



## Agroforestry Network

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## ACHIEVING THE GLOBAL GOALS THROUGH AGROFORESTRY

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Scaling up agroforestry will enable contributions to the UN's global goals. Agroforestry, i.e. to combine crops, trees and livestock, is a promising land management system that can improve farmers' livelihoods while reducing pressure on forests. Increasingly, organisations and institutions are recognising the value of ecosystem services from trees on farms and in agricultural landscapes for food security and to sustain productivity. There are a number of barriers working at different levels that are preventing a scaling-up of agroforestry practices; such as inefficient markets and extension services, barriers in land rights and financial services, and barriers in institutional arrangements and policies. Agroforestry Network concludes in this policy brief, that by addressing identified barriers and develop road maps to scaling up, farmers can fully benefit from agroforestry practices and efficient ways to spread agroforestry can be found.

Humanity is facing a number of major global challenges. In 2050, the UN estimates that the global population has reached 9.8 billion people (UN 2019). Smallholder farmers produce about half of the world's food. A rapidly growing population with increasing consumption demands creates escalating pressure on our natural resources, such as water, soils and biodiversity. Biodiversity makes production systems and livelihoods more resilient to shocks and stresses, including those caused by climate change (FAO 2019). Therefore, resilience is directly affected by loss of biodiversity. At the same time, climate change is making it more difficult and unpredictable to grow food – particularly for smallholder farmers. This means that people at the greatest risk of food insecurity and poverty, usually also lack means to adapt to climate change.

To meet these challenges, the countries of the world have united around the UN's Sustainable Development Goals (SDGs), also known as the global goals. These international processes are currently evolving from planning to implementation and actions, where politicians and decision makers are identifying strategies, projects and policies that make this possible. In this context, the agroforestry management strategy offers a multitude of enabling opportunities.

**SDGs WHERE AGROFORESTRY CAN HAVE A HIGH IMPACT**

**SDG 1: No poverty and SDG 2: Zero hunger**



A diversified multipurpose agricultural system contributes to spreading risks and reducing the risk of poverty. Being dependent on only one or a few crops leads to increased vulnerability and potential food shortages if the crop fails, especially for smallholder farmers who usually lack insurance and alternative sources of income. Instead, agroforestry contributes to people having a variety of food and income sources when combining crops, trees and animal husbandry. Agroforestry also contributes to increased productivity and thus has an important function for food security and poverty reduction.



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**SDG 5: Gender equality**



Agroforestry, where gender equality is taken into consideration, can reduce gender inequalities and have a positive impact on women's empowerment, participation and rights to economic and natural resources. Agroforestry can also give women a central role in food production and value chains despite limited access to e.g. land. Women spend less time looking for firewood, which means increased personal safety and more time for income-generating activities.

**SDG 13: Climate action**



Agroforestry contributes to both climate adaptation and mitigation. Agroforestry helps people adapt to the effects of climate change, for example as trees can contribute to soil improvement and create resistance to drought and floods. Agroforestry systems store carbon in trees and soil and give shade for crops, animals and also humans, which can improve the microclimate and cool the air.

**SDG 15: Life on land**



Agroforestry can help increase the biodiversity in farming landscapes, and contribute to important habitats for plant and animal species, such as for pollinating bees. Agroforestry can also contribute to creating "ecological corridors", where species can spread in the landscape, which is crucial for their survival.

In addition to the five SDGs mentioned above, agroforestry contributes to several other global goals, such as: SDG 3: Good health and well-being; SDG 6: Clean water and sanitation; SDG 7: Affordable and clean energy; SDG 8: Decent work and economic growth; and SDG 12: Responsible consumption and production.

Agroforestry is rarely promoted and often lacking in policies, land management strategies, local development plans, and extension services, also for nations where agriculture is a major source of income for a large part of the population. One underlying reason why agroforestry does not have a more prominent place on the global agenda, is that agriculture and forestry are separated into different sectors, often competing with each other. Strategies and policies at national level are usually divided into the same sectors, that also often are lacking a clear definition of agroforestry. Although the benefits of agroforestry are well documented the farming system risks being neglected in favour of large-scale, high-yielding monocultures. Numerous barriers preventing a scaling-up of agroforestry can be linked to these traditional systems.

