



*The lack of tree ownership restricts cocoa farmers' benefits from timber trees and they often prefer to fell the trees to avoid potential future damage caused to cocoa trees by loggers*

*Photo credit: E. Smith/World Agroforestry*



# Opportunities and Challenges for Enhancing Small-scale Timber Production and Marketing in Africa

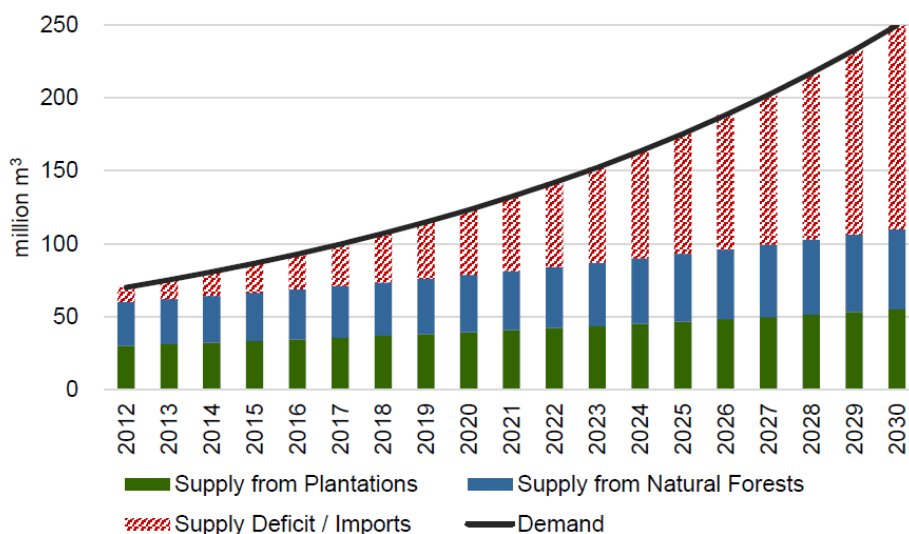
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## Highlights

- The slow rate of forest plantation development in many African countries leads to growing demand-supply gap in wood products, resulting in huge trade deficit
- Most industrial plantation programs by public sectors have been declining in the last two decades
- Smallholder plantation has been emerging as an important supplier of wood products in several countries
- Enabling policies and conducive institutional setups are crucial to promoting private and smallholder forestry schemes

## 1. Introduction

The demand for wood products is steadily growing in many African countries because of fast economic growth, increasing population, expanding urbanization and booming construction sectors. Africa's existing 16 million hectares (ha) of plantations cannot sustainably supply the wood products that the continent needs. The rate of forest plantation expansion in most African countries, except South Africa, is very low. Totally only 10,000 ha of new plantations are established per year (CAP and Indufor 2017). Forest plantation initiatives in Africa, both large and small, have performed below the required level to meet the current and predicted demand (see Figure 11.1). Inadequate new investments in forest plantations will lead to a growing gap in wood product supply and an associated trade deficit. Africa is currently consuming around 100 million m<sup>3</sup>/year equivalent of roundwood, in the form of lumber, wooden panels, utility poles, building materials, and other value-added products (CAP and Indufor 2017). Only a quarter of this demand is supplied by African plantations, with the balance coming from natural forests and imports. According to CAP and Indufor, Sub-Saharan African countries are importing around USD 2 billion worth of basic forest products per year.



**Figure 11.1:** Demand and supply of industrial roundwood in Africa (million m<sup>3</sup>). Source: Indufor Oy 2017.

Some African countries are highly dependent on imported forest products, draining their hard-earned foreign currency reserves. This high dependence on imported products not only undermines countries' determination to achieve Sustainable Development Goals (SDGs) but also challenges their effort to harness broader distribution of economic benefits to be obtained from plantation development. Establishing forest plantations will save the foreign currency currently invested in importing forest products. It is also an important vehicle to improve living standards, create employment and reduce poverty. Many African countries have attractive environments, both climatically and economically, for establishing tree plantations. Global trends, regional demands, and diminishing natural forests call for increasing forest plantations and wood processing industries in the continent.

