Narrowing the wood supply gap through on-farm wood production in Ethiopia



POLICY BRIEF



Small-scale Eucalyptus woodlot, wood market, and poles for scaffolding purposes

Key Messages

- This policy brief aims to propose options to narrow the wood supply and demand gap through a critical scenario analysis at the national level, complemented with wood value chain analysis that reflects the on-the-ground realities
- Limited access to credit services, complicated bureaucratic processes, insecure land tenure, and the dominant influence of government forestry enterprises in the wood value chain are among the key constraints to augmenting the national wood supply
- The government needs to remove some of the complicated bureaucratic land acquisition processes to ensure tenure security for private investors, small- and medium-sized wood producers
- Wood import substitution with locally produced wood products can reduce government spending, while promoting local industrialization, innovation, and job creation
- Cross-sectoral collaboration among government departments and the need to extend the
 participation of small- and medium-scale wood producers beyond wood production to wood
 processing and marketing activities is crucial to upscale the wood supply
- This policy brief is intended for forest and natural-resource policymakers, wood industrial sector, non-governmental organizations, and academia dealing with the forestry and wood sector in Ethiopia

Introduction

The estimated annual wood supply gap of 39 million m³ (MEFCC 2015) is expected to rise due to the increasing demand for wood products. The country's forest cover is around 15.5% of the land area (NFSDP 2016), making it even more unlikely to achieve sustainable wood supply from the natural forests alone. Given the deforestation rate of 91,000 Ha/year between 2000 and 2013 (MEFCC 2018), wood must be produced from sources other than the natural forests to help bridge the supply gap. However, this should be implemented with caution based on the principle of sustainability as the guiding concept to ensure successful outcomes. This policy brief **aims** to propose options to narrow the wood supply and demand gap through a critical scenario analysis at the national level, complemented with wood value chain analysis that reflects the on-the-ground realities.

The wood deficit challenge is a combination of several other interlinked factors. Therefore, to demystify this challenge, it is important to look critically at the underlying factors. The WoodCluster project, during its implementation, found out the following **challenges**:

- Limited investment in plantation forestry development by the private sector.
- The strong dominance of the wood market value chains by government forest enterprises over the small and medium-sized wood producers.
- Increased competition for land use between forestry and other development sectors such as agriculture, livestock, rural resettlement and urban development.
- Conflicting mandates of the various governmental sectors and non-governmental organizations at the expense of sustainable forest management
- Limited extension services for smallholder farmers impede technology and innovation transfer.
- Limited access to credit and financial services for the smallholder farmers and private investors to embark on plantation development and wood processing activities.
- Limited infrastructure for wood processing and value addition resulting in low wood recovery rates and low-quality of finished products.
- Limited budget allocation and logistic support to the forestry sector by the government undermines the implementation of forestry activities.

Project methods



National wood product supply scenarios

The first scenario analysed the forest and wood processing industries using the Business-asusual scenario. This scenario promotes the concept of a forestry and wood product sector that operates without any major changes in its mandates and policies. It is unlikely to close the wood supply gap under this scenario because the forestry sector needs massive transformation in terms of logistic support and political backing to pursue its mandates of achieving sustainable forest management. Without this support, the sectors' activities are futile. The current state of the forestry and wood products sector have seen a drastic increase in the importation of wood products. This situation undermines the sectors' contribution to the national economy; therefore, efforts should be directed toward meeting the national wood demand. This is critical because the combined contribution from the forestry sector and the wood processing industries to the national GDP is under 5% (Teshome 2021). Therefore, a transition to national wood sufficiency should be first pursued to cut down government expenses on wood import before considering the possibility to export wood products to other countries.

Scaling up investments in the forestry and wood products sector to create a country driven by a climate-resilient green economy is very ambitious for a country that is still challenged with meeting its national wood demand. Although, official reports have confirmed that wood production and revenue generation has significantly increased under the **government's plan scenario**. Howev-

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er, the wood supply and demand gap continues to widen, further exacerbating the country's deforestation and forest degradation problems. To meet demand, the import of wood products is increasing as well. This critical situation presents uncertainty for the future of wood production. There should be more actions to address the wood supply challenge while promoting a green economy. The policy should look beyond increasing government investments to create an enabling environment for the private sector to invest more in wood production. This requires removing overly complicated bureaucratic processes to support a flexible entry pathway for potential private investors. Guaranteeing the provision of supporting systems is crucial for private investments to thrive. The policy environment should also be in place to minimize the dominant influence of the government forest enterprises in the forestry and wood processing industries.

Reflections from the first and second scenarios formed the basis for the **independent experts' opinions** on the wood supply and demand situation. Expert opinions perceived an increase in wood production on a sustainable scale to meet the increasing demand for fuelwood, biomass, and small diameter poles. However, to realize this outcome, the first scenario should be modified toward pursuing sustainability. The second scenario should guarantee a suitable environment for profitable private sector investments to complement government investments in the forestry and wood product sector.



