



Uganda Wood Asset and Forest Resources Accounts (Forest Accounts)

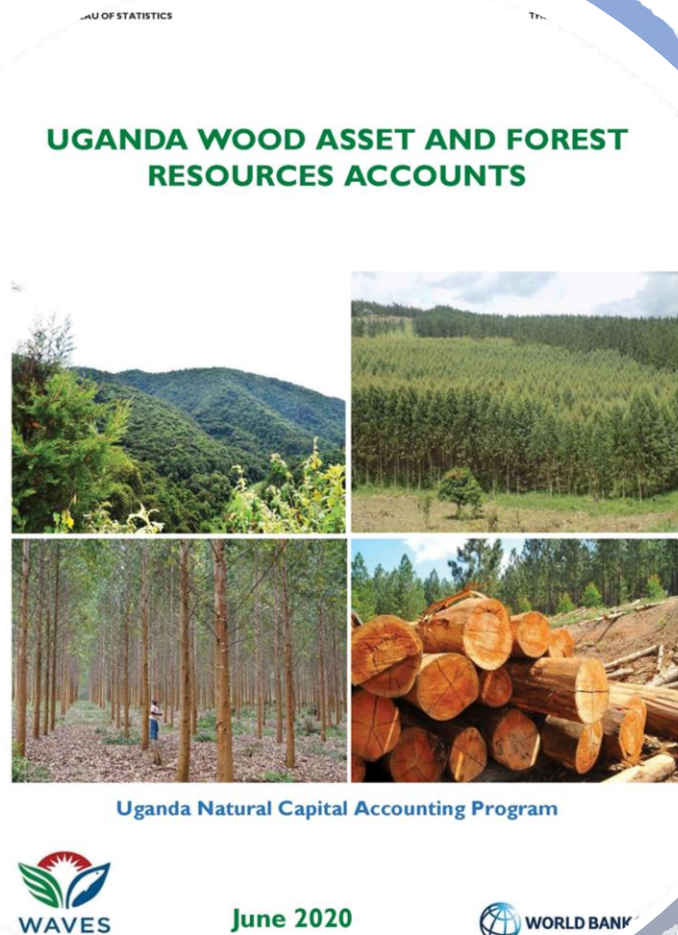
Uganda Natural Capital Accounting Program

Edward Ssenyonjo
Coordinator Inventory and
Surveys
National Forestry Authority

Objective

Forest accounts aim to:

- Help Uganda to achieve a sustainable increase in the economic, social and environmental benefits derived from forests and trees.
- Ensure that wood stocks are conserved and managed in a manner that meets the needs of present generations, without compromising the rights of future generations, by safeguarding forest biological diversity and environmental benefits.



Forest accounts are an attempt to provide a more comprehensive valuation of all wood assets and forest resources in the country, based on the available data.

Methodology and Design

- 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).
- Physical and monetary asset accounts of wood and other selected forestry resources: 1990, 2000, 2005, 2010 and 2015.
- Include projections of supply and demand up to 2040



Scope

- National level to support implementation of the National Forestry and Tree Planting Act (2003) and the Forestry Policy (2001), and forest and wood natural resource management under the Local Government Act cap 243.
- Considers all wood assets and forest resources existing or produced domestically, as well as exports and imports.

Wood products:

- wood fuel (charcoal & firewood)
- sawn wood and poles

Non-Wood Forest Products:

- Shea oil
- *Prunus africana* bark
- Sandalwood oil.



Sources of Key Information

- National Forestry –GIS and Inventory Units
 - Extensive inventories (woody biomass, EI, ISSMI, PSP) in CFR protected areas and outside.
 - Land Use Land cover mapping
- UBOS House Hold surveys
- MAAIF agricultural surveys

