



SCOPING PRIVATE SECTOR OPPORTUNITIES IN ETHIOPIA:

How to stimulate both economic development and REDD+ implementation?

Acknowledgement

Project coordination: Dr Tefera Mengistu WOLDIE

Author: Mr. Thomas YAPO

Editor: Mr. Ivo MULDER

The project team would like to thank all the persons interviewed for this report (most of them with the expert supervision of Mrs. Kibebework GETACHEW):

Mr. Jewekeltu AL-ALNE (Benishangul-Gumuz Forest Protection and Management Cooperative), Mrs. Stibniati ATMADJA (Center for International Forestry Research (CIFOR)), Mr. Didhaa AYYAANEE (Oromia Forest Enterprise), Mr. Bayleyegn AZENE (Amhara Forest Development and Administration, Mrs. Marie BARANGER (PurProjet), Mr. Fekadu BELAY (Benishangul-Gumuz Forest Development Conservation and Utilization Core Process), Mr. Mengistu BEYESSA (Asosa Environmental Protection Association), Mr. Manuel BOISSIERE (Center for International Forestry Research (CIFOR)), Mr. Yeshiber DAGNEW (Amhara Forest Development and Administration), Mr. Yibrahim DAWLED (Amhara Investment Commission), Mr. Sintayehu DERESSE (Benishangul-Gumuz Forest Protection and Management Cooperative), Mr. Kibrewosen DINEDE (Benishangul-Gumuz Investment Expansion and Promotion), Mr. Musa EBRAHIM (Benishangul-Gumuz Forest Protection and Management Cooperative), Mr. Belste FETENE (Amhara Environment, Finance and Climate Change Bureau), Mr. Jinhe FU (International Network for Bamboo and Rattan (INBAR)), Mr. Fikadu FUFA (Ethiopian Development Bank), Mr. Michael GEBRU (Bamboo Star), Mr. Atenkut GUANJA (Benishangul-Gumuz Environment and Forest Sector), Mr. Melese HAILE (Amhara Land Administration), Mr. Habtemariam KASSA (Center for International Forestry Research (CIFOR)), Mr. Wubie MENGESTU (Ethiopian chamber of commerce), Mr. Sahlemariam MEZMUR (Farm Africa), Mr. Ulrich 'Ueli' MUELLER (Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)), Mrs. Margaret ODUK (UNEP), Mrs. Heather OH (TechnoServe), Mrs. Gudeta SALAMAWIT (UNEP), Mrs. Mefthe TADESSE (TechnoServe), Mrs. Feker TADESSE (Partnership for Forests), Mr. Tsegaye TADESSE Global Green Growth Institute (GGGI), Benishangul-Gumuz Forest Land Administration Bureau, Benishangul-Gumuz Finance and Economics Development Bureau and United Nations Environment Programme in Addis Ababa.

The contents of this report do not necessarily reflect the views or policies of UN Environment, or contributing organisations. The designations employed and the presentations of material in this report do not imply the expression of any opinion whatsoever on the part of UN Environment or contributory organisations, or publishers concerning the legal status of any country, territory, city area or its authorities, or concerning the delimitation of its frontiers or boundaries or the designation of its name, frontiers or boundaries. The mention of a commercial entity or product in this publication does not imply endorsement by UN Environment.

Table of Contents

Acknowledgement.....	2
Acronyms	5
Executive summary.....	6
1-INTRODUCTION	9
1-1 METHODOLOGY	10
1-2 CONTEXT	12
2-REDD+ FRAMEWORK	16
2-1 POLICY FRAMEWORK	16
Second growth and transformation plan (GTP2)	16
Climate-Resilient Green Economy (CRGE)	18
2-2 TARGETED ACTIVITIES.....	19
2-3 THE PRIVATE SECTOR OPPORTUNITIES AND CHALLENGES.....	20
2-4 EXISTING INITIATIVES.....	24
3 -REGIONAL AND SECTORAL FOCUSES	30
3-1 REGIONAL FOCUS.....	30
3-2 NON-TIMBER FORESTRY PRODUCTS.....	32
4 - FINANCIAL SECTOR AND REDD+ FUNDING CAPACITY	36
4-1 FINANCIAL SECTOR MAPPING.....	36
4-2 FINANCING EXPERIENCES	37
4-3 FINANCING SCHEMES	38
4-4 BARRIERS	39
5 - PRIORITISATION OF REDD+ INVESTMENT OPPORTUNITIES AND RECOMMENDATIONS.....	41
5-1 Priorities.....	41
5-2 Recommendations.....	44
6 - CONCLUSION	49
REFERENCES.....	50

List of tables and figures

TABLE 1: PRIVATE SECTOR OPPORTUNITIES ATTRACTIVITY ANALYSIS	7
TABLE 2: ALIGNMENT OF THE REDD+ OBJECTIVES WITH ETHIOPIA'S GTP AND CRGE (SOURCE: ME FCC)	19
TABLE 3: PRIVATE SECTOR REDD+ OPPORTUNITIES	22
TABLE 4: EASE OF DOING BUSINESS IN ETHIOPIA 2018 (SOURCE: INTERNATIONAL FINANCE CORPORATION)	23
TABLE 5: OPPORTUNITIES AND CHALLENGES OF THE SPICE SECTOR (SOURCE: NETHERLANDS-AFRICAN BUSINESS COUNCIL)	33
TABLE 6: TYPOLOGY OF FINANCING STRATEGIES FOR RESTORATION (SOURCE: UNION INTERNATIONALE POUR LA CONSERVATION DE LA NATURE)	39
TABLE 7: PRIVATE SECTOR OPPORTUNITIES ATTRACTIVITY ANALYSIS	42
TABLE 8: IDENTIFICATION OF POSSIBLE OPTIONS TO ADDRESS CHALLENGES	48
FIGURE 1: 2016 ETHIOPIAN EXPORTS (SOURCE: THE OBSERVATORY OF ECONOMIC COMPLEXITY)	13
FIGURE 2: LEVELS OF DEFORESTATION IN THE BALE PROJECT AREA BETWEEN 2012 AND 2015	27
FIGURE 3: REGIONAL STATES OF ETHIOPIA	30

Acronyms

BBC	British Broadcasting Company
CDM-AR	Clean Development Mechanism - Afforestation/Reforestation
COP	Conference of Parties
CRGE	Climate-Resilient Green Economy
ETB	Ethiopian Birr
FAO	Food and Agriculture Organization of the United Nations
FCPF	Forest Carbon Partnership Facility
FREL	Forest Reference Emission Level
FRL	Forest Reference Level
GDP	Gross Domestic Product
GGGI	Global Green Growth Institute
GGW	Great Green Wall
GHG	Greenhouse Gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German development agency)
GM-UNCCD	Global Mechanism of the United Nations Convention to Combat Desertification
GTP2	second Growth and Transformation Plan
HWP	Harvested Wood Product
IFC	International Finance Corporation
KfW	Kreditanstalt für Wiederaufbau (German development bank)
MEF	Ministry of Environment and Forest
MEFCC	Ministry of Environment, Forest and Climate Change
NDC	Nationally Determined Contribution
NFSDP	National Forest Sector Development Program
NGO	Non-Governmental Organisation
NTFP	Non-Timber Forest Product
PAM	Policies and Measures
PBP	Performance-Based Payment
PES	Payment for Environmental Services
PPP	Public-Private Partnership
RBP	Results-Based Payment
REDD+	Reducing Emissions from Deforestation and forest Degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries
SFM	Sustainable Forest Management
SLMP	Sustainable Land Management Programme
SME	Small and Medium Enterprise
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar

Executive summary

Key points:

- Ethiopia is one of the fastest growing economies in Africa. Agriculture (subsistence and commercial) employs 80% of the population, contributes to 50% of the gross domestic product and provides 60% of export revenues, highlighting the importance of the sector for Ethiopia's economy. At the same time the country is experiencing ongoing deforestation, with agriculture being the principal driver of deforestation in Ethiopia.
- There are 2 national strategies - the climate-resilience green economy (CRGE) and the second growth transformation plan (GTP2) - to shift the country to a more sustainable development paradigm while growing to middle-income status by 2025.
- Ethiopia has ample indigenous bamboo resources: the largest area of bamboo in Africa with 1 million hectares with a potential of 3 million hectares. Based on desk research and interviews, this report concludes that investments in bamboo carry the highest potential to restore, protect or recover forests as Ethiopia committed in 2014 to restore 15 million hectares by 2030.
- In doing so, there may be possibilities to harness the potential of both international development finance institutions as well as domestic finance institutions, given that Ethiopia is at the moment an underbanked country with little domestic or international funding flowing to forest-friendly projects that contribute to REDD+.

Ethiopia is one of the fastest growing economies in Africa. The economy is to a large extent powered by agriculture and extraction of renewable natural resources from forest and agriculture (50% of the gross domestic product and 60% of exports). The expansion of agriculture into marginal lands is considered as a major cause of deforestation in the region. Environmental challenges such as forest and land degradation, and loss of biodiversity have led to significant socio-economic challenges for a country vulnerable to climate change effects and with low adaptive capacity. As 80% of Ethiopians depend on weather-sensitive agriculture for their revenue, it is important for Ethiopia to ensure that its agricultural and forest sector increases climate resilience to deal with climate change.

The Government of Ethiopia has taken the bold step of shifting the development paradigm from a carbon intensive approach to a carbon neutral and climate resilient pathway. Ethiopia committed itself during the 2014 New York Summit to restore 15 million hectares of forest by 2030. Two national strategies (the climate-resilience green economy, and the second growth and transformation plan) attest of the willingness to exit business-as-usual for a more sustainable development while growing to middle-income status by 2025. To reach this ambitious objective, a significant amount of capital is necessary. It is unlikely that this can solely come from public sources. However, any capital from the private sector – either from domestic and international sources – will have to be stimulated through regulatory and/or economic incentives.

At present, the private sector – including actors in the agricultural sector – are at the same time a driver of deforestation, but also a solution to tackle deforestation and land degradation issues. The role of the private sector in Ethiopia's economy is increasing. It was virtually non-

existent in the 1980s and has now become a major source of economic development. Credit lines adapted to small-scale forestry investments are needed to foster growth and business improvements but access to finance is a key barrier for forestry businesses, because the return on investment is not attractive and because Ethiopia is an underbanked country. It is challenging to halt, slow or restore forests without the participation of private sector players. **Creating a favourable enabling environment by the Government of Ethiopia will be important to leverage private sector engagement. An important part of the solution to mitigating climate change in Ethiopia relies in motivating the private sector to save the forests. The best solution for this is to turn forests sustainability into something more profitable than agriculture where returns on investments are faster and higher.**

Based on desk research as well as missions and interviews in Addis Ababa, Benishangul-Gumuz and Amhara, *this report provides the Government of Ethiopia with insights in private sector investment opportunities that has be considered as the country is moving towards REDD+ implementation.* We ranked those opportunities in a multi-criteria matrix to determine the one with the most potential:

EVALUATION METHOD:

To differentiate between the actual or potential outcome of investment opportunities in a realistic way, we used several 10 clearly identified factors. This assessment is based on questionnaires asked during the field missions as well as a literature research. Triangulation between different sources of quantitative data ensures the rightness of this evaluation.

The performance of these various solutions to slow, halt or reverse forest loss are rated from 1 to 5 stars (excellent: 5 stars, good: 4 stars, average: 3 stars, poor: 2 stars and very poor: 1 star). Additionally, colours were assigned to those rates (5 stars: green-excellent, 3 to 4 stars: yellow-satisfactory and 1 to 2 stars: red-unsatisfactory) for a quicker reading.

The overall attractiveness is a mean of stars received in the 10 indicators where each indicator has the same weight. Investment options were ranked to select the ones to prioritise: the higher the number of stars in attractiveness, the more priority the potential investments should receive.

		agricultural intensification + agroforestry	improved stoves	waste-to-energy	bamboo plantations + nurseries	forest sustainable management	NTPF	ecotourism
REDD+ benefits	GHG emissions reduction	****	*****	****	*****	*****	*	*
	benefits for the forests	*****	*****	***	*****	*****	**	*
	matching with national strategies	*****	**	*****	*****	*****	*	*
	ease of implementation	***	*****	**	****	***	*****	*****
	rapidity of impact	*	*****	**	***	*	*****	***
economic potential	financial viability	**	*****	****	*****	*	*****	***
	required investments	****	***	**	*****	*****	*****	*****
	scalability	***	*****	*****	*****	*	*	*
	livelihood improvements	*****	*****	*****	*****	***	*****	***
	employment	**	***	***	*****	**	*	***
overall attractiveness		***	*****	****	*****	***	***	**

Table 1: private sector opportunities attractivity analysis

The comparison in Table 1 above outlines three investment opportunities that received 4 stars and above, and that could be prioritised. These include:

- bamboo plantations
- fuel-efficient stoves production
- develop a waste-to-energy sector

Of those three, bamboo plantations are the investment opportunity with arguably the biggest potential (receiving 5 stars) given that bamboo plantations can provide jobs, restore the forest cover on degraded lands, as well as be used as fuel for cooking, and a source of foreign currency. Ethiopia has the largest area of bamboo in Africa with 1 million hectares (85% is lowland bamboo). There could be potentially 3 million hectares (highland + lowland) of bamboo in Ethiopia if plantations are developed. Moreover, bamboo processing units need investment for modernisation. In addition, sustainable and profitable bamboo plantations only need 3 to 5 years to grow (less than many other species). Other attractive options to consider include increasing the efficiency of cookstoves as well as improving waste-to-energy use.

1 - INTRODUCTION

Ethiopia's forest cover current represents 17.2 million hectares. It is 15.5% of the national territory (following the revised national forest definition, Ministry of Environment Forest and Climate Change, 2015). The deforestation is ongoing and is shaping the climate and livelihood of the Ethiopian people. Ethiopian forests are currently under threat: the annual deforestation rate since 2010 has been 1.25% (Food and Agriculture Organization of the United Nations, 2014). Projections in the climate-resilience green economy (CRGE) strategy indicate that 90'000 km² (56% of total forest area) might become deforested between 2010 and 2030, although it's increasingly understood that forests have a great potential for contributing to inclusive green growth, as it is labour intensive, provides significant export opportunities, and, if managed sustainably, can help to mitigate climate change.