A group discussion (left) and a presentation (right) at the National Scenario workshop in Addis Ababa, June 2018

Wood value chain

Understanding the value chain for wood products has become increasingly important to report the economic contribution of wood products for the actors involved and the national economv. The value chain of wood reflects the series of transformational stages that wood undergoes from the producer to the end-user. Efforts to upgrade the wood value chain should rely on first understanding the series of transformational stages and the associated challenges at each step along the chain. One of the commitments of the WoodCluster project was to propose options to upgrade the value chain of wood products, specifically Eucalyptus poles and fuelwood in Ethiopia. This was the rationale for the Participative Innovation Platform (Auch and Pretzsch 2020) workshop, which incited discussions from the various actors involved in the wood value chain.

There is an opportunity to leverage the wood supply deficit by strengthening the value chain such that more value is created from one stage to another. However, there are challenges that tend to disincentivize the participation of the actors in the value chain. The prominent challenges are related to limited technology to support value addition for wood products. This is the un-

derlying reason for the low-quality of finished wood products reaching the market. Despite the spike increase in the price of wood products, the actors in the wood value chain still struggle to maximize profits due to the dominant influence of middlemen and the influx of illegal wood in the value chain. Therefore, the government should firmly commit to creating an enabling environment so that every actor obtains their fair share of benefits from the wood sales.

Limited access to market price information, credit services, and poor road conditions further constrain market access for the smallholder and medium-scale wood producers. This is exacerbated because most smallholder tree growers act independently, so they incur high transportation and transaction costs. Farm gate prices for wood are relatively low, which leave the smallholder tree growers with no option but to sell their wood to the local traders and middlemen at the farm gate. At this stage, the scale of value addition is still rudimentary, presenting an opportunity for the traders and middlemen to participate in the value addition process. This is how value continues to be created beyond the farm level until the wood reaches the final customer.





A group discussion (left) and a group photo (right) at the Participative Innovation Platform workshop in Hawassa, June 2018

Policy implications and recommendations

priority in implementing rural and national devel- ers. opment plans. Therefore, efforts to transform the forestry and wood products sector to become competitive with high returns on investment should consider the implications of forestland expansion on other development sectors.

Addressing the wood supply deficit implies that spending. Wood import substitution with locally wood production should focus on meeting the na- produced wood products can save millions of doltional demand. This has implications for wood ex- lars while also promoting local industrialization, ports to neighbouring countries, resulting in for- innovation, and job creation. The recent massive eign exchange loss. Therefore, there should be a tree planting initiative (Green Legacy of Ethiopia) trade-off between the need to achieve national of the government of Ethiopia may be a very great self-sufficiency in wood supply or revenue genera- opportunity for the development of the forestry tion from wood export.

Having groups of smallholder and medium-scale wood producers throughout the country presents a challenge for collecting and monitoring tax payments. Therefore, the idea of promoting the partic- It is crucial for a cross-sectoral integration of the economy.

Despite the several challenges that plague the forestry and wood products sector, there is still room for improvement, provided key policy actions are taken by the government and other relevant

Promoting the agenda of upscaling forestry invest-policymakers. The strong relationship between ments from both government and the private sec- wood product utilization and livelihood sustenance tor could militate against land use by other devel- necessitates the need for a shift in the policy enviopment sectors. The competition for land use has ronment towards pursuing sustainability in wood always favoured sectors such as agriculture and production and value chains. However, for this to urban development over forestry because of their happen, the government needs to remove some current high contribution to the national economy, of the complicated bureaucratic land acquisition Moreover, agriculture is associated with food se- processes to ensure tenure security for private curity goals, making land allocation for farming a investors, small- and medium-sized wood produc-

> The government should also endeavor to push robust legislative instruments to halt the massive destruction of natural forests nationwide. Also, the government should pursue efforts to minimize the import of wood products to reduce government sector in increasing wood supply, environmental protection, reducing deforestation and forest degradation, technological development and improving economic growth of the nation.

ipation of small and medium-sized businesses in government's forestry department with other state the forestry and wood processing industry would departments and agencies to establish clear manhave some impact on tax revenue, thereby under- dates and promote synergy in the execution of mining the sectors' contribution to the national departmental mandates. The government in collaboration with relevant stakeholders should support organizing small and medium-scale wood producers into formal groups to promote collective action and create more visibility for wood produc-

References:

Auch, E.; Pretzsch, J. (2020). Participative Innovation Platforms (PIP) for upgrading NTFP value chains in East Africa. Small-scale Forestry 19: 419-438. https://doi.org/10.1007/s11842-020-09442-9

MEFCC (Ministry of Environment, Forest and Climate Change) (2015). Ethiopia Forest Sector Review focus on commercial forestry and industrialization, Addis Ababa, Ethiopia.

MEFCC (Ministry of Environment, Forest and Climate Change) (2018). Ethiopia's National Forest Inventory, Technical Report. Addis Ababa, Ethiopia.

NFSDP (2016). National Forest Sector Development Programme. Institutional Strengthening for Forest Sector Development in Ethiopia. Addis Ababa, Ethiopia.

Teshome, B. (2021). Cluster analysis for forest and wood-processing industry sector development in Ethiopia. PhD thesis, Technische Universitaet Dresden, Germany.

WoodCluster Project

2017-2022



Ethiopia

Uganda

Tanzania

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