RESTORING AFRICA'S *DRYLANDS*

ACCELERATING ACTION ON THE GROUND

THE WOOD SOLUTION

The key to driving large-scale forest restoration

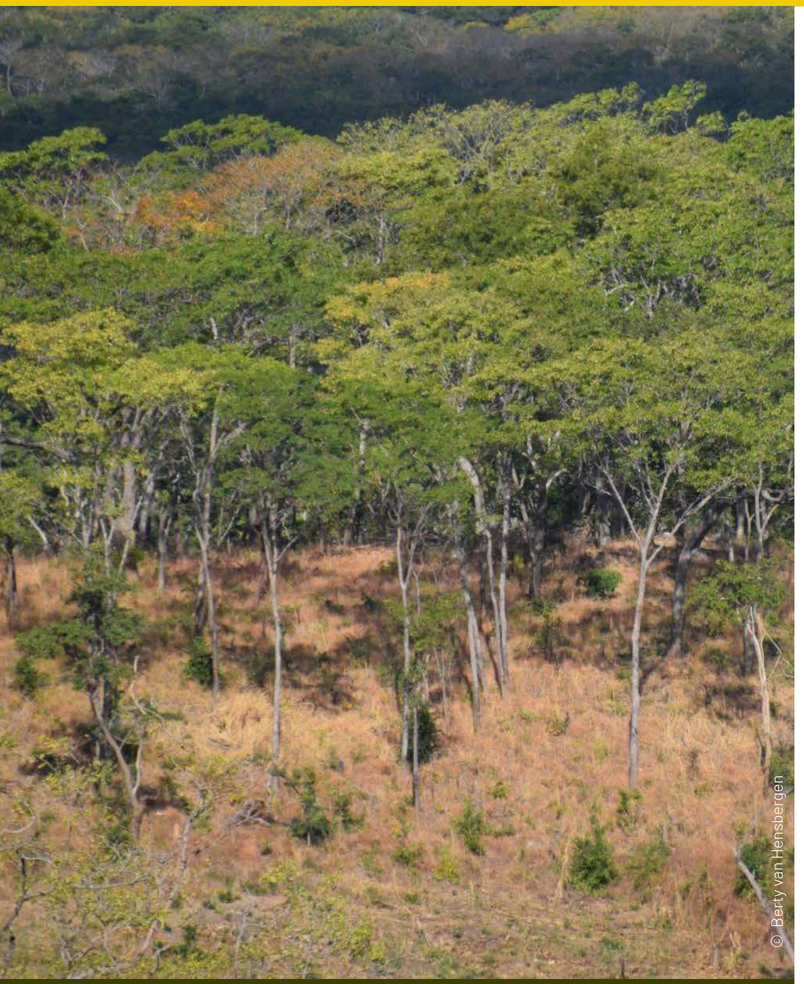
#GLFAfrica

SLU

THE ECO INNOVATION FOUNDATION

OKO

WHITE PAPER



Authors and organizations
Rosa Goodman[a], Lars Laestadius[a,b], Berty van Hensbergen[b], Kofi Debrah[c], Aaron Kaplan[b], Klas Bengtsson[b], Amen Hultström[d]

a Swedish University of Agricultural Sciences (SLU); b Eco Innovation Foundation (EIF); c OKO Forests; d Sozo Consult

GLOBAL CONTEXT

We are at a critical crossroads in human history. We can continue on the current path that has led to degradation of ecosystems, climate change, and widespread poverty and inequality; or we can reverse those trends and create new, regenerative, inclusive, and efficient systems of living and doing business.

THE OVERLOOKED FOREST

Between the rainforest of the Congo Basin and the grasslands of the savanna lie dry forests and woodlands that are often overlooked by the forest and landscape restoration (FLR) community. These forests are known as *miombo* in southern Africa and as the Sudano-Guinean transition zone forests in West Africa. A **total of 340 million** hectares of woody vegetation in dryland zones of Africa have become degraded through overgrazing, agricultural expansion, and overexploitation of fuelwood and timber. Though they are not considered to be well stocked, these forests are still logged throughout their range, have substantial ecological value, and support millions of people. Although they have considerable capacity to recover naturally, they are threatened by conversion to more profitable land uses.

