



WAVES

Uganda Wood Asset & Forest Resource Accounts Brief June 2020



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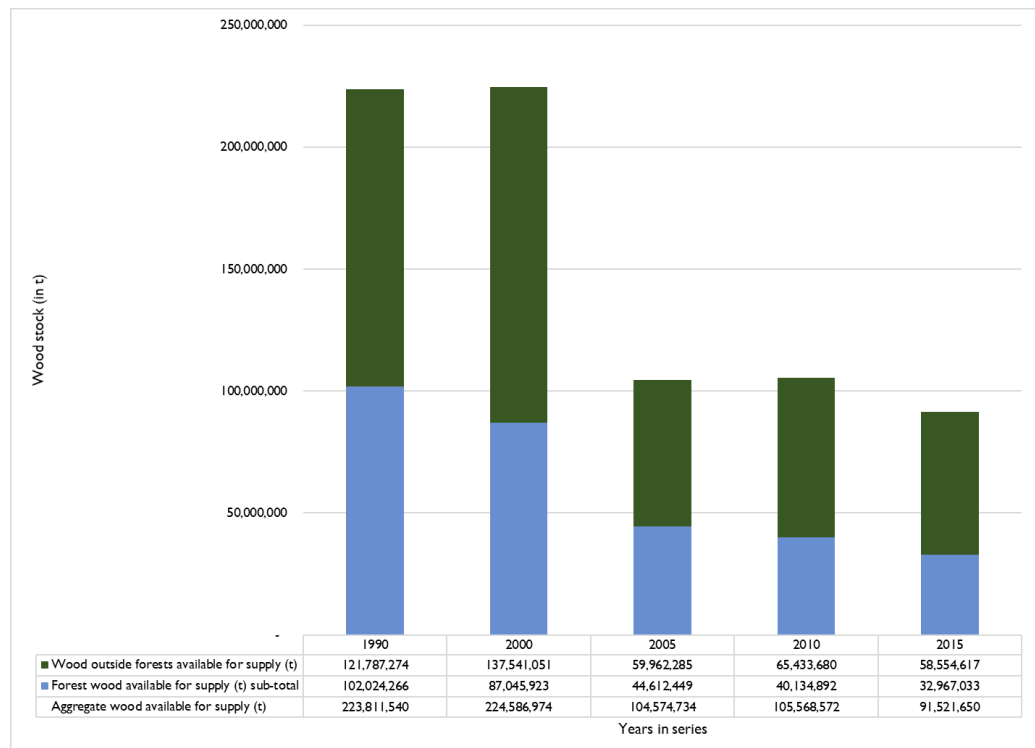
Background

In October 2018, the Government of Uganda, with the support of the World Bank-led Wealth Accounting and the Valuation of Ecosystem Services (WAVES) global partnership, embarked on the development of natural capital accounts for Uganda under the Natural 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 (2020) 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, 2000, 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



Importance of wood assets and forest resources in Uganda

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



the forestry sector contributes around 3.5% of Uganda's Gross Domestic Product, but research shows this does not include all products from forests. The Wood Asset & Forest Resources Accounts use the SEEA to provide a more comprehensive valuation of all wood assets and forest

resources in the country based on the available data. The accounts will help contribute to attainment of the Vision 2040 target to restore Uganda's forest cover to 24% of the land area.

Key methodological principles

- Uganda's wood assets include stocks in five forest land cover classes: broadleaved plantations, coniferous plantations, Tropical High Forest (well-stocked and low-stocked) and woodlands. The wood assets also include wood outside forests located in bushlands, grasslands, wetlands, small scale and commercial farmlands, built up areas and impediments.
- Wood assets are subdivided into wood stocks available for supply and those not available for supply, depending on the type of land ownership and management. For example, wood in National Parks and Wildlife Reserves as well as two-thirds of the wood in Central Forest Reserves is not available for supply.



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Findings

- The wood asset accounts indicate a **45% reduction in national wood stock between 1990 and 2015**, from 356 million tonnes (Mt) to 197 Mt. After an initial 4% increase in wood biomass between 1990 and 2000, the national stock suffered a significant reduction of 43% between 2000 and 2005. Despite a modest 3% recovery between 2005 and 2010, the aggregate stock fell by another 9% between 2010 and 2015.

