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Governing Forest Landscape Restoration in Ethiopia: a multiple scale analysis.

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ABSTRACT

Re-greening the planet by planting trees and restoring forests follows the global trend of increasing environmental awareness. Various concepts have been developed to stop deforestation and degradation as well as revive forests and forested lands. As such, Forest Landscape Restoration (FLR) is a state-of-the-art approach for ecosystem restoration while simultaneously improving people's livelihood. In this context, Ethiopia, a country particularly affected by the implications of climate change, shows a high commitment to various reforestation initiatives to restore its forests and forest lands. However, sustainable FLR implementation faces tremendous challenges, as the success does not solely depend on technical or ecological aspects: supportive governance architectures seem to be even more critical for successful restoration. Based on this, actors, institutions, and policies shape the governance arrangements and influence FLR outcomes in various ways. The entanglement between the three governance dimensions is expressed by conflicting interests as well as diverging power resources. Especially problems, such as overlapping responsibilities, institutional capacity, land tenure and power asymmetries may endanger the success of restoration. By means of a case study of Ethiopia, the thesis examines the research question on how far governance influences FLR outcomes. Various facets of forest restoration are uncovered, including their reciprocal political relation, particularly noticeable on one specific scale: the landscape.

Keywords: *Forest Landscape Restoration, Landscape Governance, political ecology, multiple scale analysis, Ethiopia*

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ABBREVIATIONS

AFR100	African Forest Restoration Initiative
CIFOR	Centre for International Forestry Research
CRGE	Climate-Resilient Green Economy Strategy
EEFRI	Ethiopian Environment and Research Institute
EPA	Environmental Protection Authority
FAO	Food and Agricultural Organization
FLEGT	Forest Law Enforcement, Governance and Trade
FLR	Forest Landscape Restoration
GIZ	German Corporation for International Cooperation GmbH
GLF	Global Landscape Forum
GPFLR	Global Partnership on Forest and Landscape Restoration
HA	Hectare
ICRAF	International Centre for Research in Agroforestry
IPCC	Intergovernmental Panel on Climate Change
ITTO	International Tropical Timber Organization
IUCN	International Union for Conservation of Nature
MEFCC	Ministry of Environment, Forest and Climate Change
MOA	Ministry of Agriculture and Natural Resources
NFSDP	National Forest Sector Development Program
PFM	Participatory Forest Management
REDD+	Reducing Emissions from Deforestation and Forest Degradation
ROAM	Restoration Opportunities Assessment Methodology
UN	United Nations
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
UNFCCD	United Nations Convention to Combat Desertification
WRI	World Resources Institute
WWF	World Wide Fund For Nature

1. INTRODUCTION

'*Ten more years to restore the planet*'- The declaration of the 2021–2030 United Nations (UN) Decade of Ecosystem Restoration initiates a new phase of global awareness and commitment to face the urgent need to restore ecosystems and their essential multiple socio-economic functions (CHAZDON ET AL. 2021; UNEP 2021). Since 1960, more than half of the tropical and subtropical forests worldwide have been destroyed or drastically degraded (IUCN 2021). The consequences for biodiversity, human livelihoods, and climate change are disastrous: More than 80% of the world's terrestrial flora and fauna can be found in forested areas (IUCN 2021). More than 1.6 billion people depend on healthy forests, which secure their food security and livelihood (IUCN 2021), and more than 2.4 billion tonnes of CO_2 is being absorbed by forests representing one-third of the world's annual CO_2 release from burning fossil fuels (IUCN 2021). Therefore, restoring forest landscapes has been brought to the centre of global discourse to tackle climate change, prevent species extinctions, and improve rural livelihoods (FAGAN ET AL. 2020; BASTIN ET AL. 2019; SUDING ET AL. 2015).

More and more countries are following the global trend by voluntarily pledging restoration and reforestation commitments. International organizations such as the World Wide Fund for Nature (WWF), the International Union for Conservation of Nature (IUCN), and the Food and Agriculture Organization of the United Nations (FAO) are promoting restoration activities under the umbrella of 'Forest Landscape Restoration (FLR)' as a solution for the world's deforestation, degradation and desertification problems (FAGAN ET AL. 2020; MANSOURIAN 2016).

With 15 Mio. hectares (ha) of planned reforestation activities by 2030, the Federal Democratic Republic of Ethiopia is one of the front leaders in the reforestation of degraded forest areas (KASSA 2018; MANSOURIAN 2020). The ambitious goal can be seen as an expression of the country's strong need to rehabilitate degraded land: Approximately 85% of the Ethiopian population live in rural areas and depend on forests and agricultural activities (IUCN 2020). The Ethiopian government hereby acknowledges that degraded forests and forest land will threaten peoples' livelihoods and, therefore, urgently needs to be restored. Numerous programmes, initiatives, policies, and projects such as the Bonn Challenge, the African Forest Restoration Initiative (AFR100) or the Great Green Wall of the Sahara have been initiated since the 1990s to address the conservation and restoration of forests and forest resources.

Despite the high commitment to FLR, both challenges and opportunities appear tremendous (PISTORIUS, CARODENUTO, WATHUM 2017). Underlying factors causing restoration failure can be purely technical; however, success factors as well as challenges often cluster around prevailing governance structures on different scales (MANSOURIAN 2016; BOISSIÈRE ET AL. 2021). Some authors state that governance architectures may be even more critical than technical or ecological components of reforestation (HOBBS ET AL. 2011; SAYLES, BAGGIO 2017; GUARIGUATA, BRANCALION 2014).

'Governance failure' caused by counterproductive governance arrangements is often attributable to different actors and institutions with diverse interests, motivations and power resources (HOBBS ET AL. 2011; HOLL 2017; MCLAIN ET AL. 2019). Based on this, the importance of governance structures for successful restoration is evident: Governance arrangements on different scales directly influence decision-making processes relevant to all stakeholders engaged in planning, implementation and also benefitting from reforestation activities (CHAZDON ET AL. 2021). Therefore, governance structures can be ambilateral: a solution and a problem for FLR (MANSOURIAN 2017).

Even though 'good governance' seems to be essential for successful FLR, experience as well as case studies and research focusing on FLR in combination with governance aspects are still limited (MANSOURIAN 2017). According to MANSOURIAN (2017), governance challenges are currently underestimated in FLR and should be more highlighted. Poor knowledge of reforestation networks, stakeholder engagement, and power relationships among different spatial scales makes it difficult to identify challenges within governance processes (CHAZDON ET AL. 2021). Therefore, the present thesis contributes to the research gap by illuminating FLR through the lens of governance on multiple scales. The following research question can be derived accordingly:

How do governance structures influence Ethiopian FLR on different spatial scales?

Operationalizing the research question, governance and FLR need to be broken down to the point of collision: the landscape. In a broader sense, FLR and governance meet each other at the landscape scale; accordingly, 'Landscape Governance' as a theoretical approach herewith serves as a guiding framework. Referring to CHAZDON ET AL. (2021), governance as well as 'Landscape Governance' needs to assess, analyse, and contextualize the actors, the institutional

setup and corresponding policies to understand prevailing governance structures. This trisection provides the structural as well as argumentative recurring theme throughout the whole thesis. After introducing the two theoretical concepts (FLR (Chap. 2.1) and Governance (Chap. 2.2)) associated with the political ecology's field of study, they both will be merged in Chapter 2.3. Based on the theoretical considerations combined with the research paradigm and methodological approaches from Chapter 3, the results will be presented according to the trisection of 'Landscape Governance'. Actors, institutions, and policies will be examined in two ways: first, by simply describing the entire governance architecture in a descriptive manner (Chap. 5) and second, by analysing the different governance components (Chap. 6, 7, 8). As governance and forests both are strongly linked with 'government' and related decision-making, the results must be seen in their historical and political context (Chap. 9). Therefore, a critical reflection against the backdrop of reciprocal implications between FLR and the political environment is particularly relevant and will lead over to the conclusion of the thesis (Chap. 10).

2. THEORETICAL DEBATE: ONE LANDSCAPE, TWO APPROACHES

FLR is much more than just planting trees. FLR incorporates the dialectic relationship between nature and society by combining ecological restoration with improving livelihoods (DJENONTIN, ZULU, ETONGO 2020). Based on this socio-ecologic entanglement represented by the research field of political ecology, forests are politically shaped by power relations, interests and resource conflicts (DEVINE, BACA 2020; MINCH 2011). To uncover the complex interplay, political ecology tries to make sense of how governance, discourse, knowledge and power are practiced (BRYANT 2015). In order to study the political ecological relations, governance approaches help to highlight prevailing power relations and contradictory interests among stakeholders (NAGENDRA, OSTROM 2012; REDPATH ET AL. 2013). Hence, combing the approach of FLR and governance gives a unique insight into the technical management process of FLR and the dynamics of stakeholders in the sense of political ecology (VAN OOSTEN 2013). The following chapters will introduce both approaches, link them together and provide the theoretical and structural basis for the empirical research on Forest Landscape Restoration in Ethiopia.

2.1. RE-GREENING THE PLANET: FLR AMONG THE REFORESTATION APPROACHES

Forests cover more than 30% of the global continental area and accommodate 80% of the world's terrestrial plants and animals (FAO, UNEP 2020). Also, humans depend on forests and their biodiversity. Even though people's relationship with forests varies from region to region, forests influence human livelihoods, health, and well-being. More directly, forests provide food, shelter, medicine and income in addition to indirect benefits such as purifying water and air (FAO, UNEP 2020).

Despite their crucial role for humans, global forests are under massive pressure with significant implications for sustainability. Natural resource exploitation and agricultural expansion on top of global environmental change threaten the world's forested areas - locally, nationally and even globally (ERBAUGH, OLDEKOP 2018). Since 1990 more than 420 Mio. ha of forest have been lost or degraded, mostly in tropical areas (FAO, UNEP 2020). With a loss of 3.94 Mio. ha per year between 2010 and 2020, Africa had the highest net loss of forest land (FAO, UNEP 2020). Deforestation and degradation (long-term reduction or loss of biological and economic productivity of forest ecosystems) not only pose major environmental problems like decreased biodiversity and ecosystem services, they also implicate socio-economic problems such as increased competition for land, natural resources and ecosystem services as well as outmigration from affected areas (WILSON, CAGALANAN 2016).

2.1.1. CALL FOR SOLUTION: EMERGING REFORESTATION APPROACHES

Combined with growing awareness that forest loss has negative impacts on the global carbon cycle, action to combat deforestation and forest degradation is on the rise. Two main scales of intervention for restoring forests are applicable: either conservation and sustainable management of natural forested landscapes or reforestation in a classical way by planting new forests on either formerly forested areas (reforestation) or areas that have never been under tree cover (afforestation) (ITTO 2020; NEIDEL 2012). Following those different approaches, reforestation and afforestation have recently received broad political support by transforming political commitments into beneficial practices in order to restore degraded land (MANSOURIAN ET AL. 2017; REINECKE, BLUM 2018). Numerous actors from all over the world launched initiatives to address the issue of deforestation and forest degradation. Governments, as well as private actors, are eager to be involved in forest restoration, as exemplified in international agreements such as the New York Declaration on Forests (MANSOURIAN ET AL. 2017).

Entire reforestation concepts and approaches have been developed, such as, most prominently, the United Nations REDD+ programme (Reduction of Emissions from Deforestation and Forest Degradation) (UNFCCC 2021). The REDD+ programme focuses predominately on emission reduction rather than on socio-ecological components. By fostering legal forest management and sustainable trade with legally produced timber, the FLEGT approach (Forest Law Enforcement, Governance and Trade) targets illegal logging across the globe (EU-FLEGT Facility 2021). Addressing nature destruction in combination with the often-neglected human dimension of restoration, the FLR approach emerged in 2000 (DJENONTIN, ZULU, ETONGO 2020; CÉSAR ET AL. 2021). Since FLR combines opportunities for reforestation as well as forest conservation in terms of addressing drivers for deforestation, FLR is a state-of-the-art response for combating deforestation and forest degradation in tropical and sub-tropical areas (MANSOURIAN ET AL. 2017; RUNYAN, D'ODORICO 2016). The concept of FLR was conceived by global forest governance actors, namely the World Resources Institute (WRI), IUCN, WWF, and the International Tropical Timber Organization (ITTO). The purpose was to find a solution for restoring degraded land by tackling both ecological and social functionality (WILSON, CAGALANAN 2016; CÉSAR ET AL. 2021). This combination is exceptionally interesting for developing countries, where the large rural population often depend on natural resources and stable ecosystems to ensure their livelihood and food security (ERBAUGH ET AL. 2020).

Expanding from failing conservation and forest management approaches, FLR has been included within the umbrella of 'nature-based solutions' to solve complex socio-environmental challenges (CÉSAR ET AL. 2021). Today, FLR is an approach rooted within the 'global environmentalism' context that incorporates a blend of top-down and bottom-up elements (DJENONTIN, ZULU, ETONGO 2020).

2.1.2. FOREST LANDSCAPE RESTORATION AND ITS COMPONENTS

FLR, 'Forest and Landscape Restoration' or 'Forest Restoration in Landscapes', is a relatively loose term and can therefore be interpreted in various ways (MANSOURIAN 2016; CÉSAR ET AL. 2021). The most prominent definition, according to scientific research, was proposed in 2000 by IUCN and the WWF (CÉSAR ET AL. 2021): FLR is *'a process that aims to regain ecological integrity and enhance human well-being in deforested or degraded forest landscapes'* (CÉSAR ET AL. 2021, pp.5).

Referring to Figure 1, the combination of ecological, social and economic aspects characterizes the nature of FLR. FLR, therefore, means far more than just forest restoration: It contains several key concepts that vary during practical translation of FLR, such as how 'landscape' and 'restoration' are defined and how scale (temporal and geographical) and processes are incorporated (CÉSAR ET AL. 2021). Therefore it is worth highlighting the different key variables within the term 'FLR'. Starting with the most prominent part of FLR, 'forests' will be defined first, followed by 'landscapes' as part of ecological integrity, moving on to the multidimensional 'restoration' and closing with the processes and principles of FLR.

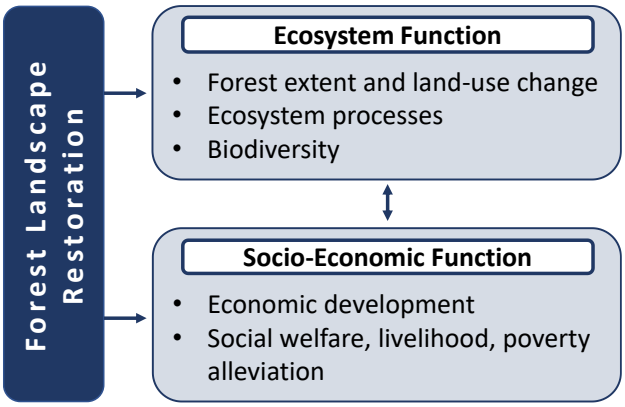

Figure 1: Dualistic function of FLR
Source: own figure based on (ERBAUGH, OLDEKOP 2018)

i. 'Forest' - more than the sum of its parts

The multitude of ways in which forests can be defined shows the complexity of this simple day-to-day term. None of the existing definitions is appropriate for universal global forest characterization (PUTZ, REDFORD 2010). However, the vegetation classification system provided by the FAO gives a rough forest indication scale, which is often used by international organizations. The FAOs basic definition of forests reads as follows: *'Forest is an area of >0.5ha with >10% tree canopy cover, with "trees" defined as plants capable of growing >5m'* (FAO 2001).

Forest definitions vary from country to country. This is especially noteworthy since each country can choose its own definition of tree cover, which become particularly relevant with regard to national agreements to restore forests and carbon stocks. Ethiopia, for example, defines forests *'as land occupied with trees (natural and planted,) attaining a height of more than 2 meters at maturity, canopy cover of more than 20% and covering an area of more than 0.5 ha, with a minimum width of 20 meters or not more than two-thirds of its length.'* (MEFCC 2017b, pp.22). The definition shows that 'forest' can be defined both *'by the presence of trees and by the absence of other land uses'* (FAO 2001). Both land use and land cover classification are therefore characterizing forests and forest lands (FAO 2001).

ii. 'Landscape'- a holistic approach

FLR focuses on restoring entire landscapes. As landscape approaches continue to gain more and more scientific attention, landscape definitions tend to vary across different research disciplines (MANSOURIAN, SGARD 2021). However, scientific literature on FLR agrees that landscape is a 'heterogenous mosaic' (CÉSAR ET AL. 2021) which *'integrates social and environmental objectives across land use sectors and scales of governance'* (ERBAUGH, OLDEKOP 2018, pp.76; DJENONTIN, ZULU, ETONGO 2020). According to ERBAUGH, OLDEKOP (2018), the term 'landscape' involves much more than the spatial and temporal dimension: It includes not only biophysical features but also its endowed institutional, cultural and social attributes (DJENONTIN, ZULU, ETONGO 2020). Hence, landscape approaches emphasize the dynamic patchwork of overlapping ecological, economic and social systems referring to a geographical area (DJENONTIN, ZULU, ETONGO 2020). By offering both a scale and a consortium of social and ecological aspects, 'landscapes' serve as a bridging concept for social and natural science (MANSOURIAN ET AL. 2016; SAYER, BULL, ELLIOTT 2008; VAN OOSTEN 2013). Putting 'landscape' in the context of FLR, they are defined as a 'planning unit' with interacting mosaics of land-cover and corresponding socio-cultural and institutional interactions, including their multi-stakeholder governance processes (MANSOURIAN 2016). These mosaics include different forest- and forest-related types ranging from old-growth and early successional forests to anthropogenically modified forests such as agroforestry (hybrid form of forestry and agriculture), commercial plantations or agricultural and degraded lands (see Figure 2) (VAN OOSTEN 2013; CÉSAR ET AL. 2021).

Figure 2: Wide-scale and mosaic restoration opportunities
Source: (MANSOURIAN 2020)

Especially in Sub-Saharan Africa, the interaction between small forests and agricultural landscapes is invaluable because of their strong connection and feedback loops for local farmers (DJENONTIN, ZULU, ETONGO 2020). Hereby, FLR project sites should encompass an area that is smaller than an ecoregion (e.g. watersheds (IP8, pos. 45, pp. 117)) but larger than a single property (CÉSAR ET AL. 2021). However, defining 'landscape' and its size is rather challenging since it leaves scope for interpretation.

iii. 'Restoration'- recovering ecosystems with multiple benefits

According to the Society for Ecological Restoration, restoration means the *'process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed'* (SER 2004, pp.3). While solely focusing on the ecological aspects of the restoration of a single ecosystem, it is challenging to achieve holistic restoration success since socio-economic aspects have to be included in restoration processes (WILSON, CAGALANAN 2016). Therefore, both the scale and the scope of ecological restoration are often too short-sighted. A wider lens, such as a whole 'restoration continuum', offers ways to balance social and economic perspectives of ecosystem restoration (DJENONTIN, ZULU, ETONGO 2020). Compared to ecological restoration, humans play a crucial role by focusing on improving entire livelihoods as well as restoring ecological functions and structures (WILSON, CAGALANAN 2016). At this point, 'restoration' in the sense of FLR is similarly multi-layered: FLR incorporates diverse activities along the restoration continuum and thus *'[focuses] on restoration of ecosystem services […] in contrast to "ecological restoration", which is a more ecocentric concept that strives for achieving pre-disturbance states […]'* (PISTORIUS, CARODENUTO, WATHUM 2017, pp.2). According to PISTORIUS, CARODENUTO, WATHUM (2017), without the active involvement of local people in restoration processes, reforestation may fail or even lead to unexpected negative consequences, as several reforestation projects around the world have shown (CÉSAR ET AL. 2021). Hence, FLR is composed of multiple forms of reforestation, which are less focused on ecological restoration than on the overall socio-economical integrity of landscapes. According to this, FLR is incorporating trees into the landscape as well as improving forest quality standards without having the intention to create a 'native' forest (WILSON, CAGALANAN 2016; CHAZDON ET AL. 2017).

Summing up, restoration in the name of FLR has to be seen in the broader context: Restoration of ecosystem services requires a strategic landscape design to allow spatial heterogeneity for different social and ecological aspects (WILSON, CAGALANAN 2016).

iv. FLR - processes, principles, and methods

Since FLR simultaneously allows to mitigate and adapt to climate change while enhancing local livelihoods as well as conserving biodiversity, the practical underlying mechanisms, processes and principles reflect the complexity of the FLR approach (REINECKE, BLUM 2018; CÉSAR ET AL. 2021). The FLR process has three key elements consisting of (1) participation, (2) adaptive management and (3) consistent monitoring and learning framework (ITTO 2020). Merging those key elements, the ITTO published a set of guiding principles to help policymakers to put FLR into practice and create enabling conditions for successful FLR implementation. The six FLR principles have been developed by the 'Global Partnership on Forest and Landscape Restoration (GPFLR)' in close cooperation with implementing organizations and local communities. Given that FLR is a fast-developing field of science and practice, processes may change quickly and adopt short-term. However, the recently updated ITTO guideline represents the up-to-date FLR standard that adequately encapsulates the core ideas of FLR undertakings (DJENONTIN, ZULU, ETONGO 2020):

1. *Focus on landscapes:* FLR is a landscape approach and therefore combines socio-ecological and political dimensions across entire landscapes, not individual sites. FLR implementation requires planning and organizing at the landscape level and considers the variety of existing forms of land use and governance arrangements (ITTO 2020).
2. *Engage stakeholders and support participatory governance:* Engagement of stakeholders in planning and decision-making is crucial to benefit from FLR measures. Land use strategies, restoration goals, implementation methods, monitoring, assessment and review must be carried out in close coordination with all involved stakeholders (ITTO 2020).
3. *Restore multiple functions for multiple benefits:* FLR measures should always address the most feasible economic, social and ecological mechanisms to create a wide range of ecosystem services that equitably benefit all stakeholders (ITTO 2020).
4. *Maintain and enhance natural ecosystems within landscapes*: FLR should not convert or destroy natural forests or other ecosystems. In contrast, FLR should restore dynamic forest processes and aim to enhance conservation, recovery and sustainable forest management (ITTO 2020).

5. *Tailor to the local context using a variety of approaches:* FLR should only use approaches that are adapted to the local political, social, and ecological situation. Local species, for example, are better suited than exotic species (BAZZANA ET AL. 2021; ITTO 2020).
6. *Manage adaptively for long-term resilience:* Since FLR is a long-term undertaking, its implementation measures need to be capable to adapt to changing local socio-economic, political, and ecological circumstances. Furthermore, monitoring and evaluation processes should be continuously integrated into management plans (ITTO 2020).

FLR implementation methods such as Participatory Forest Management (PFM), area exclosures (fencing a certain area) or agroforestry are mainly dependent on the consideration of the six FLR principles in order to ensure growing resilience and future options to adjust and enable sustainable practices (KASSA ET AL. 2017). A strong emphasis on participation, collaborative processes and empowerment focused on local stakeholders is deeply embedded in FLR principles. This connects to the core idea of FLR to create multiple benefits spanning entire livelihoods: increasing food security and poverty alleviation by biodiversity conservation as well as climate change resilience (DJENONTIN, ZULU, ETONGO 2020; PISTORIUS, FREIBERG 2014; LAESTADIUS ET AL. 2015).

Looking at the six principles of FLR, the intense focus on actor involvement and multiple stakeholder engagement become evident (VAN OOSTEN ET AL. 2014). Without explicitly naming governance aspects, FLR automatically does. It recognises that restoration requires multiple stakeholder operations on multiple scales and sectors. This type of stakeholder engagement in designing and decision-making of FLR strongly depends on governance arrangements, as presented beforehand. But what, ultimately, makes governance so crucial for FLR implementation? These questions cluster around the omnipresent field of 'governance research'. A deep dive into the sphere of 'governance' and its different approaches, therefore, seems to be indispensable to shed light on the reciprocal relationship between FLR and governance.