Ethiopia committed itself during the 2014 New York Summit to restore 15 million hectares of forest by 2030. The government of Ethiopia has taken the bold step of shifting the development paradigm from a carbon intensive approach to a carbon neutral and climate resilient pathway. Two national strategies (CRGE, and the second Growth and Transformation Plan) attest of the willingness to exit business-as-usual for a more sustainable development. A significant amount of capital – likely in the form of public and private as well as from domestic and international sources – is necessary to make the shift possible. It is challenging to halt, slow or restore forests without the participation of private sector players. The private sector is therefore at the same time a driver of deforestation, but also a solution to tackle deforestation and land degradation issues.

Ethiopia's economic progress and human well-being are dependent on healthy forest ecosystems, which provide shelter, food, jobs, recreation, medicine, water, climate regulation and energy to millions of Ethiopians. In order for these opportunities to be realised, the private sector must be involved. A significant amount of public and private capital, 356 million USD by 2033, from foreign and domestic investors is needed to meet the sector productivity goals as described in the second growth and transformation plan (Unique Forestry for the Ministry of Environment, Forest and Climate Change, 2015). Although private sector actors are significant agents of change, engagement with the private sector on forest sector in general and REDD+ in particular has been limited to date. The UN-REDD Programme is an inter-agency collaboration between the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP), and the Food and Agriculture Organization (FAO) of the United Nations that supports nationally led REDD+ processes in developing countries to achieve verified reductions or removals of forest carbon emissions against a forest reference level (FRL) or forest reference emission level (FREL) and which comply with the relevant safeguards agreed during United Nations framework convention on climate change COP (Conference of Parties) 16 in Cancun. Reducing deforestation and forest degradation and restoring forests could bring significant benefits for livelihoods, climate and biodiversity.

This report aims to provide a range of options for the Government of Ethiopia in order to stimulate private sector finance and investment in a way that benefits both the economy as well as contributing to REDD+ implementation by encouraging investments in forest establishment, sustainable forest management and the forest and broader land-use sectors. Experiences in Africa demonstrate that there are promising models of forest-based

partnerships between communities, smallholders and enterprises to meet economic development goals and create sustainable livelihoods.

1-1 METHODOLOGY

The analysis included in this report is a combination of data from desk research and field work.

1-1-a Desk research

The methods employed for this report concerned first of all a review of the relevant literature, including official documents, reports, studies and scientific publications. This was followed by an examination of deforestation drivers with the involvement of the private sector. More importantly current policies and country objectives were compared to determine the proper match and the potential investment opportunities.

1-1-b Interviews during the field mission

The main inputs to this report came from Ethiopian actors in forestry and agriculture interviewed in 2 regional States (Benishangul-Gumuz and Amhara). Results were drawn from the submitted information, which was qualitatively studied. The mission held from May 13th, 2018 until May 25th, 2018 intended to scope private investment opportunities supportive of forests and climate change objectives in Ethiopia. It aims to:

1. develop an understanding of the nature, feasibility and magnitude of potential private sector forest investment opportunities at sub-national and national levels in Ethiopia
2. increase awareness and understanding of REDD+ within the private sector
3. increase the level of understanding about the private sector amongst REDD+ stakeholders
4. develop recommendations for proposal development

The interviewees in this study were selected on the basis of their roles and experiences in the forest and related environmental governance issues in Ethiopia, including REDD+ related programmes at national, regional and project levels. A Ministry of Environment, Forest and Climate Change (MEFCC) executive accompanied us for the field visits. The following persons were interviewed during this mission (chronological order):

- Mr. Manuel BOISSIERE - CIRAD (agricultural research and international cooperation organization working for the sustainable development) and Center for International Forestry Research (CIFOR)
- Mr. Ulrich MUELLER - Deutsche Gesellschaft für Internationale Zusammenarbeit (German development agency)
- Mr. Wubie MENGESTU - Ethiopian chamber of commerce
- Mrs. Mefthe TADESSE and Mrs. Heather OH - TechnoServe
- Mr. Tefera Mengistu WOLDIE - Ministry of Environment, Forest and Climate Change (MEFCC)
- Mr. Jinhe FU - International Network for Bamboo and Rattan (INBAR)
- Mrs. Stibniati ATMADJA and Mr. Habtemariam KASSA - CIFOR
- Mrs. Feker TADESSE - Partnership for Forests

- Mr. Fekadu BELAY - Benishangul-Gumuz Forest Development Conservation and Utilization Core Process
- Mr. Atenkut GUANJA - Benishangul-Gumuz Environment and Forest Sector
- Mr. Kibrewosen DINEDE - Benishangul-Gumuz Investment Expansion and Promotion
- Benishangul-Gumuz Forest Land Administration Bureau
- Mr. Mengistu BEYESSA - Asosa Environmental Protection Association
- Benishangul-Gumuz Finance and Economics Development Bureau
- Mr. Fikadu FUFA - Ethiopian Development Bank
- Mr. Musa EBRAHIM and Mr. Jewekeltu AL-ALNE - Benishangul-Gumuz Forest Protection and Management Cooperative
- Mr. Sintayehu DERESSE - Amhara REDD+
- Mr. Belste FETENE - Amhara Environment, Finance and Climate Change Bureau
- Mr. Melese HAILE - Amhara Land Administration
- Mr. Yibrahim DAWLED - Amhara Investment Commission
- Mr. Yeshiber DAGNEW and Mr. Bayleyegn AZENE - Amhara Forest Development and Administration
- Mr. Didhaa AYYAANEE - Oromia Forest Enterprise
- Mr. Tsegaye TADESSE - Global Green Growth Institute (GGGI)
- Mr. Sahlemariam MEZMUR - Farm Africa
- Mr. Michael GEBRU - Bamboo Star
- Mrs. Marie BARANGER - PurProjet

1-1-c Themes researched

Scoping private investment opportunities – as part of this assignment – focused on the following themes as part of supporting the Government of Ethiopia:

1. **review of the national policy framework** (2-1) – opportunities and challenges for private sector engagement (2-3): the mission analysed the national legal and policy framework regulating private investments in the country, especially in those sectors having a direct impact on forests. A particular emphasis was placed on the review of the forest Declaration and opportunities for supporting private investments to be explored in future legal text regulating the Declaration.
2. **options to unlock private finance**, including barriers to investment (4-4), innovative experiences (4-2), and proposed financing mechanisms (4-3): the analysis recommended financial mechanisms to alleviate those barriers and accompany local private actors (individual enterprises, SMEs and large companies) to mitigate their operational investment risk. This part of the analysis built on the broader national experience in view of the limited private sector operating space in Ethiopia. The work took stock of existing framework arrangements in which private firms have been able to engage in commercial forestry and plantations: incentives, tax breaks, credit lines, guarantees, land tenure, etc.
3. **write a regional focus on Benishangul-Gumuz and Amhara** (3-1): building on United Nations REDD strategic support in the mentioned regions, this analysis equally sought to scope private sector engagement options in those regions. Not only identifying the local actors and sectors that could be mobilised to engage in activities supportive of forests and climate change objectives but also understanding the barriers to entry for such investments on the ground.

4. **focus on several (sub)sectors** including non-timber forest products (NTFPs), forest sector development and forest restoration (3-2): in addition to a regional focus, it is relevant to have a sectoral focus to assess the scalability of markets as well as forest landscape restoration. In response to government interest in the future creation of a payments for ecosystem services (PES) scheme to support its forests and climate change objectives, recommendations will also strive to highlight opportunities for future planning in this space.

1-2 CONTEXT

1-2-a History

Emperor SELASSIE era (until 1974): the reign started in 1930. The Imperial government established a new forestry institution in 1944. The first elaborate and modern legislation on forest resources that came in 1965 gave recognition for 3 forms of forests (namely state forest, private forest and protected forest).

Communist era (1974-1991): marxism-leninism was proclaimed the ideology of the State. Under the Derg (which means committee or council), Ethiopia became the soviet bloc closest ally in Africa. A central aspect of socialism was the land reform which nationalised all rural land, abolished tenancy, and put farmers in charge of enforcement. In 1980, Derg proclaimed a new law called 'forest and wildlife conservation and development proclamation No. 192/1980'. By accusing the previous government of its improper and unplanned exploitation of the country's forest resources and stated that the forest cover was depleted. Natural forests were used as springboards for plantations that outwardly expanded at the expense of peasant holdings during the Derg regime in the course of time, which turned community members against the resources.

The implementation of these measures caused considerable disruption of local administration in rural areas. Mismanagement, corruption and general hostility to the Derg violent rule, coupled with the draining effects of constant warfare with the separatist guerrilla movements in Eritrea and Tigray, led to a drastic fall in general productivity of food and cash crops. By mid-1984 it was evident that another drought and resulting famine of major proportions had begun to affect large parts of northern Ethiopia. The forestry sector received renewed attention when the socialist government came to power in 1975. This government gave high political attention and institutional profile to the forestry sector. The forest development initiatives were converged with the then socialist principles such as nationalisation of land and natural resources. These initiatives resulted in the establishment of grand State-owned production forests and delineation of large tracts of national forest reserves covering about 4.8 million hectares, which lasted to the present forest priority areas of the country (B. KIDANE, 2002). Nationalisation of forest resources and the establishment of a strong bureaucratic authority were seen by the socialist government as a solution to deal with the problem of deforestation and to enhance the contribution of the forestry sector to the national economy.

Federalist era (from 1991): the present Constitution of Ethiopia, which was put into force in January 1995, vests land ownership exclusively "in the State and in the peoples of Ethiopia."

Thus, land property rights are vested in the State and only usufruct rights have been alienated to farmers. Significant authority and responsibilities for land administration were transferred to regional governments (decentralisation), including authorities that provided the legal basis for piloting of land certification activities that are ongoing and broader in their geographic scope. Ethiopia was selected as a REDD+ country participant in the forest carbon partnership facility (FCPF) in 2008. The Government started the preparation of a readiness preparation proposal (R-PP) in April 2010, involving various analyses of the current issues around forest cover loss in the country through a highly participatory process. The final R-PP of Ethiopia which was approved in Vietnam in March 2011 will cost about 14.12 million USD to implement. **The World Bank, as Trustee of the FCPF, has provided 3.6 million USD for the implementation of key activities identified in the R-PP assessment note leaving a financing gap of about 11 million USD that would have to be secured from other sources.** Ethiopia officially launched the implementation of the R-PP assessment note implementation in January 2013.

1-2-b Economy

Ethiopia is one of the fastest growing economies in Africa. Agriculture and extraction of renewable natural resources are the mainstay of the Ethiopian economy and contributes to about 50% of the gross domestic product (GDP), 60% of exports and 80% of employment. The agricultural sector, which is predominantly subsistence-oriented, small-scale (fragmented), with low productivity is highly vulnerable to climate shocks. It remains dominated by smallholder production system that cannot shoulder the responsibility of transforming the economy. For example, the fact that agriculture employs more than 80% of the population yet contributes only about 50% to the GDP reveals the inefficiency of the sector.

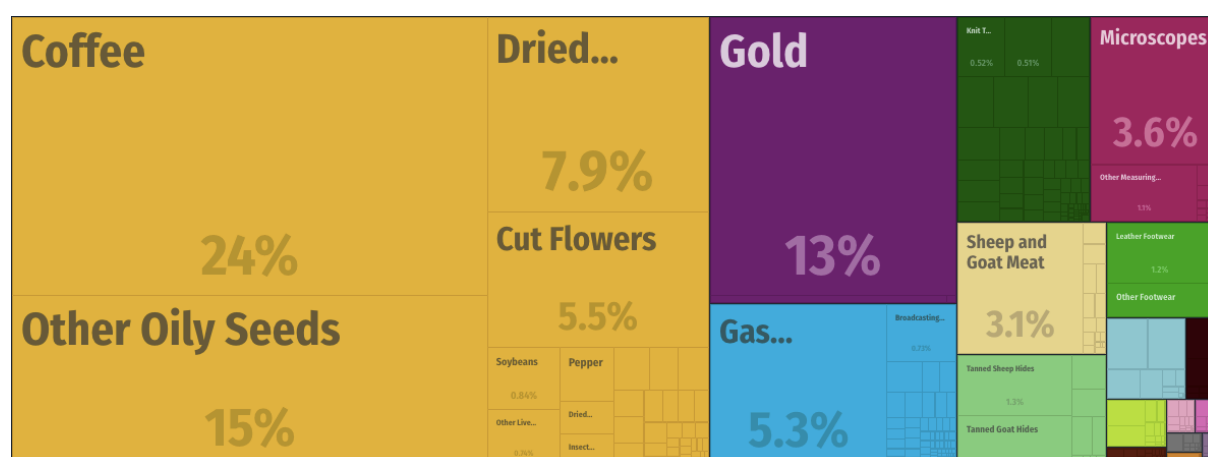


Figure 1: 2016 Ethiopian exports (source: the Observatory of Economic Complexity)

Between 2005 and 2010 the economy grew at about 11%/year and growth rates of about 7-8% are expected to continue. These spectacular growth rates have had an impact on poverty levels. Since 1995 the amount of people living below the international poverty line of 1.25 USD/day (in purchasing power parity terms) have dropped from 55.6 to 39% of the total population (United Nations Development Programme, 2012). 6.09% of the GDP is attributed to forest industries. The contribution of forest ecosystems to other sectors, particularly agriculture, is valued at 6.77% of the GDP.

Ethiopia aims to grow to middle-income status by 2025 while maintaining net zero greenhouse gas (GHG) emissions. The implementation of this vision is articulated in the second growth and transformation plan (GTP2) and the climate-resilient green economy (CRGE) strategy. This high-level planning framework aims at the main productive sectors to develop a low carbon and climate resilient economy. Both the GTP and CRGE documents highly underlined that deforestation and forest degradation must be reversed to support the continued provision of economic and ecosystem services and growth in GDP.

1-2-c Geography

With more than 102 million inhabitants, Ethiopia is the most populous nation in eastern Africa and the second most populous in all Africa after Nigeria. The annual population growth is above 2%, meaning that Ethiopia's population could grow to more than 120 million people by 2030.

