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Restoration diagnostic applied in Sodo Guragie (SNNPR) and Meket (Amhara region) woredas

Alemayehu Zeleke and Adriana Vidal



INTERNATIONAL UNION FOR CONSERVATION OF NATURE

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Executive summary

Covering an area of more than 1.2 million km², and inhabited by 100 million people, Ethiopia is the second-most populous country in Africa. With about 85% of the population living in rural areas, the national economy is heavily dependent on the agriculture sector, accounting for 41% of gross domestic product (GDP). Rain-fed, smallholder farming represents more than 90% of the national agricultural outputs but is also a key driver of forest and land degradation. The pressure to increase crop production has resulted in the expansion of agricultural lands and other overgrazing. Combined with rapid population growth linked to an increased demand for biomass, recurrent droughts and chronic poverty, these conditions have accelerated the overexploitation of Ethiopia's natural resources. These threats have been recognised by the Government of Ethiopia and addressing them is critical for the country's economic growth and development.

Policies, strategies, proclamations, programmes and plans have been developed since the 1990s to safeguard the country's forest and to directly or indirectly address the conservation and development of forest resources and landscape restoration interventions (see figure 1).

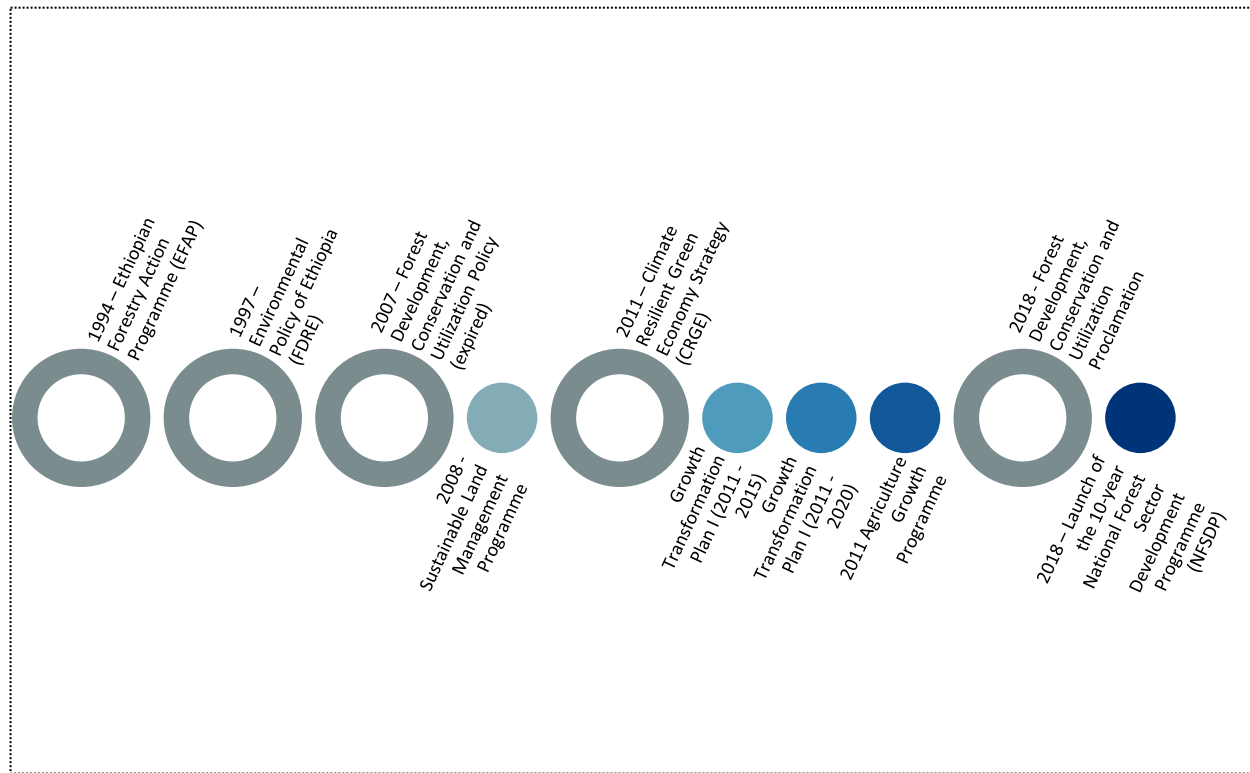


Figure 1: Timeline of the main policies on the forest and land-use sector in Ethiopia

In late 2018, the Environment, Forest and Climate Change Commission (EFCCC) launched the country's 10-Year National Forest Sector Development Program (NFSDP) (EFCCC, 2018) targeted to serve as the main guiding document for coordinating strategic policy interventions and sector-wide investments. Its goal is to build on the country's considerable forest resources and leverage existing momentum to transform Ethiopia's forestry sector. This goal will be achieved by attracting foreign investment, catalysing GDP growth, generating employment, contributing towards self-sufficiency in forest products and enhancing ecosystem services. Forest landscape restoration (FLR) interventions fall under this umbrella.

Factors leading to the successful implementation of FLR initiatives are localised and context-specific. In Ethiopia, the Restoration Diagnostic for FLR implementation (WRI, 2015) was successfully carried out in 2017 & 2018 in two Ethiopia districts or *woredas*: in Sodo woreda (Southern Nations, Nationalities, and Peoples' region) and Meket woreda (Amhara region). The objective of running these diagnostics was to identify the barriers and opportunities leading to the successful implementation of FLR and design strategies that close gaps or overcome such obstacles.

Presentation of Sodo and Meket woredas

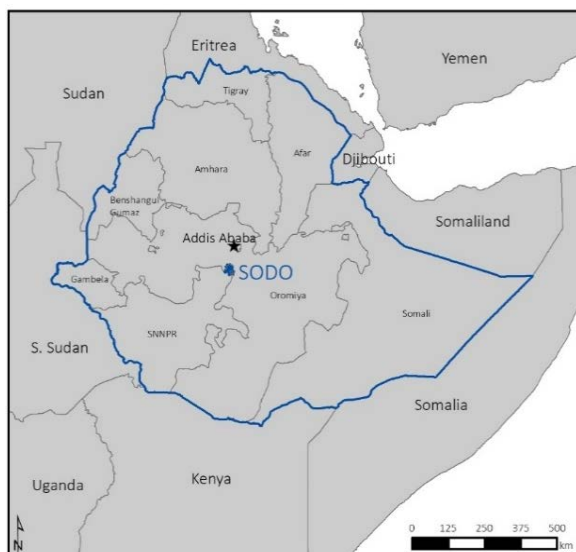


Figure 2: Location of Sodo woreda

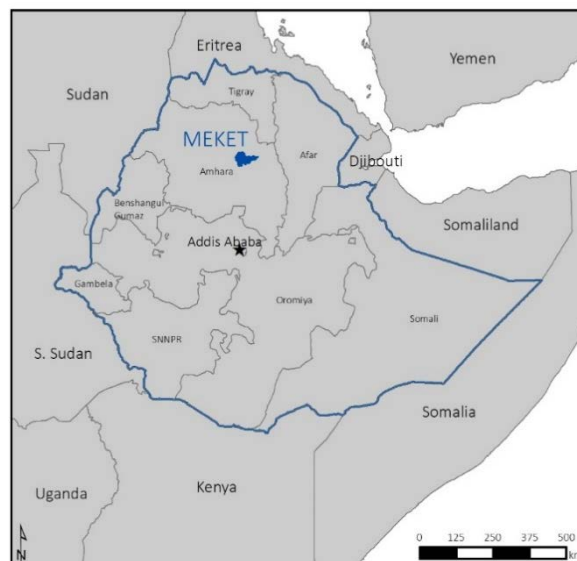


Figure 3: Location of Meket woreda

About 90% of the population of Sodo lives in rural areas. Livelihoods are predominantly based on integrated rain-fed crop-livestock agriculture systems. Forests managed by government institutions are reduced to areas around public buildings (schools, churches, government offices) and roadsides.

With a majority of rural inhabitants, the main livelihood in Meket is an integrated rain-fed crop-livestock production system that generates income, helps cope with environmental risks and meets household consumption needs. In parallel, households rely on the sale of timber and wood from eucalyptus trees to provide an additional source of income. The woreda has been listed as one of the most food-insecure and drought-prone districts of the Amhara region.

Key success factors of FLR interventions

a. Motivate

The factors motivating the implementation of restoration initiatives are:

Economic benefits

Local communities have shown continued engagement in FLR initiatives with anticipation of economic benefits (both in shorter and longer-terms), even when evidence of direct income generation opportunities is limitedly documented. Participatory Forest Management (PFM) is considered as the most common institutional framework to improve the management of state-owned natural forests. However, economic benefits from PFM are low because of limited access to forest benefits by the community. Forests in community lands, if sustainably managed, can generate income from timber and non-timber forest products favouring youth associations and community entrepreneurs, however, this option is sometimes limited by community bylaws and by lack of value chains in place, amongst other factors. In both woredas, other institutional frameworks exist depending on the type of land and the issues (degraded grasslands, deforested areas and shrublands or private lands). They therefore can generate tangible economic and ecosystem benefits but are a multiyear process. This is not to say that individuals do not generate income from trees – eucalyptus woodlots are a widespread source of cash from poles and charcoal, although the way this woodlots are carried out does not follow adequate practices to ensure sustainability and actual restoration.

Social and environmental benefits

Awareness

Although stakeholders appreciate the value and importance of restoring degraded land, the concept of FLR as an integral approach is not clearly understood by both experts and communities alike, and the degree of awareness is highly variable in both woredas. A more comprehensive approach to awareness can help address the low sense of ownership in communities in the restoration processes or the misunderstandings that can arise regarding land use and forestry extension. This could be achieved through improved communication and locally-targeted capacity development strategies engaging non-traditional stakeholders (school teachers and instructors, religious leaders, local media etc.), coupled with a system of incentives and accountability that takes a landscape approach (i.e. beyond numbers of trees planted). Moreover, most FLR activities are focussed on conservation, without a real link to livelihood issues. Creating these linkages will ensure that restoration interventions subsist in the long term and communities develop a sense of pride and practical benefits in the condition of their environments.

Crisis events

Landslides, flood, drought and soil erosion are a common occurrence in the woredas with specific events that have significantly impacted communities' access to water and extension of productive lands due to erosion and landslides. In both cases, FLR can substantially reduce the incidence of natural disasters through erosion control, protection of natural floods and landslides, improve water infiltration, reduce sedimentation of water bodies, biodiversity conservation and carbon sequestration. Moreover, rain-fed agriculture being the primary source of livelihoods, outcomes are extremely variable and unpredictable. In this regard, watershed-based land restoration and natural resources management is considered as one of the strategies to combat increasing droughts, land degradation, and improve crop yields.

Legal frameworks

The existing legal frameworks (both at federal and regional levels) promote tree planting as part of forest development. However, they do not mandate the restoration of land or replanting of trees if trees are cut. They emphasize prohibitions and law enforcement rather than providing effectively applicable incentive frameworks that actively promote tree-based landscape restoration. Introducing more comprehensive frameworks that outline prevention, detection and monitoring within a broader strategy of FLR while engaging communities in a constructive manner may help to alleviate this issue. With the launch of the NFSDP, it is expected that FLR will gain leverage in the country's priorities to manage forests and landscapes.

b. Enable

Ecological conditions

The ecological conditions are favourable to tree-based landscape restoration in both woredas. The various indigenous trees on communal lands provide the ecological capital required for natural regeneration as well as the collection of seeds, which can be grown in nurseries for the restoration of degraded forest land that no longer responds to passive restoration. However, tree-planting expansion – especially for the plantation of eucalyptus (*Eucalyptus spp*) and other exotic species – and uncontrolled livestock grazing with the total dependence of households on biomass for energy is significantly contributing to the depletion of the vegetation cover.

Market conditions

Good market conditions, i.e. access to markets, high product prices, and enabling environment, can have positive or negative implications for FLR. The unprecedented demand and top product price for wood and wood products is an incentive to plant trees in private and commercial woodlots, although not with a restorative or strategic land management vision. Value chains in place for sustainably produced timber and non-timber products can encourage communities to plant trees and promote the use of more sustainable practices for the landscape such as agroforestry, silvopastoralism or agrosilvopastoralism. However, the existing market drives species selection, which results in eucalyptus dominance. There is a need for the development of strategies to promote proper silvicultural and harvesting techniques, mixed plantations with alternative species and high-value tree/shrub species for effective FLR.

Policy conditions

An effective land tenure system is broadly considered an essential precedent for ensuring successful FLR implementation. Recent policy provisions have created the basis to enable local communities to participate in forest management through recognition of community forest as a third type of forest ownership. This allows the active involvement of local communities, including youth and landless community members, in planning for, managing and utilizing state forests. However, the lack of legal and policy coherence, clarity and uniformity for resources management as well as incentives for farmers to invest in planting or sustainably managing natural forests can hinder the successful implementation of activities. Hence incentives that promote the integration of tree-based landscape restoration and production systems that also improve agricultural productivity are needed.

Social conditions

Substantial efforts have been made to raise awareness and build the capacity of stakeholders on the importance of FLR initiatives and discuss restoration plans among stakeholders using annual community mass mobilization campaigns. These campaigns helped to highlight the ecological and economic benefits of restoration. However, community participation is often regarded as a one-off campaign in a top-down process. In Sodo, one of the main challenges to sustained community engagement was the low sense of ownership of communities in restoration processes, coupled with poor management of livestock and ineffective follow up after restoration activities. Promoting communal plantations in Meket could contribute to empower communities and generate income, facilitating dialogue for knowledge exchange and capacity building whereby farmers are involved in decision-making processes for planning and implementation of FLR on common natural resources

Institutional arrangements

It is crucial to establish a clear outline of mandates for institutions dealing with FLR and decentralize those mandates appropriately. In the meantime, woreda institutions are working on developing a culture of defining roles and responsibilities on an individual project basis to instil clarity in mandates and cultivate improved integrated cross-sectoral coordination. It is worth noting that achieving higher results in FLR initiatives under a decentralized structure is often involved and building the capacity of stakeholders at the woreda level is of critical importance.

c. Implement

Leadership

It is evident that Ethiopia's policy plans and recent initiatives to restore millions of hectares of degraded land signal a strong political commitment at all levels of government to build a sustainable green economy. This includes Ethiopia's Bonn Challenge pledge to restore 15 million hectares and similar restoration commitments embedded in the country's Land Degradation Neutrality Target and its Nationally Determined Contribution. With the support of NGOs and international cooperation, the government is promoting area exclosures and tree planting across the country through community mobilization. Although every year communities contribute labour to planting and restoration activities, it is essential to recognize the need of generating leadership within communities and at the local level to implement restoration responding to their motivations and sense of ownership of the economic and environmental benefits.

Knowledge and technical design

Decades of substantial knowledge base exist in both woredas and kebeles on topics such as bamboo-based agroforestry, area exclosures, integrated watershed management, woodlots, and integrated watershed management. However, many institutions and departments are constrained by instability, lack of capacity, limited budgets and high staff turnover. These issues often undermine a sense of ownership of programmes and relationships within institutions, which often causes discontinuity of initiatives and loss of institutional memory. Additionally, there is not enough attention given to knowledge management, with experiences gained and challenges faced are not well documented. In order to strengthen the implementation of the FLR initiatives, comprehensive processes can be put in place to integrate FLR into national plans and also develop guidelines to do so.

Financial incentives

Improved access to and economic benefit from trees by communities is considered the most significant incentive to manage forests sustainably. For instance, woreda nurseries offer seedlings free of charge; additionally, the current investment policy provides tax incentives for the establishment of large-scale plantations. Organizing and increasing the productivity of commercial agriculture and forestry-based value chains will be a key incentive for farmers and communities. In other parts of the country, tree-based high-value chains and agroforestry systems can compete economically with crops. Still, improved market infrastructures (physical and institutional) and technical support will be critical for successful investments.

Feedback

EFCCC – the Ministry of Environment, Forest and Climate Change – is responsible for performance monitoring and evaluation of forest landscape restoration efforts in Ethiopia. However, monitoring capacity remains a challenge. Monitoring capacity (technical and financial) at woreda level is limited, with unclear coordination processes to carry out restoration activities and minimal follow-ups once seedlings are distributed to farmers (private land) or planted in communal areas. There is often lack of clarity and communication with communities on how long the areas will remain closed, how they will be managed for better economic and environmental outcomes, and what indicators should be used to measure socio-economic and ecological gains (Lemenih & Kassa 2014).

Looking forward

Ensuring the long-term sustainability on the FLR activities requires the implementation of a comprehensive set of measures that address critical aspects of the land management process.

For instance, the development of the institutional capacity of key government stakeholders on the implementation of cross-sectoral coordination structures and processes is key. The role of the government is crucial for engaging microfinance and rural savings institutions, which in turn can create financial products, promote and facilitate loans compatible with FLR such as agroforestry, silvopastoralism, NTPF and mixed-species plantations. In parallel, mechanisms such as community incentives, including Payment for Ecosystem Services (PES) programs or the creation of certification programs for sustainable practices can lead to the development and increase of the productivity of commercial agriculture and forestry-based value chains. However, operationalizing such incentive frameworks would not be effective unless there is a long-term integration of FLR into the domestic budget to finance restoration activities at the district, regional and national level.

Moreover, introducing and promoting alternative, short-rotation and economically productive plantations using mixed species, including appropriate silvicultural practices, will strengthen the link to community livelihoods and also ensure long-term sustainability. The implementation of effective practices such as plantations, bamboo and agroforestry (apple/bamboo systems, orchards, and others) can be scaled up and lead to considerable economic benefits. Also, the design of FLR activities should be based on land use planning, take into consideration the conservation of biodiversity in the productive landscapes and include livelihood improvement and income diversification as part of their framework.

Furthermore, developing a tree-product value chain and market, and improving the production of and marketing for NTFPs and wood by promoting the establishment and capacity building of community-based organizations is essential. Developing FLR business models for private sector investment and promoting restoration-based value chains can help with implementation.

Finally, land tenure and community participation are some critical aspects of FLR that need to be addressed to ensure success. In several instances, tenure insecurity persists in woredas; it becomes of vital importance to ensure that all kebeles are issued land certificates to promote investment on private landholdings. As a result, the role of farmers in the planning and implementation of FLR activities will increase. Additionally, the devolution of decision-making authority at the local level will create a stronger sense of ownership in the restoration activities and improve the participation of community members in FLR activities.

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List of abbreviations and acronyms

ACSI	Amhara Credit and Saving Institution
ADLI	Agricultural Development Led Industrialization
AE	Area Exclosure
AFR100	African Forest Landscape Restoration Initiative
AGP	Agricultural Growth Programme
AILAA	Agricultural Investment Land Administration Agency
ALAP	African Landscapes Action Plan
ANRS	Amhara National Regional State
ARLI	African Resilient Landscape Initiative
BOEPLAU	Bureau of Environmental Protection, Land Administration and Use
BOA	Bureau of Agriculture
BOANRM	Bureau of Agriculture and Livestock Resource Management
CBD	Convention on Biological Diversity
CRGES	Climate Resilient Green Economy Strategy
CSA	Central Statistical Agency
DA	Development Agent
EEFRI	Ethiopian Environment and Forest Research Institute
EPFA	Environmental Protection and Forest Authority
FAO	Food and Agriculture Organization of the United Nations
FCPF	Forest Carbon Partnership Facility
FDRE	Federal Democratic Republic of Ethiopia
FLR	Forest Landscape Restoration (FLR)
GDP	Gross Domestic Product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (<i>German Corporation for International Cooperation</i>)
GOE	Government of Ethiopia
GTP	Growth and Transformation Plan
ISFL	Initiative for Sustainable Forest Landscapes
ISFSDP	Institutional Strengthening for Forest Sector Development Programme
IUCN	International Union for Conservation of Nature
LIFT	Land Investment for Transformation
LULC	Land Use and Land Cover
EFOCC	Environment, Forest and Climate Change Commission of Ethiopia

MOALR	Ministry of Agriculture and Livestock Resources
MRV	Measurement, reporting, and verification
NILUPP	National Integrated Land Use Planning and Policy
NFSDP	National Forest Sector Development Programme
NRM	Natural Resources Management
NTFP	Non-Timber Forest Product
ORDA	Organization for Rehabilitation and Development in Amhara
PES	Payment for Ecosystem Services
PFM	Participatory Forest Management
PSNP	Productive Safety Net Programme
SDGs	Sustainable Development Goals
SLMP	Sustainable Land Management Programme
SNNPR	Southern Nations, Nationalities, and Peoples' Region
UN	United Nations
UNDP	United Nations Development Programme
REDD+	Reduced Emissions from Deforestation and forest Degradation and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks
ROAM	Restoration Opportunities Assessment Methodology
UNFCCC	United Nations Framework Convention on Climate Change
UNCCD	United Nations Convention to Combat Desertification
WEFPO	Woreda Environmental and Forest Protection Office
WOEPLA	Woreda Office of Environmental Protection and Land Administration
WONARD	Woreda Office of Agricultural and Natural Resource Development
WRI	World Resources Institute

1. Introduction and overview

1.1. Background

Under the auspices of UN commitments and international multi-stakeholder initiatives, nations are increasing their efforts to reverse land and forest degradation and engage in landscape restoration to tackle multiple social and environmental challenges, including climate change mitigation and adaptation, degradation neutrality, food security and biodiversity loss. As ambitious restoration goals and substantial political commitments arise, Forest Landscape Restoration (FLR) has received international attention as a practical means for realizing many existing international commitments, including the Convention on Biological Diversity (CBD), the United Nations Framework Convention on Climate Change (UNFCCC) and the United Nations Convention to Combat Desertification (UNCCD) Rio+20 land degradation neutrality goal (IUCN, 2018; Gichuki et al., 2019; Beatty et al., 2020). Particularly through the Bonn Challenge, FLR was elevated onto the international agenda to restore ecosystem integrity while at the same time improving human well-being through multifunctional landscapes (Brancalion et al., 2016; Reinecke & Blum, 2018). The Bonn Challenge is a global effort “to bring 150 million hectares of the world’s deforested and degraded lands into restoration by 2020, and 350 million hectares by 2030” (IUCN, 2011). Launched by the Government of Germany and the International Union for Conservation of Nature (IUCN) in 2011, and later endorsed and extended by the New York Declaration on Forests at the 2014 UN Climate Summit (United Nations, 2012), the Bonn Challenge offers an exchange platform for interested countries as well as non-state actors to demonstrate leadership in implementing FLR. Regional initiatives support the Bonn Challenge such as 20x20 in Latin America and AFR100 in Africa.

The Bonn Challenge and the FLR approach have motivated many countries to review their environmental and forestry policies and align national plans with international initiatives. FLR offers demonstrated opportunities for win-win scenarios that can achieve increases in ecosystem productivity while simultaneously delivering food security, poverty alleviation, and broader socio-economic development objectives. Bringing back this benefits is especially needed and most urgent in areas where forest ecosystems have been severely disrupted or degraded.

Moving to implementation and achieving FLR objectives promises to be challenging. While past landscape restoration cases in many countries indicate that FLR is possible and can succeed, in many instances, success factors are localized or context-specific. Therefore there is a need to create enabling conditions to help realize such success factors, while at the same time efforts are needed to close gaps on factors that undermine FLR initiatives. As such, this document serves to support the Government of Ethiopia (GOE) to (i) reveal the affirmative determination of different policy, governance, human, and biophysical factors and other conditions that enhance the effectiveness and expansion of current FLR efforts, and (ii) identify factors that impede the development or success of FLR as well as strategies that close gaps or overcome such barriers for FLR. This is done through the application of the Restoration Diagnostic (WRI, 2015) localized in two selected pilot woredas or districts, as explained in the following section.

WHAT IS FOREST LANDSCAPE RESTORATION (FLR)?

Forest landscape restoration is the long-term process of regaining ecological functionality and enhancing human well-being across deforested or degraded forest landscapes. It is about “forests” because it involves increasing the number and/ or health of trees in an area. It is about “landscapes” because it involves entire watersheds, jurisdictions, or even countries in which many land uses interact. It is about “restoration” because it involves bringing back the biological productivity of an area in order to achieve any number of benefits for people and the planet. It is “long-term” because it requires a multi-year vision of the ecological functions and benefits to human well-being that restoration will produce. However, tangible deliverables such as jobs, income and carbon sequestration begin to flow right away.

Successful forest landscape restoration is a **forward-looking** and **dynamic** approach, focusing on strengthening the resilience of landscapes and creating future options to adjust and further optimize

ecosystem goods and services as societal needs change or new challenges arise. It integrates several guiding principles, including:

- **Focus on landscapes** – FLR takes place within and across entire landscapes, not individual sites, representing mosaics of interacting land uses and management practices under various tenure and governance systems. It is at this scale that ecological, social and economic priorities can be balanced.
- **Maintain and enhance natural ecosystems within landscapes** – FLR does not lead to the conversion or destruction of natural forests or other ecosystems. It enhances the conservation, recovery, and sustainable management of forests and other ecosystems.
- **Engage stakeholders and support participatory governance** – FLR actively engages stakeholders at different scales, including vulnerable groups, in planning and decision making regarding land use, restoration goals and strategies, implementation methods, benefit sharing, monitoring and review processes.
- **Tailor to the local context using a variety of approaches** – FLR uses a variety of approaches that are adapted to the local social, cultural, economic and ecological values, needs, and landscape history. It draws on latest science and best practice, and traditional and indigenous knowledge, and applies that information in the context of local capacities and existing or new governance structures.
- **Restore multiple functions for multiple benefits** – FLR interventions aim to restore multiple ecological, social and economic functions across a landscape and generate a range of ecosystem goods and services that benefit multiple stakeholder groups.
- **Manage adaptively for long-term resilience** – FLR seeks to enhance the resilience of the landscape and its stakeholders over the medium and long-term. Restoration approaches should enhance species and genetic diversity and be adjusted over time to reflect changes in climate and other environmental conditions, knowledge, capacities, stakeholder needs, and societal values. As restoration progresses, information from monitoring activities, research, and stakeholder guidance should be integrated into management plans.

Figure 4. Forest Landscape Restoration definition and principles (IUCN, 2017)

1.2. Objectives, methodology and roadmap of the report

This report intends to identify the opportunities and barriers of introducing and scaling up of FLR into selected pilot landscapes of Ethiopia: the districts (or *woredas* used as a synonym across this document) of Sodo and Meket, located in SNNP and Amhara regions respectively. It is intended to assist national policy-makers and other decision-makers in understanding the degree in which the necessary conditions for the successful implementation of FLR are present in current policy, economic opportunities, social settings, and initiatives at the national, regional, and local level that have an impact at the woreda level. This work is expected to accelerate decision-making processes for landscape restoration implementation, including the identification of enabling conditions at all levels of government necessary for long-term restoration success. It also aims at building support for expanding the lessons and experiences of Sodo and Meket to other districts and landscapes at the regional level.

To achieve these objectives, the report presents the results of the application of the *Restoration Diagnostic Tool* (WRI, 2015). The Restoration Diagnostic helps to identify and map the key success factors in place and develop strategies to increase the likelihood of achieving thriving forest and landscape restoration. The Restoration Diagnostic encompasses three main steps:

1. **Defining the scope of the assessment**, resulting in the identification of the candidate landscape(s).
2. **Assessing key success factors for the candidate landscape(s)**, identifying policies, regulations and initiatives conducive to Forest Landscape Restoration (FLR), as well as gaps and barriers. Through the Restoration Diagnostic, stakeholders evaluate the status of three groups of key success factors for FLR based on guiding questions for their assessment:
 - a. The **motivation of stakeholders** to engage in FLR activities; e.g. awareness of FLR options, potential benefits of FLR and beneficiaries, crisis events strengthening motivation and legal requirements;
 - b. The **enabling environment and prevailing ecological conditions**; including existing policies, social conditions, markets for forest and agricultural products, institutional actors and coordination of activities;

- c. The **implementation capacity** of stakeholders; e.g. ongoing FLR-related activities, technical know-how of actors and knowledge transfer mechanisms, and incentives and funding for FLR and agriculture.

