



The current state of Eastern Africa's forests

A summary

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Highlights

- Many of Eastern Africa's forests ecosystems, which harbor a unique and rich biodiversity, are transboundary. Trade of charcoal and timber spills across national boundaries, and issues such as deforestation, forest degradation and climate change transcend borders. A regional solution to managing and monitoring forests is necessary to ensure forests are protected and sustainably managed for current and future generations.
- Deforestation and forest degradation are having a significant impact on regional forest cover. Uganda lost almost half its forest cover between 1990-2015, going from 24% to 12.4% of total land area, and Tanzanian deforestation rates are among the largest globally; if they continue or increase, all forest will be lost within 50-80 years. This regional deforestation and degradation are driven directly and indirectly by agricultural expansion for subsistence and commercial farming; unsustainable harvesting of timber; firewood, charcoal and pole production; infrastructure development; and wildfires.
- Although forestry laws and institutions differ, decentralization now sees communities and local authorities across the region involved in forest management. Effective law implementation is hindered by inadequate financial, technical and human capacity, insufficient stakeholder coordination, weak conflict resolution and grievance mechanisms, corruption, political interference and elite capture, as well as conflicting intra-sector policies favoring forest conversion.
- Kenya, Uganda, Tanzania and Mozambique are at different stages in REDD+ implementation; all except Kenya have national REDD+ strategies but none are ready to receive results-based payments, and all are dependent on international funding to implement REDD+ activities. An expanding network of protected areas across the region has had some impact on slowing deforestation, and most of the countries have started or would like to start developing forest plantations.
- Forestry monitoring approaches require regional standardization. A regional observatory is recommended to provide comparable datasets, common standards for data collection methodologies, access to tools, approaches and publications, and guidance on best practice data generation and application. By coordinating and harmonizing activities, the observatory can help countries meet reporting obligations and provide a platform for learning and exchange. More comprehensive and improved data on forest cover trends and threats will also help policy makers with decision making.



Introduction

This document is a summary of a technical report to the Joint Research Center of the European Commission, to support establishment of an Eastern Africa forest observatory prototype: apps.rcmrd.org/ofesa. The report comprises of background to forest management in Eastern Africa (focusing on Kenya, Mozambique, Tanzania and Uganda), regional forest cover change trends, and conclusions for policy makers and practitioners. It outlines, describes and analyzes the status of forests and REDD+ implementation in Eastern Africa in an accessible way for practitioners and decision makers, as well as for any person interested in Eastern Africa's forests.

Forests and woodlands encompass very diverse ecosystems, from lowland to montane forests, dry forests, woodlands and bushlands, mangroves and plantation forests. At a country scale, forests cover 55% of total land area in Tanzania, 43% of Mozambique, 12.4% of Uganda, and 6.99% of Kenya (GOM 2018; MENR 2016; MNRT 2015; MWE 2017b, 2018). Forestry contributes significantly to the economy and the wellbeing of Eastern Africans, yet regional forest conversion rates are high.

The region has recently taken steps to design country-level forest monitoring and information systems, periodically gathering data critical for forest resource

monitoring, like forest biomass, land cover changes, timber harvesting and areas of degradation. Such initiatives are defined more by dissimilarities than by compatibility. While Kenya, Uganda and Tanzania have established monitoring systems, the scale, frequency and type of data gathered varies. Likewise, carbon monitoring is at a nascent stage, with systems developing in divergent ways.

Kenya, Tanzania, Uganda and Mozambique are all signatories to the Paris Agreement, which calls for conservation and enhancement of forests and adoption of policy approaches and incentives that reduce emissions from deforestation and forest degradation. REDD+ implementation further increases demand for reliable data, to prove whether forest conservation programs are reducing carbon emissions. International initiatives such as the Bonn Challenge or AFRI100 are also calling for forest restoration. Yet scarcity or lack of data, and incoherent data, have been barriers for many developing countries in establishing baselines to measure forest changes; many have not yet developed a coherent framework and actions for monitoring carbon emissions and UNFCCC reporting. None of the East African countries studied are yet ready to receive potential result-based payments.