2.2. FROM GOVERNANCE TO LANDSCAPE GOVERNANCE

Undoubtedly, governance is one of the most widely branched and fragmented scientific term, which is used within the nexus of political, economic, and social processes (BENZ ET AL. 2007). Due to its widespread use, the term inevitably gets more and more fuzzy. Thus, a closer look at specific governance definitions and their corresponding concepts is needed.

2.2.1. DEFINING GOVERNANCE: ONE TERM WITH MULTIPLE MEANINGS

The concept of 'governance' emerged around the 1990s and entered the environmental literature in the early 2000s (MANSOURIAN, SGARD 2021). The noun 'governance' has been commonly used in the sense of 'government' for a long time, thus it is still widely used to discuss the role of governments in dealing with public issues (GRAHAM, AMOS, PLUMPRE 2003; World Bank 2009). The actual 'state' in the function of governing a country is only the 'visual' political institution that is part of larger governance processes (MÜLLER-MAHN, ALEMU 2012; QUDRAT-I ELAHI 2009). Referring to the title of the present thesis (Governing Forest Landscape Restoration), the verb 'governing' is used to describe the activity of 'implementing' governance processes (MANSOURIAN 2017; CHAZDON ET AL. 2021). Governance, therefore, can be understood as both: the product of interaction and the context of interaction (PROFOR, FAO 2011). For this reason, the verb rather than the noun was chosen for the title of this thesis, as it matches the processual nature of Forest Landscape Restoration.

Nowadays, depending on scientific perspectives, multiple definitions of governance can be found. They differ in many respects by either focusing on the descriptive or the normative dimension of governance (BENZ ET AL. 2007). According to the UNDP policy paper from 1997, '*governance is the exercise of economic, political and administrative authorities to manage a country's affairs at all levels. It comprises mechanisms, processes and institutions, through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences'* (QUDRAT-I ELAHI 2009, pp.1169). This definition is still widely used and contains all essential aspects, which are also relevant for Forest Governance. In contrast to the UNDPs definition, BIERMANN, PATTBERG (2008, pp.278) focus more on the functional aspects of governance: *'the governance concept generally implies some degree of self-regulation by societal actors, private public cooperation in solving societal problems, and new forms of multilevel policy.'* Putting stakeholders in the centre ARTS, VISSEREN-HAMAKERS (2012) state that *'governance is about the many ways in which public and private actors from the state, market and civil society govern public issues at multiple scales'* (LAESTADIUS ET AL. 2015; SOMORIN ET AL. 2014, pp.89). Despite the different definitions, most of the understandings of 'governance' have in common, that *'they refer to 1. people [..] 2. decision-making actions […]and 3. tools that enable people to make those decisions […]'* (MANSOURIAN 2017, pp.3). Since governance refers to processes, actors and institutions which enable decision-making, power

relations among different stakeholders, including their ability to represent their interests, are important aspects also with regard to the political ecology reference (MANSOURIAN 2017; NAGENDRA, OSTROM 2012). Therefore, governance can be either understood in a descriptive manner by reflecting collective decision-making processes or in a normative way by incorporating the principles of 'good governance' (BENZ ET AL. 2007). However, defining principles for 'good governance' is rather controversial. Nonetheless, UNDP has set five principles, which often appear in the literature. The five principles consist of (1) Legitimacy, (2) Direction, (3) Performance, (4) Accountability and (5) Fairness (GRAHAM, AMOS, PLUMPRE 2003). Those principles are transferable to all governance processes and also serve as a benchmark of 'good' forest governance.

Evidently, governance includes a wide range of aspects which makes empirical research on governance extremely difficult. To better capture governance in the specific context of FLR, MANSOURIAN (2017, pp.3) propose the following definition: *'governance in the framework of FLR refers to the wider set of institutions and stakeholders at all levels and the ways in which they connect and interrelate over time to influence the implementation of FLR and the process of restoring a forested landscape'*. MANSOURIAN (2017) considers all the mentioned aspects of governance, including one central aspect of environmental governance: the spatial dimension and its relevance for governance processes. Following VAN OOSTEN (2013, pp.666) *'place does matter'* to the effect that a spatialization of governance is required to find holistic policy responses to our recent environmental problems, such as deforestation. Since global problems become noticeable on the local scale, the societies' need for a 'sense of place' reflects the interplay of actors on different scales that are both affected by environmental changes and at the same time need to be involved in decision-making processes to tackle those challenges (GÖRG 2007; VAN OOSTEN 2013).

On the one hand, stakeholders operate on different scales, while on the other hand, implementation of FLR processes happens on the 'landscape' level. The need for multi-scalar governance approaches as well as landscape approaches is therefore evident. Picking up this demand, a governance approach with both a strong spatial reference and a focus on 'landscapes' has been chosen to make the complexity of governance more tangible: the concept of 'Landscape Governance'.

2.2.2. LANDSCAPE GOVERNANCE: ADDING THE SPATIAL LEVEL

There is a strong desire to *'overcome [the] fragmented management of the natural ecosystems on which human beings depend'* (ROBINSON, KAGOMBE 2018, pp.27). Landscape approaches can help to overcome the predominant dualism between nature and society by combining and integrating them. As we have already seen in Chapter 2.1, FLR focuses on entire 'landscapes' with all its social and economic implications and so does 'Landscape Governance'.

Referring to Chapter 2.1, landscape approaches enjoy great popularity because they overcome the lack of multilevel approaches combined with linkages across sectors and jurisdictions (ROBINSON, KAGOMBE 2018). Therefore, landscape approaches are perfectly suitable for analysing human and ecological interactions, as it is the case in FLR (MANSOURIAN 2016). Still, research on linking governance and 'landscapes' is largely experimental (VAN OOSTEN, RUNHAAR, ARTS 2021). However, governance of landscapes takes up the broader discourse on sustainable development, incorporating multi-stakeholder and cross-sectoral collaborations on spatial levels. Thus, Landscape Governance is an approach increasingly admitted and exercised by global institutions, governments and private stakeholders (VAN OOSTEN, RUNHAAR, ARTS 2021).

But, ultimately, what does 'Landscape Governance' mean? Similarly to FLR, the 'landscape' plays a significant role. The definition of 'landscape' is equally fuzzy to landscape definitions in FLR (ROS-TONEN, DERKYI, INSAIDOO 2014). Comparing it to the FLR 'landscape' definition, Landscape Governance seems to have a similar understanding of 'landscapes' (see Figure 3).

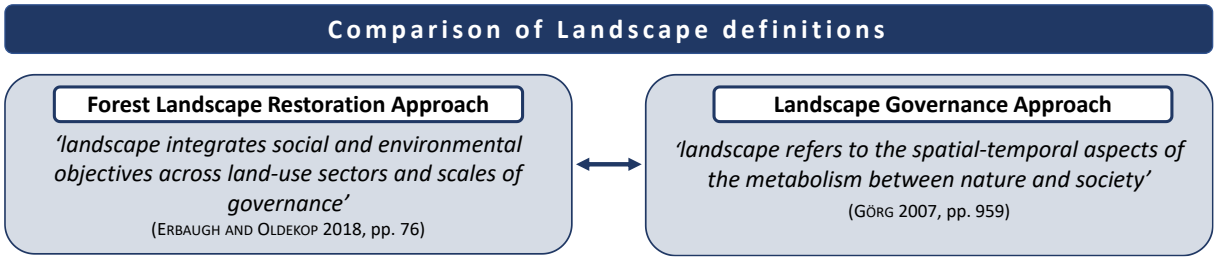

Figure 3: Comparison of landscape definitions
Source: own figure

'Landscapes' in the sense of Landscape Governance *'refer to the spatial-temporal aspects of the metabolism between nature and society'* (GÖRG 2007, pp.959). As in Chapter 2.1.2, landscapes are defined as a platform for reconciling natural and social objectives (MANSOURIAN, WALTERS, GONZALES 2019). Since both approaches have similar understandings of landscapes, Landscape Governance perfectly serves as a theoretical analysis tool for research on FLR.

Bringing landscape and governance together, Landscape Governance considers multiple actors interacting on multiple scales while following environmental, social, political and economic objectives (VAN OOSTEN, RUNHAAR, ARTS 2021). It can therefore be described as *'the multiple-scale interface between the local and the global'* (VAN OOSTEN 2013, pp.666; MANSOURIAN, SGARD 2021). Putting Landscape Governance into practice, it aims to balance protection, consumption and production, leading to long-term socio-ecological stability by involving all relevant stakeholders (VAN OOSTEN, RUNHAAR, ARTS 2021).

Building on the previous discussion about the term 'governance' and 'governing', Landscape Governance naturally differs between its procedural and substantive dimensions. Substantive Landscape Governance describes the landscape that has to be governed with all the functions, services and goods it provides. Contrarily, the procedural dimension reflects the active process of governing the landscape, entailing multi-stakeholder dialogue and decision-making processes (VAN OOSTEN, RUNHAAR, ARTS 2021).

With its link between multilevel politics and spatial designation, Landscape Governance is an appropriate setting for tackling multisectoral challenges such as FLR (SARI ET AL. 2019; GÖRG 2007). Given that Landscape Governance provides a suitable analytical approach for FLR, a theoretical and structural framework for researching governance is essential. Exploring decision-making processes as core elements of Landscape Governance, the trisection of the Landscape Governance triangle by MANSOURIAN ET AL. (2014) helps to assess the governance architecture and structure the research outcomes. The governance triangle, which will be explained in the next chapter, illustrates the central elements of Landscape Governance which makes them more descriptive as well as approachable.

2.2.3. THE LANDSCAPE GOVERNANCE TRIANGLE: ACTORS, INSTITUTIONS, POLICIES

Referring back to the definition of Landscape Governance, it involves three essential dimensions on different spatial levels: actors, institutions, and policies (MANSOURIAN ET AL. 2014). In the broader sense, the Landscape Governance triangle refers to the three different governance dimensions of politics, polity and policy (VAN OOSTEN ET AL. 2014). Here, policies and institutions provide the frame in which stakeholders interact and organize themselves (MANSOURIAN ET AL. 2014; OMODING ET AL. 2020). Figure 4 shows the three-dimensional triangle around the decision-making space on different scales:

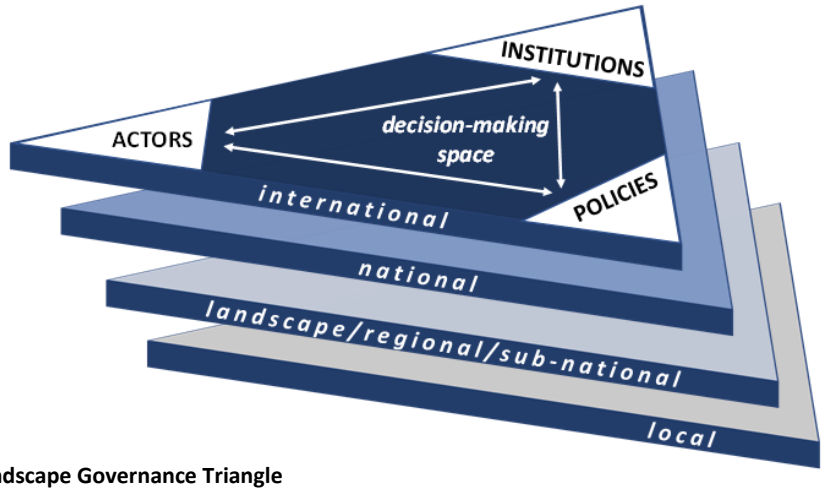

Figure 4: The Landscape Governance Triangle
Source: own figure based on (MANSOURIAN ET AL. 2014; MANSOURIAN 2017)

Each of the three elements and their interplay provides the overarching framework to assess governance structures on multiple scales. Inclusive decision-making processes of actors within policies and institutions are the core element of Landscape Governance and still remain one of the biggest challenges (OMODING ET AL. 2020). A clear assignment to one of the three categories is not always unambiguous since they contain overlapping elements. Actors, for example, may also appear as institutions with law-making abilities (MANSOURIAN 2017).

i. Actors

Understanding the actors' constellation, their motivation and ability to engage themselves is fundamental in the governance equation (MANSOURIAN 2017). Poor knowledge of actor constellations and networks may impede the identification of challenges and neglect vulnerable or marginalized groups (CHAZDON ET AL. 2021). 'Actors' are considered to be those stakeholders who *'hold power, influence, and decision-making capacity'* (CHAZDON ET AL. 2021, pp.2; BUCKINGHAM ET AL. 2021). Those heterogeneous actors shape decision-making processes with the help of institutions within a regulatory framework. They operate through various ways, for instance as consultation, collaboration or empowerment functions (SCHROEDER 2010).

Clustering the vast number of actors helps to better handle and understand the actors' constellations. A common classification is a division into public (e.g., government agencies, local authorities), private (e.g., private companies, individual landowners), and civil societies (e.g., households, local communities, NGOs) as well as according to their spatial level (MANSOURIAN ET AL. 2014). Though, it is debatable to classify actors according to simplistic characteristics because broad categorisations may disguise individual interests and intentions (MANSOURIAN, SGARD 2021; MANSOURIAN, WALTERS, GONZALES 2019). However, rough classifications of actors

(e.g., spatial level, public/private (includes civil societies)) may be reasonable, especially when analysing power relations across scales within the actor-network.

Actors can be directly or indirectly involved in Landscape Governance processes depending on their stakeholder group and spatial level. They play different roles with diverse motivations and interrelations (MANSOURIAN 2020). Therefore, actors must be considered within their network consisting of other actors and institutions. The interrelation between different actors is crucial for understanding governance structures as they strongly influence governance processes and outcomes. The actors' relationships, motivations and power abilities are subject to change over time, and new actors may enter the stage. Especially long-term stakeholder engagement on the international level can be challenging since project funding often tends to be short-term. Furthermore, global trends (e.g., REDD+) and corresponding political agendas may change, which also entail actors' involvement and changing priorities (MANSOURIAN 2020). Compared to national and international engagement, local-level actor engagement is therefore much more stable and long-term (MANSOURIAN 2020). Thus, actor constellations are never static and power might shift from one actor to another (MANSOURIAN 2017). For this reason, actor mapping only provides a snapshot of the current governance architecture.

ii. Institutions

The second dimension of the governance triangle can be described through the institutional setup. According to NORTH (1990, pp.3) institutions can be defined as *'the rules of the game in society or, more formally, the humanly devised constraints that shape human interaction*'.

Similarly to the actors, institutions can be classified according to a specific character: formal and informal institutions (RAHMAN ET AL. 2017). Formal institutions are characterized by political actors who own the assertiveness of laws and regulations as well as declare sanctions (SOMORIN ET AL. 2014). In contrast, informal institutions evolve over time and include non-formalised rules and thus comprises verbalised or customary rules and norms, with *de facto* rulemaking and enforcement bodies (RAHMAN ET AL. 2017). They are rooted in the thinking and actions of the actors and are usually unwritten (NEGERA, BEKELE, WONDIMAGEGNEHU 2019). The relationship and strength between formal and informal institutions are essential for any governance analysis (PAHL-WOSTL 2009; SOMORIN ET AL. 2014). Some decision-making actors may operate under formal institutional arrangements, others under informal institutions (MANSOURIAN 2017).

iii. Policies

According to LOWI, NICHOLSON (2007, pp.70), policies *'are rules, formulated by some governmental authority, expressing an intention to influence the behaviour of citizens, individually or collectively, by use of positive or negative sanctions'.* Policies incorporate all relevant rules and sanction instruments, such as laws, regulations, guidelines and strategies (VAN OOSTEN ET AL. 2014; AYANA, ARTS, WIERSUM 2013). Examples from the thematic field of FLR are land tenure and land use policies or public incentives for private stakeholders (MANSOURIAN ET AL. 2014). Without clear binding rules on the use of forests or ownership, efforts to restore degraded land are likely to be challenging (GÖRG 2007; VAN OOSTEN 2013; COLFER, PFUND 2011). Studies have shown that well-designed land and tenure policies improve natural resource management and increase productivity by enhancing landholders' confidence (LEGESSE, JEFFERSON-MOORE, THOMAS 2018). Linking policies and institutions, the institutional setup sheds light on how policies are implemented and enforced on the operational level. Governance arrangements are therefore only as good as the weakest link in their chain: good policies may not be effective if they are not implemented by solid institutions (CHHIBBER 1998).

iv. Scale

The scale does matter - In Chapter 2.1.2, the spatial level already played a significant role in defining the term 'landscape'. Governance analysis in the sense of Landscape Governance looks at actor constellations, institutions, and policies at different spatial levels beyond the 'landscape'. According to the literature, different spatial categorizations and definitions can be found depending on the specific disciplines.

Scale is generally understood as a relative size that frames a certain issue and is therefore always related to a specific space (WIEGANT ET AL. 2020; LOVELL, MANDONO, MORIARTY 2002). According to FOUCAULT (1980, pp.149) *'space used to be either dismissed as belonging to "nature"—that is, the given, the basic conditions of "physical geography", in other words a sort of "prehistoric" stratum; or else it was conceived as the residential place or field of expansion of peoples, of a culture, a language or a state'*. Within such philosophical considerations of space, it becomes evident that space is more than just framing a particular area. Instead, space is socially constructed as well as reproduced and therefore heterogeneous and highly subjective (FOUCAULT, MISKOWIEC 1986, pp.23). Given that space is socially configured, power structures become perceptible by observing social networks, actor interactions, institutional setups, and

policies as the governance triangle tries to unlock. For assessing multiple-scalar governance structures, space needs to be 'categorized' in terms of transferring it into a certain understanding of scales:

Starting from the theoretical side, FLR incorporates biophysical scales (e.g., field, landscape, ecosystems) as well as governance scales (international, national, regional, local), while Landscape Governance refers to the typical geographical governance levels (see Figure 5) (WIEGANT ET AL. 2020; VAN OOSTEN 2013).

SCALE

Governance		Forest Landscape Restoration		Ethiopian subdivisions
International	=	International	=	International
National	=	National	=	National
Subnational level				
Regional	=≠	‚Landscape'	≠	Region Zone
Local	=≠	Local		District (Woreda) Municipality (Kebele)

Figure 5: Diverging scale assumptions

Source: own figure based on (MANSOURIAN ET AL. 2014; MANSOURIAN 2017)

If one combines both spatial concepts while having the strong governance focus of the present thesis in mind, one obtains the spatial level categorisation which is used in the governance triangle (international, national, landscape, local) (MANSOURIAN 2017) (see Figure 5). Quartering the spatial level according to the governance spatial assumptions gives a clear analytical framework. Replacing the regional level with the 'landscape' scale approximately corresponds to the scale assumption differentiated in the FLR approach (MANSOURIAN 2017). However, combining two different scale decompositions will never equate. 'Local' in the sense of governance will be interpreted differently compared to the local scale from the FLR perspective. This becomes especially evident when adding a third spatial categorization: the Ethiopian subdivisions, which become relevant in the following empirical research process. Ethiopia has ten autonomous regions (Afar, Amhara, Benishangul-Gumuz, Gambela, Harari, Oromia, Sidama, Somali, Southern Nations, Nationalities, and Peoples' Region, Tigray) plus two charted cities (Addis Ababa, Dire Dawa) (BÉLAIR 2016). Each of the regions is subdivided into administrative zones (68 in total). Approaching the local level, the zones are further subdivided into districts (Woreda) and municipalities (Kebele) (FIKRE, DEMISSIE 2012). The highest decision-making body is the federal level, while the Kebeles are the lowest administrative units (HAILEMARIAM, SOROMESSA, TEKETAY 2016).

Compared to the other scale perceptions, international and national level are relatively coherent (see Figure 5). Sub-national divisions, however, are highly diverging. Regional Ethiopian states, zones, districts and municipalities are barely classifiable into landscape and local level since landscapes do not correspond to administrative units (COLFER, PFUND 2011; MANSOURIAN 2017). On top of this, every interviewee, including the researcher will have their own scale perceptions, which makes it even more difficult to spatially frame governance structures. Furthermore, governance elements do not always clearly belong to one specific spatial level since they interrelate and act and shape decision-making processes on multiple scales. The success of governance processes at one spatial level is therefore highly dependent upon the relationships and interactions between and within other levels (GÖRG 2007).

Summing up, the incongruence and heterogeneity of biophysical, governance and administrative scales enhance the challenge of understanding the governance of FLR (MANSOURIAN 2016). Landscapes neither correspond to jurisdictional nor administrative units. However, it has become apparent that questions about space and scale become more and more crucial for environmental problems and policy responses in the sphere of political ecology and governance (GÖRG 2007). The request for multi-level governance approaches for assessing environmental governance is pressing, so Landscape Governance with its triangle is well-suited for analysing the complexity of FLR.

In a broader context, the three components of the Landscape Governance Triangle (actors, policies, institutions) at all levels are crucial for both governance and forest restoration outcomes (MANSOURIAN 2017). MANSOURIAN ET AL. (2014) argue that 'good' Landscape Governance, marked by the five principles from Chapter 2.2.1 requires the functioning of the three governance components plus their effective interaction on all scales (PROFOR, FAO 2011). Without an adequate institutional setup, law enforcement authorities and cooperating stakeholders, misleading decision-making might cause unsuccessful restoration (MANSOURIAN ET AL. 2014). Following this, governance needs to be linked to the forest context to uncover the sticking points of forest governance. Hence, the following chapter will shed light on how governance is expressed and exercised in the forest sector, particularly relevant for the case study.

2.3. FOREST GOVERNANCE: LINKING FLR AND LANDSCAPE GOVERNANCE

Undoubtedly, successful FLR implementation is highly dependent on the governance structure on different scales (CHAZDON ET AL. 2021). Yet governance approaches and perspectives are essential for FLR, mainly because of its sectoral, spatial and temporal components of processes (MANSOURIAN 2016). Linking these two approaches will uncover a thematic field of investigation as well as challenges and factors of success (Chap. 2.3.1 & 2.3.2). All these thematic areas will become relevant for the case study and will be picked up during the empirical research. Starting with the thematic fields of forest governance, Figure 6 shows the most widespread aspects of common interest and concern (CRYSTAL ET AL. 2013).

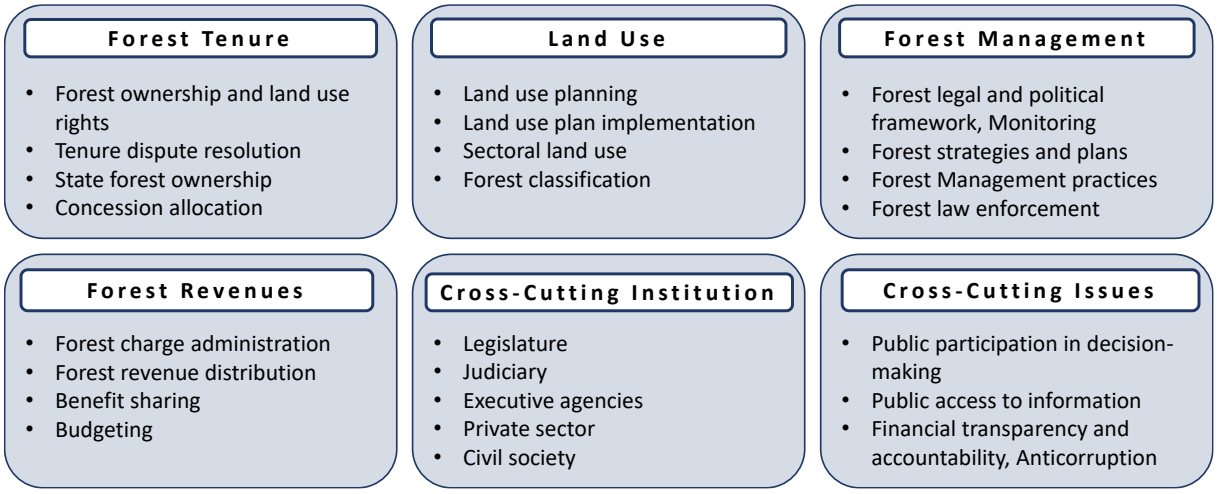

Figure 6: Thematic areas of Forest Governance
Source: own figure based on (CRYSTAL ET AL. 2013)

One of the most important and, at the same time, most conflicting issues in forest governance is related to forest tenure. Forest tenure includes forest ownership rights, forest use, access rights and rights to manage forest resources and therefore defines who can use which resources under what conditions and for how long (CRYSTAL ET AL. 2013; ALEMIE, AMSALU 2020). Forest tenure and its corresponding laws and policies codify the legal basis for state as well as private ownership of forest lands and resources (ALEMIE, AMSALU 2020). Thus, the thematic area of land use is more focused on the actual use of forested land. Sector-specific planning processes as well as classifying forest uses within designated forest areas and planning processes beyond the forest sector (e.g., mining, agriculture, infrastructure) are assigned to this category (CRYSTAL ET AL. 2013). Researchers have identified that lacking tenure security or weak tenure rights significantly limit the participation of communities in land use decision-making processes and may therefore lead to inefficiency in terms of food security, land investment and

forest restoration (McLain et al. 2019; Legesse, Jefferson-Moore, Thomas 2018). Thus, land rights, ownership and land tenure for natural resources management are key factors for FLR and will play a central role in the case study. As a next thematic area of intervention, forest management includes all the operational aspects from planning, monitoring, managing, and evaluating the various uses of forests. It also entails the overarching legal and policy frameworks, strategies and guidelines to ensure the enforcement of activities and their compliance (Crystal et al. 2013). As the name implies, forest revenues cover the monetary aspects, such as benefit-sharing, taxes, and fees. Looking at the key actors, including their legislative, judiciary and executive agencies, cross-cutting institutions are especially relevant for the performance of legislature and law implementation aspects. Similarly to all other cross-cutting issues such as participation processes, access to information and knowledge, the intersectoral and multidisciplinary nature of FLR becomes evident. Moreover, all thematic areas serve as monitoring and evaluation indicators to measure FLR outcomes (Crystal et al. 2013).

