Forest Governance

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To Siri, Edda, and Harry

Abstract

This thesis explores the gendered dynamics of forest governance and practices in rural Burkina Faso. Approximately, three billion people worldwide rely on trees for their everyday life. In West Africa, women, are often responsible for collecting tree resources such as firewood, edible leaves, and fruits. Trees also provide valuable income, especially for the poorest. NGOs, supranational organizations, and states have promoted and supported decentralized forest institutions to make local communities manage forests and take a share in the benefits and income. This study asks why institutional forestry frameworks so often provide unexpected and adverse social and ecological outcomes by exploring forest users' navigation and struggles to access firewood and shea.

To meet the objective to analyze the interrelations between institutions, gendered power relations, and forest use, the study develops a theoretical framework for analyzing forest governance. Forest governance is approached as structured by, and structuring, the gendered power relations of subjectivities, divisions of labor, access and control relations, and institutions. With an ethnographic approach, the data have been collected using various methods, such as structured observations, semi-structured interviews, and focus-group discussions, primarily in the villages of Boessen and Tonogo.

Overall, this study develops an understanding of how formal forest governance arrangements reinforce gender inequality and marginalization in Boessen and Tonogo. Gendered power relations that are embedded in informal and formal forest institutions form unequal opportunities to access and control firewood and shea. Forest governance arrangements reinforce feminized labor norms of cutting and transporting wood to impede over-harvesting and exclude women in forest management arrangements. The findings show how forest governance arrangements, in combination with the lack of available deadwood, tend to situate women at continuous risk of being punished for illegal forest practices and add extra work burden. The study moreover shows that uneven power relations at the household level and the increased value of shea have increased male harvesting and control of the shea kernel and profits. With that, men challenge the notion of the product as a feminine resource and rearrange masculinity norms.

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Abbreviations

AOF	Afrique Occidentale Française
CFM	Community Forest Management
CI	Critical Institutionalism
CVD	Conseil Villageois de Développement
ECOWAS	Economic Community of West African States
HDI	Human Development Index
INERA	Institut de l'Environnement et Recherches Agricoles
FAO	Food and Agriculture Organisation of the United Nations
FPE	Feminist Political Ecology
MI	Mainstream Institutionalism
NGO	Non-Governmental Organisation
NTFP	Non-Timber Forest Product
SIDA	Swedish International Development Cooperation Agency
SSA	Sub-Saharan Africa
UN	United Nations

List of articles

Article I

Friman, J. (2020). Gendered woodcutting practices and institutional bricolage processes – The case of woodcutting permits in Burkina Faso. Forest Policy and Economics, 111, 102045.

Article II

Friman, J. (2022). Challenging shea as a woman's crop – masculinities and resource control in Burkina Faso. Gender, Place and Culture, p. 1-20

Article III

Friman, J. Gendered complexity in community forestry management in Burkina Faso, (in review).

Article IV

Friman, J. Governance, perceptions and practices of contested firewood collection in Burkina Faso

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Prologue

It is early morning in the Sudano-Sahelian village of Boessen. The sun has not yet risen, and the stillness of the night lingers. The area will be full of life and commerce in a few hours. I have decided with Nikiema and Mariam to meet here, at the corner of the local market. They are going to the forest to cut firewood to sell, and I am going with them on this day. Eager to get going, the two women were already there, waiting for the research assistant and me to arrive. Not because they long to cut wood, but because the day is full of other chores that need attention. They also want to return home before the scorching sun makes the already heavy work more strenuous. We take the bikes onto the main road directly to the "white man's forest" (*nazaara weogo* in the local language Mooré). We can do that because today Nikiema and Mariam will only cut the legal dry firewood. We, therefore, do not need to hide on small paths to avoid encountering the forest guards. The coarse shea branches on the bicycle's luggage racks are dry and dead but have been cut from a living tree several weeks ago. The branches have been hidden in the forest, waiting to dry and darken. If the forest guard patrols, he will not be able to give a fine to Nikiema and Mariam for cutting wood illegally. After a few hours, with sweat running down our faces, we are back in the women's household compound. The logs are laid in a pile that will be sold to women in the village who brew beer when the pile is large enough to fill a cart. The money, Nikiema explains, will be saved to pay for the children's school fees.

This example from an ordinary day in February 2015 in Boessen shows what forest governance means in everyday life. Nikiema and Mariam adapt their woodcutting practices to not be fined by the forest guard but still get access to wood for vending. They cut the shea wood and know that it is done illegally, as they are aware of formal laws and local, historically established, rules. As Mariam explains, there are no other options for the two women to provide for themselves and their children. They lack both education and money to invest in any business. The ordinary and mundane practice of going to the forest to cut wood, which the story above illustrates, led me to critically examine the gendered dynamics in the co-production of forest governance and practices – both regarding how forest use is shaped by and forms formal and informal institutions.

1
Introduction

This thesis studies the gendered dynamics of forest governance and practices. It explores what forest governance means for the people, depending on the tree resources for their everyday life and how forest use eludes control and steering by institutions. Theory suggests that focusing on the interrelations between institutions, gendered power relations, and forest use can help understand why institutional forestry frameworks so often provide unexpected and adverse social and ecological outcomes. The empirical focus is on forest governance and resource struggles in two rural villages, Boessen and Tonogo,[1] in Burkina Faso.

Forests are under pressure globally, with continuously increasing deforestation and degradation levels. Such problems cause biodiversity loss and spur climate change. It also strains the three billion people who depend on forests for their daily livelihoods and well-being (Bensch et al., 2015). To curb deforestation, governments, NGOs, and supranational institutions have sought to govern forests using various measures. Such governance measures have mainly focused on restricting forest use through laws and regulations, where compliance is supervised through various monitoring and control mechanisms. These conservation efforts tend to put further strain on already pressured households as they intend to delimit resource outtake (Bixler & Shmelev, 2015; Borrini et al., 2004).

Over the last decades, and as a response to previous efforts, governments and NGOs have shifted the focus to forest governance, which sets out that forests and humans must be steered toward sustainability by well-designed institutions (Agrawal et al., 2008; Côte & Gautier, 2018) and in particular by decentralizing forest management to local communities (Etongo, et al., 2018). Decentralized management aims to incentivize local communities to manage resources in their proximity in a sustainable way while also sharing the benefits. In many countries in the Global South, where a large part of the

[1] The names of the villages and the interlocutors have been anonymized in the study, including the published texts.

population depend on forest resources for their daily needs, forest governance attempts have mainly resulted in community forest management (CFM) models (Arts & de Koning, 2017; Karambiri et al., 2020; Li, 2007), and decentralized forest logging concessions, and woodcutting permit systems to regulate commercial exploitation (Awono et al., 2013; Côte & Gautier, 2018; Ribot et al., 2006; Ribot et al., 2010; Tegegne et al., 2019). Although promising in their ambitions, these management models have not yet delivered a solution to the sustainable management of forest lands. Deforestation and land degradation remain global and local concerns. It has often led to contradictory outcomes, with continuing over-exploitation of forest resources and increasing social marginalization (Galvin et al., 2018; Gilmour, 2016; Hajjar et al., 2021; Kothari et al., 2013)

The efforts at forest governance have far-reaching implications for the local context. In Burkina Faso, for example, the naturally generated forest areas keep diminishing by almost one percent annually (FAO, 2020, p. 143). The pressing problem of deforestation and continued livelihood struggles in forest-dependent communities raise questions about the institutional frameworks aimed at curbing the problem. Why do they generate unexpected or even adverse outcomes? In this study, I propose that some light can be shed on this conundrum by exploring the dynamic processes in which forest or tree resource governance becomes re-arranged, contested, and internalized through everyday *practices* (Arts et al, 2014). Understanding such practices provides valuable insights into how forest governance and the use of tree resources relate to social exclusion and marginalization. This is especially relevant in Sub-Saharan Africa (SSA), where poverty and tree resource dependence remain high (Sola et al., 2019). In fact, tree resources remain an essential part of everyday life in Burkina Faso. About 90 percent of the population uses wood fuel for cooking energy (MEDD, 2012). Tree products, such as (*Vitellaria paradoxa*) and néré (*Parkia biglobosa*), are vital for food security and income opportunities (Elias & Arora-Jonsson, 2017; Koffi et al.. 2016; Pehou et al., 2020).

Previous research on forestry in SSA have pointed toward undesirable outcomes of forest governance, such as over-harvesting of forests (Ribot et al., 2006), ineffective management (Karambiri et al., 2020), and marginalization of community members (Coulibaly-Lingani et al., 2011; Galvin et al., 2018). However, most of these studies have focused on the outcomes of commercial and larger-scale forestry models, directing far less attention to the smaller-scale and everyday usage of the forests that remain essential in rural communities. Thus, we know little about how statutory forest and tree

resource laws, and policies intersect with lived experiences of collecting, transporting, processing, and vending tree resources.