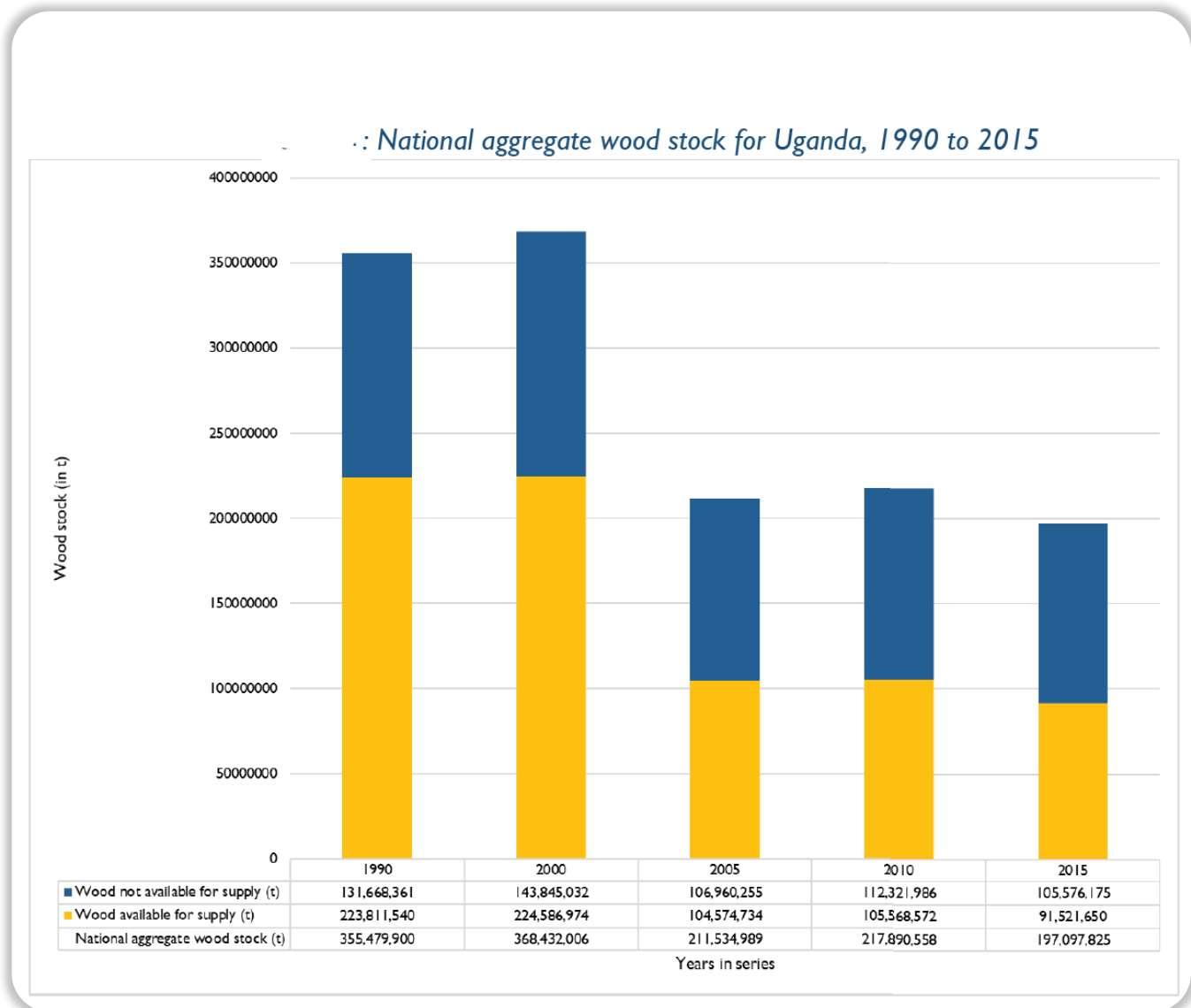
Aggregate wood stock

45% reduction in national wood stock between 1990 and 2015, from 356 million tonnes (Mt) to 197 Mt.

Two-thirds of this loss - on private land.

Wood stock changes:

- 1990 – 2000 - **4% increase**
- 2000 – 2005 - **43% reduction**
- 2005 - 2010 - **modest 3% recovery**
- 2010 – 2015 - **another 9% reduction.**



Aggregate wood stock



- National wood stock reduced by 14 Mt between 2005 and 2015.
- Sharp decline in wood supply between 2000 and 2005 coincided with transitional period from the Forest Department to a two-tier system (NFA / private owners with advice from DLGs)
- Policy and governance failure signalled the absence of authority and resulted into depletion of wood stock:
 - 57% on private land
 - 18% in Central Forest Reserves
 - 30% in National Parks and Wildlife Reserves.
- The increase in tree planting led to a doubling of wood stock in plantations, from 1 Mt in 2005 to 2 Mt in 2015 (largely SPGS and other private planting).