As indicated above, all six thematic areas harbour the potential for both conflict and improvement, as we will see later in the case study. As they serve as pathbreaking aspects regarding the Ethiopian case study, it is necessary to further investigate challenges and success factors within the sphere of forest governance. All these challenges and success factors are not exclusively reserved for forest governance; they rather apply to many natural resource management fields in many countries (Chazdon et al. 2021).

2.3.1. FOREST GOVERNANCE CHALLENGES

Based on the complexity and amount of stakeholders engaged in FLR governance arrangements, challenges are unavoidable (Ros-Tonen, Reed, Sunderland 2018). Of course, challenges always have to be seen in the project context, however, three main problem areas of landscape-based initiatives and, in particular, forest governance could be identified (Chazdon et al. 2021; Höhl et al. 2020; Brancalion, Holl 2020):

i. Poor alignment across levels and government agencies

Unaligned policies, regulations, power imbalances, overlapping jurisdictions and information asymmetries may lead to imbalances within and across levels of governance (Chazdon et al. 2021; Mansourian, Walters, Gonzales 2019). Government policies to support other sectors (e.g., economic growth) can have counterproductive consequences for reforestation activities

and may even intensify deforestation (CHAZDON ET AL. 2021). Restoration should not be seen solely as a technical problem that might lead to the exclusion of legitimate stakeholders (SAYER, BOEDHIHARTONO, BUCHORI 2020; WORTLEY, HERO, HOWES 2013). Furthermore, mismatches between short and long-term goals as well as lacking support from government programs for sustainable livelihoods can generate misleading FLR outcomes. The better the multi-sector and multi-level governance coordination, the better the restoration outcome (CHAZDON ET AL. 2021; SAYER, BOEDHIHARTONO, BUCHORI 2020; GUARIGUATA, BRANCALION 2014).

ii. Environmental and social heterogeneity

The economic, social, and ethnic diversity of stakeholders challenges FLR. FLR stakeholders differ in their cultural traditions, ethnic identity and perspective on using landscapes and forests (BUCKINGHAM ET AL. 2021; WELCH, COIMBRA JR. 2021; SANCHES, FUTEMMA, ALVES 2021). Imbalances of power and needs as well as unbalanced distribution of land and forest tenure rights complicate successful FLR (CHAZDON ET AL. 2021; BUCKINGHAM ET AL. 2021). Also, gender roles require different management tools for forest restoration. The divergence of stakeholder engagement from local to global levels demands a comprehensive information distribution amongst all stakeholders. In this context, local and indigenous knowledge as well as local peoples' rights and needs tend to get overlooked in the FLR project cycle (CHAZDON ET AL. 2021; MAYERS, BASS, MACQUEEN 2005; REYES-GARCÍA ET AL. 2021).

iii. Lack of enabling conditions and implementation capacity

Poor institutional setup combined with lacking legal instruments and policies impedes the development of local capacities and adaptive management tools. Projects are often conceived for the short-term and fail to build long-term local capacity to drive effective restoration. Furthermore, poor knowledge of reforestation networks and stakeholder engagement and relationships makes it difficult to identify challenges within governance processes (CHAZDON ET AL. 2021).

Forest governance challenges can occur on all spatial levels, sectors, and project cycle phases. Since such challenges seem to appear very frequently, solutions urgently need to be developed. Several papers are concerned with finding solutions and presenting enabling factors for forest governance, as CHAZDON ET AL. (2021) show in their paper.

2.3.2. FOREST GOVERNANCE SUCCESS FACTORS

On a theoretical basis, governance enabling factors can be found in Elinor Ostrom's principles for sustainable governance of common-pool resources (OSTROM 2012). As forests and forested landscapes are often handled as shared resources, they can be assigned to the 'tragedy of the commons'. Individuals are overexploiting forest resources for short-term individual benefits by ignoring long-term cumulative negative consequences of each individual's actions (VALETTE ET AL. 2020). To solve this problem, the Ostrom-Design-Principles have been widely applied to forest resources and therefore serve as a benchmark for 'good' forest governance (COX, ARNOLD, VILLAMAYOR TOMÁS 2010). Referring to these Ostrom-Design-Principles, CHAZDON ET AL. (2021) have outlined these eight enabling actions and conditions by linking them to the six core FLR principles from Chapter 2.1.2 (CHAZDON ET AL. 2021) (see Figure 7).

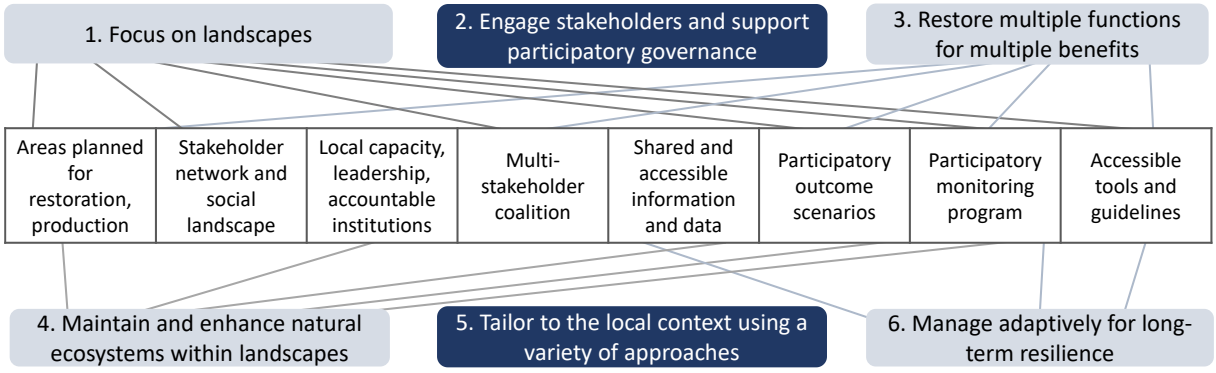

Figure 7: FLR Governance enabling conditions

The figure illustrates how eight enabling conditions are linked to the six principles of FLR. All eight of the enabling conditions are linked to Principles 2 and 5 (dark blue) so those lines are not shown in the figure.

Source: own figure based on (CHAZDON ET AL. 2021)

Referring to Figure 7, FLR incorporates all relevant governance factors for effectively managing common resources. Therefore, FLR itself can be seen as a response to traditional, often failing approaches to natural resource management (MANSOURIAN, PARROTTA 2018).

With reference to Chapter 2.3.1, the most critical aspect in forest governance seems to be the active involvement of local communities. All Ostrom-Design-Principles, as well as the FLR principles, refer to this central aspect: Multistakeholder coalition, stakeholder networks, and participatory monitoring programs shall ensure the involvement of all stakeholders (CHAZDON ET AL. 2021). Restoration activities need to adapt to local conditions and include local informal governance structures in overlapping governance architectures (WILSON, CAGALANAN 2016).

Furthermore, the quality and capacity of forest administration as well as effective monitoring, evaluation and knowledge sharing, foster local participation (BRANCALION, HOLL 2020).
Besides community engagement, forest governance needs to be transparent, accountable and should provide access to knowledge, tools and guidelines for all stakeholders (World Bank 2009). General stability of forest institutions and sustainable management of conflicts over forest resources ensures fairness of distribution of rights and resources (World Bank 2009). Coherence to forest legislation and rules should include high quality of domestic forest legislation and civil law implementation in addition to clear tenure, property, and land use rights (CHAZDON ET AL. 2021). Finally, effective Forest Governance only has an effect if the economic efficiency is ensured or corresponding incentives are adequately provided. If profitable efficiency is given, more and more private actors or public-private partnerships will enter the market and promote restoration activities (CHAZDON ET AL. 2021).

In summary, 'good' forest governance, as well as the growing awareness of challenges and success factors of FLR, has led to two main supportive global forest governance trends: First, local communities, private companies, civil organizations and informal and/or traditional structures and institutions have become increasingly more involved in forest governance (TUCKER 2010). More precisely, decentralization of management and polycentric governance involving regional, local and non-government processes leads to increased multi-stakeholder participation (GUARIGUATA, BRANCALION 2014). Second, forest governance has developed from a sectoral approach to an integrated multi-sectoral and scalar approach which is also reflected in the comprehensiveness of international forest-related goals and marked-orientation (SARI ET AL. 2019; SAHIDE, NURROCHMAT, GIESSEN 2015; GUARIGUATA, BRANCALION 2014).

Newly established FLR projects worldwide try to combine these governance trends to ensure sustainable and long-term outcomes. The same applies to countries that pledged FLR commitments, such as the Federal Democratic Republic of Ethiopia. At this point, the present thesis ties in by applying the governance approach to Ethiopian forest governance. As case studies on FLR governance are still lacking, it is even more essential to contribute to a broader understanding of FLR governance arrangements. Although countless questions have been raised in proceeding through the thematic overview above and numerous aspects could be illuminated around forest governance, the frame of the thesis only leaves room for answering one overarching research question.

2.4. INTRODUCING THE RESEARCH QUESTIONS

Based on the theoretical considerations introduced in Chapter 2.1 and 2.2, the importance of governance structures for FLR outcomes has become clear: The absence of 'good governance' structures for managing environmental resources, such as forests, may cause FLR projects to fail (HAILEMARIAM, SOROMESSA, TEKETAY 2016). Accordingly, as already presented in the introduction, the main research question takes up this aspect by examining the influence of governance structures on FLR in Ethiopia (see Figure 8).

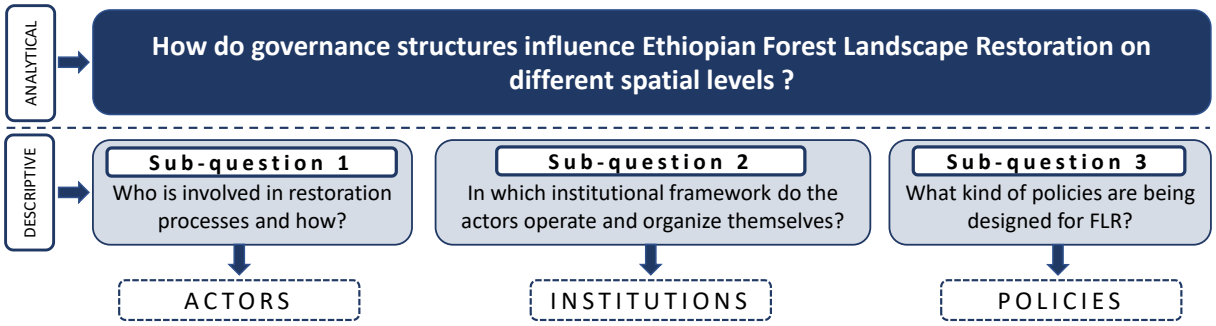

Figure 8: Research questions
Source: own figure

The main research question (dark blue) targets the analytical dimension of governance. Sub-questions (light blue) help to operationalize the main question by focusing on the descriptive part of governance. Since the Landscape Governance Triangle mirrors the descriptive aspects of governance, three guiding questions have been formulated to reflect each of the three dimensions: actors, institutions, and policies. As a first step, the sub-questions will help to assess the governance structure and, as the last step, serve as guiding support for answering the main research question. It is relatively self-explanatory that the research questions will not capture the ultimate governance architecture, as landscapes are fundamentally different and unique in time and space (VAN OOSTEN 2013). Based on this consideration, the research question aims to provide a general picture of the governance structures, even though governance on a landscape scale is not generalizable. This 'non-generalization' takes up the core idea of qualitative research and will be explained in the following chapter.

3. METHODOLOGY: RESEARCH APPROACH AND METHODS

Based on the scientific-theoretic derivation of the research structure, Chapter 3 outlines the research approaches and corresponding research methods. Research limitations and challenges are also presented to contextualize the thesis within its research circumstances.

3.1. RESEARCH APPROACH AND STRUCTURE

The research approach refers to the research philosophy of critical realism according to Roy Bhaskar and the associated ontological and epistemological assumptions (BHASKAR 2008). Here, 'reality' needs to be distinguished from the 'observable world'. By observing and researching observable mechanisms, structures, and social practices, the unobservable 'real' can be approached but never fully captured (SAYER 1992). These assumptions help to reflect the own position as a researcher during the research process. This is particularly relevant since a qualitative research approach with explorative focus has been chosen due to its suitability for obtaining empirical basic information for further theoretical classifications (MEIER KRUKER, RAUH 2005). Based on those pre-considerations, the thesis follows a rather classical approach by applying a theoretic framework to a selected case study (see Figure 9).

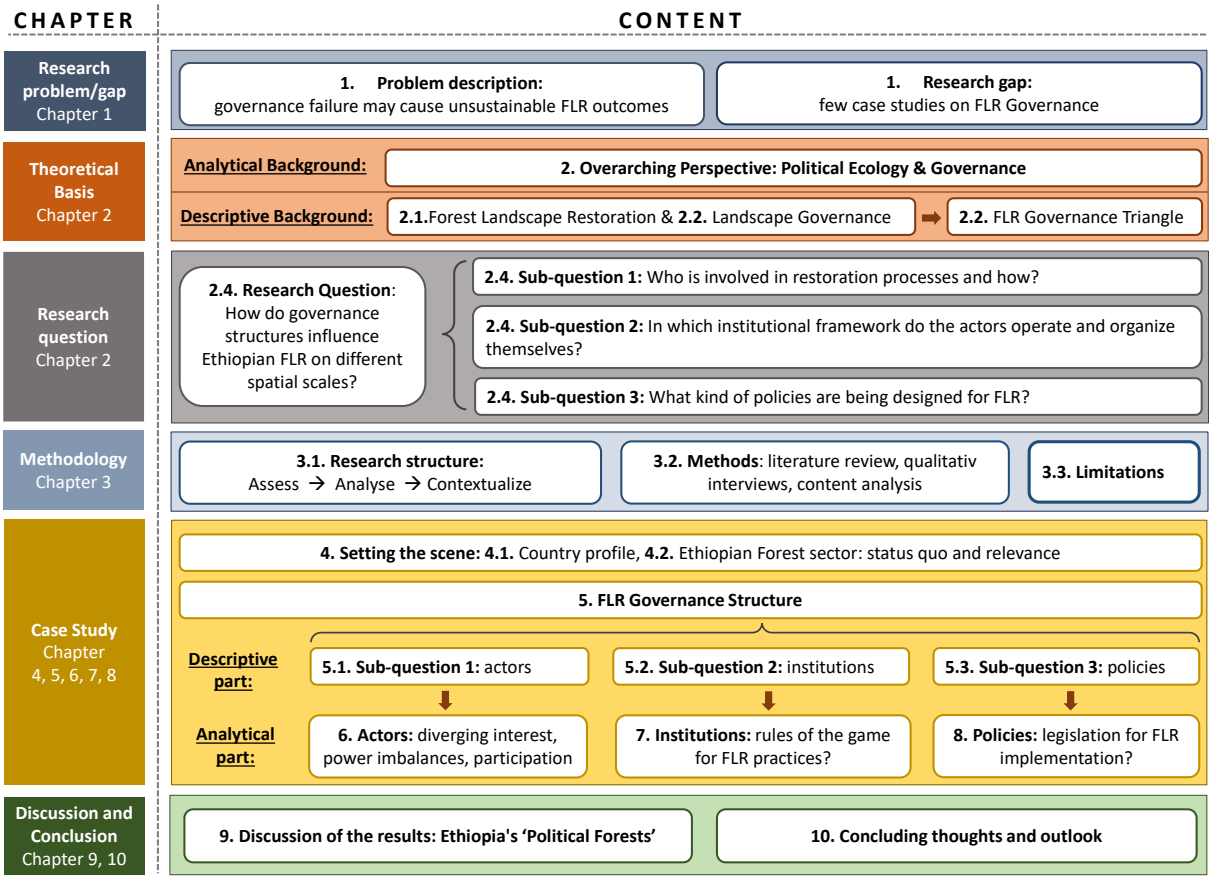

Figure 9: Research structure
Source: own figure

The underlying theory (Chap. 2) combines the two landscape approaches (FLR & Landscape Governance) and therefore provides a suitable framework for analysing governance structures within Ethiopian forest restoration activities. Given that governance spans descriptive elements represented by the Governance Triangle (actors, institutions, policies) as well as

normative functions, the paper consists of descriptive and analytical elements constantly referring to the trisection of the triangle. Hence, the empirical procedure of capturing the governance structure follows a precise order: first and in a purely descriptive manner, all the actors, institutions, and policies will be mapped and re-scaled. Since actors, institutions, and policies are very entangled, a holistic picture with all three elements must be drawn first to be able to go into more detail in the analysis of the individual elements of the governance triangle in a second step. Correspondingly, the three descriptive sub-questions will be answered first, while the main question will be answered second in the analysis of the governance architecture. The strict separation of the descriptive and analytical parts is advantageous, as a comprehensive governance analysis is more easily understandable when building on a pre-existing understanding of the governance structure. Finally, the results will be contextualized against the political background of Ethiopia since political circumstances cannot be ignored in the context of FLR.

3.2. METHODS: LITERATURE REVIEW, QUALITATIVE INTERVIEWS & CONTENT ANALYSIS

During the research process, primary as well as secondary data have been used. The literature review was largely carried out via keyword search in online databases, such as Research Gate, Web of Science, Science Direct, Google Scholar, as well as the online library of the University of Bonn. Additional internal documents were provided through GIZ, such as the ROAM assessment conducted by IUCN. The document has not yet been published but will be quoted with the permission of GIZ. Further background knowledge could be obtained during the *'Global Landscape Forum - Africa digital Conference 2021: Restoring Africa's Drylands'* (2-3 June 2021) and the *'International Tropical Forest Symposium'* (8 September 2021) hosted by the German Federal Ministry for Economic Cooperation and Development.

To answer the research questions, primary data was collected through semi-structured expert interviews. In the sense of social science, an expert is a person who has special knowledge about the research object (GLÄSER, LAUDEL 2010). Semi-structured interviews, on the one hand, offer enough freedom for the interviewer and interviewee and, on the other hand, strictly follow the research direction due to its pre-defined and open-ended questions (BOGNER, LITTIG, MENZ 2014). The interviews were conducted as a discursive dialogue. Hereby, the interview situation was understood as a communicative event that included factual questions, requests for narration, reflections and questions of understanding (MAY, MRUCK 2007).

Interview guidelines were developed and adapted if necessary. They involved four thematic blocks according to the research questions: actor's mapping, institutional setup, policies, and the overarching contextualizing of governance aspects (see Annex 2, pp. 88). Interview partners were not necessarily asked all questions due to lack of knowledge, lack of responsibility or an unsuitable question in the expert's context (GLÄSER, LAUDEL 2010, pp.12). All interviews were conducted online using the Zoom software *(zoom.us)* or MS Teams software *(microsoft.com/microsoft-teams.de).*

The acquisition of experts has primarily been carried out through private connections, social network platforms (e.g., LinkedIn) and webpages. Moreover, further interviewees were acquired through the *'Global Landscape Forum- Africa conference 2021'* by getting in contact with the speaker during group discussions and plenary sessions. The overall number of 10 interviews (numbered from Interview Partner (IP) 1 to 10) were meant to be as heterogeneous as possible (e.g., type of organizations, spatial representation) to get the most different perspectives (see Table 1).

Table 1: Metadata interviewees
Source: own table

	Criteria	Interview partner (IP) (10 in total)		
Personal information	**Age**	18-29 (2), 30-39 (3), 40-49 (4), 50-59 (1)		
	Nationality	Ethiopian (9), Rwandese (1)		
	Gender	female (3), male (7)		
Professional background	**Organization**	**International (4)**	**National (3)**	**Sub-National (3)**
		GIZ, IUCN, UNDP, CIFOR-IGRAF	MEFCC, MoA, Ethiopian Environment and Forest Research Institute (EEFRI)	Bahir Dar EEFRI, Amhara Region REDD+ Coordinator MEFCC, Gerese MEFCC office
	Organization type	public (7), private (0), others (3)		
	FLR experience (years)	3 (1), 4 (3), 5 (1), 6 (2), >10 (3)		
	Educational background	**Highest Degree**	**Subject**	
		Bachelor (2), Master (5), PhD (3)	Forestry, Agriculture, Natural Resources, Land & Water Management, Environmental studies	
Interview	**Interview medium**	Zoom (6), MS Teams (1), Questionnaire (3)		
	Interview length	Ca. 40 min (2), ca. 30 min (4), ca. 20 min (1),		

However, the choice of interviewees had to be balanced between the availability of interviewees and sample size for satisfying research outcomes. Great efforts were made to ensure a maximum of heterogeneity; however, this was only achieved to a limited extent (see next chapter).

Because of the Covid-19 pandemic, all the interviews had to be conducted online; hence, the selection of experts was limited to those who have access to the internet and online video calling tools. Experts at the international and national level could be easily reached, while sub-national or even local experts were hardly or even impossible to get in touch with. It would therefore be presumptuous to raise a claim on the representativeness of the interview sample, even more so as experts were acquired by pyramid scheme.

With the help of recordings, the interviews were transcribed, which allows an authentic depiction and analysis of the interviews (see Annex 4, pp. 90). For the sake of readability, the transcripts have been cleaned up linguistically and grammatically. Due to partially sensitive questions and political statements from the interview partners, all interviews have been anonymised to enable the experts to speak freely.

In the next step, a coding system in remembrance of the Qualitative Content Analysis, according to MAYRING (1994), was developed (see Annex 3, pp. 89). The coding system serves as a basis for the interpretation of the text as well as a framework for the entire analysis (RAMSENTHALER 2013). The coding system consists of codes, sub-codes, and sub-sub codes following the trisection of the governance triangle. The codes developed for the first version of the coding system were formed deductively. In the deductive method, the codes are defined first and then applied to the transcripts. New codes are added iteratively to the coding system whenever text passages appear which do not fit existing codes (RAMSENTHALER 2013). Therefore, the use of the coding system and the entire research follows an abductive logic, aiming at creating new knowledge through case-bound investigation (STURM 2006, pp.6).

3.3. LIMITATIONS

Qualitative research approaches intend to understand a complex reality in a given context. Since qualitative research is based on deep insights into different perspectives, it is not statistically representative. Hence, all results presented in this thesis are only a snapshot of current practices, opinions, and perspectives on FLR governance architecture.