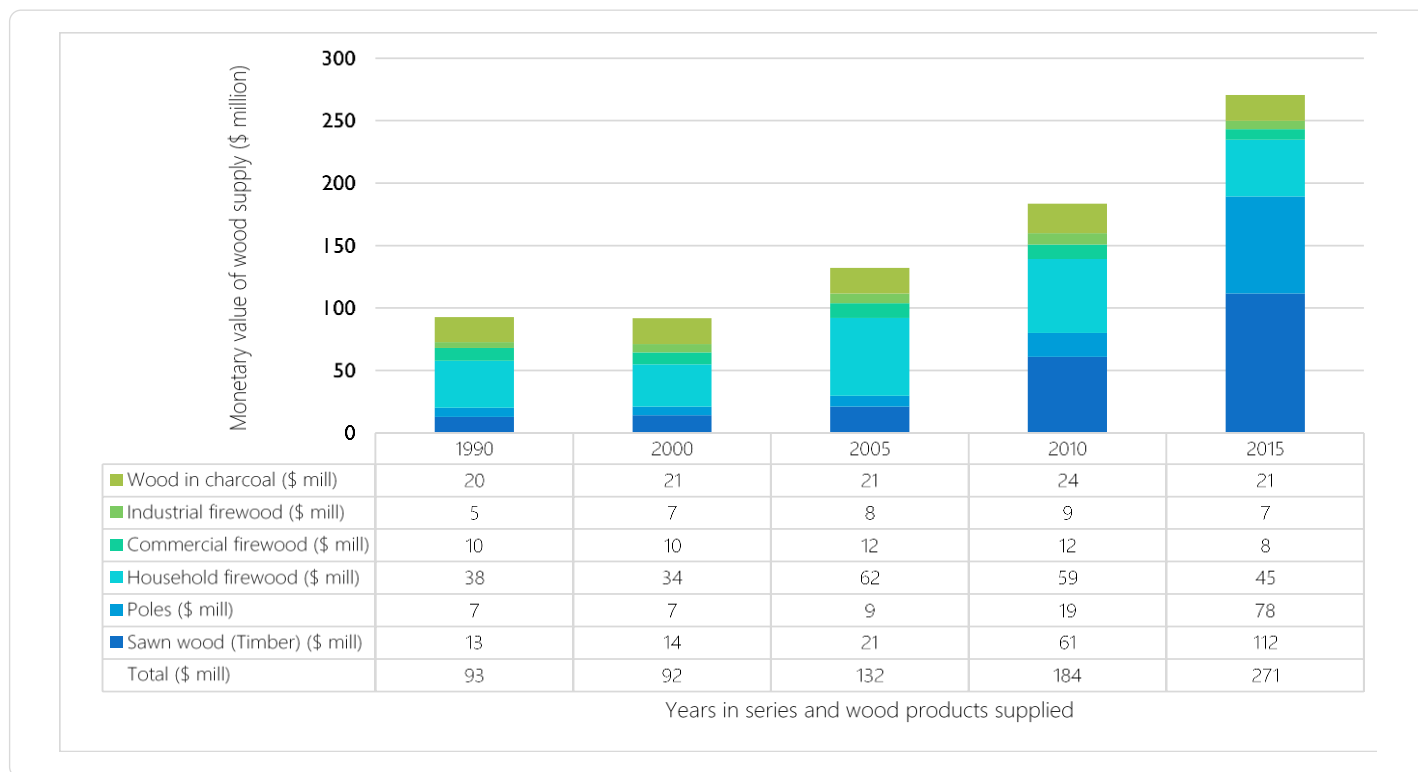
- **Between 2000 and 2015, the wood available for supply declined by 53%** from 227 Mt to 105 Mt. **The wood supply deficit** (which is when current supply does not meet existing demand) **expanded by 22 times during this period**, from 2 Mt in 2000 to 35 Mt in 2015.