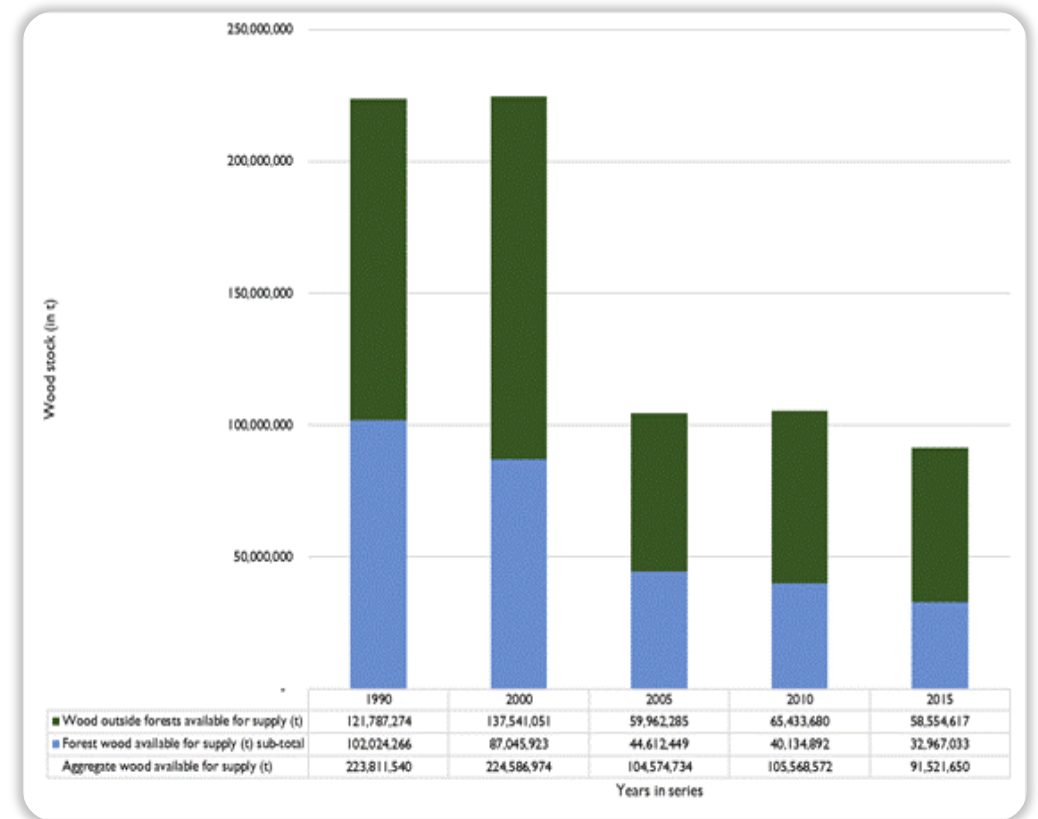
Wood stock available for supply

Depending on the type of land ownership and management:

- Wood stocks available for supply
- Wood stocks not available for supply (e.g. wood in National Parks and Wildlife Reserves as well as two-thirds of the wood in Central Forest Reserves (under conservation) is not available for supply.

Between 1990 and 2015:

- wood available for supply **declined by 59%**, from 224 Mt to 91 Mt.



Aggregate wood stock available for supply, 1990 to 2015

Wood and Non-Wood Products Trade



- Bulk of woodfuel and sawn wood production and transportation in the country is unlicensed, and thus effectively illegal, due to limited financial and human capacity at district level.
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- 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.
- 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.