Despite the huge demand-supply gap and untapped potential in the sector, the role of large companies in plantation forest development is very limited. Smallholder plantations and small-scale forestry investments by farming households have emerged as important suppliers in some countries, but not yet in other countries of Africa. Smallholder timber plantations are highly feasible in densely populated countries where it is increasingly difficult to find big swathes of land to be allocated for large-scale commercial tree plantation. The existing plantations and the prospects of expanding smallholder tree farming are constrained by several factors related to policy, institution, market, access to quality germplasm, and technological limitations. This chapter investigates policy, institution and market related challenges and the role of government to create enabling environment to encourage small-scale timber production and marketing by

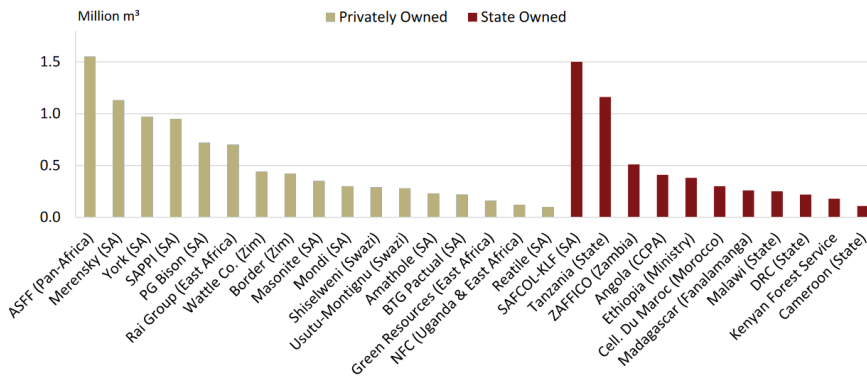
farming households. By analyzing relevant secondary documents, this chapter hypothesizes that national and local governments can stimulate small-scale timber production by improving policy and institutional factors such as securing land and tree tenure rights, improving access to market and market information, establishing vibrant institutional structure, and putting in place good governance system.

## 2. Trends of planted forests in Africa

Large scale industrial tree plantation in Africa started during the period 1900-1945. Most of these planted forests were developed based on importation and provenance trials of exotic tree species (AFF 2019). South Africa was among the first countries to establish Eucalyptus plantations in 1876 to provide fuel for railway engines and pine plantations for timber used in construction, followed later by Swaziland, Uganda, Kenya and Ethiopia.

After the end of World War II, timber plantations were expanded in Africa to increase production of wood-based products and materials that had become scarce in European countries due to the increased wartime use of fuelwood. Besides providing affordable wood for the industry, plantation forests are useful for rehabilitation of degraded areas, improvement of watersheds and for meeting environmental quality objectives such as windbreaks, shelterbelts, and carbon sequestration.

Exotic species are the most dominant trees planted in Africa, often preferable for their easy propagation and capability to grow rapidly to produce wood of desired quality. *Eucalyptus* species cover 22.4% of all planted area, followed by *Pinus* (20.5%), *Hevea* (7.1%), *Acacia* (4.3%), *Tectona* (2.6%), and a few others (AFF 2019). *Farmers typically prefer eucalyptus species* because of their fast growth, coppicing ability, ease of management, non-palatability to livestock, well established market demand for its wood, and better growth performance than most indigenous tree species even on degraded lands. Tree species such as *Grevillea robusta* is also emerging as an important on-farm tree in some countries like Kenya and Ethiopia. In terms of regional distribution, Southern Africa has the largest area of the continent's forest plantations (40%), followed by West Africa (30%), East Africa (18%), and Central Africa (12%). Governments own more than 52% of industrial plantations in Africa. South Africa is an exception to that norm, where 72% of plantations are owned by large companies and small growers (Chamshama et al 2009). Figure 11.2 shows the major sources of plantation wood in Africa.