**Positive outcomes of agroforestry**

1. Agroforestry as a land use system can contribute to achieving at least nine out of the 17 sustainable development goals.
2. Agroforestry is a key tool for both climate adaptation and mitigation, e.g. for increased climate resilience for smallholder farmers and carbon storage.
3. Agroforestry fights poverty and hunger with the potential of improved soil fertility, higher yields and more diverse livelihoods.
4. Including trees in agriculture – i.e. agroforestry – can increase biodiversity, provide a habitat for multiple species, and act as a "green corridor", allowing species to migrate across landscapes.
5. Agroforestry, e.g. easy access to firewood, can strengthen women's control over resources and free up women's time.
6. Agroforestry can diversify the income of smallholder farmers and early studies indicate that farmers using agroforestry systems earn more cash on improved yields and sales of tree products.

**BARRIERS IN THE UP-SCALE PROCESS**

The scaling up of agroforestry practices is prevented due to barriers working at different levels and for different actors. Barriers are found at farmer level, in the form of technical, economic and social challenges that prevent farmers from implementing and spreading agroforestry practices. Also, for smallholder farmers there are few value chains develo-



Dancilla Mukashyaka. Photo: Lisa Brunzell.



Benta Muga and John Oruka. Photo: Amunga Eschuchi.

ped for agroforestry products and for connecting them to consumers, the market and companies to invest in agroforestry systems. Dissemination of knowledge, for example limited extension services and knowledge exchange between farmers is another barrier. On top of that, there is a lack of research serving the scale-up processes as well as barriers in institutional environments and policies. These barriers limit farmers' access to appropriate inputs (seeds, seedlings, etc.), credit, land, education and agroforestry extension services.

#### ADDRESSING BARRIERS AND MOVING FORWARD

Addressing the barriers that are preventing scaling-up agroforestry practices, is critical for enabling farmers to invest more in sustainable agroforestry practices and increase their production. A scale-up process starts by identifying improvements and innovations. These are then tested and refined in pilot projects and thereafter widely disseminated. This process should be participatory (Coe et al. 2014), and should address and work to erase current gender roles.

The following suggested interventions are derived from interviews with agroforestry experts and literature from academia and organisations. Agroforestry Network present these actions as conceptual ideas that can be developed into action plans with road maps.

#### *Improving farmers' access to services and high-quality planting material*

- *Domestication of indigenous trees should be prioritized for the benefits of ecosystem services, nutrition, as well as to improve the livelihoods of women benefiting from the products derived from these trees.*
- *Improving access to credit and monetary resources by supporting innovative scalable financial models that address the long return on investment, constructed to also benefit women.*
- *Investing in extension services to enable further implementation of agroforestry and horizontal knowledge dissemination between farmers and from farmers to extension programmes.*
- *Securing tenure and user rights of trees and land, could improve access to credit and be a major driver for scaling up agroforestry.*
- *Cooperation among rural food producers where the collective owns the process of organisation, can strengthen voice in general for example for negotiation of prices of commodities, facilitate knowledge dissemination between farmers and diversification of production with mechanisms for pooling the produce to reduce costs.*



### Improving farmers' access to markets

- Include marginalised groups in new innovative market information systems, e.g. by acknowledging everyone's right to information regardless of their age, gender or educational background.
- Improving farmers' access to markets and develop new value chains for agroforestry products, where local processing, domestic and local markets and products from indigenous trees are promoted.
- Innovative financing, under appropriate safeguards regarding for example farmers rights, for farmers can scale up agroforestry practices and increase benefits. For example, through partnerships between companies with sustainability profiles and agroforestry farmers, and the implementation of minimum prices for certain agroforestry products that are linked to sustainable use and conservation of biodiversity, carbon in soils and voluntary carbon funds.

### Improving research to facilitate a scale-up process

- Demand driven, participatory and inclusive research across scales through integrated landscape studies in multidisciplinary research teams, with local knowledge holders, practitioners, and researchers, linking biophysical parameters to socioeconomic impacts, exploring synergies and how to manage trade-offs.

### Improve national and international enabling environments in terms of financing and policy

- New models for longer funding cycles from international and national investors and donors, and new funding mechanisms, under appropriate safeguards, involving other stakeholders such as investors in sustainable development.

- Reform of incentives such as taxes and subsidies to act in favour of agroforestry systems to move away from the emphasis on monoculture production systems, and encourage the integration of trees into farmland. Permanent or temporary incentives, including subsidies, aimed at establishing markets and decreasing economic risk in the long run, can enable farmers to get involved in agroforestry (FAO, 2013).
- Promote inclusion of agroforestry in national policies and encourage coordination between ministries and other institutions to harmonise related policies in forestry, agriculture, environment and dismantle practical barriers preventing agroforestry implementation.

