ITTO Regional Workshop
on Smallholders Forest Landscape Restoration (FLR) in West Africa
27-29 November 2019, Lomé, Togo

WORKSHOP BACKGROUND PAPER

BASED ON THE INPUTS RECEIVED FROM COUNTRY STUDIES

This document is a working paper providing some context on forest landscape restoration (FLR) undertaken by smallholders in the six ITTO member countries in West Africa. The focus is on tree planting in woodlots and agroforestry. The working paper is not a finished document, but a background paper for subsequent discussion at the workshop.

Dam with a natural forest gallery for FLR at Mr. Ayikoé's domain in Bodjé (Kpélé prefecture, Togo) Credit: K. Adjonou

Contents

1. Introduction

Much of the land in West Africa is flat, at an elevation of 0-600 m a.s.l., with some higher hilly areas, particularly in Togo and Benin. The semi-arid Sahel forms a transition zone between the Sahara in the north and the grass-dominated savannahs further south. Closer to the Atlantic Ocean, where there is higher precipitation and humidity, various types of floristically rich and diverse tropical moist forests occur. Timber and other NTFPs play a major role only in the economies of the countries with moist and semi-moist forests, whereas the eastern part and the dry interior of West Africa is notorious for its deficiency of wood and wood products.

Forests in West Africa[1] (defined as forests and other wooded lands) cover approximately 76.5 million ha (FAO 2016). In addition, Mali (as a Sahelian country) has 4.7 million ha of forests and 19.4 million ha of other wooded land. Natural closed forests are under serious threat of deforestation and forest degradation. FAO (2016) estimated annual gross rate of deforestation in the region to be approximately 3 million ha per year (average from 1990-2015), with huge differences between countries. Togo, Nigeria, Mali and Benin reported very high deforestation rates of 5%, 3.5%, 1.4% and 1.2%, respectively, between 1990 and 2015. In contrast, Côte d'Ivoire and Ghana reported increases in forest area of 0.1%, and 0.3%, respectively over the period. Other West African countries lie in between. ITTO (2011) indicated for Ghana a yearly loss of forest area of 677,000 ha between 2005 and 2010, with a comparable area of forest suffering degradation. The combined effects of over-exploitation of natural forest resources, unsustainable land-use practices (e.g. "slash and burn" or conversion to cocoa), wild fires, mining activities, and political unrest (e.g. in Liberia and Mali) have had serious effects on the natural forest area. The reported increases in forest area are rather due to new monitoring and assessment systems and increases in forest plantations and agroforestry systems (shaded cacao).

Nonetheless, deforestation is an issue and continuing forest destruction results in habitat loss, decrease in biotic diversity, accelerated soil erosion leading to decreased agricultural productivity and, consequently, deterioration of local livelihoods. If the forests are not completely cleared and transformed into other forms of land-use, degraded secondary vegetation cover remains. However, high pressure on natural resources from anthropogenic disturbances affects natural restoration processes. ITTO (2011) estimated that more than 90% of the forests in West Africa are in a stage of degraded natural or secondary forests, and only about 10% of intact forests remained in 2010.

Forest degradation refers to the reduction of the capacity of a forest to produce goods and environmental services, including a limited biodiversity. Forest degradation is generally a human-induced arrested succession, which severely constrains underlying ecological processes. A degraded forest has lost the structure, function, species composition and productivity normally associated with a natural forest type. Forest landscape restoration (FLR) is an integrative approach for the rehabilitation of degraded forests and forest lands and thereby enables the sustainable management of landscapes over time. Six principles of FLR were internationally agreed by the Global Partnership on Landscape and Forest Restoration (GPLFR) in 2018:

1. Focus on landscapes
2. Engage stakeholders and support participatory governance

[1] The definition of the term "West Africa" is not homogeneous. According to the FAO-FRA, West Africa stretches as a belt, from Senegal in the northwest to Nigeria in the southeast and comprises 11 countries, amongst them five ITTO member countries Benin, Côte d'Ivoire, Ghana, Liberia and Togo. Mali is a Sahelian country and counts in the FRA as part of North Africa.

3. Restore multiple functions for multiple benefits
4. Maintain and enhance natural forest ecosystems within landscapes
5. Tailor to the local context using a variety of approaches
6. Manage adaptively for long-term resilience.

Reduction of Emissions from Deforestation and forest Degradation (REDD+), forest law enforcement, governance and trade (FLEGT) are prominent themes in global forestry. FLR can focus either on enabling the sustainable management of natural forests as part of the permanent forest estate, containing both production and protection forests, or enabling the functionality of mosaic landscapes as a mix of land used for agriculture and infrastructure, natural forests, planted forests and woodlots and trees outside forests. Thus, FLR can help improve forest resilience and productivity as well as the livelihood of forest-dependent communities. It is meant to be an integral component of the national climate-change programmes of most tropical countries as a means to reduce greenhouse-gas emissions and increase carbon storage and of the national plans to adapt forests and agricultural landscapes to changing climatic and environmental conditions.

Several global and regional initiatives aim to address forest degradation. The most important are the Bonn Challenge (2011), the New York Declaration on Forests (2014), the Global Partnership on Forest and Landscape Restoration (GPFLR), the Global Landscapes Forum, the United Nations Convention to Combat Desertification (UNCCD), the Aichi Biodiversity Targets (Convention on Biological Diversity CBD), the Initiative 20x20 in Latin America, and the African Forest Landscape Restoration Initiative (AFR100). FLR is embedded in the Sustainable Development Goals (SDGs), particularly SDG 15, and the Global Goals of the United Nations Strategic Plan for Forests.

