# Growing a green economy in Africa: why forests matter

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**Policy pointers**

- Forests need improved governance that involves all stakeholders in decision-making processes, including local people with traditional claims to forest resources.
- Governments and companies need to explore new ways to engage with communities — giving local people more control can spread benefits more widely, reduce social risks and provide a better long-term investment prospect.
- Overcoming financial barriers to scaling up green economy interventions requires both an improved climate for investors and the channelling of public funds to enabling activities at local level, such as capacity-building.
- Further research is needed to better understand the value of forest asses and of the ecosystem services used by different sectors and livelihood systems.

**There is economic potential in African forests but it is threatened by an increasing demand for forest products, and by encroachment from other sectors. Here we explore the potential of a 'green economy' approach to the forest sector, which seeks to improve human wellbeing and social equity while reducing environmental risks and ecological scarcities. Interventions across Africa that aim to conserve, enhance and restore natural capital; increase resource efficiency; or promote sustainable consumption, show how forests could help drive a green economy transformation. Our scenario analysis indicates that a selection of such interventions, when scaled up, could help to meet increased demand for timber while enabling sustainable forest management. But scaling up of promising interventions will require action to create an enabling environment.**

Africa is achieving high gross domestic product (GDP) growth rates but still faces challenges in reducing poverty and creating sufficient jobs. African economies are highly dependent on natural resources so future growth and development will depend on what happens to key assets like forests. For these reasons, 'green economy' approaches — which improve human wellbeing and social equity while tackling environmental risks and reducing ecological scarcities[1] — are increasingly relevant to the continent.[2]

Africa's formal wood harvesting and processing industry generates around US$ 17 billion per year, contributing 0.9 per cent of GDP, but it employs just 0.2 per cent of the labour force.[3] While the sector is growing in absolute terms, both production and exports are declining relative to other sectors.

Beyond the formal sector, however, forest resources contribute to African economies in other diverse ways. Small-scale logging and sawmilling carried out on an informal (and sometimes illegal, though often traditional) basis can sometimes provide many more jobs than the formal forest sector. For example, in Cameroon, artisanal sawmilling generates 44,000 jobs, twice as many as in the formal forest sector.[4]

## Box 1. Local community licensing and control

Cameroon has started the process of giving communities control over forests with nearly 400,000 hectares of designated communal forests (and a further 400,000 still being classified), supplying five to ten per cent of the national timber markets.[i] However, the classification process is costly and cumbersome, and communities often do not have the capacity to run forestry enterprises themselves or to negotiate effectively with logging companies to get a fair deal.[ii]

Kenya has introduced legislation allowing charcoal producer associations to apply for licences to harvest woodfuel and produce charcoal. Results have been mixed as there have been delays in handing out licences and a lack of awareness among authorities, producers and traders about the new rules.[iii]

[i] N Bayol et al. 2014. 'The logging industry and management of natural forests: tropical timber and the forests of Central Africa in the face of market trends' in C de Wasseige and others (eds) The Forests of the Congo Basin – State of the Forest 2013 / [ii] K Angu Angu. 2007. Community-based forest enterprises in Cameroon– a case study of the Ngola-Achip Community Forest in East Cameroon. Rights and Resources Initiative. www.rightsandresources.org/documents/files/doc_289.pdf / [iii] R Godfrey Wood and B Garside. 2014. Informality and market governance in wood and charcoal value chains. Briefing. IIED, London. http://pubs.iied.org/17274IIED.html

Forests also meet needs for food, energy and medicinal plants, with important livelihood implications. Ninety per cent of the wood extracted in Africa is used for woodfuel, primarily for household cooking,[5] and over 60 per cent of households depend on wood and charcoal for energy.[3] Forests make crucial, though poorly-documented, contributions to GDP in other sectors by providing vital 'ecological services', such as storing carbon (mitigating climate change), protecting watersheds from erosion and sustaining biodiversity.