Based on the answers provided by stakeholders, it is possible to see which key success factors are in place (“yes” or green), which are partially in place (“partly” or yellow), and which ones are not in place (“no” or red).

- 3. Identifying strategies** suitable for FLR, based on the information and answers generated from the step before i.e. strategies that close gaps or overcome barriers for FLR for the candidate landscape.

The diagnostic was carried out in the years 2017 and 2018. The primary sources utilized in developing the restoration diagnostic in Sodo and Meket were stakeholder consultations, interviews and workshops at the local, regional and national level, field visits, as well as a desk review of legislation, policies, and programme documents.

Parallel to this diagnostic WRI supported the development of spatial data analysis in the woredas to identify potential FLR activities. This diagnostic includes the land use maps produced under that effort (see Figures 5 and 6) and summary information of the FLR options identified in each woreda (see section 5.2). Annex 1 presents a summary of the economic and financial analysis to implement these potential FLR activities in the two woredas. This document is organized into two parts:

Part 1 Provides national context and distils the key elements at the national level to guide decision-makers in supporting a policy and enabling environment that encourages FLR activities.

Part 2 is an in-depth exploration of findings, with barriers and opportunities for scaling up FLR in Sodo and Meket based on an analysis of success factors. Considering that these factors are connected intrinsically with national-level processes and frameworks, each success factor presents a shared diagnostic for both woredas, after which specific conditions are detailed at the district level, when applicable. Note that the score given to each success factor in each woreda was a result of dialogue with stakeholders during the inception and validation workshops against the findings presented, which in some cases translates into different scores in the two woredas even though the conditions found are similar. Section 6 analyses the gaps and opportunities and provides recommendations for how to develop strategies that will increase the likelihood of achieving successful FLR in the two landscapes.

Part I. Forest landscape restoration in Ethiopia

2. National context

2.1. Country profile

Covering an area of more than 1.2 million km², and inhabited by about 100 million people, Ethiopia is the second-most populous country in Africa. With an annual population growth of more than 2%, Ethiopia is expected to have more than 120 million inhabitants by 2030 (GOE, 2011). The national economy is heavily dependent on the agriculture sector, accounting for 41% of GDP. About 85% of Ethiopians live in rural areas, most of whom are smallholder farmers with average farm sizes of 0.5 hectares per household and producing more than 90% of the national agricultural outputs. Ethiopia's policy of Agricultural Development Led Industrialization (ADLI) emphasizes smallholder agriculture to stimulate growth in other sectors of the economy, most notably industry. However, due to mainly rain-fed practices characterized by low output, agricultural productivity remains relatively small.

Among the key drivers of forest and degradation include expansion of agricultural lands, overgrazing, and the demand for biomass. (Birhanu, 2014). Over 90% of households depend on biomass for energy (Johnson & Mengistu, 2013). The pressure to increase agricultural production has resulted in the expansion of cultivated areas into marginal landscapes and natural forests. Combined with rapid population growth, recurrent droughts and chronic poverty, these conditions have accelerated the overexploitation of Ethiopia's natural resources. Although Ethiopia was once endowed with diverse forest resources across wide-ranging altitudes and agro-ecological zones, these key drivers of land-use change have resulted in increased soil erosion, reductions in water quality and quantity, reduced livestock and agricultural productivity, soil nutrient depletion and wide-scale landscape degradation. Furthermore, degradation and desertification are further exacerbated by the increasing effects of climate change.

The Government of Ethiopia acknowledges that land and forest degradation, if left unchecked, will pose a critical threat, especially when compounded with the rapid economic growth the country has witnessed over the last decade. If Ethiopia is to maintain strong economic growth and achieve its ambitious development goals, protecting existing forests and utilizing forest landscape restoration are crucial. Sustainable management of natural resources has emerged as a national priority (Leminih & Kassa, 2014) where increasing the number of trees, as appropriate, and performing FLR is part of a strategy to address current threats created by steep degradation and deforestation levels, which will contribute to achieving Ethiopia's national development objectives.

In 2011, The GOE launched a Climate Resilient Green Economy (CRGE) strategy to achieve lower middle-income status by 2025¹, following a climate-resilient green economy and carbon-neutral growth trajectory. The CRGE identified the importance of the protection and proper management of existing forests and woodlands, and the establishment new forests through afforestation and reforestation while at the same time encouraging intensification of agriculture and livestock instead of additional land clearing. The CRGE identified forestry as one of the four pillars² selected for fast-track implementation with an immediate prospect of achieving sustainable economic growth and large-scale carbon abatement potential. As such, the CRGE articulates the need to reverse deforestation and forest degradation as well as enhancing forest carbon stocks through REDD+ implementation to help achieve sustainable economic growth. Through the CRGE, the government has set afforestation and reforestation targets to cover 3 million hectares of land by 2030 (FDRE, 2011).

The CRGE is further reinforced by Ethiopia's current five-year national development plan, the Growth and Transformation Plan II (GTP II 2015-2020), which aims to reduce degradation and improve the productivity of natural

¹ As per the World Bank's Atlas method, see <https://datahelpdesk.worldbank.org/knowledgebase/articles/77933-what-is-the-world-bank-atlas-method>

² The CRGE Strategy is organized around four pillars: agriculture; forestry; power; and transport, industrial sectors, and buildings.

resources, including sustainable forest products as well as investments in value-adding and processing (Streck et al., 2015). GTP II aims to put 2 million hectares of natural forests under Participatory Forest Management (PFM) while identifying and demarcating 4.5 million hectares of degraded land for afforestation or reforestation and supporting national tree-planting initiatives to increase the country's forest cover by 4.5% (Leminih & Kassa 2014). In addition to PFM, increasing land under Area Enclosures³ is one of the key strategies expected to contribute towards the efforts of achieving reforestation targets in degraded lands (Kassa et al., 2014). In 2018 Ethiopia launched its National Forest Sector Development Programme (NFSDP), expected to increase national forest cover to 20% and 25% by 2020 and 2025, respectively while improving the contribution of the forestry sector to 8% of GDP as outlined in the GTP II; the NFSDP promotes protection, restoration, and sustainable productive activities in the forest sector. All of these commitments represent opportunities to scale up successful forest landscape restoration activities and promote sustainable management of forests and woodlands to meet national targets and associated international commitments.

Ethiopia has positioned itself as a rising global leader in forest landscape restoration by committing to restoring 15 million hectares of degraded and deforested landscapes -a sixth of its surface area- into productivity by 2030 under the Bonn Challenge. Increasing the number of trees is also expected to contribute to the objectives of the Sustainable Development Goals (SDGs) of ending poverty, promoting prosperity and well-being for all, protecting the environment, and addressing climate change; the Convention on Biological Diversity Aichi Biodiversity Targets; the UNCCD ambition of achieving zero net land degradation (FDRE, 2015a); the objective set forth by the UNFCCC of limiting net greenhouse gas emissions (FDRE, 2015b); and the African (AFR100⁴) and global (Bonn Challenge and New York Declaration on Forests) restoration targets. As a member country, Ethiopia signed and endorsed the Pan African Great Green Wall for the Sahara and Sahel Initiative (GGWSSI) to halt the expansion of desertification to the Sub-Saharan countries and now implementing Action against Desertification Project to address desertification.

2.2. Linkages of FLR with Ethiopia's forest and land-use economy and policies

The role of the forestry sector in the national and local economies in Ethiopia is significant. Aggregated data show the forestry sector's contribution to total GDP is 12.8% in 2012/13 (UNEP, 2016). Of this, forest industries contribution to the GDP is 6.09%. Forest ecosystems contributions to other sectors, particularly agriculture, is valued at 6.77% of GDP. Economically, forests and trees are expected to provide direct benefits such as food, fodder, building materials, marketable goods, income diversification and employment creation. Ethiopia's 2018 forest proclamation links forest functions as central in underpinning livelihood improvement and food security, mainly by increasing and sustaining agricultural production through soil stabilization and enrichment, protection against climatic change, protection of the quality and flow of water systems, and the regulation of water uptake (FDRE, 2018).

In this context, FLR is seen as a cross-sectoral opportunity that will ensure the potential of forest and trees in the landscapes is adequately realized. This is based on the understanding that degradation of the natural resource base threatens livelihoods and ecosystems; hence, reversing the process would, in turn, contribute to increased income, improved livelihoods and poverty reduction. From the environmental and social standpoint, given that agriculture is the country's dominant economic activity, the connection is strong between restoring degraded land and improving agricultural productivity through soil rehabilitation, reducing climate change impacts, protection of the quality and regulation of water systems. It is established knowledge across multiple ministries (FDRE, 2018).

³ The strategy envisages restoration of degraded pastureland and farmlands by converting the lands into area enclosures. The main process involves restoration of degraded lands by allowing them to rest by leaving them to lie fallow for periods of time.

⁴ AFR100 is a country-led effort to bring 100 million hectares of land in Africa into restoration by 2030. Ethiopia is also a member of part of the AFR100. AFR100 recognizes the benefits of landscape restoration to African landscapes: "improved soil fertility, enhanced agricultural productivity and food security, greater availability and improved quality of water resources, reduced desertification, increased biodiversity, green jobs, economic growth, and increased climate change mitigation and resilience". AFR100's platform is expected to accelerate progress towards achieving key commitments including Land Degradation Neutrality and the Paris climate agreement

Over the past few decades, GOE has put several forest and cross-sectoral policies, strategies, proclamations and flagship programmes in place, to enhance socio-economic development and environmental contributions from forest and trees in the landscape. These include the Rural Development Policy and Strategy, the Forest Development, Conservation and Utilization Policy and Strategy (2007), the Federal Forest Law or Proclamation (2018), the Environmental Policy of Ethiopia, the two successive five-year development plans, the CRGE Strategy (2011), and Ethiopia's REDD+ readiness programme, the Growth and Transformation Plan (GTP), Sustainable Land Management Programme (SLM), Agriculture Growth Programme (AGP), and the National Forest Sector Development Programme (NFSDP) (2018). These policy provisions and key programmes and the linkages with FLR practices are presented briefly in the following paragraphs.

Environmental policy (1997): Ethiopia's environmental policy was approved in 1997 to improve the quality of life through sustainable development and sustainable use of natural resources. It also aspires to conserve traditional resource management practices. The policy includes provisions for soil management and sustainable agriculture; forests and tree resource management; and genetic, species and ecosystem diversity conservation and management. These provisions play essential roles in guiding efforts to promote afforestation and reforestation.

Forest Development, Conservation and Utilization Policy and Strategy (2007): The formulation and enactment of this policy reflected the government's commitment to enhancing Ethiopia's forest resource base. The main objective of this policy is to improve the economic contribution of the forest sector and satisfy the demand for forest products by promoting sustainable forest management and utilization practices. The policy also encourages the engagement of the private sector and local communities in managing production and protection forests. The policy introduces an incentive mechanism in the form of reduced land taxes to promote the establishment and development of private and community-owned forests. The policy recognizes the need to certify forest use rights, which is important for enhancing afforestation and reforestation programmes. Furthermore, the policy supports the management of dry forests and woodlands to promote sustainable utilization, conservation and natural regeneration of native trees and shrubs. However, key provisions in the Forest Conservation, Development, Conservation, and Utilization Policy and Strategy were not converted into binding legal articles, nor were there concrete implementation directives.

Forest Development, Conservation and Utilization Proclamation (2018). The Forest Development, Conservation and Utilization Proclamation No 1065/2018 is the most recent national forest law intended to amend shortcomings of the former proclamation 542/2007. The proclamation recognizes three types of forest ownership (i.e. state, private, association and community forests) through which emphasis was given to encourage the participation of local communities in the management of, and sharing of benefits from, State and community forests. Proclamation 1065/2018 also included incentives such as tax exemptions and access to loans upon fulfilling appropriate requirements. This new proclamation also considered all forest ownership to benefit from payments for ecosystem services and forest carbon markets. The proclamation indicates that a follow-up regulation will determine forest development incentives.

The CRGE strategy. The CRGE is Ethiopia's recent green growth development strategy. The plan has identified four pillars, one of which is forestry. It emphasizes the protection and re-establishment of forests, in recognition of the contributions they make to the economy and ecosystem services, including as carbon stocks. The CRGE has set a target to sequester more than 40 million tons of CO₂e, through the afforestation and reforestation of 3 million hectares of land, and the sustainable management of 4 million hectares of forests and woodlands by 2030.

The Growth and Transformation Plan (GTP I 2011-2015). Ethiopia launched the 2011-2015 GTP I to make Ethiopia a middle-income country by 2025. The GTP I envisage that the GDP per capita will grow from USD 378 in 2010 to USD 1271 in 2025. The GTPI stresses the need to strengthen natural resources conservation and management. In line with this, the major forestry sector activities proposed by GTP I include: the rehabilitation and restoration of degraded lands through exclosures; multipurpose tree planting; and the development of management plans for priority forests and tree seed collection and distribution.

The Growth and Transformation Plan (GTP II 2015-2020). GTP II reinforces Ethiopia's commitment to building a green economy by reducing greenhouse gas emissions through enhanced crop and livestock production, which improves food security and income of farmers and pastoralists. Other strategies are natural resource development, forest protection and reforestation programmes which enhance economic and ecological advantages of forests. GTP II aims to put 2 million hectares of natural forest under Participatory Forest Management (PFM) while identifying and demarcating 4.5 million hectares of degraded land for afforestation or reforestation and supporting national tree-planting initiatives to increase national forest cover by 4.5%.

The National REDD+ Programme. REDD+ is embedded in the national CRGE implementation strategy as part of the forestry sector, one of the four pillars in the CRGE. Ethiopia aspires to reduce deforestation and forest degradation by addressing their underlying drivers and immediate causes. Strategic interventions include the sustainable management of existing forests, as well as afforestation and reforestation programmes to create new forests. Ethiopia considers REDD+ to be a promising opportunity and a viable source of sustainable finance for investment in forest management, conservation, and restoration. REDD+ represents a way of enhancing the multiple benefits of forests, including carbon sequestration and biodiversity conservation, watershed management, increased resilience to climate change, improved livelihoods and reduced poverty.

The National Forest Sector Development Programme (NFSDP) (2018-2028). Developed by the EFCCC, the NFSDP will be instrumental in expanding the contribution of the forest sector to national economic targets. The NFSDP emphasizes protecting existing natural forests while also promoting the restoration of degraded and deforested landscapes by farmers and forest-dependent communities as well as other stakeholders in the forestry sector. Successful implementation of the NFSDP is expected to increase the national forest cover to 20% and 25% by 2020 and 2025, respectively while improving the contribution of the forestry sector to 8% of GDP as outlined in the GTP II. Wood fuel accounts for more than 80% of household energy supply in Ethiopia and is particularly important in rural areas. Beyond wood fuel, forests provide other timber products and a host of valuable non-timber products, including livestock fodder, coffee and honey. NFSDP aims to develop sustainable management of Ethiopia's forests and tree resources by 2025 that contributes to self-sufficiency in forest products and enhanced environmental services.

Sustainable Land Management Programme (SLMP-I)-2008-2013: The Sustainable Land Management Programme (SLMP) was initiated in 2008 with funding from the World Bank to address two of Ethiopia's most significant developmental and environmental problems: agricultural productivity and land degradation. The prime objective of the Sustainable Land Management Project (SLMP-I) has been set to reduce land degradation in agricultural landscapes and to improve the agricultural productivity of smallholder farmers. The main project components were watershed management (scaling up best practices), land certification (strengthening land tenure) and project management (knowledge management).

Sustainable Land Management Project (SLMP-II)-2013-2019: The objective of the Second Phase of the SLMP is to reduce land degradation and improve land productivity in selected watersheds in targeted regions in Ethiopia. Among the core project components include:

1. Integrated watershed and landscape management (scaling up and adoption of best practices)
2. Institutional strengthening, capacity development and knowledge generation and management to complement the on-the-ground activities.
3. Strengthening the tenure security of smallholder farmers in the project area to increase their motivation to adopt sustainable land and water management practices on communal and individual land.

Resilient Landscape & Livelihood Programme (RLLP) 2019-2025: The RLLP builds on the successes of the SLMP phase 1 and 2. It seeks to improve livelihoods, climate resilience, carbon storage, and land productivity in vulnerable rural major watersheds in selected localities in six regions of the country, benefiting roughly 645,000 rural households. It comprises four components, namely (1) investment in green infrastructure for resilient watersheds, (2) strengthening institutions and information: and information modernization, (3) land administration

and use, and (4) project management and monitoring. Measures of success include hectares under SLM practices and areas restored (World Bank, 2018).

The Agriculture Growth Programme (AGP). AGP is a multifaceted investment programme supporting agricultural productivity and commercialization focusing on high agricultural potential areas. The AGP's primary objective is to increase agricultural productivity and market access for key crop and livestock products in targeted woredas, with increased participation of women and youth. It has two main components: Agricultural production and commercialization and Small-scale rural infrastructure development and management.

The impact of these policies in the implementation of FLR strategies in the two selected woredas will be analysed in the following section.

Part II. Restoration diagnostic in Sodo Guragie and Meket woredas

3. Overview of Sodo Guragie woreda



Sodo woreda. Photo courtesy of Adriana Vidal/IUCN

Sodo Guragie is located, within Guragie zone, in the Southern Nations, Nationalities, and Peoples' Region (SNNPR) of Ethiopia. Sodo lies between 8°26'5.6''76''N and 38°36''43.56''E, bordered on the south by Meskane Woreda, and on the west, north and east by the Oromia Regional State. Sodo is comprised of 59 kebeles⁵ (54 rural and 5 urban), and the administrative centre is the town of Buee. Infrastructure in the woreda is poorly developed; only one asphalt road crosses through the woreda, while all rural kebeles are connected through dry weather feeder roads. The urban towns of Buee, Kella, Suten and Tiya towns have access to electricity, with the remaining rural kebeles entirely depend on biomass energy (firewood and animal dung) for domestic fuel and lighting. Telephone landlines and cell phone facilities in the district are not reliable, as in most rural area there is not enough network coverage.

⁵ There are five levels of government in Ethiopia through which decentralization materializes: Federal, Regions, Zones, Woredas and Kebeles. Kebeles are the lowest administrative unit. Kebeles are often organized into development teams and further divided into 'Cells' for the purposes of communication and organizing development activities.

3.1. Biophysical profile

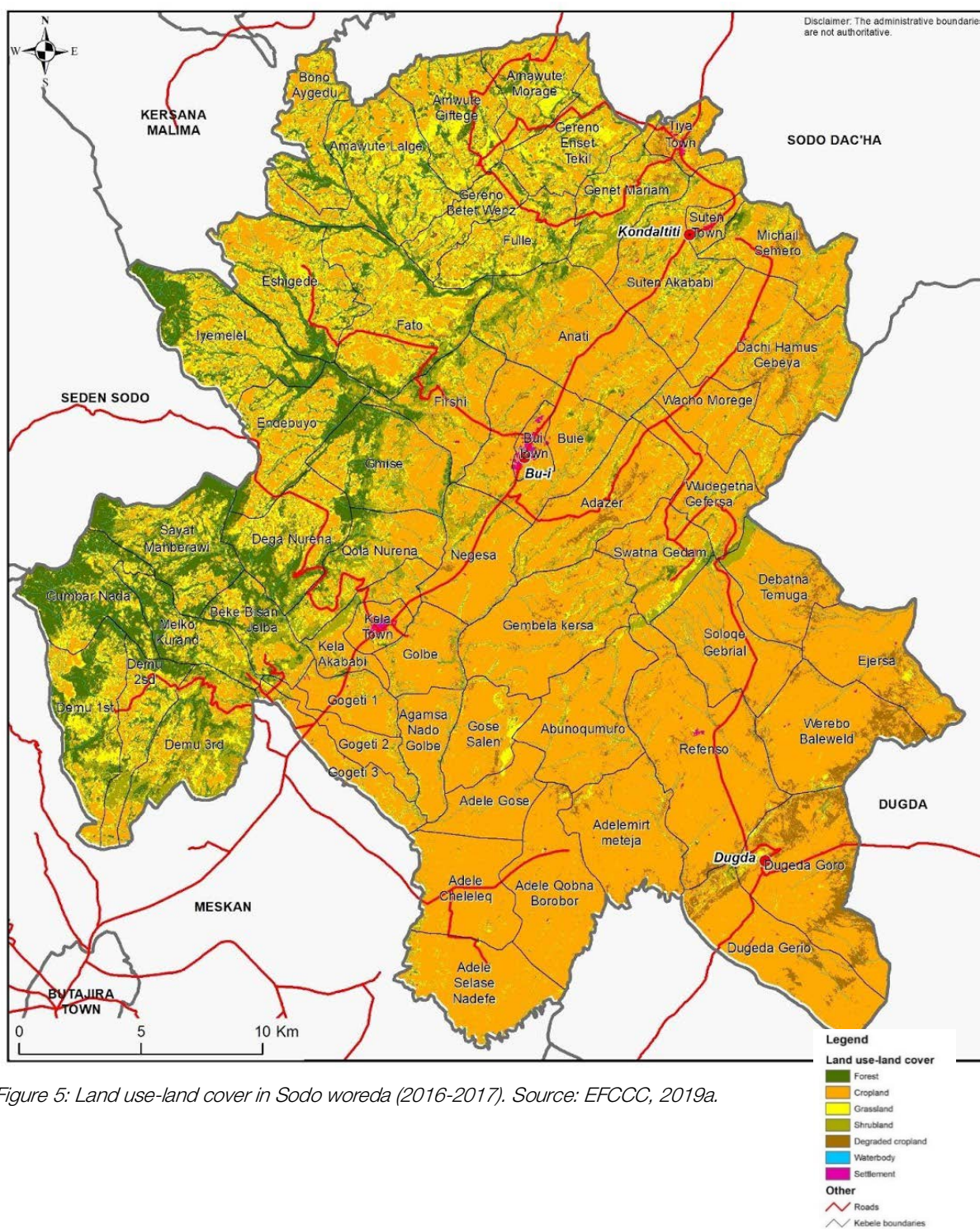
Agro-climatically, Sodo is classified roughly into three agro-ecologies; the *Woina dega* (midland-50%), the *Dega* (highland – 25%) and lowland or arid (25%)⁶. Average daily temperatures in these three classifications range between 10°C to 25°C. Altitude in Sodo ranges from 1400-3600 masl. Gentle slopes characterize the topography of the area, to rugged slopes in the midlands and undulating plains and hills in the highland, with flat plains (40%), slopes (30%), mountainous (7%) and rugged terrain (3%). The soil in Sodo is mostly sandy loam (60%), black (22%) and red (12%) types. A predominantly sandy loam soil type also means escarpment in the woreda is vulnerable to soil erosion and land degradation, with corresponding reduced productivity of the land. Current land degradation is a result of extensive human activities and related biophysical factors. Annual rainfall ranges from 800–1200 mm, historically characterized by erratic nature, uneven distribution, and extreme unreliability. Sodo has two rainy seasons: the main rainy season (*Kiremt*), which lasts from mid-June to mid- September and the short rainy season (*Belg*) from February to April. The contribution of the short rainy season to crop production has gradually diminished due to declining trends both in duration (short) and intensity (low). While the moisture from the *belg* rainy season still assists farmers during the preparation of soil for farming, the lack of enough *belg* rain is reportedly a challenge to FLR activities such as replanting activities in plantation sites.

3.2. Socioeconomic profile

The total population of Sodo is estimated at 206,816 inhabitants. Based on the Central Statistics Authority (CSA), Sodo is among the most densely populated woredas in the country, with 326 people per km² of land, well above the national average (127), SNNPR (141) and Gurage zone (294) averages, respectively. About 90% of the woreda inhabitants live in rural areas. Average family size in the woreda is 5 people per household.

About 85% of the people in the candidate landscape depend on crop-livestock mixed farming systems as a primary source of their livelihoods. Agriculture is predominantly rain-fed, with small-scale irrigation by nearly 25% of farmers, who reside along the Meki river and produce vegetables mainly for local markets. The majority of landholdings in Sodo range from less than 2 hectares, with 53.1% of households owning 0.5-2 hectares, 25% of households own less than 0.5 hectares, and additional 7.4% of households reportedly landless. Crop and livestock production are highly integrated as a means to generate income, insure against environmental variability and risks and meet household consumption needs. Maize, wheat, and teff are the major annual crops grown while enset is a perennial staple crop. Outputs from crops and livestock are used mainly for household consumption, with some outputs used for markets to obtain cash income. Wheat, teff and maize are used as the main cash crops. At the same time, the sale of eucalyptus trees, livestock trade (from animal fattening) and off-farm activities provide some additional sources of income for communities. Further, like other parts of Gurage zone, rural-urban migration is a popular livelihood strategy in Sodo whereby rural youth migrate to Addis Ababa and neighbouring towns in search of employment. According to the Woreda Department of Early Warning and Disaster Risk, Sodo is generally considered food secure, with periods of transient food insecurity or problems of food shortages caused by natural disasters such as frequent droughts, frost or landslides. The most recent drought was reported in 2015/16 (see crisis section). During periods of food shortages, eight to ten kebeles could fall under the Woreda's emergency food assistance.

⁶ Based on data collected from Woreda offices, Sodo has two agro-ecologies (highland (*Dega*) and Midland (*Woina dega*)). However, The Institutional Strengthening for Forest Sector Development Project (ISFSDP) and World Vision indicated there's a third category: lowland agroecology in Sodo. ISFSDP is a joint project by UNDP and EFCCC that aims to 'enhance the capacity of the forest sector to fulfil its mandate at all levels; increase forest coverage that boosts carbon sequestration and other environmental services as well as the promotion of sustainable supply of wood and wood products'. The Government of Ethiopia, UNDP and Norway are providing financing for the project. More information available at <http://bit.ly/2jQMNg1>



	Cropland	Grassland	Shrubland	Forest land	Degraded cropland	Waterbody	Settlement	Total area
Area (ha)	58,900	12,500	8,300	8,300	4,000	1,500	200	93,800
(%)	62.8%	13.4%	8.9%	8.9%	4.3%	1.6%	0.3%	100%

Table 1: Land use land cover in Sodo (2016-2017). Source: EFCCC, 2019a.

Trees and land use land cover in Sodo. Forest land (natural and secondary forests as well as woodlots and plantations)⁷, is found predominantly in communal areas managed through area exclosures. There are no protected areas controlled by the government and the forest managed by government institutions is reduced to areas around public buildings (schools, churches, government offices) and roadsides. Shrublands have a canopy cover of approximately 10% or combined cover of woody perennial plants $\leq 10\%$ 2m in height at maturity in situ. The Woreda office considers shrublands as having a high potential of reforestation. Grasslands include natural grasslands and pasture-lands. Most woodlots are located next to croplands and a small percentage of woodlots are located in communal lands. There is no data available on the total area and location of woodlots in the district. See Figure 5 and Table 1 for information on land use land cover in the woreda.