The objective of the ITTO Activity 3 on the **Promotion of smallholders' forest landscape restoration in West Africa** is to help ITTO member countries of the region (Benin, Côte d'Ivoire, Liberia, Ghana, Mali and Togo) to achieve their commitment to forest restoration by accelerating and facilitating the participation of smallholders in FLR, particularly in plantations of trees in woodlots and agroforestry systems. The workshop will help achieve the ITTO Activity 3 objective by sharing success factors, challenges and best practices of smallholders, and by analysing the institutional arrangements and strategies that provide efficient incentives for the involvement of smallholders and communities in FLR. Furthermore, the workshop will provide some technical inputs to all participants, including representatives of smallholder planters' associations, on plantation development, processing and value chains.

2. State of FLR in West Africa

2.1 AFR100

The African Forest Landscape Restoration Initiative (AFR100) is a country-led effort to bring 100 million hectares of land in Africa into restoration by 2030. The initiative started formally in 2015 at the COP 21 in Paris to support the Bonn Challenge and the New York Declaration on Forests. It emanates from the New Partnership for Africa's Development (NEPAD), the World Resources Institute, Germany's Federal Ministry for Economic Cooperation and the World Bank. AFR100 connects political partners with technical and financial support to scale up restoration on the ground. All study countries, except for Mali, have pledged approximately 10 million hectares for restoration (https://www.wri.org/our-work/project/AFR100/restoration-commitments).

- **Benin**

In 2016, Benin committed to restore 0.5 million hectares, primarily through reforestation and restocking its plantations, as well as improving their management. The main tree species targeted are teak (pole production) and acacia (fuelwood). Some project examples are:

- Projet de Restauration des Ressources Forestières de Bassila (PRRF), conducted from 1988 to 2003. It included management committees comprising the local population.
- Programme de Gestion des Forêts et Terroirs Riverains (PGFTR) a reforestation programme for 2,050 ha of degraded land, conducted from 2003 to 2018. It included local communities.
- Projet d'Appui à la Gestion des Forêts Communautaires, phase 1 (PAGEFCOM I) helped to provide management plans for private forests (both plantations and natural forests) and for sacred forests, for a total of more than 10,000 ha.
- Projet d'Aménagement des Massifs Forestiers (PAMF), conducted from 2002 to 2007, concerned the: implementation of sustainable ecosystem management with the participation of the local population. In total, it covered approximately 30,000 ha.
- Projet de Plantations de Bois de Feu (PBF), conducted from 2002 to 2011. This project focussed on forest reconstitution for energy-wood, developing participatory management plans and creating rural markets for firewood. In total, it covered approximately 10,000 ha of private and public forests.
- The "Forêts classées du Bénin" project, planned from 2019 to 2026: aims for an integrated management in classified forests, including aspects or firewood and valorisation of non-wood forest products. The aim is to reforest 23,500 ha.
- Mangrove restoration under several projects and programmes (especially from the NGO ECO-ECOLO and under the Ecosystem Alliance program from various NGOs).

- **Côte d'Ivoire**

In 2016, Côte d'Ivoire committed to restore 5 million hectares, primarily through reforestation and promotion of natural regeneration, as well as protection and enrichment, including in wetland forests. Beside tree plantations, the focus is on agroforestry.

- **Ghana**

In 2015, Ghana committed to restore 2 million hectares, primarily through plantation and enrichment focussing on the northern savannah, trees on farm and fuelwood production. As part of this target, it is planned to establish and manage 625,000 ha of forest plantations, to carry out enrichment planting in 100 000 ha of degraded forest reserve compartments, and to facilitate the incorporation of trees on farms on a total of 3.75 million ha of agricultural lands.

- **Liberia**

In 2015, Liberia committed to restore 1 million hectares, primarily through developing a REDD+ program. Liberia is currently setting goals and developing strategies to tackle deforestation and forest degradation. So far there is one regional programme which is in Lofa County and aims for forest landscape restoration and sustainable land management through forest conservation, restoration of degraded landscapes and the development of the agricultural sector and value chains.

- **Togo**

Between 2015 and 2018, Togo committed to restore 1.4 million hectares. This commitment is detailed in many national policies and programs:

- *Plan National de Développement* (PND 2018 - 2022) aims, among others, for the restoration of Togolese ecosystems.
- National forestry policy: strategic axe 2 on the restoration of degraded forest stands.
- National forest action plan 1994 (Plan d'Action Forestier National du Togo, PAFN-Togo): updated in 2011 to ensure the restoration of degraded forest stands.
- REDD+ national strategy.

- National strategy for mangroves, 2007 (*Stratégie nationale pour la conservation, de la restauration et la gestion durable des mangroves*).
- Strategic plan "*Vision 2030*".
- The national reforestation program (*Programme National du Reboisement* PNR) of 2016 encourages the use of indigenous species for reforestation.
- FLR Togo: the program established priorities of the FLR options according to different regions on public and private estates, including plantation, enrichment, agroforestry (e.g. with coffee and cocoa), controlled grazing, control of bush fires, trees outside the forest and mangroves restoration.
- ProREDD: the German GIZ is conducting three FLR projects in protected areas including a community forest and a classified (public) forest. This is, to date, the only programme with concrete results.

- **Mali**

Mali has no commitment in AFR100. However, it has many national initiatives and also takes part in several regional projects and programmes. Agroforestry landscape and forest restoration projects amount to approximately 485,000 ha.:

- A total of 100,650 ha reforested in different regions between 2012 – 2016
- A regional project on the reversion of land degradation by enhancing the adoption of agroforestry practices (2017 – 2022),
- Domestication and plantation of *Jatropha* for increase of fuelwood production outside forests (2009 – 2010)
- Reforestation of 6000 ha with *Acacia Senegal* financed by the Biocarbon Fund
- Several projects and activities linked to capacity-building, technical trainings and nursery development
- Contribution to the African Great Green Wall

2.2 Other FLR related initiatives and processes

2.2.1 REDD+

In the region, the REDD+ strategies developed by the countries often contain FRL targets, as forests have been largely degraded. The countries are at different levels of advancement in their REDD+ program.