Seeking to contribute to such knowledge-building, this study draws on previous work within critical institutionalism (CI) and gender studies. This means, that the study pays attention to *formal* institutions, i.e., the formalized organizational structures and state-derived laws, regulations, and policies, policies, as well as to informal and socially embedded institutions that are firmed in customary, cultural, and socially derived norms, rules, and practices and sees them as intertwined (Cleaver, 2002; Wiersum et al., 2014). While formal and socially embedded institutions are not always so easily separated, a focus beyond formalized legal structures provides the opportunity to capture how forest governance and usage are embedded within complex social and institutional settings and see them as intertwined. While formal and socially embedded institutions are not necessarily easily separated, a focus that goes beyond formalized legal structures provides the opportunity to capture how forest governance and usage are embedded within complex social and institutional settings. This perspective is particularly fruitful for studying the complexity of forest governance in a context like Burkina Faso, which is characterized by a high tree resource dependence in a plural politico-legal structure (Côte & Gautier, 2018; Koffi et al., 2016; Pouliot & Treue, 2013; Rousseau et al., 2017).

Equally crucial for understanding the complexities of forest use and governance is the recognition that women and men have different rights and access as well as control over tree resources and that these, too, are formal, informal and socially embedded (Agarwal, 1997, 2009; Carney, 1993; Carney & Elias, 2006; Coulibaly-Lingani et al., Gausset et al., 2005; 2009; Kent, 2018; Schroeder, 1999). Such gender divisions are set in relation to and within broader gendered power relations in society (Elias & Arora-Jonsson 2017; Nightingale, 2006; Rocheleau & Edmunds, 1997). By gender, I here refer to the sociocultural roles, norms, behaviors, and responsibilities attributed to men and women and the relationship between them (Cruz-Torres & McElwee, 2017). In adopting a gender perspective, this study further considers how socio-cultural aspects of difference, including economic capacity, age, physical ability, ethnicity, and product knowledge, reinforce and intersect with gender in shaping differentiated and/or unequal access to and control over trees and their products (Nightingale, 2011; Pehou et al., 2020).

Exploring the complex connections between gender and the institutional landscape, this study shows how forest institutions become done, re-arranged, and contested through gendered resource struggles, power relations, and

subjectivities. In doing this, I explore the use of trees from the household's agroforestry farmlands and the commons, i.e., the forested areas that characterize the landscape outside of individual farmlands in Burkina Faso, to which people have regulated but joint access (Dietz et al., 2002, p. 18; Nightingale, 2019). Through this, the study contributes new empirical knowledge as well as analytical perspectives of everyday gendered tree resource practices in rural Burkina Faso and how these intersect with different forest institutions. Such knowledge provides valuable insights into *why* and *how* uneven social outcomes are formed in the institutional forest resource context. Such findings are not only academically interesting for the environmental social sciences within which this study is done. They are also helpful for forest and development institutions in that they underline the need to pay attention to and address the complex power relations and contradictory regulations within the forestry sector that play out across national, local, and intra-household levels.

Aim and research questions

The overarching aim of this thesis is to critically explore the relationship between gender and forest governance in Burkina Faso. More specifically, the objective is to analyze the interrelations between institutions, gendered power relations, and forest use. Empirically, the study focuses on these processes in relation to firewood collection and shea produce in the two villages, Boessen and Tonogo. In order to fulfill this aim, the thesis asks the following research questions.

Research Question 1:

In what way does gender impact divisions of labor and access to and control over forest resources?

Research Question 2:

How do forest users perceive, navigate, and adapt to formal and informal forest institutions – and what implications does this have for forest use and management?

Research Question 3:

How are gendered subjectivities formed and contested in these struggles over forest use and management?

Contributions and delimitations

This study contributes to the theoretical, empirical, and methodological understandings of how institutions and gender relations are co-produced

through forest practices. Moreover, how these institutional and gender relations has implications for struggles over tree resources and the forested areas in the two villages of Boessen and Tonogo.

This study makes *empirical* contributions by showing how forest governance plays out on the ground as women and men navigate institutions, power dynamics, and resource competition to access firewood and shea in rural Burkina Faso. Previous research have predominantly focused on forest governance, the impact of decentralization processes, and implications for livelihood within the male-dominated and commercial forestry sector in Burkina Faso. This thesis makes insightful contributions as it shows that local, female-dominated firewood cutting is part of the economic market, providing a small yet essential income for women. This sheds light on women's role as woodcutters and exposes gendered dynamics within forest governance (see article I, III and IV).

Moreover, the study contributes to understanding how gendered power dynamics crosscut at different societal levels and shape exclusion and marginalization within tree resource access and control in rural Burkina Faso. Such findings are especially relevant in Burkina Faso, where the state strives to support and enhance gender equality. Examining the forest practices of shea produce contributes with further insights into how the femininity of shea is challenged through men's increased presence in harvesting. Such a phenomenon has been observed previously (see, for example, Elias & Arora-Jonsson, 2017; Kent, 2018). My study adds to this body of literature by providing details on men's participation practices and masculinization. My analysis shows how men in some households control shea at the expense of women's income opportunities. In some surveyed households, men now collect shea in collaboration with their spouses and make joint income expenditure decisions. Such findings demonstrate that nature is a space of struggle and cooperation around common objectives when gendered labor norms are transgressed.

Through the semi-structured interviews with 78 women and 119 men from households in Tonogo and Boessen, the complexity of forest practices and counter-productive elements of governance mechanisms are displayed. My analysis shows that forest management arrangements marginalize income possibilities and adds extra-work burden for women. Moreover, that it overwrite local usage rules and reinforces gender inequalities by excluding women from participating formally in forest management. These empirical insights can inform decision-makers within the natural resource sector in Burkina Faso about how forest governance plays out in the local setting and shapes gendered relations.

This thesis contributes *theoretically* by proposing an analytical framework of gendered forest governance. The theoretical framework draws on feminist studies (see, for example, Resurrección, 2017; Rocheleau et al., 1996), the practice-based approach to forest governance (as captured by Arts et al., 2014), and CI to advance an understanding of the power relations of forest governance and resource struggles. By drawing on CI and feminist studies, this study furthers our theoretical understanding of the interrelationship between institutional processes, practices and resource struggles (Cleaver, 2017). Above all by showing that forest use practices produce multiple processes of bricolage where institutional regulations, norms and rules are met with acceptance, resistance, and rejections within the communities.

The framework advances our understanding of how gendered subjectivities take shape through forest practices and resource struggles. For example, how alternative masculinities, i.e., other than the 'African male breadwinner ideal,' are formed through men's participation in shea harvesting (Evans, 2016; Matlon, 2016). It is also analytically applicable when exploring perceptions of firewood collection and deforestation in relation to forest governance. The framework was useful for analytically understanding the power dynamics embedded in subjectivities as forest authorities and community members (including women themselves) in various ways portray firewood collecting women as destroying forests, illegal, in need of education and being uncontrollable. This adds to our theoretical understanding of how shifting demand for natural resources relationally produces and re-establishes power dynamics and gendered subjectivities in the local context.

This study makes *methodological* contributions to exploring the relationship between forest institutions and gendered power relations in the navigation and competition over tree resources. The study highlights the value of ethnographically grounded research. Combined with a feminist ethical data production approach (Ackerly & True, 2020), it explores practices as embodied discursive interactions to show the power dynamics in these everyday doings. Specifically, around the navigation to access shea and firewood. Following practices and daily doings in-depth in the communities of Tonogo and Boessen through various methods provided the necessary time, space, and different data sets to make a rich analysis. My study shows how forest governance and practices as gendered are methodologically applicable and suitable for studying the interactions between institutions and embodied individual life experiences.

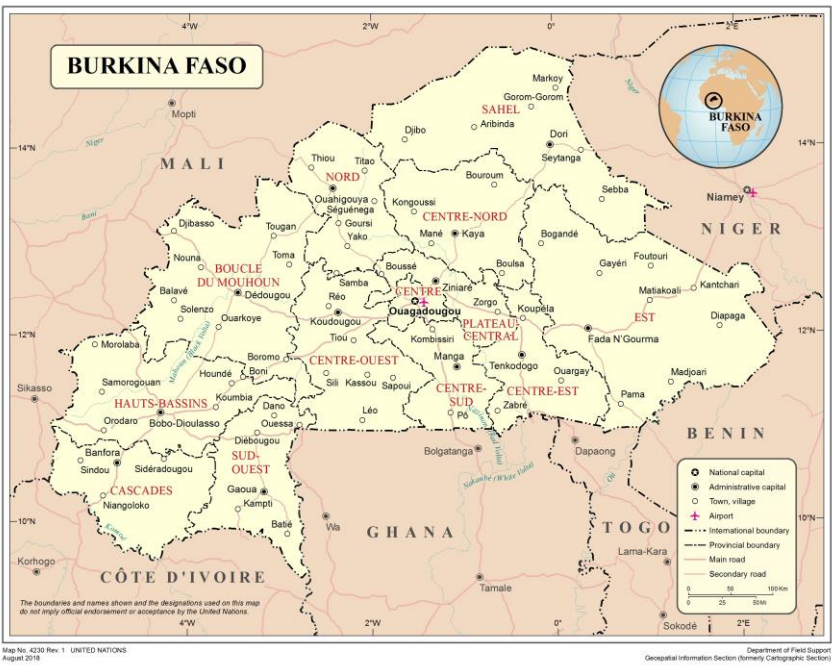
Outline of the thesis

This introduction outlined the thesis's research problem, aim, and contributions. The next chapter outlines the contextual background of historical and current, formal, and socially embedded forest institutions in Burkina Faso. It also provides the reader with the gendered aspects of how forests can be used and their significance for livelihoods in the region. A chapter on the theoretical framework follows and includes a review of theoretical perspectives that have sought to capture the gendered dynamics of forest governance through the focus on divisions of labor, access and control, and social power relations. These scholarly debates mainly stem from eco-feminist and feminist political ecology (FPE) perspectives of gender-environment relations. The framework includes a CI and practice-based approach to capture how gender intersects with institutional processes, forest governance, and practices. This is followed by a chapter on methodology and methods, describing how the research sites Tonogo and Boessen in Burkina Faso were selected and the sources for data collection. This chapter also includes discussions on the choice of methods, how the data is analyzed, and ethical considerations. After this follows a summary of the articles included in this compilation thesis. In the last chapter, I conclude and discuss the main findings of this research project and make suggestions for future research.