Key issues

Forest use and value

Eastern African forests are diverse and include transboundary forest ecosystems, such as montane forests, miombo woodlands, coastal forests and mangroves. Forest contribute significantly to local and national economies and to the livelihoods of rural and especially forest-adjacent, mostly poor, communities. Current estimates indicate forestry contributes an average 3% to Gross Domestic Product (GDP) regionally, excluding the contribution of ecosystem services and informally-traded Non Timber Forest Products (NTFPs), which are highly undervalued. Significant forest-adjacent community household income is derived from forest resources, making forests an economic and financial safety net, and a buffer against climatic shocks like droughts or economic crisis. Formally and informally, forestry employs up to one million people in countries like Uganda, and contributes strongly to sectors such as energy (forest-derived wood fuel supplying over 70% of energy demand), agriculture and tourism.

The lack of quantification of forests' economic value and contribution to national and regional economies is a major information gap; crucial for sectoral planning, budgetary allocation to the sector and its prioritization, as well as for regional economic integration. This need for quantification

provides clear transnational focus and opportunity for cross-country learning on approaches and applications. Transboundary forests, with their diverse forest types and institutional settings, can be used to pilot cross-country approaches.

Forest laws and institutions

As a driver of national and regional economic development, forests are important in Eastern Africa and a regional concern. All four countries have a tradition of crafting and implementing rules; all have forest laws that share basic fundamental principles and objectives. All are cognizant of the need to balance forest conservation with human well-being and importantly have devolved authority and governance to lower, sub-national levels including communities. Likewise, all four countries view cross-sectoral coordination and collaboration as critical for the sustainable management of forests; environmental ministries oversee forestry in collaboration with agriculture and wildlife ministries. The structure and distribution of tenure rights and management authority is similar in Kenya, Uganda and Tanzania where different tenure categories exist, from community-owned forests through co-management to government and private forests. In Mozambique however,

all forests are state-owned and forest classifications are functional rather than institutional. Management structure is similar across the region, comprising decentralized and deconcentrated government organizations as well as community organizations at the most local level.

Forest stakeholders come from forestry, environment, agriculture and energy sectors, and include ministries, implementing agencies, research institutions, forest users (domestic, industrial and commercial), local and central governments, NGOs, civil society organisations (CSOs) and the private sector. Effective forest law implementation is currently hindered by inadequate financial, technical and human capacity, insufficient stakeholder coordination, weak conflict resolution and grievance mechanisms, corruption, political interference and elite capture, as well as cross-sectoral conflicts and competition. Incomplete regulation of forest product harvesting and trade, insufficient capacity to monitor and enforce laws and regulations, and continued conflict and competition over resource rights among communities, and between communities and mandated authorities, also hamper implementation.

Despite this, laws cover the most crucial bases for supporting the sustainable use and management of forests. Some of them have been reviewed or are in the

process of review to capture the changes of the past 15 years. There is need for cross-fertilization of experiences and ideas during these review processes; the Eastern Africa Forest Observatory can provide a common framework and pathway for discussion and debate.

Status of REDD+ in Eastern Africa

REDD+ is progressing in all four countries, albeit unevenly. Forest Reference Emission Levels (FRELs) have been submitted by Uganda, Mozambique and Tanzania. None of the countries have fully established national forest monitoring systems, benefit sharing and grievance mechanisms. However, there is keen political interest in REDD+ as a pathway for addressing deforestation drivers at national and regional level. A major constraint to REDD+ is community tenure rights; clarity and security of rights is central to incentivizing sustainable use and management while providing a basis for assigning benefits.

The establishment of a regional forest observatory will have positive impacts on the speed at which progress continues, by supporting countries through the standardization of FREL and/or Forest Reference Level (FRL) assessments and national forest monitoring systems, and by allowing them to share knowledge, skills and resources.



