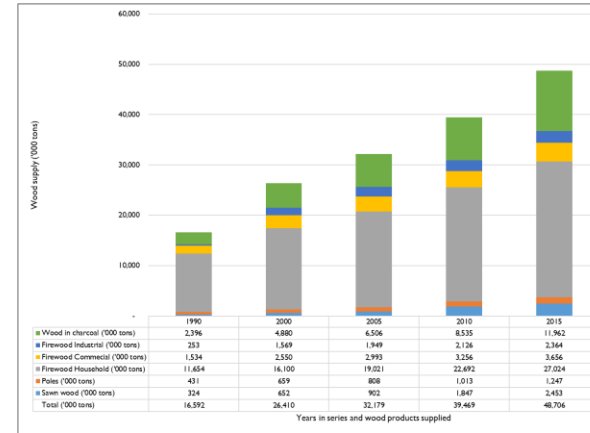
Land Physical Assets Accounts (2019)

- Show land use and land cover associated with human activity such as agriculture, settlement, industry and natural processes between 1990 to 2015.
- Maps and diagrams for 14 land cover classes – national, regions, districts, agroecological, water management and climatic zones.
- Land use for subsistence agriculture consistently increased.
- The most striking change - loss of forests and woodlands.

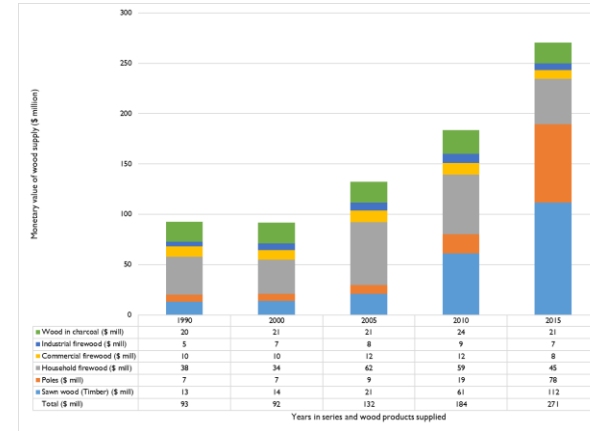
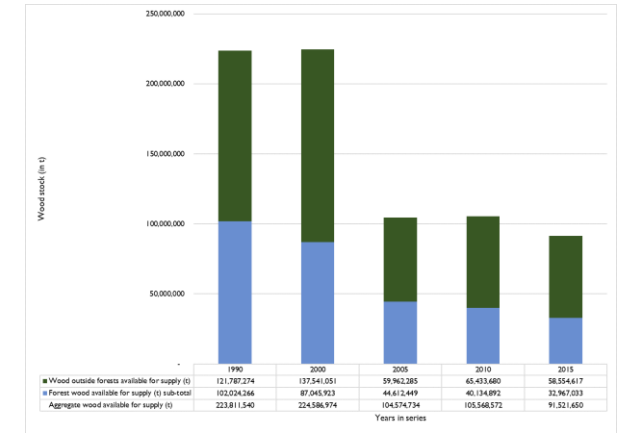
Forest Accounts (2020)

- Physical and monetary terms, cover area of forests and woodlands and also wood assets and selected wood products.
- While forest area in Uganda declined by 60% from 1990 to 2015, the total value of Ugandan forest land increased by 26.7% (due to increasing scarcity)
- Wood available for supply declined by 53% and wood supply deficit expanded by 22 times between 2000 and 2015.
- Annual national wood demand will double between 2015 and 2040, from 48 Mt to 105 Mt.