All private land in Ethiopia is legally demarcated and registered at the Agricultural Office in a cadastral registry. Land ownership is therefore clearly identified and formalised through a legal land title document. Most farmers have their land title at home, while some of them are still at the woreda agricultural office level, in the process of being distributed to the farmers through the kebele leaders.

Ethiopia is a mountainous country with a highest point at 4'533 meters. Elevation influences the rainfalls thus the vegetation. The annual loss of highland mountain forest cover has been estimated at about 141'000 hectares, resulting in important CO₂ emissions (H. ADMASSU, 2013).

1-2-d State of deforestation

The national forest definition says that a forest is a land spanning more than 0.5 hectare covered by trees (including bamboo) attaining a height of more than 2 meters and a canopy cover of more than 20% or trees with the potential to reach these thresholds in situ in due course. The height threshold has been reduced from the original 5 meters (previous submission to the United Nations framework convention on climate change (UNFCCC) for the clean development mechanism - afforestation/reforestation (CDM-AR)) to 2 meters with the intention of including dense woodlands that have a wide distribution with significant carbon stock across dry lands of the country. Canopy cover has been increased from 10% to 20% with the intention of excluding highly degraded forest from the forest definition and provide incentive for protecting forest.

It is challenging to get a reliable estimate on forest cover and forest cover change in Ethiopia, due to limited and conflicting data sources, partly attributed to varied definitions of forest in the country. Nevertheless, between 1955 and 1979, over 77% of the country forested area disappeared. Ethiopians are facing rapid deforestation and land degradation that has been fuelled by the increase of population which in turn resulted in extensive forest clearing for agricultural use, overgrazing, exploitation of existing forests for fuelwood, fodder and construction materials.

Historical accounts indicate that there has been a rapid decreasing percentage of the forest cover of the country from 40% in 1900 to 16% in 1954, 8% in 1961, 4% in 1975, 3.2% in 1980 and now it is estimated to be 15.5% mainly attributed to the change in the forest definition. The forestry organisation became weakened following the fall of the socialist regime in 1991, which resulted in catastrophic forest destruction and the country forest cover was reported as being halved during the transition period institutional void (1991-1995) (A. MELAKU, 2003). At that time, Ethiopia banned cutting down trees, but it failed to stop deforestation. The Food and Agriculture Organization (FAO) of the United Nations estimated that 140'000 hectares of forest have been lost annually between 1990 and 2010.

Deforestation and forest degradation are directly and indirectly associated to the nature of agricultural practices, energy consumption, infrastructure development, living standards, population growth, law enforcement and property right arrangements. Those complex challenges often cannot be dealt only within the forestry sub-sector, and solutions require coordinated actions across the related economic sectors such as agriculture, energy, industry, and infrastructure. Some issues such as population growth might require a political solution.

The major direct drivers are (Kreditanstalt für Wiederaufbau (German development bank), 2017):

1. **forest clearance for smallholder agricultural expansion:** the current agricultural development practices in Ethiopia have resulted mainly in a spatial expansion of land under cultivation, most often at the expense of forest and wood lands.
2. **land-use conversion for large scale commercial agriculture:** agriculture is a priority for the Government and there is pressure from investors to convert forests into agricultural lands.
3. **illegal wood extraction and collection of forest products:** fuelwood accounts for more than 80% of household energy supply in Ethiopia and is particularly important in rural areas. With the population increase, the annual fuelwood consumption could rise by 65% which leads to forest degradation of more than 22 million tons of woody biomass by 2030.
4. **expansion of human settlements in forest frontiers:** with a high growth rate, Ethiopia's population is expanding rapidly. Settlements (illegal or managed by the Government) convert forests into living spaces.
5. **development of infrastructures and road networks in forest proximities:** the aftermath of a growing economy is that there is a need for additional roads, bridges, factories, etc. Forests are sacrificed because they are considered as less important than the economic progress.
6. **forest fires:** with the diversification of agriculture, fire became the prime tool to clear land for crops

The indirect drivers or underlying causes include (MEFCC, 2018):

1. **poverty** and heavy dependence on exploitation of natural resources
2. rapid **population growth**
3. **unstable and inefficient tenure** and property right arrangements
4. **limited institutional capacity** to manage forests resources
5. **poor participation of local communities** in sustainable forest management schemes

2-REDD+ FRAMEWORK

2-1 POLICY FRAMEWORK

The National Forest Sector Development Program (NFSDP) was initiated by Ethiopia's MEFC as the main guiding document for coordinating strategic policy interventions and sector-wide investments for the coming ten-year period. The goal of the country-driven NFSDP is to provide the master plan that serves as the roadmap for future forestry actions considering the mandate of National Regional States for natural resources management and other stakeholders. The NFSDP also contributes to mobilise funding and coordinate support.

The NFSDP is comprised of a series of transformational actions that together can achieve the forest sector ambitious development and green growth goals. The proposed actions with the most transformative potential include attracting private investment in commercial forestry and establishing industrial clusters for manufacturing timber and other industrial wood products for domestic consumption and export.

The main pillars, or action programme areas, around which the NFSDP is built, include: 1) creating enabling environment and institutional development, 2) Sustainable forest production and value chains, 3) enhancing forest environmental services, 4) focusing on forests and rural livelihoods, and 5) enhancing urban greening and urban forests.

The overall vision of the NFSDP is to build on the country's considerable forest resources, attract foreign investment (both donor and public private partnerships) and leverage existing momentum (e.g. creation of MEFC) to transform Ethiopia's forestry sector in a way that catalyses GDP growth, generates employment, contributes towards self-sufficiency in forest products and enhances environmental services.

Second growth and transformation plan (GTP2)

GTP (2010-2015) focused on accelerating growth in production of traditional crops. It has done so by promoting the adoption of improved technologies by smallholder farmers, and by increasing investment in rural infrastructure, particularly for irrigation and improved watershed management. It also emphasised the need to ensure food security across all sections of Ethiopian society. The GTP required large public sector borrowing and domestic resource mobilisation to finance high levels of investment. The current level of domestic savings is insufficient to finance the high investment (particularly public), thus opening up a large resource gap.

During GTP2 (2016-2020), while accelerated growth in agricultural productivity continues to be an important area of focus, a gradual shift in emphasis towards high value crops and livestock production is being envisaged. This is to be complemented by the establishment of a market system that benefits farmers and non-farm rural actors. Similarly, natural resources development also continues to be an important area of emphasis.

However, the GTP2 goes beyond this to promote more sustainable farming practices and enhanced conservation of indigenous biodiversity resources as well as livelihood development

from natural resources (forestry, rehabilitated lands, water resources, etc.). A third area of emphasis is food security that continues to be a challenge. Finally, specific focus is placed on building institutional capacity for implementing and monitoring agricultural development. An underlying principle of the GTP2 for agricultural development is that environmental sustainability must be maintained, climate change adaptation and mitigation should be promoted, and growth should be broad based and inclusive, with a particular focus on engaging women, youth and poor households.

GTP2 has been developed around the following 5 high-level objectives for the agriculture sector:

1. accelerated growth in agricultural production with a gradual shift towards high-value commodities
2. sustainable, broad-based, and inclusive agricultural development
3. elimination of national food gap (and ultimately, contribution by the agriculture sector to a national capital formation)
4. establishment of a market system that benefits farmers and non-farm actors
5. improved implementation capacity: institutional and human resource (attitudes, skills and competency)

These high-level objectives are to be achieved through 4 strategic objectives within the agricultural sector and complementary objectives in the trade and industry, finance, infrastructure, roads, water and energy sectors:

1. increased and market-oriented crop production and improved productivity focusing on strategic crops: to promote increased crop production, adoption of improved crop technologies and practices by smallholder farmers will be promoted. Additionally, increased investment in medium and large-scale commercial farming with enhanced linkages to smallholders through outgrower schemes and contract farming arrangements is envisaged. With a view of producing for the market, the GTP2 also plans for enhanced services for testing and certification regarding chemical use and resulting residues, enhanced cooperative capacity and efficiency, and reduced pre- and post-harvest losses.
2. increased livestock production and productivity: promoting the adoption of improved livestock husbandry practices/technologies, feed production technologies, and a stronger livestock health system are central elements of the GTP2 approach to increased livestock production and productivity. As in the case of initiatives focused on increased crop production, private sector investment in commercial livestock enterprises are envisaged, as is the strengthening of systems to allow certification for and to ensure compliance of Ethiopian livestock products to international standards. Finally, GTP2 has specifically planned for measures to reduce GHG emissions from the sub-sector.
3. reduced degradation and improved productivity of natural resources: watershed development, irrigation development, forestry development (including agroforestry) and biodiversity conservation are the main elements of the GTP2 interventions working towards this strategic objective.
4. enhanced food security at national and household level: initiatives that contribute to enhanced food security are a continuation from GTP. They comprise strengthening disaster prevention and response ability as well as ensuring adequate and timely

transfers and promoting resilience among chronically food insecure households. The GTP2 also seeks to address issues of nutrition in a more systematic way. In addition to chronically food insecure households, the GTP2 identifies pastoralists and agro-pastoralists as requiring specific support.

In the context of GTP2, considerations could be given to reorienting the development strategy more toward the private sector to support the investment effort and alleviate the burden on public sector.

Climate-Resilient Green Economy (CRGE)

Following the conventional development path would, among other adverse effects, result in a sharp increase in GHG emissions and unsustainable use of natural resources. To avoid such negative effects, the government has developed a strategy to build a green economy. As set forth in the GTP, reaching this goal will require boosting agricultural productivity, strengthening the industrial base, and fostering export growth. Ethiopia's ambition to become a "green economy front-runner" is an expression of its potential for and belief in a sustainable model of growth. The growth will result in a significant shift in GDP shares: in 2025, agriculture would contribute only 29% to the GDP, industry 32%, and services the remaining 39%.

The CRGE strategy was officially introduced during COP17 in Durban in 2011. The CRGE recognises that Ethiopian forests are threatened, and it predicts a 9 million hectares deforestation and huge rise in fuelwood consumption between 2010-2030. **The strategy aims at reversing land degradation, protecting existing forests and increasing forest cover.**

The REDD+ is a novel strategy introduced by UNFCCC as a measure to reduce GHG emissions and support developing countries in their efforts to reduce deforestation and forest degradation. It is a set of policy model that includes an incentive mechanism that rewards parties which take progressive actions to reduce emissions from forest lands. **The primary goal of the national REDD+ strategy is to reduce deforestation and forest degradation, while promoting sustainable management of the forest resources and enhancing forest carbon stocks through afforestation and reforestation.**

REDD+ is anticipated to contribute to the achievement of the CRGE and NFSDP targets through improved management of existing natural forests and expansion of forest cover through afforestation/reforestation. This strategy has become very attractive to a country like Ethiopia because of its particular vulnerability to climate change effects and low adaptive capacity. Ethiopia has been actively engaged in the REDD+ process, both at the national and regional level. As explained above, due to the importance of forests in climate mitigation, REDD+ is embedded in Ethiopia's CRGE strategy, which envisions bringing the country to middle-income status by 2025 while maintaining zero net GHG. Ethiopia is receiving international support to achieve REDD+ readiness and prepare the country for receiving results-based payments (RBP) for emission reductions in the forestry sector. The national REDD+ readiness programme - primarily coordinated under the REDD+ secretariat at MEFCC - intends to serve as a vehicle through which the CRGE objectives on land use and forestry sector are achieved.

The national REDD+ strategy emphasises resilient green growth in rural Ethiopia through productive forest landscapes, healthy forests and productivity enhancement of land around the forests to achieve (i) reduced GHG emissions through avoided deforestation and forest degradation and carbon sequestration through tree planting; (ii) reduced vulnerability of rural populations and the rural economy to exogenous shocks from climate risks, disasters, drought, flood and disease; and (iii) reduced level of stress on biodiversity, water, and soil resources.

REDD+ is one of the major schemes that the government has shown commitment to as an alternative mechanism for financing of its forestry development and enhance the country climate change mitigation potential (A. MELAKU et al. 2015). The carbon financing schemes such as the REDD+ initiative brought renewed attention to the forestry and environmental sectors in Ethiopia as manifested in the recognition of forestry sector as one of the four key pillars in the CRGE strategy. Consequently, after more than two decades of marginalisation and subordination, forestry sector has shown signs of resurgence as demonstrated by the establishment of a new Ministry of Environment and Forest (MEF) in June 2013 then by the MEFCF in 2015. Thus, most observers attributed the establishment of MEF to two interrelated factors: (i) the formulation of the CRGE strategy that necessitated an institutional structure to facilitate its implementation and (ii) the growing attention to sustainable forest management and the need to strengthen forestry institutions as critically recommended in the R-PP. MEFCF is therefore a nodal institute responsible for facilitating the implementation of the CRGE strategy and responsible for all activities of planning, promotion, coordination, and forest development activities.

2-2 TARGETED ACTIVITIES

2-2-a Alignment of the national REDD+ strategy with objectives of national policies and strategies

The successful implementation of REDD+ and NFSDP activities will guarantee that the forest sector achieves 50% of the national emissions reduction target set in the CRGE strategy and Ethiopia's national determined contribution (NDC) by 2030 and leads the realisation of carbon neutrality across the economy. The table 1 below summarises the relationships between the national REDD+ strategy and major national policies and plans:

broader national objectives	REDD+ objectives	linkage between REDD+ and national objectives
<u>CRGE/NDC objectives:</u> building a green economy with zero net emissions by 2030 through the implementation of sectoral emissions abatement strategies that also improve resilience to climate change	to contribute to CRGE goals of achieving net zero emissions by 2030 through implementation of forestry strategies	the forestry sector, with REDD+ as its major mitigation lever, will contribute 50% of the total emission reduction
<u>GTP2 objectives:</u> boosting agricultural productivity, strengthening the industrial base, and fostering export growth with the objective of lifting Ethiopia's economy to middle-income status by 2025	to contribute to the GTP2 goals of increasing the forest cover of Ethiopia from 15.5% to 20%, improving local community livelihoods and enhance the contribution of forests to the national economy	sustainable financing through REDD+ will support investment in forest management, forest conservation, and forest restoration. The forest sector contributes to 11.2% to the national GDP

Table 2: alignment of the REDD+ objectives with Ethiopia's GTP and CRGE (source: MEFCF)

2-2-b Components of the REDD+ strategy

With a timeframe of 15 years, the national REDD+ strategy implemented in phases is designed to realising objectives of the forestry sector potential contribution to climate change mitigation (50% of the total national emissions reduction in 2030) in a realistic planning and implementing of REDD+ policies and measures (PAMs). Thus, although the national REDD+ strategy eventually is implemented at national scale, Ethiopia will initially prioritise REDD+ PAMs for addressing deforestation in hotspot areas and restoration along natural forest areas. Accordingly, the strategic period for implementation of the planned activities is divided into short-term, medium-term and long-term phases.