3.3. Restoration diagnostic results - Sodo

GREEN= IN PLACE

YELLOW= PARTLY IN PLACE

RED= NOT IN PLACE

Theme	Feature	Key success factor	Response
Motivate	a. Benefits	Restoration generates economic benefits	Yes
		Restoration generates social benefits	Yes
		Restoration generates environmental benefits	Yes
	b. Awareness	Benefits of restoration are publicly communicated	Partially
		Opportunities for restoration are identified	Partially
	c. Crisis events	Crisis events are leveraged	Yes
	d. Legal requirements	Law requiring restoration exists	No
		Law requiring restoration is broadly understood and enforced	No
Enable	e. Ecological conditions	Soil, water, climate, and fire conditions are suitable for restoration	Yes
		Plants and animals that can impede restoration are absent	No
		Native seeds, seedlings, or sources populations are readily available	Yes
	f. Market conditions	Competing demands (e.g., food, fuel) for degraded forestlands are declining	Partially
		Value chains for products from restored areas exists	Partially
		Land and natural resource tenure are secure	Partially
	g. Policy conditions	Policies affecting restoration are aligned and streamlined	Partially
		Restrictions on clearing remaining natural forests exist	Partially
		Forest clearing restrictions are enforced	Partially
	h. Social conditions	Local people are empowered to make decisions about restoration	Partially
		Local people are able to benefit from restoration	Partially
	i. Institutional conditions	Roles and responsibilities for restoration are clearly defined	Partially
Implement	j. Leadership	National and/or local restoration champions exist	Yes
		Sustained political commitment exists	Yes
	k. Knowledge	Restoration "know how" relevant to candidate landscapes exist	No
		Restoration "know how" transferred via peers or extension services	Partially
	l. Technical design	Restoration design is technically grounded and climate resilient	Partially
		Restoration limits "leakage"	Partially
	m. Finance and incentives	Positive incentives and funds for restoration outweigh negative incentives	No
		Incentives and funds are readily accessible	No
	n. Feedback	Effective performance monitoring and evaluation system is in place	Partially
		Early wins are communicated	No

⁷ In February 2015 Ethiopia adopted a new forest definition as follows: 'Land spanning at least 0.5 ha covered by trees (including bamboo), attaining a height of at least 2 meters and a canopy cover of at least 20% or trees with the potential to reach these thresholds in situ in due course' (EFCCC, 2015). Note also that this is called *technical forest definition* mainly used for mapping, measuring and reporting. The legal forest definition is the one defined on the Federal Forest Development, Conservation and Utilization Proclamation (1065/2018) that is more generic in context and defined as 'Forest means trees, plants, and other biodiversity accumulation at and in the surrounding of forestlands, roadsides, riverside, farm and grazing lands as well as residential areas or parks that grow naturally or developed in some other ways'.

4. Overview of Meket woreda



Meket woreda. Photo courtesy of Adriana Vidal/IUCN

Meket is one of the woredas in the western side of North Wollo Zone of the Amhara National Regional State (ANRS). It lies between latitudes $11^{\circ} 40' 30''\text{N}$ & $12^{\circ} 1' 30''\text{N}$ and longitudes $38^{\circ} 20' 0''\text{E}$ & $39^{\circ} 0' 0''\text{E}$. Meket is bordered on the south by Wadla and Dawunt Woredas, on the west by the Debub Gondar Zone, on the northwest by Bugna, on the north by Lasta, on the northeast by Gidan, and on the east by Guba Lafto Woredas. Meket woreda has 36 kebeles⁸; Felkait and Gergera are urban, while the other 34 are rural kebeles. Road infrastructure in the woreda is relatively weak. The administrative centre Filakit lies on the main Debre Tabor - Nefas Mewcha highway (also known as the Chinese road) has an all-year link to the Zonal capital of Weldiya. An asphalt road connects 12 kebeles with the woreda capital-Filakit. In comparison, 17 kebeles are connected only through a dry-weather-road, and the remaining seven kebeles do not have any road that connects with the woreda capital.

4.1. Biophysical profile

Meket lies within the North Wollo Zone, which is mountainous and characterized by steep slopes that are unsuitable for agriculture and with over 45% of the land classified as degraded and unusable. Meket forms part of the northern Ethiopian highlands and characterized by a degraded landscape of rugged terrain and high ranges between the valleys and plateaus. Meket extends from the divide between the Tekezé and Bashilo watersheds northwards, with elevation gradients peaking from over 3000 meters above sea level along the eastern part of its southern border to

⁸ Kebeles are the lowest levels of government/administrative units. Under the current government system, Kebeles are often organized into development teams and further divided into 'Cells' for the purposes of communication and organizing development activities.

1300 at the northwesternmost point. River systems which have their source in the woreda or drain through include Gilgel tekeze, Deremo, Tota bahir, Koka, Zoga, Voyeb (densana buraka), Zita (sebat abar). Meket can be roughly classified into three agro-ecologies or climatic zones; the *Dega* (highland) zone above 2,400m, representing 22% of the landscape; the *Woina dega* (midland) zone, ranges from 1,800-2,400m, covering roughly 65 % of the woreda, and the *Kola* (lowland) zone, below 1,800m covers 13% of the woreda. Rainfall is erratic, which often causes recurrent droughts causing food shortages. Annual rainfall varies considerably based on the climatic zone from the lowest (500-700 mm) to the highest (2000 mm), with average rainfall ranging 900-1000 mm. The mean annual temperature of the area varies from 7°C to 28 °C.

4.2. Socioeconomic profile

According to the Population Department of the Meket woreda Finance and Economic Development Office, the total population of the candidate landscape is estimated at 217,000, with 0.00015 inhabitants per km² of land, which is low and the majority of inhabitants (88%) live in rural areas. Of the total households in the candidate landscape, 89% are rural, with an average household size of 5 people per household and small sizes of landholding, averaging at 0.75 hectares per household. About 98% of the people in the candidate landscape depend on the low input/low output agricultural and mixed crop-livestock production system as a primary source of livelihood, while nearly 2% practice pastoralism exclusively. Crop and livestock productions are highly integrated as a means to generate income, cope up with environmental risks and meet household consumption needs. At the same time, the sale of timber and wood from eucalyptus trees provides an additional source of income. Agriculture is characterized by heavy reliance on erratic rainfall, unsustainable practices, and labour-intensive with limited to no mechanization. The main food crops grown in the *woreda* include field peas, barley, teff, horsebean, sorghum, and lentils. The mountainous and steep slope topography combined with severe land degradation, make a considerable share of the landscape unsuitable for agriculture, while also severely limiting cultivable land.

Meket, as well as the other seven rural woredas of this Zone, has been grouped amongst the 48 woredas identified as the most drought-prone and food insecure in the Amhara Region. Data from the Woreda Office of Agriculture indicates that nearly 30% of the population in the woreda is enrolled in the Productive Safety Net Programme (PSNP) as they are under chronic food insecurity. Those not enrolled under PSNP are vulnerable to natural shocks, including droughts and often assisted by emergency relief system. Watershed-based land restoration and natural resources management are considered by the various woreda offices as one of the strategies to combat land degradation, increasing droughts and improve crop yields.

Trees and land use land cover in Meket

Forest land (natural, secondary forests and woodlots) is found predominantly in communal areas managed through area exclosures. There are no protected areas managed by the government, and the state forest is reduced to areas around public buildings (schools, churches, government offices) and roadsides. Shrublands have a canopy cover =10% or combined cover of woody perennial plants ≤10%, 2m in height at maturity in situ. The Woreda office considers shrublands with potential of restoring through reforestation. Grasslands, on the other hand, include both natural grasslands and pasture-lands. Woodlots are heavily present in private lands next to croplands, and a small percentage of woodlots can be located in communal lands. However, there is no data available on the total area of woodlots in the district nor percentages per land-use type. In Meket, woodlots are heavily present in private lands, mainly concentrated along the main asphalt road. See Figure 6 and Table 2 for information on land use land cover in the woreda.

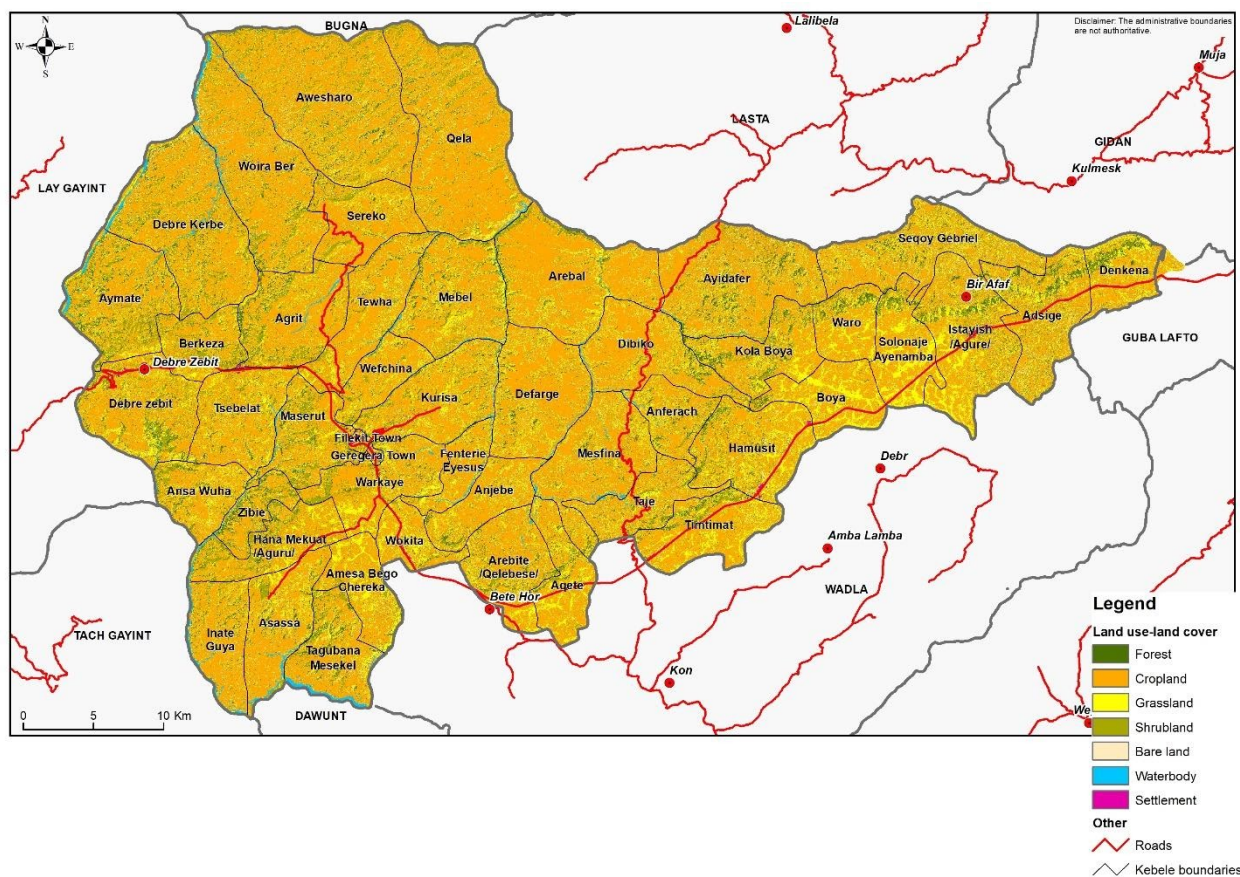


Figure 6: Land use-land cover in Meket (2016-2017). Source: EFCCC, 2019a.

	Cropland	Grassland	Shrubland	Forest	Bare land	Waterbody	Settlement	Total area
Area(ha)	120,500	29,600	23,300	9,300	9,200	1,500	300	193,700
(%)	62.2%	15.3%	12%	4.8%	4.8%	0.8%	0.1%	100%

Table 2: Land use land cover in Meket (2016-2017). Source: EFCCC, 2019b⁹

4.3. Restoration diagnostic results - Meket

GREEN= IN PLACE

YELLOW= PARTLY IN PLACE

RED= NOT IN PLACE

Theme	Feature	Key success factor	Response
Motivate	a. Benefits	Restoration generates economic benefits	Yes
		Restoration generates social benefits	Yes
		Restoration generates environmental benefits	Partially
	b. Awareness	Benefits of restoration are publicly communicated	No
		Opportunities for restoration are identified	Partially
	c. Crisis events	Crisis events are leveraged	Yes
	d. Legal requirements	Law requiring restoration exists	Yes
		Law requiring restoration is broadly understood and enforced	No

⁹ The Meket woreda LULC data should be taken with approximation; various conflicting numbers were obtained from woreda offices and reports particularly on total area of the woreda, share of cultivated area and forest land, etc.

Enable	e. Ecological conditions	Soil, water, climate, and fire conditions are suitable for restoration	Partially
		Plants and animals that can impede restoration are absent	No
		Native seeds, seedlings, or sources populations are readily available	Partially
	f. Market conditions	Competing demands (e.g., food, fuel) for degraded forestlands are declining	Partially
		Value chains for products from restored areas exists	No
	g. Policy conditions	Land and natural resource tenure are secure	Partially
		Policies affecting restoration are aligned and streamlined	Partially
		Restrictions on clearing remaining natural forests exist	Yes
		Forest clearing restrictions are enforced	no
	h. Social conditions	Local people are empowered to make decisions about restoration	Partially
Local people are able to benefit from restoration		partially	
i. Institutional conditions	Roles and responsibilities for restoration are clearly defined	Partially	
	Effective institutional coordination is in place	Partially	
Implement	j. Leadership	National and/or local restoration champions exist	Partially
		Sustained political commitment exists	Yes
	k. Knowledge	Restoration "know how" relevant to candidate landscapes exist	Partially
		Restoration "know how" transferred via peers or extension services	Partially
	l. Technical design	Restoration design is technically grounded and climate resilient	Partially
		Restoration limits "leakage"	Partially
	m. Finance and incentives	Positive incentives and funds for restoration outweigh negative incentives	No
		Incentives and funds are readily accessible	No
	n. Feedback	Effective performance monitoring and evaluation system is in place	Partially
		Early wins are communicated	Partially

5. Analysis of key success factors for FLR in Sodo and Meket

5.1. Motivate

a. Benefits

Economic benefits

FLR is expected to yield economic benefits related to the status quo land use (in place)

Shared diagnostic

The role of land restoration in poverty reduction and food security is well recognized at the national policy level. Economically, forests and trees provide direct benefits such as food, fodder, building materials, marketable goods, income diversification and employment creation. The Federal Forest Development, Conservation and Utilization Proclamation (No 1065/2018) links forest functions as central in underpinning livelihood improvement and food security, mainly by increasing and sustaining agricultural production through soil stabilization and enrichment, protection against climatic change, protection of the quality and flow of water systems, regulation of water uptake.

Economic benefits from FLR-related activities vary depending on the activities that are allowed under different land tenure regimes:

State forests: Participatory Forest Management (PFM) is considered as the most common institutional framework to improve management of state-owned natural forests. Early lessons from PFM suggest economic returns to communities under PFM remained low because bylaws corresponded with reduced access by communities who previously had free access to all types of forests products. For instance, under PFMs in SNNPR, the direct financial benefit is limited to the use of dead wood and income from Non-Timber Forest Products (NTFPs)¹⁰ such as forest coffee, spices and honey (SNNP, 2007). There are prohibitions of timber harvesting for commercial purposes as well as restrictions on harvesting of indigenous trees unless permitted, even from private land (FDRE 2018). These restrictions can change in the coming years though as the new forest proclamation allows the use of protected forests according to a sustainable forest management plan, including potential use for sustainable logging. Also, the group of beneficiaries depends on historic user rights formalization of forest access and use, and with limited participation of women in the process (Techel & Lemenih, 2017).

Communal areas (degraded grasslands, deforested areas and shrubland/degraded forest): Area Enclosure is considered as the most common institutional framework to improve management of degraded lands in communal areas mainly on sloppy areas or upper catchments of watersheds, such as pasture/grazing lands, deforested areas and shrublands through communal management. In both Sodo and Meket, most remnant degraded secondary forests and shrublands are found in communal lands, and although restoration of degraded forest can generate tangible economic benefits, most current practices of FLR in communal lands indicate that conservation objectives appear to have dominated the discourse.

Community efforts to restore degraded areas for environmental purposes need to be undertaken in parallel with necessary restoration activities with a productive focus that will generate income to the farmers. By addressing

¹⁰ The Ethiopia Forest Sector Review considers non-timber forest products to include forest coffee; honey; beeswax; spices; wild food; traditional pharmaceutical products; gum and incense; bamboo; fodder; fuelwood (firewood and charcoal); and farm implements and climbers (EFCCC 2017).

both types of needs through an integrated approach to restoration, it is more feasible to manage realistic community expectations and a timeline of when economic benefits could be reaped.

Many enclosure areas in Ethiopia, mainly arid and semi-arid areas have plenty of demonstrated examples of how restoration can improve lands and livelihoods. In Tigray, Amhara, Oromia and SNNPR in more than ten years, communities contributed up to 20 – 60 days per year of labour to soil and water conservation and native-tree planting to restore extremely degraded landscapes with the expectation of benefit from NTFP to be produced by the forest. However, as FLR can be a multiyear process, many of the NTFPs took years to materialize as it takes time for ecosystem functionality to recover after being restored (Denier et al 2015). Many of the enclosure areas are not under active management to be restored and to generate economic benefits as well as environmental, which is a missed opportunity to enhance tangible and short-term benefits for the community. Economic benefits that take long in unfolding could be a deterrent for farmers to wait and invest in FLR practices.

Expectation regarding the degree of economic benefits also needs to be managed adequately. For example, in the planning stages of the Humbo project in SNNPR (World Bank, n.d), farmers were reportedly made to develop high expectations of economic benefits. Beyond NTFPs (such as grass) from the established area enclosures, they had to wait nearly four years before starting to receive carbon revenue (Biryahwaho et al. 2012). Even once payments began to flow, prices per ton of carbon were below expectations, and the decision-making process on the utilization of the carbon revenues arguably occurred with little consideration to the livelihood priorities of some farmers, reportedly undermining further participation (Murugan & Israel 2017).

Past evidence of Natural Resources Management (NRM) interventions shown that priority issues often selected by farmers, although linked to land restoration, were more focused on immediate livelihood concerns, such as water shortage and lack of livestock feed. In contrast, issues selected by decision-makers and woreda level implementers reflected longer-term concerns with landscape-wide soil and water management and restoration (Cullen et al. 2014). Priorities should be given to developing restoration strategies at the landscape level that strike the balance of different needs and enhance complementarities of conservation objectives with increasing land productivity. There are reported cases whereby planting economically important species as part of forest plantations (under communal areas) has improved incomes for many households (Sandewall et al. 2014, Weldesemaet 2015).

EFCCC/UNDP's ISFSDP projects in Sodo and Meket signal a comprehensive approach to FLR intending to establish up-to-date tree nursery sites, large-scale plantation, rehabilitation of degraded land to make it functional for economic benefit and capacity building to contribute in poverty reduction. In addition to area enclosures, agroforestry practices that combine fodder tree species (e.g., *Acacia*, *Cytisus proliferus* – tree Lucerne, *Sesbania*) and terraces/bunds could play a significant role in restoring degraded communal grasslands.

Private land:

- **Cropland-** Both at the federal and regional level, the importance of agroforestry is highly recognized in achieving the agriculture objectives of CRGE. The agriculture pillar aims to improve “crop and livestock practices for higher food security and farmer income while reducing emissions.” Agro-forestry -or trees in agricultural production systems- can help boost crop and livestock productivity by reducing soil erosion, improving soil fertility and soil moisture, and providing fodder for livestock feed, including the provision of wood products for various needs. Fruit trees may also support income diversification. SNNPR is estimated to have an estimated 7,705,000 hectares of land with potential for forest landscape restoration (73% of SNNPR's total area). In contrast, Amhara region is estimated to have a combined 13,594,000 hectares of land (88% of the region's total area) with potential for forest landscape restoration (MEFCCC, 2018). Most notably, SNNPR already has many successful examples of implemented agroforestry systems, and these examples can likely be applied in Sodo and Meket. For instance, apple/bamboo-based agroforestry practices at Teticha ward, Hula district of Sidama zone has shown that farmers played a significant role in promoting plant diversity through the integration of woody species in agricultural landscapes. Moreover, the apple component of the agroforestry systems reportedly contributed to 60% of the households' annual

income (Asfaw et al. 2015). This widespread practice indicates the significant contribution of integrating fruit trees in FLR not only to household food security but also to support the cash needs of households.

- **Woodlots/plantations and home garden¹¹**- includes small-scale production of wood (e.g. wood fuel or timber for construction) and non-wood products (e.g. fruits, forage) for domestic and commercial uses on both communal and private land. Farmers often allocate a portion of their land for home gardens in proximity to their homesteads. These gardens commonly include planting *Cordia africana* (wanza) with coffee and “Enset” (*Ensete ventricosum* or false banana) with coffee, which is traditionally practised agroforestry systems. This practice maintains indigenous trees or encourages planting trees on farmlands, grazing fields, and around households. Areas of future agroforestry exploration could include the promotion of mixed-species woodlots (e.g., *Eucalyptus*, *Cupressus*, *Grevillea*, *Cordia*) or plantations of high-value orchard species in home gardens (e.g., mango, avocado, papaya, apple), fodder species (e.g., *Sesbania*), and medicinal trees and forbs for home gardens (e.g., *Olia*). Traditionally farmers, particularly in Meket, maintain indigenous trees or plant trees on farmlands, grazing fields, around home gardens. During field visits, a useful example of livelihood-based restoration interventions was observed in a farmer’s plot in Meket. The farmland combined vegetables (cabbage, carrot, garlic), annual crop and fruit (apples) farming with trees (eucalyptus) and other cash crops (‘*Gesho*’) farming at the farm boundaries. Promoting similar practices could increase the economic benefits generated from FLR. Where farms size is small, tree planting on near and around farms may be perceived as competing with food crops. However, promoting similar innovative practices that maximize opportunities through mixed-species productive trees and cash food crops could mitigate the challenges of declining farms size, the increasing rural population and associated landlessness. Areas of exploration include the promotion of mixed-species trees (e.g., *Eucalyptus*, *Cupressus*, *Grevillea*, *Cordia*) for woodlots and Plantation of high-value NTFP tree in home garden– fruits (e.g., mango, avocado, papaya, apple), fodder (e.g., *Sesbania*), and medicinal (e.g., *Olia*) trees for home gardens.

At the national level, given Ethiopia has only two native bamboo species (*Oxytenanthera abyssinica* (lowland bamboo) and *Arundinaria alpina* (highland bamboo), the Ethiopian Environment and Forest Research Institute (EEFRI) are carrying out pilots on the prospects of introduced bamboo species in the country as an alternative for income generation in woodlots, farmlands and homesteads. Similar efforts were carried out through the SLMP II, where INBAR, the World Bank and the GOE are partnering to introduce several new species of bamboo in selected landscapes. In Sodo, with additional ecological adaptations and market development, bamboo can be an ecologically and economically competitive with potential for improved livelihoods. Part of ISFSDP’s activities in the district is introducing bamboo in the area, and such efforts will be worth exploring.

Aside from income generated from individually owned woodlots (mainly eucalyptus), evidence of direct income generation opportunities due to forest landscape restoration limitedly documented. Lessons from other parts of the country shown that communities continue to engage in landscape restoration initiatives with anticipation of economic benefits (both in shorter and longer-terms). This attitude indicates communicating the benefits of restoration in terms relevant to all stakeholders is thus of critical importance, including distinguishing private economic benefits with public economic benefits.

At the woreda level PFM schemes are non-existent as the most tree areas are located around public structures such as schools and churches who are directly responsible for their management. Moreover, no state forest enterprises exist in the woreda. Most secondary natural vegetation and tree cover in Sodo is found in communal areas managed through area exclosures which are not meant to be used for economic gains. Conversely, almost all major forest types in Meket are plantation forests under state, communal or private management regimes.

¹¹ Home gardens are “intimate, multi-storey combinations of various trees and crops, sometimes in association with domestic animals, around homesteads” (Kumar and Nair, 2004).

Aside from income generated from individually owned woodlots (mainly eucalyptus), evidence of existing direct income generation due to FLR is limitedly documented in the woredas. Stakeholders have different definitions/understandings/expectations of benefits from FLR, which is reaffirmed by the fact that economic benefits of restoration could vary considerably depending on the type of FLR option and specific land tenure regime. Communicating the benefits of FLR in terms relevant to all stakeholders is thus of critical importance, including distinguishing private economic benefits with public economic benefits. See Table 3 for examples of FLR economic benefits that could be capitalized on and further communicated to stakeholders.

Land-use type/Tenure regime	Management options	Types of economic benefits	
		Private economic benefits	Public economic benefits
State forest (legally protected)	PFM through bylaws	Limited to NTFP (grass, dead wood, honey, etc.)	Ecosystem services (carbon, soil protection, water)
Communal areas (degraded grassland, deforested land, shrubland)	Area enclosure, terraces/bunds, tree planting (timber tree and/or fuelwood species); managed or protected through community bylaws	Limited to NTFP (grass, deadwood, honey etc.)	Ecosystem services (carbon, soil protection, water); rarely quantified
Private cropland and private woodlot/plantations	Agroforestry practices, multi-species woodlots, integration of woody species in agricultural landscapes (fodder tree species on the bunds, fuelwood species, nitrogen-fixing tree species)	Sale of timber and/or fuelwood tree species (e.g., <i>Eucalyptus</i> , <i>Cupressus</i> , <i>Grevillea</i> , <i>Cordia</i>)	Ecosystem services

Table 3: Types of public and private economic benefits of FLR based on land use type and tenure regime – Sodo and Meket woredas

Complementary to this diagnostic, a cost-benefit analysis was developed to identify the value of FLR activities in terms of direct benefits (from the sales of the timber and non-timber forest products) and indirect benefits (such as carbon sequestration, soil erosion protection and water regulation) to the woredas. Activities which benefits were analysed included agroforestry, mixed tree species in home gardens, improved agricultural practices, natural vegetation through area enclosures and enclosure with enriching planting. Potential sources for financing these restoration interventions and its gaps were also identified. A summary of this cost-benefit analysis can be found in Annex 1 of this document.

Social and environmental benefits

Restoring landscapes is expected to yield social, cultural, and/or political benefits (in place)

Restoring landscapes is expected to generate any environmental benefits (in place in Sodo, partly in place in Meket)

Shared diagnostic

Land degradation characterizes Sodo; escarpment in the woreda is vulnerable to soil erosion and declining soil fertility. Landslides and floods are common. Meket also suffers from degradation. The woreda has mountainous landscapes with steep slopes that are vulnerable to soil erosion and declining soil fertility, with a considerable share of this landscape already unsuitable for agriculture. FLR can contribute significantly through erosion control, protection of natural floods and landslides, improve water infiltration, biodiversity conservation and carbon sequestration.

FLR is expected to have multiple ecological and social outcomes. It can improve and sustain soil and water quality, conserve biodiversity and contribute to climate change mitigation and adaptation (Mekuria 2013). Ethiopia's current

policy landscape increasingly treats forest and landscape restoration as a cross-sectoral opportunity, where FLR is effectively linked to improved livelihoods and food security. Given agriculture is the country's dominant economy, the connection between restoring degraded land and improving agricultural productivity through soil rehabilitation, reducing climate impacts, protection of the quality and regulation of water systems is established across multiple sectors (FDRE 2018). However, stakeholders at the woreda level in Meket notably identified the challenge of interiorizing the belief of these benefits for communities.