2
Contextualizing the study

This chapter describes the significance of forests for livelihoods and the ecological status of forested regions in Burkina Faso. This background provides the context for how gendered forest resource use and institutional structures interact in Burkina Faso. It includes discussions on general household labor division structures and gendered power relations at the household and community level. The institutional context is approached as intertwined in the analysis but separately presented for clarity. The major juridical laws and

Figure 1: Map of Burkina Faso showing neighboring countries (UN Geospatial, 2016).



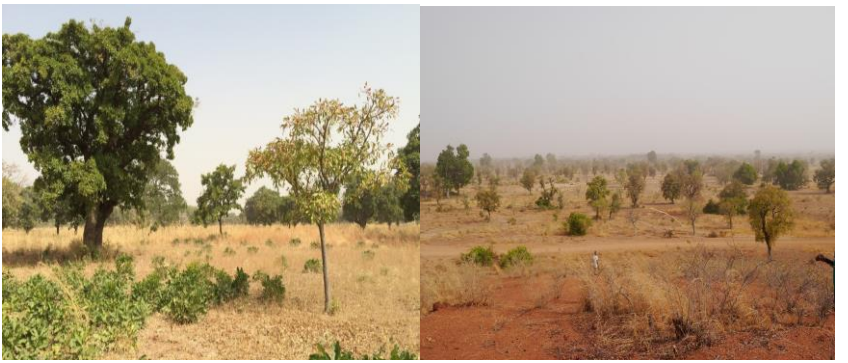
regulations in Burkina Faso are introduced first. This is followed by an introduction to how socially embedded institutions are formed and structured in Burkina Faso.

Livelihoods in Burkina Faso

Burkina Faso is a landlocked country in West Africa with a population of about 22 million. It is considered a low-income country and ranked 184 out of 191 on the Human Development Index (HDI)[2] (UNDP, 2022). The fact that a large portion of the population struggles to make ends meet can be exemplified by an estimated 51% of the rural population living below the national poverty level (Worldbank, 2021). Natural resources are significant assets for everyday rural life in Burkina Faso. About 90% of the population is involved in subsistence or commercial rain-fed farming (MAHRH, 2004). This makes farming households, especially the poorest, vulnerable to droughts, flooding, and irregularities in precipitation. These phenomena are anticipated to increase and intensify as climate change progresses in the Sahel region (Alvar-Beltran et al., 2020; Sorgho et al., 2020).

As farm yields often do not cover the dietary needs for an entire year and economical purchasing power is low, Burkina Faso has widespread food

Figure 1: The pictures show the agroforestry landscape. The photo on the right shows farmland where small shea trees are sprouting. The photo on the left is taken from a hill close to the village compounds in Boessen. As it is close to the village, elderly women who cannot walk so far go here to cut small branches. This area used to be covered with trees, and women describe their reluctance to cut the branches here as the bushes now are so small and they would prefer to save them.



[2] When taking into account CO2 emissions per capita and material footprint per capita, Burkina Faso ranks 115 out of 165 countries (https://www.sustainabledevelopmentindex.org/)

insecurity.[3] More than half of the population is considered moderately or severely food insecure. Consequently, 25% of children under five are stunted in growth, and 18 percent of the population suffer from undernourishment (FAO et al., 2022, annex 1A). Although farming is often the main occupation in rural households, most need to diversify their income and food sources. Trees and forests are vital in providing food and additional income possibilities (Foli et al., 2018; Koffi et al., 2016).

Agroforestry is the dominant farming system in Burkina Faso, in which trees are an integrated and managed component on farm fields and fallows. The average farm size in the area where this study takes place ranges from 1 to 5 hectares. This allows farmers to maintain several (mostly) fruit trees on their land. How many and which trees are planted, culled, and used varies from household to household and geographical area. Some of the most common tree varieties on the farmlands of the study sites are shea, néré, and tamarind (*Tamarindus indica*).

The role of trees for rural households

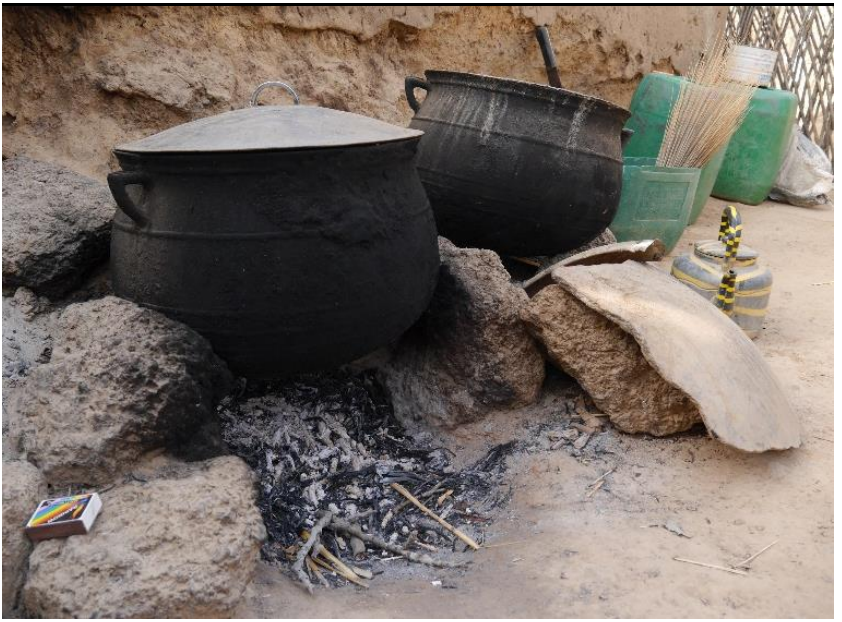
> Our lives are created around trees. We use trees to cook, to eat, for houses, for medicine and right now we sit under a tree. We can't live without them.

The above quote from the imam leader in Boessen describes well the varying ways in which are an essential resource for households in rural Burkina Faso. As an energy source it is vital as about 90% of the population in Burkina Faso depend on wood fuel for cooking (MEDD, 2012). Overall, wood fuel dependence in Sub-Saharan Africa is expected to increase from 575 to 918 million people between 2004–2030 (WorldBank, 2011). This has led Burkina Faso to endorse energy policies developed by the Economic Community of West African States (ECOWAS) that focus on distributing and increasing access to affordable and efficient stoves (Arevalo, 2016). Adoption records of such stoves in Burkina Faso remain low and have yet to show their capacity to relieve pressure on firewood extraction in forested areas (Bensch et al., 2015).

As the imam leader described above, trees provide food and essential nutrients. Fruit and leaves from trees such as the néré or mango are helpful in the hunger season (the most food insecure period between sowing and harvest) (Gausset et al., 2005; Koffi et al., 2016; Koffi et al., 2020).

[3] "A person is food insecure when they lack regular access to enough safe and nutritious food for normal growth and development and an active and healthy life. This may be due to unavailability of food and/or lack of resources to obtain food" (FAO 2022, https://www.fao.org/hunger/en/). Moderate food insecurity means that one skips meal and reduces the quantity. Severely food insecure means that a person has run out of food and has no food for a day or more (FAO 2022, https://www.fao.org/hunger/en/)

Figure 3: Cooking vessels with the type of fireplace that is used in Boessen and Tonogo.