Physical and monetary. supply of wood products



Wood stocks available for supply



UGANDA WOOD ASSET AND FOREST RESOURCES ACCOUNTS

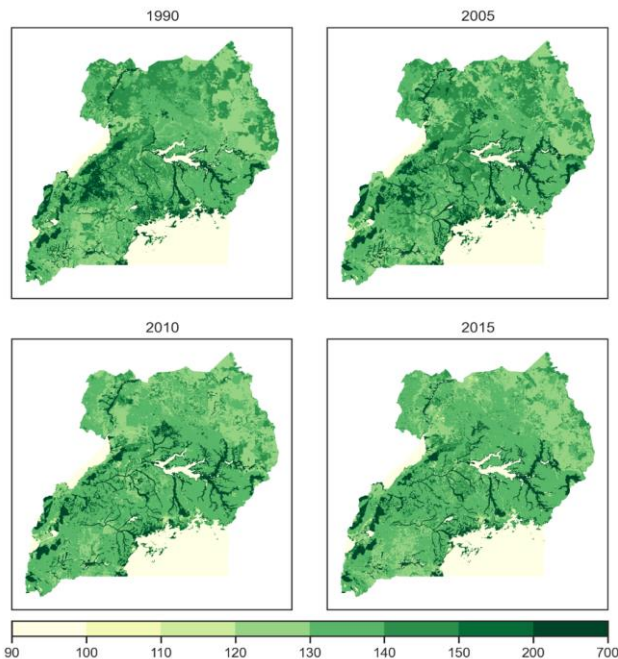


Uganda Natural Capital Accounting Program

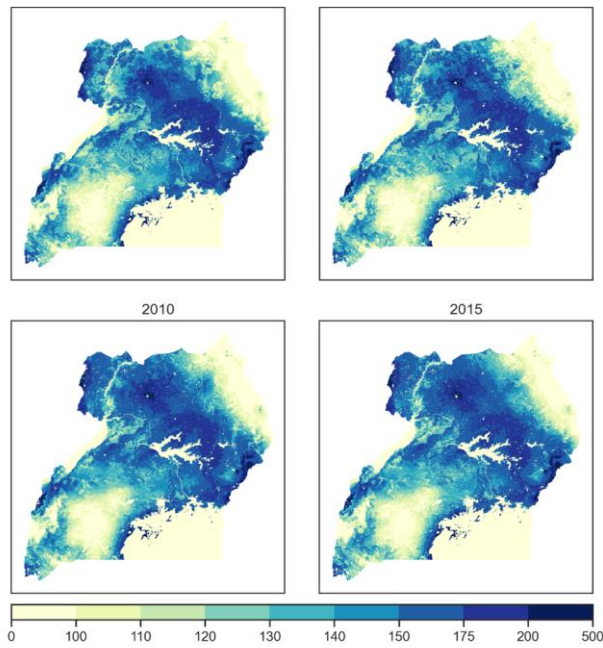


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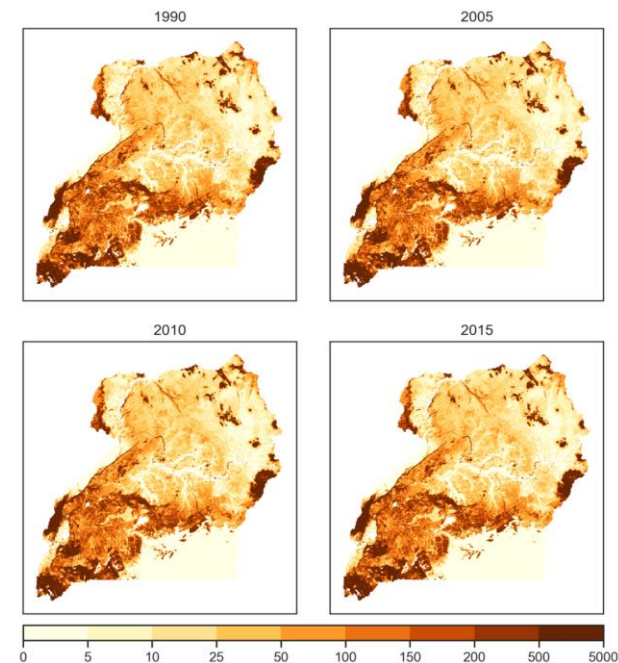




Carbon storage in Uganda, 1990, 2005, 2010 and 2015 (ton C/ha) by year.



Annual water yield, Uganda, 1990, 2005, 2010 and 2015 (mm water per hectare per year).



Sediment retention in Uganda, 1990, 2005, 2010 and 2015 (ton/ha/year).