Côte d'Ivoire, Ghana, Liberia and Togo are the countries engaged in the Forest Carbon Partnership Facility (FCPF), with Ghana being the most advanced, having signed the Emission Reduction Purchase Agreement (ERPA) on Nov 6, 2019, Côte d'Ivoire is at the stage just before signing their ERPA. These two countries will benefit from major payments for results of their forest carbon emission reduction. Liberia and Togo are still in the REDD+ readiness phase. Benin, Côte d'Ivoire, Ghana, Liberia and Togo are partners of UN-REDD receiving different types of funds to support the national REDD+ process. The only country that is not engaged in any REDD+ project is Mali.

In detail, we can note:

- Benin: REDD+ Readiness Preparation Proposal in collaboration with UN-REDD.
- Côte d'Ivoire: FCPF Readiness Process conducted and Carbon Fund participant. UN-REDD Programme partner country since 2011.
- Ghana: FCPF Readiness Process conducted and Carbon Fund participant UN-REDD. Programme partner country since 2011; has developed a national REDD+ strategy in 2015.

- Liberia: REDD+ preparation since 2007 (National Forest Monitoring System NFMS, and Safeguards Information System SIS), still in progress.
- Togo: Readiness grant since 2015, scheduled to end mid-2020.
- Mali is not engaged in REDD+ activities but has used a SESA for a project on the resilience of the agroforests and forests (African Development Bank).

There are some promising examples of smallholder involvement in REDD+, e.g. in Ghana two out of three project components involve smallholder farmers. One component focusses on climate-smart agriculture and the integration of shade trees for increased carbon sequestration in cocoa and support farmers to include 16 – 18 timber trees in rejuvenation efforts of old and unproductive cocoa farms. Also, Côte d'Ivoire puts a focus on cocoa through the Cocoa & Forests Initiative which pledges to provide deforestation-free cocoa and more shade trees. Another component in Ghana focuses on the savannah woodland landscape and aims to support both shea tree plantations and community woodlots to reduce pressure on remaining forests and provide smallholders with sustainable options for using fuelwood and opportunities for income-generation from shea butter.

In Côte d'Ivoire, the REDD+ project La Mé, approved in 2017, includes financial and technical support for investments in teak plantations (minimum land size of 3 ha) as well as financial support for reforestation or assisted natural regeneration (minimum land size of 1 ha), which is theoretically accessible for smallholders.

2.2.2 IUCN

The International Union for the Conservation of Nature (IUCN) has been working on FLR in a variety of programmes, including four current projects and initiatives. Benin, Côte d'Ivoire, Ghana, Liberia, Mali and Togo all benefit from the overall regional programmes of IUCN. In addition, Ghana takes part in the Land Use Stabilization (PLUS) project.

2.2.3 FLRM

Since 2014, the Forest and Landscape Restoration Mechanism of the FAO aims to contribute significantly to the scaling-up, monitoring and reporting on FLR activities.

2.2.4 Green Climate Fund and FLR

Over the past 2 years, many countries have been developing their capacities to develop programmes and projects for the Green Climate Fund (GCF). Coordinated through the National Designated Authority (NDA) of the respective countries, projects that address both mitigation of greenhouse gases and adaptation to changing climatic conditions, fall in the framework of FLR. In West Africa, climate change has disproportionately affected smallholder farmers in the Savannah/Guinea belt, rendering their coping strategies ineffective. Coping strategies include opening new fields and overharvesting NTFPs, leading to deforestation, forest degradation, and loss of ecosystems services. FLR is seen as an effective measure to increase resilience of ecosystems and social systems.

The exact stage of preparation of GCF projects in the 6 countries is not known. Togo intends to submit a proposal to the GCF to implement its REDD+ strategy that includes an FLR approach.

2.3 Role of smallholders in FLR

Smallholders constitute approximately 80% of farmers across the study countries in West Africa. But in most countries, there is no official definition of what a smallholder is, and generally there is large heterogeneity between different groups of smallholders. Definitions vary also in different studies and statistics. Smallholders can be broadly described by the following characteristics:

- ✓ small land holders;
- ✓ limited access to land;
- ✓ low financial capital;
- ✓ general focus on subsistence or semi-subsistence;
- ✓ utilization of low technology production techniques;
- ✓ limited use of chemical inputs;
- ✓ low participation in (global) markets;
- ✓ and high level of vulnerability (environmental/climate, financial).

Smallholders are most often classified according to their land size, which varies from less than one hectare up to between 2 and 5, and up to 10 ha. Legally, smallholders can be individuals, family or clan structures, communities, churches or associations.

The majority of the actions for FLR, including forest plantations, are state driven. Smallholders, for the main part, face a precarious situation that prevents them from using sustainable forest and land use techniques. Their role in FLR lies essentially in using agroforestry practices, but FLR is not their primary objective. Still, initiatives for FLR and reforestation exist at the local and community level, for instance in community forests, sacred forests and with the creation of income-generating activities such as agroforestry or woodlot planting.

Smallholders in the context of our work are mostly involved in agroforestry practices. This includes trees on farms, creation of woodlots and small forest plantation development, the planting of tree crops (cocoa, coffee, rubber, oil palm, cashew), as well as permanent tree crop combinations. For example, in Ghana and Côte d'Ivoire, cocoa farmers are encouraged to plant a certain number of timber trees in their farms, with partial support through seedling supply and training. In Liberia, smallholder rubber, cocoa and coffee farmers receive technical support, seedlings and chemical inputs as incentive. Several initiatives promote agroforestry practices with native timber species, exotic species for timber or fuelwood, or fruit trees. It is estimated that a total of 600'000 smallholder farmers in Côte d'Ivoire plant native or exotic tree species in their cocoa farms. In Liberia, smallholder tree planters are mainly rubber and cashew farmers.

