Policy Gaps and Opportunities for Scaling Agroforestry in sub-Saharan Africa:
Recommendations from a policy review and recent practice

Summary

Integrating trees in farming and pastoral landscapes – agroforestry is one of the most effective tools we have for climate mitigation and adaptation, and for restoring degraded lands, while providing nutrition and livelihoods benefits to millions of people in sub-Saharan Africa. Nearly half of all agricultural land in the world currently has more than 10% tree cover. Agroforestry systems on small-scale farms play a crucial role in reducing household risks and diversifying incomes while providing nutritional benefits to vulnerable women and children, men, and youth who are locked out of the mainstream market economies.

Despite these important roles and the widespread of agroforestry practices, there are several critical barriers that hinder its accelerated adoption, even in areas that have significant potential for these practices.

We provide a summary of findings and policy recommendations based on a review of policies and technologies under the European Union (EU) funded Regreening Africa Programme, being implemented in Kenya, Rwanda, Ethiopia, Somalia, Niger, Mali, Senegal and Ghana. **We argue that successful adoption of agroforestry is dependent not only on designing appropriate technologies but upon ensuring an enabling policy, legal and institutional environment to underpin the scaling-up process.**

Development and intended application of this policy brief

This policy brief was developed through the European Union-funded project on Reversing Land Degradation in Africa by Scaling-Up Evergreen Agriculture (Regreening Africa, 2017-22). The project is an active intervention deploying agroforestry for land restoration across 1,000,000 hectares and targeting 500,000 households in eight African countries. The project has an explicit policy objective to accelerate the scaling-up of land restoration through policy engagement in the target countries of Ethiopia, Kenya, Rwanda, Somalia, Mali, Niger, Ghana, and Senegal. Based on an intensive documentation review, focus group discussions, and key informant interviews, the agroforestry policy environment and the current legal and institutional arrangements were explored, and the barriers to and opportunities for supporting scaling-up of agroforestry across the project countries were identified. The recommendations provided in this brief outline key actions that must be taken to support the accelerated scaling-up of agroforestry across sub-Saharan Africa and realize its enormous benefits to improving livelihoods and expanding the national economy.

Key findings

Agroforestry provides a unique opportunity to address the climate change emergency and address land degradation while contributing to national and regional development aspirations, targets, and commitments.

There are a number of different practices that are recognized as agroforestry in this brief, including farmer-managed natural regeneration (FMNR) of trees on farmlands, assisted natural regeneration (ANR) of trees on community and national forest lands, the integration of high-value fruit, timber and nut trees species in farming systems, and soil and water conservation techniques involving the use of trees, shrubs and grasses, among others. The unique, identifying characteristic is the integration of trees in agricultural and pastoral lands within and across a range of spatial and temporal scales.

Despite vigorous efforts, agroforestry has not yet been sufficiently mainstreamed or supported through existing policy frameworks in Africa. Since agroforestry systems contain elements of agriculture, forestry, land, water, and environment, it tends to fall into the cracks between sectoral policies. It is, therefore, not well integrated into planning and financing under any of the key ministries.

Fragmentation and ineffective coordination among government institutions and stakeholders dealing with the different elements of agroforestry (private sector, non-governmental organizations (NGOs), research and academic institutions), leads to inefficiencies in financial resource use as well as duplication or poor attention to needed efforts.

These conditions are prompting a number of countries to embark on the development and legislative approval of holistic national agroforestry policies and comprehensive agroforestry strategies and action plans.

There is a critical need and opportunity to address the gaps in technical advisory and implementation capacities, and the financial mechanisms to scale agroforestry. Technical advisory services remain underfunded, under capacitated, and unfacilitated to support farmers in developing their agroforestry systems. Funding mechanisms that currently support parallel agroforestry extension structures should be directed back to strengthen government extension institutions, since these are mandated to provide these services, and they remain in place long after other project supported extension services have ended.