**Figure 11.2:** Largest source of plantation wood in Africa.

Source: GEF, 2015

Plantation forest development by private companies is very limited in most African countries, primarily because of perceived risks and barriers to investment. Private investors are familiar and comfortable with the relatively low but reliable forestry returns in developed markets, but generally, Africa has an unreliable investment climate. Industrial plantation programs by public sectors have been declining in the last two decades due to weakening state forest services (Chamshama 2011). The priority given to public forest service has been diminishing in the face of global and national social, political and economic changes that embolden the increasing role of non-state actors. Consequently, government institutions are retreating from establishing and managing forest plantations, wood processing, marketing and trade. Smallholder plantation has increased significantly over the last three decades in the form of woodlots and trees on farm (ToF). It has currently become an integral part of major agro-ecosystems in Africa. However, the contribution of small-scale plantation to provide commercial wood products is not receiving much attention and is not recognized as a significant forest and tree production system (Holding-Anyonge and Roshetko 2003; AFF 2019). The following section presents the significance and role of smallholder timber plantation in providing wood products in Africa.

### 3. Significance and role of smallholder tree planting in Africa

Smallholder tree plantations are widespread across Africa, and they comprise a key component of agricultural-forest landscapes. On average, one-third of rural smallholders across Africa who grow trees earn about 6% of total household annual gross income (Miller et al 2017). Smallholder plantations provide a range of benefits to rural communities, including fuelwood, fodder and wood for building, and environmental and amenity benefits (Roshetko and Bertomeu 2015). Although smallholder commercial tree plantation is a recent phenomenon, its

expansion has increased the amount of industrial wood on the market. Industrial plantations are conventionally viewed as large areas of fast-growing monoculture operated by state or private companies. Recently, however, commercial timber production has begun to attract smallholder growers. Small-scale private tree plantations are fast gaining grounds, particularly in East and South Africa countries like Tanzania, Kenya, Uganda, Ethiopia, and South Africa.

In most East African countries, the prospects for large-scale commercial private sector participation are rather limited due to the shortage of continuous block of land available for plantation purpose. Tree planting by small farmers has been widely expanded in Kenya for two decades following the ban of harvesting wood products from the state forest reserves. This regulatory intervention has created market supply shortages and encouraged the involvement of smallholder farmers in tree planting (Holding-Anyonge and Roshetko 2003). Farmers involved in agroforestry practices such as trees for coffee shade and woodlot for fuel and construction have increasingly started to grow timber for sale on the market (Holding-Anyonge and Roshetko 2003; Chamshama et al 2009). The UK-based Gatsby Charitable Foundation has played a key role in supplying smallholder farmers with quality planting material, including hybrid Eucalyptus clones through their Tree Biotechnology Program. These fast-maturing plants have provided many small farmers with valuable income from the sales of poles, small-diameter timber and woodfuel. Other successful smallholder tree plantation programs in East Africa include Uganda's Sawlog Production Grant Scheme (SPGS), Tree Growers' Associations (TGAs) Program in Tanzania funded by the Government of Finland, and Komaza in Kenya. Tree growers' associations such as the Uganda Timber Growers Association (UTGA) and Kenya Forest Growers Association (KEFGA) have emerged since the late 2000s to look after the interests of their members. These include collective marketing of produce and inputs as well as to lobby their respective governments for better support to the sector (Jacovelli 2014).

Small-scale tree plantation is a venture that involves the broad distribution of economic benefits to lower-income families and avoids potential conflicts in allocating large areas of land for plantation. It can engage a large number of communities in rural areas and positively impact their livelihoods. For example, small-scale tree plantations by farming households have been significantly increasing in Ethiopia, covering an estimated area of 754,900 ha. Such plantations supply the largest volume of wood products used in the construction sector (such as poles and posts) and generate significant income to the farming households, compared to other farm enterprises (Lemenih and Kassa 2014; Sandewall et al 2015). Studies show that smallholder plantations can be established at a relatively low cost per hectare while also creating positive impacts on both income generation and climate change mitigation (CAP and Indufor 2017). A case study conducted in Ethiopia shows that households involved in tree planting, on average, generate 142 percent higher cash income than non-participating households and are able to spend significantly higher amounts for education and health care services (Addis et al 2016).