Phase 1: short-term implementation goals (2016-2020):

In the short term, the national REDD+ strategy focuses on preparing the national REDD+ action plan, improving enabling conditions (forest legislation, land allocation, measurement, reporting and verification, financing, forest extension, inter-sectoral coordination and institutional capacity) for REDD+ implementation, operationalising the national forest monitoring system, mobilising non-results based (upfront) investments, and designing and implementing prioritised REDD+ policies, actions and measures in order to achieve a 25% reduction in national deforestation rate, while consolidating experiences for forest restoration.

Phase 2: medium-term implementation goals (2021-2025):

In the medium term, the national REDD+ strategy will focus on increased investments and scaling up REDD+ PAMs at national scale and starts operationalising RBP at sub-national levels. The main target in this period is to bring the net deforestation to zero (i.e. rates of deforestation and afforestation will be equal).

Phase 3: long-term implementation goals (2026-2030):

This phase rolls out REDD+ PAMs at full national scale and operationalises national RBPs. In this period, Ethiopia's forests and land areas will become a net carbon sink and address 50% of national emission reduction target by 2030.

2-2-c Selected activities

The following activities have been identified for targeted investments:

1. clonal nursery technology and high value seed propagation and certification
2. development of a bio-economy based on modern timber product processing and manufacturing
3. inclusive business innovations for sustainable forest management and commercial plantation forestry engaging communities and large-scale industries
4. ecosystem services and sustainable use of biodiversity
5. environmental and social safeguards for sustainable economic development

2-3 THE PRIVATE SECTOR OPPORTUNITIES AND CHALLENGES

The United Nations defines the private sector as including individual, for-profit, and commercial enterprises or businesses; business associations and coalitions as well as

corporate philanthropic foundations. It represents the part of the economy which is run by private individuals or enterprises and not under the State control, e.g. from subsistence smallholder farmers, SMEs to large multinational companies (diversity). The role of the private sector is increasing in Ethiopia. It was virtually non-existent in the 1980s and has now become a major source of economic development. The private sector including the informal sector contributes to over 80% of the GDP. Though the private sector actors are associated with drivers of deforestation and forest degradation, the single largest of which is the production and supply chains of agricultural commodities, the private sector can make vital contributions to forest sector initiatives through the range of its expertise and be part of the solution to mitigating climate change by addressing key drivers of deforestation under attractive conditions.

The private sector is an increasingly dominant player in the production of wood products. Yet, for other forest services such as carbon storage, markets are often not effective. Market and policy failures mean that the private sector often degrades the forest resource base and adopts unsustainable practices. The challenge is to identify policy and market instruments that would create incentives for the private sector to play an active role in improving forest management systems. Often, these instruments are country specific due to specific socio-economic and environmental factors. In the next session, we will present the key challenges and opportunities for the private sector to engage in sustainable forest management.

2-3-a Opportunities

Given the immense investment needs for restoring 15 million hectares of forest and the limited available public finance or donor organisations seeking to support the Government of Ethiopia in accomplishing its ambitious policy objectives, **the focus should be on leveraging the private sector engagement**. Specifically, the private sector can contribute to REDD+ in 3 key areas (innovation, investment and implementation):

- innovation: one of the key attributes of the private sector is the development and deployment of new technologies and innovations. Commercial enterprises must respond to market pressures and need to stay competitive in an evolving environmental, legal, regulatory and fiscal landscape. They do this by incorporating new systems, knowledge, technologies and practices into their operations to boost efficiency, productivity and profits. These skills and capabilities will be needed to decouple growth from resource consumption and environmental degradation.
- investment: the transition to a green economy will require structural changes to current and future investment patterns. The UNEP green economy report suggests that an average annual additional investment of 40 billion USD will be required to halve global deforestation by 2030 and to increase reforestation and afforestation by 140% by 2050, relative to business as usual. Given the current strained state of public finances globally, in the wake of several financial crises, private sector capital will be essential to meeting this requirement.
- implementation: innovation and investment require various forms of implementation to bring about results on the ground. Ultimately, as the largest terrestrial land user, the private sector will be heavily involved in activities on the ground required to transition to a green economy.

Economic growth is the major driver for certain forest sub-sectors, especially for pulp and paper consumption, energy and industrial wood product consumption (panels and sawnwood) in the construction sector. Economic growth influences purchasing power, improving the ability to switch fuel sources from wood to electricity or to purchase more and higher value wood furniture.

The future wood product supply gaps present challenges but also significant opportunities for Ethiopia to meet the growing domestic demand for wood products through industrialisation, forest establishment, and sustainable forest management. Increasing sector productivity through these investments would contribute to the achievement of Ethiopia's goals of establishing and rehabilitating 15 million hectares forest by 2030:

- construction: the construction sector represents the most important internal demand over coming decades, justifying its prioritisation for forest sector investments in industrialisation. The Ethiopian housing sector is currently dominated by traditional construction types. The 2007 census estimated that 96.5% of the population live in traditional building types, such as wood and mud constructions.
- plantations: forest plantations offer a good starting point for the development of a vibrant forest-based industry provided that the natural potential is fully exploited by application of best practice forestry standards. Ethiopia can harness private sector investments in the 245'000 hectares of high-quality plantations required leading to massive employment. In Ethiopia, timber prices are among the highest in Africa. More, bamboo plantations could be a powerful ally for restoring degraded landscapes.
- energy: driven by national electrification plans, utility pole (transmission pole) demand is projected to increase significantly in the coming years. Baseline scenario calculations suggest an average of 400'000 m³ poles will be required annually. Ethiopia will likely be subject to additional demand from neighbouring countries such as Kenya, where demand for poles is currently estimated at 1 million/year and from South Sudan, where no suitable pole plantations and pole treatment facilities exist. Charcoal is an important source of energy in sub-Saharan Africa. Sustainable industrial charcoal production is a good business opportunity. As charcoal is the leading energy source for cooking, equipping households with improved stoves at a large scale could also save a lot of forests.
- furniture: promoting harvested wood products (HWP) such as furniture is an important strategy for maximising the economic, social, and environmental potential of the forest sector. Demand for wooden furniture (a high value adding sub-sector) is expected to grow by more than 200% over 20 years. More, furniture can be built sustainably with bamboo.
- nurseries: considering that quality seedling production is lacking in Ethiopia, the option to attract a commercial clonal eucalyptus nursery investor should be considered.

sectors	investment opportunities
agriculture	agricultural intensification + agroforestry
energy	improved stoves
	waste-to-energy from woody material
forestry	plantations (bamboo, etc.)
	forest sustainable management
conservation	NTFP
	ecotourism (hunting, etc.)

Table 3: private sector REDD+ opportunities

2-3-b Challenges

The challenge is that investors are mostly looking for short-term profits whereas forestry is not compatible with short term. The other challenge to investing in forest-related activities resides in the poor returns on investment. Natural forests can't attract investors because there is little money to make. Indeed, it often requires large investments at the beginning, no direct benefits and (even sometimes) uncertain results due to physical risks (bush fires and natural hazards). Investors prefer sectors such as agriculture and manufacturing of textiles, plastics and metal. The importance of forestry is not recognised by relevant authorities. This is in contrast to land for agricultural investments, which is clearly indicated in investment procedures by authorities. Agricultural programmes are more appealing for politicians than the relatively long-term forest development options (G. ALEMAYEHU, 2014).

On the other hand, reducing domestic policy and institutional problems that restrain or discourage private sector engagement in sustainable forest management (SFM) is very important. As part of this initiative, ensuring stable and clear policies, institutions, and operating environments, including those related to tenure and concessions is also very important.

Access to land can also be an issue because all land in Ethiopia is considered public property. Individuals, companies and other organisations can, however, acquire the right to use land, notably rural land, mainly used for agricultural purposes. The absence of a national land-use plan adds to the complexity of allocating land to one sector versus another.

One other obstacle resides in the difficult access to capital. The banking and microfinance sector has limited capacities. In addition, there is currently a limited supply for local currency which hinders foreign companies from operating their business activities in an efficient manner.

	2018 ranking
overall	161
starting a business	174
dealing with construction permits	169
getting electricity	125
registering property	139
getting credit	173
protecting minority investors	176
paying taxes	133
trading across borders	167
enforcing contracts	68
resolving insolvency	122

Table 4: ease of doing business in Ethiopia 2018 (source: World Bank, 2018)

Considering the ranking done by International Finance Corporation (IFC) out of 190 countries, it appears that Ethiopia doesn't provide the most favourable ground for an enterprise to flourish (161 out of 190). We clearly see that the scores regarding starting a business, protecting investors and getting a credit are low compared to African standards. This implies that the country could assess the prospects for new types of instrument to overcome the challenges and design new approaches to forest policy can induce the private sector to play a positive role in forest management.

2-4 EXISTING INITIATIVES

TechnoServe

AAA is a sustainability programme from Nespresso launched in 2003 in collaboration with the NGO the Rainforest Alliance. Originally, the name of the AAA programme derived from the “AA” standard, a hallmark of coffee quality found in Kenya and other high-quality coffee origins. Nespresso added the third A to represent environmental, social and economic standards. Today, each A of the AAA programme stands for the three foundations of the Nespresso approach:

- first A (quality): the programme is designed to help farmers continuously improve their quality through better farming practices.
- second A (sustainability): the programme sets rigorous environmental and social standards as agreed in partnership with the Rainforest Alliance and the Sustainable Agriculture Network.
- third A (productivity): yield improvement is key for improving farmers net income.

The programme is the unique Nespresso long-term sourcing approach developed to secure the highest quality green coffee required to produce the Nespresso Grand Cru coffees, while protecting the environment and enhancing farmer welfare.

Through the AAA programme Nespresso also co-invests in coffee-growing projects and infrastructures to improve production processes, increase yields and optimise production costs. Partnerships with farming communities also allow to work collaboratively to develop new and innovative coffees. A strong network of partners, both local and global, plays an essential role in meeting a shared sustainability vision. This includes local coffee cooperatives, regional suppliers, NGOs, government agencies, global financial institutions and research bodies. Additionally, Nespresso pays premiums for quality and has financial incentives for farmers to adopt and implement the AAA programme best practices in regard to coffee quality, environmental preservation and farm management, as well as to fund technical assistance and investments on the ground.

The objective reinforces the trend towards coffee farming sustainability, limiting impacts of climate change on the one hand and developing new business opportunities for producers on the other hand.

In an effort to repair degraded lands, improve biodiversity and protect natural ecosystems, the AAA programme incorporated indigenous shade tree planting into the programme design. Planting shade trees within coffee farms not only contributes to improving coffee yields and quality, but it also strengthens coffee farms resilience in the face of climate change, thereby ensuring sustainable coffee production in the future. The shade tree training delivered during the AAA agronomy training programme explains the impact of sun on coffee trees, the benefits of shade, the characteristics of a good shade tree, and the techniques for planting shade trees, including a practical demonstration in the demonstration plot.

In 2017, 313'538 shade tree seedlings were distributed to 10'297 AAA coffee farms and wet mills of the AAA programme. A total of 399'331 indigenous tree seedlings have been distributed since 2016. This year, woreda nurseries in Sidama have been contracted to produce indigenous trees specifically for the AAA programme and TechnoServe is confident of meeting the overall cumulative target of 928'000 trees by the end of 2020. TechnoServe currently has over 650'000 indigenous shade trees seeds sown in various woreda nurseries in Sidama (350'000) and in Guji (300'000). The seedlings will be ready for distribution to farmers in August 2018.

This is a significant effort to recover the forest linked with coffee production. The new challenge will be to protect the growth of the trees in line with the national strategies.

Great Green Wall (GGW):

The GGW is a pan-African (Burkina Faso, Chad, Djibouti, Eritrea, Ethiopia, Mali, Mauritania, Niger, Nigeria, Senegal and Sudan) proposal to establish a green belt of planted trees across the Sahel-Saharan region in order to battle desertification and land degradation. The initiative aims to support the efforts of local communities in the sustainable management and use of forests, range lands and other natural resources in dry lands. It also aims to contribute to climate change mitigation, improve food security and livelihoods of people in the Sahel and the Sahara.

In Ethiopia the GGW programme is expected to further reinforce the government CRGE strategy, of which REDD+ is an integral part. The GGW is an African Union programme supported by the FAO, the European Union, and the Global Mechanism of the United Nations Convention to Combat Desertification (GM-UNCCD). In Ethiopia the FAO is funding the development of a national strategy and plan of action for the GGW, which is part of a technical cooperation project designed to provide technical and financial support to Ethiopia and 4 other countries (Chad, Djibouti, Mali and Niger). The Ministry of Agriculture is the GGW focal organisation in Ethiopia.

The project 2 billion USD budget, stemming largely from World Bank co-financing and partnerships fostered by the African Union, ensures participating countries will have the means to see the project through to the end.

Examples of success include more than 50'000 acres of trees planted in Senegal. Most of these are the acacia species *Senegalia senegal*, which has economic value for the commodity it produces, gum Arabic. A small portion of the trees are also fruit-bearing, which, when mature, will help combat the high levels of malnutrition in the country rural interior. Even more dramatic is the project potential social impact. The British Broadcasting Corporation (BBC) reports that the improvements in land quality and economic opportunity in Mali may help curb terrorism in the country, where famine and poverty have exacerbated a spike in political and religious extremism.