### CONCLUSIONS

Numerous barriers that prevent scaling-up agroforestry originate in land management, where agriculture and forestry are separated and high-input monocultures are promoted. This policy brief has identified a number of actions that could create better enabling environments for agroforestry, provide farmers with economic incentives to implement sustainable practices, and make research efficient and more demand-driven in the support of a scaling-up process. By further develop our proposed actions with road maps, new and efficient ways to promote and spread agroforestry can be found. These activities need to be rooted in knowledge collaborations between farmers and researchers, and in the harmonisation of policies and coordination between institutions and other actors working with rural land management, to create effective enabling environments for agroforestry on local, national and international levels.

This policy brief has been adapted from the Agroforestry Network reports *Achieving the Global Goals through agroforestry* (2018) and *Scaling up Agroforestry: Potential, Challenges and Barriers* (2018). More detailed information and references can be found in the reports.

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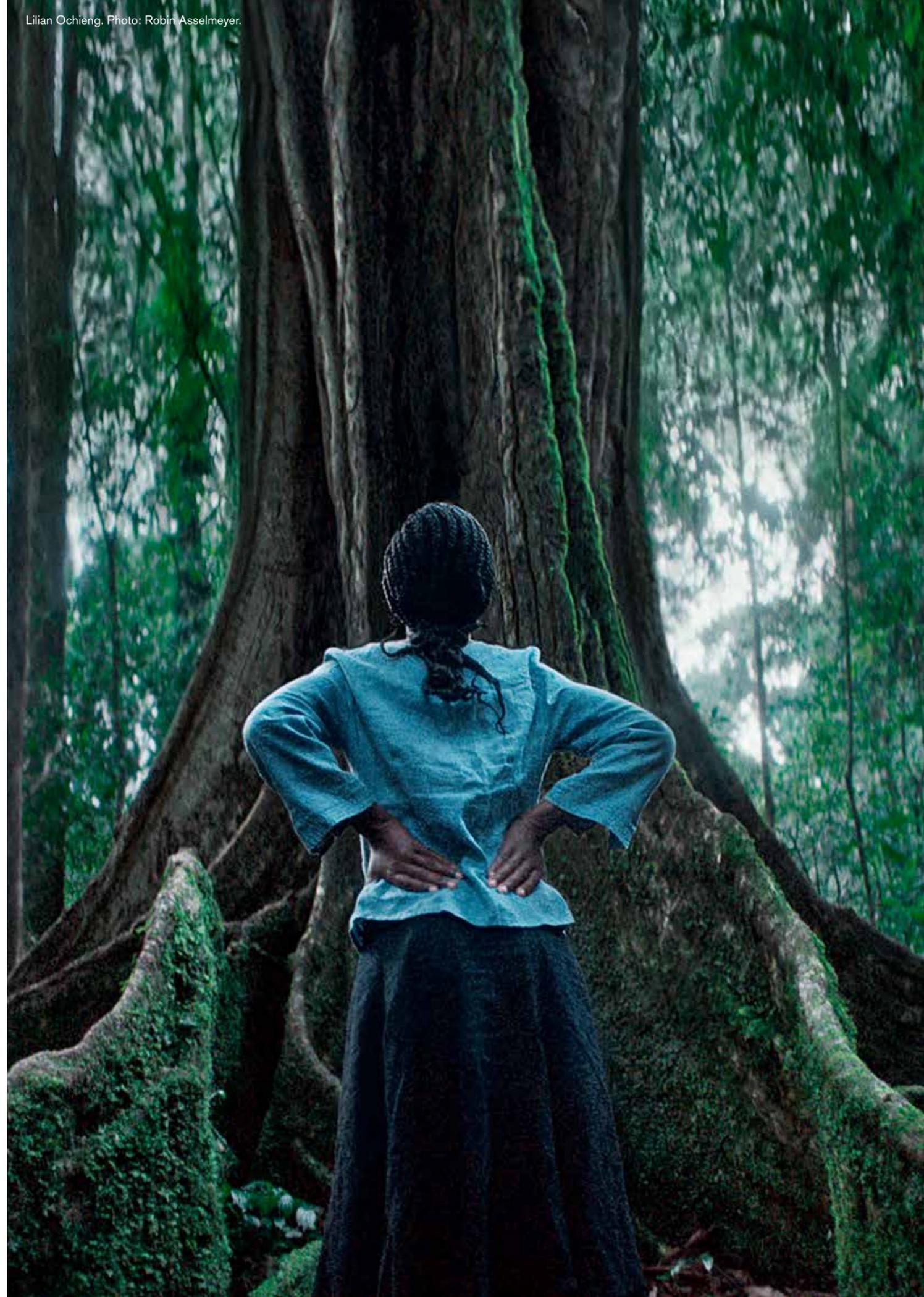
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Sustainability Science for Biosphere Stewardship



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