But there are severe threats to the forest resource base, and so to its green economy potential:

- Informal rights associated with people's traditional systems of governance rarely get official recognition. This contributes to social inequity and undermines local people's incentives to invest in good management

- Deforestation, driven as much by agriculture as by forest resource extraction, is rapid, with 75 million hectares (ha) of forest lost between 1990 and 2010[6]
- Forests are increasingly degraded: only a small proportion of Africa's production forests are sustainably managed
- Over-harvesting, of both woodfuel (firewood and charcoal) and non-wood forest products, is damaging forests situated close to markets.

As a result, Africa's forests, for all their environmental and development potential, have become a major source of carbon emissions.[7]

# 'Business as usual' scenarios

Given Africa's expected population increases and economic growth rates, demand for forest goods and services will rise considerably. In a 'business-as-usual' scenario, without major change to current policies and practices, domestic demand for industrial roundwood (eg wood used sawn timber, veneer, plywood, pulp and paper) could be double or even triple the current level (96.2 million $m^3$) by 2050.[8] And although Africa expects to increase production from planted (as distinct from 'natural') forests, this will not be enough to offset the loss resulting from deforestation.

Table 1 shows two business-as-usual scenarios for 2030 and 2050: one with worst case assumptions about high demand increase and low supply increase (given high deforestation and limited expansion in planted forests); the other showing a best case scenario with less pessimistic assumptions about these variables (ie, lower increase in demand, greater increase in supply).

*A package of interventions would help to secure the future of the forest sector*

In both scenarios, meeting such demand from the natural forest that is already designated for 'productive use' will require harvesting intensities well above sustained yield[9] of 0.25 to 0.5$m^3$/ha/year,[10] negatively affecting future yields of industrial-use timber and putting severe strain on the forest resource base, which is already threatened by agricultural expansion. This could be exacerbated by localised shortages of woodfuel, especially near urban areas.

If the natural (non-planted) forest resource base continues to decline, it will become ever more difficult to meet demand. In short, a business-as usual-scenario is likely to lead to a greatly reduced forest sector with lower employment, much greater dependence on imports, and wood being replaced by other materials that may do more environmental damage. Forests will be less able to deliver important ecosystem services, meaning carbon emissions will increase and biodiversity will be threatened.

# Transformative interventions

While this possibility is bleak, there are several types of intervention that, having been tried out in Africa, provide glimpses of how forests could help drive the transformation to a green economy.

**Managing, enhancing and restoring natural capital** can make it possible to meet high environmental standards associated with sustainable forest management in both natural and planted forests. However, managing social relationships and ensuring lasting benefits for local communities remains a major challenge (Box 1).

**Increasing resource efficiency** can reduce pressure on forest resources, whether in tree-planting or wood or charcoal processing, through new technology, improved handling and storage practices or better organisation in the supply chain. This potential is evident in South Africa, where the average productivity of forest plantations increased by more than 40 per cent from 10$m^3$/ha to 14.5$m^3$/ha from 1980 to 2012.[11]

According to World Vision, energy efficient cooking stoves use up to 60 per cent less wood than open fires.[12] Their Energy Efficient Stoves 'Clean Development Mechanism' project in Ethiopia aims to distribute 30,000 of these stoves, the use of which also benefits low income families — particularly women and girls — by reducing ill-health effects from indoor smoke and saving time spent on woodfuel collection and cooking. The challenge is to secure high levels of uptake of resource-efficient

technologies, by overcoming problems of high upfront costs, and ensuring that user needs and preferences are taken into account.

Sustainable consumption interventions are reinforcing the two approaches above. This uses demand pressure to drive improvements, often as part of international regulatory or supply chain initiatives but also (to a lesser extent) can be through national initiatives to promote sustainable locally produced goods. Five African countries have signed Voluntary Partnership Agreements with the European Union to halt illegal timber exports, and two of these — Cameroon and Ghana — have gone further by incorporating the domestic market into the agreement as well.[13] Organic and fair trade labelling of natural food and health products is helping some of the more marginalised groups in Africa to generate income from non-wood forest products.