However, plantation with timber species, including e.g. teak, khaya, fraké, samba, iroko and others, are less common for smallholders, with few exceptions. In Benin, it was found that smallholders' goals in FLR are generally to sell fuelwood or timber, but also to secure their land. Firstly, access to support for establishing tree plantations is more limited for them. Forest plantation funds usually aim for a minimum area (e.g. 4 ha in Ghana) and prefer somewhat larger landholders and investors. As such, smallholders are often not even aware of these funds.

In Togo, tree plantations under 10 ha are officially called community and private forests, as opposed to private enterprises for the larger ones. They need to provide a forest planning document. Generally, they are agroforestry systems. In Togo, 70% of the private plantations are ≤ 5 ha. In total, they represent between 10,000 and 30,000 ha, according to the National Forest Inventory and REDD+ studies, with teak occupying almost 7,000 ha. In Côte d'Ivoire, it is estimated that 10% of teak plantations are managed by smallholder individuals or communities with less than 10 ha of plantations. In Ghana, private individual plantation owners reportedly have land sizes within a range of 2 to 50 ha per individual. In Mali land areas, even for smallholders, tend to be bigger than in the other countries, with a reported minimum plantation area of 10 ha.

A common approach is the involvement of smallholders in *Modified Taungya Systems (MTS),* which involves the establishment of plantations by the government through partnerships with farmers. In MTS, farmers provide the labour and tend seedlings and young trees during the first few years before canopy closure. In turn, they are allowed to use the land for growing food crops during these

years. In addition, they get benefit shares from the sale of the timber trees once they are harvested. This approach is for example widely applied in Ghana.

Smallholders are organized in various ways, with the most common being associations. They include associations of teak planters (Côte d'Ivoire, Ghana), private tree growers (Ghana, Togo, Mali), cocoa farmers (Côte d'Ivoire, Ghana), rubber planters (Liberia), cashew planters (Liberia) or shea nut collectors (Mali). Further organizations are church partnerships for conservation and reforestation (Ghana) and youth groups engaged in tree planting (Ghana). These groups usually work hand-in-hand with the authorities. On the field, government and local communities acknowledge the FLR component of agroforestry systems. In Togo, many private forest owners usually work only with the help of their family members. Other individuals are in associations. However, most of them (more than 85%) do not coordinate with officials of the forest service. Private owners can make their land available for FRL (contract agreement with the government) or for energy-wood reforestation (contract agreement with communities).

Community forestry initiatives also aim to be more inclusive of smallholders in forest landscape restoration. In some cases, community forestry projects aim for communities to help restore and/or conserve forest areas and engage in alternative livelihoods. In other cases, community woodlots are established for the production of fuelwood or other plantations for income generation.

3. SWOT analysis for smallholder FLR in West Africa

In the six case study countries, the involvement of smallholders in forest landscape restoration was assessed based on current strengths and weaknesses and potential opportunities and threats. The following main issues came up in the SWOT analyses:

- Policies and legal frameworks: Existing laws and policies, in particular those concerning land and tree tenure, greatly influence smallholders' decisions as to whether to invest in tree planting. In some countries, weak tenure laws and property rights act as a disincentive to smallholders to engage in plantation development or even agroforestry combinations with timber trees. In other countries, current or planned revised legal frameworks provide new opportunities in the long-term.
- Data, knowledge and extension: A general lack of data at national levels is hindering the implementation of best practices in FLR. For smallholders, access to technical support and extension services is often lacking.
- Financing: Willingness of the international community to finance FLR is seen as a major opportunity. On the other hand, financial support (e.g. through banks, microfinancing institutions) for smallholder investments is still limited at the local and district levels.
- Markets and value chains: At the global level, demand for timber and other wood products is growing, being an opportunity for tree plantations. However, there are several weaknesses in the value chains. While in some countries there are only few wood processing industries, in others the main challenge for smallholders is the selling through middlemen (often for lower prices) and unwillingness to process small-diameter logs.
- Forest services and governance: Centralized government structures and slow processes are major weaknesses in many countries and make it difficult to address issues of smallholders. In some cases, there is a lack of capacities within forest services.
- Stakeholder participation and exchange: While some countries already have well-functioning associations, in others the various associations and groups are not well structured or limited in their support. Participation of the local population is generally seen to be at low levels.

In the following sub-chapters, all identified strengths, weaknesses, opportunities and threats are listed and summarized under the key points. Legend: B = Benin; C = Côte d'Ivoire; G = Ghana; L = Liberia; M = Mali; T = Togo).

3.1 Strengths

The following strengths were identified in the country reports:

- Policies and legal frameworks
    - Clear land tenure laws facilitating plantation development for smallholders (L)
    - Revised legal frameworks on forest management (B)
    - Existing national norms on sustainable forest management

- Forest services
    - Creation of government organs specifically responsible for environmental issues, FLR and climate change (M)
    - Good skills mix of forestry personnel (G,C,M)
    - Experience in implementing various projects and models of plantations (G,C,M)
    - Decentralization of forest services in some cases (B)

- National and international financing opportunities
    - Financing opportunities from specific projects on FLR (T,B)
    - Private sector interest in reforestation (T)
    - Good international investor experiences (G)

- Participation and existence of associations and networks
    - Associations, unions and networks (G,C,T,B,M)
    - Participative processes for the development of forest management plans (B, M)
    - Participation and enthusiasm of local communities (G,L,B)

- Availability of resources (in particular land for FLR)
    - Availability of suitable lands for plantation development (G,L,T)
    - 3/5 of forest area belongs to private individuals (T)
    - Availability of labour (G)

- Benefits of FLR
    - Income diversification for farmers (G,L,C)
    - Biodiversity services (C)
    - Job creation (G,L,C)