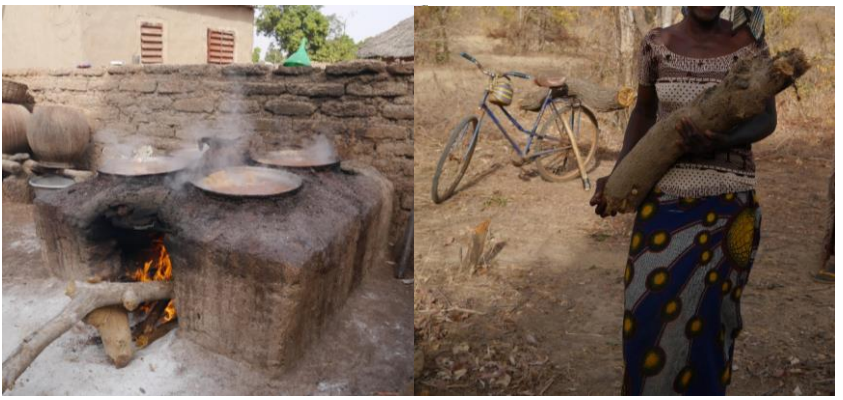
Trees are also used for medicine, shade, and soap (Nadembega, Boussim, et al., 2011; Pouliot, 2011). Certain trees, such as the shea or sacred groves, are essential for religious beliefs and ceremonial rituals (Carney & Elias, 2006; Hagberg, 2006).

More research is needed on the relative importance of economic revenues from trees. A study from southeastern Burkina Faso shows that non-timber forest products (NTFPs) make up 45 percent of rural households' annual income. Koffi et al. (2016) show that in times of food insecurity, women with access to woodlands turned to firewood as a coping strategy. Women living in areas with low access to woodlands relied more on the trade of forest fruits, such as shea nuts. The relative importance of tree resources as an income and coping strategy is higher for poorer families than for wealthier ones (Leßmeister et al., 2016). As women tend to be the ones collecting forest products, their work burden increases at times of food insecurity or as forest resources become scarcer (Djoudi & Brockhaus, 2011). The multiple values ascribed to trees, albeit not exhaustively presented here, demonstrate the broad and varied uses of trees in West Africa and Burkina Faso.

Harvesting from trees

In the semi-arid Sudano-Sahelian climate zone, where this study takes place, the landscape is dominated by agroforestry farmlands and fragmented forested areas with trees and bushes. These areas vary from denser forests to woody savannah (bushland) (Foli et al., 2018). The use of firewood and shea on these lands has been explored in-depth to understand how people navigate and re-arrange institutional arrangements to gain access and control. In the fieldwork, this has, for example, been approached by asking the women what fuel they use when cooking, followed up by asking where they access the wood and how, or if this changes throughout the year. The responses allowed for an understanding of the resource collection as complex and varying over time and space. Returning to the desire to understand navigation, this study explores the use of trees from where people obtain access, instead of from where people have a right to access (Ribot & Peluso, 2003). This often means that women and men in Tonogo and Boessen obtain firewood and shea from multiple places. It can be the household's farmland, other people's farmland (including fallows), or commons (outside or inside of the village territory)

Figure 4: Dolo beer cooked with a shea branch to the left (in Tonogo). A woman holds a shea branch in Boessen, and a larger branch waits on the bike.



such as community forests, forest reserves, or bushland. It can also be within the village's territory or other villages' land. I will go through the legality and regulations of forest use on these lands further below.

More evidence is needed to show the relative significance of farmland trees compared to forest commons for livelihoods. In this study, farmland trees rarely cover household needs regarding fuelwood, fruit, leaves, and medicine. Accessibility to forest (or bushland) commons is essential, especially for poorer households that lack the economic resources to purchase food or wood fuel (Koffi et al., 2016). In Boessen and Tonogo, the fieldwork

showed that most firewood collection occurs outside active farmlands. Where people go to get firewood and shea also depends on the available time, bodily strength, purchasing power. Preference or need of different wood also affect where people go to get firewood. Different wood is used and preferred for different types of cooking. Small, thin branches or even harvest residues (like straws) can be used for cooking quick dishes. Branches that burn longer, like shea, are preferred by (dolo) beer producers, for example, as it needs to cook over three days. Charcoal or gas is not widely used in Boessen and Tonogo – I never saw or visited a household where it was used. At the same time, it is a common sight in larger cities.

What makes a forest in Burkina Faso?

The question of what makes a forest is relevant to discuss in this study of forest governance. FAO defines a forest as "land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent, or trees able to reach these thresholds in situ" (FAO, 2018, p. 4). Fallow land is included in this definition, but it excludes agroforestry systems where crops are grown under the trees. According to FAO, Burkina Faso has a forest cover of 6 216 000 ha (FAO, 2020, p. 136), constituting about 22.7% of the total land cover. Out of this, 6 039 000 ha are naturally generated forests (FAO, 2020, p. 143)[4].

As other studies from Burkina Faso have shown, and which also is relevant for Boessen and Tonogo, forest and tree resource users relate to multiple layers of forest concepts that guide practices (Côte & Gautier, 2018; Hagberg, 2001). In Burkina Faso, statutory laws and documents are written in French, where the word forêt translates directly to the English word forest. Forêt does not translate directly to the local language Mooré, which is dominant in Boessen and Tonogo. Instead, the land is defined in other characteristics of space where boundaries have not been physically demarcated. Hagberg (2006) captures boundaries of land as defined through ritual, cultural, and social practices. However, in Mooré, this translates into bushland (weogo), land with spirits (zeeni weogo, or kangaré) land with spirits and where you cannot farm (zee bèga), fallow land (puo wéga), farmlands close to the household compound (kararga), and 'empty lands' (razom piiga or zeepele).

These land characteristics are classified by FAO as agricultural land if they are predominantly used for farming (including agroforestry farming). If not, and they have the right amount of canopy cover (see above), they are

[4] I have used FAOs forest statistics as a reference point as it is widely used in scientific publications.

classified as forests or other wooded lands[5] (FAO, 2018, p. 4). This means that the weogo can cover FAO's classifications of forest and other wooded lands, while the Mooré language does not make that distinction between forested and agricultural land. Instead, the distance to the household compound defines the land as weogo.

In national jurisdiction, all forested land that is not private is public state-owned forests, and it is divided into classified or protected forests.[6] This also includes agroforestry farmlands (the predominant farming system) which in rural Burkina Faso are rarely privatized, and also grassland (see Forestry code, article 11). This means that the forest law applies to a majority of farmlands in Burkina Faso. Further below, I will go through the historical trajectories of how these land categories have evolved, the interlinked usage rules, and the social, cultural, and ritual relations to forested land. These different,

Figure 5: The photo shows central Boessen at the far end, and in front is the visible land that villagers describe as being covered with trees in the past.

[5] According to FAO, wooded land is land that is "not classified as 'forest', spanning more than 0.5 hectares; with trees higher than 5 meters and a canopy cover of 5-10 percent, or trees able to reach these thresholds in situ; or with a combined cover of shrubs, bushes, and trees above 10 percent" (FAO, 2018, p. 4).

[6] The forest law also stipulates municipalities as owners of protected forests (see Forestry Code, 2011), but this has not been implemented in other regulating legislation or in the municipalities. This means that the protected forests are still under the control of the state.

contradictory, and overlapping layers of land concepts and definitions have been relevant to how and why I have approached and investigated how women and men navigate rules, regulations, and norms in Boessen and Tonogo. They relate to the plural politico-legal authorities of government bodies and customary authorities and how these exercise power and regulate land and usage rights.

Deforestation in Burkina Faso

Forests decrease yearly by 0.77 percent in Burkina Faso (0.87 for naturally generated forests) (FAO, 2020, pp. 136-143), compared to 0.60 percent over the African continent and 0.12 percent globally (FAO, 2020, p. 17). Tree plantations cover an area of 177 000 ha and are, on the other hand, increasing by 3.7 percent annually (FAO, 2020, p. 150). FAO's statistics show a loss of 1 664 000 ha of naturally regenerated forests in Burkina Faso between 1990 and 2020 (FAO, 2020).

Deforestation is also reflected in villagers' sentiments in Boessen and Tonogo when they describe how trees and large forested areas have "disappeared" within the village territory (see article IV). Research have shown that the high deforestation levels in Burkina Faso is mainly driven by field expansion, closely followed by other human-induced impacts, such as firewood extraction, bushfires, mining expansion, and climate change (Etongo et al., 2018; Kagambega et al., 2019). For users, this means that the availability of forest food, firewood, medicinal trees, and plants, in general, is decreasing.

Data show that agricultural land has expanded exponentially with deforestation, from 3.5 million hectares in 1990 to 6 million hectares in 2020. Agriculture land now spans about 44 percent of all land in Burkina Faso (FAO, 2022b). However, Burkina Faso's population grew from 8.8 million in 1990 to 21.5 in 2021 (World Bank, 2022). This means the available agricultural land needs to feed more people in 2021 than in 1990. It is not only forested lands that are suffering degradation – one-third of the cropland is degraded (FAO, 2022a), impacting farmers' ability to produce food (Winterbottom et al., 2021). Farmers in Boessen and Tonogo often shared such accounts. They described that their soils were not producing as much as they used to, that the harvest was not enough to feed the family, and that they nowadays did not have enough land to allow it to recover in fallows. This phenomenon, where forested lands are shifting into agricultural land, where the latter also suffers from degrading soils – challenges the ability to sustain rural livelihoods in Burkina Faso as land becomes unproductive and complicated to restore.