The more different perspectives, the more holistic the results. While the selection of experts was meant to be as heterogeneous as possible, it can, nonetheless, be fully representative. This is particularly obvious from the gender perspective (7 male, 3 female), the educational background (all interviewees had at least a bachelor's degree) and regarding the spatial level.

Significantly local people and farmers most affected by FLR are barely reachable since personal interviews could not be arranged due to the Covid-19 pandemic. According to one interviewee, there are several reasons: *'because of language, internet access and second, farmers are very sceptical. […] You are a white foreigner, and they don't know your interests.'* (IP1, pos. 41, pp. 93). Referring to this statement, as a white German student, I reflect my position in the research process as a privileged one, leading to further scepticism and power imbalance (HUNTER 2002). Nevertheless, after some efforts, it was possible to reach experts from the sub-national level who agreed to at least fill out a written questionnaire. In this case, compared to spoken interviews, the questionnaires only delivered unsatisfying results since the thematic direction is difficult to cover. However, one interviewee from the Amhara region - a region in the north of Ethiopia currently submerged in violent conflict - agreed to conduct an interview despite the conflict situation and continuing power blackouts. Even though it was possible to interview some sub-national experts, the 'real' local perspective, however, remains uncovered.

Further limitations during the empirical process can be attributed to biased perspectives of the researcher. During a six-month internship at the German Corporation for International Cooperation GmbH (GIZ), deep background knowledge as well as a development cooperation angle of view was obtained. On the one hand, this is advantageous because of deep background knowledge, on the other hand, it complicates the 'unlearning' process that should take place during every research project (KLUGE ET AL. 2019).

In general, a high level of flexibility was required. During the ongoing research process, internal documents were provided by interview partners that vitiated parts of the survey. This culminated in the fact that one interview partner pointed out that he recently received a very similar questionnaire. On the one hand, this shows the great interest and topicality of the research field, on the other hand, the research gap threatens to be filled before the submission of the present thesis.

Despite all the challenges, this research reveals exciting and unexpected results. However, 'remote' research is not comparable to conducting empirical research on the ground. This is particularly relevant for FLR in Ethiopia, as FLR happens on the grassroot level with the involvement of so many different ecological circumstances and social practices, as we will see in the following centrepiece of the thesis.

4. SETTING THE SCENE: FOREST LANDSCAPE RESTORATION IN ETHIOPIA

Ethiopia is considered to be the cradle of humankind (FINNERAN 2013). Unusual for an African country, Ethiopia has never been fully colonized. As a result, Ethiopia preserved its diverse cultural and ethnic identity (FINNERAN 2013). The unique cultural, social, and political structure of Ethiopia strongly influences its governance processes as well as FLR. It is, therefore, necessary to outline the country's profile to understand the complexity of FLR Governance structures in Ethiopia.

4.1. COUNTRY PROFILE

Covering around 1.2 Mio km² at the horn of Africa and inhabited by around 115 Mio. people (2020), Ethiopia is the second most populated country in Africa, growing at 2.5% a year (2020) (MEFCC 2020; ZELEKE 2020; World Bank 2021, 2020; ADEM ET AL. 2020). The country is landlocked and bordered by South Sudan, Sudan, Kenya, Somalia, Eritrea and is using neighbouring Djibouti's main port for its access to the global shipping market (World Bank 2021).

Ethiopia's land area is divided into the cool highlands and the hot surrounding lowlands. Around 60% of the country's territory is classified as arid and semi-arid. With its unique flora and fauna, large numbers of endemic species and ecological diversity, Ethiopia is a biodiversity hotspot. Wide-open savannahs, as well as rainforest areas and mountainous landscapes, impede agricultural usage (ZELEKE 2018).

Since more than 80% of Ethiopians live in rural areas, the national economy is highly dependent on the agricultural sector, accounting for 40% of GDP (ZELEKE 2020). According to the country's progress report, the poverty rate decreased from 45.5% in 2000 to 23.5% in 2016. However, more than 22 Mio. Ethiopians are still living below the national poverty line, making Ethiopia one of the poorest countries in the world (UNDP 2020). Despite the agricultural focus, Ethiopia's economy experienced substantial growth averaging 9.4% from 2010 to 2020. Herewith, Ethiopia is among the fastest-growing economies in the world (World Bank 2021). This development has been supported by the political transformation Ethiopia has experienced under Prime Minister Abiy Ahmed Ali, elected in 2018. He introduced far-reaching reforms to democratize the country and played a key role in repacifying the Eritrean conflict, for which he received the Nobel Prize for Peace (DW 2019).

However, political and ethnic conflicts remain one of the most considerable challenges in Ethiopia. With more than 80 different ethnic groups, Ethiopia's federal system is based on the principle of ethnic federalism and self-determination (BÉLAIR 2016). The success of this system is highly controversial since inter-ethnic conflicts have dramatically increased since the legislative period of Abiy Ahmed. Lately, an outbreak of the smouldering crisis in the Tigray region between the Tigray Regional Government and the Ethiopian National Defense Force caused dramatically increasing numbers of refugees fleeing to neighbouring countries and other parts of Ethiopia (UNHCR 2021).

In addition to political and ethnic tensions, the COVID-19 crisis ongoing since 2020 even exacerbates the situation in Ethiopia. Similarly to other countries in the world, Ethiopia experiences severe social and economic impacts. The pandemic led to increasing food prices, rising unemployment, decreased exports and increased poverty (ARAGIE, TAFFESSE, THURLOW 2021; World Bank 2021).

Aside from these recent developments, the biggest challenge for Ethiopia remains climate change. Successive and prolonged droughts, soil erosion, destruction of forest areas and land through massive population growth and overgrazing are challenging the country (Welthungerhilfe 2021). The consequences are reaching dramatic proportions: crop failures, waterlogging of pasture and cropland, livestock deaths and damage to infrastructure. In particular, during the last years, the weather extremes have favoured the massive spread of locusts, resulting in heavy crop losses and endangering Ethiopias' food security, especially in rural areas (Welthungerhilfe 2021). In response to the climate change crisis, Ethiopia launched its Climate-Resilient Green Economy (CRGE) strategy to accelerate economic growth and become a middle-income country by 2025 while ensuring social and environmental sustainability (MEFCC 2017a). Herein, next to the strong agricultural sector, the forest sector plays a significant role as it belongs to one of the four pillars of the strategy (MANSOURIAN 2020).

4.2. FOREST SECTOR IN ETHIOPIA: STATUS QUO & RELEVANCE

In 2020, Ethiopia's forests covered around 15.2% of the country's territory (MEFCC 2017b). Figures about the 'original' tree cover in Ethiopia are inconsistent as historical data are lacking (BOISSIÈRE ET AL. 2021). Most cited is the figure of 40% forest cover prior to the 20th century, however, the unclarity of the actual forest cover blurs the distinction between reforestation and afforestation, especially in the public perception (BOISSIÈRE ET AL. 2021).

The natural forest vegetation comprises several types of forests classified by their physiognomy. The most widespread type of forest is dry evergreen Afromontane forests located in the temperate highlands (MEFCC 2017b). Figure 10 shows the distribution of dense, moderate and sparse forests in Ethiopia (SMITH, MCDOUGAL, METUZALS 2016).

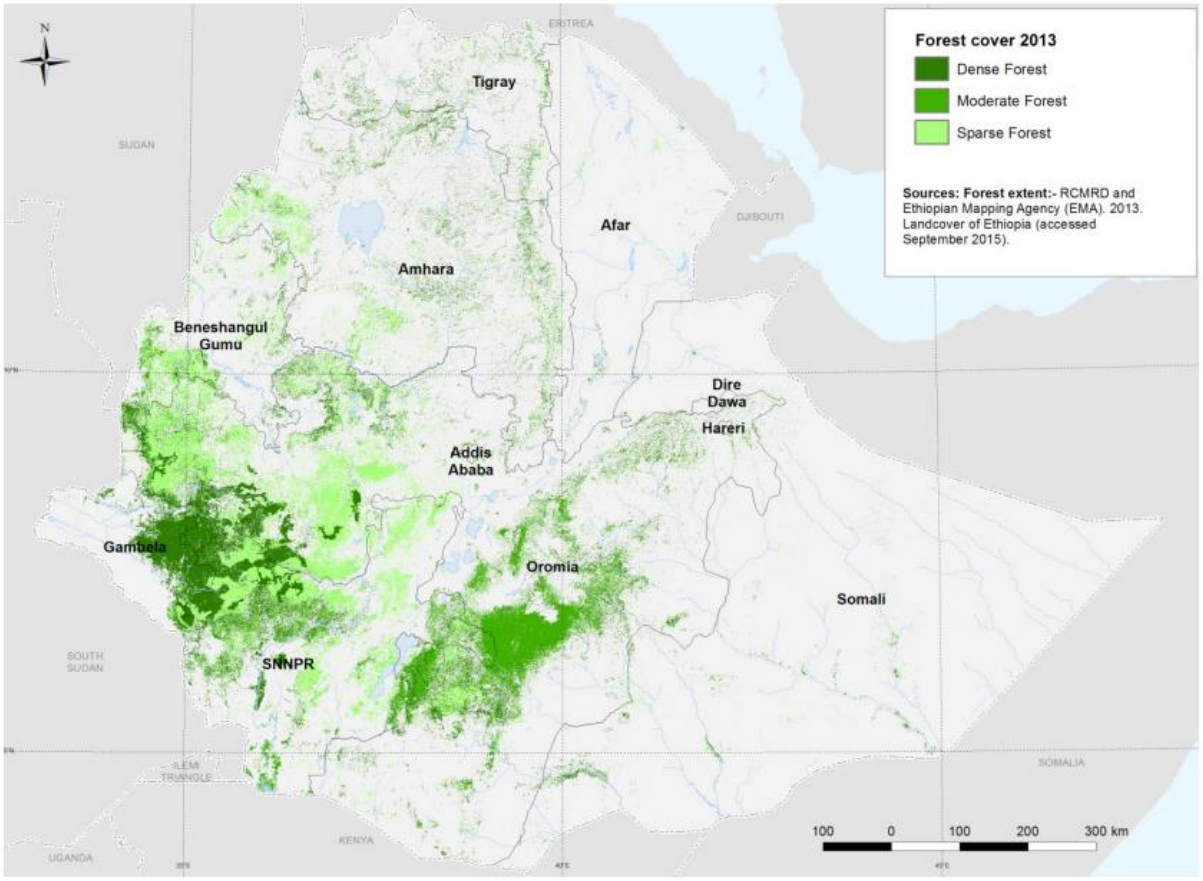

Figure 10: Forest cover in Ethiopia 2013

Source: (SMITH, MCDOUGAL, METUZALS 2016, pp.3)

Especially dry Afromontane forests have been heavily degraded since they are located in areas suitable for human settlement and agriculture (MEFCC 2017b). Given that 80% of the Ethiopian population lives in rural areas, the agricultural sector still dominates rural economic activities (MANSOURIAN 2020). To ensure agricultural output on productive lands, rural people and farmers often rely on ecosystem services provided by forests, such as water retention and erosion control. Firewood, as well as fodder, are directly provided by trees and ensure the communities' livelihoods (ZELEKE 2020). Forests and forested lands, therefore, provide invaluable services to rural communities.

Besides covering basic needs, forests also have a significant national economic potential, which is still widely unexploited: From 1991 on, Ethiopia has implemented the Agricultural Development Led Industrialization (ALDI) strategy to stimulate economic growth besides the agricultural sector (MEFCC 2017b). Herewith, Ethiopia plans to start the structural economic transformation from agriculture-led towards an industry-led economy (MEFCC 2017b). The shift to industry-led development has positive implications for the forestry sector, stimulating forest production and output. Despite the industrial shift, agricultural production still accounts for almost one-third of the total national production (see Table 2).

Table 2: Gross Domestic Product by economic activity at constant prices
Source: (MEFCC 2017b)

YEAR	2010/11	2011/12	2012/13	2013/14	2014/15	2014/15 production as % of total
Agriculture, Hunting and Forestry	**212,252,688**	**222,664,479**	**238,437,963**	**251,339,951**	**267,311,808**	**38.4%**
- Crop	146,759,975	154,081,705	166,698,857	177,633,112	190,421,592	27.4%
- Animal Farming	45,806,146	48,287,718	50,777,182	51,834,785	54,250,139	7.8%
- Forestry	19,686,567	20,295,055	20,961,923	21,842,054	22,640,077	3.3 %
Total GDP	**478,866,870**	**519,903,443**	**571,493,300**	**630,720,069**	**695,345,993**	
- Forestry as % of GDP	4.1 %	3.9 %	3.7 %	3.5 %	3.3 %	Average: 3.7 %
- Forest Sector growth rate	--	3.1 %	3.3 %	4.2 %	3.7 %	Average: 3.6 %
- Total GDP growth rate	--	8.6 %	9.9 %	10.4 %	10.2 %	Average: 9.8 %

Forestry currently only contributes 3.7% to the Domestic Product (GDP). However, the trend is increasing. The most significant market income is associated with flows of wood fuel (charcoal and firewood) followed by livestock fodder from forests (MEFCC 2017b). Nonetheless, some studies have shown that current GDP numbers undervalue the contribution of forestry because forest outcomes are challenging to measure. According to such studies, forestry even contributes more than 6.1% to the total GDP (MEFCC 2017b).

The general international and domestic wood demand is growing fast compared to the supply of wooden products. To cover the rising national demand, Ethiopia imports huge volumes of industrial wood for domestic use. However, the export of forest products is mainly limited to non-timber products, such as honey, natural gum and beeswax (MEFCC 2017b). The gap between demand and domestic supply of forest products is increasing, and so are deforestation rates (see Table 3) (LEMENIH, KASSA 2014).

Table 3: Development of forest cover 2010-2020
Source: (MEFCC 2017b)

	2010	2015	2020
Forest area, including plantations (1,000 ha)	17,799	17,434	17,069
% forest cover	15.9%	15.6%	15.2%

As most people live in rural areas and depend on rainfed agriculture, the pressure on forests is high: expansion of agricultural lands, overgrazing by livestock and demand for wood fuel are the main reasons for deforestation and forest degradation (PISTORIUS, FREIBERG 2014). Between 25-30% of deforested areas are occupied by agricultural crop production; another 30% are converted into grazing land (HAILEMARIAM, SOROMESSA, TEKETAY 2016). The knock-on effect of deforestation is not limited to forests: Declining water quality, loss of biodiversity, desertification and soil erosion constitute only a few examples of adverse effects with dramatic consequences for rural livelihoods and food security (HAILEMARIAM, SOROMESSA, TEKETAY 2016).

In response to this negative trend, as well as covering the need for forest products, there have been many attempts of large-scale reforestation projects in Ethiopia. Back in the 1970s and 1980s, the global fuel crisis leads to first reforestation activities as a means of securing energy supplies (AYANA, ARTS, WIERSUM 2013). Fast-growing exotic and invasive species such as eucalyptus have been planted on almost 400,000 ha to provide firewood and construction wood. The consequences are still tangible: almost 90% of reforested areas are covered by eucalyptus plants (JAGGER, PENDER 2003). Eucalyptus is valued for its fast-growing timber, however, eucalyptus plants need much water and hinder other native species from growing in the vicinity (BYG ET AL. 2017).

Nowadays, reforestation activities plan to better adapt to local conditions. Individual farmer-led and state-led tree planting are on the rise and mainly occur on communal lands, with both exotic and indigenous tree species (BOISSIÈRE ET AL. 2021). State-driven reforestation is dominating by implementing reforestation approaches, such as Participatory Forest Management (PFM) and area exclosures. More specifically, Ethiopian restoration prioritizes the restoration of secondary forests, agroforestry (including agro-silvio-pastoralism), restoration of natural forests, industrial roundwood plantations, commercial plantations for non-timber products and buffer plantations around protected areas, rivers and lakes (MANSOURIAN 2020). Such landscape restoration activities mainly occur in the mid-and highland areas, where most of the population lives and areas are severely degraded (KASSA 2018).

All these reforestation efforts contribute to Ethiopia's highly ambitious reforestation plans. Nationally, the forest sector is one of the four pillars of the CRGE strategy that helps to reduce CO_2 emissions and increases the resilience of the population and landscape to the effects of ongoing climate change (ZELEKE 2020). In 2016, Ethiopia demonstrated its political commitment by pledging 15 Mio. ha of restored forests by 2030 through the Bonn Challenge initiative. The global initiative cascaded down to regional multi-stakeholder commitments such as the AFR100, where Ethiopia made the highest pledge of all African countries.

The political will to restore degraded forests and forest lands shows the importance of FLR for the country in two ways: first, to sustain living standards of rural communities while facing climate change but also as an opportunity for economic development for becoming a middle-income country (ZELEKE 2020). Ethiopia, therefore, depends on its forest resources to be sustained, protected, and rehabilitated.

5. FLR GOVERNANCE STRUCTURE: INFLUENCES FROM BEYOND THE LANDSCAPE

Given that Ethiopia's future in rural areas is highly dependent on forests, FLR governance structures began to develop. Assessing the governance structure is, therefore, crucial to understand the whole governance architecture. To this end, the governance triangle from Chapter 2.2.3 will be applied to the Ethiopian case by simultaneously answering the three sub-questions introduced in Chapter 2.4. One sub-chapter will be dedicated to each of the three components. The descriptive manner of the following chapter allows to get an overview of the governance structures before diving into the analysis and interpretation (Chap. 6, 7, 8).

As we will see in the following sections, the fourth dimension of the triangle (scale) is, however, not always clearly referable. Given the diverging scale assumptions outlined in Chapter 2.2.3, the spatial classification will differ depending on the triangle's dimensions.

5.1. SUB-QUESTION 1: ACTORS' MAPPING

Understanding the capacity and ability of actors to exert influence and power requires an actor mapping of state- and non-state actors (public vs. private) and how they are shaping policy actions, institutions, and outcomes (SOMORIN ET AL. 2014). Since FLR comprises a lot of different stakeholders on different scales, it is rather difficult to name all the actors involved in restoration processes. Table 4 shows the results from the interview.

Table 4: Actor's involvement FLR Ethiopia

Some of the actors are to clearly attributable to one of the categorizations. This applies to both the division into public/private and the spatial allocation.
Source: own results based on (MEFCC 2020, 2017b)

Level	Actors involved in FLR in Ethiopia	
International	**public**	UNDP, UNCCD, UNFCCC, GIZ, DVID, FAO, etc.
	private	IUCN, WRI, World Vision, Farm Africa, WWF, SOS Sahel, CIFOR-ICRAF, Consulting agencies, etc.
National	**public**	***Commission of Environment, Forest and Climate Change (MEFCC), Ministry of Agriculture (MoA),*** research institutes and universities, Land Administration Office, Ethiopian Environment and Forest Research Institute (EEFRI), etc.
	private	---
Sub-National	**public**	Forest & Environment Office, Agriculture & Natural Resource Office, Resources Office, Wildlife Conservation Office, etc.
	private	Amhara Forest Enterprise, Oromo Forest and Wildlife Enterprise, Organization of rehabilitation of Amhara, wood processing enterprises, etc.
Local	**public**	schools, community leader, etc.
	private	***farmers and pastoralists, local community,*** religious institutions (e.g., churches, mosques), elders, clan leaders, households, microfinance institutions, small and microenterprises, etc.

To categorise the actors according to Chapter 2.2.3, they were classified into 'public' and 'private', as well as according to their spatial level. Some actors have only been mentioned once; some of them appeared much more often in the FLR context (marked in bold). IP7 briefly summarized the most important actors who were named by many interviewees:

'There are the farmers, the government bodies like the Ethiopian Environment, Forest and Climate Change Commission, the ministry of agriculture and other actors like GIZ, World Vision Ethiopia, and several NGOs and governmental institutions are working on this particular landscape restoration in Ethiopia.' (IP7, pos. 9, pp. 37)

Following this statement, public actors on high administrative levels as well as communities on low administrative levels are somehow participating in the FLR process. Since FLR is mostly state-driven in Ethiopia, governmental actors play a much more prominent role in the FLR governance structure than other actors. For this reason, separate sub-chapters are dedicated for each of the two main public actors. The sub-section will start with the public actors (Ministry of Agriculture (MoA); Ministry of Environment, Forest, and Climate Change (MEFCC)) followed by private actors, such as local communities, farmers, and pastoralists. Finally, according to the interview results, actors less influential will be briefly introduced (Development agencies, NGOs, research institutions etc.).

i. Ministry of Agriculture

Next to the MEFCC, the Ministry of Agriculture (MoA) is probably the most important public actor on national and sub-national scales. Since most of the Ethiopian population lives in rural areas, agriculture plays a significant role, and so does the MoA. The Ministry was established in 1907 under Emperor Minillik II and is now in the hands of Minister Umer Husen (TESHOME 2021). With its headquarters located in Addis Ababa, the MoA commands a highly efficient extension system from national to Kebele level (IP2, pos. 32, pp. 95). Based on the ADLI policy since 1991, the MoA possesses a sizeable financial budget, which is above the 10% threshold set in the Comprehensive Africa Agriculture Development Program. The agricultural sector is, therefore, one of the key actors, especially when looking into the future (MEFCC 2017a): Ethiopia faces a rapid population growth leading to increasing food demand. In this context, the MoA is responsible for ensuring long-term food security, prospering industry and increasing agricultural outputs for the export market (MEFCC 2017b). This challenging task is handled by four different sectors: the Agricultural Development sector, Livestock Resources sector, Agricultural inputs and productivity sector and Natural resources and food security sector. Technically, trees and forests, as well as land, are 'natural resources'. In fact, managing restoration and reforestation, as well as related soil and water conservation, therefore falls within the competence of the MoA (IP4, pos. 21, pp. 103).

ii. Ministry of Environment, Forest and Climate Change

Undoubtedly, the Ministry, also named 'Commission' of Environment, Forest and Climate Change (MEFCC) under state minister Ato Kebebe Yimam belongs to the key FLR actors in Ethiopia. As the name implies, the MEFCC is in charge of '*managing the environment in Ethiopia*' (MEFCC 2021). The mission seems to be clear:

'*The MEFCC is responsible to ensure the realization of the environmental rights, goals, objectives and basic principles […] through coordinating appropriate measures, establishing systems, developing programs and mechanisms for the welfare of humans and the safety of the environment.'* (MEFCC 2021).

In order to properly understand the actor's surroundings and its role within the FLR context, a closer look at the history of the MEFCC is necessary. The MEFCC, as it exists today, is a relatively young ministry and has gone through several institutional restructuring and legal formation processes. Formerly, the Natural Resources Conservation and Development Directorate of the MoA was in charge of forest-related issues (MANSOURIAN 2020; AYANA, ARTS,

WIERSUM 2013). Under the MoA, the Environmental Protection Authority (EPA) was established in 1995 to take care of the environmental management. Following the need for better representation of environmental issues, the EPA upgraded to the independent Ministry of Environment and Forest in 2013 (MEFCC 2021; MANSOURIAN 2020). The strong political will combined with the pressing need for sustainable environmental management made it inevitable to create an autonomous body to ensure the environmental objectives. In 2015 the ministry was renamed and restructured to the MEFCC, as it exists today. The ministry consists of three main thematical sectors (Environment, Forest, Climate Change and Biodiversity) and two associated sectors (resource mobilisation and project administration, process support). The responsibilities from the MEFCC range from official representation of Ethiopian interests in international environmental agreements to preparing mechanisms that promote social, economic, and environmental justice (MEFCC 2021). Specifically related to the forest section, the MEFCC is in charge of restoring degraded, primary as well as secondary forests and forested landscapes, which generally comprises agriculturally used land (IP7, pos. 13, pp. 110). Moreover, the MEFCC has made progress in reversing the loss of forest cover, enhancing forest-related social, economic, and environmental benefits and promoting governance frameworks by issuing policies, laws and guidelines. The MEFCC also acts as the national focal point to the UNFCCC (AMWATA ET AL. 2020).

iii. Local Communities

'The success of global forest restoration critically depends on prioritizing local communities.' (ERBAUGH ET AL. 2020, pp.1472). FLR is implemented where people live. Reforestation activities mainly happen on either formerly cultivated land managed by local communities or non-cultivated communal land officially controlled by the government with a strong presence of local communities (BYG ET AL. 2017). Accordingly, all interviewees agreed that local communities (e.g., households, farmers, villagers) are among the most relevant stakeholder in FLR:

'[…] the community is part of FLR because the government alone does not do anything without the involvement of the community. So, the communities are a major stakeholder.' (IP1, pos. 9, pp. 90)

The local rural population strongly depends on the land; thus, landscape level interventions affect them directly. They are involved in several ways: either they independently rehabilitate their land (which is relatively rarely the case according to an interview partner, e.g., IP8, pos.