Awareness

Benefits of restoration are publicly communicated (partially in place in Sodo, not in place in Meket)

Opportunities for restoration are identified (partially in place)

Shared diagnostic

Current FLR activities in both woredas mostly occur in area exclosures and with purposes of watershed protection, communal land management, gully rehabilitation and management and construction of physical soil and water conservation structures such as terraces and bunds. In this context, substantial efforts are made to raise awareness on the importance of landscape restoration through an annual community mass mobilization campaigns whereby restoration plans are discussed between the woreda officers and communities. Communities allocate 20-40 voluntary days per year of donated labour to implement those plans. The Natural Resources Management (NRM) department within the woredas' Office of Agricultural and Natural Resource Development (WOANRD) leads the process through the regular budget. Overall, it is observed that communities have a positive attitude to these communal level landscape restoration activities. Awareness-raising efforts in certain instances also include events whereby selected 'champion' farmers share their experiences.

However, interviews at the local level revealed that although stakeholders value the importance of restoring degraded land, the concept of FLR as an integral approach is not clearly understood both by experts and communities alike across the board, and the degree of awareness is highly variable. Benefits of restoration are most frequently publicly communicated through sensitization workshops and restoration is often carried out in one-off campaigns focused on satisfying quotas in communal or state land, with less attention to future maintenance and sustainability of restoration actions. Awareness-raising processes often consist of communities attending meetings organized by the kebele council where plans that originated in the woreda are presented to them for discussion. Awareness-raising campaigns are usually deployed as a way of mobilizing farmers to implement specific activities rather than an educational or capacity development exercise to expand restoration in private and productive land. Although extension services and established structures at the kebele and community level exist to facilitate awareness creation, stakeholders consider that these structures are not deployed effectively and that much more could be done to generate a compelling impact and influence communities' behaviour. Successful awareness generation is closely related to the capacity, knowledge and experience from woreda officials and personnel in delivering effective stakeholder consultation processes, tailoring locally planning or utilizing other innovative mechanisms to enhance awareness and build capacity on techniques, principles and multiple benefits of FLR. However, woreda office representatives note the lack of resources to effectively communicate landscape restoration techniques and tools to carry out this critical work – the lack of a vehicle to visit around the woreda was mentioned as a limitation.

A more comprehensive approach to awareness can help address this, including providing more resources and capacity to woreda personnel on FLR including communication and capacity development strategies for equipping kebeles and communities with the requisite knowledge and skills. This, coupled with a system of incentives and accountability that takes a landscape approach (i.e. beyond numbers of trees planted), could result in adequate awareness and motivation for FLR in woredas and communities. Engaging other stakeholders such as school teachers and instructors, religious leaders, local media, and others is also key. Awareness of the landscape needs of communities and private farmers needs to be built on factual information and improved capacity, however tangible economic incentives and feedbacks also need to be in place to ensure that restoration interventions

developed through mass mobilization campaigns subsist in the long term and communities develop a sense of pride in the condition of their environments.

Low sense of ownership of communities in restoration processes, coupled with poor management of livestock and ineffective follow up after restoration activities are among the key challenges. In communal areas, the practice of unmanaged livestock grazing and other poor livestock practices remains an issue. These practices often degrade soil and water, trample tree seedlings, and contribute to soil compaction and grazing often removes crop residue that would otherwise enhance soil fertility. While farmers may benefit from reduced soil erosion in the long term (if land productivity increases), they may lose out in the short to medium term. Farmers with enough of their land for grazing may not lose out from restrictions placed on grazing of a communal area, but those with small holdings most likely will. Managing trade-offs such as this and coordinating different perspectives requires not only a good understanding of landscape-level processes but also an ability to relate these to human livelihoods in the woreda and the competing needs of different stakeholders to ensure that the impacts of decisions are as equitable and gender-responsive as possible.

Sodo Guragie diagnostic

In the last few years the woreda Environmental and Forest Protection Office (WEFPO) and NRM department of WOANRD, have been implementing the ISFSDP project in selected kebeles of Sodo. The project identified 19 lowland/arid kebeles within the upper and lower Meki watersheds to implement FLR activities, where area exclosures and physical water and soil conservation activities and tree planting have been completed. The project's quarterly report indicates that restoration management plans were prepared with community participation, with community mobilization and work evaluation meetings reportedly carried out for 31 kebele representatives including four community elders from each kebele.¹² The project could be worth exploring for potential innovative institutional mechanisms that redress the awareness-related challenges previously discussed.

Meket diagnostic

Another challenge in Meket concerning awareness is the rapid expansion of monoculture exotic tree species such as eucalyptus and the potential economic and environmental risks. Farmers in Meket value eucalyptus as a major source of income, and eucalyptus is prominent on farmland, around homes and at road boundaries. There is a need for greater awareness and effective land use and forestry extension among farmers about the importance of species diversity and land-use practices as dependency on single-species plantations might create economic and ecological risks. Single species eucalyptus plantations not only are susceptible to the greater risks of pest and diseases, but also cause decreased crop productivity, when planted near or on farmland, and reduce water availability, when planted near water streams.

In addition to the restoration activities carried out through regular woreda budget, few donor-funded flagship programmes also implement restoration-related projects in Meket. The Public work component of PSNP and SLMP operate in selected kebeles, under a different community engagement and incentive framework: cash or food (PSNP) and other material and technical support (SLMP). More recently, the Woreda Office of Environmental Protection and Land Administration (WOEPLA) in collaboration with the NRM department of WOANRD and other sectoral woreda offices have been implementing the ISFSDP project. The project identified 30 kebeles categorized based on the levels of land degradation. Underpinned by the objective of establishing alternative livelihood improvement, the project implemented integrated land use planning and short-rotation plantations in 10 kebeles, while AE and physical water and soil conservation activities are carried out in 20 kebeles with extensive land degradation. The project's annual report indicates that priority was given to training and workshops to improve the overall understanding of the community regarding the project programme and to succeed sustainability of project interventions. Different training was provided for over 475 participants on topics such as soil and water conservation measures, pre and post plantation management, integrated land use planning, improved fuel-saving stoves and

¹² Sodo Woreda Forest Sector Development & Institutional Strengthening Project, 1st quarterly report 2017.

beekeeping.¹³ The project could be worth exploring for potential innovative institutional mechanisms that redress awareness-related challenges discussed.

Crisis events

Crisis events are leveraged (in place)

Sodo Gurage diagnostic

Natural disasters such as frequent droughts, frost, landslides and floods occur in Sodo. The northwest of Sodo, in particular, is reportedly drought-prone and is assisted by emergency relief assistance as crises occur.¹⁴ About 15 kebeles located in the rift valley part of Sodo are identified as a 'red zone' due to their frequent exposure to natural disasters. In general, during periods of disaster risk and food shortages, eight to ten kebeles could rely on disaster emergency relief (food or cash assistance) from the regional government. The worst drought in the woreda reportedly occurred in 2002/2003, culminating in crop failures and livestock deaths as well as forcing the majority of the woreda population to depend on daily food relief and other kinds of assistance, including direct cash. The most recent drought in Sodo was reported in 2015/16, where the regional government supported vulnerable kebeles with food aid in 2016 (two months) and 2017 (one month). Although little information is given regarding the frequency and extent of the impact, landslides have also reportedly occurred in Sodo. Further, parts of Sodo, especially those areas near and around Meki River are reportedly flood-prone. Although rivers in the area stay dry for most of the year, flash floods usually occur at the peak of either the *belg* or *kiremt* rainy seasons. For instance, as recently as in April 2018, the Early Warning and Emergency Response Directorate¹⁵ of the National Disaster Risk Management Commission placed Sodo among the list of "areas affected and likely to be affected by flood". Since, 2013, the woreda has reportedly started restoration efforts in degraded areas and those prone to natural disasters. Community-based watershed development involving soil and water conservation structures, area exclosures and enrichment planting is reported to have promising results in some part of the catchments of Meki watershed.

Meket diagnostic

Meket, together with other seven rural woredas of North Wollo Zone, has been grouped amongst the 48 woredas identified as the most drought-prone and food insecure in the ANRS. Meket is characterized by land degradation resulting from a combined extensive human activity and related biophysical factors that continue to threaten livelihoods. Some notable causes of land degradation in the landscape include farming practices on steep slopes and fragile soils with inadequate measures for soil conservation or vegetative cover, erratic and erosive rainfall patterns, declining use of fallow, limited recycling of dung and crop residues to the soil, limited application of external sources of plant nutrients, deforestation and overgrazing. Agriculture, the primary source of livelihood, is entirely dependent on rain, which is extremely variable and unpredictable, with a significant impact on crop production. Data from the Woreda Office of Agriculture indicates nearly 30% of the population in the woreda are under chronic food insecurity and are enrolled in the Productive Safety Net Programme (PSNP), the flagship programme by GOE and donors to shift millions of chronically food-insecure households from recurrent emergency food aid to a more secure and predictable, and largely cash-based, form of social protection. Food insecure households receive a combination of cash and food in one of the three PSNP programmes in a way that enables them to improve their livelihoods. These include direct support programmes; public works programmes (cash or food for work), or temporary programmes. According to interview with the Meket woreda offices, even those households or individuals not enrolled under PSNP are vulnerable to natural shocks, including recurrent droughts, which often necessitate emergency relief and food aid. Watershed-based land restoration and natural resources management is considered by the various offices in the woreda as one of the strategies to combat increasing

¹³ Meket Woreda Forest Sector Development & Institutional Strengthening Project, annual Report 2017.

¹⁴ Sodo is not supported by the flagship Productive Safety Net Programme (PSNP), but by disaster emergency relief from the regional government.

¹⁵ Federal Democratic Republic of Ethiopia National Disaster Risk Management Commission, Early Warning and Emergency Response Directorate. Flood Alert. April 2018.

droughts, land degradation, and improve crop yields. Additionally, similar to most degraded landscapes in northern Ethiopia, the practice of area exclosures is being actively promoted in the candidate landscape as a primary mechanism to restoring degraded lands, including hillsides.

Legal requirements for forest landscape restoration

Law requiring restoration exists (not in place)

Law requiring restoration is broadly understood and enforced (not in place)

Shared diagnostic

Regulations relevant to FLR exist at three levels: (i) federal and (ii) regional (iii) community by-laws (for area exclosures and general use of land in communal areas).

Forest management. The new Federal Forest Development, Conservation and Utilization proclamation (1065/2018) sets out more provisions to local communities to participate in forest management through recognition of community forest as a third type of forest ownership as opposed to its predecessor Proclamation 542/2007. The new federal proclamation places an obligation on forest developers under various forest ownership regimes to respect and observe laws issued for environmental safety, watershed protection and biodiversity conservation, although without specifying the specific laws to be observed. Also, proclamation 1065/2018 made progress in its provision of rights and incentives for forest developers under various forest ownership regimes e.g. it grants forest developers the right to acquire land identified for forest development and obtain a certificate of title deed, and establishes incentives such as tax exemptions and access to loans in favour of forest developers upon fulfilling requirements –to be determined by a follow-up regulation. It is unclear whether the follow-up regulation will articulate the criteria for accessing loan for forest development or whether it will outline favourable condition for communities to obtain credit for restoration activities.

Proclamation 1065/2018 places prohibitions on grazing animals and cutting trees from state forest under PFM. Penalties for breaking the law results in monetary fines (10,000-20,000 Ethiopian Birr)¹⁶ and imprisonment of 1-8 years. While not prohibited in the regulation, community bylaws designed to manage communal areas through area exclosures implicitly apply similar rules given to PFMs.

Indigenous tree species. Both national and regional level proclamations (SNNPR forest proclamation 147/2012 and Proclamation of ANRS (204/2013)) state that no person is allowed to cut endangered indigenous naturally grown trees from state forest or those naturally grown in community forest; however, national proclamation 1065/2018 allows utilization of endangered tree species planted on private land, upon confirmation from the responsible authority. It is expected that future regulations guide how a farmer, for instance, can prove that the timber he sells from an indigenous tree species has not originated from a natural forest. Future regulations should also provide a clear procedure on how authorities grant confirmation or differentiate timber based on its origin. Proclamation 1065/2018 states that directives issued by the EFCCC will determine the list of endangered indigenous natural tree species.

The lack of legal and policy frameworks to support FLR activities with indigenous species could exacerbate the risk of FLR efforts focusing entirely on the use of exotic species, which may have the potential to alter ecological functions and substantially reduce biodiversity. It remains crucial to creating a legal framework that promotes the diversification of species. Such diversification can occur if communities and individual farmers plant high-value native species knowing that they will sell (with the existence of market structures, value chains) and that they will receive incentives and support.

¹⁶ 1 USD=27.57 Ethiopian Birr (July 2018)

Regional legal frameworks

SNNPR – Sodo: The SNNPR State Forest Development, Conservation and Utilization Proclamation (147/2012) applies to all possessions, types and products of forests across the region. It recognizes categories of productive and protected forests as well as community forests and establishes arrangements for community management of state forests. Private-managed and community-managed forests need a managed plan approved by the regional state that ensures that measures are taken to protect and sustainably use the trees. Private forest developers must reforest areas where trees have been cut down. A special provision exists for forests developed to rehabilitate degraded lands to be managed in line with watershed and sustainable resource utilization. Moreover, the proclamation sets out the requirement for soil conservation and watershed rehabilitation measures when needed to avoid erosion and over flooding. The regional authority shall identify the list of endangered indigenous trees which cannot be commercialized.

ANRS – Meket: The Revised ANRS Rural Land Administration and Use Proclamation (252/2017) in principle apply to all rural lands with provisions of special laws relating to forestry, wildlife protection, biodiversity resources, natural resource and environmental protection. As such proclamation 252/2017 is designed to improve conservation and development of natural resources through the realization of user rights and obligations over land use.

The Administration and Use of Watersheds Rehabilitated and Being Rehabilitated with Community Participation Proclamation of ANRS (204/2013) provides directives specific to watershed rehabilitation through community participation.¹⁷ Proclamation 204/2013 sets out rights, obligations and penalties to land users within a delineated watershed. It requires land users within watersheds to protect and prevent damage to natural resources and protect soil fertility both in private farmlands and communal areas. It also places various responsibilities on communities including control livestock grazing to avoid damage to areas under restoration, avoid ploughing areas near rivers, streams and restored gullies, and prohibitions of cutting trees or deadwood, shrub or grass without permission or beyond the amount permitted to be cut. Failure to comply is punishable per community watershed users' agreement or bylaws under respective watersheds. However, it is unclear the extent to which support is provided to ensure community bylaws are legally acceptable and to have them enforced by the judiciary. The woreda often struggles with competencies to ensure bylaws are effectively linked with the judiciary. Capacity building at woreda and community level is crucial to ensure that community bylaws are better aligned with existing laws and can be approved by concerned authorities to facilitate their enforcement as such bylaws help reduce and better manage conflicts in watershed areas. Further, it is important to note that economic returns to communities resulting from communal areas under area exclosures and watershed development remain low because bylaws have led to reduced access by local people who previously had free access to forests. Better incentives for communities to engage in forest landscape restoration and area exclosures will be needed to mitigate the opportunity costs of limited access to communal areas.

Overall, the existing legal frameworks (both at federal and regional levels) promote tree planting as part of forest development. However, they do not mandate the restoration of land or replanting of trees if trees are cut. Moreover, the federal forest proclamation does not require restoration, although encourages tree planting, restoration and sustainable use of land.

Compliance and enforcement. The regulatory mandate and enforcement capacity are limited to national and regional regulations and authorities. The woreda, beyond facilitating the establishment of community bylaws, does not have the mandate to issue local level regulations. While in theory the woreda is assumed to implement regional and national regulations, the role and competencies of the woreda remain limited in the absence of adequate regulations. Even when some regulations are in place, they are rarely supported by implementation guidelines and follow-up, monitoring or evaluation mechanisms from the regional level. Hence, the woreda often struggles to

¹⁷ Proclamation 204/2013 defines "Watershed" as any surface area that catches the area of drained outlet; by collecting the rainfall or runoff water; and, the collected water drained to a common confluence point; in a way of runoff, that contains the natural resources; that means water, soil and plant; as well as, in the community level, it contains public, means of ploughing, animals, interrelation between dwellers of the society and natural resources; and, it incorporates social, economic and cultural values.

enforce regulations. Conversely, community by-laws have a strong influence at the local level but have no enforcement mechanisms beyond peer pressure from the community itself or through formal legal claim which is rarely activated. Most communal forest lands have a bylaw established by the members to protect and benefit out of the forest and NTFPs. These bylaws are often the most effective regulation mechanisms, often exceeding existing regional or federal regulations where the legal provisions are not well known by communities.

Introducing more comprehensive frameworks that outline prevention, detection and monitoring within a broader strategy of FLR while engaging communities in a constructive manner may help to alleviate this issue. This could include, for example, public education and awareness on relevant laws and regulations pertinent to FLR as well as engaging communities in monitoring and enforcement can enhance visibility and comprehensibility of laws and regulations. Finally, although the new legal provisions have amplified the vision to managing natural forests (state and community) to a sustainable forest management approach, the challenge remains to identify and delineate natural forests in protected areas and forests under sustainable use. This presents ambiguity when it comes to commercialization of indigenous tree species. The 2018 forest proclamation's new vision is still to be interiorized and implemented down to the woreda level, in a way that effectively promotes communities to plant indigenous tree species on their farmlands in a diversified manner. Such diversification can occur if communities and individual farmers plant high-value native species knowing that they will sell (with the existence of market structures, value chains) and that they will receive incentives and support.

A list of relevant policies and legislation instruments is provided in Annex 2.

5.2. Enable

Ecological conditions

Soil, water, climate, and fire conditions are suitable for restoration (in place in Sodo Guragie, partly in place in Meket)

Plants and animals that can impede restoration are absent (not in place)

Native seeds, seedlings, or source populations are readily available (in place in Sodo, partly in place in Meket)

Shared diagnostic

The ecological conditions in Sodo and Meket are conducive to FLR. The various indigenous trees on communal lands provide the ecological capital required for natural regeneration as well as the collection of seeds, which can be raised in nurseries for the restoration of degraded forest land that no longer responds to passive restoration. The altitude ranges in both districts (1400 to 3600 m.a.s.l.) and average annual rainfall (800-1200 mm) provide an opportunity to increase the number of trees and tree yields in the landscape.

The Kiremt rainy season can be suitable for the establishment of fast-growing timber species which can cover the growing need for fuelwood and construction timber. Use of the two native species of bamboo or the careful introduction of exotic bamboo species in Sodo and Meket has the potential to be a sustainable addition to the wood/timber mix. Meket moreover has options to expand on their banana and apple. The lack of enough *belg rain* in Sodo particularly can be a challenge to FLR activities such as for running replanting activities on plantation sites. The different agro-ecologies in Sodo and Meket are suitable for tree regrowth of various species. The soil type is also suitable; wildfire is not common in these districts.

Different options of restoration activities have been identified for the woreda through workshops and data spatial analysis, with 88% and 92% of the Sodo and Meket woredas, respectively being identified as having potential for any, or a combination, of the following forest landscape restoration options (EFCCC, 2019a; EFCCC, 2019b):

Sodo

- Agroforestry in croplands in areas with less than 50% slope and with less than 30% of tree cover.
- Woodlots/plantations in croplands and grasslands within 2 km from roads.
- Enrichment planting in shrublands within 1 Km of croplands and grasslands, excluding areas with more than 10% of tree cover.
- Restoring secondary forests in areas of the woreda where the potential natural vegetation is forest (i.e., *Acacia* wooded grassland of the Rift Valley and *Dry evergreen Afromontane* forest and grassland complex).

Meket

- Agroforestry in croplands with less than 60% slope and grasslands, with less than 30% tree cover.
- Woodlots/plantations in areas within 1 km from roads and with less than 60% slope.
- Enrichment planting in shrublands with less than 10% tree cover.
- Riparian forests within 10 m of perennial river banks, excluding closed shrubland areas.
- Restoring secondary forests in areas of the woreda where the potential natural vegetation is forest (i.e., *Combretum-Terminalia* woodland and wooded grassland and *Dry evergreen Afromontane* forest and grassland complex).

The suitability of these options on the ground and in specific areas needs to be confirmed with a thorough analysis of degradation levels and drivers of deforestation/degradation, paired with consultations with communities and social data analysis.

Sodo and Meket have source populations from patches of remnant native trees and seedlings that can be the foundation for forest regrowth and natural regeneration. The various indigenous trees provide a sound basis for these passive interventions as well as the collection of seeds to be raised in nurseries for the restoration of severely degraded forest land. Reported natural vegetation across the different terrains (highland and mid to lowland) include *Juniperus procera*, *Cordia africana*, *Olea africana*, *Carissa edulis* (Agam), *Dodonaea viscosa*, *Acacia abyssinica*, and specifically in Sodo additional species such as *Arundinaria alpina*, *Acacia seyal*, *Acacia albida*, *Balanites aegyptiaca*, and *Acacia tortilis*. In the rift valley part of Sodo woreda, acacia trees called *Faidherbia albida* are most commonly found agroforestry species within farmlands and this is an excellent opportunity to be scaled up.

Sodo and Meket also have multiple exotic species including *Eucalyptus globulus*, *Eucalyptus camaldulensis*, *Grevillea robusta*, *Melia azedarach*, *Moringa stenopetala*. Also, Meket has exotic species such as *Cupressus lusitanica*, *Acacia decurrens*, *Acacia saligna*, *Shinus molle*, and *Sesbania sesban*. Farmers in Sodo and Meket value eucalyptus as a major source of income, and eucalyptus is prominent on farmland, around homes and at road boundaries. As a result, eucalyptus species occupy more extensive land cover compared to other tree species.

In addition to the legal contexts discussed above, low cost-low labour, fast vegetative growth and high market demand (wood and wood products) appear to drive the expansion of eucalyptus. The rapid development of eucalyptus plantations gave rise to two challenges with conflicting priorities: the environmental concerns of the species and its economic role. Environmental concerns associated with the species focus on issues such as reduced soil fertility, depletion of groundwater, and soil acidification, especially when grown on previously cultivated croplands. Eucalyptus trees used to be planted mainly on hillsides, parts of farmlands no longer suitable for growing crops, and around homesteads. However, recent expansion into farmlands reportedly causes conflicts between neighbouring tree planters and non-planters, because of the significant shading effect on crops, often forcing farmers adjacent to eucalypt plantations to plant eucalyptus as well. From an economic standpoint, the focus has been on the importance of the species due to its fast growth, high biomass production and coppicing ability. In a context where biomass makes up for nearly all household energy needs, the use of fast-growing species which produce a significant amount of biomass becomes inexorable. However, high dependence on monoculture species risk exposure to pest and diseases, but also cause decreased crop productivity, when planted near or on farmland, and reduce water availability, when planted near water streams.

Sodo Gurage diagnostic

There are five nursery sites in Sodo (including the one managed by the ISFSD project). The nurseries provide up to 150,000 seedlings per year for each of the 59 kebeles. While the nurseries distribute both indigenous and exotic tree seedlings, the share of indigenous plant seedlings that also improve soil fertility was reportedly inadequate. There is keen interest from communities to establish a seed bank in the woreda although there was no information on an existing plan to bring it to fruition. The rationing of seedlings to kebeles does not fully address the demands of individual farmers and it was reported that most of the seedling were from eucalyptus. There are some endeavours to set up private nurseries, including one reported cooperative that sells seedlings in the woreda. However, their aggregate supply does not make up for the insufficient number of seedlings distributed by the government. Also, the NRM department of WOANRD manages the nurseries and 32 demonstration sites located

in FTCs. Interviews with woreda officials indicated that there is a regional consensus to manage nurseries in by both WEFPO and WOANRD to avoid conflict of interest. The planning office indicated that WONARD would keep managing the old nurseries and WFEPO the new ones. It is not clear how decisions are coordinated with the environmental protection office at the moment regarding forest quality, management and distribution of tree seedlings.

Early lessons from the ISFSDP project reported that, while there are recent encouraging efforts of land restoration in the lowland areas of Sodo through community participation, land degradation on agricultural land remains a challenge due overstocking of livestock and a lack of proper livestock management, among other things. Uncontrolled livestock grazing in nearly all kebeles of the woreda is reported as a challenge to restoration efforts. Only in a few kebeles of Sodo (mainly highlands), did farmers report the practice of controlled and rotational grazing as a coping mechanism to overcome feed shortages and increase grazing efficiency. In this system, cattle are tied in the middle of the pasture and graze within the radius of the rope and as the grass is completely grazed, the rope is elongated through time for the cattle to reach available grass. In many kebeles with forests, livestock is also kept out of the restored areas with native trees, following the regulation that indicates so. Such practices can be replicated in other parts of the woreda to mitigate the impacts of uncontrolled grazing practices to FLR efforts.

Other reported challenges include pest infestation of mole rat (*Tachyoryctes splendens*) in plantation fields, the low survival rate of seedlings due to seedling quality, species-site matching, inappropriate transport systems, unclear responsibilities in communal areas, and lack of adequate post-planting management measures. In addition, enset agroforestry systems occasionally suffer from an infestation of bacterial wilt on enset crop as well as seasonal crop diseases that have also been identified as a challenge.

Meket diagnostic

To reduce the negative environmental impacts, various mitigating measures are recommended in some parts of ANRS (Tadesse & Tafere. 2017). These include: implementing appropriate planting space, species and planting site selection, practising proper silvicultural and harvesting techniques, promote cluster plantation; encourage buffer planting and introduce minimum distance of trees from crop fields; promote mixed plantations; encourage the use of broader spacing; implement proper land-use plans; integrate with soil and water conservation structures (Tadesse et al. 2015). Moreover, it is essential to identify effective national and international silvicultural practices that can be scaled up. There is a need for greater awareness and effective forestry extension among farmers about the importance of species diversity and increase adoption rates of other species. It is crucial to introduce and promote alternative, fast-growing species and mixed plantations. Although the selection of species to raise in the nurseries is based on the preference of farmers (i.e. eucalyptus), the nurseries in the woredas have increasingly started to offer diverse tree and fruit species such as apple, banana and bamboo seedlings. During field visits, a tree nursery supported by the ISFSDP is dominated by eucalyptus, *eucalyptus globulus*, which was said to be useful for making perfume. However, this is only a potential that needs to be studied further. Finally, integrated land-use planning is an important strategy to manage land use, including for eucalyptus, based on potential, capability and future sustainability. Integrated land-use planning is a component in ISFSDP whereby the projects collect biophysical and socioeconomic data to prepare base maps and developmental maps for an integrated watershed land use plan. Lessons could be drawn from ISFSDP to ensure eucalyptus plantations follow similar land use plans.

Market Conditions

Competing demands (e.g., for food or fuel production) for degraded or lost forestlands are declining (partly in place)
Value chains for products from restored area exist (partly in place in Sodo, not in place in Meket)

Shared diagnostic

Good market conditions (i.e. access to markets, high product prices) can have positive or negative implications for FLR. Increasing demand and high prices for fuelwood, construction timber, and other wood products, and the ability to bring such products to market is an incentive to plant trees. Right market conditions can also be an incentive to produce more cash crops and increase heads of livestock for sale. On the other hand, forest products, particularly if they are NTFPs limited to access to well-established forests and may not have formed strong value chains. In these cases, NTFPs can often not compete with economic returns from other commercial activities.

Sodo Guragie diagnostic

In Sodo, excess crop production (maize, teff, and wheat) is traded in small quantities, often only locally or through a network of traders aggregating products from individual farmers at market days for an onward trade to large urban centres such as Addis Ababa. Market incentives are not in place to spur interest in the producer to turn over more sustainable practices for the landscape such as agroforestry, silvopastoralism, agrosilvopasture or sustainable timber forest-enterprises (coupled with the lack of other enabling conditions). Production of timber and fuelwood is in growing, though mostly through unsustainable practices. An alternative to unsustainable fuelwood commercialization is to promote improved cooking stoves and charcoal production methods in combination with awareness campaigns to enhance existing initiatives that could be scaled up. The woreda office has distributed improved cooking stoves to farmers with the condition of planting trees, and that scheme has worked successfully. Forest-based enterprises of wood products are underdeveloped.