3.2 Weaknesses

The following weaknesses were identified in the country reports:

- Legal and institutional frameworks
    - Weak legal and institutional framework (G,L,C,M)
    - No forest management plans for private owners (T)

- Weak law enforcement and compliance
    - General non-compliance with regulations (T,B)

    - Legal forest exploitation and plantation development are expensive (taxes) (C)
    - Weak enforcement of laws and/or performance standards (G,B)

- Inadequate land and tree tenure make it difficult for smallholders to get property rights
    - Inadequate rural landscape planning for plantations (C)
    - Registration of plantation and/or trees on farm is complicated (G,C)
    - Lengthy land acquisition processes (G)

- Slow processes within national forest services
    - Over-centralization (G)
    - Limited resources of forest administration (B)
    - Bureaucracy within forest service leads to slow decision-making processes (G)

- Lack of exchange between different stakeholders
    - Limited participation of smallholders in discussing silvicultural techniques and commercial negotiations (C,T)
    - Little exchange between private and public sector (C)
    - Lack of coordination between institutions (M)
    - Development of plantations has not gone hand-in-hand with developments of the industry (G)

- Potential conflicts
    - Political instability (C,L)
    - Poor relationships between small forest/plantation owners and neighbouring communities (T)

- Limitations in market access
    - Difficult access to the international markets due to weak bargaining power of smallholders (T)
    - Wood supply from natural forests more in demand than plantation products (T)

- Limitations in information systems
    - Widespread data gaps (e.g. growth rates, expected returns, statistics on smallholders in general terms including on the real extent of plantations done by none-state institutions/smallholders) (G,C,T,B,M)
    - Inadequate knowledge of key indigenous species, mixed plantations and agroforestry (G,L,C,B,M)
    - Weak technical formation and extension services for FLR and agroforestry (C,G,L,B,M)
    - Grassroot organizations and platforms are not well structured (T,B)
    - Inadequate monitoring (e.g. limited use of GIS & other technologies) (G,C)

- Technical challenges for smallholders
    - Low knowledge in silvicultural practices (M)
    - Water scarcity due to competition between trees (C)
    - Problems with pest infestations (C)

- Limited resources
    - Inadequate plantation infrastructure (G,T)
    - Lack of inputs (labour, fertilizer, chemicals) (L,T)
    - Lack of genetically improved planting material (G,C)
    - Limited availability of qualified workers (T)

- Problems of financing plantation establishment
    - Small land size leading to high transaction costs (G)
    - Lack of sustainable financing frameworks (G,C)
    - Limited capacity to access carbon funding (M)

- Low income for smallholders
    - Low productivity (G,C)
    - Poor wood quality due to insufficient tree maintenance practices (G,C)
    - Limited utilization & processing capacity for small-diameter logs (G)
    - Low use of intermediate products of the plantations (T)

3.3 Opportunities

The following opportunities were identified in the country reports:

- International engagement for FLR
    - International conventions and initiatives (C,T,B)
    - Increased awareness and interest of international community for FLR (C,T,B,M)
    - Willingness of donors to finance and support projects (L,C,T,B)

- Political will leading to improved legal frameworks for FLR
    - Integration of forestry into the national development plan (T)
    - Resources mobilization at communal and department level for FLR (C)
    - Consensus for necessary new legal frameworks for FLR and constant improvement of land and tree tenure regulations (G,C,T,M)
    - Strong political interest in plantation development for the creation of jobs and other benefits (G,L,C)

- Regional collaboration
    - Political and economic stability leading to better collaboration (G)
    - Dissemination of existing knowledge of best practices in plantation management (G)
    - Availability of genetically improved planting material of high-value exotic species in other countries (G)

- New investments and financing opportunities
    - Investing in processing infrastructure is expected to be profitable (T)
    - High potential of the carbon market and (payment for ecosystem services) PES schemes (G,B,M)
    - There is an overall increase in planted areas and many micro, small and medium size enterprises (T)
    - Possibility of forest certification to open up new markets (T)

- Increasing market demands
    - Increasing demand for industrial timber and other wood products (G,B)
    - Increasing niche market demand (e.g. certification) (G,B)

3.4 Threats

The following threats were identified in the country reports:

- Challenges connected to socio-economic or politic developments
    - Political instability could lead to conflicts (C,M)
    - Policies not favouring smallholder planters (L)
    - Youth migration to urban areas (L)
    - Difficulties in finding skilled workers (T)

- Illegal activities
    - Illegal mining (G)
    - Illegal logging and timber trade (G,T,B)
    - Illegal charcoal production (G,T)
    - Illegal farming within forest reserves (G)
    - Weak law enforcement (C)

- Local conflicts due to inadequate tenure and property rights
    - Insecure land and tree tenure, particularly affecting smallholders (G,T)
    - Multiple land interests in off-reserve areas (G)
    - Encroachment into community forests can lead to local conflicts (T)
    - Free-range cattle grazing (nomadic herdsmen) (G,T)

- Insecurities concerning the investment in FLR
    - High investment costs and late cost returns (T,M)
    - Difficult for smallholders to access credit in conventional financial institutions (T,B)
    - Lack of sustainable financing and unwillingness to extend long-term credits (G)
    - No statistics on wood trade and its contribution to the national economy (T)
    - Limited availability of legally sourced raw material for developing legal wood processing industries (T)
    - Overall lack of investment in research and development (G,T)
    - Potentially higher future transportation costs (B)

- Challenges of market access for smallholders
    - Underdeveloped domestic market for timber (G)
    - Generally poor market access for smallholders (G)
    - Low prices for naturally grown timber that compete with teak in particular (G)
    - No price guarantees for smallholder wood products (G)
    - Absence of processing units for timber (T)
    - Low valuation of forest by-products (T)
    - Middlemen offering low prices for wood products (G)
    - Low competitiveness of processed products on the international market (T,B)
    - Increased availability of substitute products on the market (T)
    - Under use of thinning products (T)