21, pp. 115), or they participate in state-driven reforestation activities. Hereby, they provide labour, planting sites and seedlings. In some cases, they are even required to provide 20-30 days per year of free labour to tree planting in return for food and transportation (KASSA ET AL. 2017) (IP5, pos. 22, pp. 107). Further benefits were explained by IP7:

'Farmers will do water and soil conservation activities on their own farms and their own grazing lands. They do plant trees, so they are also helping to improve their food security level, so the soil gets more fertility. […] they can improve their livelihoods by getting firewood from the planted trees. [Regarding] the water and soil conservation activities, planted trees are improving the fertility of the soil, so they are increasing the productivity of their farmlands and accordingly helps them to improve their crop production.' (IP7, pos. 15, pp. 110)

Another form of local FLR engagement is the establishment of decentralized community associations for FLR implementation (IP5, pos. 8, pp. 106). However, community participation strongly depends on the region and is often limited, which will be further discussed in Chapter 6.3 (BOISSIÈRE ET AL. 2021). Without having their total commitment, forest restoration is unlikely to be successful (MANSOURIAN 2020).

iv. Private sector involvement

According to the interview results, private companies do not play a significant role in FLR activities at the present time (IP6, pos. 18, pp. 108). Privately owned enterprises are instead engaged in wood and seedlings supply for the market than in implementing FLR activities. However, *'there are informal organized associations as well as forest enterprises and they have also their own land forest where they implement forest landscape restoration'* (IP5, pos. 14, pp. 106). The two main enterprises involved in FLR are the Oromia Forest and Wildlife Enterprise and the Amhara Forest Enterprise. Although the two enterprises are fully government-owned, they act as private forest developers (MEFCC 2017b). However, private sector involvement is at an early stage and needs to be incentivized by the government:

'There is a new proclamation in 2017/18. It gives the chance to have private forests. And there are some incentives for private forest developers. They will get some leased free land and be excluded from paying taxes for maybe 10 to 20 years.' (IP2, pos. 50, pp. 96)

The political will to strengthen private sector funding and involvement in FLR activities is evident. The Government of Ethiopia provides incentives to attract private investors, however referring to MEFCC (2017b), there have not been any projects registered to profit from the tax advantages so far.

According to BOISSIÈRE ET AL. (2021), developing business models that encourage private sector engagement help to achieve successful and sustainable forest landscape restoration (ZELEKE 2020). This notably applies to local farmers. Seed supply, for example, is dominated by government organizations which can hamper the farmer's ability to obtain quality seed from independently certified sources (BOISSIÈRE ET AL. 2021). Moreover, limited knowledge of the domestic or international tree and wood market restricts the development of privately driven trade options in forest resources (BOISSIÈRE ET AL. 2021).

Summing up, the private sector is still very underdeveloped. To enable Ethiopia to achieve its ambitious restoration goals, the private sector needs to be motivated through public incentives. Capital mobilization to open new markets could offer further economic options. The establishment of the Oromia Forest and Wildlife enterprise and Amhara Forest enterprise, in addition to the government's efforts to attract private companies through tax reductions, is a step in the right direction. However, the current attempts to involve private companies can be critically evaluated, as the two forestry companies are state-owned, and autonomous management is questionable.

v. Development agencies/International donors

While governmental bodies clearly belong to the most important actors, international donor organizations and multilateral agencies have only been sporadically named as important actors in terms of funding FLR projects. According to OECD data, Ethiopia ranks among the top recipients of international development aid in the forest sector (MANSOURIAN 2020). Financial and technical support for forest sector development on a multilateral level mainly comes from the United Nations World Food Programme, the Global Environmental Fund, the World Bank, the World Resources Institute (WRI), as well as FAO programmes and UNDP engagement (AUDA-NEPAD 2021). On the bilateral side, organizations such as GIZ, World Vision, the Norwegian Agency for Development Cooperation (NORAD) and the British Department for International Development (DFID) as well Sweden and Japan have been mentioned (IP3, pos. 19, pp. 98; IP2, pos. 10-12, pp. 94) (AUDA-NEPAD 2021). The enormous international interest in forest sector development enables Ethiopia to benefit from international funding options. It is estimated that international donors spend 100 to 200 Mio. USD annually on Ethiopian forest sector development (MEFCC 2017b). Therefore, compared to other sectors, funding is not considered to be among the top challenges for forest sector development (IP3, pos. 43, pp. 100).

vi. Other actors: NGOs, universities, research institutes, schools, and churches

Other actors, such as NGOs, educational and research bodies as well as religious actors, should not be neglected even though they play a subordinated role (IP6, pos. 9, pp. 108). NGOs like CIFOR-IGRAF, Farm Africa and other local non-governmental organizations *'are important in terms of outsourcing finance [and] knowledge and facilitating grassroot activities.'* (IP2, pos. 13-14, pp. 94). Research institutes like the autonomous federal Ethiopian Environment and Forest Research Institute (EEFRI) identify, adapt, and generate technologies for forest development (EEFRI 2021). They *'build capacity and establish a system that enables the environment and forest research activities to be efficient, effective and development-oriented'* (EEFRI 2021). On the local level, schools provide education to children and can therefore contribute to more sustainable practices on the ground. Religious institutions such as churches also play a role since tropical forests are protected because of their sacredness in some regions. Churches of the Ethiopian Orthodox Tewahedo Church, for example, are surrounded by native forests with high tree diversity as parishioners are taking care of the forest fragments (WOODS ET AL. 2017).

In brief, national government bodies and local communities are the most important actors in FLR implementation. External stakeholders such as donor organizations and NGOs are crucial for funding and negotiating restoration processes and supporting community engagement (REINECKE, BLUM 2018). Although the private sector remains underdeveloped, the government increasingly provides incentives to attract investors. The actual implementation of Forest Landscape Restoration is mainly driven by non-state actors, namely local communities, whereas decision-making is almost entirely in the hand of MoA and MEFCC. FLR in Ethiopia is therefore dominated by public actors on higher scales with a solid top-down focus. Based on these results, the first guiding question can be answered as follows (see Figure 11):

SUB-QUESTION 1: Who is involved in restoration processes and how?

- **Government (MEFCC & MoA):** management of administrative/ regulatory issues, law-making, technical support, monitoring, evaluation, funding
- **Intergovernmental organizations:** project design, funding, creating pilot projects and programs for implementation
- **Private sector**: co-financing/contracting local communities to supply inputs for factories (e.g., seedlings), small scale FLR implementation
- **Local community**: main FLR implementers on grassroot level; small scale FLR implementation
- **Universities/ research institutes**: capacity building, research outputs of new technologies and approaches, knowledge sharing
- **Schools/ religious institutes:** awareness creation for local communities, forest protection through sacredness of indigenous forest

Figure 11: Sub-question one: actors
Source: own results

As we know from Chapter 2.2.3, actors only constitute one of the three dimensions of the governance triangle. The second dimension, represented by the institutional setup, frames all the actors' interactions and decision-making processes. The institutional framework is, therefore, as important as the actors' involvement and will be illuminated in the following chapter. As already anticipated, overlapping between actors and institutions may occur.

5.2. SUB-QUESTION 2: INSTITUTIONAL SETUP

Referring to Chapter 2.2.3, institutions can be seen as '*the rules of the game'* with law-making and law-enforcing capacities which significantly determine the FLR outcome (NORTH 1990, pp.3). FLR legislations are mainly carried out through governmental institutions, namely the MoA and the MEFCC. Accordingly, both ministries simultaneously operate as actors and institutions. Based on the results, Table 5 provides the overview of the institutional setup relevant for FLR activities.

Table 5: FLR institutions

The institutional setup of both, the MEFCC and the MoA, differs from region to region, hence the table does not apply to all the Ethiopian regions.
Source: own results based on (MEFCC 2017b, 2020)

Level	Formal/Informal Institutions	
International	UNFCCC, UNDP, UNCCD, FAO, IUCN etc.	
National	**Ministry of Environment, Forest and Climate Change (MEFCC)**	**Ministry of Agriculture (MoA)**
	Commission of Environment, Forest and Climate Change	Ministry of Agriculture
Regional	Regional Environment, Forest and Climate Change Bureaus *(only existing in some regions)* • SNNR= Environmental Protection and Forest Authority • Benishangul Gumuz Region= Bureau of Environment, Forest and Land Administration	Bureau of Agriculture
District (Woreda)	---	Office of Agriculture
Local (Kebele)/ Community	---	Kebele level offices
	Local Informal Institutions	
	Clans, Gada System, Elders, Equb, Iddir	

The institutional setup can be divided into formal and informal institutions and mapped according to its spatial level, as introduced in Chapter 2.2.3. As the ministries were already described in the previous chapter, the formal institutional setup will be kept relatively short.

i. Formal Institutions

Formal institutions can be found on almost every spatial level. Starting from the international level, FLR implementation is mainly influenced by policies and guidelines from UN institutions. United Nations departments such as UNFCCC, UNDP and UNCCD provide technical as well as financial FLR assistance and play a leading role in the global environmental discourse with legislative power. The institutions at the national level are clearly dominated by the MoA and the MEFCC:

'There is an institutional setup. The MEFCC and the MoA are at federal level. Then regional level, then zonal level, then district level, then village [Kebele] level. There is a chain of command. This includes planning and implementing; reporting comes from bottom to top.' (IP5, pos. 12, 106)

Referring to Table 5, FLR processes have to follow the institutional hierarchies from national down to Kebele level, the lowest Ethiopian administrative unit. The MoA is well structured and represented throughout all administrative levels, including Kebele level. Compared to the MoA *'[…] the MEFCC is not yet extended to district as well as Kebele level. It mainly remains at federal and sometimes at regional level'* (IP7, pos. 21, pp. 111). The regional structure of the MEFCC, if available, differs from region to region (see Table 5). In the Tigray region, for example, the MEFCC representatives are embedded within the Bureau of Agriculture and Rural Development (MANSOURIAN 2020). Both forest and the agricultural sector are administered at the regional level (if there is a MEFCC authority available). The regions have their own parliament with decision-making power for structuring the sector according to their specific socio-economic needs and geographical preconditions (HAILEMARIAM, SOROMESSA, TEKETAY 2016). The annual budget for each sector is assigned at the regional level unless it is earmarked from the federal side. Offices and bureaus at Woreda and Kebele level usually follow the same scheme as that of the regional representatives (HAILEMARIAM, SOROMESSA, TEKETAY 2016). Next to the MoA and the MEFCC other ministries also contribute to FLR, albeit with a much smaller impact. Examples are the Ministry of Water, Irrigation and Energy; the Ministry of Finance and Economic Cooperation; the Ministry of Innovation and Technology; and the Ministry of Transport (IP9, pos.3, pp. 118) (MANSOURIAN 2020).

To conclude, the formal institutional setup relevant for FLR ranks from international decision-making processes to local level representatives. Rule- and law-making, as well as policy design, happen on international, national, and regional levels. In contrast to the MoA, the MEFCC is not yet fully structured down to the local level.

ii. Informal Institutions

As Table 5 has shown, landscape and local scales are usually not expressed by formal governance constellations and institutions (VAN OOSTEN 2013). Especially in rural areas of Ethiopia, informal institutions are often involved in governing the use of communal forest resources (YAMI, VOGL, HAUSER 2011). More than 70% of the Ethiopians are members of informal institutions (NEGERA, BEKELE, WONDIMAGEGNEHU 2019):

'Informal institutions play a great role. They manage their traditional experience and knowledge. […] So, the informal institutions in terms of traditions help a lot, particularly in sustaining agricultural landscapes as well as forest landscapes in Ethiopia.' (IP7, pos. 29, pp. 111)

Informal institutions strongly differ depending on the region. They are widespread and not codified by state law (YAMI, VOGL, HAUSER 2011). Informal institutions are often self-enforcing through obligation mechanisms in line with patron-client relationships such as clan networks (NEGERA, BEKELE, WONDIMAGEGNEHU 2019). Clan systems and community elders shape the informal institutional landscape of Ethiopia, as one interviewee explains:

'They have a clan system, like the Gadaa system. The community is one clan system that sustains cutting trees and destroying trees by this system is forbidden. Trees are a gift of God; they believe like that. This tradition is transferred from one generation to the next generation, so they are sustaining these landscapes[…].' (IP7, pos. 33, pp.112)

The functions and services provided by trees and forests are often deeply rooted in local traditions and appreciated by the community. According to the Gadaa system in the Oromia region, as mentioned above, people and nature are two inseparable entities, which makes forests dedicated places for rituals and adoring of God *(Waaqaa)* (BEDADA 2021). The indigenous democratic Gadaa system even has its own criminal prosecution in case of illegal logging activities (BEDADA 2021). IP3 further states:

'*The culture is very different, but generally, their culture is encouraging about FLR. For example There is a culture* [Gadaa system], *where forests are so important because they depend on natural resources. They are using it for birth medicine, handcraft and food security.'* (IP3, pos. 43, pp. 100)

Forests, therefore, have socio-cultural and economic values and are deeply rooted in the communities' daily routines (BEDADA 2021). Local practices and traditional systems around forest conservation and rehabilitation of degraded land allow certain areas to undergo either natural forest regrowth processes or active reforestation (BOISSIÈRE ET AL. 2021). Traditional agroforestry systems, for example, have been sustained for hundreds of years and enable farmers to manage multi-storey farming systems (IP7, pos. 29, pp. 111).

Moreover, other traditional institutions such as informal insurance institutions *(Iddir)* and traditional financial institutions *(Eqib* or *Equb)* have been mentioned. Iddir (very widespread in Amhara region) covers various risks such as the death of livestock, medical expenses, property loss and food shortages (IP8, pos. 27, pp. 115). It is a voluntary association established to serve as mutual aid in emergency cases by offering cheap loans (NEGERA, BEKELE, WONDIMAGEGNEHU 2019). Equb provides financial borrowing and lending services to its members. These rotating saving and credit associations are informally established credit institutions *'where individuals agree to meet for a defined period of time to jointly save and borrow money'* (KARAFO 2017, pp.1). In most cases, interest rates are cheaper compared to formal banking and credit institutes. Equb is based on pre-established social ties, such as ethnic background, neighbourhood or people from the same workplace (NEGERA, BEKELE, WONDIMAGEGNEHU 2019). Further informal institutions like *Debo, Jiga, Dado* or *Jarsum* have not been mentioned in the context of FLR.

To recapitulate, customary institutions are essential for social safety and often act as a replacement for formal institutions and are even more critical than statutory laws (BEDADA 2021). They serve as negotiators for resolving conflicts, deciding over the common use of productive assets and adapting to difficulties to ensure the sustenance of the community (BEDADA 2021). Informal institutions can but are not obliged to act as a counterpart to formal institutions. In some cases, formal and informal institutions can be mutually supportive; in other cases, they may hinder each other. Sub-question two can therefore be answered as follows (see Figure 12):

SUB-QUESTION 2: In which institutional framework do the actors operate and organize themselves?

- Formal institutions dominate on international and national level: MEFCC and MoA are the main institutions on national level for creating FLR related rules and legislation
  - **MoA:** represented from national through regional level down to local level
  - **MEFCC:** represented on national level; sporadic representation on sub-national level
- Informal institutions (e.g., Equb, Iddir) play a significant role on local level

Figure 12: Sub-question two: institutions
Source: own results

By adding the institutional setup to the governance triangle, the regulatory, rulemaking and law enforcement element of governance arrangements have been introduced. Consequently, the institutional output in terms of policies represents the last dimension of the governance triangle and will be illuminated in the following.

5.3. SUB-QUESTION 3: FLR POLICIES

Policies incorporate all relevant rules and regulatory instruments, such as laws, regulations, guidelines and strategies (VAN OOSTEN ET AL. 2014; AYANA, ARTS, WIERSUM 2013). They are designed to regulate and guide FLR by defining fundamental assumptions, priorities and objectives (AYANA, ARTS, WIERSUM 2013). In Ethiopia, policies, in general, are strongly connected to the evolution and fickleness of the state structure (AYANA, ARTS, WIERSUM 2013). A complex set of national and international policies have evolved over time to (or not to) support FLR (MANSOURIAN 2020). Table 6 provides an overview of the policies relevant to FLR:

Table 6: FLR related policies

Source: own table based on (MEFCC 2017b, 2020)

	Year	Policies, plans, strategies and guidelines related to FLR
International	**2017**	Paris Agreement
	2016	African Forest Landscape Restoration Initiative (AFR100)
	2015	UNDP: Sustainable Development Goal (SDG) 15: Live on Land
	2014	New York Declaration on Forest (NYDC)
	2013	UNFCCC: REDD+ Monitoring, Reporting and Evaluation (MRV) Programm
	2011	***Bonn Challenge 2030***
	2005	Kyoto Protocol
	1994	UNCCD: Convention on Biological Diversity (UNCBD)
National		**Ministry of Agriculture**
	2011	Agriculture Sector Program of Plan on Adaptation to Climate Change (APACC)
	2010	Ethiopia's Agricultural Sector Policy and Investment Framework (PIF)
	2007	First Forest Policy in Ethiopia's history
	2005	***Federal Rural Land Administration and Use Proclamation***
	1993	Agricultural Development-led Industrialization strategy (ADLI)
		Ministry of Environment, Forest and Climate change
	2019	Drought Strategic Plan (DSP) UNCCD
	2019	Bamboo Development Strategy and Action Plan (BDSAP)
	2018	***New Forest law & National Forest Sector Development Program (NFSDP)***
	2018	Forest Development, Conservation and Utilization Proclamation (FDCUP)
	2016	National REDD+ Strategy
	2014	Investment Amendment Proclamation (IAP)
		Others
	2016	Ministry of Finance and Economic Development (MoFED): Growth and Transformation Plan II (GTP II)
	2011	***Climate Resilient Green Economy Strategy (CRGE)***
	1997	Environmental Policy of Ethiopia (EPE)
	1995	Federal Democratic Republic of Ethiopia, FDRE: Constitution of the Federal Democratic Republic of Ethiopia

Policies marked in bold were considered the most important according to the interviewees and were mentioned several times (IP2, pos. 50, pp. 96; IP7, pos. 35, pp. 112; IP5, pos. 16, pp. 106). FLR relevant policies are either designed on the international or national level. Even though regional authorities can also create rules and guidelines, none of the interviewees has mentioned regional legislative aspects (HAILEMARIAM, SOROMESSA, TEKETAY 2016). Accordingly, the following sections focus on international and national policies issued by several ministries.

i. International Policies

FLR has recently received more and more attention in terms of international policies on forests, climate change and food security (VAN OOSTEN ET AL. 2014). Global mandates such as UN commitments are particularly relevant for restoration efforts. Starting with Ethiopia's ratification of the United Nations Convention on Climate Change (UNFCCC) in 1997, followed by the Kyoto protocol in 2001 and the Paris Agreement in 2017, the first steps towards mitigating climate change caused by human interference were taken (MEFCC 2020). More concretely, in line with the Convention on Biological Diversity (UNCBD), Ethiopia made its first pledge to restore at least 15% of degraded ecosystems (MEFCC 2020, 2017a). The incentive-based REDD+ strategy was launched by UNFCCC in 2013 to tackle deforestation by providing economic incentives for forest restoration (MEFCC 2017a). Other relevant UN policies include the UN Convention to Combat Desertification (UNCCD), the Sustainable Development Goals, particularly goal no. 15 (Live on Land) and the New York Forest Declaration (NYFD) in 2014, which was endorsed by more than 130 nations (MEFCC 2017a). The NYFD pledged to restore 350 million ha by 2030. The pledge contributes to the Bonn Challenge, where Ethiopia committed to restore 15 Mio. ha of degraded land – the biggest pledge of all countries (DEWITT, REYTAR, ANDERSON 2014). Further multinational restoration commitments included the Pan African Great Green Wall for the Sahel and Sahara Initiative (GGWSSI) to build a green wall from Senegal in the west to Djibouti in the east to prevent desertification and expansion of the Sahara Desert (MEFCC 2017b). On top of this, the AFR100 Initiative launched in 2016 further contributes to domestic as well as international restoration commitments, such as the Bonn Challenge and the NYFD. Restoring 100 Mio. ha of degraded land, the African Union has set an ambitious target to tackle deforestation, and so does Ethiopia with its national contribution of 15 Mio. ha by 2030 (PISTORIUS, CARODENUTO, WATHUM 2017).

ii. National Policies related to Forest Landscape Restoration

In the Ethiopian context, global and multinational reforestation initiatives are intended to support national interests and agendas, as reflected in forest laws and policies (HWANG, LEE, MÜLLER-MAHN 2017; BOISSIÈRE ET AL. 2021). In practice, national policies determine the actual implementation of FLR. The most crucial national forest-related policies which were named by the interviewees can be summarized in three blocks:

first, land use and administration policy, second, forest policies, and third, national strategic guidelines with forest implications (IP8, pos. 29, pp. 115). Naturally, all laws, proclamations, and guidelines need to be in accordance with the national law and the Ethiopian Constitution (HAILEMARIAM, SOROMESSA, TEKETAY 2016).

1. National Land Ownership & Tenure rights

According to MARKAKIS (2011), land is the most treasured, valued and also strategic resource in Ethiopia. Likewise, land is an object of recurrent political discourse and conflicts (WAYESSA 2020). Land tenure in Ethiopia has a long history with three main land governance eras: the imperial regime (before 1974), the military regime (1974-1991) and the Ethiopian People's Revolutionary Democratic Front regime (EPRDF) (from 1991 until today) (ALEMIE, AMSALU 2020, pp.104). Forest resources during the imperial land tenure period were mainly dominated by absentee landlords and the Ethiopian Orthodox church. Forest land was categorized as highly taxed 'wasteland' in order to promote the conversion of forest land into profitable farmland (BOISSIÈRE ET AL. 2021). Overall, the imperial feudal tenure system was very insecure, arbitrary and characterized by the eviction of farmers (ALEMIE, AMSALU 2020; BYG ET AL. 2017).

After the overthrow of Emperor Haile Selassie in 1974, the communist Derg regime abolished the feudal land tenure system and nationalized the land, including forests. From then on, forests and land have been owned by the government (MANSOURIAN 2020; LEGESSE, JEFFERSON-MOORE, THOMAS 2018). Individuals have the right to acquire land free of charge and to be compensated in case of expropriation (WUBNEH 2018; TURA 2018). However, this resulted in huge land and tenure insecurities and a lack of long-term land management, which discouraged communities from investing in tree planting (MANSOURIAN 2020; BOISSIÈRE ET AL. 2021). In 1991, the EPRDF took over the political power and retained the state ownership of land, which was introduced during the Derg regime (TURA 2018). Accordingly, *'the land is the common property of the Ethiopian Nations, Nationalities and Peoples'* (FDRE 1995 Art 40 (3); TURA 2018). Rural land, therefore cannot be exchanged, sold or hypothecated (LETA, BERLIE, FEREDE 2021).

Nowadays, two separate ministries oversee land management: in urban areas, it is the Ministry of Urban Development and Construction, and in rural areas, it is the Ministry of Agriculture (NEGA ET AL. 2021). Regional states are responsible for administering and managing land and forests (MEFCC 2017b).