Alternative and fast rotation plantations can be considered to mitigate the increasing expansion of eucalyptus in the area and associated environmental impacts. Indigenous bamboo species can be introduced as an alternative. If value chains are adequately promoted, bamboo can be a significant income source for local communities that also have good market potential in Addis Ababa as a supply for bamboo industries. Currently, bamboo value chains are rudimentary in Ethiopia although there is a programme at the national level that promotes the expansion of bamboo plantations in the country.

Although not widely practised, farmers also produce honey in the mid humid and lowland areas. A pilot cooperative is reportedly established in the lowland area to help process and commercialize raw honey. Besides this, there are no known community cooperatives or associations that market other NTFP products, which are not common in the area, including products from restoration-compatible activities. There are no known formal initiatives that link producers to consumers. Cooperatives for sustainable timber and forest-based enterprises need to be incentivized with adequate access to capacity and market access. Cooperatives are seen by experts and people interviewed as a key element to enhance the economic benefit of trees, in benefit of small and medium enterprises and landless youth who can seize the opportunity to generate business based on timber and NTFP products as part of a value chain. Incentives for the creation of cooperatives need to be put in place, in the form of increased access to loans, technical support, and technology transfer.

There have been efforts undertaken with the support of NGOs to reinforce and create local value chains for agricultural products produced under restoration practices. For instance, World Vision Ethiopia has a project focused on improving livelihoods in Sodo through local value chain development and saving approach. The project includes analysis of opportunities and challenges for vegetable value chains such as tomatoes. A similar analysis of value chains for restoration will be needed including for NTFPs and high-value tree products. Road infrastructure in the woreda is poorly developed; only 38 km of asphalt road within the entire woreda and all rural kebeles are connected through dry weather feeder roads.

Meket diagnostic

The growing trend of allocating a large portion of farmlands to eucalyptus woodlots in Meket (compared to other land use types) can be an indicator where not only the economic returns from eucalyptus woodlots has now surpassed crops but also keeping woodlots seen as a form of insurance policy by farmers against any shocks or unforeseen circumstances. However, lack of sustainable management of such woodlots coupled with monoculture practices is likely to cause spillover environmental impacts. To change this trend, it will be necessary to develop strategies to promote adoption and uptake of diverse species, including institutional collaboration to develop and implement modalities, mechanisms to expedite the uptake of diverse species. For example, awareness and market intervention on wood-based manufacturing enterprise for species diversity and ecological functionality. Proper silvicultural and harvesting techniques, mixed plantations with alternate species as well as the introduction of alternative and high-value tree/shrub species, among others, offers an opportunity for effective FLR. Cooperatives for sustainable timber and forest-based enterprises need to be incentivized with adequate access to capacity and market access. Cooperatives are seen by experts and people interviewed as a critical element to enhance the

economic benefit of trees, in benefit of small and medium enterprises and landless youth who can seize the opportunity to generate business based on timber and NTPF products as part of a value chain. Incentives for the creation of cooperatives need to be put in place, in the form of increased access to loans, technical support, and technology transfer.

Additionally, the woreda has potential for high-quality honey production, which provides an opportunity to integrate honey into a forest production system. However, it faces multiple challenges including lack of processing and packaging facilities, lack of necessary business skills such as business planning, bookkeeping, organisation and management, and marketing. Moreover, if value chains are adequately promoted, timber and honey resources can create an additional source of income. There is a need for interventions to organize and promote the honey value chain. The Honey Processing Union known as ‘*Amhara bottled Honey (Agunta)*’ should be engaged and supported to organize and build the capacity of the honey value chain. Support from Amhara region Livestock and Fishery Bureau/Agency is also an essential aspect for such potential businesses, as restoration and beekeeping will highly complement and address human wellbeing in FLR intervention areas. The Organization for Rehabilitation and Development in Amhara (ORDA) should also be a strong partner in the development of value chains. Road infrastructure in the woreda is poorly developed, with 17 kebeles are connected only through a dry-weather-road, and the additional seven kebeles without road access that connects with the woreda capital.

Policy conditions

Land and natural resource tenure are secure (partly in place)

Policies affecting restoration are aligned and streamlined (partly in place)

Restrictions on clearing remaining natural forests exist (partly in place in Sodo, in place in Meket)

Forest clearing restrictions are enforced (partly in place in Sodo, not in place in Meket)

Shared diagnostic

An effective land tenure system is broadly considered an essential precedent for ensuring successful FLR implementation. Clarity over the ownership and extent of land rights is often crucial in incentivizing actors to make long-term investments (financial or otherwise) in the land that forest landscape restoration requires.

While tenure security on private farmlands is a step in the right direction, more is needed to expand opportunities for FLR. It should be noted that incentive frameworks that actively promote FLR and integration of forest production systems that also improve agricultural productivity will be needed. As such, the lack of legal and policy to support FLR activities on private farmlands and woodlots remains a challenge. Limited access to capital, lack of collateral and a high-interest rate continue to be a hurdle to farmers. Additionally, there is a lack of policy support for business development services such as training, access to finance, business skills training, coaching and market access support services.

Conversely, the tenure regime of communal lands -where the FLR is most needed, and where the practice of area enclosure is mostly undertaken to restore degraded lands- remains a challenge. The Federal Forest proclamation (1065/2018) sets out provisions for local communities to participate in forest management through recognition of community forest as a third type of forest ownership in contrast to its predecessor Proclamation 542/2007. Evidence indicates that tenure insecurity persists in communal areas and continues to undermine active and sustained engagement of communities (Kassa et al 2017).

Regarding land-use planning, given the lack of regional and woreda level land-use planning, it is not clear how land use is allocated to extractive sectors such as mining or if ecological considerations are a priority. The newly launched National Integrated Land Use Planning and Policy Process (NILUPP) within the Prime Minister’s Office, once finalized, could offer guidance in harmonizing land use planning at regional and woreda levels. For the last two success factors under this section, see information in section 5.1.a.

Sodo Guragie diagnostic

Issuance of land certificates giving clear user rights to farming households is completed in 31 out of the 54 rural kebeles through the UK-financed Land Investment for Transformation (LIFT) programme. Before its completion, LIFT programme also facilitated access credit for agricultural practices in those kebeles. In the remaining 23 kebeles, efforts are reportedly underway to issue user rights certificates. Seven kebeles are waiting for approval from the region for the issuance of certificates, while in 16 kebeles land measurement using GPS has been completed. However, following LIFT's completion, progress has been slow due to budget constraints to complete the process using woreda-level resources.

SNNPR Proclamation No. 110/207 (SNNP, 2007) stipulates land use rights certificates can be issued for individuals or groups, creating *de-facto* ownership as long as the land is used in line with the regulation; land can be leased to third parties. The SNNPR proclamation 147/2012 (SNNP, 2012) stipulates the active involvement of local communities in planning for, managing and utilizing state forests. Certificates are issued for communal lands, private farmers and cooperatives. Data was not obtained from the woreda on the share of certificates processes for private, communal and cooperative lands. Many forests are already under area exclosures in community watersheds, giving community groups the duty and right to manage and use their forest according to the bylaws. The permitted use of indigenous tree species from forests under area exclosures has an ambiguous understanding. While not prohibited in the regulation, the use of timber or fuelwood for commercial purposes from indigenous species has not been permitted by law anywhere in Ethiopia to date.¹⁸ Although restored communal areas are often under the protection of forest guards, the reality is that most of the fuelwood sources in major market areas come from indigenous tree species, which arguably come in many cases from area exclosures. Better forest governance that faces the challenges of fuelwood supply and designs solutions for sustainable use of forests is required. On the other hand, community youth members or landless members can join associations and request community authorization to use NTFP from communal land for commercialization. Based on Sodo Woreda Office of Land Administration, 'the privilege to use resources from communal land could be given by the community to those farmers that have no land and youth cooperatives; landholders need community authorization to use resources from communal land'. The woreda can work with the communities to provide information of options and types of arrangements of use and benefit-sharing of communal lands under exclosure, which can reinforce their sense of ownership while at the same time providing a solution for private owners and landless youth. Most of the costs associated with area exclosures are still primarily borne by the communities themselves, with little incentive to cover the opportunity costs of communities in setting up the exclosures. Benefit-sharing policies need to consider the above short and long-term perspectives which could undermine the sense of ownership and sustainability of area exclosures.

Guided by national policy priorities and provisions under Federal Rural Land Administration and Land Use Proclamation (No 456/2005), SNNP Proclamation No. 110/207 guarantee access to land for agriculture for rural residents. For example, Proclamation No. 110/207 stipulates that rural youth has the right to be allocated land for agriculture by the community or government; any resident of the region who wants to engage in agriculture has the right to acquire land by settlement in conjunction with minimum landholdings of 0.5ha (rain-fed agriculture). Implementing this provision constitutes an ever-growing challenge in the face of high population growth and increasing land degradation. In Sodo, pressure on land resources is high; the area is one of the most densely populated landscapes in the country. The growing demand for farmland also makes identifying appropriate areas for exclosures increasingly tricky. Based on information obtained from the woreda, there is no more land left to distribute for landless youth on an individual basis and to mitigate this challenge the woreda is allocating land to youth groups organized in the form of cooperatives. The demand for land will continue to be an issue of concern in Sodo. It is important to design FLR initiatives in a manner that helps to improve agricultural productivity and contribute to fighting food insecurity while also accounting for high population growth and youth entitlements to land. Improving agricultural productivity through modern technologies that increase the number of trees in the landscape is essential to minimize degradation pressures.

¹⁸With the exception of Bale eco-region in Oromia Regional State where dry and dying trees can be logged for commercial poles and posts.

Large-scale land investment is a crucial component in the national development strategy of Ethiopia. As such, SNNPR has allocated more than 450,000 hectares for large-scale commercial agriculture, part of which is included in the federal land bank for large-scale investments within the Agricultural Investment Land Administration Agency (AILAA) (MOARD, 2009; Oakland Institute 2011). Concrete details of land earmarked for investment were missing, but reportedly 659 hectares in Sodo have been allocated to private agriculture investment (including agro-industries). Lands are commonly identified based on satellite imagery and expert opinion from the Bureau of Agriculture and Livestock Resource Management and the Investment Commission, including consultation of zonal and woreda administrations but without participation from other institutional stakeholders. Woreda stakeholders interviewed in Hawassa and Sodo indicated that earmarking land for large-scale agricultural investment and extractive industries (such as mining) as well as infrastructure development is contributing to further deforestation in SNNPR. In principle, investment decisions are to be made based on environmental impact assessments and consultation with impacted communities. Yet, in reality, those investment decisions with implications to forest resources reportedly minimize actual environmental impacts and fail to account for community concerns and wishes properly. Interviews with the Woreda Finance and Economic Development Office indicated several additional large-scale investments in different sectors, including agriculture (29) and Manufacturing (1). Furthermore, the woreda is reportedly organizing 1560 youth associations for mining.

Meket diagnostic

While provisions under the revised ANRS Proclamation 252/2017 offer an opportunity and a foundation for systematic land registration and tenure security system in private woodlots and croplands, similar policy support will be needed to communal areas (Fiestas et al. 2018). Tenure security should be considered as a combined result of the ongoing functioning of land administration systems, the participation of rights holders in these systems, and the continued interaction of supporting institutions, laws and policies. For successful FLR, given the complexity of the communal land ownership type, it is vital to ensure a clear and legitimate property right framework whereby rights to use common natural resources (use rights) is complemented by the right to make decisions on how those common property resources should be managed (control rights).

The increasing problem of landlessness also means continued pressure on ANRS to allocate communal lands to landless youths, which may have implications to tenure security on communal lands. There is an inherent lack of clarity and uniformity by which community participation and benefit arrangement is sought in AE. Some exclosures are allocated for landless youths and women to manage and benefit from restored land based on a cut and carry system, while on other cases they are run by community members. For example, evidence in the past suggests common grazing areas and community woodlots in some kebeles in Meket have been distributed for individual management and use following disagreements about collective management and use. Farmers preferred individual management and use of resources, especially since they did not have any sense of ownership of communal resources, such as woodlots, because they were hardly allowed to use them. They felt that even those who were not involved in managing the resources shared in the rare benefits (Lakew et al. 2000).

Similarly, it is also important to consider the role of the church in Meket as it appears to bear influence on the community and FLR outcomes. Past interventions of SOS Sahel in Meket shown that the churches at the same time claimed many hillside exclosures registered by groups of community members. Community members pay some income to the churches from the proceeds obtained from exclosure activities such as sales of grasses or firewood. Encouraging efforts are ongoing in Meket in terms of preparing land management plans at watershed levels.

Social conditions

Local people are empowered to make decisions about restoration (partly in place)

Local people are able to benefit from restoration (partly in place)

Shared diagnostic

Community participation for FLR activities is one topic where there is ample space for improvement. More can be done to allow for proper consideration of the views and priorities of the community on FLR and to encourage participation in all the stages from planning, decision making and implementation. Participation has meant mobilizing farmers to implement specific activities rather than involving them in decision-making processes, where communities are often approached in a one-off campaign in a top-down process. Experts are reportedly the ones who make key decisions such as goal setting, developing management plans, and defining benefit-sharing mechanisms. It is important to expand the roles of farmers and other community members' role in the planning of FLR activities through devolution of decision-making authority. Building the technical, managerial and administrative capacity of communities through capacity development at the woreda level remain critical to the success of FLR. Participatory approaches exist in other areas in the country, where integrated watershed development areas follow a Local Level Participatory Planning Approach (LLPPA), where the community has a significant role planning and deciding future activities in their lands, and the expert occupy a facilitator role.

As discussed earlier, area exclosures are one of the key approaches to forest landscape restoration in Ethiopia. This practice combines tree planting, watershed protection and physical soil and conservation measures to restoring degraded landscapes. Direct benefits and revenues from these resources (mostly pasture or access to NTFPs like honey, resins, and tree gum for instance) are distributed according to arrangements structured around community groups and guided by legally acceptable bylaws. However, the norms of community participation in the practice of area exclosures are not uniform across communities. Some area exclosures are allocated for landless youths and women to manage and use rehabilitated sites based on a cut and carry system, while in other areas, area exclosures are run by community members. Community members may formulate their bylaws on the utilization of products harvested from area exclosures. The benefits for communities provided by area exclosures include grass biomass for fattening, beekeeping, job creation for landless youths and women.

Most communities, however, do not see significant economic benefits from area exclosures, and attention could be given to alternatives such as selective enhancement of trees in exclosure areas where commercial species grow next to indigenous trees, enabling use and commercialization of timber and fuelwood coming from the enclosed areas. Area exclosures reportedly continue to expand in areas where community members receive such benefits. Still, in areas where benefits are not diversified, and land availability is lacking, communities have little interest in expanding area exclosures (Tadesse et al. 2015).

Since the implementation of area exclosures through soil and water conservation and enrichment planting started, encouraging results are reportedly detected in parts of Sodo and Meket as observed through UNDP's ISFSD project and the woredas' mass mobilization programme. Moreover, promoting communal plantations in the woredas could contribute to empowering communities to generate income, facilitating dialogue for knowledge exchange and capacity building whereby farmers are involved in decision-making processes for planning and implementation of FLR on shared natural resources. Similarly, promoting the integration of forest production systems that also improve agricultural productivity will be crucial to improving food security and reducing further land degradation on private croplands and woodlots.

Institutional conditions

Roles and responsibilities for restoration are clearly defined (partly in place)

Effective institutional coordination is in place (partly in place)

Sodo Guragie diagnostic

The management and protection of forestry and forestlands fall under the responsibility of SNNPR Environmental Protection and Forest Authority (EPFA). These structures are reflected at zonal and woreda levels. The zonal and woreda structures of the EPFA were established in 2016, transferring the responsibility for forest management from

the Bureau of Agriculture and Livestock Resource Management (BOANRM). It is worthy to note that the EPFA and the BOANRM have different mandates in the current regional government structure, whereby the BOANRM has regional representation and directly reports to the regional government while the EPFA does not, only reporting on the implementation of their mandate through reports that the BOANRM presents before the regional government on its behalf. Currently, BOANRM is the institution mandated by the regional government to implement the Forest Development, Conservation and Utilization Proclamation 147/2012, which was issued before EFCCC was established. The EPFA is still in the process of consolidating the newly founded administrative structures and processes. As a result, its capacity to implement and support activities on the ground is still limited. By way of illustration, interviews in Hawassa (regional capital) indicated that the EPFA still does not have full information/data on the extent of forest cover in the region. The NRM department of BOANRM still manages a large portion of areas treated under watershed management. Similar mandates between these institutions in FLR noted to create horizontal synergies opportunities, yet coordination remains weak. Similarly, at the woreda level, the WEPFO and NRM department of the WOANRM operate under overlapping mandates with limited coordination – periodical planning meetings happen within the woreda offices but they do not necessarily result in advancing a common agenda for FLR. Lack of consistent cross-sectoral coordination can be attributed to the fact that institutions or individuals within institutions are not incentivized to coordinate or engage in activities outside of their mandates. Most institutions receive annual budgets by the government to undertake specific activities. Yet, there is no legal requirement, precondition, or additional incentive in place to coordinate or integrate activities overlapping in intent or outcome (Zeleeke et al. 2006).

Consequently, there are opportunities to improve the coordination system that makes institutions accountable either to each other or to the communities they serve. At the SNNPR level, it is important to establish a clear outline of mandates for institutions dealing with FLR and decentralize those mandates appropriately. It is worth noting that achieving higher results in FLR initiatives under a decentralized structure is often complex and building the capacity of stakeholders at the woreda level is of critical importance.

Responding to ecological and socio-economic reasons, Sodo is not a beneficiary of flagship programmes such as the Productive Safety Net Programme (PSNP), the Agricultural Growth Programme (AGP) and the Sustainable Land Management Programme (SLMP), which has unintended impacts on the availability of additional funds for FLR-supportive activities. There are various NGOs in the FLR space operating in parallel with limited coordination. Table 4 summarizes some of these key stakeholders in Sodo. The UNDP-ISFSD project is the main source of support for the implementation of FLR-related activities through broad-based stakeholder engagement and capacity building. Activities promoted include land use planning, soil and water conservation activities and land management to facilitate the development and management of plantation sites, support nursery establishment and management, strengthen agroforestry practices, expand access, use, and sustainability of alternative energy sources, and creation of job opportunities. World Vision Ethiopia is operating in several kebeles of Sodo, mainly working on improving the income of the poor households through local value chain development and reinforcing a culture of savings. Improving livestock feed, vegetables, dairy breeding and child education are among the specific areas of focus. SOS- SAHEL Ethiopia focuses on the effort of restoration, this organization is also pioneering in agroforestry development, although it has only one focal person.

Stakeholders	Major Activities related to FLR	Sources of funds
Woreda office of Agricultural and NRM	• Technical assistance to farmers on improved agriculture production techniques: fertilizer use, improved seed provision, land management practice, modern agroforestry practice, etc • Lead community mass mobilization to raise awareness on watershed development and protection (Soil erosion protection, reforestation, sustainable grazing practice, nursery management)	Regular Government budget
Woreda office of Environmental	• Technical assistance through awareness creation campaigns about better NRM practice (Soil erosion	Regular Government budget

Protection and Forest	- protection, reforestation, reduce deforestation, sustainable grazing practice etc. - Nursery development and provision of seedlings to farmers - Forest resource and environmental protection (closure and others)	
Woreda cultural heritage, Tourism and government communication office	Protection of forests and landscapes of historical value (church forests and others)	Regular Government budget
Woreda office of livestock and fish resource	Technical assistance in sustainable fodder production and management (including plantations of fodder value – trees and grasses) and awareness creation on uncontrolled livestock grazing practices.	Regular Government budget
Woreda office of youth and sport	Participate in awareness creation campaigns with other government offices for better NRM practice in the woreda	Regular Government budget
UNDP/ISFSD	- Work extensively in soil and water conservation practices, - Established modern tree nursery sites, large scale plantation, - Rehabilitation of degraded land through closure with selective plantation - Advocates agroforestry for improved livelihood - Capacity building for other government offices engaged in related themes	Received funds from Norway and Sweden under UNDP frame
SOS Sahel Ethiopia	- Input provision and advisory service for smallholders about conservation agriculture; provide improved seed, inputs and planting materials of animal fodder to smallholder farmers, - Identify and provide access to improved seeds, planting materials and equipment for private and public nursery participants - Organize landless youth group on beekeeping, fruits and vegetables etc	The UK and Irish fund source
OMO Microfinance	- Provide financial services prioritizing youths, women, farmers, Micro and small enterprises and others who are keen to work but lack adequate working capital. - Provide credit for farmers with landholding certificate as collateral.	Borrowing from Commercial banks; government development finance sources
Agar Microfinance	- Gives saving and credit services to all segments of societies in the woreda - Gives credit service to farmers holding their second-round land certificate and also in group bases	Shareholders' equity; From saving deposits; Borrows from commercial banks
World Vision Ethiopia	- Improving livelihoods through investment in fodder supplying, educating children and dairy breeding; implementing an integrated food and nutrition project with the main objective of sustainable childhood development, with components of restoration - Promotion of Improved cookstoves	From Sponsors of children within it; Grant funds from proposals
Buye Child and Family Development Association	Plan to involve in Integrated Agri-business and NRM involvements	
Local timber association	Manufacturing of timber products locally	Local MFIs and own funds

Table 4: Potential FLR stakeholders/institutions in Sodo Woreda

Meket diagnostic

ANRS' Bureau of Agriculture and Livestock Resources (BOANR) is the main government institution responsible for the planning and implementation of FLR. The BOANR is currently planning and implementing different forms of FLR, including through purposeful tree planting, AE, watershed developments, and land use planning through flagship programmes such as the SLMP, PSNP and the annual mass mobilization programme. EFCCC's structure is yet to be streamlined into the decentralized governance structure of ANRS. EFCCC is represented through the regional REDD+ coordination unit. In general, the federal line ministries such as EFCCC are responsible for translating broader policy targets and objectives into their respective sectoral action plans and targets. This competency also includes the translation of cross-sectoral proclamations into action plans and coordination of the respective regional state institutions for the implementation of action plans through financial disbursement and technical backup. Regional bureaus are often responsible for adapting national plans to fit into the contexts of ANRS and coordinate Woreda offices for the implementation of plans. In the absence of lower-level structures, EFCCC must rely on coordinating with other Ministries as well as regional governments when seeking to implement policies and laws at the regional level. Currently, EFCCC sets regional and woreda level FLR targets that local authorities must meet. However, in fulfilling these quotas, it is often difficult to effectively engage farmers, as the identification of rehabilitation sites are often imposed by staff at the woreda office of agriculture and Development Agents (DAs) at the kebele (community) level (Lemenih & Kassa 2014). For example, in the preparation and implementation land use planning (a key principle in FLR) there lacks clarity and overlap of responsibility between ANRS BOANR and Bureau Environmental Protection, Land Administration & Use (BEPLAU), which is reflected in overlapping activities of respective woreda offices without coherent coordination mechanism (Zerfu 2016). Lack of cross-sectoral coordination was one of the main issues raised by stakeholders in Meket.

Cross-sectoral coordination for FLR should be incentivized through dedicated resources to ensure continuous engagement of all the relevant institutions. One reason for the absence of cross-sectoral coordination is because institutions, or individuals within institutions, are not incentivized to coordinate or engage in activities outside of their mandates. Most institutions receive annual budgets by the government to undertake specific mandates. Yet, there is no legal requirement, precondition, or additional incentive in place to coordinate or integrate activities overlapping in intent or outcome (Zeleeke et al. 2006). Consequently, no mutual accounting system makes institutions accountable either to each other or to the community they provide service. For example, to address this issue, SLMP and PSNP rely on stakeholder platforms as mechanisms to coordinate with various institutions. Facilitation of such platforms is, however, constrained by intensive resource demand and incentives required to engage other institutions. One of the recommendations that came out of these two programmes is the need for dedicated resources to ensure continuous engagement of all the relevant institutions (Tongul & Hobson, 2013).

Because several sectoral policies and proclamations pertinent to land management overlap, it results in a lack of clarity in mandates for implementing institutions. Beyond coherence in policy and regulations, effective implementation of FLR will also require vigorous cross-sectoral coordination and the development of relevant capacities among institutions overseeing various activities affecting sustainable land management activities across the different levels of government. Although there is limited clarity regarding the implications of streamlining the EFCCC structure at the regional level and division of responsibilities between BOANR and EFCCC, it is essential to recognize that BOANR's operational structure established from regional to kebele level is irreplaceable. Given the extension system both for natural resources (e.g. forests) as well as crop and livestock sectors are executed by the MOALR and its respective BOAs and lower-level structures, the need for coordination with other institutions is particularly important. Moreover, through the MOALR, the BOA's current mandates include facilitating natural resources protection and development through sustainable agricultural development and biodiversity conservation. For example, the natural resources directorate under the MOALR and regional bureaus such as BOA still manages a significant portion of the region's woodlands, AE and community forests. Capacity building at EFCCC is essential to take the initiative to seek to integrate relevant institutions into the FLR process, where they are currently

underrepresented as well as open dialogue to clarify overlapping mandates and responsibilities. Close coordination with the MOALR at the national level is particularly necessary in this regard to develop innovative institutional mechanisms that employ existing structures as crucial opportunity to maximize FLR agenda and ensure success at regional (ANRS) and woreda (Meket) levels.