Forest monitoring in Eastern Africa

Regional forest resources are periodically monitored through biomass monitoring and Land Use/Land Cover (LULC) or forest cover mapping. Harvesting and trade in forest products are also monitored, though monitoring varies in data type, scale and frequency of collection. Mapping allows for compatibility and comparability assessments, and the exploration of necessary adjustments for regional decision-making and approaches to REDD+ reporting, regional timber trade, forest restoration and community forestry.

Recently all countries' approaches have also been aligned with REDD+ objectives. Nevertheless, carbon emissions monitoring is just initiating, with only Kenya and Tanzania having designed and now establishing systems, and others still in the design phase. These systems are developing in divergent ways. Uganda is developing monitoring for different forest types and purposes, and has produced more comprehensive LULC data, including forest cover change for diverse forest types and tenure regimes.

All countries combine forest inventories with LULC mapping and are striving to collect both biophysical and socio-economic data. Yet both biophysical and socio-economic

data varies, highlighting a need for closer cross-border coordination to determine what data would assist with regional reporting for obligations such as REDD+ and AFRI100. As well as diverse methodologies complicating forest cover change comparisons, monitoring continues to be challenged by inadequate financial and human resources and difficult, often insecure, terrains, with results like Kenya conducting its last national forest inventory more than 20 years ago. Good practices like broad-scale collaboration in design and implementation tend to compensate for these shortfalls. There is also increased interest in linking socio-economic data to biophysical data, however with the exception of Mozambique, most monitoring systems are yet to meaningfully integrate participatory approaches to involve community members and civil society.

Overall, the region's monitoring systems are dynamic and evolving to fit multiple purposes nationally and internationally but they are still largely evolving apart from each other, with the result that data produced is scarcely coherent and comparable. There is practical need to ensure systems also respond to sub-regional and regional policy problems, which are increasing with greater social, economic and political integration.



Forest cover change: trends, drivers and policy responses

Trends show a general decline in forest cover. Annual deforestation rates are high (See Table 1) (KFS 2013; Kweka et al. 2015; MWE 2017; Sitoé et al. 2012). Deforestation is highest in forestlands with weak management and tenure security, such as open access land in Tanzania and communal lands in Kenya. In Uganda, deforestation is highest in private land forests, with less deforestation occurring in government-managed public forests, especially in protected areas.

In response to rapidly-declining forest cover, the four countries have embarked on sector reforms, including reviewing and enacting new legislation. Kenya has included county-level government in forest management and initiated a chain of custody system to verify and report on forest product origin. With reforestation as a national development priority, Mozambique's newly-formed Ministry of Lands, Environment and Rural Development (MITADER) initiated a participatory audit of forest concessions, suspended new exploration requests, banned log

exports, updated forest policies and regulations, and started an ambitious forest protection, conservation and sustainable management project (Sitoé et al. 2012).

Drivers of forest cover change and degradation are regionally similar, with main direct drivers being agricultural expansion (both for commercial and subsistence purposes), unsustainable harvesting of wood products, infrastructure development and wildfires. The greatest external drivers are from agricultural and energy sectors, while internal drivers are logging, firewood collection and charcoal production. Degradation is more widely spread and varied than deforestation, though undeveloped assessment methodologies have resulted in a gap in degradation monitoring.

Weak monitoring and enforcement capacity are associated with inadequate budget allocations to the sector, political interference and corruption. Coordination failures and conflict with other sectors likewise exacerbate forest conversion to other land uses. A regional observatory would allow measuring regionally consistent deforestation drivers, but also a coordinated approach to monitoring and better coordinated land use planning.



Table 1. Forest cover and deforestation rates across Eastern Africa

Country	Forest cover		Deforestation rates
	% of total land area	Hectares (Ha)	Annual loss (in % of forest cover)
Tanzania	Mainland Tanzania	55	48,100,000
	Zanzibar	40	106,458
Mozambique		43	34,400,000
Kenya		6.99	4,136,446.5
Uganda		12.4	2,500,000

1 Based on estimate given in the submitted Forest Reference Emission Level (FREL) for mainland Tanzania for 2002-2013; equivalent to an estimated loss of 582,427 ha per year.