Land use rights are granted to communities and certificates are distributed amongst the farmers (MANSOURIAN 2020). Land certificates improve the tenure security of smallholder farmers and their cultivated land. The farmers' confidence to cultivate the land for their entire life encourages them to invest in land management and restoration activities (LEGESSE, JEFFERSON-MOORE, THOMAS 2018; TURA 2018). However, these certificates are not yet available for forest land (BOISSIÈRE ET AL. 2021).

2. *Forest Laws: National Forest Development plan and National Forest Priority Areas*

Since little attention has been paid on forest land in the past, laws tailored explicitly to forests were only recently established. The first milestone was the approval of the new constitution in 1995, followed by the National Conservation Strategy, which confirmed the right to local people to have use rights over forests (CRONKLETON ET AL. 2017).

Forest restoration was specifically promoted for the first time in 2007 by the Forest Development, Conservation and Utilization Strategy, with focused on private and state forests (KASSA ET AL. 2017). Community-based forest management was not recognised, so farmers were not incentivized to restore areas, creating mistrust and conflicts among rural communities and the government (AYANA, ARTS, WIERSUM 2013; MANSOURIAN 2020). Addressing these tenure challenges, the 2007 Forest Law has been replaced by the 2018 Forest Law, which strengthens the rights of local farmers and communities in FLR (BOISSIÈRE ET AL. 2021). According to the 2018 Forest Proclamation, the government identifies four types of forest ownership: state forest, private forest, community forest and association forests (MANSOURIAN 2020). State forests are exclusively under state ownership and include natural, conserved and production forests. Private forests are associated with private or institutions' holdings; community forests are utilized, conserved and administered by communities; association forests are developed and managed by associations established for forest development (MENGESHA ET AL. 2020). The major difference compared to the 2007 Forest Law is the fact that communities can obtain forest ownership rights (IP2, pos. 50, pp. 96) (MCLAIN ET AL. 2019).

In addition to the acknowledgement of privately owned forests, Participatory Forest Management (PFM) has been recognized as a vehicle to enhance communities' engagement by co-managing forests (MEFCC 2017b). Technically, PFM forests are still owned by the government but are co-owned and co-managed by local communities with predefined responsibilities as

well as benefit-sharing paragraphs (MENGESHA ET AL. 2020). Furthermore, incentives for private forest developers, such as lease-free land and tax incentives, have been established (IP2, pos. 50, pp. 96). The 2018 Forest Proclamation also paves the way for 'Payments for Ecosystem Services (PES)' to encourage forest expansion and restoration in return for financial compensation (BOISSIÈRE ET AL. 2021). However, this widespread and popular approach is still largely underdeveloped in Ethiopia (HAILE, TIRIVAYI, TESFAYE 2019).

In line with the 2018 Forest Proclamation, the 2018-2027 National Forest Sector Development Programme (NFSDP) has been developed to guide the forest sector. The extensive NFSDP gives detailed information, analysis, conclusions, and guidelines about the future of the forest sector. To support the restoration efforts, the MEFCC in collaboration with international experts (e.g., WRI) published national potential and priority maps for tree-based landscape restoration (IP5, pos. 16, pp. 106). Based on three different priority classes, a total of 82 Mio. ha land has been classified as suitable for FLR (see Annex 1a/b, pp. 87) (ZELEKE 2018). Whenever different actors want to restore a specific area, they need to follow the priority maps (IP5, pos. 16, pp. 106).

3. Climate-Resilient Green Economy Strategy (CRGE)

Last but not least, the CRGE has to be mentioned among the policies since forestry is one of the four pillars of the strategy (1. Agriculture, 2. Forestry, 3. Renewable Energy, 3. Transportation and Technologies) (FDRE 2011). As already mentioned in Chapter 4.2, the CRGE aims to make Ethiopia a middle-income country by 2025 and develop a carbon-neutral economy by 2030 (KASSA 2018). Regarding the forest sector, three main areas of activity have been identified. First, the demand for fuelwood shall be reduced and replaced by fuel-efficient stoves; second, afforestation and reforestation to increase carbon sequestration shall be promoted and third, area exclosures via rehabilitation of degraded pasture land will be accelerated (FDRE 2011). However, the focus of the CRGE is rather on reducing and compensating greenhouse gas emissions than implementing sustainable and social equitable restored forest areas (HISHE ET AL. 2021). With its top-down approach and little evidence suggesting the involvement of local communities, it has a clear economic focus on the higher purpose of becoming a middle-income country (PAUL, WEINTHAL 2019; HIRPHA ET AL. 2021).

In conclusion, the design and enforcement of national policies are hugely influenced by the ruling party and authoritarianism in Ethiopia (CLAPHAM 2006). In general, policies are always designed to follow a certain political or economic interest (TURA 2018). For example, land use policies are primarily created for the agricultural sector, and the CRGE mainly follows macro-economic objectives (IP8, pos. 31, pp. 116) (PAUL, WEINTHAL 2019). However, the Ethiopian government made an effort to create a comprehensive legislature, which shows the political will to stimulate and accelerate reforestation (IP1, pos. 35, pp. 93). All those forest laws, guidelines and strategies introduced a new area of forest restoration and tree-planting. Sub-question three can be therefore answered as follows (see Figure 13):

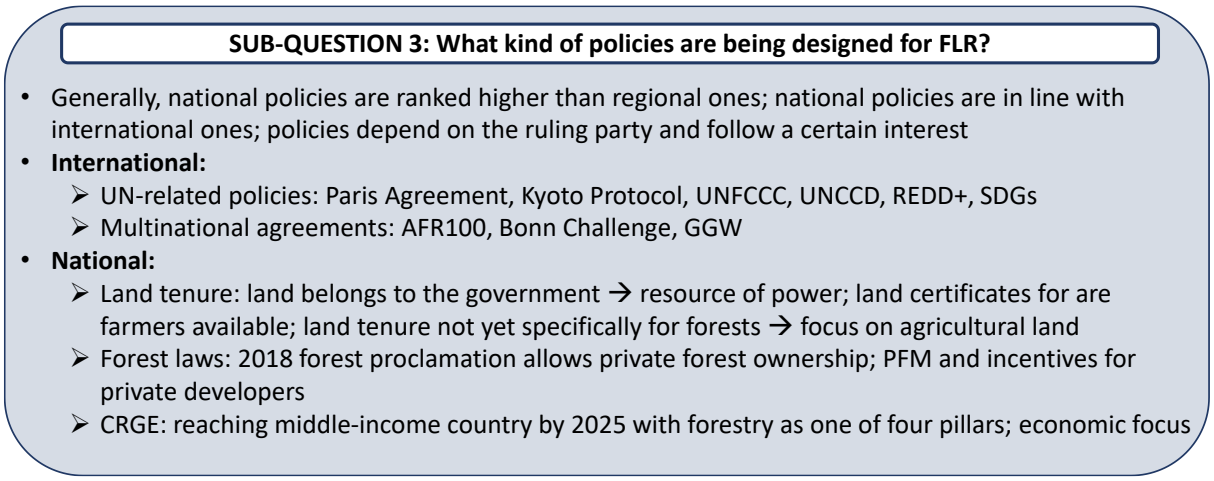

Figure 13: Sub-question three: policies
Source: own results

By answering the three guiding questions concerning actors, institutions, and policies in this chapter, the larger frame of governance structures of Ethiopian FLR has been set up. Based on this underlying structure, deeper analysis and interpretation of the governance architecture is now feasible. As Chapter 5 above, the following chapters (6, 7, 8) stick to the trisection of the governance triangle.

6. ACTORS: DIVERGING INTERESTS, POWER ASYMMETRIES AND PARTICIPATION

As outlined in Chapter 5.1, numerous actors shape the FLR governance arrangements in Ethiopia. Actors either directly (by making decisions) or indirectly (by influencing decision-makers) contribute to FLR. While doing so, they follow different interests and express them with diverging power resources. The following chapters (6.1, 6.2, 6.3) outline different aspects of actor entanglement and conflicts named by the interviewees.

6.1. ACTOR CONFLICTS: DIVERGING MOTIVATIONS, CONTRADICTORY INTERESTS

Actors' conflicts and conflicting interests are a typical phenomenon within governance arrangements (BETGE 2019). Diverging motivations occur on every spatial level between different actors. The results have shown that conflicting interests mainly occur between different governmental actors, between governmental actors and local communities and within local communities.

As shown in Chapter 5, two main ministries are in charge of restoration activities. The MoA and the MEFCC share some of the responsibilities, which harbours potential conflicts:

'The MoA has a section called 'natural resource management'. The MEFCC, has forestry, environment, and climate change. You can see the overlap. Both can have a right: forestry is natural resource and land is in natural resource. The MoA can work on land, they also can work on forestry and the other natural resources. […] Unless you design which part should I do and which you should do, it becomes difficult. What is the trend: I think the MoA thinks, that the MEFCC should do regulatory activities, […]and the actual implementation like afforestation and restoration but the MEFCC say: no. Forestry is solely given to the MEFCC and we have to do all the forestry activities and this is I think the point of contest.' (IP4, pos. 21, pp. 103)

Each of the ministries tries to maximize its outcome. The agricultural sector is mainly interested in increasing crop production and agricultural productivity irrespective of other social and ecological costs (HAILEMARIAM, SOROMESSA, TEKETAY 2016). Underlying pressure to fulfil the production quota set by the government might be the reason for lacking cooperation between the two ministries. The MEFCC partly has contradictory interests to the MoA's: It may resist or even forbid deforestation for agricultural expansion or use of commercial fertilizers, herbicides and pesticides (HAILEMARIAM, SOROMESSA, TEKETAY 2016). In this context, lacking actor coordination between sectors competing for land (agriculture and forestry) is very crucial, according to the interviewees:

'The responsibility of FLR is distributed along different government institutions like the MoA and the MEFCC. They have limited coordination and communication for what to do where, in terms of specific interventions.' (IP2, pos. 28-30, pp. 95)

According to the experts, there are no systematic cross-sectoral and cross-level coordination mechanisms for FLR implementation (WIEGANT ET AL. 2020). Especially inter-sectoral planning on governmental level is lacking and mainly top-down oriented. This particularly applies to forests, alternative energies and the agricultural sector (HAILEMARIAM, SOROMESSA, TEKETAY 2016).

Besides conflicting motivations within the governmental bodies, conflicts of interest may also arise between government-led FLR activities and local communities:

'We [international development agency] *were conducting a land use planning and we had different stakeholders in the planning session. One of the farmers started to talk about his experience. We were telling them that in hill areas with steep slopes, pure agriculture should not be practiced rather agroforestry. The farmer said: "you are telling us to do this, but we can try agricultural extension." So, there are some issues regarding some conflicts of interests […].'* (IP1, pos. 19, pp. 91)

Such conflicts of interest arise when knowledge is not well communicated, and local needs are not adequately addressed. Similar problems also occur while practising one of the most widespread top-down restoration approaches in line with FLR: area exclosures are a common tool to restore formerly forested land (BIRHANE ET AL. 2017). Controlling access of animals and humans to degraded land has been a traditional practice in Ethiopia to prevent areas from overgrazing. Enclosed areas allow degraded forests to rest and regenerate for a certain period of time and therefore are an essential tool for restoring degraded areas (KASSA ET AL. 2017; LEMENIH, KASSA 2014). However, area exclosures implicate conflicting interests:

'Land belongs to the government. But, in usual practice its open access resource. Everyone do grazing the land. Therefore, during the FLR implementation, you should change the land use from open access to regulated use. Definitely people will be constrained. Open access practices will be constrained by rules and by exclusion. In most cases, […] livestock and humans are excluded from the plantations or from exclosures.' (IP2, pos. 20, pp. 95)

At this point, different interests and motivations of the government and communities become visible. Reforestation by the use of area exclosures cause short and midterm losses for farmers since they often rely on grazing areas and firewood:

'No free grazing is tolerated anymore. Therefore, farmers will keep their animals indoor and supply their animals with fodder. In some places, there are successful experience, and, in some cases, we have bad experience. Therefore, it depends how it was implemented and how the farmer was persuaded and if the farmer sees any benefits the intervention. (IP2, pos. 22-26, pp. 95)

The governance process of such area exclosures is mainly top-down oriented and very complex (LEMENIH, KASSA 2014). Inclusive integration of local farmers and communities is therefore challenging. In the Tigray region, for example, more than 1.5 Mio. ha are under exclosure, more or less successfully (BIRHANE ET AL. 2017). The government of Ethiopia has even planned to increase the area under exclosure in recognition of the CRGE strategy to cover 3 Mio. ha of land with forests (BIRHANE ET AL. 2017).

Such differences of interests also happen between different communities on the local scale. One interviewee has mentioned conflicting land use assumptions when it comes to FLR measures, specifically area exclosures:

'Here, in one village, they understand the importance of forests for their livelihood. They decided to keep that area for rehabilitation. The other village, which is just 5 km away, they also wanted to have the benefit from this area. And if they let their livestock going inside the protected area, the communities in this area don't allow to use their restored land as grazing. […] Because for example a few people may have lots of cows, and this land is used for keeping these cows. If you say you will keep this land free of anything, they say: no. Because this land is very important for them. Without this land, they don't have any place to keep these animals, and, in this case, you may find some conflicts and disagreements between the communities.' (IP8, pos. 25, pp. 115)

As mentioned in Chapter 2.2.3, forest resources can be assigned to the 'tragedy of the commons'. Communities are therefore often competing for access to land and natural resources, which can hinder successful FLR implementation.

As a result, conflicting interests often occur between different actor groups: either within governmental organizations or between governmental bodies and local communities or within local communities. Inter-ministerial conflicts are mainly clustering around the nexus between agricultural expansion and restoring forests. Conflicting interests on the local scale often occur in line with different land use requirements and area exclosures. However, contradictory interests are one aspect; exercising power to enforce interests is another.

6.2. POWER ASYMMETRIES: PUBLIC vs. PRIVATE; NATIONAL vs. LOCAL

Different interests are always accompanied by actors' diverging relative power resources used to enforce their respective interests. (PAAVOLA 2007). Generally, '*power refers to the dominance of one coalition over the other'* (AYANA, ARTS, WIERSUM 2013, pp.187). The results from the interviews have shown ambiguous power distributions among the actors. Either governmental bodies (MoA and MEFCC) or local communities were named as actors who hold the most power in decision-making processes.

Starting with the governmental bodies, according to many interviewees (e.g., IP4, IP6, IP7, IP9) the MEFCC and MoA are the most influential actors in the FLR context: *'The most powerful actor in Ethiopia is the MoA and MEFCC […]. These two are the strongest actors in FLR.*' (IP7, pos. 11, pp. 110).

On the national level, the two ministries seem to have equal power resources (IP7, pos. 13, pp. 110). It is noteworthy that only one interviewee (IP3, pos. 23, pp. 99) considered the MEFCC being the most powerful actor compared to the MoA, albeit FLR is mainly ascribed to the MEFCC.

Referring to power balances on different spatial scales, *'the most powerful and effective actors are political leaders at zonal and district where they are more powerful in mobilising local community members'* (IP9, pos. 7, pp. 118). Since the MEFCC is underrepresented at the zonal and district level (see Chap. 5.2), the MoA fills the power vacuum on these scales. Generally, if available, sectoral offices have decision-making power, in terms of rights and responsibilities for granting funds for example. However, their decision power is controlled by higher authorities on the national scale (MEKONNEN, BLUFFSTONE 2014). The power monopoly of the ministries on the national level arises from the fact that *'Institutions are determined by the interests of those who are economically powerful'* (HAILEMARIAM, SOROMESSA, TEKETAY 2016, pp.86). If political actors own the assertiveness of laws and regulations, they become an 'institution' according to the definition of SOMORIN ET AL. (2014). This is the case in Ethiopia: The MoA and the MEFCC simultaneously serve as a law-making institution and leading economically powerful actor in FLR since they oversee the distribution of funds and own the land. Representing two dimensions of the governance triangle (institution and actor) simultaneously increases their nominal power and deepens power asymmetries.

In comparison to the power monopoly of the government, other interviewees see local communities as the most powerful actors:

'Most of the restoration fails because people fail, or the facilitators fail to understand the power of community in most cases. […] If the community want to reserve a certain area, they will use their traditional institutional system. That is where their power lies.' (IP4, pos. 15, 19, pp. 103)

Evidently, the power of local communities stems from the fact that they partly do not accept, acknowledge, or follow official formal institutions, such as government bodies:

'At the end, they can do what they want. The government may say: we want to restore this place. The local community may say: no or even yes […]. When they see your work is against their interest, your intervention will fail because they can do what they want.[…] For example, we enclosed a certain place, and then after some time, they may continue their grazing. Then we say: do not take your cattle in there. Then they will say: okay. But still, when they don't have alternatives and they are not convinced, they will continue. There are no strong mechanisms that we can enforce our objectives. Therefore, the only way we can get power is to convince the

community. In that sense and according to my view, the community is the powerful one.' (IP4, pos. 9, pp. 102)

Following their own interests in line with customary institutions, communities can act independently and release themselves from officially legal binding rules. Without strong formal institutional arrangements with law enforcement mandates, communities act according to their laws of the game: '*Without the consent of the community, you cannot conduct* [the intervention]*, even though you have strong policies, you may not succeed.'* (IP8, pos. 37, pp. 116).

In summary, power relations among actors are always relative, depending on the actors' perspectives. Figure 14 summarizes the relative power distribution on different scales. On the national level, the MEFCC and MoA have almost equal power, with a tendency towards the MoA, according to the interviewees (IP4, pos. 9, pp. 102). Scaling down, the power constellation shifts towards the communities. Most decisions in terms of policies are made within higher governmental structures while they are implemented on the ground.

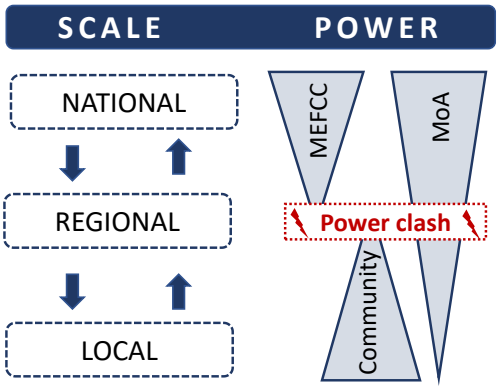

Figure 14: FLR power asymmetries

Simplified figure of the relative, not nominal, power relations among FLR actors.

Source: own figure

According to the interviewees, community rights matter even though policies and legislation are made at the ministerial level (HAILEMARIAM, SOROMESSA, TEKETAY 2016). Therefore, power can be either distributed amongst different actors on the same level (horizontal) (e.g., MoA and MEFCC) or between actors from different scales (vertical) (e.g., MEFCC and local communities) (GRIFFIN 2012). However, if the decision-making power remains on national scale while the power of local communities manifests itself on the local level, a 'power vacuum' or 'power clash' at the centre can arise (see Figure 14) (GRIFFIN 2012). Since power vacuums tend to be filled by the most powerful actor, the MoA and MEFCC extend their influence on the middle scales to expand their power monopoly (GRIFFIN 2012).

Based on the result that power resources are also ascribed to local communities, one might assume that local communities are fully integrated into FLR decision-making processes. However, the opposite is the case: nominal power can only be exercised if one is part of the process. This, unfortunately, does not apply to all actors.

6.3. EXCLUDED ACTORS: LOCAL COMMUNITIES, GENDER DEBATE, AND YOUTH

The results in terms of excluded actors are very diverse. Some interviewees, especially from national public organizations, did not mention any excluded population groups even on enquiry. However, there was consensus from several interview partners about two or three main stakeholders that tend to be excluded from FLR interventions: local communities, women, and youth. Such excluded actors may be precluded from decision-making processes, and as a result, their interests and needs may not be sufficiently considered.

i. Local communities

Local communities are among the key actors for FLR implementation. Community engagement often tips the balance towards success or failure (HAILEMARIAM, SOROMESSA, TEKETAY 2016). It is therefore noteworthy that some of the interviewees mentioned local communities to be among the excluded actors:

'I have the feeling that the community is somehow excluded because, especially in the campaign process, things are done to fulfil the campaign and not really to strategically address the concern on land rehabilitation. The involvement of the community is not well considered. […] So, the active involvement of the community is kind of mission or not properly addressed.' (IP1, pos. 25, pp. 91)

IP1 mentions that local communities and their specific needs are not properly addressed in FLR processes since high-level political agendas are prioritized. The exclusion of local communities in decision-making processes seems to be a widespread phenomenon that, however, can be assessed very differently from region to region. IP2 further states:

'For example, in areas where restoration happens on the ground, they may participate in the process, but they don't have a say to change and to make it in the modality of the implementation. For example, the local people have their own mental model of land use plan. But in the process, they will only participate if they are interested. […] The local people should participate to the last level: where to put what, how the future of the land use should be.' (IP2, pos. 16, pp. 94)

IP2 points out two aspects: lacking participation options for local communities on the one side and a lack of interest from the communities on the other side. Participation of local communities in decision-making processes seems to be limited:

'They [local government authorities] invite the local people to ask their willingness if they are interested in, for example, tree planting in a certain area. […] The participation is limited at that point. In some cases, where there is really no interest, the participation will go to the persuading and negotiation process. That is the participation.' (IP2, pos. 18, pp. 94)

Here, the different interpretations and understandings of 'participation' are highly relevant since 'exclusion' can be defined in various ways. Some interviewees (solely from governmental organizations) did not mention local communities being among the excluded actors since they are obviously always part of the active implementation of FLR measures. However, exclusion can take different forms: As described above, some actors tend to be excluded from decision-making processes; others are primarily excluded from benefits. Certainly, exclusion can also mean of not even having access to FLR. This aspect has been mentioned by IP1:

'When we talk about the main reason for this [exclusion from FLR]*, it's the economic condition of the community. In areas where […] communities are taking their initiative in integrating forest in their landscapes is, they have somehow alternative options. The issue of investing in forestry, which concerns the waiting for a long period of time for the investment return, is somehow compensated with other alternative income that they have. So, in such a situation, people are curious enough to invest in FLR […]. In some cases, where communities have limitations in financial resources, they barely think of investing in forestry but rather in agricultural activities where they get medium-term return and subsistence input for their households.'* (IP1, pos. 10, pp. 90)

According to this interviewee, FLR can only be implemented if alternative income sources are available. Otherwise, local communities may stick to their traditional cultivation and grazing system with the apparent consequences for forest land. For this reason, FLR projects, especially in the context of development cooperation, try to provide alternative income options, such as jobs in the forest sector or fodder for the livestock to keep them out of the reforested areas (IP1, pos. 33, pp. 92). Some NGOs even try to compensate farmers until they benefit from FLR measures (IP8, pos. 33, pp. 116). However, some interviewees also mentioned good examples where community engagement was successful. It has to be noted that mainly interviewees working for governmental organizations mentioned those success factors:

'The restoration areas where they started around 2017 or 2018 almost looks like a forest. And I think that is very successful. […] Especially in areas where the communities are aware of the danger of degradation, FLR will be successful.' (IP4, pos. 29, pp. 104)

'Let me tell you one of the best experiences that we have already documented on community participation on FLR. In Amhara state, before 30 years, it was a totally degraded area, so communities by there were initiating land restoration. They did agroforestry. […] In that respect, the community has been benefitting from that agroforestry practice.' (IP5, pos. 18, pp. 107)

The more communities are aware of the consequences of deforestation and the benefits of FLR, the more they tend to be involved in reforestation activities and may even start rehabilitating forests by themselves without governmental support (IP8, pos. 21, pp. 115).

According to some interviewees, the mentality of local communities is very supportive for FLR: *'It's very easy to mobilize people. Whenever you have good ideas, there is not much resistance. […]the community mentality is something that is a good input.'* (IP1, pos. 35, pp. 93)

Aside from several success cases (e.g., Tigray region), community involvement is still underrepresented and urgently needs to be adequately addressed in the sense of the Ostrom-Design-Principles (see Chap. 2.3.2) (HAILE, GEBREGZIAGHER 2020). Tackling these challenges, the government expanded Participatory Forest Management (PFM) approaches (see Chap. 5.3). PFM is a response to lacking community engagement, conflicting interests between government and local population and diverging objectives for forest management (KASSA ET AL. 2017). Local communities are given exclusive using rights in return for benefit orientated and sustainable forest management (KAHSAY, NORDÉN, BULTE 2021). The PFM model has therefore provided stability and increasing incentives for local communities to engage in FLR. In 2017, almost 1.5 Mio. ha of forest were under PFM (MANSOURIAN 2020). The government's interest to include local communities also have practical reasons: FLR is way cheaper with farmer-assisted restoration by integrating trees in the agricultural landscapes than conventional restoration through active tree-planting (FAO 2018).