- The changes in these four physical flows measured were related to changes in land cover.
- Nationally there was an increase in the amount of carbon stored from 769 million tonnes in 1990 to 804 million in 2015
- Water yield also increased nationally.

Towards Ecosystem Accounts for Uganda



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Program Achievements

Component 2: Studies and activities to enhance accounts development

- Prepared and published an **issues paper on adjusted macro-economic indicators** showing the ANNI & ANS and their deviation from the GDP estimates because of natural resource depletion
- Prepared and published an issues paper on the **wood fuels** sector detailing use of wood fuel in Uganda and its impact on the country's wealth

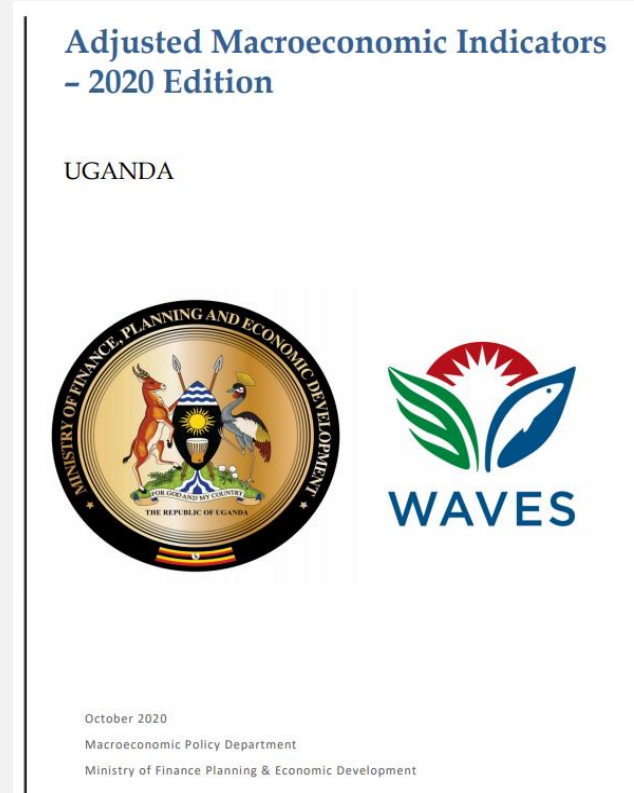
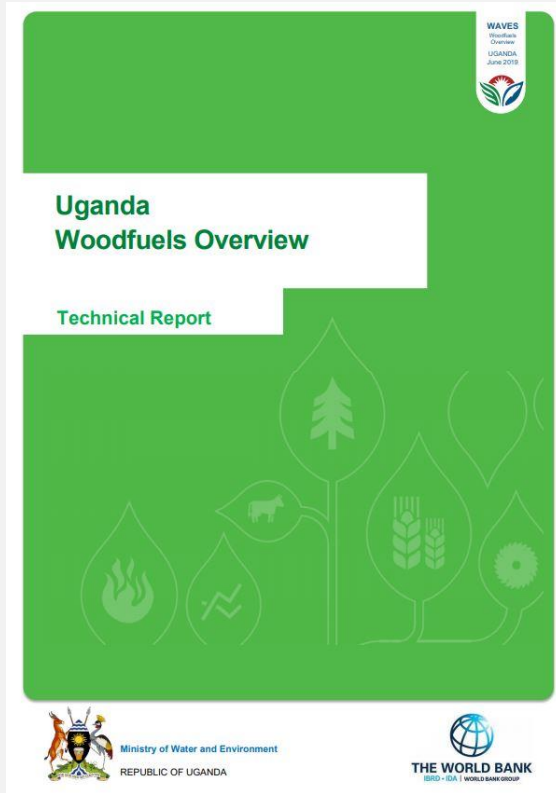
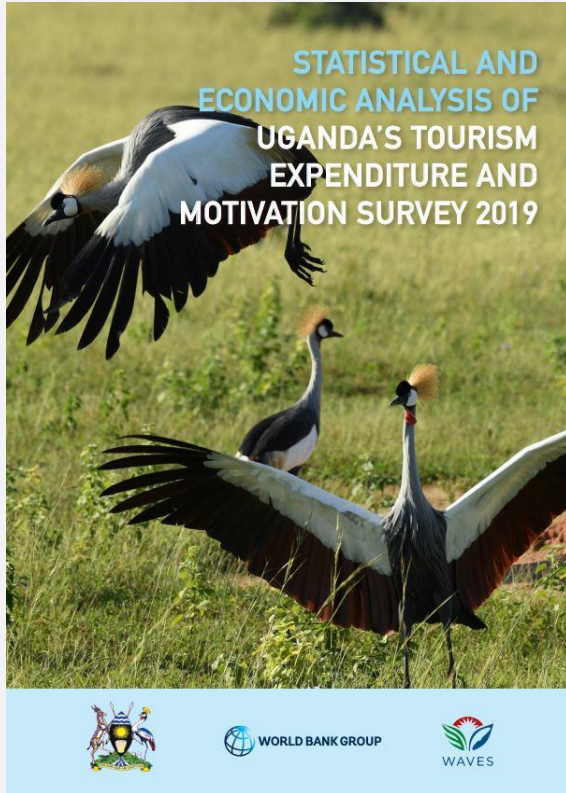