Critical scholarship has pointed out that West Africa's deforestation needs to be considered as occurring due to simultaneous stressors (Fairhead & Leach, 2003) caused within broader socio-economical and institutional structures (West et al., 2020). These structures, in turn, vary across time and geographical and political contexts (see, for example, Fairhead & Leach, 1995; Fairhead & Leach, 2003; Munro & van Der Horst, 2016; Wardell et al., 2003) Analyzing drivers and causes over a national territory should, therefore, be done cautiously. For example, as farmers thin out branches on trees as part of their management practices, it can provide false indications of the degradation data, instead of a managed regeneration process (see Fairhead & Leach, 1995; Munro & van Der Horst, 2016). In Boessen and Tonogo, such thinning-out practices are standard in farmland tree management. The statistical data on forestry and energy consumption presented in this study should thus be read with caution, as it can be complicated to provide exact and correct data.

High deforestation rates and the dependence on tree products have, since the 1970s, led government agencies and NGOs to target the forestry sector in national policies and development projects (Foli et al., 2018; Ribot, 1999; Westholm & Arora-Jonsson, 2015). To halt deforestation and degradation, this has brought projects that, for example, target forest restoration, community forest management, technical training, and, as mentioned earlier, the distribution of energy-efficient stoves (Arevalo, 2016; Bensch et al., 2015; Ouedraogo, 2006). While these projects have shown mixed results, some researchers have pointed to an ongoing re-greening of the Sahel region, driven by farmer's management techniques, such as contour stone bunds (often called diguettes, which can be found in both Boessen and Tonogo) or zaï pits (West et al., 2020; Zida et al., 2020).

The colonial trajectory of land categories in Burkina Faso

That forests are degraded and deforested in Burkina Faso is not only something that has been noticed recently, but the French colonial power[7] also highlighted it as a problem. In 1900, the French maintained that the longevity of forested areas was threatened (Benjaminsen & Hiernaux, 2019). This led the Upper Volta regime (which included Burkina Faso's territory) to establish the first forest law in 1900. The law removed property rights from local communities and stipulated the state as the owner of all land. In the 1930s,

[7] France claimed the territory of Burkina Faso in 1896 as part of the French colonial region of Afrique Occidentale Française (AOF) (Cote, 2015). This was met with resistance. In 1919, the colony of Upper Volt was established; thereafter, in 1960, the Republic of Upper Volta gained its independence. In 1984, the name was changed to Burkina Faso (land of the honest men) (Harsch, 2017).

shifting cultivation practices, forest fires, and pastoralism were labeled as the "three evils" that negatively impacted forest resources in West Africa (Wardell et al., 2003). Later scholarship has shown that the connections between population pressure and resource destruction have provided a false history of resource emergency (Ribot, 1999). This also enabled the colonial power to motivate their right to access and control forest resources in Burkina Faso (Batterbury & Bebbington, 1999).

In the same period, a new conservationist-focused forestry code was established (in 1935). The regulation stipulated that the state should regulate and manage forests. A colonial legacy of the first forestry code is the separation of land into classified forests and protected land (Hagberg, 2006). The first category, classified forests (forêts classées), was created with the primary purpose of securing and providing timber to the colonial powers and preventing the conversion of forests into agricultural land (Côte, 2015). These forest reserves were designated and demarcated, often through fencing with barbed wire. The local population's rights to use classified lands became restricted as agriculture, herding, and woodcutting became prohibited (Paré et al., 2010).

People living within these reserves were forced to move and abandon their household compound and farmland. People in Boessen also describe these forced evictions in the interviews, and some villagers still refer to the forest that was classified in 1935 as "our family's land." Although the forest code has changed character through revisions over the years, as colonial heritage, the restricted usage mechanisms pertain (Bouda et al., 2011; Zougouri, 2008). Nowadays, the subsistence collection of ripe fruits, dead wood, and medicinal products in classified forests is permitted (Bouda et al., 2011) (see article 54 in the Forestry code (2011)). Commercial forest exploitation is only allowed through organized timber concessions in certain forest reserves.

The second land category that the French colonial powers established was protected lands (forêts protégées). This category covered all other lands that did not become classified. Protected lands thus cover forests, bushland, steppe savannah, and farmlands[8]. On protected lands, subsistence rights were fully allowed, a regulation that remains, with some exceptions. After independence in 1960, the state-centered conservationist approach to forest governance was maintained in Burkina Faso. Cutting living branches is prohibited, and only ripe fruits can be harvested.[9] The state is the principal owner of the land, except on private lands, which are recognized in statutory law.

[8] A third land category of private land was established later (see the Forestry code, 2011).

[9] The usurp right is stipulated in the Environmental code (2013), which is superior to the Forest code.

However, in practice, the land is strongly governed by customary tenure institutions (Linkow, 2016). Most households surveyed in this study conduct farming on land distributed by customary authorities and hold no legal papers on their landholding.

To conclude, current forest legislation and management practices in Burkina Faso have a strong legacy from the colonial period (Gautier et al., 2015). There are three legal categories of land: classified, protected, and private lands. As mentioned, the forested lands, where people derive their tree resources, are classified as forests (forest reserves), agroforestry farmlands, and commons (protected lands). Although these lands are mainly state-owned, they are vested and governed by customary authorities (Linkow, 2016). The regulations, norms, and rules guiding the legality of land are contradictory and, at times, over-lapping between the state jurisdiction and customary and patrilineal regulations. This relates to the right to distribute land and decision-making over rules and regulations to which the state and, at times, customary authorities claim rights. This also concerns how rules and regulations are defined, and I will further explain in detail how they are shaped and provide different gendered rights to use and own land and trees.

Defining legality of tree resource use: subsistence and commercial purposes

As stated above, one is allowed to harvest firewood and shea for subsistence use from protected and classified lands – the forest commons. As this study shows, how subsistence use is defined is a matter of interpretation and varies between the villages (see article I). It is also tightly bound to and restricted by gendered forms of labor. Commercial exploitation of dry wood is allowed on protected lands with a woodcutting permit that the forestry office in every department issues. Commercial exploitation is also done by forest concessions on some of the classified forests. The regulation is in place to control and regulate exploitation (see article 61 in the Forest code, 2011).

Another colonial governance heritage is the establishment of the forest management authority of forest guards (*garde forestier*). This centralized institutional arrangement is the predecessor of present-day departmental forest guards (cited in article I) (Côte, 2015). The forest guards have maintained the responsibility to patrol and monitor forested areas. This includes assessing whether the wood collected is for domestic or commercial purposes and penalizing illegal behavior through fines and confiscation of wood and equipment.

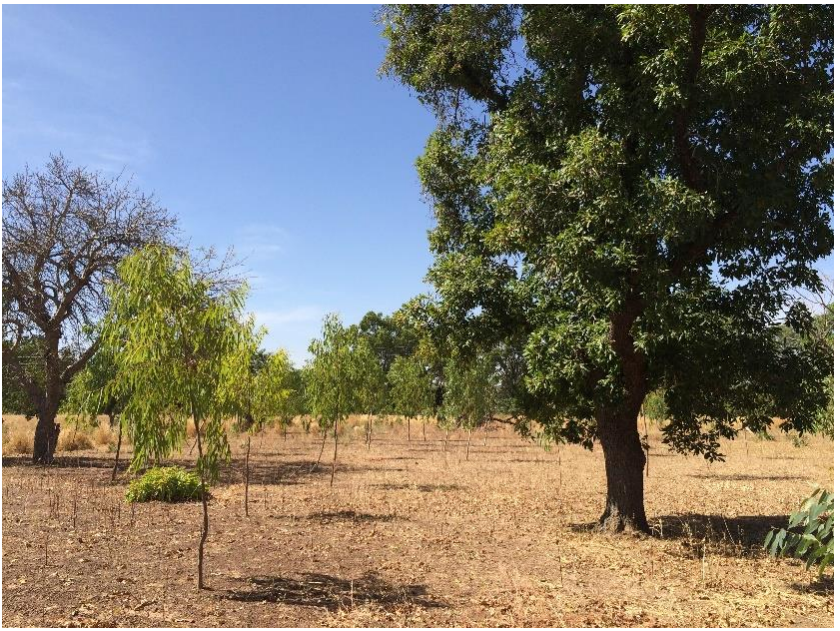
Certain forest species are also subject to special protection because of their ethnobotanical interest or risk of extinction. The list includes 11 species,

and only the forest authorities can decide if these trees can be cut or felled (MECV, 2004) (Arrêté n°2004-019/MECV). Several of the trees on the list are common agroforestry trees, such as the shea, néré, and tamarind. Farmers in Boessen and Tonogo clear or save these trees from their farmland. Farmers also explain that they do not need permission to cut their planted trees. The law, however, states otherwise. There are thus discrepancies between local ways of doing and state regulations.

Forest governance through decentralization

Accounts of widespread deforestation, unsustainable management of tree resources (MECV, 2007), and poverty have heavily influenced how the state, NGOs, supranational organizations, and donor agencies have formed programs, policies, laws, and regulations in Burkina Faso following its independence (Brännlund et al., 2009; Foli et al., 2018; Vinceti et al., 2020). Forestry and development projects within the natural resource sector have been characterized by decentralization processes, food security, forest restoration projects, and community management (Vinceti et al., 2020). These institutional structures, policies, programs, and projects are visible in Boes-

Figure 6: The picture shows eucalyptus trees planted on agroforestry farmland in Tonogo.



sen and Tonogo in various ways.