Summing up, the exclusion of local communities has various shapes: exclusion from decision-making processes and FLR benefits as well as exclusion from FLR activities in their entirety. Top-down processes dominate the restoration with little attention to the communities' needs, views and objectives (KASSA ET AL. 2017). Therefore, the exclusion of local communities can be seen as a manifestation of the prevailing institutional setup and dominance of governmental bodies in land governance (WAYESSA 2020). Indeed, the challenge of lacking community participation has been recognised: promoting PFM measures to decentralise forest management to local communities offers new participation options. However, participation that does not influence or effectuate FLR outcomes remains meaningless (PAAVOLA 2007).

ii. Women and Girls

Among local communities, women and girls are even more deprived in the FLR context, according to some interviewees: *'[…] somehow they undermine gender aspects. When it comes to decision-making, its more on the family leader, which in most of the cases is male. But we found out that women are the one who collects firewood. […] There is a need for more mobilization or awareness for forest linking with gender.'* (IP3, pos. 46, pp. 101)

The discrimination and marginalization of women are evidenced by the fact that only a quarter of the households is female-headed. Most decisions are therefore made by adult men (MEFCC 2020). Women are facing socio-cultural and economic burdens to participate as equals in decision-making and leadership processes regarding FLR (IP3, pos. 53-54, pp. 101) (MEFCC 2020). While men mainly focus on high-value forest products to sell, women tend to be more involved in daily extractions of forest products (e.g., firewood) for immediate household use since they have limited options to be engaged in forest product value chains (KAHSAY, NORDÉN, BULTE 2021). This has two main reasons: women living in rural areas often lack productive resources such as land and are underserved with financial assets (KAHSAY, NORDÉN, BULTE 2021).

Even though there exist female-headed households, most of them are landless (MEFCC 2020). Women in rural areas often depend on male support. Officially and per the land property law, married women and men, as well as unmarried women and men, have the same right to own, use and make decisions about the property (FDRE 1994, Constitution Art. 35, 2000, Art. 57, 58 & 59; MEFCC 2020). However, culturally, the land is inherited by the male successor of the family, and women can only inherit in case there are no sons (IP3, pos. 51-52, pp. 101) (MEFCC 2020). Especially in traditionally rural areas, women sometimes even do not have the right to sell, lease or rent property and land (MEFCC 2020).

Besides the inequalities of land rights and ownership, women are often disadvantaged in accessing financial resources to implement FLR measures on their own:

'They [man] tend to go to the microfinance institutions. […] [Females] *tend to put money together like community funding. Females are more on that side because they don't have a property to provide for the bank as a guarantee. […] They* [woman] *prefer this community fund rather than going to the bank. For men, they can use normal funds.'* (IP3, pos. 56-57, pp. 101)

The Ethiopian law provides the same rights for men and women to open a bank account (MEFCC 2020; FDRE 2000, Art. 64). However, although the percentage of women owning a bank account increased to 22.7% in 2018/19, the gender gap of men and women owning a bank account has nonetheless increased to 16.2% (ACHEW ET AL. 2021). As the interview sequence shows, women tend to use traditional ways of funding because of the inaccessibility of formal funds, loans, and credits. Women preferably make use of community funding or indigenous financial institutions like '*Equb'* (see Chap. 5.2) (IP6, pos. 27, pp. 108) (KARAFO 2017).

In conclusion, the gender debate in the context of FLR is in full swing. Women are most disadvantaged in the decision-making processes of FLR, even though they are directly affected by forest degradation (KAHSAY, NORDÉN, BULTE 2021). Restoration projects funded by international development corporations, therefore, try to particularly focus on women's needs (e.g., (GIZ 2021)). However, IP3 states that now '*one of the global topics in development cooperation is about to focus on youth and woman. But when you go to the implementation down there, it's not really the case'* (IP3, pos. 47-48, pp. 101). The question about gender equality will therefore remain on top of the international reforestation agenda.

iii. Youth

Aside from women and local communities, the young population was also mentioned among the excluded actors (IP3, pos. 46, pp. 101). Around 41% of the Ethiopians are under 15 years old, and more than 28% are aged 15-29 (USAID 2017). With almost 27% of youth unemployment, it remains a huge problem. Therefore, the participation of youth in reforestation activities is even more important: on the one hand, FLR includes income-generating activities, which enables the young population to remain in their villages rather than migrating to urban areas or abroad (HAILE, GEBREGZIAGHER 2020). On the other hand, children benefit from FLR through more nutritious food and improved access to education since their parents generate more income for paying school-related fees (HAILE, GEBREGZIAGHER 2020). It is therefore essential to involve the younger population through training, capacity building and credit access for job creation (MEFCC 2017a). As the population is constantly growing, Ethiopia's young population is a great asset but still an untapped resource which huge potential for forest sector development (USAID 2017; TETZLAFF 2021).

To conclude, in every governance process, there are excluded actors. However, especially in terms of common-pool resources, it is even more critical to include all affected stakeholders, especially regarding the rapid population growth. FLR happens on grassroot level, where people live and generate their income. Local communities, women and youth need to be included more in order to achieve the best possible restoration outcome. One option to increase their participation is to create and improve inclusive governmental bodies and institutions.

7. INSTITUTIONS: RULES OF THE GAME FOR FLR PRACTICES?

As introduced in Chapter 5.3, institutions set the framework in which actors can operate and organize themselves. Conflict, as described in the previous chapters, often arise because of lacking institutional capacity and arrangements. This is also the case for FLR institutions in Ethiopia as the following chapters demonstrate.

7.1. INSTITUTIONAL GAPS ON GRASSROOT LEVEL

As shown in Chapter 5.2, the MoA and the MEFCC are the main FLR institutions with differing structural setups. In contrast to the MEFCC, the MoA operates a highly efficient system even down to the Kebele level:

'At the lower levels, the MEFCC has limited or no representation. They don't have an armed wing. They can't really implement the intervention. The MoA has a highly efficient extension system. There are more successful than the MEFCC. The MEFCC has a very non-efficient system. Maybe that's a little impolite. […] They need really think how they can address representation at the lower level.' (IP2, pos. 32, pp. 95)

The expert refers to the lacking vertical alignment, particularly at regional levels of the MEFCC (see Table 5, Chap. 5.3). Given that most restoration activities are implemented on the regional and local level, strong lead institutions that cascade down to the local level are essential for successful FLR implementation (MEFCC 2017b). The following expert statement shows the lacking institutional structure of the MEFCC:

'There are gaps in the institutional structure from the MEFCC side. […] the structure is not still down to the district and Kebele level; it remains at the federal at regional level. The structure needs to be extended to the district as well as to the Kebele level.' (IP7, pos. 21, pp. 111)

This institutional gap in the hierarchy of the MEFCC dramatically slows down FLR processes (IP3, pos. 28, pp. 99). Furthermore, there are variations regarding the institutional arrangements of forestry across regional states. Some regional states have their own dedicated forest administration; in others, the forestry task is managed by the MoA (McLain, Kassa, Lawry 2019). Until today, there are no MEFCC offices at Woreda or Kebele level, which hinders a smooth hierarchy for bottom-up and top-down reporting (IP1, pos. 27, pp. 92). Addressing these gaps demands dedicated forestry institutions at all levels, particularly at Woreda and Kebele level in forested areas of Ethiopia (McLain et al. 2019). However, building functioning and well-structured institutions on all spatial levels take time and the MEFCC is still relatively young (IP7, pos. 21, pp. 111).

Following this, the institutional gaps shed light on the general institutional capacity, which seems to be relatively poor: *'The institutional setup needs to build up human capacity and building infrastructures at district level. It needs to build up extend the structures.'* (IP7, pos. 27, pp. 111). Limited capacity of institutions combined with high-level bureaucracy, especially on lower spatial levels (Woreda and Kebele), is critical for managing FLR as well as enforcing relevant laws (McLain et al. 2019). Referring to this aspect, IP4 poses the following legitimate question: *'Are people in line with the utilization modalities or protocols which are set in the place? This must be proven.'* (IP4, pos. 15, pp. 103). Applying sanctions and punishments in case of disobedience of rules and laws requires strong institutions and high institutional capacity. Those mechanisms are not yet sufficiently established (Sari et al. 2019). According to Hailemariam, Soromessa, Teketay (2016), high rates of staff turnover in almost all environmental sectors in Ethiopia partially explains the problem of limited institutional capacity.

To sum up, the existing institutional gaps and limited capacity of the MEFCC is one of the main challenges of FLR implementation in Ethiopia. While the MEFCC is present on the national level, it is not on all other sub-national levels. Starting from zonal down to district, Woreda and Kebele level, there is still no defined structure (IP7, pos. 21, pp. 111). The incoherence in the command structure complicates effective implementation and monitoring processes as well as reporting. In order to effectively implement FLR activities, a well-structured institution, mainly working on forestry from national down to grassroot level, is urgently needed (Hirpha et al. 2021).

7.2. INSTITUTIONAL OVERLAPPING, IMPRECISE RESPONSIBILITIES AND ASSIGNMENTS

As the institutional structure of the MEFCC is incomplete and makes use of external institutional structures from the MoA at lower spatial levels, conflicts and overlapping responsibilities on the higher administrative levels seem to be unavoidable. The institutional overlap can be seen either on the administrative level or in terms of overlapping thematic responsibilities, as the following interview excerpt from a leading international development agency shows:

'*Our main political partner is the MEFCC. But since we are also working on agricultural land we have to also deal with the local agricultural bureaus and offices. Not at ministry level but at the lower level, we deal with the agricultural offices.'* (IP1, pos. 21, pp. 91)

The MoA acts on the local level and is therefore responsible for forestry issues since the MEFCC does not have representatives on these scales. The MoA, thus, assumes the

responsibility for forest-related issues on lower levels, although forestry officially belongs to the MEFCC's duties. Here, the second point of overlap becomes visible: the thematic overlap as already briefly introduced in Chapter 5.1:

'Seedling production is something shared by both [MoA & MEFCC]. *MoA has some of the biggest nurseries […], and some others are in the hand of the MEFCC. I think this overlapping has occurred because previously, we didn't have the MEFCC. By then, the segregation of the responsibilities had to be conducted and there were issues with agroforestry and soiling water conservation activities to be under the MoA. MEFCC was also insisting on taking [agroforestry] to forestry ministry, but finally, it was decided that agroforestry will be under the MoA.'* (IP1, pos. 21, pp. 91)

The thematic overlap primarily occurs in the context of the Natural Resource Management department of the MoA because both ministries are assigned to restoring activities: the MoA for land restoration and the MEFCC for forest restoration. In this case, agroforestry, for example, comprises agriculture elements combined with reforestation activities. Since agroforestry aims to improve agricultural production, it is officially part of the MoA's responsibilities. However, reforestation activities mostly take place on agricultural land that was often formerly forested. Overlapping and even conflicting responsibilities are therefore the logical consequence (IP4, pos. 21, pp. 103).

The overlap and disequilibrium can also be seen within the scope of entire reforestation campaigns. As part of the AFR100 initiative, Ethiopia launched the 'Green Legacy Initiative (GLI)' (20 billion planted trees within four years) with high media attention under the leadership of the prime minister's office in 2019 (BOISSIÈRE ET AL. 2021). In this case, the MoA took the leading role, while the MEFCC was highly underrepresented and provided only technical assistance (BOISSIÈRE ET AL. 2021).

According to IP1, there is one specific reason for the overlap as well as the MoA's persistent engagement in forest activities and its hesitation to hand over power and responsibility to the MEFCC:

'Basically, the issue of these two sectors is because of the [financial] *resource. Because natural resource management and agroforestry have good financial resources because even international organizations are working on these areas, so the MoA is the dominant ministry in the country. They pool all the sectors and areas which has higher financial resources.'* (IP1, pos. 23, pp. 91)

As reforestation and restoration activities currently receive a lot of national as well as international financial support, the forestry sector has considerable financial resources at its disposal (IP1, pos. 23, pp. 91). According to IP3, *'Ethiopia has been one of the top channels of*

funding FLR.' (IP3, pos. 43, pp. 100). Access to international funding options can therefore be a crucial point for the MoA to actively be and remain involved in reforestation activities.

Summing up, the institutional overlap becomes evident in two main aspects. First, the MoA takes over the functions of the MEFCC on grassroot level. Second, the thematic overlap leads to unclear responsibilities between the two ministries. As a result, in some places, there seems to be too much institutional capacity (e.g., overlapping responsibilities); in other places, there is too little (e.g., institutional gaps on lower levels). In this context, there is one important institutional aspect that has not yet been highlighted: overlap and conflicts between informal and formal institutions.

7.3. INCLUSION vs. EXCLUSION OF INFORMAL INSTITUTIONS

As already introduced in Chapter 5.2, the rural population in Ethiopia is often organized within their own traditional institutions. Against this backdrop, the question of the extent to which informal institutions are integrated in formal institutional processes arises. The results from the interviews exhibit a very mixed picture. On the one hand, it is claimed that local communities are partially excluded as actors, while on the other hand, local communities as part of informal institutions tend to be integrated into FLR processes. Especially actors working for the ministries emphasised the comprehensive integration of informal institutions like *Equb* and *Iddir* for better rehabilitation of land and forest restoration (IP6, pos. 27, pp. 108). Moreover, traditional knowledge and practices are integrated into the FLR process:

'So, this traditional knowledge and the practices are not ignored rather they are integrated into the scientific and more than once so that when they are combined together, they broaden the knowledge so even more sustainable landscape can be created […].' (IP7, pos. 30-31, pp. 112)

The integration of traditional institutions and knowledge can be seen as a huge enrichment for FLR, if taken advantage of it. Integrating traditional systems is not easy, but efforts are made to involve informal institutions:

'If the community wants to reserve a certain area, they will use their traditional institutional system. […] In some places, traditional institutions could be diluted or weak due to modern education, migration or increasing population dynamics. Some traditional institutions may get weaker but, still, they are very important. And in many cases, people like us [international organization] *try to make use of those institutions, but it's not easy. Getting a good understanding of communities and their own institutions take time. They contribute a lot but, in most cases, they are not make use of.'* (IP4, pos. 19, pp. 103)

Limited understanding of traditional structures, like the Gadaa system for example (see Chap. 5.2), can have severe impacts. Cases, where the disregard for the Gadaa system led to diminished efficiency of customary conflict management institutions which in turn led to further degradation of rangelands, have been reported in the Oromia region (BEDADA 2021). At the same time, integrating Gadaa traditions into modern FLR practices can lead to better restoration successes as compared to regions not using traditional institutions (BEDADA 2021):

'Sometimes it makes it complicated and sometimes it's simply fine, working with traditional institutions. Because once you get the clan leader on your side, then everything goes smoothly. If not, things get complicated.' (IP1, pos. 31, pp. 92)

As traditional institutions may decide on success or failure of FLR, it is indispensable to place customary institutions within the governance structures for negotiation and decision-making processes (IP4, pos. 9, pp. 102). Since traditional institutions often replace the statutory laws, neglecting these norms can cause conflicts and may have negative consequences for the restoration outcomes (RAHMAN ET AL. 2017). The entire institutional structure is still a work in progress and needs to be built in an inclusive way. Currently, higher-level institutions mainly develop policies and guidelines, while lower-level institutions are involved in FLR implementation (ARITI, VAN VLIET, VERBURG 2019). This kind of 'task sharing' shows the current relationship between formal and informal and within formal institutions on different scales: top-down orientated and non-participatory (ARITI, VAN VLIET, VERBURG 2019). A systematic combination of formal and informal institutions may facilitate cross-sectoral and cross-cultural understanding and awareness to further scale up inter-institutional partnerships (BEDADA 2021; HIRPHA ET AL. 2021).

To conclude, institutional capacities on all levels need to be strengthened, extended to grassroot levels and need to take customary institutions into account. The coordination and cooperation within governmental institutions and between formal and informal institutions run with significant deficits. Comprehensive formal arrangements would help to institutionalize Forest Landscape and Landscape Governance to enhance law enforcement and to better structure FLR processes (VAN OOSTEN 2013; HAILEMARIAM, SOROMESSA, TEKETAY 2016). However, 'institutionalization' may also lead to decelerated restoration outcomes since formalisation can paralyse local collective restoration activities (VAN OOSTEN 2013). Nevertheless, institutions can only develop their full strength in combination with stable legislature, policies, and laws.

8. POLICIES: LEGISLATION FOR FLR IMPLEMENTATION?

On the policy dimension of the governance triangle, the interviewees have mentioned two main challenges which hamper FLR in Ethiopia: unclear land use policies/ tenure rights/ guidelines and overlapping jurisdictions. Those two aspects are seamlessly intercorrelated with the theoretical anticipation in Chapter 2.3 and the descriptive results from Chapter 5.3. It is noteworthy that mainly highly educated international experts and national governmental experts were able to name policies and identify challenges, which can be an indication of poor visibility, comprehensiveness, and accessibility of those policies (ARITI, VAN VLIET, VERBURG 2018).

8.1. UNCLEAR LAND USE POLICIES, TENURE RIGHTS AND GUIDELINES

Clarity around forest tenure, rights, policies, and guidelines is crucial for tree planting, as we have seen in Chapter 2.3.2. According to MANSOURIAN (2020), lacking forest agency, including unclear forest laws, have been two of the major factors for low success rates of tree-planting over the last years. Many interviewees agree: *'There are no clear policies that guide us.'* (IP4, pos. 17, pp. 103). This predominantly refers to land use policies:

'*One of the practical challenges that we are facing is not having a defined land use policy. […] Some regions have their own policy regarding land use arrangements.'* (IP1, pos. 33, pp. 92)

IP4 explains the problem in more detail:

'In Ethiopia, there is kind of nested ownership arrangements. The government thinks the land is owned by the people and the government. In many local communities, they feel like the owner and even there is cross-sectoral conflicts: Where should be the restoration area, where should be the plantation? […] So, we do not have an actually clear policy.' (IP4, pos. 17, pp. 103)

Even though land officially belongs to the state, in practice, it is an open resource and ordinarily accessible to everyone (IP2, pos. 20, pp. 95). Hence, local communities do not own forest land; they rather have the right to use it as community land. In some cases, the government provides legal documents which exhibit usage rights on community land. However, such land certificates are not yet established for forests (BOISSIÈRE ET AL. 2021). In this context, the Ethiopian government argues that state ownership prevents land accumulation of just a few landowners by purchasing from small scale, often poor farmers (LETA, BERLIE, FEREDE 2021). As it controls the land, the government's argumentation is not surprising, as the land remains an indispensable source of state power (WAYESSA 2020). Land use and ownership is, therefore, a political-ecological issue, since the Ethiopian government has been using land as a means to control and exercise power on people, both economically and politically (WAYESSA 2020).

Despite the state's power monopoly on land distribution and ownership, the existing policies are either not implemented or too unspecific to properly manage forest use:

'Land use policy is a general policy, and it is not specific for a specific purpose. It contains big ideas, which is not specific to implement specific things. A specific case for example, now in the country is eucalyptus. It's one of the most trees which is planted widely, and there is no specific policy for this species. […] The policies are much more focused on the agricultural sector.' (IP8, pos. 31, pp. 116)

According to IP8, the dominance of eucalyptus species could have been restricted with applicable policies tailored to the local context. Despite the advantage of its rapid growing and fast income-generating characteristics, eucalyptus causes negative externalities, such as loss of soil fertility due to intoxication (BAZZANA ET AL. 2021). Proper land use policies could therefore play a key role by improving the awareness of ecological effects of eucalyptus plantations and other invasive species (BAZZANA ET AL. 2021).

Lacking implementation of existing policies is illuminated by BOISSIÈRE ET AL. (2021): The 2007 Forest Policy includes tax releases for farmers to promote tree planting and increase tree cover. However, according to BOISSIÈRE ET AL. (2021), the provision has never been disbursed in practice.

Generally, the effects of existing land use and forest policies are not yet visible on grassroot level (IP8, pos. 35, pp. 116). The absence of state-recognized community and individual usage rights on forest land cause severe tenure insecurities (MCLAIN ET AL. 2019). Therefore, unclear responsibilities for forest land and the low capacity of local government authorities and communities lead to low tree survival rates and insufficient maintenance (BOISSIÈRE ET AL. 2021). The consequences are unfavorable:

'The state can do whatever it needs and wants. One year, it's an FLR side; next year it could be another side. It will be taken from the community, and it will change the land use. So, the rural people may not have trust that their investment level will not be paid back. There is this lack of trust. […] We don't have places which are really dedicated to forests. Every open land is for grazing, and they don't consider it in their management plan because it needs sort of organization to claim that land as forest land.' (IP2, pos. 36, pp. 96)

This statement contains several aspects. First, there seems to be a temporal mismatch between the short-term governance arrangement and the long-term characteristics of ecological processes. Different planning intervals and time horizons can ruin FLR achievements (WIEGANT ET AL. 2020).

Furthermore, aside from lacking confidence and trust of local communities in government agencies, it becomes clear that there is still no concise definition for forest and forest lands. As forest land is not always covered with trees, it is essential to properly demarcate and define land on which trees stand or once stood (BRYANT 2015). Hence, areas that should be under forest cover are often used for other purposes such as intensive farming (KASSA ET AL. 2017). Consequently, lacking ownership, unclear definitions, and property rights strongly affect farmers' motivation and collective actions to invest in reforestation activities (LEGESSE, JEFFERSON-MOORE, THOMAS 2018).

Adding to this, '*there is not a clear strategic approach from the government side how to address the issue of degradation in the different landscapes.'* (IP1, pos. 33, pp. 92). Strategic guidelines and national development plans on restoration activities incorporating inclusive principles and strategies are often missing (HIRPHA ET AL. 2021). However, referring to IP7, *'policies and strategies are available, but this should be also work down to the ground'* (IP7, pos. 43, pp. 113).

As a result, multiple and overlapping tenure systems, lacking implementation guidelines as well as insufficient information about property rights hinder successful FLR implementation on the ground (MANSOURIAN, SGARD 2021). Without clear land use policies, livestock continues to graze on already degraded land, and steep slopes may be cultivated against the land administration proclamation of the country (HAILEMARIAM, SOROMESSA, TEKETAY 2016). Since policies are made by the Ethiopian government, and land belongs to the state, any resulting policies mainly represent the state's interests. This implicates that holding power over land means holding power over FLR processes, as we have seen in Chapter 6.2. Even though Ethiopia is making advantageous changes in their land use policies, there are still huge gaps due to its inefficient and weak organizational setup (ARITI, VAN VLIET, VERBURG 2019). Similar to the institutional structures, policies are designed and implemented in a top-down manner, with little bottom-up initiative (ARITI, VAN VLIET, VERBURG 2019).

The policy vacuum and tenure unclarity on most spatial levels impede the already weak institutions to execute law enforcement (IP4, pos. 17, pp. 103) (MCLAIN ET AL. 2019). The consequences can be even worse: large scale land acquisition, also known under the negatively connoted wording 'land grabs', are prevalent in some parts of Ethiopia and may also cause deforestation activities (MANSOURIAN 2020). Large-scale resettlement programs and land redistribution have created further uncertainty regarding land use and ownership and therefore hamper

reforestation and restoration by undermining sustained engagement of communities (MANSOURIAN 2020; KASSA ET AL. 2017).

Tackling the policy challenges, a careful revision of the 2005 federal rural land law and forest policies is needed (MCLAIN ET AL. 2019). Several interview partners expressed their wishes that land ownership should be certified by the government, free grazing should be restricted and FLR interventions should be fixed and not changed every year (e.g., IP6, pos. 27, pp. 108).