**Table 1. Projected effect of green economy measures on timber supply and demand balance (million $m^3$/year)**

| Demand and supply variables | 2030 | | 2050 | |
|---|---|---|---|---|
| | Best case: low demand, high supply | Worst case: high demand, low supply | Best case: low demand, high supply | Worst case: high demand, low supply |
| **Business as usual** | | | | |
| Projected industrial roundwood domestic demand* | 146.60 | 171.10 | 206.00 | 304.40 |
| Natural forest production area after deforestation (million ha) | 172.40 | 157.00 | 153.60 | 126.70 |
| Production from planted forests | 32.80 | 30.45 | 38.70 | 33.10 |
| Production required from natural forests | 113.80 | 140.70 | 167.30 | 271.30 |
| Harvesting intensity required to meet demand ($m^3$/ha/year) | 0.66 | 0.90 | 1.09 | 2.14 |
| **Green economy interventions** | | | | |
| Industrial roundwood supply potential with harvesting intensity compatible with sustainable forest management (0.375$m^3$/ha/year) | 97.50 | 89.30 | 96.30 | 80.60 |
| Surplus/shortfall (from projected domestic demand) | -49.10 | -81.80 | -109.70 | -223.80 |
| Industrial roundwood supply potential with sustainable forest management combined with increase in planted forests' area and productivity, improved wood processing efficiency and 50% reduction in deforestation | 166.90 | 137.70 | 217.30 | 151.40 |
| Surplus/shortfall (from projected domestic demand) | 20.30 | -33.40 | 11.30 | -153.10 |

* Domestic demand with full import substitution but no exports. Source: compiled using data from tables 5, 8, 9 and 10 in *The Role of Forests in a Green Economy Transformation in Africa* (IIED 2015).[2]

# Green economy scenarios

In Table 1 we also consider the potential effects of scaling up a package of interventions like those described above, including expanding the area and productivity of planted forests, increasing processing efficiency and reducing deforestation (primarily by addressing low agricultural productivity). As with the business as usual scenarios, the interventions are explored with different assumptions for the low supply and high supply models. It shows that these natural capital and resource efficiency interventions can, in theory, ensure the future of Africa's forest resources while still wholly or partially meeting increasing demand for wood.

Sustainable management of natural forests, at a harvesting intensity compatible with sustained yield, increases the likelihood that the forest resource base will be maintained into the future. However, by 2030, the demand for industrial roundwood is projected to far exceed sustained-yield supply. As a result, sustainable management of natural forests alone may not be enough, but should be combined with other green economy interventions, forming a package of actions. Table 1 shows that, if this multi-pronged approach is taken, the shortfall in wood supply is significantly reduced in the worst case scenario and eliminated altogether in the best case scenario. Such a package of interventions would help to secure the future of the forest sector and its contribution to GDP and employment.

# Improving the enabling environment

In practice, there are considerable obstacles that need to be overcome for the interventions considered to bring about the transformation to a green economy. Governments and other forest stakeholders need to take action to provide an enabling environment.

**Seek wider participation.** A fundamental step towards better forest governance is for all stakeholders, including those who are not part of the formal economy, to take part in an open dialogue on a vision for the country's forests. Achieving this may require recognising local people's traditional claims to forest resources, and giving them and their representatives 'a place at the table'. Such a dialogue must explore the opportunities and trade-offs provided by all types of forest ecosystem services, and recognise use by non-forest sectors such as tourism and agriculture. Different levels of government also need to be involved. Processes followed for the Voluntary Partnership Agreements and for REDD+ provide an important precedent and base on which to build.

**Boost local control and engagement.** Governments and the private sector need to explore a wider range of approaches for engaging local people in forest management. In the standard approach, companies are allocated forest concessions or lease land from the government for plantations; at best they reach some 'corporate social responsibility' arrangement with the local informal land and resource users. But this often fails to deliver local benefits, remains vulnerable to social conflicts, and risks damaging companies' reputations, which can make it difficult to attract finance.

Other models that involve more local control need to be considered. For example, partnerships between companies and community-owned forest enterprises or encouraging farmers to plant trees on their land. These alternative approaches can take a long time to get established but can pay off as good relationships with local communities are good for business.

**Work with the informal sector.** Finding new ways to engage local communities will require a change in attitude and approach to the informal sector, recognising its full spectrum of activities: from illegal, corrupt and unsustainable through to good practice that complies with customary rules even if outside formal law. Governments, the private sector and NGOs must work with people in different parts of the informal spectrum in different ways: tackling socially and environmentally destructive activities through tougher enforcement, but also encouraging good practice through technology, business and marketing support.