Farm Africa

Since 2012, Farm Africa and a consortium of partners have been implementing Ethiopia's first REDD+ project, a scheme that pays developing countries for carbon storage, in the Bale Eco-region. Bale is an area of significant ecological importance, where de facto open access to the forest had been driving rapid deforestation for many years. The REDD+ project builds on a participatory forest management (PFM) approach, which supports local forest users and the government to manage the responsibilities and benefits of the forest together.

The REDD+ project offers a framework to create an additional income stream to incentivise conservation of the forest by earning carbon credits for avoiding deforestation and forest degradation. Proceeds from the sales of the carbon credits will be shared on an 80%-20% basis between the forest management cooperatives in Bale and the Government of Ethiopia.

Over the REDD+ project first monitoring cycle, which covered the period 2012-2015, there is an externally verified reduction in deforestation of 62% against the anticipated rate. A total of 12'496 hectares of forest were saved, which is equivalent to a saving of 5.5 million tons of carbon dioxide emissions.

Farmers in Bale are benefiting from their engagement in PFM through various forest-based enterprise developments. However, the income they are generating from these activities is small compared to the gain they could have made by converting forests into cropland. The integration of the REDD+ scheme was designed to generate additional income from the carbon market. Forest conservation achievements were primarily driven by the anticipation of those financial gains.



Figure 2: levels of deforestation in the Bale project area between 2012 and 2015

Unfortunately, Farm Africa was unable to sell its credits using the carbon market therefore no additional income was generated for the farmers.

Partnership for Forests

Ethiopia is the birthplace of Arabica coffee. Coffee is key to the country culture and economy. It contributes to 5% of GDP and 30% of export earnings. An estimated 45% of the country total production comes from forest and semi-forest coffee. However, this coffee is currently sold as commercial-grade coffee, due to variable quality and lack of traceability. At the same time, the forests in which this coffee grows are under threat because of agricultural expansion and demand for fuelwood. To incentivise forest conservation in Ethiopia, bring long-term economic benefits to coffee growing communities and open up a new category of specialty coffee to the global market, Partnerships for Forests is working towards developing a strengthened value chain for forest coffee.

In collaboration with Ethiopia's Coffee and Tea Development and Marketing Authority, Partnerships for Forests aims to incentivise the conservation of these forests by developing a premium brand and supply chain for Ethiopian forest and semi-forest coffee.

To build upon on these encouraging findings and help catalyse transformation of the forest coffee industry, Partnerships for Forests is supporting the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) in building a robust supply chain for Ethiopian wild-

forest coffee, and TechnoServe to develop the brand for Ethiopian forest coffee. The two organisations are working as a consortium in the implementation of the project, the overall vision of which is to:

- develop new and internationally recognised Ethiopian forest and semi-forest coffee brands
- export large quantities of Ethiopian forest and semi-forest coffee
- secure prices that incentivise farmers to protect standing forest

In addition to strengthening the forest coffee value chain, the project aims to improve forest change cover monitoring mechanisms, introducing innovative traceability models and strengthening community forest management. The project will be implemented mainly in Ethiopia's Kaffa, Sheka, Bench Majji, Ilu Babor and Bale areas on approximately 150'000 hectares of forest. The project stands to benefit around 10'000 farmers in these regions and catalyse approximately 2.5 billion ETB at export price from 6'030 tons of forest and semi-forest coffee.

Though this initiative is interesting, it aims more at protecting the current forest cover and farmers' income than in restoring the forests.

Kreditanstalt für Wiederaufbau (KfW)

A loan contract facility is planned to be the feature for handling the financial support and to bring the support to the participating farmers.

The rationale for and value added of KfW involvement in this afforestation support project would be to:

1. contribute to the establishment of forest plantations of not only fast-growing species, but a substantial share of ecologically high value forest stands
2. contribute to the introduction of forest management as a valuable and sustainable source of income for a larger part of the poor rural population
3. contribute to the establishment of farmer organisations that will continue to secure farmers and local populations market power for forest products

The proposed project is composed of 4 major elements to implement the concept in the field together with the relevant government or civil society institutions and the local population:

1. support in the establishment and set-up of cooperation structures to enhance purchase of forest management equipment and supplies, and improve marketing of forest products through farmer cooperatives and units
2. support in business and technical planning procedures to enhance economic viable forest plantations and site adapted establishment of these forest plantations with ecological suitable and climate smart silvicultural concepts
3. support in investments into long term forest management goals which envisage not only short rotation profits but the establishment of high economic and ecologic value forest patches
4. support in continuous monitoring of project success and long-term impact of the afforestation efforts of the local population

This initiative is the only one to address a major challenge of investing in restoring the forests, i. e. plantation financing. If successful, it could be coupled with other initiatives to improve their effectiveness

Sustainable Land Management Program (SLMP)

The SLMP was initiated in 2008 to address two of Ethiopia's most significant developmental and environmental problems: agricultural productivity and land degradation. The programme is funded by the International Development Association and the Global Environmental Facility (the total amount is 29 million USD). The Ministry of Agriculture is the leading institution coordinating the programme from federal level down to the regional, woreda (district) and kebele (neighbourhood) levels where the programme is implemented by regional Bureaus of Agriculture.

The objective of the programme is to reduce land degradation, improve agricultural productivity for smallholder farmers, and protect or restore ecosystem functions and diversity in agricultural landscapes. It consists of 3 parts: 1) watershed management; 2) rural land certification and administration and 3) project management.

So far, the programme has had a number of successes. For example, in Amhara, Oromia and Tigray regions about 77'000 hectares of land have been rehabilitated; a further 79'000 hectares of forest have been established as PFM sites and these are now managed in partnership with local communities; and approximately 50'000 households have adopted sustainable land management practices. The SLMP is expected to contribute to the implementation of both the national REDD+ programme and the CRGE strategy.

Mirt stoves

Injera is a flatbread that is a fundamental component in Ethiopian cuisine. It is cooked with a traditional stove. Reducing fuelwood consumption to cook injera is important, because it represents the end-use for approximately half of all primary energy consumed in the country (M. BIZZARRI, 2010).

Mirt (that means 'best' in Amharic) is an improved cooking stove produced with mortar (a mixture of river sand and cement) with a 5-year lifespan. Since Mirt was introduced in 1998, the project has achieved much progress in social, economic and ecological terms. In 35 smaller and medium-sized towns, about 100 small businesses have been set up which have manufactured 27'000 Mirt stoves. A single stove reduces the demand for wood by 570 kilograms/year. The amount of fuelwood saved since the start of the project now totals 16'000 tons. This is equivalent to an area of 2'000 hectares of forest. Each Mirt saves approximately 5 kilograms of wood per injera baking session for the average household. Most housewives bake injera twice a week. This is a significant savings for the average Ethiopian urban household. The Mirt saves commercial injera bakers over 3.5 tons of fuelwood/year.

Fuelwood consumption is a major deforestation driver. Replacing traditional stoves by more efficient one is interesting. The next step would be to produce more of these stoves and to make charcoal production more efficient to close the loop.

3 -REGIONAL AND SECTORAL FOCUSES

3-1 REGIONAL FOCUS

Ethiopia has established its federal policy in 1995. It has 5 government tiers: federal, regional, zonal, woreda, and kebele levels of administration. The federal system constitutes 9 regional States (determined on the basis of settlement patterns, language, and ethnic identity) and has 2 chartered cities.

The 9 regional States (*kililoch*) in Ethiopia are:

- Afar
- Amhara
- Benishangul-Gumuz
- Gambela
- Harari
- Oromia
- Somali
- Southern Nations, Nationalities, and Peoples' Region
- Tigray

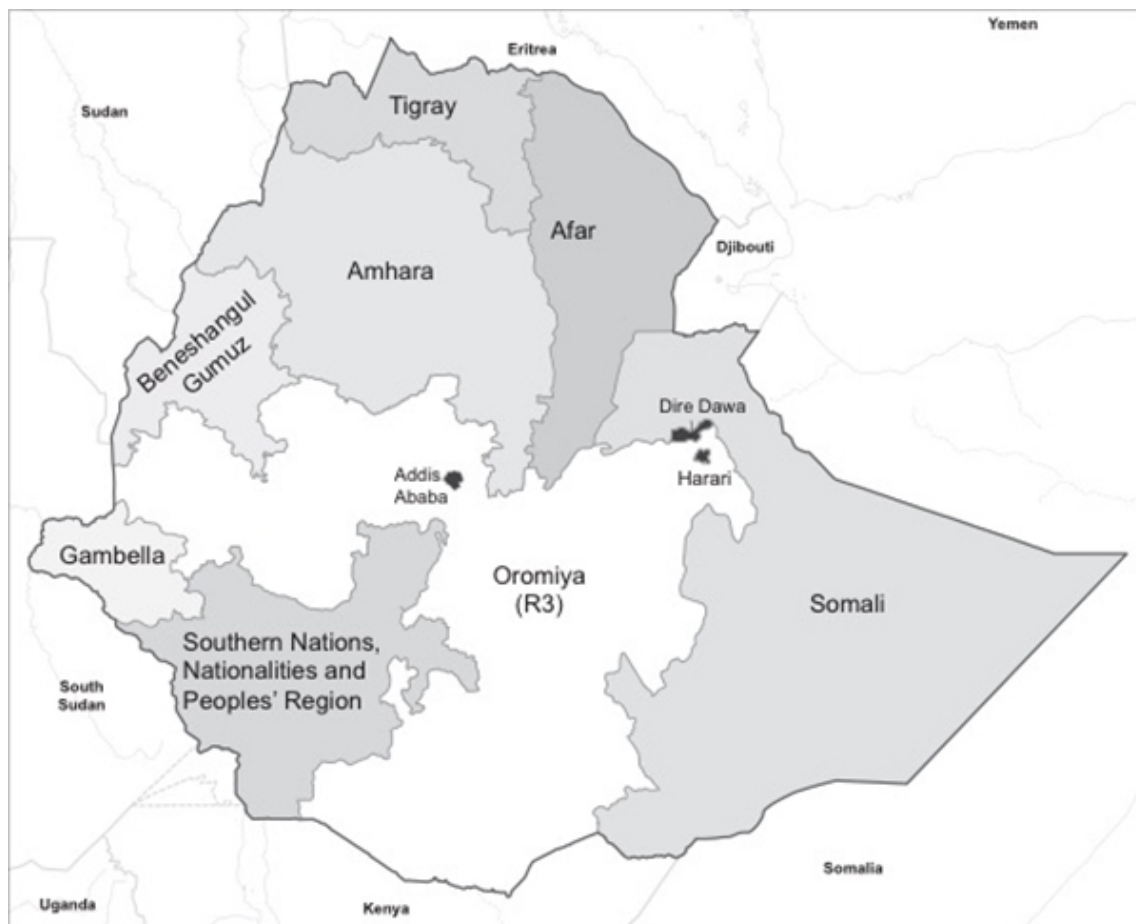


Figure 3: regional States of Ethiopia

Considering the limited mission time, we focused on 2 regional States: Benishangul-Gumuz and Amhara (northeast of Addis Ababa bordering Sudan) which are not coffee regions. We consider that what we studied in those States gave us enough material to give recommendations that could benefit the whole country.

3-1-a Benishangul-Gumuz

The mission to Asosa (capital of the region) took place from May 20th until May 23rd. Based on the 2007 census conducted by the Central Statistical Agency (CSA) of Ethiopia, the Benishangul-Gumuz region has a total population of 784'345. Most of this population is rural (86.59%). The estimated area is of 49'289.46 km² (4.5% of the national territory). Over 60% of this region is covered with forest, including bamboo, eucalyptus and rubber trees, incense and gum forests as well as the indigenous species. There is a widespread destruction of the canopy due to increased population.

The region has faced major challenges to economic development, due to lack of transportation and communications infrastructure. The Abay River (Blue Nile) divides Benishangul-Gumuz, and there was no bridge crossing it until 2012. Benishangul-Gumuz is mostly lowland region. Lands are not very fertile, but they are highly sought after because of the race for land and the area is considered as peaceful. Benishangul-Gumuz' attributes are:

- a more uniform/homogenous region than the others
- a low-land region (altitude < 1'500 meters)
- generous rainfalls
- a low-in-importance livestock
- an increasing commercial agriculture (sesame, ...)
- a smallholder subsistence type of agriculture
- a mostly Muslim population

3-1-b Amhara

The mission to Bahir Dar (capital of the region) took place from May 23rd until May 24th.

Based on the 2007 census conducted by the CSA, the Amhara region has a population of 17'221'976 (22 times more than Benishangul-Gumuz). Most of this population is rural (87.73%). The estimated area is of 154'708.96 km² (14% of the national territory and 3 times more than Benishangul-Gumuz).

Ethiopia's largest inland body of water, Lake Tana, which is the source of the Blue Nile river, is located within Amhara. The region also contains the Semien Mountains National Park, which includes Ras Dashan, the highest point in Ethiopia. Amhara is bordered by Sudan.

Unfortunately, Amhara is not very well connected to the largest market in Ethiopia, i.e. Addis Ababa. Amhara's attributes are:

- marginal commercial farming
- limited farm sizes
- high lands are the majority

3-2 NON-TIMBER FORESTRY PRODUCTS

In addition to this regional focus, it is relevant to have a sectoral focus, notably concerning NTFPs. NTFPs are minor or secondary products obtained from forests which do not require harvesting trees.

NTFPs play an important role in the Ethiopian national economy and rural livelihoods. The total value added to the GDP from NTFPs equals 20.1 billion ETB, which is considerable. The reliance on NTFPs and other forest resources can be high in poor, rural populations living close to forests. Forests provide coping mechanisms during times of food scarcity as they offer wild fruits for children during periods marked by food shortages. There are growing national and international markets for a number of the NTFPs. The main commercial NTFPs in Ethiopia are forest coffee, honey, beeswax, spices, bamboo, herbal medicines, gums and resins. The future of some NTFPs such as spices and forest coffee is uncertain if current deforestation is not reversed.