- Environmental problems and potential yield declines in plantations
    - Climate change (G,L,M)
    - Unregulated use of herbicides leading to pollution and decreasing resilience of plantations in the long-term (G)
    - Shorter fallows decreasing soil fertility and yields (L)
    - Wildfires leading to the destruction of forest plantations (G,M)
    - Livestock (over)grazing could kill trees (M)

4. Priorities and leverages

4.1 Livelihoods and value chains

A variety of tree species, both indigenous and exotic, are planted by smallholders with different purposes. For the production of timber, market demands, and the value chain play a main role in the decision on which species to plant. There are a few key species, but teak is by far the most favoured. Another main purpose of tree plantations is the production of fuelwood for individuals or communities that is also widespread (e.g. eucalypts; *Acacia auriculiformis* in Benin and Togo).

On the other hand, trees in agroforestry systems often serve a variety of purposes such as wood for local construction, fuelwood, and non-timber forest products including medicinal plants, fruits, oils, gums, resins, honey, weaving and dying materials, aromatics, etc. However, there is generally limited value-added processing at local levels and most smallholders depend on middlemen to sell their products. This also applies to timber. In Togo, e.g. it is estimated that less than 2% is processed before export. The table below lists the most common species that smallholders' plant in West Africa. Teak is the single most important timber species used by smallholders for creating woodlots plantations of a certain size. Based on some experience from state trial plantations, Terminalia (*T. superba, T. ivorensis*) is also sometimes used. In Mali, Eucalyptus is also an important species for reforestation. There are some species that have potential, but experience is lacking (see table beneath).

Species		**Use**	**Value chains**
Timber tree species			
Tectona grandis	teak	timber	Most smallholder teak growers sell their logs to middlemen, sometimes to local contractors, who process the logs into boards. Exporters (mostly Indian and Chinese) purchase and export logs. Local manufacturers or craftsmen transform teak into a variety of products for the local market, particularly furniture, doors and window frames
Terminalia **spp***: T. superba, T. ivorensis*	limba, framiré fraké	timber, shade tree	International/regional market, domestic construction timber
Hevea brasiliensis	rubber	timber, rubber	Rubber wood in Liberia is becoming a major trading good
Other timber species with potential for planting in woodlots/agroforestry	With potential to be accepted in the value chain: *Triplochiton scleroxylon (samba, wawa), Ceiba pentandra, Milicia excelsa (iroko), Khaya spp., Lophira alata (esore), Alstonia boonei (ekouk, emien), Daniellia ogea (in dryer areas), and Nauclea diderrichii (bilinga)*		
Fuelwood and industry wood			
Acacia auriculiformis, Acacia **spp** *Eucalyptus* **spp**	Acacia can become invasive		
Pinus caribaea, Pinus oocarpa	The Caribbean pines grow well in the Western part of West Africa, however their market potential is low		
Tree crops			

Theobroma cacao	cocoa	food (export)	Cocoa is grown by farmers, fermented and dried, and then sold to cocoa bean traders, often via associations, then exported and further processed by the chocolate industry, mostly in Europe.
Hevea brasiliensis	rubber	latex, wood	Rubber is often produced in outgrower schemes where latex is sold directly to companies (e.g. the Firestone Rubber Company in Liberia), which further process and export the products. At the end of rubber rotations, rubberwood can be used for furniture or as fuelwood.
Anacardium occidentale	cashew	food (mostly export)	Cashew nuts are mostly exported. The growers dry the nuts and sell them to middlemen, sometimes through associations.
Vitellaria paradoxa (dry areas)	Shea, karité	cosmetics, cooking oil	Shea nuts are locally processed into shea butter and sold on the local market or internationally. Actors are nut collectors (mostly women), butter producers, traders, and the global food and cosmetics industry.
Acacia senegal (dry areas)	Gum arabic	glue (edible), various industries	Gum Arabic can be harvested from wild trees or from plantations of private owners who are organized in cooperatives (e.g. Mali). The gum is exported internationally for the use in a variety of industries including the food industry.

In addition to the main products, there are a variety of secondary non-timber forest products (NTFPs) which are collected from forest areas, plantations and trees on farms and in the landscape. In particular in drier regions of West Africa, several tree species are known for their medicinal properties and are used for herbal medicine. They are not only used for subsistence but also sold on the local and domestic markets. In Mali, for example, collectors of medicinal plants (including tree products) and traditional healers are organized in associations. Non-timber forest products such as shea, gum arabic and herbal medicine are also important sources of income for women and contribute to women empowerment.

Value chain is a core element that we will discuss during the workshop.

4.2 Removing barriers for smallholders in West Africa

4.2.1 Institutional elements

4.2.1.1 Land and tree tenure

Secured land tenure and/or tree tenure is key for any smallholder to invest time and resources in FLR/agroforestry and woodlots. In this respect, the concept of “actual rights”, as distinct from “paper rights”, is particularly important for the smallholder.

In the region, the countries often have issued written laws on land ownership rights (more rarely on tree ownership specifically). The situation on the ground, however, sometimes differs. Women especially have difficulties to access secured land.

In **Benin**, the right of access to property and the ownership rights are written in the law, without distinction between men and women. However, customary rights often prevent women accessing land, as they are not entitled to inheritance. Sharecropping and lending are common, although they offer only precarious rights. Law enforcement is somehow weak, but reforestation activities are a means to secure land ownership.

In **Côte d'Ivoire**, ownership right of trees is granted by the law to the owner of the land, but it is linked to regulatory constraints. The law also guarantees tree ownership to customary landowners. There are initiatives to secure land tenure.