Institution/Stakeholder	Current/Recent past activities related to FLR	Source of funds
Woreda office of Agriculture and Livestock Resources	• Technical assistance to farmers on improved agriculture production techniques: fertilizer use, improved seed provision, land management practice, modern agroforestry practice, etc. • Lead community mass mobilization to raise awareness on watershed development and protection (Soil erosion protection, reforestation, sustainable grazing practice, nursery management)	Government budget
Forest Sector Development programme project office	• Enhance the capacity of the forest sector; increase forest coverage that boosts carbon sequestration and other environmental services	UNDP/Norway and Sweden governments
Environmental Protection, Land Administration and Use Office at Woreda level	• Preserving and enhancing the productive capabilities of land in cropped and grazed areas • Actions to stop and reverse degradation - or at least to mitigate the adverse effects of earlier misuse	Government budget
ANRS Environment, Forest and Wildlife Protection and Development Authority	• conservation of natural resources such as forests and wildlife, ensuring the welfare of animals, and the prevention and abatement of pollution. It is guided by the principle of sustainable development and enhancement of human well-being	Government budget
Amhara Regional REDD+ Coordination Unit	• open an opportunity to support agroforestry development • REDD+ is focusing basically on climate change mitigation, reducing emission from deforestation, encouraged and supported to adapt to the changing climate through putting in place some livelihood restoration mechanisms.	Government budget
Productive safety net programme (PSNP)	• aimed at enabling the rural poor facing chronic food insecurity to resist shocks, create assets and become food self-sufficient. • Promotes watershed development and improve natural resources base; market development; encourage agricultural investments	GOE and 10 development partners
Organization for Rehabilitation and Development in Amhara Region	• Implement integrated sustainable livelihood development programmes to address the economic and social problem. It has four pillar programmes coined as Natural resource; Water, Sanitation & Hygiene and Irrigation; Food security & Agriculture; and Youth employment generation programmes.	Various and charitable contributions
Amhara Forest Enterprise	• Reinforce enabling conditions for the expansion of community forests and woodlots by prioritizing the transfer of management rights and securing benefits of community forests and woodlots for local communities, village associations, and forest user groups. • It promotes to conserve, develop forest and forest products to ensure food security by maximizing land use practice; introduce farm-forestry (agroforestry) practices among farming and semi pastoral communities.	Government budget
Labour, Youth, Sports, and Manpower Development	• Organize to engage large numbers of young people and labour organizations and help to reduce unemployment and	Government budget

	generate a lasting national commitment to a sustainable and prosperous nation.	
Youth Enterprise	Develop bee hives themselves using local materials; develop apple seedlings and growing apples; plan to develop bee-Keeping, Apple Fruit and Ecotourism	ACSI
Woodwork private enterprise	Mostly run by a youth entrepreneur interested in using wood from indigenous trees but these raw materials are scarce. Allows of eucalyptus timber production, the quality of logs is improved for carpentry.	ACSI
The Farmer Training Centre in each Kebeles	Provide technical and extension services to farmers in various crops, livestock and natural resources fields of development, production and management; prepare demonstration sites	No concrete financial sources
Office of trade and industry	Licensing and renewal licences for production and trade of marketable FLR products and Linking enterprises to market.	Government budget
Office of small and medium enterprises	- Register unemployed youth; identify potential resources in the Woreda/District - organize the youth in their respective groups based on their business interests provide training on entrepreneurship facilitate and link the youth with credit associations,	Government budget
Communities and farmers with woodlots	- Involved in the production of fuelwood, timber, wood carvings and forest-based foods. - They combine vegetables, crops, fruits, fodder, trees and cash crops.	Self-budget
GTZ with SLM (Sustainable land management programme)	- Promote energy efficiency at all levels (especially the efficient use of biomass resources at the households) - Promote the developments of Renewable Energy (RE) - promote rational use of natural resources, poverty reduction and food security - Enhance the capacity of the different development partners to integrate into their programmes and execute energy development measures - Apply sustainable land management measures in combination with income-generating activities	Bilateral donor
Honey processing cooperatives	Collecting honey; Processing honey as well as selling unprocessed honey to interested buyers; Marketing Honey	Self-budget

Table 5: Potential FLR stakeholders/institutions in Meket woreda

5.3. Implement

Leadership

National and/or local restoration champions exist (in place)

Sustained political commitment exists (in place)

Shared diagnostic

There is strong political commitment and leadership at the national government to advance forest landscape restoration and increase tree cover, as well to translate Ethiopia's ambitious climate and sustainable development targets into action plans while revising relevant regulations to create an enabling environment. Ethiopia's policy plans and recent initiatives are directed to restore millions of hectares of degraded land while also integrating forest landscape restoration activities into productive sectors. To achieve the objective of increased areas under restoration with productive purposes, two main approaches are being followed: area exclosures and afforestation and reforestation (small-scale and industrial plantations). Already existing programmes such as the Sustainable Land Management Programme (SLMP) promotes tree planting and area exclosures based on a mosaic landscape restoration approach integrating forest restoration activities within agriculture areas and the broader landscape.

The National Forest Sector Development Programme (NFSDP) by UNDP and EFCCC is piloting efforts to increase forest cover with environmental protection purposes and improving livelihoods. In degraded communal lands, area exclosures is a key approach promoted by Non-Governmental Organizations (NGOs) such as World Vision and SOS-Sahel. These organizations and others are actively engaged at the woreda with restoration activities or projects with restoration outcomes. More recently, the government has also made a pivotal commitment to promoting area exclosures across the country through community mobilization. Every year communities contribute labour for restoration activities. This is also shown through the ISFSD project through which encouraging signs of watershed management practices have been recognized by woreda leaders and communities in the lowland parts of the woreda.

Government offices at the regional and woreda levels are also committed to implement FLR however they fairly point out the limitations in guidance from the national level to implement policies, budgets to improve government capacities to assess restoration opportunities and carry out integral land use planning, and finance for FLR activities on the ground. Challenges remain in identifying specific opportunities for forest landscape restoration, including comprehensive strategies on how landscape restoration opportunities can be integrated into multiple productive sectors such as agriculture, infrastructure and industry. Also, low technical and financial capacities, and little coordination between different sectors. Additionally, information flow and exchange regarding decisions with implications on land-use change and forest remains limited, which further constrain restoration efforts (Birhanu, 2014). For example, while large-scale investment is currently among the potential drivers of land-use changes, decisions to allocate land for investment are carried out with limited stakeholder consultation and do not necessarily consider restoration of degraded land within decision models. Commitment to coordinate among regional and woreda sectoral offices with overlapping functions, although recognized as necessary by all, continue to be challenging to put into practice. Similarly, while there is a recognition to improve community consultation processes and inclusive decision making, efforts have been anaemic so far. Capacity development at all levels of government is essential to integrate the relevant institutions into the FLR process, including the integration of the FLR agenda into the national agricultural policy and the newly launched National Integrated Land Use Planning and Policy Process (NILUPP).

Further, in contrast to the strong statements of political will at the national level to advance restoration through policy design, there is a limited financial commitment in practice, given that until now the national government has not increased budget allocation to regions for landscape restoration. For example, interviews noted that the woredas struggle to cover costs of nurseries and Farmers' Training Centres (FTCs). Except for programmes funded by donors and NGOs, the cost of restoration activities is currently borne by communities through community mobilization to secure donated labour and time from members. Currently, the government budget is limited to paying for salaries and nurseries. Subsequently, there are no incentives in place to improve performance by woreda staff or additional budget for knowledge generation and technology transfer, which will constrain scaling up of restoration efforts and ensuring long-term sustainability. To ensure the long-term sustainability of landscape restoration efforts it will be worth exploring the development of community incentive mechanisms, such as fiscal incentives, Payment for Ecosystem Services (PES) programmes, or the creation of certification programmes for sustainable practices that would develop and increase the productivity of commercial agriculture and forestry-based value chains. However, operationalizing such incentive frameworks would not be effective without dedicated budget allocation and commitment from the government.

Finally, despite the political commitments of advancing restoration in broader landscapes, in practice most efforts tend to focus on degraded communal areas with limited efforts to integrate forest landscape restoration in private farmlands. Integration of forest production systems that also improve agricultural productivity is key to improving food security and reducing further land degradation. It is evident that national policy recognizes the importance of agroforestry in improving soil fertility and livestock feed availability, as well as meeting household and market demands -SLMP already promotes tree planting on private farmlands. However, increased government action is needed to explore and plan a more significant role of trees in and around farms. Key stakeholders such as MOALR need to be more engaged to ensure a collaborative approach to forest landscape restoration in agricultural areas. Areas of collaboration could include realigning current agricultural subsidies to promote forest landscape restoration at the level of individual farmers and incentivize decisions to plant productive trees that also provide ecosystem

services. Promotion of integrated and innovative land-use practices, such as agroforestry and silvopasture, could be promoted and scaled up.

Knowledge and technical design

Restoration “know-how” relevant to candidate landscape exists (not in place)

Restoration “know-how” transferred via peers or extension services (partly in place)

Restoration design is technically grounded and climate-resilient (partly in place)

Restoration limits “leakage” (partly in place)

Shared diagnostic

There are decades of substantial knowledge base in SNNPR and ANRS covering PFM, bamboo-based agroforestry, area exclosures, and integrated watershed management which can be transferred to Meket. Much of this know-how is available within woreda staff and NGOs such as SOS Sahel and World Vision, who have implemented projects in other parts of ANRS, SNNPR and to some extent in Sodo. However, many institutions and departments are constrained by instability, lack of capacity, limited budgets and high staff turnover. These challenges often undermine a sense of ownership of programmes and relationships within institutions, which often causes discontinuity of initiatives and loss of institutional memory. Additionally, there is not enough attention given to knowledge management, with experiences gained and challenges faced are not well documented. Projects supported by external support, such as through NGOs, are often short-lived whereby lessons and experiences although documented do not complete the cycle of transferring knowledge to be utilized by local institutions, such as woreda departments. It remains of critical importance to building the capacity of relevant woreda institutions to plan, implement, monitor and evaluate FLR interventions. Systematically building the capacity of woreda and lower-level institutions/community ensures that FLR is implemented in a manner that is knowledge-based, inclusive and participatory. As such, providing training and technical assistance to regional and woreda experts to scale-up forest landscape restoration will be important. Both at regional and woreda levels, it is crucial to ensure incentive mechanisms are targeted to boost experts’ commitment and awareness to information knowledge dissemination on landscape restoration. Capacity building events such as on-the-job training, restoration-focused field days and demonstrations as well as knowledge exchange sessions to key stakeholders could be an entry point. It should also be noted that stronger restoration-related extension activities that strengthen community capacity building and ensure broader and inclusive community engagement will be needed. It is crucial to engage MOALR to evaluate alternatives to reinforce the functioning of the FTCs to maximize restoration objectives. Moreover, experiences from Tigray highlight the role of using local-level traditional institutions such as IDIR and MAHEBER (local-level self-help associations established voluntarily to solve societal problems) as a strategy for the dissemination of knowledge and demonstration of impacts and could have a role in promoting and scaling up interventions into areas where there were previously no interventions or where success has been limited (Birhane et al., 2017). It should be noted that such extension and information dissemination about restoration should respond to and substantively include the needs of women and youth.

Finally, the lack of an integrated national land use plan and definition forest, forestlands and woodlands continue to be a challenge as there is no harmonized and universal land use plan and policy at the regional/local level to guide land use. Areas that should have forest or need to be defined as forestlands and woodlands are often used for other land uses functions, such as farming, and vice versa. At micro-watershed level, the community-based watershed development guideline by MOALR is instrumental in providing standard approaches to watershed interventions across different geographical locations and government initiatives focusing on land restoration. However, the guidance falls short of providing adequate emphasis on land use planning and implementation, hence, it is often undertaken with limited use of available information. The processes of site selection, setting restoration objectives, as well as the development of management plans are undertaken with limited community participation, a complementary process for integrated land use planning. Comprehensive national and subsequent regional level guidelines will be required to guide the process of establishing and managing forest landscape restoration initiatives. As discussed earlier, the newly NILUPP within the Prime Minister’s Office offers an opportunity to integrate FLR into national plans and also develop guidelines.

Finance and incentives

“Positive” incentives and funds for restoration outweigh “negative” incentives for status quo (not in place)

Incentives and funds are readily accessible (not in place)

Shared diagnostic

Improved access to and economic benefit from trees by communities is considered the most significant incentive to manage them sustainably. Woreda nurseries offer seedlings free of charge; however, beyond this, other financial incentives or subsidies for tree planting applicable to Sodo and Meket could not be identified. While the current investment policy offers tax incentives for the establishment of large-scale plantations, corresponding incentives extended to private farmers or communities establishing woodlots through proclamation 1065/2018 has not been regulated and not implemented at woreda level. Specifically, proclamation 1065/2018 included incentives for forest developers such as tax exemptions and access to loans upon fulfilling appropriate requirements. The proclamation indicates that forest development incentives will be determined by a follow-up regulation. It is unclear whether the follow-up regulation will articulate the requirements for accessing loan for forest development or whether it will outline favourable condition for communities to access credit for restoration activities.

There is a lack of business development services such as training, access to finance, business skills training, coaching and market access support services. It should be noted that incentive frameworks that actively promote forest landscape restoration and integration of forest production systems that also improve agricultural productivity will be needed. For instance, lack of sustainable management of woodlots coupled with monoculture practices is likely to cause spillover environmental impacts. To change this trend, it will be necessary to develop strategies to promote adoption and uptake of diverse species, including institutional collaboration to create and implement modalities, mechanisms to expedite the assimilation of various species. Towards such goals, market intervention on wood-based manufacturing enterprise for species diversity and ecological functionality will be needed. Proper silvicultural and harvesting techniques, mixed plantations as well as the introduction of alternative and high-value tree/shrub species, among others, offers an opportunity for effective FLR. Currently, farmers struggle with limited access to capital for FLR activities.

As noted earlier, organizing and increasing the productivity of commercial agriculture and forestry-based value chains will be a crucial incentive for farmers and communities. As noted in other parts of the country, forest high-value chains and agroforestry systems can compete economically with crops (e.g. apple/bamboo agroforestry systems), but market infrastructures (that can also add value) and technical support (sustainable land use and management practices for eucalyptus) will be key for successful investments. In-depth analysis of potential value addition for bamboo will be required to understand better enabling environments conducive to expanding FLR. At the national level, the Ethiopian Environment and Forest Research Institute (EEFRI) is carrying out pilots on the prospects of introduced bamboo species in Ethiopia, additionally to native bamboo species. In Sodo, UNDP is introducing bamboo and the result of these efforts will be worth following.

Sodo Guragie diagnostic

At the woreda level, WFEPO experts expressed their challenge to enforce national-level proclamations due to lack of clear directives and implementation manuals to enforce, further limiting the opportunity to execute the mandate of the office effectively. As such, no restoration-related loans are reported in Sodo. There is a lack of business development services such as training, access to finance, business skills training, coaching and market access support services. The woreda office of Youth and Sports and woreda office of Enterprise Development remain the only local government institutions that provide services or facilitation to enterprises. The role of the government will be crucial to engage microfinance and rural savings institutions to promote and facilitate loans that are compatible with FLR activities (agroforestry, silvopastoralism, NTFP, mixed species plantations) and to create financial products for such activities. As such, strengthening the financial and technical capacity of the woreda offices of Youth and Sports and Enterprise Development could help facilitate the process.

Meket diagnostic

The woreda office of Youth and Sports, woreda office of Enterprise Development and woreda office of cooperatives development remain among the few local government institutions that provide services or facilitation to enterprises. The role of the government will be crucial to engage microfinance and rural savings institutions such as the Amhara Credit and Saving Institution (ACSI) to promote and facilitate loans that are compatible with FLR activities (agroforestry, silvopastoralism, NTFPs, mixed species plantations) and creating financial products, especially for these activities. As such, strengthening the financial and technical capacity of these woreda offices could help facilitate the process.

Meket has potential for high-quality honey production, which provides an opportunity to integrate honey into a forest production system. However, it faces multiple challenges including lack of processing and packaging facilities, lack of necessary business skills such as business planning, bookkeeping, organisation and management, and marketing. There is a need for interventions to organize and promote the honey value chain whereby timber and honey resources can create an additional source of income. The Honey Processing Union known as '*Amhara bottled Honey (Agunta)*' should be engaged and supported to organize and build the capacity of the honey value chain. Support from Amhara region Livestock and Fishery Bureau/Agency and ORDA is also an important and crucial aspect for such potential businesses, as restoration and beekeeping will highly complement and address human wellbeing in FLR intervention areas.

Feedback (monitoring, evaluation and support system)

Effective performance monitoring and evaluation system is in place (partly in place)

Early wins are communicated (not in place)

Shared diagnostic

EFCCC is responsible for performance monitoring and evaluation of forest landscape restoration efforts in Ethiopia. However, monitoring capacity remains a challenge. Currently, EFCCC's monitors annual tree planting through reports the Commission receives twice a year on the distribution of seedlings planted. There is a recognition on the potential shortfalls of such information, including the need to complement with satellite imagery, expertise the Commission does not currently have. EFCCC is the principal national entity implementing REDD+ through the Forest Carbon Partnership Facility (FCPF) and the Oromia Forested Landscape Programme with funding from the BioCarbon Fund Initiative for Sustainable Forest Landscapes (ISFL). Similar mechanisms are currently applied to monitor progress in the REDD+ process could be applied for monitoring and evaluation of forest landscape restoration efforts.

There is often lack of clarity and communication with communities on how long the areas will remain closed, how they will be managed for better economic and environmental outcomes, and what indicators should be used to measure socio-economic and ecological gains (Lemenih & Kassa 2014). Additionally, success stories are often evaluated and reported based on the achievement of outputs (i.e. quotas) and not the long-term effectiveness of the restoration efforts or the perceived or actual benefits provided to local people. Beyond meeting quota requirements, the long-term sustainability of FLR investments is not a criterion for performance metrics of woreda offices. Because most FLR efforts are focused on reducing land degradation, there is a lack of attention and capacity in evaluating the contribution of such initiatives to livelihood improvement. Monitoring capacity (technical and financial) remains limited, with minimal follow-ups once seedlings are distributed to farmers (private land) or planted in communal areas.

At SNNPR level, the management and protection of forestry and forestland fall under the responsibility of Environmental Protection and Forest Authority and the competent mirror authority at the woreda level. However, given its recent installation, the Authority does not yet have enough capacity to monitor forest development and related activities. By illustration, stakeholder interviews in Hawassa indicated that the Authority is in the process of developing an initial baseline to build an understanding and database as to the extent of forest cover in the region.

At ANRS level, the BoA is the leading government institution responsible for planning and implementation of FLR. The BoA is currently planning and implementing different forms of FLR, including through purposeful tree planting, area exclosures, watershed developments, and land use planning through flagship programmes such as the SLMP,

PSNP and the annual mass mobilization programme. EFCCC is represented through the regional REDD+ coordination unit.

The management and protection of forestry and forestlands fall under the responsibility of BOANR, together with the regional REDD+ Coordination Unit, and the competent mirror authority at the woreda level (WOANR). However, given its recent installation, the EFCCC is represented by the REDD+ coordination unit at ANRS level and does not yet have enough capacity to monitor forest development and related activities. Similarly, at the woreda level, WOANR, ISFSD project office and woreda office and rural land administration carry out restoration activities, with limited capacity for monitoring. Given FLR is carried out among land-use institutions with overlapping roles and functions, it is unclear how monitoring of progress is coordinated. Ownership and follow up by woreda offices of restored land is limited.

6. Diagnosis summary and recommendations looking forward

6.1. Barriers and opportunities

Barriers
High level of population density and continued land fragmentation coupled with low crop productivity • High population density and land fragmentation continue to exacerbate dependency on the exploitation of communal resources, which will undermine FLR efforts on communal lands. • Agriculture is characterized by low input/low output with little value addition, perpetuating pressure on natural resources.
Awareness and commitment • Awareness-raising campaigns are often deployed as a way of mobilizing farmers to implement specific activities rather than a continued effort to improving knowledge. • Tangible short-term economic incentives/benefits need to be in place to ensure that restoration interventions developed through mass mobilization campaigns subsist in the long term and communities develop a sense of ownership; direct benefits motivate farmers to pursue FLR that focus on long-term environmental benefits. • Limited effort to expand farmers' role in the planning and implementation of FLR activities through devolution of decision-making authority at the local level. It will also be essential to build the technical and managerial capacities of communities and their organizations to manage land under FLR better.
Lack of policy coherence • Lack of policy incentives to farmers for planting or managing natural forests or indigenous trees due to the restrictive policies on natural forests and native trees. Natural forests are often managed for conservation purposes, and communities are not allowed to use wood from natural forests for commercial purposes. • Limited clarity for the management of communal areas. • Allocating to landless youth of area exclosures that have been rehabilitated and managed by local communities could erode the trust of the community regarding ownership arrangement of area exclosures. • Large-scale agricultural investment decisions granting rural land for investment at times results in the clearing of trees and forests, putting it at odds with the Forest and Land administration policies that aim to reduce deforestation and land degradation.
Lack of institutional capacity • Lack of integrated national land-use policy. • Lack of clarity and overlap of responsibility between BOA and Environmental Protection and Forest Authority. • Incentives are missing for cross-sectoral coordination at the district level. • Extension services for forestry provide services to communities, although not in a sufficient manner that ensures impacts in the long term and a proper scale.
Limited Knowledge on FLR • Most efforts have aimed more at conservation than at also improving livelihoods; restoration for environmental purposes need to be followed up better to ensure survival and avoid further degradation, they need to be expanded across the woreda. • There is a huge untapped potential for restoration on productive land; although there are a few initiatives with the application of agroforestry, is not by any means a common practice. • Farmers receive little support on how to manage trees on private land sustainably. Expertise in agroforestry and mixed-species silvicultural practices are low. • Lack of knowledge management systems and how to deal with the issue of free-grazing. • There is no proper identification of the tree species that could respond well depending on the agroecology. Hence it is not possible to elaborate a plan to increase seedlings variety.

There are insufficient data and technology available to generate spatial data necessary to design forest landscape restoration plans at the district level.
Lacking infrastructure - The poor road connectivity severely limits access to services and markets by communities. - Poor accessibility poses a barrier for development and business-oriented investments alike.
Land use planning is inexistent There is no woreda level land use planning or zoning that assigns land suitability for different uses based on economic, social and environmental potential.
Value chains and access to finance - Value chains exist for agricultural products and livestock and not for restoration-related products such as vegetable value chains. - There are financial institutions that provide loans and credits to individuals, associations and cooperatives but their requirements (co-financing, a minimum number of co-signers) could be a deterrent to expanding the use of credit for land use-based activities. - These financing institutions do not have specific products nor offer incentives for the propagation of FLR compatible activities. - Lack of business development services, such as technical and business training and limited access to financial services.

Opportunities
National policy commitment and growing positive attitude to tree planting - Ethiopia's commitment to FLR as outlined in the CRGE. - The increasingly positive attitude and momentum to tree planting.
Regulations relevant to FLR exist The new Forest Policy Code sets out more provisions that promote local community participation in forest management through recognition of community forests as a third type of forest ownership. The proclamation also places an obligation on forest developers to respect and observe laws issues for environmental safety, watershed protection and biodiversity conservation. In turn, forest developers received improved rights and incentives to promote development in the sector.
Opportunity for close coordination through existing institutional structures Given the extension system in place both for natural resources (e.g. forests) as well as crop and livestock sectors under the responsibility of BOA and lower-level structures, the need for coordination with other institutions is particularly important. Close coordination with the MOALR at the national level is particularly necessary in this regard to develop innovative institutional mechanisms that employ existing structures as a crucial opportunity to maximize FLR agenda.
Scaling up of lessons learned in Tigray, Oromia, SNNPR and Amhara - Extensive experiences have been gained through the restoration of severely degraded landscapes in Tigray region as well as other parts of ANRS. Lessons learned in Tigray can be replicated along with the incentive mechanisms. - Apple–bamboo-based agroforestry practice in Sidama zone is worth noting. - UNDP's broad-based approach to FLR in Sodo.
The scale of land degradation and land available for restoration - The level of land degradation in Sodo offers an opportunity for FLR, but effective incentive mechanisms need to be identified to succeed. - UNDP's comprehensive approach in both woredas provides a basis for learning experiences and elements of success and scaling up.
Market demands - Market demands for wood and wood products have been an important driver for smallholder woodlots. - Opportunity to introduce productive agroforestry and improved woodlot management practices - With a small increase in technical interventions, FLR initiatives have the potential to be productive and rewarding to communities.

6.2. Proposed strategy

Based on the information shared with stakeholders and gathered through a desk review, this section presents the proposed strategy to scale up forest landscape restoration in Sodo and Meket which, if implemented, will help to ensure the long-term sustainability of landscapes. FLR measures will need to promote sustainable agricultural and woodland management, as well as the development of value chains that will improve livelihoods.

The proposed strategy has six key components:

- **Institutional capacity development and enhanced coordination.**

The institutional capacity development of the Environment, Forest, and Wildlife Protection and Development Authority is key. They are responsible for the implementation of FLR outside protected areas and capacity development should focus on supporting the EPFA in further developing capacity in relevant zonal and woreda offices as well, including on the implementation of cross-sectoral coordination structures and processes as they scale between national and local jurisdictions.

The Environment, Forest and Wildlife Protection and Development Authority needs to work in close cooperation with other relevant institutions through a multi-stakeholder cross-sectoral platform. The implementation of a restoration strategy in the candidate landscape would be complementary to other land-use oriented programmes such as the SLMP and PSNP. Absence of cross-sectoral coordination can be attributed to the fact that institutions or individuals within institutions are not incentivized to coordinate or engage in activities outside of their mandates. Both at the regional and local level, it is crucial to establish a clear outline of mandates for institutions dealing with FLR and decentralize those mandates appropriately. It is worth noting that achieving greater results in FLR initiatives under a decentralized structure is often complex and building the capacity of stakeholders at the woreda level is of critical importance.

- **Build effective incentive packages for farmers to promote diversification of tree species, including plantations of diversified species for different uses, bamboo and agroforestry in both protection and productive lands, utilizing existing government structures (training centres, kebeles' systems, etc).**

Most communities do not see significant economic benefits from area exclosures, and attention could be given to alternatives such as selective enhancement of trees in exclosure areas where commercial species grow next to indigenous trees, enabling use and commercialization of timber and fuelwood coming from the enclosed areas. Payment for ecosystem services for conservation measures led by communities in area exclosures should be explored.

For private farmland, upfront incentives in the form of training and in-kind materials can be packaged and provided to selected groups of farmers who can become examples to other farmers (peer-to-peer motivation) as they collect the benefits from restoring lands, improved crops, and income from diversified tree species. Existing government structures need to be strengthened and their efficiency enhanced with additional capacity and budget to ensure that incentives are properly and successfully implemented. It is critical to assign public budgets from the national down to the local level for sustained programmes of incentives. Potential sources of national level finance are discussed in Annex 3.

- **Development of an implementation strategy for FLR**

Priorities should be given to developing restoration strategies at the landscape level that strike a balance to both needs and enhance complementarities of conservation objectives with increasing land productivity.

Community efforts to restore degraded areas for environmental purposes need to be undertaken in parallel with necessary restoration activities with a productive focus that will generate income to the farmers. By addressing both types of needs through an integrated approach to restoration, it is more feasible to manage realistic community expectations and a timeline of when economic benefits could be reaped.

For this, the comprehensive design and implementation of restoration measures is needed, including the restoration of degraded landscapes and their sustainable management, agroforestry, and the establishment of woodlots and plantations for subsistence and commercial purposes. Effective restoration practices that have the potential to be scaled up in the districts should be identified. Successful experiences of agroforestry in other parts of the country (incl. apple/bamboo systems, orchards, and others) are worth exploring. Also, UNDP's effort to introduce bamboo in the area should be noted for early lessons.

The design of specific FLR activities should be based on a thorough understanding of degradation levels and drivers of degradation and deforestation, and a key role will be played by land-use planning that assigns land suitability for different uses based on economic social, and environmental potential, taking into consideration the conservation of biodiversity in the productive landscapes. The implementation strategy needs to have a plan to equip smallholders with technical packages that allow them to carry out FLR successfully.

- **Tree-product value chain development, including for high-value trees (timber and NTFP), and private sector finance for FLR**

Improving the production of and marketing for NTFPs and timber by promoting the establishment and capacity building of community-based organizations (such as cooperatives), where the cooperative agency of the woredas have a key role. This strategy, coupled with an effective value chain reinforcement and value addition is essential to create income opportunities for landless youth and entrepreneurs interested in investing in small or medium forest industries. Developing FLR business models for private sector investments and their implementation including value addition to wood products. It is essential to investigate further and promote restoration-based value chains including for example apple/bamboo, other successful agroforestry systems, and sustainable forestry management practices. The involvement of international finance, impact investors and financial institutions to promote blended finance instruments that attract private investment is fundamental.

- **Improve tenure security on communal land and complete issuance of land certificates on private land**

Area enclosures are undertaken mainly on communal lands, and tenure insecurity persists due to a lack of clarity on the role of community participation, and the benefit rules from the forest products in communal lands. Thus, it is essential to improve tenure regimes in communal lands. For agroforestry systems and private woodlots, it is of critical importance to ensure that all kebeles are issued land certificates to promote investment on private landholdings.

- **Improve community participation, capacity building and awareness**

It is crucial to expand farmers' role in the planning and implementation of FLR activities through devolution of decision-making authority at the local level. It will also be essential to build the technical and managerial capacities of communities and their organizations to manage land under FLR better.