Agroforestry is now embedded in the curricula of many agricultural and forestry universities in Africa, and in the agenda of a predominance of agriculture and forestry research institutions. This capacity should now be harnessed into accelerated practical learning efforts and more ambitious scaling-up programs.

Unsecured or ambiguous land and tree tenure create long-term uncertainty for farmers and pastoralists, restricting the success of agroforestry initiatives. In countries where land and tree tenure has been reformed in recent years, there has been a notable expansion in farmer adoption of agroforestry systems

Policy recommendations

1. Agroforestry Strategies and Policies

Countries should develop and implement a national agroforestry policy, strategy, and action plan that provides clear guidance and alignment, and that can be integrated into sub-national level plans, programs, and policies, using devolved structures when they exist. Countries should review, align, and revise their policies vis-à-vis support for the scaling-up of agroforestry, to benefit the accelerated expansion of agroforestry coherently and effectively. This can be integrated into sub-national level plans, programs, and policies, using devolved structures when they exist.

2. Coordinated Implementation

Countries should ensure the coordinated implementation of agroforestry development through platforms or mechanisms that function effectively across the sectoral ministries responsible for agroforestry, in collaboration with the private sector, NGOs, grassroots organizations, and other actors that are critical to success in implementing agroforestry development on the ground. The platform or other mechanisms should set up effective institutional mechanisms, governance, and consultation principles and processes for coordinated actions among institutions and stakeholders. The devolution of national government functions provides an opportunity for the integration of agroforestry into sub-national level plans, programs, and policies. A feedback link to research and extension organizations, as well as NGOs and others promoting agroforestry, is also key to the coordination and alignment.

3. Land and Tree Tenure

Countries should further reform their land and tree tenure to promote agroforestry in line with the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security, and the Principles for Responsible Investment in Agriculture and Food Systems with gender considerations fully taken into account. Land and tree tenure reforms need to take into consideration the tenure rights of vulnerable groups, including women. With clear rights over trees, women and men farmers are strongly incentivized to invest in agroforestry, to their benefit and to the benefit of the national economy and environment.

4. Extension and Advisory Services

Countries should increase investments much more in government-led extension and advisory services capacity for agroforestry, as a critical way to support farmers. This must be done with intentional and strong linkages to the institutions providing research and training, as well as implementing agents such as farmer leaders and non-government actors and would include working across sectors and stakeholders so that expertise, often held in research and education institutions, and in environment ministries, is used to train extension staff or tree nursery operators, typically within the agricultural ministries and partners.

5. National and International Commitments

Countries should implement and support agroforestry activities at national, sub-national, and local levels that contribute to the achievement of national aspirations and commitments linked to the international agenda. National Commitments to the Nationally Determined Contributions, the Bonn Challenge and Land Degradation Neutrality and National Biodiversity Strategies and Action Plans, and Aichi Targets provide a source of crucial political buy-in to promote the broader adoption of consistent agroforestry efforts since agroforestry is uniquely effective in achieving these targets. Addressing these commitments is a great opportunity for leveraging the necessary sectoral linkages, finance, and monitoring to accelerate the scaling-up of agroforestry.

Elaboration of key findings

1. Despite vigorous efforts, agroforestry has not been sufficiently mainstreamed or supported yet through existing strategies or policy frameworks.

Our reviews show countries such as Kenya, Rwanda, Ghana, Mali, Niger, and Senegal have advanced agroforestry in their sectoral policies or programming, through the development or revision of their forest and agricultural policies, their National Action Plan for climate change adaptation and their Nationally Determined Contributions. For instance, in 2009, the Kenyan Ministry of Agriculture enacted new Farm Forestry rules which require 10% of all farms to be covered with trees, as a response to severe deforestation. Another policy reform that has directly targeted and benefited the expansion of agroforestry is the re-interpretation and implementation of the Forest Code in Niger that strengthened on-farm tree tenure and helped to tremendously expand the practice of farmer-managed natural regeneration to over 7 million hectares of cropland.

