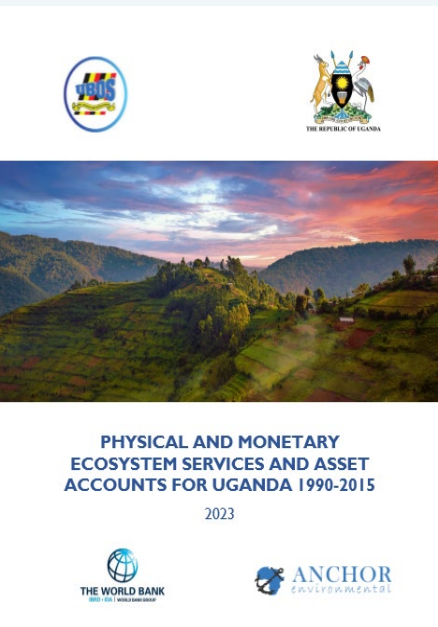




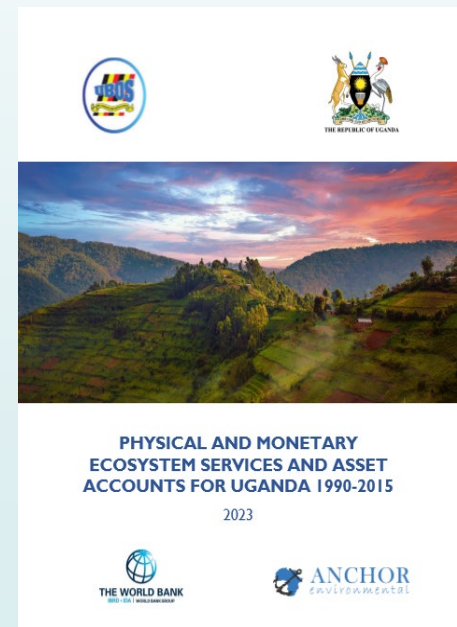
UGANDA BUREAU OF STATISTICS



ECOSYSTEM ACCOUNTING – UGANDA Compilation, Analysis & Policy Implication



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Outline

- Introduction
- Compilation of the Accounts
- Analysis - Valuation
- Key Findings
- Implication of Change in Asset Account
- Policy Implications
- Conclusion

Introduction

- Ecosystem accounting is a framework that aims to integrate the value of ecosystems into national accounting systems
- Uganda begun the task of creating experimental ecosystem extent accounts, using data, modelling tools and capacity that are readily available.
- UBOS with support from the World Bank WAVES program provided technical and financial support in developing the maiden Ecosystem Accounts “***Uganda’s Ecosystem Accounting Report***” in 2020.
- In 2022, UBOS received support from World Bank, Global Program for Sustainability and technical support from Anchor Environmental Consultants to compile Ecosystem Service and Asset accounts for the period 1990 to 2015.

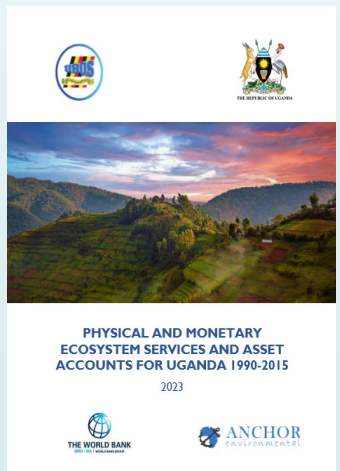
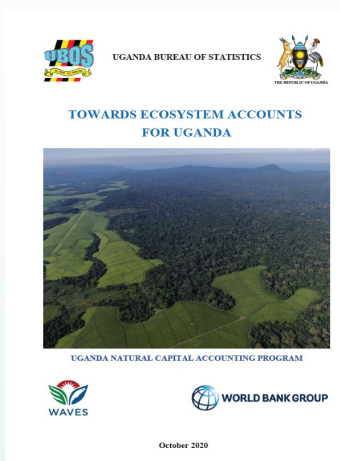


Introduction Cont.



The Ecosystem Products so far Compiled by Uganda;

- Uganda Land Physical asset account
- Uganda Water accounts
- Uganda Wood Asset and Forest Resources Accounts
- Land and Soil Improvement Accounts for Uganda
- Fisheries Resources Accounts for Uganda
- Biodiversity and Tourism Accounts for Uganda
- Towards Ecosystem Accounts for Uganda
- Physical and Monetary Ecosystem Services and Asset Accounts for Uganda



Compilation of the Accounts

- Ecosystem types are important in the extent accounts
- Uganda compiled extent accounts for the 10 major ecosystem types



Plantation



Wood land



Built-up



Bare land



Open water



Forest



Wetland



Grass land



Bush land



Farm land

In Uganda, the following accounts were produced;

- » **Extent Account**
- » **Condition Account- Not Compiled**
- » **Services Accounts**
- » **Asset Accounts**