Program Achievements

Component 2: Studies and activities to enhance accounts development

- Prepared and published an issue paper on **natural capital accounting and its link to National development planning with recommendations for NDP III**
- Supported the development of the **statistical and economic analysis of Uganda's tourism expenditure and motivational survey 2019**
- Currently preparing a **follow up report of the adjusted macro economic indicators** under the auspices of the Macro-economic Department – MFPED

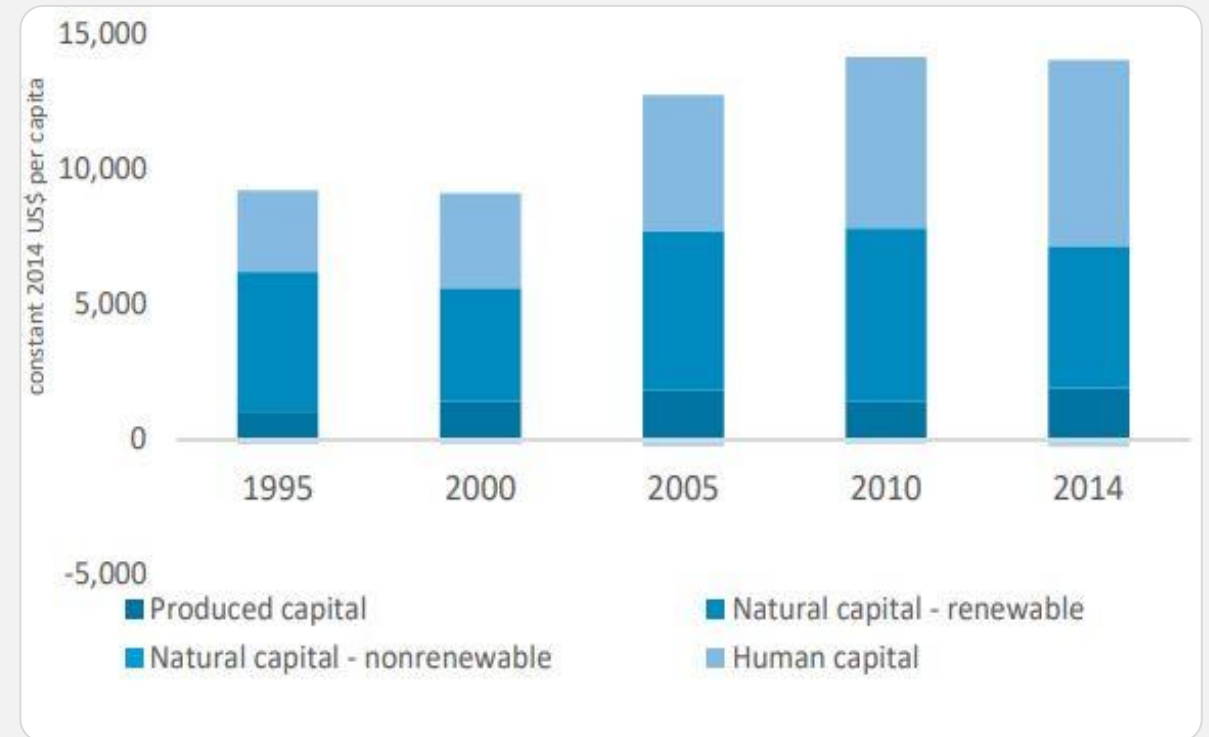




Other issue papers/sectoral deep dives

Natural Capital Wealth of Uganda

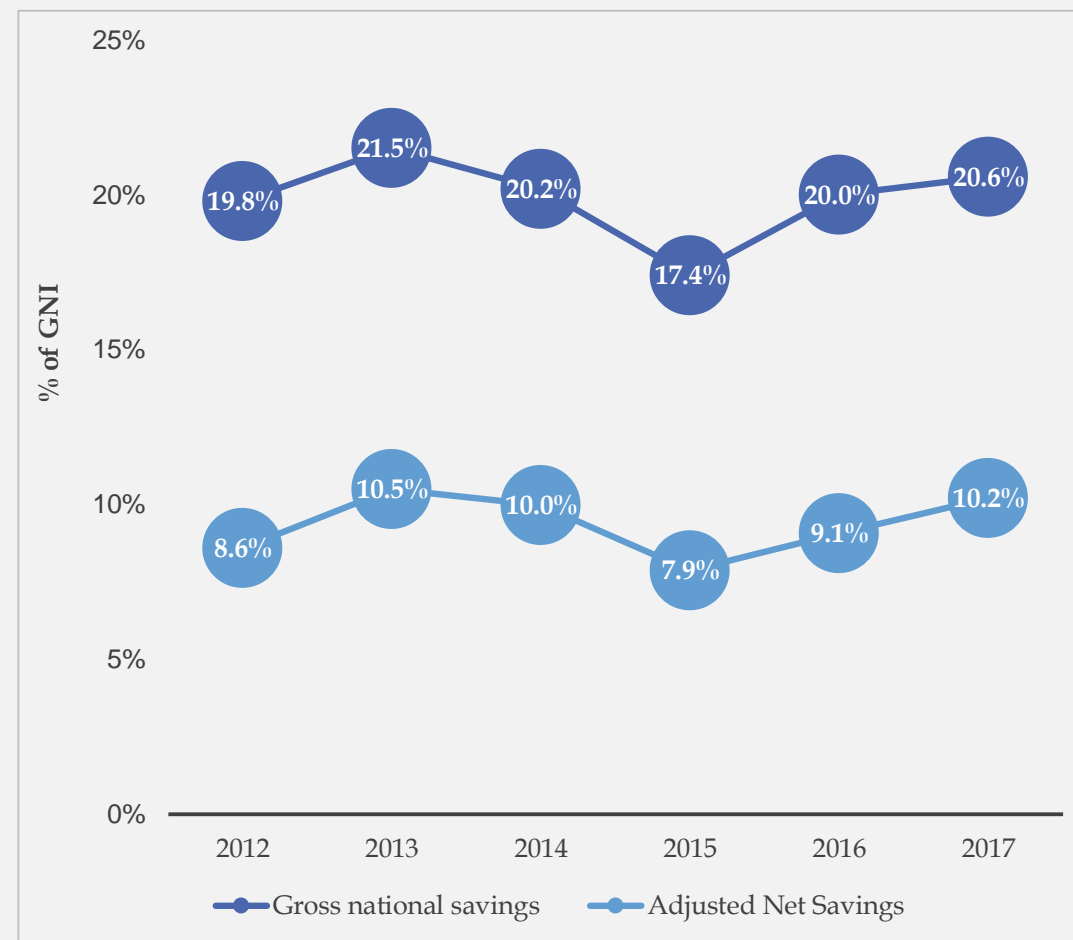
- Uganda's economy is highly dependent on natural capital for production and economic growth.
- Largest component in Uganda's total wealth is human capital, followed by natural capital.
- Since 2010, renewable natural capital is being depleted