Despite some noticeable efforts, key policy issues that hinder the adoption of agroforestry were identified among the reviewed countries, including:

(i) The total lack of policies related to agroforestry (AF) in some cases, or agroforestry not being sufficiently taken into account in current policies (e.g. Somalia, Mali, Ethiopia);

(ii) The existence of policies that limit access, use and sale of tree products that discourages farmers from cultivating trees on their land (e.g. Mali, Ghana);

(iii) Incoherent policies that prohibit one aspect of agroforestry such as the pruning of trees, yet promote farmer-managed natural regeneration (e.g. Ghana); and (iv) fragmented policies developed by siloed sectors, leading to incoherence (e.g. Kenya, where the predominance of the promotion of mechanization in agricultural policies is disincentivizing the integration of trees on farms).

These cases ultimately emphasize the lack of a focused agroforestry strategy or policy for coordinating dispersed efforts that have impacts on agroforestry. They effectively and unintentionally prevent the accelerated upscaling of agroforestry. Agroforestry typically does not have its own policy space. It belongs to many sectors. Various aspects of agroforestry spread across agriculture, forest, natural resources, and climate change policies or strategies. Of the eight countries reviewed, most have not prioritized an agroforestry policy or strategy across the relevant sectors to support the mainstreaming or the integration of trees into agricultural and pastoral landscapes.

Rwanda is the only reviewed country that has mainstreamed agroforestry across national policies and plans (see Box 1). However, in many countries, numerous policy elements across different sectors can be built upon to establish a national agroforestry strategy or policy. Ethiopia is close to finalizing an agroforestry strategy, and Kenya has initiated the development of a strategy as well. Ghana has an agroforestry policy that dates back to 1986, and that could stand to be refined based on current knowledge and experience. Somalia (Puntland and Somaliland), Mali, Senegal, and Niger all have agroforestry mentioned in various environmental, forestry, and climate change strategies and plans. Still, no steps have yet been taken to develop comprehensive agroforestry-focused policies, strategies, or plans. A significant example outside of Africa is India, which implemented a National Agroforestry Policy (see Box 2) that have had positive impacts in enhancing investment in agroforestry and incentivizing farmers.

Box 1

Rwanda Agroforestry Strategy and Action Plan

Rwanda recently developed an Agroforestry Strategy and Action Plan (2018-2027), to be implemented under the Rwanda Water and Forestry Authority in the Ministry of Environment. This Agroforestry Strategy and Action Plan creates a roadmap for promoting leadership and synergies in agroforestry and engaging coordinated action to increase the adoption of agroforestry technologies at scale for enhancing Rwanda's agricultural landscapes, watersheds, and rural communities. The new Forest Sector Strategic Plan (2017-2021) also outlines an increase in the number of scattered trees on cropland and agroforestry areas up to 50 trees/ha by developing and intensifying agroforestry techniques on all suitable lands. Rwanda's Vision 2020 also includes agroforestry, and Rwanda's National Strategy for transformation (2017-2024) aims to double the agroforestry coverage from 6% to 12% up 2024.

Box 2

The India National Agroforestry Policy

Agroforestry adoption in India faced many obstacles, and an Agroforestry Policy was widely seen as necessary to overcome these challenges and to bring the different ministries working on agroforestry together to implement more coherent support. The development and adoption of the Agroforestry Policy for India, starting in 2008, made India the first nation in the world to adopt an inter-sectoral policy on agroforestry.

The policy provides incentives for the complete value chain of the agroforestry system so that it becomes a self-propelling process. The policy is not only seen as crucial to India's ambitious goal of achieving 33% tree cover, but also to providing many of the other benefits such as increasing food and nutritional security and supplying more fodder, fuelwood, and timber for India's growing population. The policy provides a platform for converging the various tree planting programs outside of forest areas, which are currently being implemented by different ministries such as agriculture, rural development, and environment. It has also fostered the creation of a major investment program aimed at supporting the States in their efforts to expand agroforestry among small-scale farmers. The policy has also guided the strengthening of research and extension on agroforestry, and it has resulted in many regulatory reforms that incentivize farmers to engage more vigorously in cultivating trees on their land. A high-level Inter-Ministerial Committee monitors the implementation of the policy. The India experience has demonstrated that it is crucial to have the broadest possible buy-in across the political and ministerial spectrum. It fostered supporters to engage the widest possible audience and to deftly "choreograph" how the policy would be developed to ensure transparency, trust, and broad collective agreement.