- The ecosystem services developed are consistent with the Extent accounts and only 11 ecosystem services were estimated considering the data available;
 - 7 Provisioning,
 - 4 Regulating
 - 1 cultural service

Compilation of the Accounts

Provisioning Service compiled for Uganda were;

- Biomass provisioning services
 - Crop
 - Grazed biomass/Livestock
 - Aquaculture
 - Wood
 - Wild fish and other natural aquatic biomass
 - Wild animals, plants and other biomass
- Water supply

Except

- Biotic and abiotic goods

Regulatory Service compiled for Uganda were;

- Global climate regulation
- Soil and sediment retention
- Water purification (Retention and breakdown of nutrients)
- Water flow regulation

Except

- Solid waste remediation, Flood control, Storm mitigation, Noise attenuation, Pollination, Biological control and Nursery population and habitat maintenance

Cultural Services compiled were

- Experiential-related services-Tourism

Analysis- Valuation

- Invest modeling provides a systematic approach to assess the economic value of ecosystems and make informed decisions regarding their management and conservation.
- To be compatible with the measures used in the SNA, the ecosystem accounts express the value of ecosystem service flows in terms of “**exchange value**”.

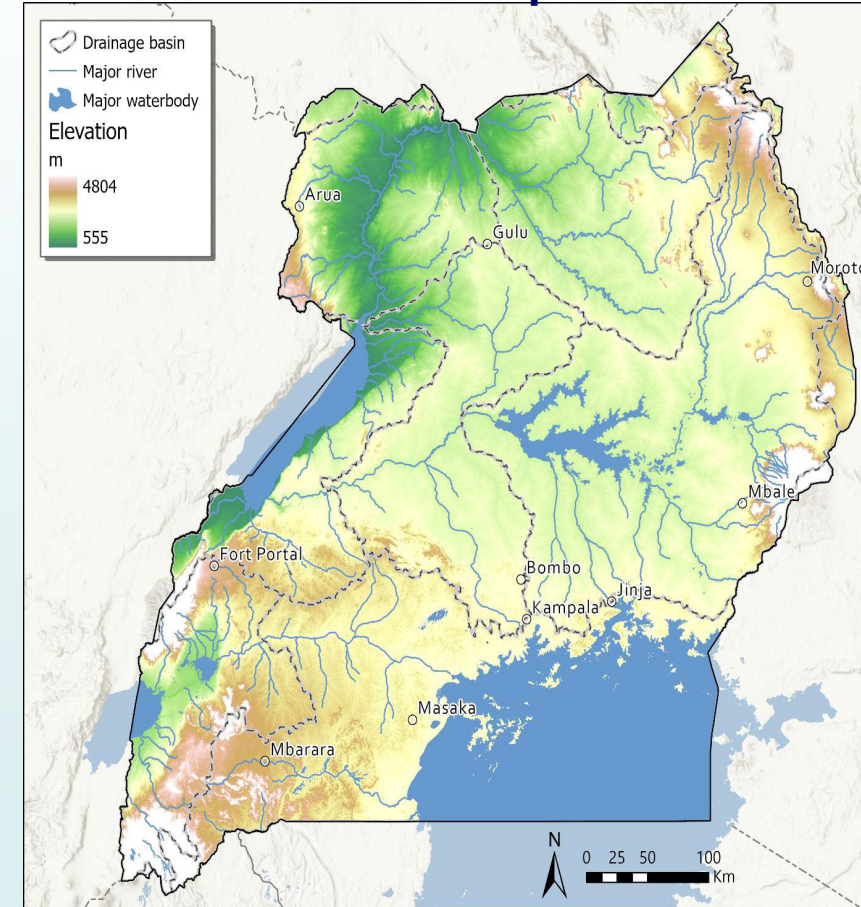
Valuing Ecosystem Services & Assets

- Provisioning services were valued in terms of **residual value**
- Regulating services- valued in terms of **avoided costs**
- Cultural services- valued in terms of **Experimental value** & non- use value
- The asset value of ecosystems was calculated as the summed **net present value** (NPV) of expected future flows of all ecosystem services.

Key Findings

- Uganda covers an area of 241 550 km², 17% of which are water bodies.
- Originally 21% of land area was Combretum wooded grassland and 20% of land area was lake Victoria rainforest.
- The natural forests covered 24% in 1990 and 8% by 2015. The reduction was due to cleared forests for agriculture and settlement.
- 260 Billion USD was lost as a result of the degradation and loss of ecosystem areas, with the greatest losses being in woodland and forest.