Issue Paper on Macroeconomic Indicators produced by MOFPED:
in 2019 with 2017 data (1st edition) / in 2020 with 2018 data (2nd edition)

Comparison of Gross National Savings and Adjusted Net Savings

- High GDP growth rates are expected in the production of agricultural commodities, minerals, oil and gas, as well as service delivery and tourism – all sectors that depend on the effective management of natural capital.
- **Adjusted Net National Income** measures the degree to which income is sustainable in the short term, while wealth indicates the prospects for maintaining that income in the long term.
- **Adjusted National Savings** provides the link between income and wealth.





Program Achievements

Component 3: Knowledge and capacity building

- Publication of National Plan for Advancing Environmental Economic Accounting (2019)
- Continuous capacity building (specific trainings and learning by doing)
- Exposure to NCA international best practices (e.g. study tour to the Netherlands)
- Participation in global and regional Communities of Practice

Institutionalization

- Multi-agency TWG enhancing inter-agency collaboration
- NCA unit being established at UBOS

Woodfuels Overview

Uganda relies heavily on natural resources for its energy supply, with most of the country's primary energy derived from trees.

The woodfuel industry is significant and continues growing. However, lack of reliable data on scale, value, economic and social contribution is indicative of the low priority it receives in the country's planning process. It is therefore important to ensure that demand for wood-based energy is quantified and valued. Using a Natural Capital Accounting approach, it is possible to quantify the contribution of woodfuels to the country's economy.

The overview highlights the importance of generating reliable data that will help policy makers advocate for reform, amplify governance and provide practical support to industry players.

Background

The Ministry of Water and Environment prepared this brief as part of the national Natural Capital Accounting program supported by the World Bank's Wealth Accounting and the Valuation of Ecosystem Services (WAVES) program. Woodfuels are defined as fuelwood, charcoal and residues from agriculture and forest product processing.

Woodfuels account for the highest percentage of all energy needs in Uganda. The bulk of it is consumed by households while the industry and the commercial sector account for the balance. The demand for woodfuels is expected to more than double in the next 20 years. Despite the industry's importance to the economy, it is not an area of focus in national planning. Formalization of the woodfuel industry will require governance reform alongside a package of practical interventions to support the development of the industry.

The annual value of traded woodfuels is estimated at USD 880 million. The government captures little official revenue from the industry and private taxes on woodfuels could be worth USD 146 MY.

Despite the industry's scale, value and growth prospects, it remains largely informal. This hampers investment that might result in modernisation, efficiency and better environmental and social safeguards. Formalisation of the industry would require reforming governance together with practical interventions to encourage development.

The industry has significant impact on revenue, employment and other sub-sectors of the economy. It is estimated to be employing 870,000 people on a full-time equivalent basis. Up to 60% of employment and value is likely to be generated in rural areas.

Figure 1: Projected growth in demand for woodfuel in Uganda, 2010-2040

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Uganda Adjusted Macroeconomic Indicators Brief

Summary

Increased attention is being paid around the world to enhancing the range of economic indicators used to assess the long-term sustainability of economic progress. As part of this, two important sets of new economic indicators have been developed:

- Adjusted macroeconomic measures of national income and savings, reflecting a wider range of asset depletion than conventional measures, as well as environmental damage and income saved for investment in human capital.
- Information on national wealth, based on a comprehensive measure of different types of wealth / assets, including renewable and non-renewable natural capital, produced capital, human capital and financial assets.

The two sets of indicators are complementary. Adjusted national income measures whether income is growing in the short term, while wealth indicates the prospects for maintaining that income and its growth over the long term. (Adjusted) savings provides the link between income and wealth.

The largest single contribution to Uganda's comprehensive wealth comes from human capital, illustrating the importance of investment in education.

Background

The National Capital Accounting framework being developed in Uganda reflects recent developments and global trends in broadening the measurement framework for economic activity. Traditional measures of national activity, such as GDP and the conventional national accounting framework measures, do not consider some of the broader impacts of that activity, such as the consumption of natural resources, pollution and environmental degradation. An important initiative to address these shortcomings is the System of Economic-Environmental Accounts (SEEA).