## Box 11.1

### Cases of successful smallholder tree planation programs in East Africa

#### Ugandan Sawlog Production Grant Scheme (SPGS)

The Sawlog Production Grant Scheme (SPGS) was started as a joint initiative between the Government of Uganda, and the European Union in 2004. In the first phase of the project (2004 - 2009), SPGS triggered a major interest in commercial tree planting in Uganda, with some 10,000 ha being established to the required standards. The Government of Norway has also joined in the funding of the second phase of SPGS (2010 - 2013) and has supported the establishment of 30,000 ha of timber plantations. The SPGS supported private-sector individuals, associations, and companies that planted a minimum of 25 hectares. The grant was fixed at approximately USD 350/hectare - 50% of the cost of establishing the plantation. The payment was made in three tranches spread across two years after certain criteria were met. No upfront payments were accepted: farmers had to invest in plantations themselves and only upon successful fulfilment of the criteria did they receive the grant.

#### Komaza – A Social Enterprise Supporting Tree Plantation Establishment

Komaza is a US-based social enterprise established in 2008 to support tree plantation activities in the southeast coast of Kenya. Komaza adopts micro-forestry approach, which combines microfinance and sustainable forestry. It provides farmers with support throughout the forestry value chain. The farmer package with Komaza consists of 1) training in the best forest management practices, 2) the best possible planting inputs, including *Eucalyptus grandis* x *camaldulensis* seedlings, seeds for short-term crops, water-retaining polymers, and fertilizers, 3) maintenance support throughout the rotation, 4) harvest and sales support, and 5) after-harvest support, including advise on spending strategies for the new income generated from harvested trees. Komaza provides a practical and scalable model for channeling funds from various social-impact investors to tree growers and simultaneously helps to find solutions to many economic, social and environmental challenges.

#### Tanzanian Tree Growers' Associations

The first Tree Growers' Associations (TGAs) were established in Tanzania a decade ago by private forest owners and currently there are 100 active TGAs in Tanzania's tree growing hotspot, the Southern Highlands. These farmers association can improve the quality and increase the volume of timber production as well as improve access to timber markets. The benefits of TGAs are seen in more efficient delivery of technical advice, economies of scale in plantation management and have major bargaining power with other market participants. In 2016, the Tanzanian TGAs formed an umbrella organization to represent the TGAs in national level decision making. The TGA registered some 12,500 hectares of TGA members' plantations in April 2017. The Government of Finland has assisted the TGAs with technical assistance and material support. The benefits of TGAs will be realized once the smallholders have timber for sale and can commence joint marketing and sales. Due to larger available volumes, this will likely attract buyers from value-added processing, resulting in higher stumpage prices than before. Eventual streams of income to TGAs will also increase their capacity to provide more meaningful services to their members.

Source: CAP and Indufor 2017

There is huge potential in many African countries in terms of biophysical and socio-economic suitability to expand small-scale tree plantations. Existing small-scale plantation forests are far below the continent's potential and significantly lower coverage than other countries such as China, India and Vietnam (Sandewall et al 2015; Roshetko and Bertomeu 2015). Roshetko and Bertomeu (2015) pointed out the significant gains in forest cover in East and South Asia due to the successful tree planting programs in China, India, Vietnam and Thailand. Existing studies show that small-scale tree plantations in Africa can be significantly improved by providing sufficient economic incentives and support for poor households that hardly afford to lose short-term economic gains to benefits from tree planting. It can also create an innovative mechanism to overcome low quality products and fragmented production system (FAO 2014; Jacovelli 2014; Sandewall et al 2015; Miller et al 2017). Such efforts could be realized by improving integration between producers and downstream industrial partners. This should include clustering smallholder producers in the form of out-grower schemes, improving the market information system, and introducing contractual agreements between raw material suppliers and the industries.