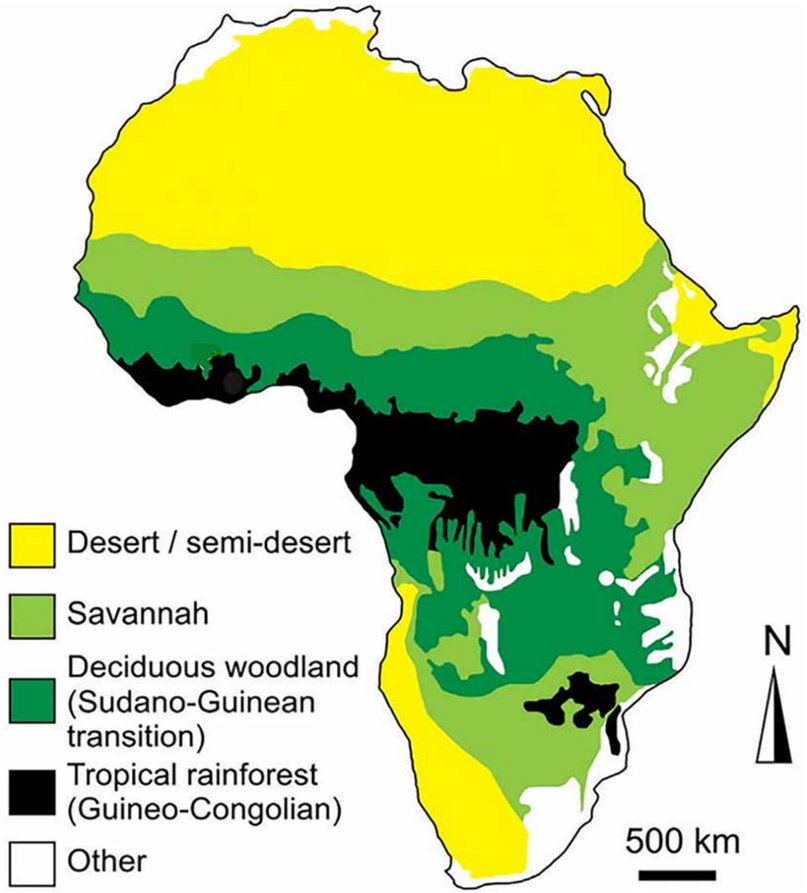


Figure 1. Africa's forgotten *miombo*-type forest stretches across the deciduous woodlands of the Sudano-Guinean transition and into the savannah.
Adapted from Miller, C.S. et al. *J. Quat. Sci.* 31, 7 (2016).

FOREST RESTORATION AND MANAGEMENT

The key to sustaining and restoring these forests is, therefore, to manage them to generate value while improving their productivity and quality. But how?

Restoration is often considered as a cost rather than an investment and in conflict with livelihood opportunities and production. Even when value chains are explored, they are typically for relatively low-value products, such as charcoal and honey. Timber extraction, on the other hand, can be lucrative – but it is typically done in a way that degrades and depletes the forests and at the expense of local people and communities.

Fortunately, the trajectory of these forests can be changed. Active management can restore their timber stocks and biodiversity; and new value chains can drive restorative management to a meaningful scale – all while creating rural business opportunities (see Box 1).

Managed miombo woodland in Mozambique.

Photo: Rosa Goodman

Box 1. How can logging be restorative?

Many trees require ample sunlight to regenerate, including many species that have been overharvested in the past. Likewise, good silviculture enhances growth and quality of desired trees. This means that removing trees can actually be beneficial, as it allows sunlight to reach the forest floor and removes competition for the desired trees. Thus, selective thinning (of small and larger trees) is the mechanism by which degraded miombo-type forests can be restored through management that includes logging. The Wood Solution is tailored to accept a wide variety of species and dimensions in its sawmill design and products, meaning that a majority of the wood removed through silvicultural treatments will feed into value chains. Making these restoration interventions profitable will ensure that they are actually implemented and improve the ecological and economic states of the forest.

Mainstreaming cross-laminated timber (CLT) buildings in London
Photo used with permission from waughthistleton.com.