CRONKLETON ET AL. (2017, pp.15) put the problem in a nutshell: *'Ethiopia presents a case where state efforts to exert ownership over forests, coupled with the lack of capacity to enforce regulations, or actually to control access to forests, produced institutional uncertainty and led to general patterns of forest degradation and deforestation'.* Without proper legal instruments, laws and guidelines, responsibilities in the absence of power to enforce laws remain unclear (HAILEMARIAM, SOROMESSA, TEKETAY 2016). However, this is not the only weakness of the Ethiopian forest and land use policies. Similarly to the institutions, overlapping jurisdictions pose significant challenges, especially during FLR implementation.

8.2. OVERLAPPING JURISDICTIONS AND LAWS

Overlapping jurisdictions in terms of traditional laws and land use contradictory to federal law may cause difficulties, as some regions have their own customary land use arrangements (IP7, pos. 13, pp. 110; IP1, pos. 33, pp. 92). *'This people, most of the time they are elder people, they are the one in charge of providing rules and propose which things can be done when it comes to the natural sides'* (IP3, pos. 43, pp. 100). Formal and traditional tenure systems combined with lacking legal instruments to manage the overlap between the two law systems make FLR implementation challenging (MCLAIN ET AL. 2019). This sometimes even culminates in effectively criminalizing community practices (MEFCC 2017b).

Next to the conflicting traditional and formal policies, overlaps within formal policy and jurisdictions were revealed. Land use policies are very fragmented and scattered over multiple different ministries (ARITI, VAN VLIET, VERBURG 2019). Due to the young age of the MEFCC, forest policies have been formerly set up by the MoA (AYANA, ARTS, WIERSUM 2013). Lacking integration and coordination of those two sector policies lead to unbalanced objectives and priorities that hamper synergies between the ministries (AYANA, ARTS, WIERSUM 2013). Forest sector development plans and FLR initiatives are only weakly integrated into local and national

development plans (McLain, Kassa, Lawry 2019). For instance, the Forest Proclamation (MEFCC) and Land Administration Proclamation (MoA) both deal with natural resources management, which also includes forests. However, only the land administration proclamation provides legal provision for common property ownership, which disregards community authority over forest resources (MEFCC 2017b). Following up on this aspect, according to Ayana, Arts, Wiersum (2013, pp.194), the current agricultural policy *'[…] overstates the potential of smallholder agriculture and crop production, with very limited attention to other sectors such as natural resource conservation and forest development'.*

Summing up, the FLR policy landscape is strongly influenced by several policy obscurities, particularly regarding tenure and ownership rights. While forest and land use policies can turn bio-physical entities and trees into a forest, the opposite can also happen (Bryant 2015): Applied forest policies often originate from the agricultural sector and are therefore not adequately tailored to the forest sector. On top of this, the absence of proper land use plans, strategical guidelines and implementing regulations may eliminate the success of FLR interventions (McLain et al. 2019; Hirpha et al. 2021). Referring to scale challenges, policies may furthermore be suboptimal and inefficient if they follow a single scale approach (Wiegant et al. 2020). 'Scale-jumping' in the sense of combining global space of FLR engagement and national space of dependence on restoration processes is a constant negotiation process (Hwang, Lee, Müller-Mahn 2017).

However, government institutions constantly develop encouraging policy and legal measures to improve tenure insecurities and forest resource management: the 2018 Forest Law, in combination with the implementation of the CRGE with its forest carbon strategy and PFM approach aims, among other objectives, to enhance land tenure security by land registration and certification measures (MEFCC 2017a). These regulations are still under development to constantly improve the legal conditions (IP1, pos. 27, pp. 92) (Boissière et al. 2021). Nevertheless, there is still a long way to go. National FLR policies must be adapted to local contexts to work efficiently (IP7, pos. 43, pp. 113). But good policies alone will not have any impact: *'Having legal instruments and policies is one thing, but they are of no use if not implemented.'* (Hailemariam, Soromessa, Teketay 2016, pp.84).

The statement reflects the core idea of the entire governance analysis: Policies are valueless without strong institutions to enforce them, and institutions are valueless without actors using

institutional arrangements for decision-making. The analysis of the governance triangle in its spatial dimension has shown a range of different results. Some of the results were not surprising as they have been anticipated in the theoretical part of the thesis (see Chap. 2). This particularly applies to forest governance's challenges and success factors, as they can be mostly transferred to the Ethiopian case. Coupled with this, the multiple scalar analysis in the sense of Landscape Governance and political ecology uncovered entanglements in terms of power asymmetries, diverging interests and structural deficits across actors, institutions, and policies. However, one aspect has not yet been granted sufficient consideration:

As anticipated in Chapter 2.2, 'governance' and 'government' are closely linked to each other. This assumption is also reflected in the results, as government authorities play a leading role in the FLR governance architecture. Since FLR is mainly state-driven and highly influenced by the political situation, the results must be seen in a broader political context to better understand the government's attitude towards FLR. Herewith, the brief political contextualization completes the entire governance analysis: After assessing (Chap. 5) and analysing (Chap. 6, 7, 8) the governance architecture, contextualizing the results sheds light on the overarching theoretical framework (Chap. 2.2) consisting of governance and its political ecology.

9. CONTEXTUALIZING FLR GOVERNANCE: ETHIOPIA'S 'POLITICAL FORESTS'

As most of the interviewees work for the Ethiopian state in a narrower or broader sense, the findings are somewhat biased. Nevertheless, the results have shown an ambivalent picture with inherent political ecological references:

The question of why FLR outcomes are realized is often subjected to the government's power, as the main decisions is often related to the states' land ownership (WAYESSA 2020). On the one hand, the state resists handing over decision-making power to non-state actors (e.g., private sector, local communities) since land and forests are a strategic resource that maintain power resources (WAYESSA 2020). On the other hand, there is an unprecedented political will to foster restoration processes through privatization and community engagement (IP1, pos. 35, pp. 93). The commitment of the government is shown by its various tree planting initiatives and mobilization of local communities (IP5, pos. 22, pp. 107). As expected from their political agenda, most of the interviewees from the public sector emphasized the state's effort and were very optimistic about reaching the ambitious restoration goals:

'With proper investment, it is possible. Because whether we like it or not, we are going in that direction that we are optimistic that these things will be realistic. That is what I experienced. And I believe that it will be realistic.' (IP2, pos. 58, pp. 97)

'So far, we did 12 Mio. and we are expecting to restore 7 Mio. ha degraded land by 2030. It's three years that we started with the prime minister initiative, so it's very realistic in my opinion.' (IP5, pos. 24, pp. 107)

The mass mobilization of communities through campaigning, free labour, and tree planting activities, in which even the prime minister himself participated, show the priority of reforestation on the political agenda (IP7, pos. 45, pp. 113; IP5, pos. 24, pp. 107).

However, while large scale reforestation initiatives gain a lot of media attention, the ongoing deforestation trend reveals on lack of long-term management and maintenance of existing forests. Following this aspect, MANSOURIAN (2020) considers tree planting as a political tool in Ethiopia, as it has been previously used as a form of political opposition by local communities (IP2, pos. 34, pp. 95). The strict law enforcement and harsh penalties regarding nature protection of the Derg's regime between 1974 and 1991 resulted in protest movements of the local people by harvesting protected forests on purpose (YOUNG ET AL. 2020). This kind of protest is well documented as an example for instrumentalization and politicization of forests and can be transferred to the present time (YOUNG ET AL. 2020): Politization of tree-planting becomes evident in current political conflicts, as the Ethiopia and Egypt Nile water conflict shows for example:

'As a citizen and committed expert in Land restoration sector, even Egypt should contribute for FLR activities and pay for ecosystem restoration to Ethiopia for their own benefits as they are naturally hosted to the Nile River.' (IP6, pos. 38, pp. 109)

The MoA's statement above shows that hegemonic conflicts and legitimacy claims affect FLR, either positively or negatively (TETZLAFF 2021). On the negative side, political conflicts such as the current military intervention in the Tigray region show a severe impact on FLR:

'Yes, the conflict which is currently happening in Tigray region aggravates […] FLR. […] Generally, conflicts not only aggravate FLR it also devastates forests during the war.' (IP7, pos. 41, pp. 113)

'What I can speak for sure is first victims of those tensions will be FLR interventions. Newly established FLR and existing forests or highly developed FLR activities will be the targets in terms of burning or cutting or biofuels. Forests will be the first victims of the crisis.' (IP2, pos. 54, pp. 97)

Nature degradation due to political conflicts does not exclusively apply to forests; other agricultural activities which are relevant for sustaining livelihoods are affected in the same way (IP8, pos. 39, pp. 116). Interviewee IP8 named one specific example:

'For example, in Amhara and Tigray region, there are boundaries within watersheds. Some part of the watershed is here in Amhara region and the other part is in the Tigray region. And because of this politics, the communities are not at a peace level. […] Due to this, they do not come together and discuss the protection of their watershed in their landscapes. This politics is very important.' (IP8, pos. 41, pp. 117)

As IP8 stated, the general political instability due to politized ethnicity and regional power claims combined with unstable and unsafe exercise of political power has become a general development constraint with a significant impact on environmental resources (FENETAHUN ET AL. 2021; TETZLAFF 2021). Ethiopia, as a state of ethnic federalism, is currently in a phase of transition, with the possibility of state collapse (TETZLAFF 2021).

To summarize, the reciprocal relationship between FLR and politics is expressed in recurrent political discourses: Forests are shaped by political decisions while at the same time forests *'are political spaces that shape the practice of politics'* (DEVINE, BACA 2020, pp.912). Herewith and according to the results, forests are never only 'natural' or 'ecological'. Also known under the term 'political forests', forests and FLR are political ecological sites that are created, shaped and also destroyed by various governance architectures consisting of actors, institutions, and policies (PELUSO, VANDERGEEST 2020; DEVINE, BACA 2020). The politization of forests and FLR activities, therefore, have undesirable side effects: FLR is used as a tool to achieve the economic objective of higher political interests (e.g., CRGE, Bonn Challenge) and not for benefitting those who are in greatest need: local communities (HIRPHA ET AL. 2021).

10. CONCLUDING THOUGHTS AND OUTLOOK

Throughout the entire thesis, the complexity of governing Forest Landscape Restoration and the central role of 'good forest governance' has become evident. The multidimensional nature of governing natural resources with all their embedded social, ecological, economic, and political aspects makes it rather difficult to give a clear answer to the main research question (see Chap. 2.4). Despite the manifoldness of landscapes, one aspect is obvious: governance structures can either influence FLR outcomes in a positive or in a negative way. Following the trisection of Landscape Governance, the results to the research question can be summarized as follows:

On the actor's side, it can be noted that FLR is influenced by stakeholders that are differently equipped in terms of power resources and decision-making abilities. Public actors on the national level, namely the MoA and MEFCC, mainly dominate the FLR process, as they have the financial means as well as the power over land distribution (WAYESSA 2020). Local communities are less engaged in decision-making processes on the national level. However, on grassroot level, the power is in the hands of local communities, as they are organized in powerful traditional informal institutions instead of acknowledging formal institutional arrangements.

Next to the influence of their power, actors' different interests tend to impede successful FLR. The MoA is mainly interested in agricultural productivity, while the MEFCC is focused on forest development. Local communities are caught between both: On the one hand, they need to make a living from the subsistence economy; on the other hand, their livelihoods are threatened by climate change, for which tree-planting may help to produce long-term relief. Better cross-sectoral coordination between the actors as well as the involvement of all stakeholders, especially local communities, women, youth, and private developers in designing, planning and decision-making, would improve the inclusiveness of FLR interventions (VAN OOSTEN 2013).

Moving on to the institutional architecture, the institutional arrangement across different scales can be described as top-down and rather non-participatory (ARITI, VAN VLIET, VERBURG 2019). As a typical problem for many developing countries, low institutional capacity with gaps on the local scales, as in the Ethiopian case, hampers effective enforcement of policies and laws (CROSBY 1996). Institutional overlaps between formal and informal institutions and imprecise assignments between the ministries further complicates FLR implementation in Ethiopia. Perspectively, the MEFCC needs to expand to the local level to certify, classify and demarcate forests in a coordinated manner (MCLAIN ET AL. 2019). Generally, the 'institutionalization' of Landscape Governance and FLR through the empowerment of formal institutional arrangements would help to better structure and organize FLR and its processes. Nonetheless, this should not be overdone, as exaggerated formalization may paralyze and bear down informal restoration initiatives (VAN OOSTEN 2013).

In addition to low institutional capacity, lacking policy harmonization further complicates the FLR process in many respects. Lacking land use plans, local ownership, and tenure rights combined with a lacking definition of forests and forested lands limits the restoration success (MANSOURIAN 2020). As the institutional hierarchy is centered at the higher levels, gaps between policy design on the national level and policy implementation on lower administrative

scales prohibit active participation of communities, political acceptance and commitment of institutional actors (ARITI, VAN VLIET, VERBURG 2019). Reforestation activities, therefore, may serve as political leverage by combining national interests with the global environmental discourse at the expense of local communities (KASSA 2018).

To sum up, the multiple scale analysis of FLR in Ethiopia has shown the following overall picture: FLR in Ethiopia is currently mainly top-down driven with state-led operations where local communities implement FLR activities on the ground but are rarely included in decision-making processes (BOISSIÈRE ET AL. 2021). Such failing cross-scale and cross-level interactions combined with a mismatch between spatial levels and heterogeneity of perceived scales are crucial aspects for governing FLR. The embedment of landscapes within international, national, and local interests led to contestation and spatial conflicts (e.g., local vs. global; production vs. conservation) (VAN OOSTEN 2013; SARI ET AL. 2019). Hence, it is essential to create restoration projects that are both locally relevant and simultaneously contribute to national and international objectives (WILSON, CAGALANAN 2016). Long-lasting reforestation programs, bottom-up approaches and tools for the benefit-sharing need to be further developed (BOISSIÈRE ET AL. 2021). Governance solutions rather need to be scaled down than scaled up to properly address FLR challenges, especially on local scales (CHAZDON ET AL. 2021). Participation, marked-based approaches and decentralization of forest management to local communities by including cultural norms and values generate sustainable FLR implementation (WILSON, CAGALANAN 2016; KAHSAY, NORDÉN, BULTE 2021).

Despite all the challenges for FLR implementation in Ethiopia, the government makes great efforts to tackle all those challenges and meet the goal of 15 Mio. ha of restored area by 2030. Enlargement of Participatory Forest Management approaches, institutional capacity building, private sector incentives, and improved policies show the political engagement and priority on the agenda. However, the future will bring further difficulties: Apart from ongoing climate change, population pressure, power shifts between generations and ethnic groups, conflicts over resources and political instability worsen the environmental degradation and threaten forests and forested lands (KASSA ET AL. 2017; TETZLAFF 2021). The UN Decade on Ecosystem Restoration has come at the right time: there has never been a more urgent need to revive Ethiopia's degraded forests (UNEP 2021). Accelerating the re-greening and restoring of Ethiopia and the whole planet is needed to end poverty, combat climate change, and build resilience for future developments.

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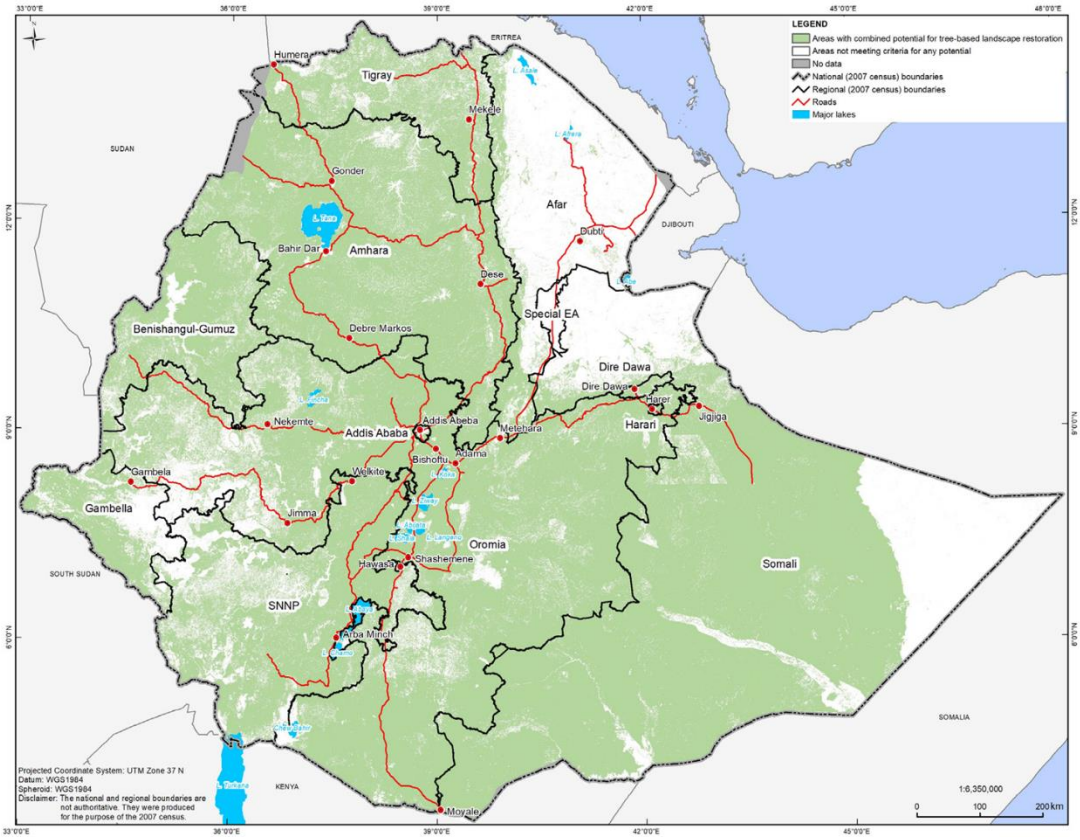
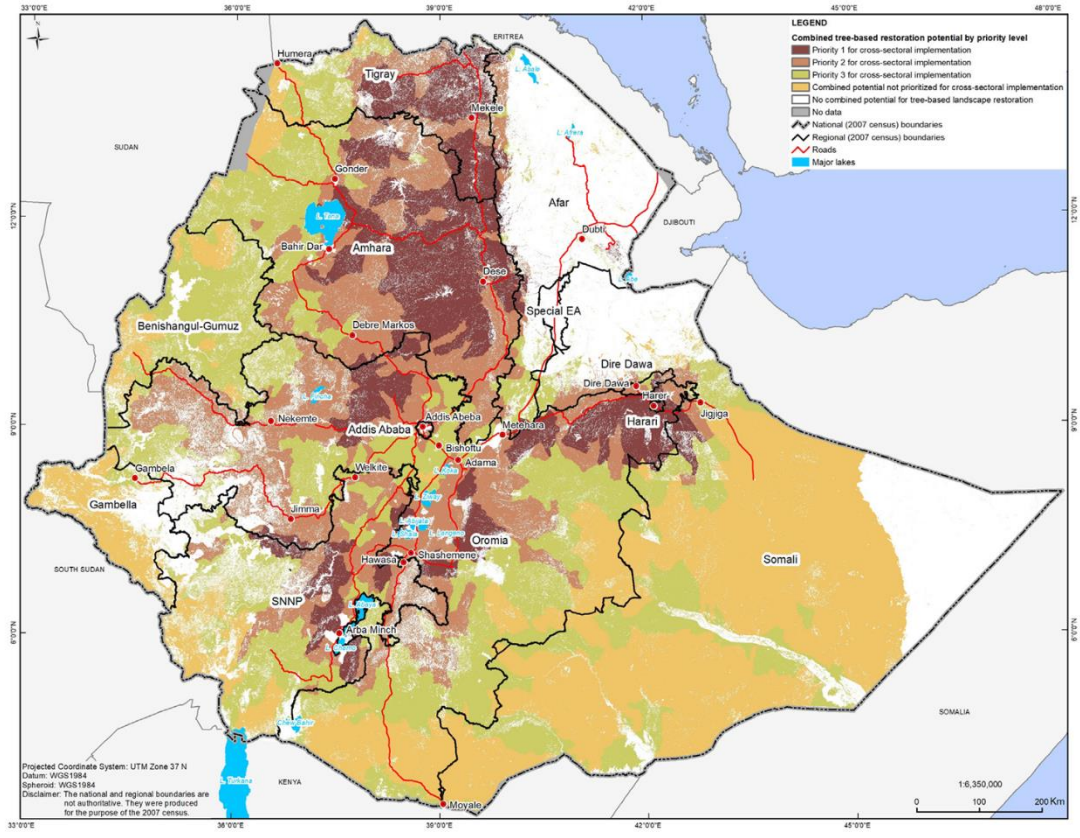
ANNEX 1: NATIONAL PRIORITY MAPS FOR FLR

a) Combined Potential for FLR (ZELEKE 2018, pp.7)



b) Combined Potential for FLR according to Priority Level (ZELEKE 2018, pp.8)



ANNEX 2: QUESTIONNAIRE

	QUESTIONS
Stakeholder Mapping	Which actors/stakeholders are involved in FLR in Ethiopia? What is the actor's role/responsibility in FLR? (Motivation/Interests)
	Which actors are excluded? Why?
	How would you rate the power of local communities?
	How is the communication working between governmental bodies and local communities?
	What kind of relationships do the actors have among themselves?
	How would you rate the influence or the power of the actor? Most powerful? Least powerful? Power relations: Tensions, Conflicts?
Institutions	Which institutions influence FLR/large-scale restoration in your country? How?
	Were there supportive/harmful institutions at the project scale (and if yes, which ones)?
	Were new institutions set up at the project scale (and if yes, which ones)?
	What about informal institutions? Participation mechanisms?
Policies	What kind of regulations, laws or political guidelines are relevant for FLR in your opinion?
	Are there any incentives/subsidies for restoring landscapes with FLR?
Contextualization	What are challenges for FLR implementation in Ethiopia?
	What are success factors for FLR implementation in Ethiopia?
	What needs to be changed in your opinion?
	In how far do the political, social, and economic situation in Ethiopia influence the FLR process? Do ethnical aspects play any role?
	Conflicts due to political reasons?

ANNEX 3: CODING SYSTEM

CODE	SUB-CODE	SUB-SUB-CODE
1. Sub-Question: Stakeholder Mapping	1.1. Participating actors	1.1.1. Public
		1.1.2. MoA
		1.1.3. MEFCC
		1.1.4. Private
	1.2. Actors' conflicts	1.2.1 Exclosures/Enclosures
	1.3. Partnerships/Cooperation	
	1.4. Power/Importance	
	1.5. Motivation/Interests	1.5.1. Conflicting Interests
	1.6. Excluded actors	1.6.1. Gender
		1.6.2. Youth
	1.7. Participation Processes	1.7.1. Lacking Participation
		1.7.2. Lacking knowledge transfer
	1.8. Local Participation	1.8.1. Decision-making processes
		1.8.2. Tree-Planting
2. Sub-Question: Institutional Setup	2.1. Institutions	2.1.1. Formal Institutions
		2.1.2. Informal Institutions
		2.1.3. MoA
		2.1.4. MEFCC
	2.2. Institutional challenges	2.2.1. Institutional gap
		2.2.2. Institutional overlapping
	2.3. Supportive Institutions	
3. Sub-Question: Policies	3.1. Policies/Guidelines	3.1.1. Laws
		3.1.2. Guidelines
		3.1.3. Land ownership
		3.1.4. Land tenure
	3.2. Incentives	3.2.1. Tax reduction
		3.2.2. Subsidies
	3.3. Importance	3.3.1. Green economy strategy
		3.3.2. FDP
Contextualization	4.1. Challenges/Success factors	4.1.1. Challenges
		4.1.2. Success factors
		4.1.3. Improvement options
	4.2. Socio-political conflicts	4.2.1. Ethnical conflicts
		4.2.2. Political conflicts
	4.3. Political role of FLR	