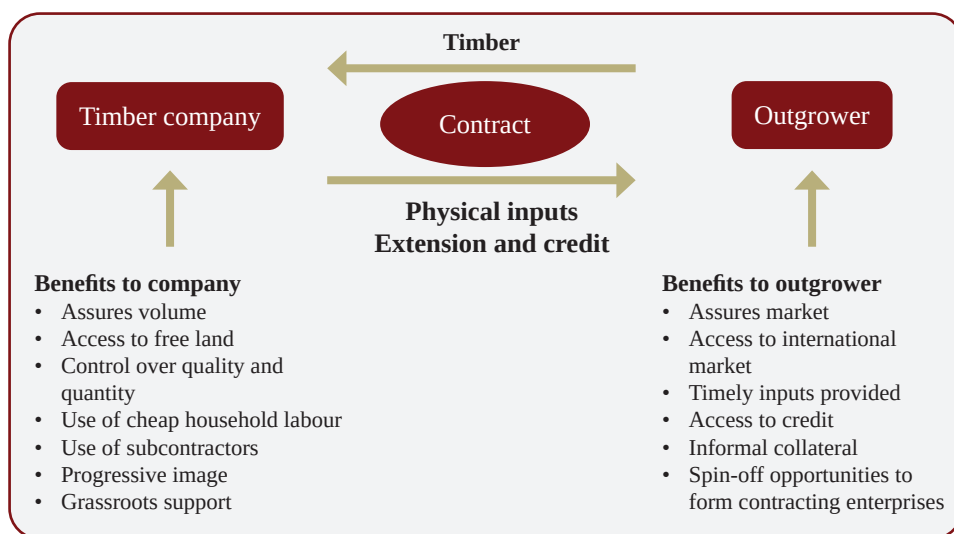
### **3.1. Out-grower schemes for commercial tree plantation**

Out-grower schemes in forestry are defined as contractual partnerships between growers or landholders and a company to produce commercial forest products. Out-grower schemes vary considerably in the extent to which inputs, costs, risks and benefits are shared between growers/landholders and companies. In most out-grower schemes, growers allocate land and other resources to the production and management of trees and related forest products, and a processing company provides a guaranteed market. Experience demonstrates that out-grower schemes hold potential for African farmers.

Sappi and Mondi's Khulanathi are two notable examples of out-grower schemes in South Africa. These companies saw an opportunity in developing communities as business partners and encouraged them to plant trees on a commercial scale. They commonly offer financial and technical support to small growers to establish and manage their tree crops in return for guaranteeing them a market for the final products. The companies also disseminate new techniques and practical research findings to participating farmers mainly through demonstration field days. The small grower schemes supported by large companies have assisted thousands of smaller growers in South Africa, making a huge impact on rural livelihoods (Jacovelli 2014). The incentives for forest processors to develop out-grower schemes include increased supply of the wood resource, access to productive land, resource security without incurring additional cost for land lease, diversification of supply, and increased co-operation with local communities. For growers, the advantages include an alternate and additional source of income, a guaranteed market for products, reduced market risks and, in some cases, financial support for enterprise



development. Out-growing can be seen as a way of allocating risk between the grower – who takes the risk of production – and the company – which takes the risk of marketing. The contract defines the relationship between the two parties and shared responsibilities. Growers are provided with physical inputs, loans and extension services for the establishment and maintenance of small woodlots. The partnership benefits both parties. Figure 11.3 illustrates a typical partnership scheme between smallholder timber grower and processing company.