Coffee

One of the most important forest-derived products is coffee, which is estimated here to have generated 12 billion ETB of income in 2012-13 (1.8 billion USD - 1.4% of GDP). Ethiopia is home and cradle of biodiversity of Arabica coffee seeds. Ethiopia is Africa's largest coffee producer and the world's fifth largest exporter of Arabica coffee. Climate change will negatively impact much of the current coffee farming landscape of Ethiopia, actual coffee growing areas of Ethiopia will decrease considerably if no interventions are made however, substantial areas that were previously unsuitable for coffee will become suitable as the century progresses. This is due to the upslope shift of coffee growing suitability (the niche) as higher altitude areas (e.g. above 2'000 meters) improve and lower altitude areas worsen as a result of the climate change. Most coffee is grown in areas of humid (moist) evergreen forest. This type of rainforest is found at 650-2'600 meters above sea level, with coffee mainly confined to altitudes of 1'200 - 2'100 meters. The size of coffee farms is very small, from 0.5 to 2 hectares per farmer.

Bamboo

Bamboo naturally grows in 6 regional States. Ethiopia has the largest area of bamboo in Africa with 1 million hectares (85% is lowland bamboo). There could be potentially 3 million hectares (high lands + low lands) of bamboo in Ethiopia if plantations are developed. Bamboo can be used for human and animal food, charcoal, furniture, flooring, toothpicks, etc.

Spices

Ethiopia has a long history of spice and herb production for the domestic market. Modest quantities of several spices have been exported for centuries to countries in the Middle East and exports to Europe have developed over the past twenty years. The average land covering by spices is approximately 222'700 hectares and the production 244'000 tons/year.

Spices cultivation is scattered throughout Ethiopia and is carried out by smallholder farmers. Spices could be intercropped with coffee.

At the moment, there are two spice extraction plants in Ethiopia, one public and the other under private ownership. The public spice extraction plant, the Ethiopian Spice Extraction Factory, has a processing capacity of 180 tons/year. Over 85% of its business is for paprika. The privately-owned spice extraction plant in Ethiopia is Kassk Spices and Herbs Extraction. This factory was built in Addis Ababa in 1997 and has a processing capacity of 120 tons per annum. All of the extracted spice is exported overseas for food colouring, flavouring, etc. to Europe mainly Germany, Spain and Italy. The two spice extraction plants in Ethiopia are presently not operating at full capacity due to machinery obsolescence and shortage of raw materials. However, since there is vast area of suitable land for the production of spices in the country it is possible to increase spice production, even by designing an outgrowers scheme and the rehabilitation of existing plants (Tea production 2010, EIA).

Opportunities	Challenges
<ul style="list-style-type: none"> - the government of Ethiopia is promoting agro-industrial projects and has declared spices as focus area for development - as plant species, spices have a wide possibility of being cultivated in different agro-ecological zones of the country - financial services by banks and microcredit institutions and transportation and related logistic infrastructure are necessary - the spice subsector is amongst the important crops that fit within the strategy of commercialisation of agriculture - spice crops already widely traded internationally have a high potential for expansion and diversification of export earnings of Ethiopia - support of policy incentives that enable exporters to implement modern processing techniques and machinery starting from pre-harvesting to post-harvest processing - an increasing number of buyers/traders/oleoresin extraction companies, pharmaceutical manufacturers, choose to buy spices directly from Ethiopia - the Ethiopian Institute of Agriculture Research (EIAR) is conducting research pertinent to the spices subsector in some of its specialised and semi specialised research centers such as: Tepi (which is major spices research center), Araca (primarily concerned with ginger), Jimma (primarily concerned in coffee but also some spices) & Bako (in essential oils) 	<ul style="list-style-type: none"> - the cultivation practice and technique are highly based on knowledge that passed from generation to generation, and the production level is low - in need of an efficient spice value chain service delivery mechanism - innovation technologies (farm management, drying, storage) and spice agricultural research needed - post-harvest handling of the product is inadequate: poor and re-used packaging, storage in unclean sheds and next to e.g. chemicals, much up- and offloading, bumpy transport - irregular supply and variable quality of spices produced from forest and agricultural landscape - weak role of private commercial investors in spices production - weak business linkage among stakeholders in the chain including farmers, traders, processors and meso-level support institutions and macro level regulatory and enforcement institutions - increasing role and importance of unlicensed brokers in the trading of spices in the market - weak marketing system not stimulating production and marketing based on enforceable quality standards - lack of value addition in terms of major agroprocessing activities in spices - price volatility due to changes in demand and supply in local and overseas markets - lack of organised market information service to the different actors in the spices farm-to-market chain - challenges to channel the spices products to the international market through market promotion and creation of market links

Table 5: Opportunities and challenges of the spice sector (source: Netherlands-African Business Council)

The spices are:

- korerima: it grows naturally at altitude ranging from 1'000-2'000 meters
- ginger: it is cultivated in many places of the country
- turmeric (*ird*): it is used as a ground spice and in curry powder, mainly as a food-colouring agent as well as a colouring material in the textile industry. At all locations turmeric performs well. Turmeric can be grown up to an altitude of 2'000 meters in areas with high rainfall.
- cardamom (*yeshaikimam*): it is a perennial herb, belonging to the ginger family. It is the highest priced spice in the world markets known as 'Queen of spices'.

- black pepper (*kundo-berbere*): this cultivar was planted to test its adaptability at Bebek, Jima, and Tepi adaptations. At Bebek and Tepi the cultivar grew with excellent performance. In Ethiopia it is possible to cultivate black pepper successfully in wider range, from 1'250 meters to extremely lowlands of Southern Ethiopia, where there is high rainfall throughout the year.
- sweet paprika pepper: there is no local market for sweet paprika pepper, but some large agricultural operations have started to grow paprika as an intercrop.
- cinnamon (*kerfa*): it requires a warm and wet climate with average temperature of 20°C to 30°C and high rainfalls.

Herbs

The number of small-scale producers involved in horticulture is estimated at 5.7 million farmers.

Here is a list of medicinal herbs that you can find in Ethiopia:

- *Artemisia abyssinica* (*chikugn*)
- *Ocimum lamifolium* (*demakese*)
- *Aloe vera* (*eret*)
- *zingibil* or *dendabil*
- *Withaniasomnifera* (*gisewa*)
- *Echinopskebericho* (*kebercho*)

Aromatics

The world markets for incense and myrrh are dominated today by South-Yemen, Ethiopia and Somalia. Ethiopia is located in the African gum belt and is one of the few countries with large frankincense and myrrh resources. The country has a potential annual production of 70'661 tons from the 2.9 million hectares of land total area covered of oleo-gum resin bearing species. Despite its huge potential, Ethiopia has not fully benefited from the sector. It exports raw gum and resin materials without further industrial processing. Essential oils that can be extracted from gum have wide applications as odorants, flavourings and pharmaceutical ingredients in the manufacturing sector. The price for these essential oils is 5-10 times higher than the price of the dry extract resins on a weight basis (CBI Market Survey, 2011).

In terms of the market for gums and resins other than gum Arabic (aromatic gums), Ethiopia has 1% of the world market and 28% of the Africa's export trade (S. FELEKE and S. MELAKU, 2011). Trade volumes of gums and resins in Ethiopia have been increasing since the 1990s. Between 1997 and 2011, Ethiopia exported about 45'323 tons of natural gums and resins to the world market.

Here is a selection of aromatics produced in Ethiopia:

- lavender
- incense: frankincense and myrrh are raw materials used in industries like pharmaceuticals and food industries. Both myrrh and frankincense are highly valued for their aromatic fragrances.
- myrrh
- gum Arabic: it is used as thickening, stabilising, emulsifying and suspending agent in food and drink industries.
- opoponax or sweet myrrh

Honey and beeswax

Ethiopia the leading honey and beeswax producer in Africa. In 2010, China was the world's leading honey producer and Ethiopia was in 7th place. Recent production amounted to 53'675 tons of honey/year. Moreover, Ethiopia has the potential to produce up to 500'000 tons of honey and 50'000 tons of beeswax/year. Ethiopia has about 10 million bee colonies and over 800 identified honey-source plants.

The main destination for Ethiopian honey export is Sudan with a share of 76%. In fact, the honey price on the domestic market is mostly higher than the international honey price, which makes honey export less profitable (M. ASSEFA, 2011). Consequently, many companies that attempt to export honey usually drop out of the international honey trade, and target more the local markets which are still attractive (G. LEGESSE, 2014).

Apiculture is a promising off-farm enterprise, which directly and indirectly contributes to smallholder farmers income in particular and the national economy in general. It has significant role in generating and diversifying the income of subsistence Ethiopian smallholder farmers mainly the small land holders and landless.

4 - FINANCIAL SECTOR AND REDD+ FUNDING CAPACITY

4-1 FINANCIAL SECTOR MAPPING

Ethiopia allowed the establishment of private banks and insurance companies in 1994 but continues to prohibit foreign ownership in this sector (G; KYDAKI, 2000). The Ethiopian banking sector is currently comprised of a central bank, two government-owned banks and sixteen private banks. Ethiopia's financial system is small and largely dominated by the State. Currently public banks account for 67% of total deposits and 55% of loans and advances. Government dominates lending, controls interest rates, and owns the largest bank, the Commercial Bank of Ethiopia, whose assets represent about 70% of the sector total, as of April 2012. The central bank, the National Bank of Ethiopia, has a monopoly on all foreign exchange transactions and supervises all foreign exchange payments and remittances. By June 2011 the private credit to GDP ratio for Ethiopia was around 9% compared with the average of 30% for sub-Saharan Africa. Citing the *Journal of Economics and Sustainable Development*, the financial sector has recently been experiencing a reversal of financial deepening. The broad money to GDP ratio declined from 27% in 2007-2008 to 25% in 2008-2009, while the ratio of domestic credit to GDP decreased from 32% to 27% over the same period. Negative real interest rates (stemming from high inflation and low deposit rates), high reserve money growth, bank-by-bank credit ceilings, and a lack of competition in the banking sector have contributed to the economy continued demonetisation in recent years, which is posing increasing risks to financial stability. Authorities have made commitments to promote monetisation, improve liquidity management and achieve positive real interest rates in the financial sector, but reversing demonetisation remains a major challenge. Ethiopia remains as one of the underbanked countries even at sub-Saharan African countries standard.

The banking sector as a whole, while remaining relatively sound, is characterised by excess liquidity. Non-performing loan ratio standing at 1.8% as of March 2012 appears unusually low, especially given the strong domestic credit expansion.

The microfinance sector is relatively well developed but not strictly supervised. At last count about 31 institutions, reaching 2.4 million people, operated in the country and have become a major source of financial services to many farmers and businesses. Some unlicensed NGOs are also active in the delivery of microfinance services through informal channels.

Mobile banking is an underserved sector with strong growth potential. Very low cell phone penetration has prevented the rapid development of mobile banking, which has taken place elsewhere in Africa. However, the mobile phone industry has just started to discover Ethiopia as a relatively large, untapped market. A number of operators are thus preparing to launch, or have already launched, payment and transaction systems supported by mobile technology.

Access to finance is a top obstacle to SMEs as firms in Ethiopia are more likely to be credit constrained than global comparators. It is argued that micro-enterprises and large firms in Ethiopia have relatively better access to finance than SMEs. SMEs are considered as a missing middle in the country. In this regard, data from the World Bank (2016) shows that while only 16.4% of firms using banks to finance working capital in Ethiopia in 2015, 41.1% and 21.4% of firms rely on banks to finance working capital in Kenya and Uganda respectively in 2013.

Moreover, the value of collateral needed for a loan (as percent of loan amount) in Ethiopia is 296.2%, while the sub-Saharan average is 214.2%.

4-2 FINANCING EXPERIENCES

REDD+ finance has been channelled so far through a bilateral agreement with the Government of Norway, the FCPF, the BioCarbon Fund and the UN-REDD programme. In addition, in October 2017, Ethiopia has succeeded in securing 45 million USD from the Green Climate Fund for a project proposal to enhance critical irrigation systems in regions regularly stricken by drought and there are clear connections to be made with its REDD+ policies and measures.

International Finance Corporation

In Ethiopia, IFC is focusing on pro-active development of projects in key sectors such as agribusiness and industry that benefit micro, small and medium enterprises, helping them access finance and other services critical to their sustainable development. IFC has extended a risk-sharing facility worth up to 10 million USD to Nib bank, which, through loans to the cooperatives, should help them increase the volume of coffee they process from about 460 to 4'000 metric tons, generating about 17 million USD in export revenues and creating 2'000 jobs, more than half of which will likely be filled by women.

IFC Director for Eastern and Southern Africa, Jean-Philippe PROSPER, said: "This facility provides an innovative way for IFC to help Nib increase its lending to coffee farmer cooperatives in Ethiopia that can in turn acquire wet mills for processing high quality coffee and meet working capital needs. We expect this project to increase incomes and improve the lives of farmers in Ethiopia."

The risk-sharing facility is designed to overcome these obstacles and encourage lending to Ethiopia's coffee producers because IFC and Nib will share these risks, meaning more farmers will qualify for loans. Though this experience addresses a key issue (funding), it fails to create reforestation conditions.

Forest carbon partnership facility

The FCPF and the World Bank (FCPF delivery partner) are supporting Ethiopia in its efforts towards REDD+ readiness. The FCPF readiness programme is a multi-donor initiative that assists countries in establishing the key pillars of REDD+ readiness, including: 1) developing their national reference scenarios for emissions from deforestation and degradation; 2) adopting and complementing national strategies for reducing deforestation and forest degradation; and 3) establishing national monitoring, reporting and verification systems for REDD+.

Ethiopia became a member of the FCPF Participants Committee in 2008 and received a first grant (200'000 USD) to develop a R-PP in 2009. Between 2009 and 2011 the Federal Environmental Protection Authority led the development of the R-PP which was finalised in May 2011. In October 2012 the FCPF approved a readiness grant of an additional 3.4 million USD (total 3.6 million USD) to start the implementation of the R-PP.

The objective of the FCPF readiness programme is to strengthen the capacity of Ethiopia's institutions dealing with land use and REDD+. To support this objective the programme is divided into 3 key components and related activities. These are 1) support to the national readiness management arrangements (including strengthening the capacity of the Ministry of Agriculture and the REDD+ secretariat), 2) support to the design of a national REDD+ strategy (including the development of the Strategic Environmental Assessment and in-depth analytical studies on drivers of deforestation and degradation) and 3) preparation of a national implementation framework for REDD+ (looking at legal and institutional arrangements and options for REDD+).