Since the 1980s, national and NGO-led reforestation and tree-planting programs have been widespread throughout Burkina Faso (Brännlund et al., 2009). Boessen and Tonogo have two small village forests, following tree planting campaigns (see also Sawadogo et al., 2001), each spanning about 2 ha. Plantations often comprise fast-growing trees. Plantations are primarily grown for timber production, not firewood or food. Tree planting projects have mainly promoted fast-growing, non-indigenous, and non-fruit-bearing tree varieties, such as Eucalyptus camadulensis, neem (Azadirachta indica), and acacia (Bouda et al., 2011; Karlson et al., 2015). In Boessen and Tonogo, farmers have also planted trees on their agroforestry farmlands (weogo), mainly eucalyptus and mango (Mangifera indica), on the agroforestry farmland close to the family compound (kararga). These planted trees are often under the control of men, as patriarchal land tenure structures refrain women from planting or owning trees.

One farmer from Tonogo, who had planted about 1.5 hectares of eucalyptus on his farmland, explained his decision by saying that "I know that the soil will be destroyed and that I cannot put crops here in a few years. But it is the best I can do to provide for my family." This quote illustrates the food security risk farmers are willing to take, given that the value of wood exceeds the costs of purchasing food. It also shows some of the frustration farmers expressed, of struggles to maintain soil quality and their experiences of increased climate variability in farming.

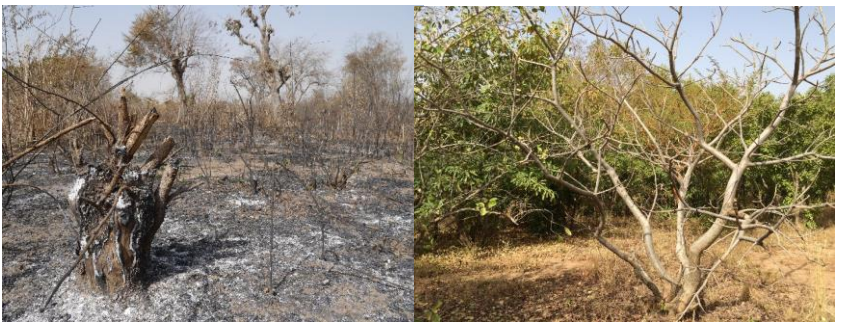
The decentralization process within the natural resource sector in Burkina Faso that was initiated in the 1990s (Arevalo, 2016) was strongly encouraged by actors such as the World Bank and IMF, and later programs by FAO (Côte, 2020) (see Ribot, Lund, & Treue, 2010 for a thick description of the meaning of decentralization). There are also decentralized institutional arrangements at the village level of village development councils (CVD). They are responsible for developing and implementing village development plans and represent the village in different committees at the municipal level. In Boessen and Tonogo, the CVD group, for example, has one person responsible for health issues and keeps track of diseases amongst the population and data on children's development. The CVD can also represent and negotiate land disputes in cases where official land titles are missing (OECD, 2013).

Within the forestry sector, the decentralization process has impacted chiefly the participatory forest management schemes in classified forests (Bouda et al., 2011; Coulibaly-Lingani et al., 2011; Gray, 2002; Karambiri et al., 2020; Yelkouni, 2004). This forest management scheme includes rotation cutting, where members receive economic compensation for their work, and

part of the revenues are put into village development funds. Research have shown that this scheme has escalated forest degradation and reinforced the presence of the central state (Ribot, 1999; Ribot et al., 2006). Other scholars have shown that this has excluded the poorest from taking advantage of the benefits, has been gender excluding, created elite resource capture, and increased the risk of conflicts between the management bodies and local authorities (Bouda et al., 2011; Etongo et al., 2018). The purpose of the classified forest in Boessen is conservation, and as mentioned earlier, there are no possibilities for economic benefits from legal extraction. There is still one management group of the classified forest. Still, it had not been active for several years during fieldwork as "people are not interested in it" (interview with the local forest manager in Boessen village, 2015).

In Tonogo, two forested areas have been in the process of implementing community management (see article III). Community forest management (CFM) has been a popular forestry management solution globally in recent decades (Murray Li, 2007). Although there are various solutions and interpretations of what should be achieved and what defines CFM (Cronkleton et al., 2013), its intention has often been to make local communities take care of forests while also benefiting from their resources (Agrawal, 2001; Hajjar et al., 2021). Although promising for local communities, research have shown that CFM has sometimes negatively impacted forest resources and benefit sharing (Blaikie, 2006; Shackleton et al., 2010). I explore the outcomes of CFM in this study (article III) and experiences of other decentralized institutional arrangements that instead displace forest control from the local community (see article I).

Figure 7: After the processes of implementing CFM in Tonogo, the environmental status of the two proposed areas differs significantly. In Tanglongo, left picture, large trees are being logged, and the place is commonly used for firewood collection. In Kounghin, the right picture, there are no visible signs of use.



Customary authorities and forest relations

Customary institutions have maintained firm control over land and forest tenure in Burkina Faso, parallel with the post-colonial establishment of government and state authorities. This partly depends on the fact that state institutions have weak possibilities for monitoring and control, which provides poor conditions for what is usually termed good governance (Bouda et al., 2011; Côte, 2020). This is also reflected in the departmental forest offices in Boessen and Tonogo, where one of the forest guards describes that "you see me all alone managing this department, and I do not even have money to fill carburant in the moto [moped]."

The customary authorities govern local forest use rules and norms (Hagberg, 2001; Wardell et al., 2003). This means, amongst other things, that customary authorities have exercised access and control rights to forest commons on protected lands (Gautier et al., 2015). Although forest use practices are context-specific, there are commonalities throughout Burkina Faso regarding how informal, socially embedded institutions are structured. In practice, this means that land chiefs allocate land in Boessen and Tonogo villages and are involved in solving land conflicts. Customary authorities also perform and control spiritual ceremonies (Hagberg, 2006). These ceremonies are performed to communicate with the spirits in times of, for example, conflicts, illness, or misbehavior in the village. It is also essential to call rain for the harvest season, or as this study shows, management of forests (see article III). Forest users are also guided by the spiritual and cultural notions that certain forested areas are sacred or that certain tree species are taboo to cut.

As mentioned earlier, individual land titles have yet to be widely implemented in Burkina Faso. Although the state officially owns all protected land, as discussed earlier, customary authorities (the naabas) still allocate them. Farmers who lack farmland traditionally borrowed or were given land by the naabas or relatives. According to customary regulations, a farmer cannot plant trees on borrowed land, as that is an ownership act. A few farmers who have borrowed land for long periods in Boessen and Tonogo described that they had planted trees since they had been on the land for so long. In some cases, these planted trees also led to conflicts between the farmers and the land lenders, where the latter opposed the borrower's claim to the land.

Gendered divisions of forest labor in Boessen and Tonogo

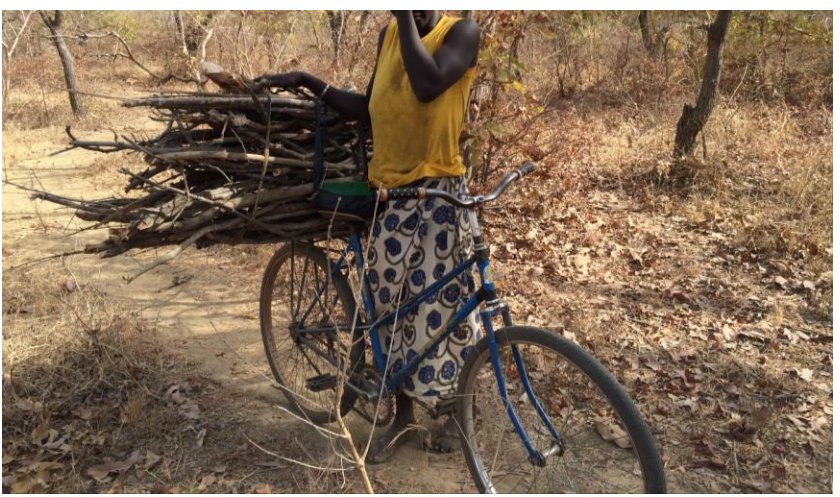
In Burkina Faso, as elsewhere, gendered divisions of labor provide specific roles for those who collect and harvest tree resources (Rocheleau & Edmunds, 1997). In general, wood fuel, edible leaves, and forest fruit collection

are female labor responsibilities. Men generally deal with timber felling (Gausset et al., 2005). Forested areas and tree species are also gendered spaces in which labor roles and norms are formed (Kiptot, 2015). For example, the shea and néré trees have historically been treated as women's trees (Pehou et al., 2020). The labor of picking these fruits is a female labor task and a resource from which women historically have controlled output (Pehou et al., 2020; Pouliot, 2012).