In **Ghana**, the multiplicity of rights in land shows the discrepancy between the situation on paper and in the field. Several initiatives have worked on securing tree tenure rights, since tree ownership is granted by the law to the planter.

In **Liberia**, the law provides a clear land tenure and now gives to customary land the same standing as private land.

In **Mali**, in 2017, the government adopted a bill on agricultural land to secure farmers' lands, differentiate them from state properties, and promote women's access to agricultural land, but the coexistence of different land tenure systems still creates conflicts.

Togo adopted a new land law in 2018, which corrects the inconsistencies from the old land tenure system, guarantees women access to land, makes collective registration of land possible and secures land transactions, among others. However, land registration procedures are mostly unknown by smallholders, the process is generally long and very expensive for local people.

The recognition of the rights in the long term is crucial and a central element of the enabling conditions for investing in FLR and tree planting. However, rights on land and trees are essential but not sufficient to create incentives to plant or protect trees. In addition, favourable policies, a comprehensive legal text, and access to credits and markets are needed.

Land and tree tenure security is a core element that we will discuss during the workshop.

4.2.1.2 Policies

A strong policy focus that could guide the countries to encourage smallholder investing in FLR and planting trees is largely missing in the six countries.

In **Benin**, the law supports the establishment of agroforestry systems, the creation of communal forests / plantations and encourages private planters to set up private plantations for timber. However, there is no policy putting a strong focus on FLR.

In **Côte d'Ivoire**, the policies address various related issues, such as climate change or biodiversity protection, yet there is no strong focus on FLR.

In **Ghana**, two policies had been addressing forest degradation and reforestation of degraded areas. However, one will end in 2020 (Agenda for Transformation), whilst the other ended in 2017 (Shared Growth and Development Agenda II). Yet, the National Climate Change Policy (2012) emphasises the development of plantations, the rehabilitation of degraded forests and agroforestry systems.

In **Liberia**, there is no specific policy and strategy in place to promote forest plantations. Reforestation, agroforestry and the rehabilitation of degraded areas are integrated into the National Policy and Response Strategy on Climate Change. An ITTO project evaluated the existing planted forests in Liberia and helped develop policy elements, which integrate reforestation and afforestation into a wider FLR strategy (November 2019).

In **Mali**, policies and strategies focus on the conservation and sustainable management of existing forests but do not really take forest landscape restoration and reforestation into account. In terms of climate change, there is a national strategy for adaptation but none on mitigation.

In **Togo**, many policies promote the restoration of degraded lands (especially the National development plan, the National forestry policy and the National forest action plan). The effectiveness in coordination, however, remains a question.

The creation of incentive schemes is an important policy instrument, e.g. direct subsidies, tax reduction, etc, for investments of smallholders in FLR/tree plantations. Specific examples, e.g. in countries that want to promote FLR schemes, are incentives to use local species and long-term rotation systems (in plantations). In the six ITTO member countries in West Africa, there is no clear incentive scheme for the promotion of FLR by smallholders.

In **Benin**, the government promoted agroforestry practices, i.e. with the PANA programme (2008-2014), as well as reforestation through punctual but regular initiatives and teak silviculture (2008-2012). There is a lack of a strong incentive system.

In **Côte d'Ivoire,** REDD+ provided some incentives for forest restoration (facilitated for privates, establishment of a system for payment for ecosystem services).

In **Ghana**, the main incentive was the creation of a Forest Plantation Development Fund (FPDF) in 2000.

In **Liberia**, the incentives for smallholder rubber, cocoa, and coffee farmers include technical support through training and provision of inputs (seedlings, fertilizers, chemicals).

In **Mali**, there are very few incentives for tree plantations compared to agriculture. Incentives are limited to the forest service's provision of tree seedlings and sensibilization of smallholders to the benefits of trees.

In **Togo**, there is no incentive scheme for FLR or for the planting of woodlots and reforestation by smallholders.

Policies and incentives are core elements that we will discuss during the workshop.

4.2.1.3 Financing

Smallholders in the West African region do not have direct access to any of the substantial financing schemes offered in the national and international context for FLR. National governments control access and funding flows of e.g. multilateral funds such as GCF, GEF, World Bank and others and major financial facilities as they exist for REDD+. With few exceptions, this is also the case for bilateral (governmental and private) donors. Opportunities for reaching private investors, e.g. in the supply chain or getting access to blended finance (with shares of both public and private finance) are at the moment, at least, in the West African context, illusional.

Smallholders often use their own capital (work force or cash) to get the necessary finance for their investment, though, generally, they have limited resources available for long-term activities such as tree planting. Facilitating access to financing, particularly microfinancing with affordable conditions is thus key.

Financing of smallholder FLR is a core element that we will discuss during the workshop.

4.2.2 Technical elements

4.2.2.1 Organisations and structure of smallholders

A smallholder cannot work alone except when his/her main focus is subsistence farming and fuelwood gathering. To become a part of a value chain, smallholders need to overcome the asymmetry of information. To do so, smallholders need to become organised in associations or other forms so that they can obtain access to knowledge and advice. Through becoming organised, smallholders can create a certain level of bargaining power, or, at least, voice their concerns at a broader policy level. When smallholders are working in the same geographic area, they also can join forces for common investments, e.g. access to quality seeds, a communal nursery or joint silvicultural treatments and harvesting. Working together is thus the key.

A specific organisation feature is the so-called outgrower scheme. This is a type of partnership between people smallholders and timber buyers or processing enterprises. The main driver of this system is usually the industrial enterprise that is in search of its raw material, generally roundwood. The enterprise seeks to secure supply to meet the increasing demand for wood products by signing partnerships with farmers to allocate land and other resources to the production and management of desired trees for which the company will provides a guaranteed market. The varying responsibilities of each partner are defined by contracts. A special feature of outgrower schemes is that processing enterprises support its producers with seeds, technical advice and eventually credits.