**Figure 11.3:** The nature of timber out-grower deal, adapted from Cairns 2000.

Source: adapted from Cairns 2000

#### 4. Policy and institutional challenges in promoting small-scale timber production

The decision of smallholder farmer to plant trees on a given piece of land is influenced by expected utility, policy and institutional settings. Sandewall et al (2015) reported that plantation development varies across countries owing to factors such as policy, market situation, governance and institutional arrangements. Investing in forestry venture, which has a long gestation period, is risky in nature and requires secure land and tree tenure rights. Unfortunately, in many locations, the forestry sector often lacks clear and robust property rights, which are essential for the effective functioning of markets. Most countries in Africa do not have policies that govern trees on farmland nor specify how to deal with products from on-farm tree plantations (Ali et al 2011; Foundjem-Tita et al 2013; Lemenih and Kassa 2014; Jacovelli 2014; Miller et al 2017). This section presents critical policy and institutional factors affecting stallholder tree plantation in Africa.

#### **4.1. Lack of clear land-use policy that defines areas available for tree plantation**

Lack of clear land use policy leads to insecurity of land and tree tenure. Although there is variation among countries in Africa, insecure land tenure negatively affects plantation forest development in the continent (Jacovelli 2014). Secure access to land with clear land-use policy and supportive legal instruments is a prerequisite for developing smallholder plantation forests. Progressive tenure reforms are emerging in most countries that guarantee holding certificates. For example, Ethiopia issued a new forest proclamation in 2018, which recognizes four forest tenure categories: private, community forest, association, and state forests. This forest proclamation provides several incentives and bundle of rights for small holder tree growers, including the right to obtain a certificate of title deed, free from any kind of tax for the first production cycle, access to a loan, value addition and marketing of forest products and services such Carbon trade to local or foreign markets.

#### **4.2. Weak forest management institutions**

Institutions in this context refer to the administrative and political bodies through which forestry regulations are made, implemented, and adjudicated. Strong forest policies and legal instruments have limited use unless accompanied by institutions and administrative capacity that can efficiently and effectively implement those regulations. Weak government institutions inadequately enforce minimum forestry management standards and provide timely information required to make management decisions (FAO 2014). Weak institutions also exacerbate other policy challenges in the forestry sector, such as insecure tenure rights and an unregulated forest product market. Although the complexity and uncertainty of the forestry sector require competent institution, regulatory agencies in most African countries have insufficient resources and capacities to effectively administer existing laws and regulations, and there is a wide gap between rules on paper and implementation on the ground (Ali et al 2011; Foundjem-Tita et al 2013; Jacovelli 2014; Sandewall et al 2015). Smallholders are planting trees in the context of weak and dysfunctional institutional arrangement, which intensifies endemic corruption in harvesting, processing, and marketing forest products. Holding-Anyonge and Roshetko (2003) pointed out that tree farmers are often exposed to corrupt administration officials who fraudulently apply contradictory rules and regulations on environmental conservation, agriculture and taxation. An effective institutional setup that facilitates coordination and communication among key stakeholders should address broader policy objectives and commitments of the governments.

### **4.3. Weak governance**

The notion of good governance is commonly seen as a critical foundation for achieving positive social, environmental, and economic outcomes. Conversely, weak governance is often blamed for poor development outcomes, such as poverty and unsustainable levels of natural resource depletion. In the context of forestry, poor governance manifested in a lack of transparency and accountability is often associated with a lack of appetite by the private sector to invest in the forestry sector. For example, lack of transparency and predictability during land allocation, product harvesting and marketing critically hinder investor's decision, whether smallholder or big company. Although most countries have formulated a number of incentives in their regulatory framework to attract tree growers, transparent and comprehensive action plans are missing to implement the strategies.