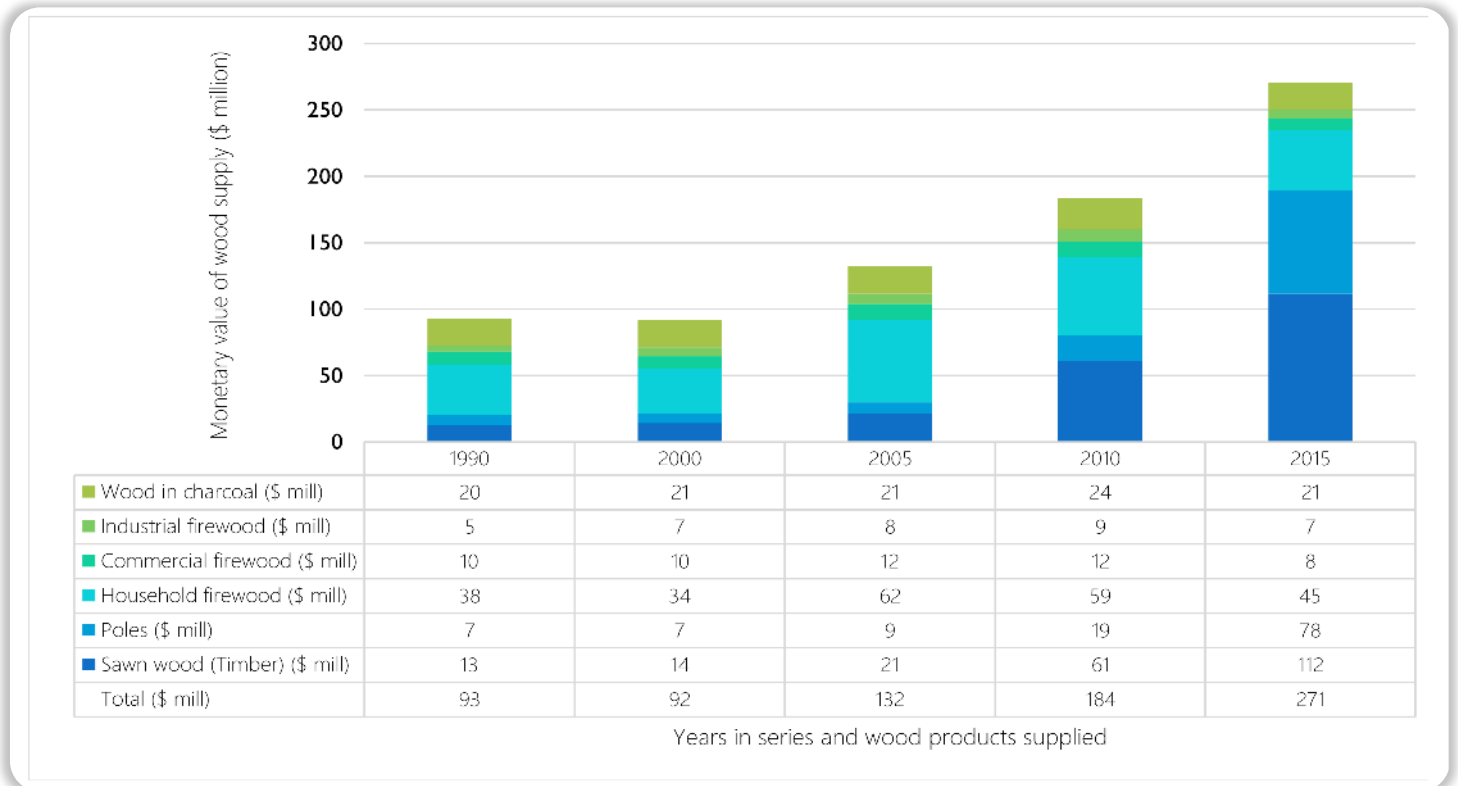
Monetary value in wood product supply

Main wood product supplies:

- Charcoal
- Industrial, commercial and household fuelwood
- Poles and sawn wood (timber).