Gender-divided labor roles are not specific to natural resource use only. In the rural Burkinabè context, there are often clear distinctions regarding who should do and be responsible for farming, household, and care work (Freidberg., 2001). Studies, NGOs, and the state have conceptualized being a farmer as a male occupation, where women are sidelined as helpers Matlon, 2016; Thorsen, 2002). Within the patriarchal structures that dominate household labor structures and tenure rights in Burkina Faso, husbands often have the right to control the female household members' labor (Kevane & Gray, 1999). Women are, in this sense, "obliged" to work on the common household farmland from which men generally control the output. This labor separation is also reflected in a division of the household budget, where women and men have separate expenditure responsibilities (Freidberg, 2001). For example, men are usually responsible for buying crops for sowing, while women are responsible for expenditures for children (Thorsen, 2002).

Women have, by tradition, borrowed land to farm crops they use for their

Figure 8: Sara wipes sweat from her forehead after cutting firewood and loading it onto the bike rack.



disposal (I will explain this in more detail in the next chapter). The labor women can put into "their own fields" is a matter of negotiation and, as Kevane and Gray (1999) show, something that comes secondary to fulfilling labor obligations on the household farmland. At times also secondary to other household labor chores for which women are responsible. Women's labor roles have tended to be focused on the household domain, where women are responsible for preparing and cooking food and caring for children (Thorsen, 2002). These distinctions are broad generalizations and should be treated as such. Freidberg (2001) shows how gendered labor roles in Burkina Faso have evolved and changed over time, interlinked to societal processes such as the colonial regime.

Gendered land tenure structures and access to trees in Burkina Faso

Access and use of forests and trees in Burkina Faso need to be understood in the context of gendered power relations. Fundamental to this is how patrilineal power relations structure land tenure rights and labor in Burkina Faso (Gausset et al., 2005). These uneven land structures often overwrite women's statutory rights to land (regulated in the Rural Land Law 034-2009), thereby delimiting women's ability to own and inherit the land (Djoudi et al., 2020). The gendered norms and regulations of land tenure might delimit women's possibilities to own land, but women can often gain access to farmland indirectly through patrilineal tenure regulations (Kevane & Gray, 1999). This means that women borrow land from their husbands, relatives, or other community members. How women navigate to access farmland differs between places and households. In both Boessen and Tonogo, most women described difficulties finding land to borrow. In Tonogo, this difficulty meant that many women did not have an individual farm plot, and in Boessen, women said that they had to find new farm plots every year. These farmlands are essential for women to grow crops, since they can control household consumption or vending output.

Since women do not own land, gender research have argued that it is *through* the head of the family, the man, that women can access resources from farmland trees (Elias & Carney, 2007; Gausset et al., 2005; Pouliot, 2012). Even though men, in practice, own the trees (on farmlands), women have historically been able to access and control specific trees, such as the shea and resources from them (Kent, 2018). In recent years, scholars have shown that such feminized control is challenged (Elias & Arora-Jonsson, 2017; Kent, 2018; Rousseau et al., 2017; Rousseau et al,, 2019).

This study furthers these arguments by showing how the feminization and masculinization of forest resources, extraction tools, and transportation become reinforced and challenged through forest resource extraction. Lack of control and availability of firewood and other tree resources on the household farmland make the commons an essential asset for women (Gausset et al., 2005). The ability to access tree resources is also situated and contextual. Factors such as physical ability, age, ethnicity, technology, capital, authority, and social identity intersect with gender and impact who can move into forested areas in Burkina Faso and how (Pehou et al., 2020; Ribot & Peluso, 2003). In the coming chapter, I will address the theoretical conceptualizations of how forest governance shapes how tree resource users navigate access and control of tree resources.

3
A framework for analyzing gendered relations of forest governance

This study departs from an understanding that forest governance and tree resource use are set within and productive of unequal power and resource relations. This entails differentiated access and control over forested areas, tree resources, and management and from which marginalization and unsustainable management and use of forests emerge (Elias et al., 2017; Joshi et al., 2021; Kent, 2018; Resurrección, 2017). Forest governance refers to the multi-level and multi-stakeholder processes of rule- and decision-making and actors within the private sector, civil society, and the state who strive to address a specific issue, problem, or situation related to forests (Agrawal et al., 2008; Lemos & Agrawal, 2006; Wiersum et al., 2014). To solve these problems, forest governance often includes establishing institutional frameworks, instruments, policies, and management mechanisms for regulating forest use (Ingram et al., 2015; Kooiman, 2007, pp. 17-18). Rule-making is embedded in broader authoritative societal processes and formed in values, norms, and practices (Wiersum et al., 2014).

Feminist scholarship have shown that women and men tend to have unequal possibilities to take part in decision-making (Arora-Jonsson, 2009; Leach, 2007). In Burkina Faso, this means that people have uneven and unequal opportunities to decide over their labor and income, take part in forest management, and exercise land inheritance rights. Rulemaking can also bring uneven and unjust management solutions that tend to marginalize and exclude women while providing possibilities for knowledge, training, access, and control of forest resources for men (Nhem & Lee, 2019; Samndong & Kjosavik, 2017). Forest and tree resource governance and forest relations are, in these ways and, as already mentioned, gendered (Arora-Jonsson, 2013;

Leach, 2007; Nhem & Lee, 2019; Resurrección, 2017; Rocheleau & Edmunds, 1997).

To theoretically and analytically address how gendered power relations and forest institutions interact and form context-specific gender-environment relationships, I have developed a framework for *analyzing gendered relations of forest governance*. The analytical framework addresses forest governance as structured by and structuring the gendered power relations of *subjectivities*, *divisions of labor*, *access and control relations,* and *institutions*. I address these analytical components as arising from and changing through everyday practices in the material context: the forest, the trees, and its resources. This means that this study draws on a constructivist understanding of gender relations and forests in Boessen and Tonogo as continuously evolving through everyday forest interactions and tree resource use.

For this study's theoretical undertakings, the constructivist understanding also means that I approach society and nature as interdependent and relationally produced (Nightingale, 2011). Changes in society inherently change the environment and vice versa. A forested area is not a pre-destined entity but is dynamic and shifting in its existence, biophysical state, how it is perceived, and the purpose it holds (Nightingale, 2017). The location and ecological character of forest and bush areas in Tonogo and Boessen villages form the pre-requisite for possible or desired use in that specific place. How people can behave in, use, and benefit from a forest is, in turn, shaped by gendered power relations, which play out through practices (Sultana, 2009, 2021). I draw on the constructivist understanding of society and nature as relationally produced for approaching forest governance as being shaped by and shaping and re-arranging nature (the forests and tree resources), power relations, and practices.

In the following sections, I present the components of the analytical framework, which mainly draws on feminist political ecology (FPE), ecofeminism, critical institutionalism (CI), and practice-based theory. First, I introduce how I approach gender as constitutive of how power relations are formed and an integral part of forest practices and governance. This is followed by conceptualizing a CI reading of forest governance and how I approach institutions and gender relations as forming and formed by practices. Thereafter, I discuss how these conceptual parts are connected and interdependent and develop a framework for analyzing gendered relations of forest governance.

Gender and subjectivities in the forest

In this thesis, I explore the gendered power relations of how forest governance impacts the forest and social relations in Boessen and Tonogo from how it organizes forest practices, management, and distribution of resources (Arora-Jonsson, 2013). I am particularly interested in exploring how attributes and meanings of masculinity and femininity form specific forest relations and evolve through practices. As the introduction mentions, I read gender as a socio-cultural construction of roles, norms, and responsibilities attributed to men and women and their societal relationships (Cruz-Torres & McElwee, 2017). Infused with power and the meaning of the symbolic attributes of sexes, these sociocultural systems vary across time and space (Paulson, 2017).

This means that gender is not a taken-for-granted and stable state of being. Instead, gender continuously changes in its 'content' as it is renegotiated and contested over time and in different places (Bondi & Davidson, 2003; Harris, 2006; Kaijser & Kronsell, 2014; Sultana, 2009). Previous research have, for example, shown that certain forest practices, such as shea and firewood collection, are perceived as feminine chores. While other tasks, such as timber production, are most often done by men (Carney & Elias, 2006; Elias & Carney, 2007; Gausset et al., 2005; Pouliot, 2012). Attributes of femininity and masculinity structure these divisions, and in sections to come, I will further discuss these through the concept of gendered divisions of labor.

I address how forest users in Tonogo and Boessen perceive their experiences and relations to forested areas, their livelihood- and resource struggles from the concept of gendered subjectivities (Nightingale, 2011). "What it means and feels like to exist within a specific place, time, or sets of relationships" is a lived, performed, and embodied experience contained in the meaning of subjectivity (Morales & Harris, 2014; Sultana, 2009). Gendered subjectivities, in this regard, can be multiple and co-existing (Sultana, 2021). This study explores how multiple femininities and masculinities co-exist and emerge through forest interactions (Colfer, 2020). I address gendered subjectivities as immersed in multiple power relations and social hierarchies, which play out in struggles over access and control of shea, firewood, and forested areas (Nightingale, 2019). I am also interested in how resource struggles rearrange the gendered meaning of the resource, labor, and the self. I address the use and struggles of forest resources as embedded in contestations over gendered subjectivities (Sultana, 2009).