Figure 2: Per capita wealth of Uganda

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Natural Capital and NDP III 2021-2025

Summary

GDP is a good measure of annual production in a country. It is however an insufficient indicator of development as it only records income. In addition, it does not sufficiently cover the flows and stocks of natural resources, which is key to achieve both economic and ecological sustainability. Natural Capital Accounting can contribute directly to three of the five objectives of NDP III.

This brief demonstrates importance of different NCA accounts for development planning, based on experience from Uganda and other countries.

Background

The Uganda Natural Capital Accounting program aims to mainstream natural capital into development policy dialogue and planning by integrating a set of accounts that will inform the Third National Development Plan (NDP III) and other national and sectoral policies.

The aim of the program is to increase understanding of the contribution of natural assets and ecosystem services to the economy and the impact of the economy in this natural asset base.

The theme of the third National Development Plan for Uganda is 'sustainable industrialization for inclusive growth, employment and wealth creation'. Uganda aspires to become an upper middle-income country and, to achieve this, its per capita wealth must increase significantly. This will require investments not only in produced and human capital, but also in natural capital.

Natural capital is critical to development and green growth as it provides direct and indirect benefits to society.

Uganda's per capita assets have consistently increased since 1994, growing by 52% to US\$ 13,732 in 2014. This means that the country's productive potential has expanded.

However, per capita natural capital only recorded a marginal increase of 18% since 1994. It has fluctuated between US\$4,000 to 6,000 since 1995.

Natural Capital Accounting is a framework to consistently measure and monitor a country's natural capital and its use of natural resources.

Natural Capital Accounting can contribute directly to three of the five objectives of NDP III:

- value addition in key growth opportunities, consolidate and increase the stock and quality of productive infrastructure and increased productivity, inclusiveness and wellbeing of the population.
- framework to consistently measure and monitor a country's natural capital and its use of natural resources.
- Natural Capital Accounting can contribute directly to three of the five objectives of NDP III.

The National Plan for Advancing Environmental-Economic Accounting (NP-AEEA) prioritises the development of water accounts, forest accounts, energy accounts, land accounts, air emission and waste accounts, and ecosystems extent and condition accounts. Most accounting efforts in Uganda are ongoing and documented results are still limited.

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Land Physical Asset Accounts for Uganda Brief

Background

The Land Physical Accounts for Uganda were developed to contribute to the goal of the National Land Policy (2013). The goal of the policy is to ensure an efficient, effective and optimal utilization and management of land resources for poverty reduction, wealth creation and overall socioeconomic development. Land is a key strategic asset for Uganda as it contributes over half of the value of the asset basket of poor Ugandans (Gou 2015).

The priority accounts developed with the WAVES support are: The Land Physical Asset Accounts, the Forest Accounts (Central Framework), and Experimental Ecosystem Accounts for forests and wetlands. Three issues papers have also been prepared with WAVES support: on:

- Natural Capital and NDP III
- Adjusted macroeconomic indicators and
- Total wealth for Uganda, and an overview of the woodfuel subsector.

Findings from the Land Physical Asset Accounts

Uganda has an overall land cover of 24,155 million hectares (ha) under 13 land cover classes of Broad-leaved plantations, coniferous plantations, Tropical High Forest (THF) well stocked, THF low stocked, woodlands, bushlands, grasslands, wetlands, small scale farmlands and commercial farmlands, built up areas, open water and impediments.

Figure 1: Land cover trends for Uganda by percentage and hectares, 1990 to 2015

As shown in Figure 1, small scale farmlands were the dominant land cover in the country. Small scale farmlands increased from 8.4 million ha (or 34.8% of land cover) in 1990 to 10.3 million ha (42.5% of land cover) in 2015.