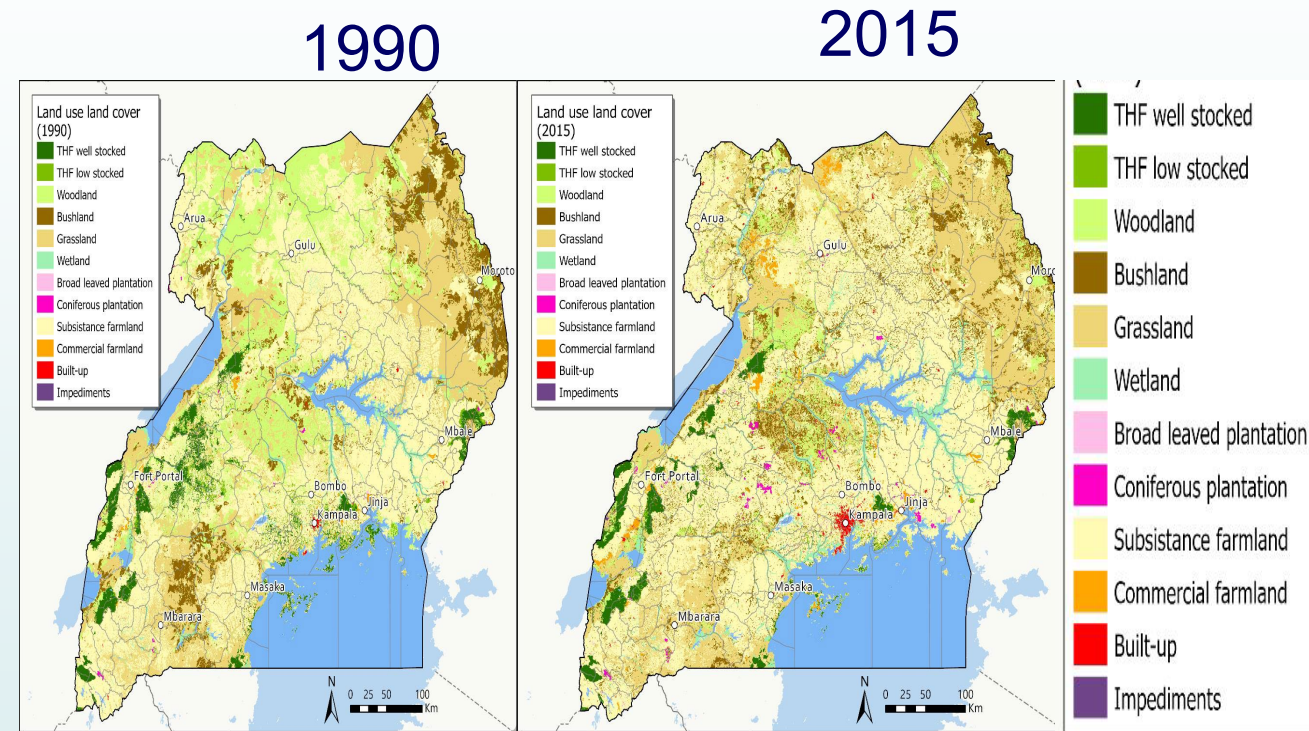
Historic Map



Key Findings

In monetary terms all services & assets increased as shown;

- **provisioning services;** 20.6 Billion USD in 1990 to 48 Billion USD in 2015
- **Regulating services;** 25 Billion USD in 1990 to 39 Billion USD in 2015
- **Cultural Services;** Tourism value increased 10 times more than the values in 1990
- The **Total Asset value** of national ecosystems; estimated of 1.9 Trillion USD in 2015 from 1.1 Trillion UDS 1990.



- The overall asset value of ecosystems per capita declined by 17.7% in the period of 25 years.

Implication of Change in Asset Account

➤ The decline of the overall asset value of ecosystems means;

- Mismanagement of the ecosystem assets
- Increase in demand for these services

➤ The drastic increase in the value of some assets reflects the

- Areas where the country has focused its investments.



Plantation
476%



Wood land
-66%



Built-up land
372%



Bare land
-56%



Open water
97%



Forest -37%



Wetland
45%



Grass land -27%



Bush land
0.2%



Farm land
-11%

Policy Implications

- The accounts provide data to global and national indicators;
 - SDG
 - Uganda's Vision 2040
- They have supported macroeconomic modelling of the impact of climate change, and this has been incorporated into the National Policy and Planning frameworks like the budget.
 - All Ministries, Departments and Agencies (MDAs) are required to mainstream climate change and environment issues in the detailed annual budget estimates
 - The budget is now required to have a certificate of climate change compliance

Conclusion

- The accounts will be expanded in the future to include;
 - Services such as pollination, flood attenuation, local recreation, experiential use of ecosystems, urban air temperature regulation, air quality regulation
 - Contribution of the country's tropical high forests to regional climate regulation (particularly rainfall)
- The updated accounts will allow incorporation of new datasets, such as the recent national livestock census, Tourism Satellite Account
- Future work will focus on the empirical estimation of ecosystem condition and its incorporation into the ecosystem accounts.



***THANK YOU
FOR LISTENING***