The likely lead institution for FLR is the environmental offices at the woredas, working in close cooperation with the Bureau for Agriculture and Livestock Resources Management, through a multi-stakeholder platform that provides access for other key stakeholders such as community and women's groups, intergovernmental organizations, and NGOs. The implementation of a strategy to scale up forest landscape restoration in the candidate landscape would be complementary to other land-use-oriented programmes, such as those activities led by UNDP and by the Agriculture Ministry. Given the high population density, severe land degradation and land fragmentation the implementation of such a strategy would generate know-how which could be transferred to other areas with similar circumstances.

Successful awareness generation is closely related to the capacity, knowledge and experience from woreda officials and personnel in delivering effective stakeholder consultation processes, tailoring local planning or utilizing other innovative mechanisms relevant to enhance awareness and build capacity on techniques, principles and multiple benefits of FLR. A more comprehensive approach to awareness can help address this, including providing more resources and capacity to woreda personnel on FLR including communication and capacity development strategies

for equipping kebeles and communities with the requisite knowledge and skills. This, coupled with a system of incentives and accountability that takes a landscape approach (i.e. beyond numbers of trees planted), could result in adequate awareness and motivation for FLR in woredas and communities. Engaging other stakeholders such as school teachers and instructors, religious leaders, local media, and others is also key. Awareness of the landscape needs of communities and private farmers needs to be built on factual information and improved capacity, however tangible economic incentives and feedbacks also need to be in place to ensure that restoration interventions developed through mass mobilization campaigns subsist in the long term and communities create a sense of pride in the condition of their environments.

6.3. Recommended next steps

The following activities are advised to prepare for the implementation of the strategy:

Governance

1. Conduct a detailed capacity development needs assessment for relevant regional and woreda government offices and develop an action plan, prioritizing the capacity gaps and identifying potential partners to close these gaps. Assess options and the necessary institutional framework for integrated land use planning both at the regional and district level. Approaches to overcome identified capacity gaps are incorporated through this document which should be taken into account.
 - Macro-level planning for the entire district landscape, where the complex system of high conservation value ecosystems and wildlife movement, existing and planned infrastructure, and centres of human population can be reflected adequately. Integrating FLR into the newly launched NILUPP is essential.
 - Micro-level land use planning (kebele level), to embed the needs and detailed knowledge of local communities.
2. Provide access and capacity building to woreda offices to utilize Arc GIS and generate raster data as a tool to improve knowledge and land use planning.
3. Generate intra and inter-institutional coordination mechanisms at the woreda, regional, and national levels to tackle the different issues arising at all levels from lack of coordination, cooperation, and overlapping efforts. This should be done building on the capacity of stakeholders and actors at each of these levels to design comprehensive strategies to integrate landscape restoration opportunities into multiple productive sectors.

Technological packages for restoration

1. Assess the potential to introduce and promote alternative, short and medium-term rotations of economically productive tree plantations using alternate tree native/exotic species, including appropriate silvicultural practices.
2. Facilitate the expansion of apple fruit tree in highland areas by offering improved quality seedlings and availability of tools at local markets for apple tree management.
3. Assess the economic and physical potential to introduce high-value fruit-based bamboo agroforestry systems in agricultural areas.
4. Assess the possibility of installing seed banks to address the issue of seedling production.
5. Identify effective silvicultural practices which suitability for Sodo and Meket can be assessed and scaled up, focusing on diversifying and mixing eucalyptus with productive native tree species, including bamboo.
6. Establish of short rotation/economically productive communal and private woodlots, using existing structures, namely farmer training centres. Build the necessary capacity for provision of technical advice to farmers in district and kebele administrations, and in PFM cooperatives/groups.

Markets and value chains

1. Complete an assessment of integrating landless youth to markets through access to resources, capacity and funds for forest-related activities such as forest enterprises, cooperatives for the production of timber and non-timber forest products. Identify potential for a role for the youth in the current situation of land scarcity.
2. Consider building the overall capacity of existing small wood product based private enterprises that potentially buy wood products from individual farmers involved in FLR. This will create a good market for forest products, basically timber products of native species like *Cordia Africana*.
3. Undertake market research on the current availability, sustainability and potential scale of NTFPs and timber in the landscape and develop business models to explore the potential for a public-private partnership, as well as cooperatives, for the most promising sustainable natural resource value chains.

References

- Asfaw, Z., Y. Mulatu, B. Assefa, T. Abebe, S. Duna, G. Mulugeta, H. Berhanten, H. Kassa. (2015.) *Enhancing the Role of Forestry in Building Climate Resilient Green Economy: Strategies for Scaling up of Effective forest Management Practices in Southern Nations Nationalities and Peoples Regional State with an Emphasis on Agroforestry*. Addis Ababa, Ethiopia: CIFOR
- Birhane, E., Mengistu, T., Seyoum, Y., Hagazi, N., Putzel, L., Mekonen Rannestad, M. And Kassa, H. (2017). Exclosures as forest and landscape restoration tools: lessons from Tigray Region, Ethiopia. *International Forestry Review, Special Issue: Forest landscape restoration and upland land use* 19 (S4)
- Beatty, C.R., Vidal, A., Devesa, T., and Kuzee, M.E. (2020). *Accelerating biodiversity commitments through forest landscape restoration; Evidence from assessments in 26 countries using the Restoration Opportunities Assessment Methodology (ROAM)*. Gland, Switzerland: IUCN. [online]. Available at <https://portals.iucn.org/library/node/48975> (Accessed: June 23, 2020)
- Birhanu A. (2014). Environmental degradation and management in Ethiopian highlands: Review of lessons learned. *International Journal of Environmental Protection and Policy*, 2, 24-34.
- Biryahwaho, B., Misiko, m., Tefera, h. and Tofu, A.(2012). "Case Study: Humbo Ethiopia Assisted Natural Regeneration Project." CGIAR Research Programmes on Climate Change, Agriculture and Food Security (CCAFS). Institutional Analysis and Capacity Building of African Agricultural Carbon Projects Case Study. Copenhagen, Denmark.
- Brancalion, P.H.S., Pinto, S.R., Pugliese, L., Padovezi, A., Rodrigues, R.R., Calmon, M., Mesquita, B. (2016). Governance innovations from a multi-stakeholder coalition to implement large-scale Forest Restoration in Brazil. *World Dev. Perspect.*3, 15–17.
- Carodenuto, S., Wathum, G., Kiff, L., Pistorius, T. and Tennigkeit, T. (2015). *Forest Landscape Restoration in Ethiopia, specific to Amhara National Regional State- Methodology, Options and Business Cases*. Freiburg, Germany: UNIQUE
- Cullen, B.,Tucker, J., Snyder, K., Lema, Z., and Duncan, A. (2014). An analysis of power dynamics within innovation platforms for natural resource management. *Innovation and Development*, 4:2, 259-275
- Denier, L., Scherr, S., Shames, S., Chatterton, P., Hovani, L., and Stam, N. (2015). *The Little Sustainable Landscapes Book*. Oxford, UK: Global Canopy Programme.
- Environment, Forest and Climate Change Commission of Ethiopia (EFCCC) (2016). *National Forest Sector Development Programme, Ethiopia. Volume I: Situation Analysis*. Addis Ababa, Ethiopia
- EFCCC (2018). National Forest Sector Development Program, Ethiopia. [online] Available at https://www.efccc.gov.et/images/PDF/Forest_Programmes/National%20Forest%20Sector%20Development%20Program_Volume%20III;%20Synthesis%20Report.pdf (Accessed: June 23, 2020)
- EFCCC (2019a). *Tree-based Landscape Restoration Potential and Priority Maps for Sodo Guragie (Southern Nations, Nationalities, and Peoples' Regional State)*. Addis Ababa: EFCCC.
- EFCCC (2019b). *Tree-based Landscape Restoration Potential and Priority Maps for Meket (Amhara Regional State)*. Addis Ababa: EFCCC.
- Federal Democratic Republic of Ethiopia (FDRE) (2011). *Climate Resilient Green Economy Strategy (CRGE)*. Addis Ababa, Ethiopia.
- FDRE (2015a). *Land Degradation Neutrality National Report*. Addis Ababa, Ethiopia.

FDRE (2015b). "Intended Nationally Determined Contribution (INDC) of the Federal Democratic Republic of Ethiopia." Addis Ababa: FDRE. [online] Available at: <http://www4.unfccc.int/submissions/INDC/Published%20Documents/Ethiopia/1/INDC-Ethiopia-100615.pdf> (Accessed: June 23, 2020)

FDRE (2011). Ethiopia's Climate-Resilient Green Economy. Green economy strategy. Available online: <http://www.undp.org/content/dam/ethiopia/docs/Ethiopia%20CRGE.pdf>

FDRE (2018). Forest Development, Conservation and Utilization Proclamation No 1065/2018.

Fiestas, I., Leckie, J., Mayr, C. (2018). "Formalising Land Rental Transactions in Ethiopia – Is Land Certification Enough?" Conference paper presented at the "2018 World Bank Conference on Land and Poverty." Washington DC: The World Bank

Gichuki, L., Brouwer, R., Davies, J., Vidal, A., Kuzee, M., Magero, C., Walter, S., Lara, P., Oragbade, C. and Gilbey, B. (2019). Reviving land and restoring landscapes: Policy convergence between forest landscape restoration and land degradation neutrality. Gland, Switzerland: IUCN. viii + 34pp. [also available at doi: <https://doi.org/10.2305/IUCN.CH.2019.11.en>].

Government of Ethiopia (GOE) Ethiopia's Climate-Resilient Green Economy (CRGE) strategy (2011). [online] Available at: <http://www.undp.org/content/dam/ethiopia/docs/Ethiopia%20CRGE.pdf> (Accessed: June 23, 2020)

International Union for Conservation of Nature (IUCN) (2011). The Bonn Challenge website. [online]. Available at www.bonnchallenge.org. (Accessed: June 23, 2020)

IUCN (2017). *What is FLR, InfoFLR*. Available at: www.infoflr.org (Accessed: 13 July 2020).

IUCN. (2018). Increasing ambition and action on NDCs through FLR. [online]. Available at: <https://infoflr.org/what-flr/increasing-ambition-and-action-ndcs-through-flr>. (Accessed: June 23, 2020)

IUCN and WRI (2014). "A guide to the Restoration Opportunities Assessment Methodology (ROAM): Assessing forest landscape restoration opportunities at the national or sub-national level". Working Paper (Road-test edition). Gland, Switzerland: IUCN. 125pp.

Johnson F.X. and Mengistu A.T. (2013). *Alternative Future Pathways for Household Bio-mass Use in Ethiopia*. Stockholm, Sweden. Stockholm Environment Institute.

Kassa, H., Birhane, E., Bekele, M., Lemenih, M., Tadesse, W., Cronkleton, P., Putzel, L. and Baral, H. (2017). Shared strengths and limitations of participatory forest management and area enclosure: two major state-led landscape rehabilitation mechanisms in Ethiopia. *International Forestry Review* Vol.19 (S4)

Kumar, B.M. and Nair, P.K.R. (2003) The enigma of tropical homegardens. *Agroforestry Systems* **61**, 135–152 <https://doi.org/10.1023/B:AGFO.0000028995.13227.ca>

Desta, L., Kassie, M., Benin, S., and Pender, J. (2000). "Land degradation and strategies for sustainable development in the Ethiopian highlands: Amhara Region". *Socio-economics and Policy Research* Working Paper 32. Nairobi, Kenya: ILRI.

Lawry, S., McLain, R. and Kassa, H.. (2015). *Strengthening the resiliency of dryland forest-based livelihoods in Ethiopia and South Sudan: A review of literature on the interaction between dryland forests, livelihoods and forest governance*. Working Paper 182. Bogor, Indonesia: CIFOR.

Lemenih, M. and Kassa, H. (2014). Re-greening Ethiopia: History, challenges and lessons. *Forests*, **5**(8), 1896–1909.

Ministry of Environment, Forest and Climate Change (MEFCC) (2018). "National Potential and Priority Maps for Tree-based Landscape Restoration in Ethiopia (version 0.0) Technical Report". Addis Ababa, Ethiopia.

- Mekuria, W. (2013). Conversion of communal grazing lands into exclosures restored soil properties in the semi-arid lowlands of northern Ethiopia. *Arid Land Research and Management*, 27(2):153-166
- Ministry of Agriculture and Rural Development (MOARD) (2009). *The Ethiopian Agricultural Investment Areas*. Agricultural Investment Support Directorate. Public Relation Bureau.
- Murugan, P. and Israel, F. (2017). Impact of Forest carbon sequestration initiative on community assets: the case of assisted natural regeneration project in Humbo, southwestern Ethiopia. *Afr Stud Q* 17(1):23–42
- Oakland Institute. (2011). *Understanding land investment deals in Africa. Country report: Ethiopia*. Oakland, USA.
- Reinecke, S. and Blum, M. (2018). “Discourses across Scales on Forest Landscape Restoration” *Sustainability, MDPI*, Open Access Journal, vol. 10(3), 1-19
- Sandewall, M., Kassa, H., Wu, S., Khoa, P.V., He, Y., and Ohlsson, B. (2015). Policies to Promote Household Based Plantation Forestry and Their Impacts on Livelihoods and the Environment: Cases from Ethiopia, China, Vietnam, and Sweden. *International Forest Review* 17: 98–11
- Southern Nations Nationalities and Peoples Regional State (SNNP) (2007). Proclamation No. 110/207: Rural Land Administration and Utilization Proclamation. Available at <http://extwprlegs1.fao.org/docs/pdf/eth164265.pdf>
- SNNP (2012). Proclamation No. 147/2012: Forest Development, Conservation and Utilization Proclamation. Available at <https://chilot.me/wp-content/uploads/2017/07/e188b5e18bb0e18a95-e1888de1889be189b5-e18ca5e189a0e18983e18a93-e18aa0e18ca0e18983e18980e1889d-e18aa0e18b8be18c85-e18981e18ca5e188ad-147.pdf>
- Streck, C., Murray, B., Aquino, A., Durschinger, L., Estrada, M., Parker C., and Zeleke, A. (2015). “Financing Land Use Mitigation: Practical Guide for Decision Makers.” Prepared with support from cooperative agreement # S-LMAQM-13-CA-1128 with U.S. Department of State.
- Tadesse, S. A. and Tafere, S.M. (2017). Local people’s knowledge on the adverse impacts and their attitudes towards growing Eucalyptus woodlot in Gudo Beret Kebele, Basona Worena district, Ethiopia. *Ecological Processes*, 6:37.
- Tadesse, W., Gezahegne, A., Tesema, T., Shibabaw, B., Tefera, B. and Kassa, H. (2015). *Enhancing the Role of Forestry in Building Climate Resilient Green Economy in Ethiopia: Strategy for scaling up effective forest management practices in Amhara National Regional State with particular emphasis on smallholder plantations*. Addis Ababa, Ethiopia: CIFOR
- Techel, G. and Lemenih, M. (2017). Strategy for Forest Landscape Restoration and biodiversity conservation between Chebera chuchura National Park and Kafa Biosphere Reserve. Unique Forestry and Land Use: Final report prepared for GIZ.
- Tongul, H. and Hobson, M. (2013). *Scaling up an integrated watershed management approach through social protection programmes in Ethiopia: the MERET and PSNP schemes. Hunger, Nutrition, Climate Justice. A new dialogue: Putting people at the Heart of Global Development*. Dublin.
- United Nations Environment Programme (UNEP) (2016). *The contribution of forests to national income in Ethiopia and linkages with REDD+*. United Nations Environment Programme: Nairobi
- United Nations (UN) (2012). New York Declaration on Forests, Actions Statements and Action Plans; Climate Summit: New York, NY, USA, 2012; [online]. Available at: <http://www.un.org/climatechange/summit/wpcontent/uploads/sites/2/2014/07/New-York-Declaration-on-Forest%E2%80%93Action-Statementand-Action-Plan.pdf>. (Accessed May 20, 2020)
- Weldesemaet, Y. (2015). ‘Economic contribution of communal land restoration to food security in Ethiopia: Can institutionalization help?’ In: Kumar, C., Begeladze, S., Calmon, M. and Saint-Laurent, C., (eds.). *Enhancing food*

security through forest landscape restoration: Lessons from Burkina Faso, Brazil, Guatemala, Viet Nam, Ghana, Ethiopia and Philippines, pp. 144-173. Gland, Switzerland: IUCN.

The World Bank (WB) (n.d.). Ethiopia: Humbo Assisted Natural Regeneration Project. Available at: <https://www.biocarbonfund.org/sites/biocft1t2/files/documents/Ethiopia%20-%20Humbo.pdf>

WB (2018). Ethiopia - Resilient Landscapes and Livelihoods Project Appraisal Document. [online]. Available at: <http://documents.worldbank.org/curated/en/671621533180654816/pdf/ETHIOPIA-PAD-07112018.pdf>. (Accessed June 23, 2020).

World Resources Institute (WRI) (2015). The Restoration Diagnostic. [online]. Available at: <http://www.wri.org/publication/restoration-diagnostic>. (Accessed May 20, 2020).

Zelege, G., Kassie, M., Pender, J., Yesuf, M. (2006). *Stakeholder Analysis for Sustainable Land Management (SLM) in Ethiopia. Assessment of Opportunities, Strategic Constraints, Information Needs, and Knowledge Gaps*. Second Draft Addis Ababa.

Zerfu, H. (2016). *Land Governance Assessment Framework Implementation in Ethiopia. Final Country Report*. Washington, DC: The World Bank.

Annex 1. Economic and financial analysis of FLR opportunities – Summary fact sheet

Approximately 85% of the Ethiopian population lives in rural areas and are highly dependent on forests for their livelihoods. Local communities rely on forests for their energy, fodder and water resources and benefit from ecosystem services provided such as sedimentation, water retention, and erosion control without which it would not be possible to maintain fertile and productive lands. Ethiopia's forests generated cash and in-kind benefits of about 111.2 billion Ethiopian birr (16.7 billion USD)¹⁹. Additional non-market benefits of 2.4 billion Birr (85 thousand USD) were generated in the same period, based on Ethiopians' willingness to pay to maintain forests¹⁹. As such, the forest sector in Ethiopia is one of the four pillars of the country's Climate Resilient Green Economy (CRGE) strategy and has the most significant potential to help the country reduce its GHG emissions and increase the resilience of its landscapes and population in the face of the effects of climate change.

However, despite the significant role of forests in the country's economy, their value is not adequately internalized. Agricultural lands, overgrazing and trampling by livestock, and the demand for fuelwood (which address more than 90% of Ethiopia's energy requirements), as well as timber poles for construction, put growing pressure to the existence of forests and have degraded more about 45% of the country's total landmass. Land and forest degradation are perceived as critical obstacles to the country's development; in fact, this degradation is strongly linked to low agricultural productivity, food insecurity, and overall rural poverty.

Recognising the issue, the country has committed to restoring about 15 million hectares of degraded and deforested lands as part of the global initiative of the Bonn Challenge, following the CRGE strategy of zero net greenhouse gas emissions and plans for large-scale afforestation and reforestation programmes towards 2030²⁰.

In 2018, the International Union for Conservation of Nature (IUCN) teaming with a group of country experts, government officials and local communities conducted a restoration diagnostic and a cost-benefit analysis (CBA) of FLR interventions in 2 districts – or *woredas* – of Ethiopia; one in Sodo *woreda* in the Southern Nations, Nationalities, and Peoples' (SNNP) Region and the other one in Meket *woreda*, in the Amhara Region. This fact sheet presents a summary of the CBA aiming to provide a quick and persuasive reference of the direct economic benefits of FLR to the local economies as well as other non-marketable benefits that are translatable in the improvement of livelihoods in the long term.

Cost-Benefit Analysis (CBA) is a methodology applied to public decision-making that attempts to quantify the advantages (benefits) and disadvantages (costs) associated with a particular intervention, policy or action. When applied to forest landscape restoration initiatives, this approach helps to identify how much the value of ecosystem goods and services would change in a specific area following the implementation of restoration activities or transitions ([definition](#)). Each FLR activity is presented with the Present Value (PV) of benefits or costs through time; and their Net Present Value (NPV) that incorporate the budgets/costs of implementing such activity and its expected benefit through time. For each potential restoration transition option, the Net Present Value (NPV) is calculated by the difference between NPV of degraded land use and NPV of the restoration activity. Nine steps were used when applying the cost-benefit analysis for FLR interventions in Sodo and Meket *woredas* (box 2). Direct and indirect benefits (such as fodder, fuel-wood; and carbon sequestration, soil erosion control and water regulation respectively) were identified and taken into consideration in the analysis. The CBA was conducted at the district level, with input from stakeholders' groups ranging from community members (farmers, landowners and forest-related businesses), local government officials and supportive NGOs in each *woreda*.

¹⁹ As of 2012, according to UNEP/Smith et al. (2016) UNEP, 2016. The contribution of forests to national income in Ethiopia and linkages with REDD+. United Nations Environment Programme: Nairobi. Available [here](#).

²⁰ Pistorius, T., Carodenuto S. and Wathum G. (2017). Implementing Forest Landscape Restoration in Ethiopia. *Forests*, 8

Box 2: The nine steps of CBA analysis for FLR options

- Step 1:** Specify the set of options (alternative restoration options)
- Step 2:** Decide whose costs and benefits count and the people who will be impacted
- Step 3:** Identify the impacts and select measurement indicators of the proposed restoration opportunities
- Step 4:** Predict the impacts over the life of the proposed restoration opportunities
- Step 5:** Monetise (place monetary values on) impacts
- Step 6:** Discount future costs and benefits to obtain present values
- Step 7:** Compute the net present value of each restoration opportunities
- Step 8:** Perform sensitivity analysis
- Step 9:** Reach a conclusion and provide recommendations

Considerations on data availability - The current CBA focuses on the financial and economic analysis of FLR options in each woreda and it features robust data collected to produce the results. There were, however, some limitations in data available to conduct the analysis:

- The data incorporated into this CBA is robust but inherently limited by available data in both woredas. Hence the focus of this analysis is mainly on the financial and economic aspects of the FLR options and does not document household values of ecosystem services given by the presented options;
- While important efforts were made in collaborating with experts from federal to regional, woreda, and kebele levels to optimise the available information, the current analysis has been constrained to incorporate the indirect benefits of restoration, like ecological balances, water regulations and productivity and other benefits from downstream communities. This may underestimate the NPV of returns of environmental benefits from landscape restoration practices. Also, the lack of fully-fledged data on watersheds and their respective specific biophysical characteristics and biophysical variables at woreda and kebele levels have limited the CBA analysis.
- The average lifecycle for potential FLR options was first decided in consultation with selected local forest experts and farm households. These cycles have been also validated during validation workshops conducted in each woreda. This method of selection might have its limitations, but it was a trusted source for the analysis as local experts and stakeholders are in a better position to provide the local agro-ecology knowledge and experience regarding the restoration.
- The criteria applied to define potential restoration interventions, which were mapped in consultation with local experts and selected farm households, may not apply to the variety of unique on-the-ground and micro-level situations. Therefore, it is important to note that the results of this CBA reflect the broadly defined woreda-level average restoration practices.

Cost-benefit Analysis results

Sodo woreda

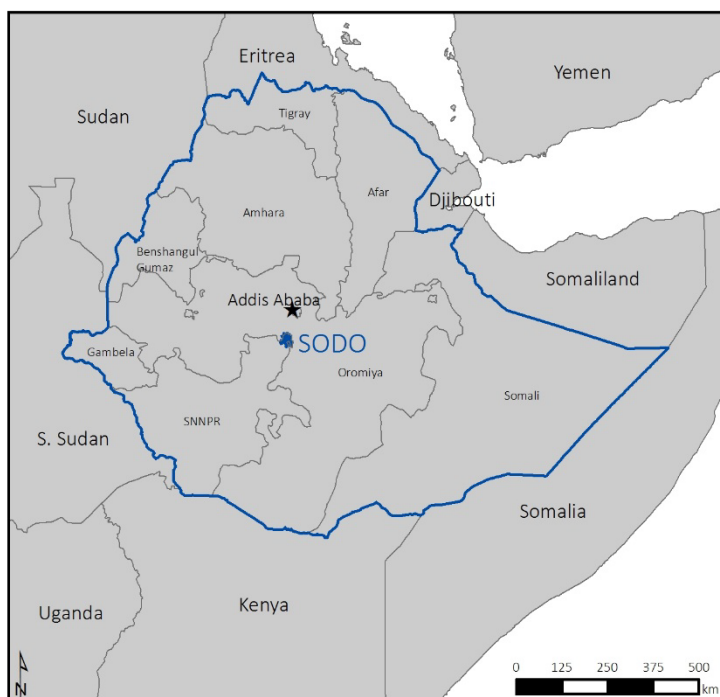


Figure 1: Map of Sodo woreda

Table 1: Composition of the Sodo woreda

Sodo population	
Population: 206,816 (2016 census)	
Male	101,771
Female	105,045
Rural	9.40%
Urban	90.60%

Woreda profile

Sodo is one of the thirteen woredas located in the Gurage Zone of Southern Nation Nationality Peoples Region (SNNPR) and one of the most densely populated woreda of the country and is characterized by 40% of bush fallow, 23% of the canyon and 7% of mountainous land.

Livelihoods: the livelihood of the communities of the woreda is primarily based on rain-fed subsistence mixed crop agricultural practices and livestock production associated with trees grow either in woodlots or in farm plots.

Land use: Agriculture, grazing, forest and villages settlements.

Issues: Deforestation and land degradation leading to a high level of soil erosion and removal of natural forest

Local stakeholders identified five degraded land use and associated restoration intervention to apply to the area:

- Traditional Agriculture land (cropland)
- Degraded forest plantation
- Degraded woodlots and home garden
- Degraded natural forest (Including degraded shrub-lands)
- Degraded non-timber plantations (bamboo)

Based on the degraded land uses and proposed restoration interventions, the following restoration transitions were identified²¹:

- Apply agroforestry practice (agri-silviculture or crops + tree)
- "well managed"²² forest plantation in croplands and grasslands within 2Km from roads
- "well managed" commercial bamboo plantation

²¹ These restoration transitions differ slightly from the transitions identified in section 5.2 because they were the result of two different analyses processes.

²² "Well managed" practice refers as compared to the current management practice, it follows better management practices, standard and scientific ways of production to improve the productivity of a given practices.

- d. “well managed” woodlots and home garden
- e. “well managed” natural forests (through closure and restocking)

A summary of the CBA is available in figure 3. The cost of restoration takes in consideration implementation costs (acquiring lands, input costs i.e. seedlings, fertilizers, pesticides, insecticides and others, material costs, etc.), transaction costs, harvesting costs, transportation costs and opportunity costs.