The concerns about supply deficit prompted afforestation and plantation establishment programmes including the Sawlog Production Grant Scheme (SPGS) and other private sector investments. **The increase in tree planting led to a doubling of wood stock in plantations**, from 1 Mt in 2005 to 2 Mt in 2015. **Despite these useful additions, the national wood stock still reduced by 14 Mt between 2005 and 2015. Two-thirds of the reduction in national wood stocks between 1990 and 2015 occurred on private land.**

- **The largest decline in wood supply occurred between 2000 and 2005**, which led to a reduction in wood available for supply. This drastic decline in wood stock was triggered by policy and governance failures during the transitional period from the Forest Department, which managed all forests outside of wildlife protected areas in the country, to a two-tier system where Central Forest Reserves are managed by the National Forestry Authority (NFA), while forests on private land are managed by private owners with support of District Local Governments. The policy and governance failure signaled the absence of authority, which resulted into depletion of woodstock: 57% on private land, 18% in Central Forest Reserves, and 30% in National Parks and Wildlife Reserves. Over 90% of the decline in national wood stock between 1990 and 2015 occurred in the period between 2000 and 2005.
- **Due to limited financial and human capacity at district level, the bulk of woodfuel and sawn wood production and transportation in the country is unlicensed, and thus effectively illegal.**

- **The quantity of wood supplied as natural input for the production of wood products in the national economy increased by 2.3 times between 1990 and 2015**, from 61 Mt to 139 Mt. By 2015, at least one-third of the natural input of wood supplied from the economy was from unsustainable production since only 92 Mt was available for supply.
- The supply and use tables also show that **Uganda's wood product trade deficit** (the difference between exports and imports) **reduced by 8.8-times between 2000 and 2015**. Flows of selected non-wood forest products such as shea oil and Prunus Africana bark did not increase in value between 2010 and 2015, the only two time points for which data is available.
- Due to rising demand for wood products as a result of population growth and urbanization, **national wood demand is projected to more than double between 2015 and 2040, from 48 Mt to 105 Mt per annum. Sustainable wood supplies from areas defined as forest will be fully depleted by 2025, leaving an annual wood supply deficit of 72,615 t by 2030**. Wood available for supply from outside forests will reduce to just 3.0 Mt by 2040, less than 3% of total projected demand in 2040. Consequently, most future wood production will then have to shift to areas currently reserved for forest and wildlife conservation, unless wood stocks are created at the same time as they are being depleted on other lands.

Figure 2: Trends in monetary wood product supply value, 1990 to 2015



In Figure 2 above:

The main wood supplies are charcoal; industrial, commercial and household fuelwood; poles and sawn wood (timber).

The monetary value of wood supply increased three times from **\$93 million** in 1990 to **\$271 million** in 2015. 56% of increase in monetary value of wood supply was due to timber supply, 40% due to poles, and only 4% was due to woodfuel (charcoal and firewood).

The changes in monetary value were largely influenced by changes in the price of wood, as the wood products experienced similar increases in supply in physical terms.



“Between 2000 and 2015, the wood available for supply declined by 53% from 225 Mt to 105 Mt. The wood supply deficit expanded by 22 times during this period, from 2 Mt in 2000 to 35 Mt in 2015.”

Policy implications

1. The reduction in Uganda’s wood assets is due to change in forest land cover, overharvesting of wood outside forests and sub-optimal implementation of forest management regulations. With regard to forest governance, there is a need to directly address poor governance for remotely located central forest reserves and enhance capacity of District Local Government to manage forests and wood assets on private land.
 2. Wood stocks outside forest reserves, National Parks and Wildlife Reserves are not adequately addressed under existing regulations. The accounts point to the need for a specific regulation for wood outside forests and targeted guidelines on tree production and silvicultural management for private non-forest lands.
 3. Charcoal production is driven by high demand. However, due to the high risk of wood stock depletion, a new market structure is needed, and the charcoal value chain needs to include wood extraction costs and resource rents.
- Other proposed demand side interventions include development in energy use efficiency through the adoption of improved cooking stoves, kiln technologies and enhanced incentives for the adoption of alternative sources of energy for cooking especially liquified petroleum gas.
4. Current plantation establishment efforts such as the Sawlog Production Grant Scheme (SPGS) are relatively small compared to the scale of wood supply required. The large and growing supply deficit necessitates actions at a much larger landscape scale, emphasizing the need to establish forest cover in areas available for supply cover as the major base of wood stock in the country.
 5. There is a need for more detailed research into non-wood forest products, including medicinal plants, bark cloth, rattan cane, gum arabic, bamboo and resins, among others, to quantify their economic contribution more accurately.

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