URBAN GROWTH AND NEED FOR HOUSING

While pressure on forests mount, the population is also expected to double in many African countries over the next 30 years, and cities will grow even faster as people migrate to urban areas. Thus, the demand for new housing will skyrocket and must be planned to avoid the humanitarian and health crises of expanding slums and informal settlements. Nigeria alone will have a housing shortfall of over 17 million units by 2030. Building with concrete and steel is not consistent with the Paris Climate Agreement. Building with wood, on the other hand, would both reduce greenhouse gas emissions and also lock carbon in durable structures of high social value.

THE WOOD SOLUTION – BRINGING TOGETHER URBAN HOUSING DEMAND AND LANDSCAPE RESTORATION

We propose that the urgent need for housing be met by modern, engineered wood buildings and that this new demand for wood be leveraged to drive the development of a new tropical timber industry. Ultimately, this market will incentivize large-scale restorative management of degraded dry tropical forests. Wood construction is growing exponentially in Europe and North America, and it is also possible in tropical countries. Directly linking wood buildings and the forests providing the wood at a regional scale uncovers the unique potential within Africa – where housing, forests, and industries can go together.

INTEGRATING FORESTS, WOOD PROCESSING INDUSTRIES, AND MARKETS - THE KEY TO MAKING IT ALL POSSIBLE

The integrated forest-industry-market approach, combined with locally significant by-product value chains, has the potential to drive this transformation to a meaningful scale. We believe this approach, particularly innovations in wood-processing systems, is the missing link between theoretical potential and on-the-ground implementation. It provides both genuine incentives for restoring and managing natural forests, and makes this restorative forest management possible (see Box 1). This model also supports and enhances local control of resources, equitable benefit distribution, entrepreneurship, transparent businesses practices, and cooperation.

AIM OF THE SESSION

- Provide a forum for those that work with miombo-type dry tropical forests and woodlands and market-driven restoration solutions.
- Envision a future in which climate-friendly urban development drives large-scale forest and landscape restoration while providing rural business opportunities.
- Illustrate the proposed forest-based industrial system – from forests to sawmills to mass timber buildings – and the locally significant by-product value chains
- Demonstrate how forests can be restored through active management that includes logging.
- Show the potential for restorative forest management, value generation, and climate change mitigation.
- Gather information about concerns, considerations, and how we can improve the concept and move forward.
- Identify partners and foster collaborations with actors throughout the value chain and industrial system.

MAIN GLF AFRICA 2021 THEMES ADDRESSED IN THIS SESSION

- “Restoration business and finance”—basing restoration on business opportunities and entrepreneurship within a new, integrated forestry sector
- “Novel landscape arrangements and partnerships”—working across the entire value chain from forest managers and communities to sawmills to urban planners and architects
- “Showcasing successful restoration technologies”—processing systems that link forests and wood products
- “Thinking about scale”—continental industrial development meeting urban and rural needs

PARTICIPATING ORGANIZATIONS

GLF Africa Digital Conference 2021 would not be possible without the support and participation of the following hosts, partners and organizations. For a full list of everyone involved, please visit: **events.globallandscapesforum.org/africa-2021/partners**

GLOBAL LANDSCAPES FORUM

The Global Landscapes Forum (GLF) is the world's largest knowledge-led platform on integrated land use, dedicated to achieving the Sustainable Development Goals and Paris Climate Agreement. The Forum takes a holistic approach to create sustainable landscapes that are productive, prosperous, equitable and resilient and considers five cohesive themes of food and livelihoods, landscape restoration, rights, finance and measuring progress. It is led by the Center for International Forestry Research (CIFOR), in collaboration with its co-founders UNEP and the World Bank and Charter Members.

Charter Members: CIAT, CIFOR, CIRAD, Climate Focus, Conservation International, Crop Trust, EcoAgriculture Partners, EFI, Evergreen Agriculture, FSC, GEF, GIZ, ICIMOD, IFOAM - Organics International, ILRI, INBAR, IPMG, IUFRO, Rainforest Alliance, Rare, RRI, SAN, TMG - Think Tank for Sustainability, UNEP, Wageningen Centre for Development Innovation, part of Wageningen Research, WFO, World Agroforestry, World Bank Group, WRI, WWF International, Youth in Landscapes Initiative

RESTORING AFRICA'S *DRYLANDS*

ACCELERATING ACTION ON THE GROUND

bit.ly/GLFAfrica2021