**Improve access to finance.** Unwillingness by banks or investors to get involved in new forest-related initiatives usually results from an unfavourable policy and institutional environment as well as more specific issues of risk and returns. Public investment is needed to improve the investment climate, for example by increasing transparency. Actions under the Voluntary Partnership Agreement process that

improve governance and promote multi-stakeholder participation may also lessen investors' perceptions of risk.

Similarly, concerted efforts to apply REDD+ safeguards could have the side effect of boosting investor confidence in a country.[14] Public finance can also address more specific obstacles, by paying, for example, for technical expertise and business mentoring (where enterprises do not have a track record), and special equity funds that can enable small forest enterprises to meet the percentage of 'own funding' required for bank loans.[15]

**Cross-sector coordination.** Forests affect, and are affected by, a number of other sectors, notably agriculture, energy, infrastructure and mining. This means coordination between sectoral authorities and between different levels of government is vital. Some REDD+ programmes are showing the way by linking measures to improve agricultural productivity with action to reduce forest encroachment.

**Improved information on forest assets.** Economic policymaking has tended to focus on the value of wood and fibre without fully appreciating the other economic contributions that forests make. Forests need to be reflected in national accounts and expenditure control review processes, but better information is required for this. Publicly supported research on forest ecosystem services can help by documenting how the services contribute to different sectors and livelihood systems. This proposed research will raise awareness about the ecological foundation that forests provide for GDP in many sectors, and the range of forest stakeholders and management types that can sustain it.

Ultimately, forests can play a significant role in a green economy transformation in Africa provided the interventions that are showing promise can be scaled up. This requires an enabling environment that takes account of all forest stakeholders, formal and informal.

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## Notes

[1] UNEP. 2011. Towards a green economy: pathways to sustainable development and poverty eradication. www.unep.org/greeneconomy / [2] IIED. 2015. The Role of Forests in a Green Economy Transformation in Africa. http://pubs.iied.org/13580IIED.html / [3] FAO. 2014. State of the World's Forests 2014: Enhancing the socioeconomic benefits from forests / [4] JP Nkou and R Eba'a Atyi. 2013. 'Analyse macroéconomique du secteur forêt-faune' in Eba'a Atyi, R and others (eds) Étude de l'importance économique et sociale du secteur forestier et faunique au Cameroun. CIFOR / [5] FAO 2012 2012 Global Forest Products Facts and Figures / [6] FAO. 2010. Global Forest Resources Assessment 2010 / [7] R Valentini et al. 2014. 'A full greenhouse gases budget of Africa: synthesis, uncertainties, and vulnerabilities'. Biogeosciences, 11, 381–407 / [8] In roundwood equivalents — author's calculations based on FAOSTAT / [9] 'Sustained yield' refers to the amount of timber that can be harvested per hectare per year without reducing future yields. / [10] D Alder. 1999. Some issues in the yield regulation of moist tropical forests. Paper presented to a workshop on humid and semi-humid tropical forest yield regulation with minimal data held at CATIE, Turrialba, Costa Rica, 5–9 July 1999 / [11] R Godsmark. 2014. The South African forestry industry's perspective on forestry and forest products statistics. Presentation to FAO Workshop on Forest Products Statistics 27 November 2014 / [12] PoA 9769 : Energy Efficient Stoves Program (EESP) Appendix 1 – PoA 9769 ER http://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5TE6HLP1Z4KOABSDI873YQCFGXW2RM/view / [13] FAO. 2014b. The Voluntary Partnership Agreement (VPA) process in Central and West Africa: from theory to practice / [14] T Christophersen. 2015. 'Are REDD+ safeguards key to financing sustainable landscapes?' The UN-REDD Programme blog. https://unredd.wordpress.com/2015/06/03/are-redd-safeguards-key-to-financing-sustainable-landscapes/?preview_id=1219 / [15] D Elson. 2012. Guide to investing in locally controlled forestry. Growing Forest Partnerships in association with FAO, IIED, IUCN, The Forests Dialogue and the World Bank. IIED, London. http://pubs.iied.org/13565IIED.html

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