Another common governance challenge is when countries formulate stringent forest regulations without having the capacity to enforce them. Many private actors are not able to comply with such regulatory requirements and instead operate illegally in the informal sector. Conflicting regulations, combined with unclear roles and capacity within regulatory institutions, contribute to higher levels of corruption, which is manifested in misuse of trusted power and violation of a duty or obligation under the law. Jacovelli (2014) indicates that in several Africa countries, the market price of timber and other wood products is artificially low due to a combination of poor governance (e.g., non-transparent sales of trees from publicly owned forests) and illegal trade of forest products from open access sources. Such conditions create an uneven playing field and discourage tree growers operating in the formal sector. Weak governance structures are driving many countries in Africa to reconsider government role in administering forest resources and, in many cases, resulted in looking toward alternative actors and policy instruments that stimulate interest in growing trees. A broad array of hybrid forest governance strategies are emerging in the wake of a global understanding that purely market state or civil society-based governance mechanisms which depend on their efficacy on support from other domains of social interactions.

### **4.4. Lack of efficient market and weak integration between producer and downstream industrial partners**

The forestry sector lacks strong policies that are essential for the proper functioning of markets, i.e., encourage healthy competition and discourage the development and misuse of market power. Such policies, among others, need to ensure clearly defined and legally enforceable property rights, internalize externalities (both positive and negative), and provide information to market participants to fully understand the impacts of their actions. Informed decision making requires accurate and up-to-date information. However, in the forestry sector, market

participants often do not have a full understanding of the consequences of their decisions. The government is expected to provide enough and accurate information to inform market participants and support the decisions of regulatory agencies.

Forest markets are also suffering from low quality and illegal wood products, making it very difficult for market participants to operate legally in the formal sector and in a sustainable manner. Low-quality wood products often arise from unmanaged or poorly managed plantation and from open-access natural forests. The prices for products arising from under managed plantations and illegal sources are normally set by the buyer rather than through the conventional market economics of letting supply and demand fix competitive prices. This affects financial returns from the plantation and eventually discourages tree growers from proactively managing their plantations or expanding their business.

## 5. Opportunities

A number of supportive policies are emerging in several countries in Africa to promote sustainable smallholder forestry scheme, which contributes to meeting the growing demand for wood at local, national and global levels at the same time to assist other ecosystem services. Although there are variations among nations, the policy reforms focus on strengthening land and tree property rights, production and marketing of forest products. The growing demands for wood products, extensive deforestation, effects of climate change have contributed to the significant expansion of smallholder plantations in many African countries (Sandewall et al 2015). Smallholder plantations in Africa could play a major role in moving towards a green economy since plantations directly sequester greenhouse gases (GHGs) emitted from service and industry sectors and other land use. Plantations provide alternative sources of wood, which reduces degradation and deforestation of natural forests resulting in further emissions and can contribute to major rural employment opportunities for both skilled and unskilled labor.

Several countries have enacted the Green Development Strategy that identified the forestry sector as one of the key economic pillars. For example, the Ethiopian government set new priorities to expand plantation forests in its 2011 Climate Resilient Green Economy (CRGE) Strategy. This strategy aligns well with many national and regional policy frameworks designed in recent years, such as the National Forest Sector Development Program (NFSDP), the national REDD+ Investment Program (RIP), and the new forest proclamation (No. 1065/2018). In Niger, the recent political openings and reforms to the colonial era forest and rural policies allowed local innovation in land management and created incentives for re-greening rural landscapes (Haglund et al 2011).

Success stories and best practices in developing smallholder plantations are emerging in the continent. Uganda, Kenya, Tanzania, and South Africa offer interesting cases to capture the experiences of small growers' schemes. Those cases provide practical lessons on how to plan and manage commercial tree planting, particularly by smallholders, in Africa. Jacovelli (2014) pointed out the availability of compiled information in the form of general texts (Evans and Turnbull 2004, Bredenkamp and Upfold 2012) and practical guidelines (FSA 2002; FAO 2006; Jacovelli et al 2009; Sappi 2008). This information is useful in advancing commercial tree plantation, both appropriate silvicultural practices and experiences on how to overcome market challenges faced by smallholder farmers. In this regard, the experiences of out-growers scheme promoted in South Africa and East African countries are worth consideration. Out-growers schemes sponsored by larger industrial companies have the potential to play a positive role in overcoming market challenges of smallholders. The smallholder will benefit from the technical support offered by the companies and secured future market for their products. The companies overcome the challenges of getting land and benefit from the larger supply of wood to process in their industrial facilities and spreading overhead costs. CAP and Indufor (2017) reported successful cases where a number of East Africa's larger forestry companies, including Green Resources, New Forest Company, and Kilombero Valley Teak Company, have established out-grower programs, leading to positive developmental impacts.