Monetary value of wood supply **increased three times from \$93 million in 1990 to \$271 million in 2015** – as a result of price changes:

- 56% due to timber supply
- 40% due to poles
- 4% due to woodfuel (charcoal and firewood)



Trends in monetary wood product supply value, 1990 to 2015

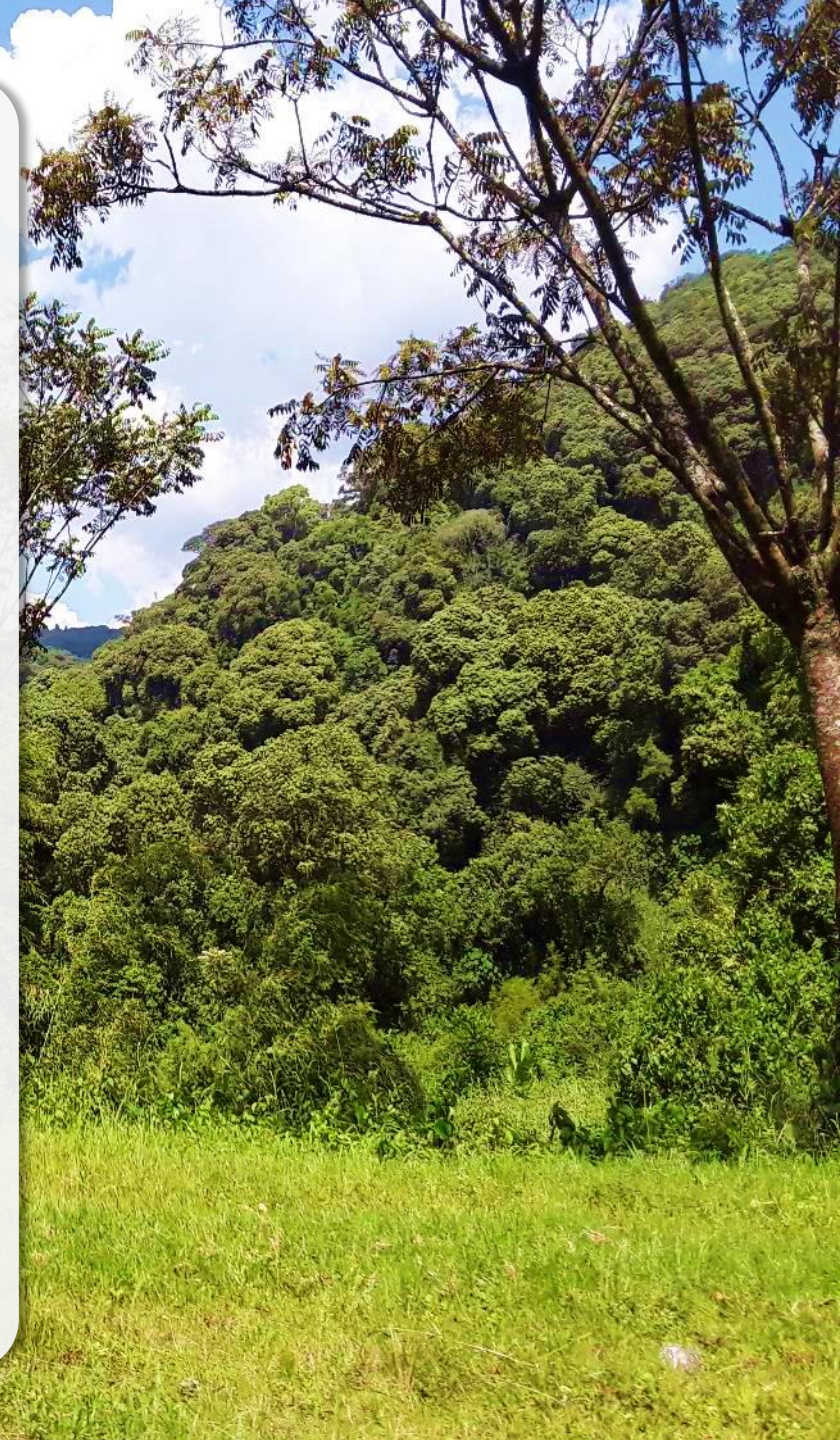
Projections of wood demand and supply



- National **wood demand is projected to more than double between 2015 and 2040, from 48 Mt to 105 Mt per annum**, due to rising demand as a result of population growth and urbanization.
- **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.
- It is predicted that **most future wood production will have to shift to areas currently reserved for forest and wildlife conservation**, unless adequate wood stocks are created to match the rate of depletion/use.