Land cover (million ha)	1990	2000	2005	2010	2015
Others (000ha)	2,282	4,653	4,471	4,744	4,954
Small scale farmland (000ha)	8,632	8,896	8,845	9,772	10,275
Grassland (000ha)	5,716	2,794	2,064	3,068	5,097
Bushland (000ha)	1,422	4,008	2,961	2,172	1,987
Forests (000ha)	4,934	3,787	3,634	2,199	1,952

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Uganda Wood Asset & Forest Resources Accounts Brief

Background

In October 2016, the Government of Uganda, with the support of the World Bank's Wealth Accounting and the Valuation of Ecosystem Services (WAVES) global partnership, embarked on the development of natural capital accounts for Uganda under the National Capital Accounting Program.

The Program is jointly led by the Ministry of Finance, Planning and Economic Development, the Uganda Bureau of Statistics, the Ministry of Water and Environment, and the National Planning Authority. It aims to increase understanding of the contribution of natural assets and ecosystem services to the economy, as well as the impact of economic activity on natural assets. The findings will inform policy dialogue and planning processes, including the Third National Development Plan (NDP III).

The Wood Asset & Forest Resources Accounts (2016) report presents the first comprehensive set of Natural Capital Accounts for Uganda's wood assets and forest resources, using the United Nations System of Environmental-Economic Accounting Central Framework (SEEA-CF 2012). The accounts include physical and monetary asset accounts of wood and other selected forestry resources from 1990, 2005, 2010 and 2015. Projections of supply and demand up to 2040 are also provided.

Figure 1: Aggregate wood stock available for supply, 1990 to 2015

Uganda's forests are an important and treasured natural asset that provide multiple environmental, social and economic benefits, meeting the majority of country's needs for energy, timber and poles, providing habitats for flora and fauna, and helping mitigate climate change. Forest ecosystems are Uganda's principal source of energy, since woody biomass provides for 78% of energy production (MEMD 2016). Many rural communities are highly dependent on forest ecosystem services, while Uganda's nature-based tourism sector largely relies on the integrity of the tropical high forests and woodlands that support rich biodiversity and provide habitat for wildlife. The national accounts currently estimate that

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Program Achievements

Component 3: Knowledge and capacity building

Communication

- Production of briefs for accounts and issue papers
- Public launches and multisectoral engagements

National Plan for Advancing Environmental Economic Accounting (2019)

- **Recognises that reporting on SDGs and other indicators requires cross-sectoral information, generated from multiple data sources**
- **Offers a roadmap to develop an NCA system, using the SEEA, as the best way for Uganda to generate such information**
- **Prioritises water accounts, forest accounts, energy accounts, land accounts, air emission and waste accounts, and ecosystems extent and condition accounts**



Lessons Learnt

- NCA development requires partnerships at both national and international levels.
- Local capacity in NCA is important to support national institutions, especially UBOS.
- Policy entry points need to be identified and tapped to mainstream NCA in the development agenda.
- Moving forward, it is crucial to embed NCA in the machinery of government.
- There is a need to prioritize and address data gaps that are important for future NCA implementation.
- Inter-ministerial/agency collaboration is critical.



Policy uses/evidence for policy decisions

NDP III anticipates the use of NCA to inform major cross-sectoral decisions

Promote natural resource accounting to improve the national income measurement through:

- Undertaking economic valuation of selected ecosystems and their services;
- Integrating natural capital and ecosystem service accounting into the system of national accounts; and
- Building sectoral, institutional and local government capacity in natural capital accounting



Going beyond Institutionalizing and expanding NCA to meet critical Ugandan needs for decision-making

- Using accounts for informing decisions and planning
- Implementing the NCA roadmap (the NP-AEEA) and keeping it under review
- Developing the coordination and technical roles of UBOS
- Developing the roles of other institutions to produce data, interpret and use accounts
- Generating improved data and filling data gaps
- Constructing new accounts to meet new demands
- Refining accounting and modelling methodologies
- Sustainably resourcing NCA

Appreciation



We could not have done it alone!

Thanks to the World Bank team and the WAVES Program team.

A note of thanks to the **United Nations Statistics Division (UNSD)** and **UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC)**.

Uganda is a proud member of the **Gaborone Declaration for Sustainability in Africa (GDSA)** and **Africa NCA Community of Practice**.



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