4.2.2.2 Land-use systems

The West African context, with humid, semi-humid, semi-dry and dry ecosystems, is specific in the way smallholders use the landscape. In the few remaining Guinean rainforest massifs, smallholders are mainly active as cocoa or rubber farmers on degraded or deforested land. They do not have access to production forests. In semi-humid to dry areas, the situation is different. Due to high population pressure and use of forest land for agricultural purposes and fuelwood gathering, smallholders are major actors in the so-called mosaic landscapes, characterised by a multitude of land uses, mainly on either private land or community land. When it comes here to FLR activities, based on the circumstances, a variety of options is available in principle:

- Promotion of natural regeneration on degraded lands and marginal agricultural sites
- Management of secondary forests
- Integration of trees in agricultural landscapes outside forests (agroforestry systems)
- Integration of trees in pastoral / livestock landscapes outside forests (silvopastoral systems), and last, but not least
- Creation of planted forests (woodlots, single species or multispecies / multifunctional plantings).

It is on these last three options that FLR activities of smallholders are centred. For these options, it would be necessary to define and implement the enabling conditions, so that land-use systems can be established to allow smallholders to produce long-term crops, such as trees, sustainably.

5. Smallholder FLR/Tree plantation – conclusion and trends

The political and legal environment in the six ITTO member countries in West Africa has a significant impact on smallholder investment in FLR and tree planting. In addition to sufficient demand and access to markets for the timber produced, land and tree ownership security is a necessary requirement to allow with some confidence long-term investment for planting timber trees and investing in other FLR activities.

Smallholder plantations are not yet a common source for industrial wood at the larger scale in the region, and timber from governmental plantations is still the main source of planted timber in the value chain in all six countries (besides timber from natural forests). But the pressures on land use and concerns about social sustainability of larger industrial-type of tree plantations are potentially driving the development towards smallholder plantations, woodlots or agroforestry schemes in the future. With an adequate forest policy and legislative measures, and with the provision of an incentive structure, smallholder forest and agroforest ownership and management can eventually become a pillar of a viable forest sector in the future.

However, the time that is required for the return on investment for a tree plantation is a major challenge for any smallholder. Up to date incentives to make it possible for a smallholder to invest for 10-25 years or so are yet not available. An additional challenge is the limited capital and work force available. Therefore, the availability of incentives for tree planting and the recognition to compensate the opportunity cost of smallholders, e.g. for land and labour, are crucial requirements to develop smallholder tree plantations and FLR investments. For this, major efforts from governments and investment institutions are necessary.

Nonetheless, smallholders have a great interest to plant trees responding to the increasing market demand for plantation wood in all West African countries and at global level. The motivation is clear, if a smallholder has some capital for a modest investment: tree plantations and woodlots are working as a "tree bank" which offer secured interest and a buffer against economic short-term shocks as well as once grown and if well planned, a personalised pension fund.

In West Africa, the scale of smallholder tree planting varies from a few trees in agroforestry plantations to up to 10 ha of monospecific plantations in one site. A common feature is that the majority of trees planted in the region are teak, introduced more than 100 years ago in the subregion. Besides teak, the other main species used are exotic fast-growing species such as *Acacia auriculiformis, A. mangium*, eucalyptus species, agroforestry tree species such as cashew, and sometimes tropical pines, but rarely local species (*Khaya* spp., samba/wawa, framiré, limba). High valuable endemic timber species, such as iroko (*Milicia excelsa*) or wawa (*Triplochiton scleroxylum*) are generally absent in smallholder schemes.

A major issue for smallholders is the lack of access to good seed sources, adequate information on environmental conditions and technologies that are required for high-quality tree plantations that can also satisfy higher price markets. Specialised extension services on advising smallholders in all issues relating to FLR and valuable tree planting are limited, if available at all in the countries of the region. Tree planters must organize themselves to develop long-term perspectives. This is a major bottleneck.

Once trees have grown, smallholders are confronted with the question of the access to markets for their timber. Timber is sold to intermediaries who then develop their own value-chain, either selling the wood to small wood transformation enterprises in urban areas or, in the case of teak, to roundwood exporters shipping even small-size teak roundwood in containers to India, Hong Kong or China. In these cases, smallholders are not on the winning side. In addition, in the absence of

technical support and incentives, smallholders are often not fully able to integrate the wood value chains (timber and fuelwood) and their wood is often ending up in lower value markets.

A new form of securing value chains are partnerships in form of outgrower schemes as they are known for many agricultural crops such as cotton, cocoa and others. Little experience exists in the region where forest industries and small-scale tree planters have developed wood sourcing for forest industries. The major challenge in the outgrower schemes are building trust between the partners and establishing feasible and mutually beneficial, fair and transparent agreements.

Besides the numerous problems that exist, there is a future for smallholders investing in FLR, tree plantations and agroforestry. However, to produce positive outcomes, smallholders have to organise themselves in associations to reach the necessary convening and negotiation power to be heard, to improve their technical knowledge and to obtain recognition by the industry demanding their timber. Also, it is important that smallholder associations look for new forms of partnerships, e.g. outgrower schemes that correspond to the local conditions. All this includes the creation of new partnerships between smallholders and smallholder associations, local authorities and national governments, financing institutions, industries, development NGOs and educational and research centers. Such partnerships are essential to further develop FLR and smallholder forestry.

Smallholders engaging in FLR should not only focus on monospecific tree plantations but also take into account the potential they have to create environmental and social benefits, which can attract development agencies, social investors and bonds. Today, climate change funding (REDD+) offers new opportunities that have not yet been considered by the majority of smallholders in the region. For example, the Green Climate Fund and other climate fund mechanisms offer performance-based funding for integrated FLR schemes. Such elements could be further explored, e.g. through a regional GCF project for smallholder FLR/tree planting, supported by ITTO.

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