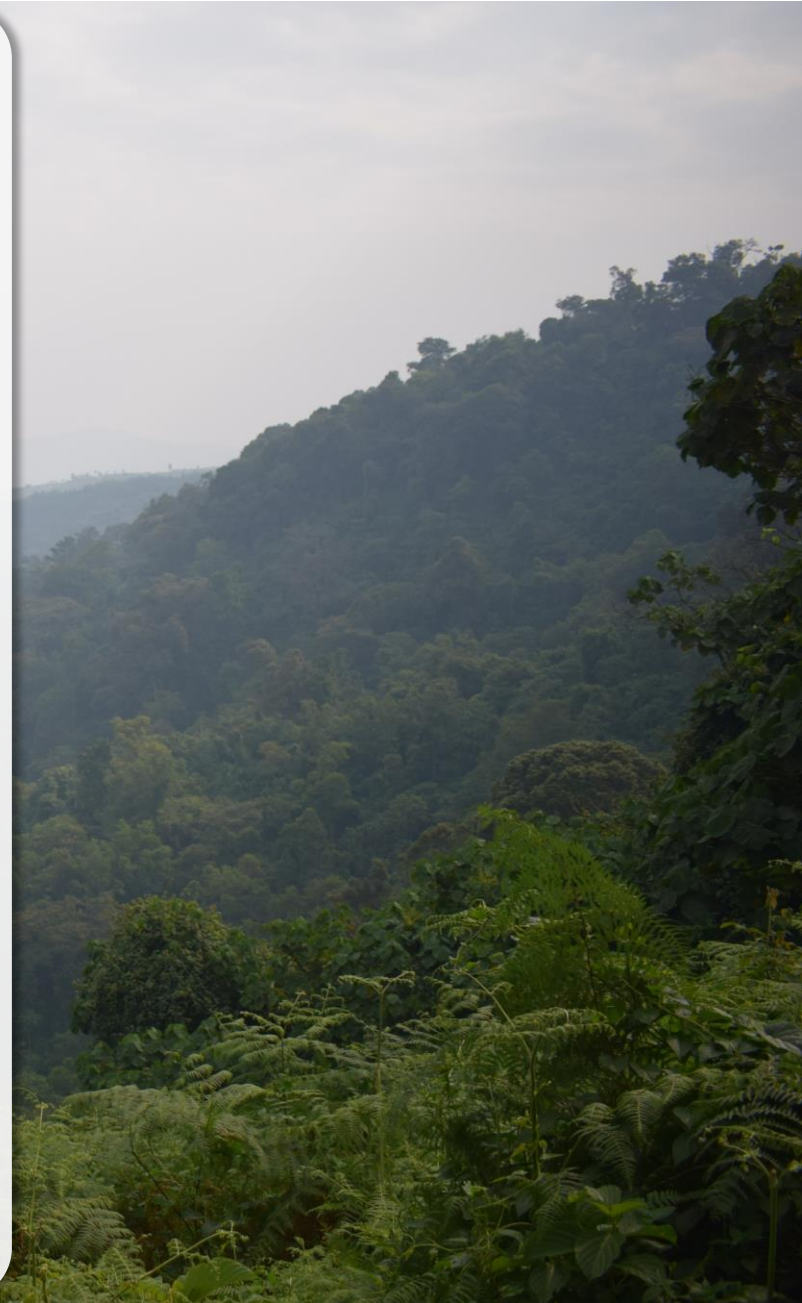
Policy implications

- Loss of wood stock - mainly due to overharvesting of forests on private land and sub-optimal implementation of forest management regulations.
- Important to directly address poor governance of the sector and enhance capacity of District Local Government to manage forests and wood assets on private land.
- Need for a specific regulations and guidelines on tree production and silvicultural management for private non-forest lands.
- 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.



Policy implications

- Improve energy use efficiency:
 - Adoption of improved cooking technologies.
 - Adoption more efficient charcoal production technologies
 - Establishment of plantations dedicated to fuelwood supply.
 - Enhanced incentives for the adoption of alternative sources of energy for cooking.
- Stimulate establishment of timber plantations as a major base of wood stock in the country.
- Research on non-wood forest products, including medicinal plants, bark cloth, rattan cane, gum arabic, bamboo and resins, among others, to quantify their economic contribution to GDP more accurately.
- Review market structure, and formalize value chain for forest products and services.





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THANK YOU