2. There is fragmented and ineffective coordination among institutions and stakeholders dealing with the different elements of agroforestry.

Taking agroforestry to scale requires coordination and collaboration among high-ranking decision-makers in various sectors, especially in agriculture, environment, and forestry. The agroforestry agenda typically falls in-between the related ministries, and very often, there is no dedicated home or institution with the mandate to coordinate the advancement of agroforestry or its integration with other development agendas. In Ethiopia, Kenya, and Senegal, parts of the mandate for agroforestry development were given to both the Environment and Agriculture sector ministries. In Rwanda, Niger, and Mali, agroforestry falls under the Environment sector, while in Ghana and Somalia, agroforestry does not have a clear institutional home.

When a lead ministry does exist, agroforestry is very often under-resourced, and there are no mechanisms by which to coordinate and connect the responsible ministry with other sector ministries, or with research institutions, or other implementing partners that are vital for its development. In Ethiopia however, the recent establishment of the Ethiopian National Watershed and Agroforestry Multi-Stakeholder Platform **(see Box 3)**, which is co-chaired by both the agriculture and the environment sectors, provides a valuable opportunity to facilitate awareness-raising, coordination, and harmonization across sectors, as well as the creation of an enabling policy environment within which agroforestry can flourish.

Box 3

Establishment of the Ethiopian National Watershed and Agroforestry Multi-stakeholder Platform (NWAMP)

The establishment of the NWAMP aimed to accelerate the scaling-up of the adoption of agroforestry in Ethiopia through developing agroforestry strategies. This includes better coordination and harmonization across sectors and amongst public and private actors and involving enhanced capacity development for research, extension systems, farmers, and other actors. The Ministry of Agriculture and Livestock (MoAL) established and coordinates the NWAMP in collaboration with the Ministry of Environment, Forest and Climate Change (MEFCC), and other relevant partners. The NWAMP facilitates stakeholder linkages within and amongst national, regional, and international agroforestry and watershed networks. It helps to minimize the overlap of activities among implementing partners promoting agroforestry technologies and practices. Key roles and responsibilities of the NWAMP also include facilitating awareness-raising and the dissemination of agroforestry knowledge, the creation of an enabling policy environment within which agroforestry can flourish. This takes place through the support and guidance of policies, strategy, and plans development. NWAMP will also mobilize greater financial resources for agroforestry, support monitoring, and evaluation of the performance of agroforestry practices and the scope of scaling-up progress throughout the country.

3. The prevalence of unsecured or ambiguous land and tree tenure creates long-term uncertainty for land managers, further restricting the success of agroforestry initiatives.

Trees on farms, community forests, and pastoral lands require clear and secure tenure rights. The absence of clearly defined property rights significantly affects farmers' decisions about long term investment in land, such as investing in trees and establishing agroforestry. Various types of tenure insecurity were noted among the reviewed countries, such as the lack of formal titles to land (Ethiopia), the rights to trees being separated from rights to land (Ghana, Senegal), forest regulations inhibiting tree growing on farms (Mali, Ghana) and lack of rights for farmers to manage the trees on their land and to market their tree products, including bureaucratic and expensive permit systems (Mali). In addition, in most reviewed countries, land purchase price and rents are high, restricting access by the poor and vulnerable (including women), and the patrilineal system predominates, which does not allow women to inherit or own land.