4-3 FINANCING SCHEMES

Investment is the nucleus of an economy. It plays a crucial role in the models of economic growth. It is an essential component of aggregate demand and fluctuations in investment have a considerable effect on economic activity and long-term economic growth. The achievement of the desirable goals of stable macroeconomic condition and faster growth partly depends on the level of investment. Since it is an essential macroeconomic variable through which economic growth of a country is achieved, the analysis of the sectoral scene of the country investment scenario is a prerequisite towards designing an appropriate investment policy. A series of interviews carried out with the Government and International Monetary Fund (IMF) in October 2014 revealed the limited financing available for the industrialisation of forestry.

Achieving zero net emissions (or more removal) from deforestation and forest degradation and furthermore, capturing emissions from other sectors through sustainable forest and land management can only be possible with a significant and immediate scaling-up of investments. Ethiopia should design mechanisms to effectively access existing sources of multilateral, bilateral and domestic financing for REDD+ investments. While international financing is very essential, it is equally important to explore in-country funding for REDD+ including from public and private sources.

In general, the more a restoration intervention will benefit individuals, the more opportunities there will be for attracting private finance, and the more an intervention provides broader societal benefits, the better the chances are for attracting public sector finance mechanisms.

When considering how to fund landscape restoration, it is important to distinguish between:

1. the source of the money
2. the mechanism of the funding and the terms by which the money is allocated to those involved in implementing the restoration strategy (e.g. land managers)
3. the channels through which the money physically reaches those implementing the restoration strategy
4. the benefits that the restored landscape generates or the markets it serves

A single source might be able to provide money through one or more mechanism and channel. It is often the case that the market viability, or lack thereof, will determine the most appropriate financing mechanism. For instance, non-marketable services are typically not

well-suited for loans since the service does not generate a tangible revenue stream that can pay back the loan.

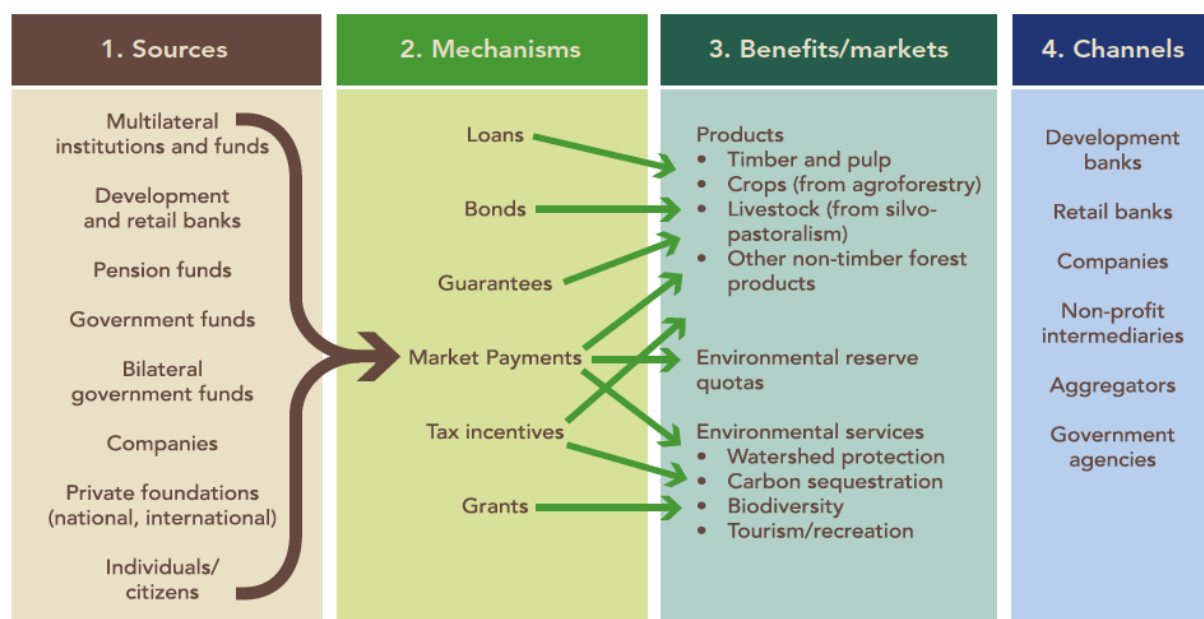


Table 6: Typology of financing strategies for restoration (source: Union Internationale pour la Conservation de la Nature)

4-4 BARRIERS

Given the potential of forests and climate finance for the country, it is important to identify barriers to investment, capitalise on the existing initiatives and explore opportunities to engage private sector in those activities supportive of REDD+ objectives. There are several key barriers to increasing private investment in Ethiopia's forest sector. These include: lands available for commercial plants; lack of access to affordable long-term finance; weak prioritisation of the forest sector compared to other land use sectors to date; lack of recognition and engagement of the private sector in forestry to address technology investment requirements; and, ineffective local extension schemes. Planned infrastructure investments, institutional improvements, and ongoing forest law reform should help to improve the ease of doing business in the forest sector. More attention is needed to attract the investments required to transform the sector into one that is more productive and contributes to the country industrialisation goals as laid out in the GTP2. Although domestic investment can increase available supply, foreign direct investment has the added advantage of providing needed access to new technology (e.g. clonal nurseries, timber processing equipment and transport logistics), related skills and knowledge, and capital. These outside inputs require an enabling investment climate and partnerships between the private and public sector, and domestic as well as international actors.

Small and medium forest enterprises face significant difficulties in accessing capital. Interviews carried out with smaller businesses indicate limited knowledge of available financing tools, demonstrating the lack of sector-specific information and the difficult interaction between them and the formal banking sector. In the absence of big corporations in the sector, access to financing is relatively low for all REDD+ opportunities. This shows the

limited development of microfinance, funding for SMEs (mesofinance) and funding for agricultural and forestry sector. Credits lines adapted to small-scale forestry investments are needed to foster growth and business improvements. Collateral needs to be feasible and adapted. Administrative requirements for loans need to be harmonised into accessible and comprehensible packages and made available in rural areas. The long-term nature of paybacks from forestry investments means that improving financing for HWP production and processing is particularly important. Although profitable over the long term, an investment in productive forests may take eight or more years to 'break even', making financing institutions key players in the successful promotion of HWPs. Access to finance is a key barrier for forestry businesses.

The Ethiopian Development Bank for example does not provide specific credit lines for forest investments, only for investments in timber processing industries. Commercial banks, due to lending restrictions, are focusing on short-term credits with high yield returns. Hence for the forest sector there is no access to domestic credit and State forest enterprises are required to invest revenues into GTP2 priority areas. Governments can play a useful role in triggering initiatives for addressing this issue by organising sector-specific fora that bring together potential investors and commercial banks.

5 - PRIORITISATION OF REDD+ INVESTMENT OPPORTUNITIES AND RECOMMENDATIONS

5-1 Priorities

Investment options quoted in 2-2 and 2-3 appear in this section. These are:

- intensification of existing agriculture combined with agroforestry inside existing fields to increase the lands dedicated to tree planting
- conception, manufacturing and distribution of fuel-efficient stoves to burn off less fuelwood therefore decrease the incentive of cutting trees for this matter
- creation of a waste-to-energy sector where kitchen waste is used to create a substitution energy to fuel Ethiopia's growth
- bamboo plantations and nurseries to provide fuelwood, charcoal and furniture
- forests sustainable management where industrial forestry is developed
- NTFPs as an incentive for communities to protect the forest as a revenue generator
- ecotourism (including hunting) to turn forests as a revenue generator without cutting any tree

The selection is based on a multiple criteria matrix to highlight and rank the investment opportunities with the most potential. This will bring to light the most efficient opportunity to address deforestation and stock forest carbon stocks. There are 2 topics (REDD+ benefits and economic potential) and 10 indicators to assess the various opportunities:

- GHG emissions reduction: GHG in the atmosphere have increased so much because of human activities that the Earth's temperature is dangerously increasing. We are assessing the potential mitigation power of the investment opportunities.
- benefits for Ethiopian forests: we are assessing the capacity of these opportunities to enhance the forests they interact with or to slow, halt or reverse deforestation.
- matching with national strategies: we are assessing the compatibility with the opportunities with CRGE and GTP2.
- ease of implementation: we are assessing the set-up speed of these opportunities.
- rapidity of impact: we are assessing the duration for these opportunities to produce the expected results.
- financial viability: positive impact on the forests can't attract the private sector players if they can't generate profits from these opportunities therefore it is important to assess their financial viability.
- required investments: we are assessing if the needed investments for these opportunities to be feasible. The lower the amount, the better.
- scalability: we are assessing how easy the opportunities can be expanded in order to meet the ambitious objectives set by Ethiopia to restore forest cover.
- livelihood improvements: we are assessing how these opportunities can improve the living standards of farmers (increase of income, better environment, air quality, ...).
- employment: we are assessing the ability of these opportunities to procure jobs to the population.

EVALUATION METHOD:

To differentiate between actual or potential outcome of investment opportunities in a realistic way, we used several 10 clearly identified factors. This assessment is based on questionnaires asked during the field missions as well as a literature search. Triangulation between different sources of quantitative data ensures the rightness of this evaluation.

The performance of these various solutions to slow, halt or reverse forest loss are rated unambiguously from 1 to 5 stars (excellent: 5 stars, good: 4 stars, average: 3 stars, poor: 2 stars and very poor: 1 star). Additionally, colours were assigned to those rates (5 stars: green-excellent, 3 to 4 stars: yellow-satisfactory and 1 to 2 stars: red-unsatisfactory) for a quicker reading.

The overall attractiveness is a mean of stars received in the 10 indicators where each indicator has the same weight. Investment options were ranked to select the ones to prioritise: the higher the number of stars in attractiveness, the more priority the potential investments should receive.

		agricultural intensification + agroforestry	improved stoves	waste-to-energy	bamboo plantations + nurseries	forest sustainable management	NTPF	ecotourism
REDD+ benefits	GHG emissions reduction	****	*****	****	*****	*****	*	*
	benefits for the forests	*****	*****	***	*****	*****	**	*
	matching with national strategies	*****	**	*****	*****	*****	*	*
	ease of implementation	***	*****	**	****	***	*****	*****
	rapidity of impact	*	*****	**	***	*	*****	***
economic potential	financial viability	**	*****	****	*****	*	*****	***
	required investments	****	***	**	*****	*****	*****	****
	scalability	***	*****	****	*****	*	*	*
	livelihood improvements	*****	*****	*****	*****	****	*****	***
	employment	**	***	***	****	**	*	***
overall attractiveness		***	*****	*****	*****	***	***	**

Table 7: private sector opportunities attractivity analysis

The comparison outlines three investment opportunities being ranked 4 stars and above based on the above matrix should be prioritised. **Bamboo plantations is the investment opportunity with the most potential.**

5-1-a Developing industrial bamboo plantations

The country has ample indigenous bamboo resources (estimated to cover almost 1 million hectares) and the Ethiopian government has already prioritised the developing a new bamboo strategy and policy for sustainable development. The country also has a fledgling bamboo sector - small-scale enterprises and modest charcoal production that the initiative can build upon.

Bamboo is a fast-growing plant. Ethiopian bamboo is mainly comprised of 15% of *Yushania alpina* (highland bamboo) and 85% of *Oxytenanthera abyssinica* (lowland bamboo), both endemic to Africa (K. EMBAYE, 2000). Sustainable managed plantations can be implemented and harvested in 3-5 years to provide biomass required for various applications, including local or high value modern furniture, building material, pulp and paper, particleboard and the like. However, until very recently, applications and uses of bamboo in Ethiopia have remained local, such as for light furniture. Production is still characterised by limited modernisation. Yet, the local economic importance is considerable. Adapting this estimate based on market assessment and averaging the prices of a culm (or shoot) in Asosa (for lowland bamboo) and in Goba (for highland bamboo) reveals that the economic contribution of bamboo to the GDP can be estimated 5 billion USD (International Network for Bamboo and Rattan). Close to 750'000 people have access to the bamboo resource with each person consuming an average of 5 culms/year (S. NUNE et al., 2010). This access is unlikely to change as the bamboo area in the country is reasonably stable and no policy shift exists in terms of access to the resource. Financing is needed to implement factories able to process bamboo and to manufacture high grade products for exportation.

5-1-b Implementing industrial fuel-efficient stoves production

Providing improved stoves is not only a solution to save fuel, it is also a health issue (because of harmful smoke). After having found and tested the most efficient design (Mirt, Yekum, Mirchaye, Lakech, etc.), a commercial production of improved cook stoves could be rolled out to equip Ethiopian households. A commercial production will keep the quality constant and will lower the cost/unit.

This activity could be quickly viable based on several experiences in neighbouring countries but public assistance at the beginning will make the goals attained sooner. It is vital that producers can get access to some form credit.

5-1-c Starting a waste-to-energy sector

The increase of population, the industrialisation and modernisation of Ethiopians' lifestyles means that the amount of waste is growing. By using proper technologies (incineration,

anaerobic digestion, etc.), this waste can be converted into energy to feed the current economic development.

5-2 Recommendations

Restoring forests is key to mitigate climate change. **Considering the amounts of money needed to implement and achieve REDD+ results, turning private sector actors into transition catalysts is essential.** Public sector interventions are necessary to address the market, policy and governance failures that are a significant contributing factor to global deforestation and forest degradation. As with any complex problem, there is no single optimum set of policy interventions, and their effectiveness will be contingent on the extent to which they can be successfully adapted to the local context. In addition, recommendations will be followed more efficiently if they are at the same time part of the national REDD+ strategy.