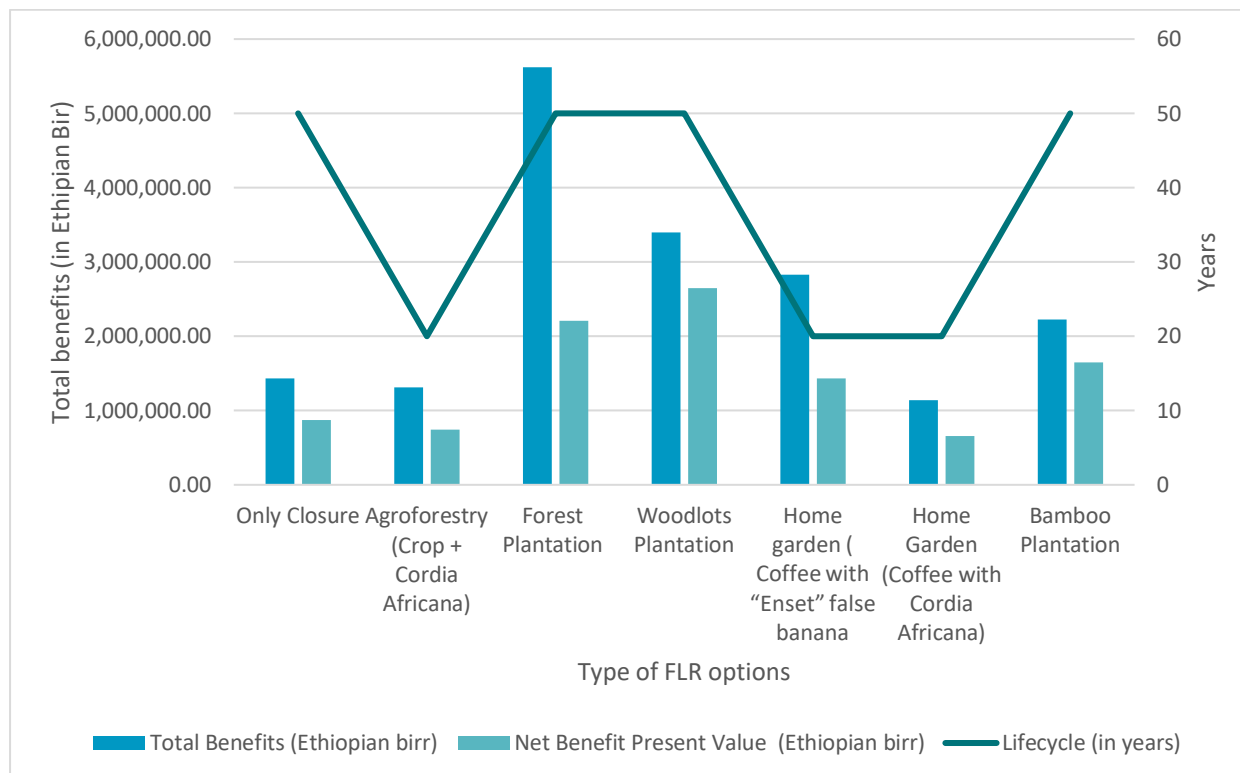


Figure 3: Net Benefits of Potential FLR Options in Sodo woreda (the prices used for the computation of monetized values are as of April 2018).

Secondary forests, woodlots and non-timber plantations present the highest net benefits with lifecycles of 50 years. Home garden is another interesting option, with a quicker lifecycle of 20 years (fig.3). Accordingly, the resulting recommendations were made, following FLR transitions analysis from current land use to potential restoration options:

Agroforestry is recommended as one of the main potential restoration options. There is an important potential for agriculture in the woreda; however, agricultural practices are traditional and needs to be improved to take into consideration the potential impacts of a changing climate on agrarian communities. Apart from the monetary benefits (see fig. 3), agroforestry also enables further direct benefits such as crop production, timber production, hay (as fodder for livestock) and firewood; and indirect benefits such as carbon sequestration and soil erosion protection. The net present values of gross benefits for agroforestry estimated about 1,308,902.04 birr that gave a net worth of 739.3 thousand birr/ha net benefit from this restoration option (on average benefit about 36968.07 Birr /ha per year). Due to the yearly product cycle from crops and culture of farming practice by the community, this option is widely recommended.

Landscape restoration of forest plantations is another good option as the total benefits include timber, firewood, fodder, carbon sequestration and soil erosion protection. The total net present value of costs for forest plantation in 50 years lifecycle is 3,410,946.50 birr/ha. And the net present value of total benefits including timber, firewood, fodder, carbon sequestration and soil erosion protection is 5,620,809.85 birr which gives a total net benefit worth of 2,209,863.35 birr/ha (about 441,97.26 birr/ha per year).

Meket woreda

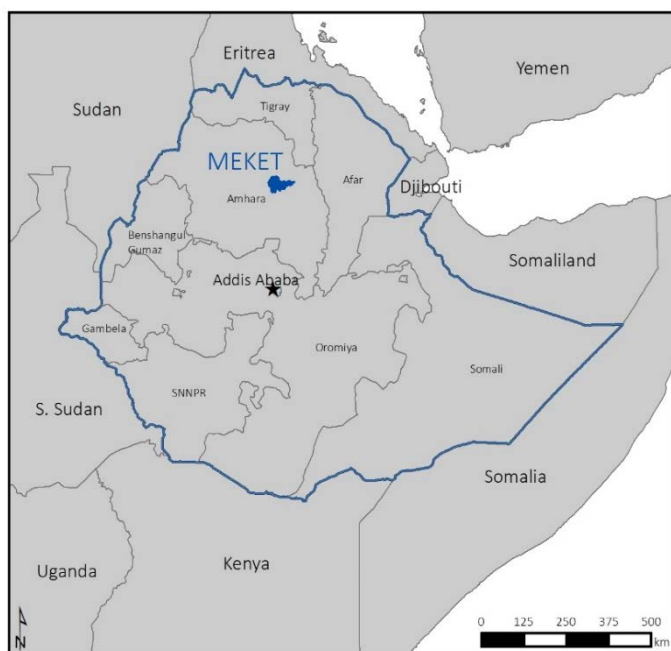


Table 2: Composition of the Meket woreda

Population: 217,047 (2017 census)	
Male	107,899
Female	109,178
Rural	88.00%
Urban	12.00%

Figure 2: Map of Meket woreda

Woreda profile

Presentation: Meket woreda is one of the ten woredas that is located in the East highlands of Amhara Region North Wollo Zone. About 46% of the woreda's land area is constituted of valley bottoms and gullies 28% is level land (flat plain) and the remaining 18% is mountainous land.

Livelihood: rain-fed subsistence crop production and animal husbandry are the main livelihood activities, but strong environmental degradation has led to cases of chronic malnutrition.

Land use: Agriculture (Eucalyptus plantations), grazing, forest and village settlements.

Issues: Extensive deforestation (due to expanding cultivation and increasing demand for wood products) has led to an increase in water run-off, following rainfall. This had resulted in extensive flood damage to crops and severe soil erosion. Moreover, because of land resource scarcity, a competition between land uses exist, especially between cropland, natural forest and non-environmental friendly plantations such as Eucalyptus ("Bahir-za").

Similarly, in Meket, a stakeholder consultation identified degraded land uses that would benefit from restoration:

- Cropland (traditional agricultural land use)
- Degraded forest plantation areas
- Degraded Incense plantation
- Degraded woodlot plantation and home garden
- Degraded open accessed shrubs and bushland areas

Stakeholders also identified five restoration activities that could be used to improve the ecological and economic productivity of the above corresponding degraded land uses²³:

- Agroforestry with wheat and "Teff" (*Eragrostis tef*)
- Improved management of Forest plantation
- Improved management of Incense plantation

²³ These restoration transitions differ slightly from the transitions identified in section 5.2 because they were the result of two different analyses processes.

- d. Improved management of woodlot plantation and home garden
- e. Development of closure with and without plantations/water and soil conservations/

A summary of the CBA is available in figure 4.

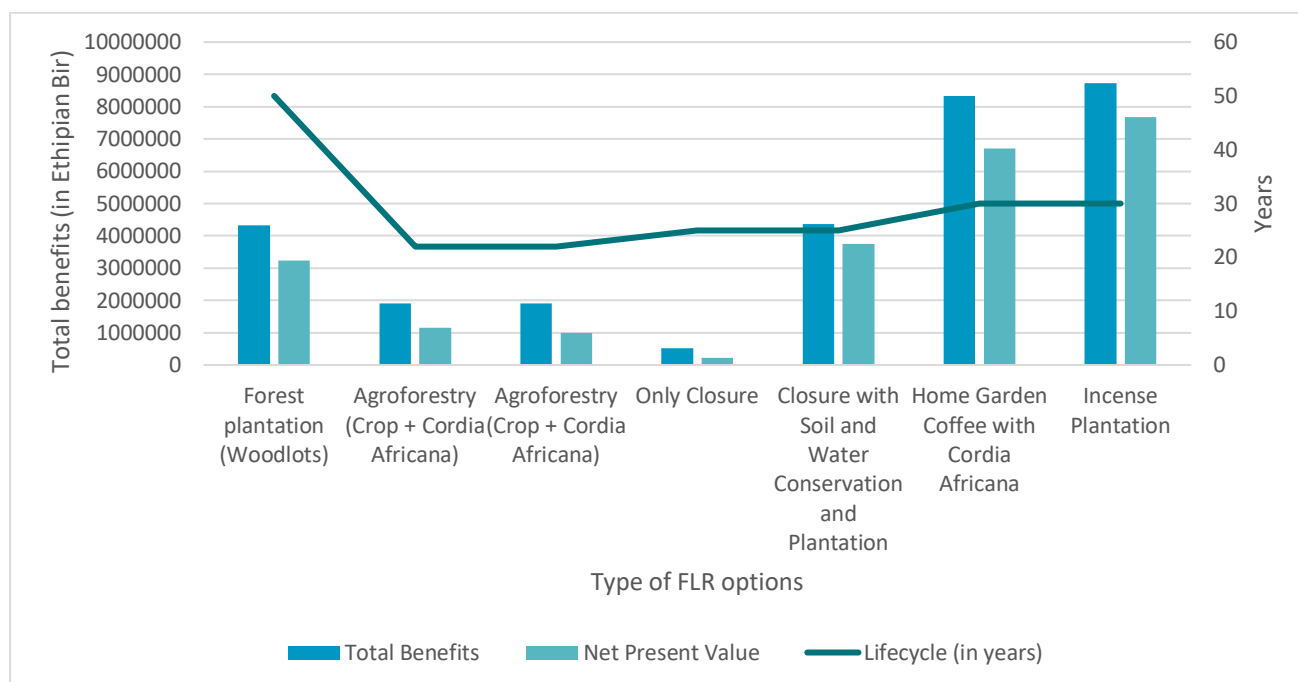


Figure 4: Net Benefits of Potential FLR Options in Meket woreda (the prices used for the computation of monetized values are as of April 2018)^{24,25}

Interestingly for this woreda, the most profitable options are not the ones with the longest lifecycles. The options with the highest NPV are non-timber plantations, home garden and almost equally area closure with soil and water conservation and plantation, and secondary forest. However, the later has a 50-year lifecycle and coupled with the added benefits of timber, firewood, carbon sequestration and soil erosion protection, has the highest potential as a restoration option. As a result, the following recommendations were made:

- **Forest plantations are elicited by stakeholders as a good potential FLR option** in the woreda. Eucalyptus is the main species of tree plantation, which is growing widely, and most farmers are replacing their conventional agriculture by these plantations with the added benefits of timber, firewood, carbon sequestration and soil erosion protection. The present value of total benefits for this option amounts to 4,331,005.02 birr/ha. Using the present value of benefits and costs, the NPV of restoring forest plantations is 3,228,744.11 birr/ha in 50 years (on average benefit about 64,574 birr/ha per year).
- **Well-managed agricultural practice through agroforestry (tree-based agriculture)** is recommended as a restoration option. Benefits from agroforestry include encompass gains from both crops and plantations with crops such as Cordia Africana. The present value (PV) of total costs of agroforestry practices is estimated to be 749,982.10 birr/ha, with accrued benefits in the 22 years life span of the tree of 1,906,877.02 birr/ha. The total NPV of this agroforestry practice from the transition from degraded agriculture land is 1,156,894.92 birr/ha (on average benefit about 52,586 birr/ha per year). On the other hand, the transition from degraded grassland has a NPV of 995,371.02 birr/ha (on average benefit about 45,244 birr/ha per year).
- **Rehabilitation of natural vegetation through protection and regeneration**, by implementing area closure practices in open access shrubs, grasslands and bare land areas. The estimated present value of costs for practising closure is 286,690.23 birr/ha per year. The present value of benefits from closure is estimated at 514,433.34 birr/ha. Accordingly, NPV of restoration through closure becomes 227,743.11 birr/ha in the 25-

²⁴ In the case of the Agroforestry (Crop + Cordia Africana) option, the opportunity cost of land is considered for degraded agriculture. As for the Agroforestry (Crop + Cordia Africana) option, it is considered for grassland

²⁵ The lifecycle for each potential FLR option is determined in consultation with experts and stakeholders during our consultative meetings in fieldwork and then validated during the validation workshop in Bahir Dar, Amhara region, Ethiopia to consider the local context.

year timeframe (on average benefit about 9,109 birr/ha per year). It has to be noted that only closure without potential soil and water conservation and plantation practice is not as productive. In parallel, the use of conservation and plantation interventions to improve open access grassland, shrubs and bare lands is bringing higher benefits (with a PV of about 628,055.7 birr/ha). In total, the PV of benefits of this rehabilitation option is estimated to be 4,372,250.49 birr/ha, resulting in an NPV of returns equal to, 3744,194.79 birr/ha (on average benefit about 149,767 birr/ha per year).

- **Home gardens with** coffee and crops of *Cordia Africana* are considered. While coffee is not widely cultivated in the area, some farmers believe that it can be productive if well managed. The present value of costs for the use of home garden is estimated at 1,618,131.00 birr/ha, with potential benefits at about 8,329,129.13 birr/ha. From this, the NPV of home garden practice of coffee with *Cordia Africana* is quite profitable at 6,710,998.13 birr/ha in 30 years (on average benefit about 223,700 birr/ha per year). However, this figure should be cautiously considered as Coffee plantation is not widely practised and is potentially overestimated.
- **Non-timber plantations**, such as commercialized incense (*Eucalyptus*, *Grevillea* and others), can also bring important benefits, if well managed. The present value of costs and benefits for this option is estimated at 1,057,094.00 birr/ha and 8,733,129.13 birr/ha, respectively, with a resulting NPV of 7,676,086.92 birr/ha (on average benefit about 255,869 birr/ha per year). However, like the previous option, this agroforestry practice should be considered cautiously as commercial incense production is not currently available in the woreda.

Potential sources of finance and limits for FLR in Ethiopia

Both private and public sector financing solutions are required to fund restoration interventions. Innovative financing partnerships between both the private and public sectors will be key in securing investment and it is equally important to incentivize smallholder farmers and community members to restore their land. Apart from financing options, it will be equally important to ensure cross-sector institutional coordination and bottom-up/top-down coordination of programme implementation to scale up restoration successes. Several types of financing options are available:

- **Banking and Micro Finance Institutes (MFI) for FLR Financing:** Commercial banks in Ethiopia typically do not target smallholder farmers and tend to have a minor focus on agriculture (9.4% of the credit). The results from the CBA suggest agricultural-based restoration activities provide direct economic and environmental benefits. This provides options to private financing businesses such as OMO microfinance, Agar microfinance, Amhara Credit and Saving Institution (ACSI) to expand access to convenient, accessible, and affordable financial services to smallholder farmers.
- **Public and NGOs in Financing FLR:** Ethiopia's Climate Resilient Green Economy Strategy (CRGE) is going to be responsible for attracting, allocating and channelling international climate finance to FLR activities. It will leverage both public and private finance, from both multilateral and bilateral sources. Other public funding opportunities include:
 - o **The Youth Fund**, created to promote youth job creation and entrepreneurship and can help finance youths who want to invest in FLR activities.
 - o **The Productive Safety Net Programme (PSNP)** created to subsidize smallholders' effort in investing in FLR and related activities
 - o **NGO support** from organisations such as UNDP, World Vision, SOS Sahel Ethiopia, SLMP, Sodo Buie Child and Family Development Association (SBCFDA) and Techno-Serve. These organisations can support the development of self-sustaining financing mechanisms and establishment of conservation trust funds (debt swaps, grants, donations, etc.) which can finance FLR interventions.
- **Informal Financial Sources:** The informal economy of the two woredas is dominated by smallholder farmers that use these systems to fill their financial gaps. It is common for neighbouring households and communities to develop their traditional community associations such as "Iddir", "Eqqub" and "Mehaber". These traditional institutions play a crucial role in the mobilisation of savings and more than two-thirds of the population has access to an informal finance provider, whether it is from money lenders, friends/relatives, or from one of the three popular systems ("Iddir", "Eqqub" and "Mehaber"). Exploring these informal financing opportunities is also key in the implementation of FLR interventions.

Final recommendations

The results from the CBA suggest tree-based restoration activities are directly linked with economic and environmental benefits in both woredas. However, the FLR options presented will require cross-sector institutional

coordination and bottom-up/top-down coordination of programme implementation to scale up restoration successes. To do so, the following factors should be taken into consideration:

- Restoration commitments will require both private and public sector financing institutions and innovative partnerships to fund different FLR options at a local and national level.
- The use of public financing mechanisms can create an enabling environment and help to mobilize resources for individuals to participate in FLR interventions by considering both collective and individual actions. Promoting collective actions and mobilizing resources from public sources will be an alternative to overcome challenges linked to the availability of financial resources. Individual actions for FLR intervention can also be implemented in private land resources through credit and financial support. Thus, the private and collective action nature of FLR options should take into account in designing and implementing FLR interventions.
- Similarly, FLR interventions provide options for investments that are made directly by smallholders and with funds distributed through private financing businesses. In parallel, it is vital to find ways to incentivize smaller holder and community's investments in the restoration of their lands. For instance, the use of interventions to support FLR through Payment for Ecosystem Services (PES) programmes will enhance sources of finance and create this enabling environment that will help to implement FLR interventions.
- Finally, the common local community associations ("Iddir", "Eqqub" and "Mehaber") play a crucial role in savings, resource and beneficiary mobilization.

Annex 2. Policies and regulations of relevance to FLR

Policy / proclamation / regulation	Details relevant to FLR
Ethiopian Constitution (1995)	▪ Vests the right to ownership of land and other natural resources, including forests, in the hands of state and people (Article 40); Government administers land on behalf of the people. ▪ Land may not be subject to sale or other means of exchange, therefore prohibiting any form of private or communal ownership. ▪ Guarantees the right of Ethiopian 'peasants' and 'pastoralists' to free allotment of land and to not be evicted from there. ▪ Private investors have the right to use land following "payment arrangements established by law".
Forest Policy (2007) (federal)	▪ The objective of the forest policy is to increase the forestry sector's contribution to economic growth by protecting and developing the forest resource and fulfilling the rising demand for forestry products and services. ▪ Stipulates provision of incentives to encourage investors, social and individual organizations to be engaged in forest resource development, which includes the provision of professional and technical support, provision of seeds/seedlings at fair prices, facilitating access to credits, promoting tax reduction schemes for farmers/pastoralists designating part of their land for agroforestry. Green certificates for smallholder farmers and communities include tree crops. ▪ Some of these provisions are not yet implemented, limiting the flow of private investment to forest development. ▪ Creation of awareness regarding the forest policy and strategies amongst the concerned stakeholders to mobilize support for implementation was not carried out properly at all levels.
Forest Conservation and Utilization Proclamation (2007) (federal)	▪ Aims to increase the contribution of forest resources to the national economy via sustainable management and utilization of forest resources. ▪ Promotes markets for forest development including private forest development. ▪ Recognizes State forest and private forest. ▪ Designation of all "major forestlands" as State forests; the process should involve consulting respective communities to identify their priorities. ▪ Gives priority to communities if designation and demarcation of state forest would result in the eviction of the local community. ▪ Emphasizes the participation of local communities in the management of, and sharing of benefits from, State forests. ▪ Forest rights may be granted to communities, associations or investors and are similar in substance to general land use rights. Forest Management Plans must be prepared. ▪ Private forest developers have to obtain licenses for harvesting and transporting products.

	▪ The required regulation and guidelines are still in the draft stage and not yet approved to implement the forestry policy and proclamation. ▪ Unlike Oromia and the SNNPS, ANRS has no forest proclamation and regulation.
FDRE Forest Development, Conservation and Utilization Proclamation No 1065/2018	▪ Links forest functions as central in underpinning livelihood improvement and food security, mainly by increasing and sustaining agricultural production through soil stabilization and enrichment, protection against climatic change, protection of the quality and flow of water systems, regulation of water uptake ▪ Promotes markets for forest development including private forest development. ▪ Recognizes State, community and private forest. ▪ Designation of all “major forestlands” as State forests; the process should involve consulting respective communities to identify their priorities. ▪ Emphasizes the participation of local communities in the management of, and sharing of benefits from, State and community forests.
National Forest Sector Development Programme (NFSDP) 2018 - 2028	▪ The NFSDP is fully aligned with the Climate-Resilient Green Economy (CRGE) strategy and provides an implementation framework for the second Growth and Transformation Plan (GTP 2). The programme aims to increase Ethiopia’s forest cover to 20% in 2020 and 30% in 2025 and transform the forest sector in a robust and sustainable economic sector for the country. ▪ NFSDP’s five pillars are: enabling environment and institutional development, sustainable forest production and value chains, forest environmental services, forest and rural livelihoods and urban greening and urban forests. It counts with four action programmes to contribute to forest cover increase: new commercial plantations including bamboo, afforestation/reforestation, forest landscape restoration and tree planting in woodlots.
Federal Rural Land Administration and Land Use Proclamation (2005) (federal)	▪ Ensures state and public ownership of land while establishing a framework for the participation of peasants and pastoralists in managing rural land. ▪ Mandates regions to establish land administration and land use proclamations appropriate to respective regional states. ▪ Entitles peasants and pastoralists whose livelihoods depend on farming to rural land free of charge. ▪ Provides private investors with the rights to use rural land under the investment policies and laws at the federal and regional levels. ▪ Provides a framework for transferring land rights to individual users, communities, and private investors through the issuance of landholding certificates, concessions, or other agreements. ▪ Provides the rights of transfer, lease or compensation for land and properties developed on it.
SNNP Proclamation No. 110/207: Rural Land Administration and Utilization Proclamation	▪ Rural youth has the right to be allocated land for agriculture by the community or government; any resident of the region who wants to engage in agriculture has the right to get land by settlement in conjunction with minimum landholdings of 0.5ha (rain-fed agriculture) leaving the option to allocate forest land for agriculture. ▪ Land $\leq$ 60% gradient shall not be used for farming and free grazing. Use is restricted to forestry, perennial plants, development of forage for animals, and similar activities.

	▪ Land use rights certificates can be issued for individuals or groups, creating de-facto ownership as long as the land is used in line with the regulation; land can be leased to third parties. ▪ Communities have the right to use NTFPs in state-owned forest.
SNNP Proclamation No. 147/2012: Forest Development, Conservation and Utilization Proclamation	▪ Recognizes community forest in addition to state and private forest ▪ Emphasizes the involvement of communities in planning for, management and utilization of state forest ▪ Includes the use of trees by communities in addition to NTFPs "...tree species..." in state forests ▪ Places no restrictions on the utilization of community forest
The Revised ANRS Rural Land Administration and Use Proclamation (252/2017)	▪ Apply to all rural lands with provisions of special laws relating to forestry, wildlife protection, biodiversity resources, natural resource and environmental protection ▪ Recognizes conservation and development of natural resources through the realization of user rights and obligations over land use ▪ Includes goals towards environmental protection and improved land management in the land administration policy, including forest ownership (for state and communal lands) and use rights.
The Administration and Use of Watersheds Rehabilitated and Being Rehabilitated with Community Participation Proclamation of ANRS (204/2013)	▪ Sets out rights, obligations and penalties to land users within a delineated watershed. ▪ It requires land users within watersheds to protect and prevent from damage of natural resources, and protect soil fertility both in private farmlands and communal areas. ▪ It also places various responsibilities on communities including, control livestock grazing to prevent damage to restoration activities in areas, avoid ploughing areas near rivers, streams and restored gullies, and prohibitions of cutting trees or deadwood, shrub or grass without permission; or, cutting beyond the amount of permitted to be cut.

Annex 3. Validation workshops participants' lists

Sodo validation workshop (May 23-24, 2018)

No	Name	Organization/office	Position
1	Getachew Teka	Administration Office	Administrator
2	Adane Areda	Agriculture and natural resources	Head, Rural Development and Agricultural Extension Department
3	Hailu Seyifu	Agriculture and natural resources	Head, Animal Science Department
4	Zewudu Wosenu	Agriculture and natural resources	Agricultural engineering & mechanization, NRM expert
5	Gosaye Woji	Animal resources and fishery	Vice-head, Animal Production Department
6	Solomon Mengesha	Bureau of Agriculture and Natural Resources - Hawassa Region	Senior Expert
7	Teketel Dechasa	Sodo Buee Child and family Development Charitable Organization (SBCFDCO)	Food Security Project Coordinator
8	Bulbula Gelan	Community representative	
9	Shewangizaw Arega	Community representative	
10	Kefelegn Elala	Cooperatives office	Team leader
11	Abeze Tessema	Culture, Tourism, Communication Office	Coordinator
12	Bitew Shibabaw	EFCCC (National)	General Director - Plantation Forest Development & Management General Directorate
13	Denbi Balcha	Environmental protection and Forest office	Head
14	Ewunetu Korenel	Environmental protection and Forest office	Forest expert
15	Bithanu Konde	Finance Office	Development planner
16	Bahiru Bekele	Health Office	Expert
17	Deginet Chrint	Institutional Strengthening for Forest Sector Development (ISFSD)	Forestry expert
18	Daniel Tsegaye	Revenue Office	Expert
19	Abush Seitu	Trade and Industry	Expert
20	Hailu Teka	Water and energy	Officer
21	Yalew Tuji	Women and Children Affairs	Coordinator
22	Tibebu lemma	World Vision - NGO	Manager
23	Bekele Tuji	Youth and Sports Officer	Expert

Meket validation workshop (May 31 – June 1, 2018)

No	Name	Organization/office	Position
1	Haymanot Gashaw	Administration Office	Administrator
2	Bayleegn Azene	Amhara Forest Enterprise (regional)	Staff
3	Esemebalem Mihref	Bureau of Agriculture - NRM	Staff
4	Getachew Engidayehu	Bureau of Agriculture - NRM (regional)	Director

5	Aba Kidenenciam	Community representative	
6	Priest Dejen Alemaqe	Community representative	
7	Dejen Assefa	Cooperative office	Expert
8	Atalele Alemu	Disaster Risk Management	Head
9	Abebe Seifu	EFCCC (national)	Director - Degraded Forest Land & Ecosystem Rehabilitation Directorate
10	Gizachew Alamerew	Environment, Forest and Wildlife Protection and Development Authority (regional)	Protected and endangered forest protection and development directorate
11	Admasu Molla	Environment, Forest and Wildlife Protection and Development Authority (regional)	Protected and endangered forest protection and development directorate
12	Shifaeraw Fetadie	Finance office	Head
13	Melak Dagnaw	Institutional Strengthening for Forest Sector Development (ISFSD)	Head
14	Fitrist Moges	Land Use Planning	Expert
15	Nega Getachew	Livestock resource and Fisheries	Head
16	Abera Sisay	Office of Agriculture	Natural resource development process coordinator
17	Adane Kassa	Office of Agriculture	Head
18	Solomon Wondie	Office of Agriculture	Expert
19	Wosene Gelaw	Office of Agriculture	Extension and communication
20	Birhan Belay	Office of rural land administration and use	Head
21	Fitrist Mekonnen	Office of rural land administration and use	Land use planning
22	Sisay Birara	Office of technique and vocational enterprise	Head
23	Abreham Beyene	ORDA public work	Forest and NRM expert
24	Gizachew Eniyew	Organization for Rehabilitation and Development in Amhara (ORDA)	Project manager
25	Libse Shumete	Organization for Rehabilitation and Development in Amhara (ORDA)	Food security project
26	Getinet Enpidaw	Revenue process	Process owner
27	Yeshiwork Misgan	Trade and Industry office	Marketing Department
28	Moges Mengie	TUET college	Head
29	Adino Masreshaw	Water and energy office	Head
30	Temesgen Desaleg	Water and energy office	Electrical energy expert
31	Bisrat Molla	Women and children office	Geography expert
32	Sefien Bishaw	Youth and sport office	Head



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