2 Estimate based on the submitted Forest Reference Emissions Level (FREL) for Mozambique; equivalent to an estimated loss of 267,029 ha per year.

3 Estimate based on total deforestation rate for 1990-2010.

4 MWE 2016.

Conclusion

Against this background, several regional forest monitoring needs emerge: a) better, regular and more systematic information on forest trends and threats, and forest uses and values, providing data to support decision making and for national and regional reporting; b) mechanisms for data exchange and harmonization, and strengthening current monitoring system capacities.

Each country faces severe limitations in their national forestry sectors, especially in the face of forest cover loss and forest degradation; assessment of the latter faces distinct methodological challenges, and poor budget allocations hinder effective law implementation. Yet all countries also have opportunities, both individually and collectively, being at varying stages of sectoral law and policy review. Although regional forest cover is declining, Kenya's overall forest cover has increased. There is opportunity to learn from each other, as well as great scope to harmonize and standardize monitoring methodologies and indicators, whilst streamlining data types for meaningful comparisons. Importantly, all countries share global commitments on climate mitigation and reforestation. The main opportunity is that of improving capacity to reliably report on these commitments and provide evidence of performance.

An Eastern African Forest Observatory could help answer these challenges, with the aim of addressing the highlighted forest monitoring issues. The observatory should comprise a database and accessible web platform and offer products targeted at regional policymakers and managers, focused on key thematic areas (e.g. effects of policies on drivers of deforestation, ecosystem service potentials, fire distribution and management, biomass energy, forest product economic chains). The development of prospective and scenarios will be of particular help to policy and decision makers. One of the first observatory activities would be a mapping of actors in each participating country, any existing collaborations relating to observatory functions, and the mode of cooperation.

Such mapping would enable the identification of entry points and how best to strengthen collaboration.

Different definitions, classification standards and data collection methods, data gaps, quality issues and inadequate resources for data generation have all resulted in an absence of regionally comparable datasets. To address this, the following is required:

- Sound reference datasets using high resolution satellite imagery to support generation and systematic validation of land use/land cover products.
- Standardized data collection methodologies or procedures, based on international standards and forest type definitions. Tanzania's NAFORMA methodological approach could prove a useful template, as it gathers biophysical, socio-economic and institutional data.
- Guidance on best practices for data generation and application, and access to related tools, approaches and publications.
- Joint data products, to be analyzed and reported jointly to address reluctance to share data, stemming from organizational fear of losing relevance and cost-recouping motivations.

Initial consultations show strong support for the observatory among the region's technical and political actors. In addition to generating and synthesizing regional-level data and information for policy decisions, the observatory will help countries meet reporting obligations, and provide a platform for learning and exchange. It will support the development of national forest monitoring systems, favor coordination and collaboration and multisector dialogues. These are longer-term benefits when the observatory is well-established, however interest remains in the observatory's ability to support regional forest conservation and better land use, and particularly to promote forests as a legitimate land use contributing to local, national and regional economies alike.

Acknowledgements

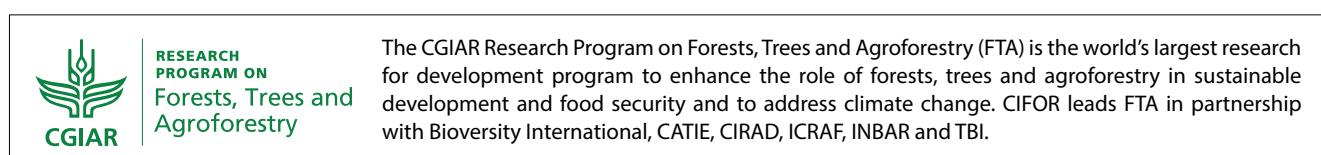
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