5-2-a Interventions of a general nature

There is a need to create enabling conditions to support a robust private sector involvement. These actions can range from strategies involving coercion (law) to those involving persuasion (campaigns):

- **raise awareness** of the importance of trees and forests while explaining the seriousness of the situation in Ethiopia concerning deforestation. Ministries need capacity building, and awareness campaigns must take place in schools, communities and on medias to inform as many Ethiopians as possible to modify prejudicial habits.
- **policy clarity** is critical for private sector involvement in REDD+, both internationally and nationally. Investors need clarity and stability to consider investing in a sector where returns often occur after decades. It is the role of the administration to reassure them concrete measures.
- **intermediation of business associations** makes it easier for the public sector to discuss with companies or investors than to deal with a multitude of stakeholders. It makes communication more efficient. The absence of such organisations contributes to the low visibility of the sector and means that the government has to engage with individual firms rather than a broader platform if at all. Such associations can play an important role in providing room for the private sector to voice their demands, pool resources, and better organise access to funding. Especially for small-scale woodlot owners, such platforms provide a means of communication that encourages knowledge sharing and exchange of experience.
- **harmonisation of contradicting policies and development programmes** has a positive effect on the actions in the sector. A joint team with experts from Ministry of Agriculture, Ministry of Finance and Economic Cooperation and MEFCC would be the most appropriate to get the job done.
- **invest in local research** on forestry or increased cooperation with foreign researcher can strengthen local knowledge of issues at stake. This involvement is very important to keep people educated and committed.
- **strong law enforcement prevents illegal drivers of deforestation.** If people feel they can degrade forest with impunity, they won't stop especially when money is involved.

- **reduction of bureaucratic obstacles**, in particular slow decision making in public administration. There is evidence that delays, and bureaucracy dissuades or does not stimulate investments that could tackle deforestation.
- **formalisation of informal economy** can raise government revenues, improve sector efficiency and visibility, and support transformation towards an increasingly export-oriented sector that contributes to foreign currency earnings.
- **Involve faith-based institutions as forests protectors**, given that forests have a spiritual purpose and meaning for many Ethiopians.
- **use of hunting fees** to invest in forestry projects. As Ethiopia is a legendary hunting destination for decades, it can use the money gained in this activity to restore the forests.

Demand-side measures

These measures cannot directly impact land-use governance, but they can create signals shaping the production and trade of forest-risk commodities:

- **green public procurement policy** requiring certification of the sustainability and quality of key wood products should be considered to encourage investments in sustainable forest management, industrialisation and professionalisation of the sector. The public purchase of sustainably produced furniture from domestic sources could contribute to achieving economic and environmental development goals.
- **dissemination of fuel-efficient stoves** and alternative-fuel cooking and baking techniques (electric, liquefied petroleum gas, etc.)
- **stimulate demand in underdeveloped sectors** (but with a strong potential) by developing targeted marketing strategies

Supply-side measures

The measures can be legal, technical, spatial, financial (providing and increasing ease of access to grants, loans and investments, or removing perverse incentives for activities leading to forest loss) and informational:

- **de-risking forest sector investments** through structured funds and guaranteeing products that enable local banks to establish or modify existing credit lines to reflect forest sector investment requirements, such as maturity, interest rates, and collateral requirements. The longer the instrument lasts, the better to create confidence and match delayed returns. It should channel and attract investments in forestry and mobilise domestic private capital (savings). This instrument should also have a dedicated technical assistance facility that can provide capacity building support. The Ethiopian Development Bank can be used as an intermediary to make the fund accessible only for projects with a sustainability/recover component.
- address the challenge associated with **property right and tenure security** can motivate communities by giving them a sense of ownership. Clear rights of use of the land can be granted for communities to restore forests.
- **stimulate participation and equitable benefit sharing** by forest-dependent communities
- **invest in the forest resource base could restore degraded forests**. As Ethiopia's forest resource is limited and continues to decline, the establishment of commercial plantations is a priority and has the potential to address deforestation by reducing pressure on natural forests and woodlands, and providing sustainable sources of wood products to reduce the

projected future supply gaps and support implementation of the national REDD+ strategy. Given limited land availability, woodlots should play an important role in transforming the sector to one that produces high-quality industrial timber. Experience in other African countries suggests quality timber production can be achieved through the establishment of a core dedicated commercial plantation combined with outgrower schemes that engage surrounding communities. This approach fosters technology spill-over from commercial plantations to woodlot owners and generates significant local socioeconomic development while meeting the commercial timber production demands of a country increasingly modernising its construction and housing sectors.

- the support of the national effort in expanding renewable energy sources

5-2-b Government interventions that directly target the private sector

Public support is a key component to motivate the private sector into making of REDD+ activities a success. Here is a list of interventions that can directly stimulate private sector actors:

- the government can incentivise farmers and communities to invest forestry-friendly activities. Upfront payments, such as grants, positive taxation, or RBP (PES, etc.) will motivate the private sector players.
- lands available for commercial plantations need to be identified and a tangible incentive system needs to be put in place to encourage investment in the sector considering the long-term nature of financial returns in forests/trees and the need for relatively large areas for them to be economically viable.
- improved inter-sectoral coordination could accelerate the achievement of objectives by creating synergies.
- partnerships between public actors, the private sector and communities are considered a promising model for achieving development goals. Public Private Partnerships (PPPs) have been put in place as one approach to improve forest management by soliciting greater funds from the involvement of the private sector.
- the promotion of small and large-scale fuelwood plantations (bamboo, eucalyptus, etc.) to supply the myriad of stoves
- direct performance-based payments (PBP) for private stakeholders will greatly facilitate private sector involvement and investment. The direct issuance of PBP to the private sector secures their investment and makes the protection of forests financially competitive with conventional land-use options that lead to deforestation and forest degradation.
- an invitation for the private sector to participate in discussions and policies to address the drivers of deforestation. The private sector players driving deforestation and those helping to conserve forests both need to be a part of REDD+ dialogues. The private sector needs to see some sort of net benefit from its investment that can be measured and evaluated.
- large banks should be made aware of opportunities to provide long-term financing for REDD+ projects or offset their emissions and those of their clients. Involving insurance companies willing to take on the risks associated with REDD+ may also prove to be a promising area of exploration. REDD+ opportunities could also be brought to the attention of large companies with a corporate social responsibility orientation, as well as customer sales, event management companies, hotels and individuals, among others interested in offsetting their carbon emissions.

- incentivise tree planting on slopes because they cannot be used for agriculture and this can prevent the major issue of soil erosion.
- in addition, farmers could be allowed or authorised to use their land as collateral
- training farmers of options and opportunities to switch towards agroforestry, mixing trees (timber or fruit trees) with crops can improve their revenue because most farmers have little knowledge on agroforestry systems, planting techniques, maintenance techniques for timber or fruit trees.
- professional associations could be offered property rights provided they reforest the land

Specifically towards private sector actors with a forest-friendly activity (positive contribution)

The forest sector would benefit significantly from increased engagement of the private sector to provide additional capital and know-how. Here is a list of actions that could involve the private sector:

- direct PBP for private stakeholders while maintaining the environmental integrity of a national accounting framework through a nested crediting approach will greatly facilitate private sector involvement and investment. The direct issuance of PBPs to the private sector secures their investment and makes the protection of forests financially competitive with conventional land-use options that lead to deforestation and forest degradation. With integrated jurisdiction-wide accounting frameworks, a nested framework reduces risk of intra-country leakage, which gives comfort to buyers in carbon markets.
- subsidies towards other sectors (like large-scale agriculture) can be reassigned for more sustainable projects

Specifically towards private sector actors driving deforestation (negative contribution)

Actors in this category can be subsistence farmers or big producers of raw materials, suppliers, manufacturers, traders, retailers, consumers, financiers and technical service providers. Here is a list of interventions that could make them change their practices:

- dedicated funds for market and feasibility studies, to develop and demonstrate the feasibility of HWP business models. Many forest management and processing companies require a business development support to be bankable for private investors.
- each degraded hectare must be compensated by the creation of nurseries for promising species and clones that are required to increase sector productivity, or by planting trees of at least the same size.
- incentives to adopt and expand environmentally friendly agricultural practices such as agroforestry, intercropping and intensification
- an awareness programme to change their practices and maximise waste-to-energy techniques
- special tax credit to reward the disengagement from forest unfriendly practices.

economic and financial barriers	
lack of private financing towards the private sector	<ul style="list-style-type: none"> - to provide insurance against risk will solve lack of financing to implement the national strategy, so that both national and international investors will have incentives to support it - to attract national and international investor interest in investing in Ethiopia, they need to be shown investment opportunities with promising long-term returns, branding possibilities, likely social benefits and recognition - to create a provision of promotional financing, including grants and subsidised loans - to attract donors for upfront financing - to publicise national commitments in addition to international cooperation and support for identification, formulation and development. The expected output of implementing the measure is the availability of financing to execute the national strategy - to allow farmers/communities to use their land as a collateral - to formalise the sector
market failures	
lack of market access for wood and non-wood forest products established in the national strategy areas	<ul style="list-style-type: none"> - to make investments in capacity-building to develop the necessary markets for the wood and non-wood forest products will solve lack of market access. It is good to provide timely market information to farmers, input suppliers and output buyers - to convey information about inputs and product markets (price and location) to farmers - to convey information about local input demand to suppliers and buyers - to support construction of community-based marketplaces. It is crucial for small-scale farmers to integrate with local markets to benefit fully from their work. Doing so requires market development for forest and non-forest products. Establishing market access will increase the selling and purchasing power of the local community by breaking the chain of the brokers. The expected output of implementing the measure is improved market access for new products produced via measures.
policy and regulatory frameworks	
private-sector reluctance to invest in projects that focus on land restoration and sustainable forest management	<ul style="list-style-type: none"> - to convince the private sector of the existence of a reliable, specific and transparent policy framework - clearly structured financial incentives - long-term government commitment - potential returns from national strategy interventions. Ethiopia is planning to engage the private sector. So far, engagement has been mainly limited to business associations or a small number of interested companies. - to attract private-sector interest in investing in the strategy, they need to see investment opportunities with promising long-term returns, likely social benefits and recognition. The expected output of implementing the measure is the identification of the most relevant private-sector actors and the incentives and benefits inherent to the proposed strategy.

Table 8: identification of possible options to address challenges

6 - CONCLUSION

Ethiopia is highly dependent upon agricultural activities and millions of Ethiopians are earning their livelihood from the sector. However, given that agriculture is the main driver of deforestation and given that climatic changes can increasingly affect the rural population, it is important to transform the sector in a way where agricultural production is 'decoupled' from deforestation, but also where measures are being put in place to stimulate sustainable economic activities directly related to the forestry sector.

As a consequence, the country made a pledge to restore 15 million hectares of degraded and deforested lands by 2030. The nation now strictly forbids any sort of activities that might affect the harmony of its precious climate. It is internally facilitating its citizens to revive forest coverage and is internationally looking for role-model activities in the implementation of a green economy. However, as business-as-usual will only lead to more deforestation, two national strategies (GTP2 and CRGE) were created to attain the restoration objective while developing the economy sustainably. **Considering the limited public funding, it appears that this objective cannot be reached without the contribution of the private sector.**

This report gives potential solutions on how the country can activate or strengthen the private sector participation. There is no silver bullet to engage the private sector but a multi-variable analysis of various investment opportunities able to slow, halt or reverse forest loss brought to highlighted three viable options that could be prioritised:

- **bamboo:** the implementation of bamboo plantations that provide numerous financial benefits while restoring the forest cover
- **improved cook stoves:** the supply of improved cooking stoves that will save a lot of fuelwood and charcoal
- **waste-to-energy:** the development of a waste-to-energy sector where municipal and agricultural waste can fuel the economic progress of the country.

The Government of Ethiopia can facilitate private investment in above-mentioned areas by putting in place the right enabling environment through regulatory and economic incentives. For example, financial support (subsidised line of credit for a lower rate, guarantees, etc.) could stimulate investments in these sectors or goods in order to reduce the pressure on forests and stimulate rehabilitation of degraded land (e.g. through bamboo). The low hanging fruit to fight deforestation is to involve the communities. To this end, a sense of ownership should emerge to motivate the communities in acting.

As long as forest conversion appears more profitable than forest conservation, forests will be threatened in Ethiopia, in a similar way as in other countries across the world. In order to tackle this issue, Ethiopia could invest not only in capital and labour, but also in forest-friendly entrepreneurship. The relationship between government and the private sector could be an area of reform. Creating a venture-favourable environment will facilitate this process, motivate local private stakeholders and attract the foreign direct investments.

REFERENCES

- PurProjet (2016). Sidama agroforestry project, 35 pages
- SMITH, R. et al. (2016). The contributions of forests to national income in Ethiopia and linkages with REDD+, 81 pages
- AYANA, A. (2015). Institutional and context analysis for REDD+ programme in Ethiopia, 60 pages
- Consentia (2015). Ethiopia forest sector review, 121 pages
- DAVIS, A. and MOAT, J. (2017). Coffee farming and climate change in Ethiopia, 40 pages
- Deutsche Forstservice GmbH and Organization for Rehabilitation and Development in Amhara (2017). Conservation and sustainable use of biodiversity and forests in Ethiopia, 122 pages
- WINBERG, E. (2011). Participatory forest management in Ethiopia, practices and experiences, 58 pages
- FIKRU, S. (2015). Review of honeybee and honey production in Ethiopia. Journal of animal science, 10/2015, 9 pages
- GEBRU, T. (2016). Deforestation in Ethiopia: causes, impacts and remedy. International journal of engineering development and research, volume 4-issue 2, 6 pages
- Department for international development (1999). Commercial production of energy efficient biomass stoves for the commercial and institutional sector, 43 pages
- BERNARD, F et al. (2012). The private sector in the REDD+ supply chain: trends, challenge sand opportunities, 9 pages
- HENDERSON, I et al. (2013). The role of the private sector in REDD+: the case for engagement and options for intervention, 12 pages
- MAGINNIS, S et al. (2014). A guide to the restoration opportunities assessment methodology (ROAM), 64 pages
- MENBER, K. (2015). Public and private investment analysis in Ethiopia. Research Journal of Economics and Business Studies, volume 04, number 06, 04/2015, 14 pages
- UNEP (2015). Facilitating implementation and readiness and mitigation - Ethiopia, 57 pages
- International bank for reconstruction and development / World Bank (2017). Harnessing the potential of private sector - Engagement in productive forests for green growth, 16 pages
- World Bank (2018). Doing business 2018 - Ethiopia, 65 pages