Farmers are severely discouraged from establishing or managing trees on their land when the state claims ownership over those trees, or when the pruning or felling of trees is restricted in agricultural landscapes, or when the state still has the power to grant concessions over trees in agricultural landscapes arbitrarily. Tree user rights can be managed separately from land tenure, where this is useful, for example in Ethiopia. Within the Humbo project on watershed conservation, the government provided a legally-binding document granting "tree user rights", as there was a mandatory requirement to receive carbon finance incentives in this project. Another significant advancement is in Niger. In 2004 a new forest code came into force, which recognized that trees on farmland belonged to the landowners and not to the state. Those new legal conditions encouraged farmers to manage natural tree regeneration, leading to the rapid establishment of hundreds of millions of trees on over 7 million hectares of newly generated parkland systems. The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries, and Forests in the Context of National Food Security, and the Principles for Responsible Investment in Agriculture and Food Systems offer a framework for promoting tenure security.

4. There is a critical need and opportunity to address gaps in technical advisory and implementation capacities and the investments to scale agroforestry.

One constraint that has been highlighted in several countries e.g., Rwanda, Senegal, and Ethiopia, is an insufficient investment in research and development of agroforestry technologies, together with weak linkages between research, extension, and knowledge transfer. The limited range of agroforestry practices that are being promoted and the low availability of high-quality tree seeds and seedlings were also emphasized. There is a need for support at every step of the development and strengthening of agroforestry value chains.

Local knowledge should be harnessed in the development and promotion of agroforestry options and value chains across local contexts and scales. There are many NGOs, local organizations, cooperatives, and farmers/producer's associations that are working in agroforestry in the 8 reviewed countries. They are increasingly involved in the management

of natural resources at scale. However, dedicated agroforestry extension workers and the technical capacity of extension staff to provide effective advisory services in agroforestry is often sorely lacking.

Farmer facilitators have now been trained and activated in many countries. They should be used more widely as an avenue to demonstrate and disseminate the various technological options that involve agroforestry. They are most effectively engaged when they are connected with well-equipped training and demonstration centers, as we observe in Kenya and Rwanda. Women farmers and other vulnerable groups also need to be encouraged and trained to practice agroforestry with promising results and opportunities on food security, resilience, and income, as observed in Senegal, Mali, and Ghana, for instance. Many agricultural universities now offer curricula in agroforestry that are providing an expanding cadre of agroforestry graduates. These and the networks of agroforestry research institutions in most countries should now be better linked to the extension system and the growing efforts of NGOs and other actors in scaling-up agroforestry practices.

5. Agroforestry provides a unique opportunity to address climate change and land degradation while contributing to national, regional and international targets and commitments.

Most of the African countries have made commitments under the AFR100 (African Forest Landscape Restoration) Initiative and the Bonn Challenge, where agroforestry is recognized as a pivotal intervention to achieve the ambitious land restoration targets. Agroforestry also contributes to the African Union Agenda 2063, the Intended Nationally Determined Contributions (NDC), National Biodiversity Strategies and Action Plans, and Aichi Targets on biodiversity conservation.

National plans and projects exist to reduce land degradation, promote sustainable land management, and enhance livelihoods through agroforestry. Examples include the National Action Programme to Combat Drought and Desertifica-

tion (2012) in Ghana, and Niger's Economic and Social Development Plan 2017-2021, as well as for 3N Initiative 'Nigeriens Nourishing Nigeriens' of 2012 with agroforestry related targets and actions. Assisted natural regeneration of trees on farmlands and community lands plays a prominent role in these plans.

Other vital frameworks that are supporting the agroforestry agenda include:

The Strategic Investment Framework for Sustainable Land Management (SIF-SLM) in Senegal, Mali, and Niger, with its focus on minimizing degradation, rehabilitating degraded lands and increasing food production; and the Great Green Wall initiatives in Senegal, Mali, Ethiopia, Ghana, Niger and Somalia that are combatting the effects of climatic change and desertification. A stronger monitoring and learning framework will be fundamental to the ongoing success of these projects, and their contribution to the national commitments.