## 6. Conclusions and Recommendations

The current rate of forest plantation expansion in most African countries is far below the level to meet the growing demand for wood products.

Inadequate plantation development and the dwindling supply from natural forests is leading to a growing gap in wood product supply and resulting in huge trade deficit. Establishing forest plantations will save the foreign currency currently invested in importing forest products; and is an important vehicle to create employment and reduce poverty. Enabling policies and conducive institutional setups are crucial for the establishment of private and farm-based plantation forestry. In light of this, African countries need vibrant policies and institutional arrangement that can transform their forestry sector to meet new priorities and shifting demands in the rapidly changing economies, environmental conditions and social structures. Forest development, particularly smallholder plantation, successfully addresses key macroeconomic policy goals of African countries such as import substitution, export diversification, job creation and poverty reduction. These socio-economic factors give strong leverage to actors lobbying for policy reforms and to the private sector in negotiating for the necessary policy support.

## Box 11.2

### The nature of out-growers deal based on experiences from South Africa

#### Specific activities to establish out-growers scheme

- Selecting suitable farmers and plots in the vicinity of processing industries based on commonly set criteria. These include land suitability in terms of geographic location, size, soil, slope and approval of landownership.
- Awareness creation on the comparative advantages and benefits of growing commercial trees compared to the conventional farming on the existing farm.
- Signing a contract between the growers and the company. The contract includes detail operations that need to be done on each particular site and the correct timing for each operation.
- Based on the contract, prepare detail provisions for an advance to be paid by the company to the grower after he or she successfully completes each operation.
- The money paid out to the grower for each operation can be a grant provided through donor support or a loan advanced against the value of the final product or combination of both.
- The grower may also take an additional annual advance against the final value of the crop. Amounts advanced are deducted from the final payment, made out to the grower at the time of harvest. The companies provide extension free of charge, fertilizer, seedlings and other chemicals at bulk cost price.
- The out-grower farmers will plant the selected tree species with different assortments, including small, medium and large diameter wood that can mature at 5, 10, and 15 years respectively.

#### The key issues that contribute to the success of out-grower schemes include the extent that:

- Arrangements are appropriate for the local context (e.g. partners should have a reasonable likelihood of deriving benefits, contribute to the strengthening of the sociocultural and economic context of local communities).
- Contributions (e.g. land tenure, business viability) and partnerships are secure.
- Production and market risks are accurately calculated and shared.
- Partners have the social and technical expertise to genuinely negotiate arrangements.
- Partners are informed of realistic prospects and alternate opportunities.
- Arrangements and forestry practices are consistent with the principles of sustainable forest management at the local and regional levels.
- Arrangements contribute to wider community well-being.
- Consolidate rather than spread too thinly across areas – transport costs and other costs are unaffordable if volumes per area are too low.
- Transparency and strong relationships with growers are vital.

## Recommendations

- Governments need to adequately promote enabling policies and institutional frameworks to create conducive environments for investing, trading, and doing business. This includes initiating policy reform and establishing systems to enhance tenure security, improve market information and empower smallholders to bargain for better prices.
- State and non-state actors should support viable value chain development between smallholder tree growers and downstream industrial partners.
- Providing technical assistance to ensure adequate quantities of quality products and develop favorable livelihood strategies for low-income smallholders during the period between planting and harvesting.
- Financial support is also critical to further catalyze high quality out-grower programs, secure and maintain markets, and obtain rewarding prices for producers.

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