Gendered subjectivities are socially and discursively constructed and shaped in material interaction (Nightingale, 2011). The material interaction, as in resource struggles and practices, is central to exploring how power relations and subjectivities evolve in Boessen and Tonogo. Shifting governance structures, such as forest management, policies, and resource demands, affect resource struggles and forest practices, providing a space where subjectivities evolve (Lau & Scales, 2016). The material (tools, shea, firewood, forest) is the central node through which these struggles and shifting gender relations develop. This study, moreover, explores how the increased resource competition around shea brings contestations and re-enforcement of gendered roles and resource rights through which subjectivities and resource struggles evolve. Understanding these processes as embodied and lived experiences is vital for understanding how forest governance brings uneven and unequal socio-environmental relations for individuals and households.

How gender intersects with other categories of social difference

As gendered subjectivities are multiple, it is also relevant to understand how gender intersects with other axes of social difference, such as race, class, knowledge, ethnicity, age, disability, regional modalities, and so forth (Butler, 2002, p. 7; Lykke, 2010, p. 50; Sultana, 2021). Socio-cultural categories of difference are dynamic, changeable, and interlinked, which requires an analysis that treats these categories as fluid and continuously changing. Such categories are also vital for understanding the hierarchical and multiple ways in which gendered power relations and resource practices are formed. In this thesis, I read gendered power relations within forest practices and resource struggles as an outcome of and producing social difference (Carter, 2019). I draw on an intersectional perspective to show how forest governance, in various ways, impacts uneven and unequal forest practices and social relations in Boessen and Tonogo (Kaijser & Kronsell, 2014; Lau & Scales, 2016; Lykke, 2010).

My aim, however, is not to include a complete intersectional analysis of how gender intersects with all other categories of social difference. Instead, my methodological and analytical approach has sought to include the most relevant aspects of how forest governance impacts forest users. In the shea and firewood collection, this entails paying attention to physical capacity, knowledge, farmland access, class, and access to the material. Approaching that resource struggles are made in complex structures of intersecting categories of difference also helps explore how differentiated gendered subjectivi-

ties in Boessen and Tonogo are interrelated to forest practices (Nightingale, 2011). Paying attention to the complexity and intersections in which subjectivities and resource struggles emerge can provide valuable insights into social and environmental outcomes from forest governance.

Gendered divisions of labor

To address how gendered rules and norms of forest resource labor are formed, I draw from conceptualizations of gendered divisions of labor (Evans, 2016; Freidberg, 2001; Jackson, 1999; Rocheleau et al., 2013). I explore gendered divisions of forest labor in Tonogo and Boessen as situated within the performativity of masculinity and femininity (Agadjanian, 2002). Norms of masculinity and femininity in forest labor are produced in social power relations and life experiences (Nightingale, 2011). Such an analytical approach also includes an intersectional understanding of forest labor and its relationship with other labor. Gendered divisions are hierarchically structured, where specific forest labor is of a lower status than others (Jackson, 1999). Such a perspective is especially relevant in Boessen and Tonogo, where forest labor results from low investment capacity, income needs, and gendered labor norms.

As mentioned above, gendered labor roles are not static and dualistically divided between men and women. Even in situations where labor is relatively

Figure 9: Women from Boessen coming back from cutting firewood.

strictly gender-divided, such as firewood provisioning in Boessen and Tonogo, there can be room for *flexibility* (Evans, 2016). Flexibility refers to the fact that individuals can challenge and shift gendered norms by crossing and 'entering' into labor domains that are normatively located with the other sex. Shifts and changes in gendered labor norms occur when individuals find it socially and economically motivating to take on labor viewed as belonging to the other sex (Evans, 2016). This means that it is necessary to situate forest governance and forest resources to broader social-economic structures as it will impact how household dynamics unfold. The perspective of flexibility helps to understand how subjectivities change and how they are embedded in power relations.

When Eva from Boessen describes that "I am like a man when I have the ax," she transgresses gendered labor norms of which tools to use and gets access to wood that a machete (which women usually use) cannot perform. Such gendered crossings are dynamic, gradual, and done through the material, as with Eva and the ax above). As this study shows (and corroborating other gender resource studies, see Elias & Seema 2017; Jackson, 1999), enhanced demands and value of shea (see article two on shea harvesting) can incentivize such crossings to occur. While such divisions structure the embodied forest labor, it does not equate that the one doing can control benefits. Therefore, I approach gendered power relations as closely interrelated to gendered labor divisions and how access and control structures are formed.

Gendered access and control of forest resources

Feminist scholars have emphasized that patriarchal power structures form specific and uneven gendered access and control of forests and resources (Gausset et al., 2005; Kevane & Gray, 1999; Lambrecht, 2016; Thorsen & Reenberg, 2000; Baba & Van der Horst, 2018). In this study, I draw from such understandings to study how firewood and shea are accessed and controlled in Boessen and Tonogo – both through the strategies that individuals deploy to achieve access and control and through the institutional regulations governing forest use (Ribot & Peluso, 2003).

Feminist scholars have long been interested in women's strategies to negotiate and resist shifting resource relations (Agarwal, 1997; Harris, et al., 2017; Kevane & Gray, 1999). Such works have shown how subordination does not equal non-agency (Carney, 1993; Schroeder, 1999). The strategies women deploy to resist shifting resource access vary with the context and the risks at stake (Jackson, 1999). Strategies can, for example, take an overt or covert character depending on the room for maneuver (Agarwal, 1997;

Kevane & Gray, 1999). People also draw on subjectivities to negotiate, contest and resist access to and control resources. Such a perspective helps explore how shea and firewood (see article II as an example) are immersed in hierarchical and gendered power relations. I draw from these approaches to examine the complexity of how forest governance is gendered and impacts access and control struggles in Boessen and Tonogo.

Forest governance and institutions

Using various points of departure, forest governance scholars have tried to understand how different institutional arrangements impact forest behavior. Forest institutions can be defined as systems of rules, norms, and regulations that guide practices and the roles and interactions of actors (Wiersum et al., 2014). As the introduction mentions, institutions may be formal, informal, and, at times, intertwined. They are also situated at different scales, with arrangements, practices, and roles being formed from supranational to the local level to intra-household and individual levels. As institutions guide how people should behave and act in the forest, they are relevant to study to understand how forest relations change and how they impact how people use tree resources.

Critical institutionalism and forest management

This study departs from a critical institutional (CI) approach to how forest practices emerge. The CI perspective has sprung from a critique of Mainstream Institutionalism (MI)[10], which has strongly influenced how forest management frameworks have been developed in the last decades (Li, 2007). A central argument of MI is that human behavior can be steered and controlled through proper institutional frameworks. Consequently, MI scholarship has focused on the institutional design of forest management models and variables to achieve sustainable natural resource behavior (Cleaver, 2002; de Koning & Cleaver, 2012). In contrast to the state-centered conservationist paradigm proposed by Hardin (1968) as a solution to the over-use of common-pool resources (Feeny et al., 1990; Hardin, 1968), MI scholars have argued that community-level institutions and actors are essential in the sustainable management of natural resources (see Berkes et al., 1998; Cash et al., 2006; Dietz et al., 2003).

The "self-governance" approach of that local communities are the ones best suited to manage the natural resources in their proximity (Mattijssen et

[10] Also referred to as a new institutionalism or common property approach (Cronkleton et al., 2013; Gebara, 2019).

al., 2018; Ostrom, 2009) has, throughout the African forestry and development sector, been translated into various decentralized and/or community forestry management models (see article III) (Coulibaly-Lingani et al., 2011; Shackleton et al., 2010; Skutsch & Ba, 2010). As discussed earlier (see chapter 0), the environmental and social impacts of these approaches have been mixed, sometimes even having the opposite effect on the intentions of NGOs, donor agencies, and governments (Blaikie, 2006; Shackleton et al., 2010). This has led CI scholars to understand the processes of how resistance, negotiations, and compliance emerge, and how this relates to the way communities perceive forest conservation, poverty reduction projects, and social inclusion (Asiyanbi et al., 2019; Nhem & Lee, 2019).

CI scholars have argued that MI forestry approaches (see Ostrom, 2009 as an example) have been too attentive to institutional design and variables (Quintana & Campbell, 2019). Especially as a determinant for steering local communities' ability to manage natural resources sustainably. Such assumptions, they argue, provide a distorted approach to human behavior as predictable and rational (Hall et al., 2014). That is not to say that institutional design does not matter for social and environmental outcomes. However, it does not provide a solid explanatory framework that can fully account for the complexity of forest governance. Especially not for how power relations emerge and interrelate with how tree resources are used (Cleaver, 2002, 2012; Łapniewska, 2016).

CI has shown that steering and controlling people's forest behavior is complex and never entirely feasible (Gebara, 2019; Peloso & Harris, 2017). CI's understanding of human behavior and institutions as dynamic, complex, and changing through practices has been a helpful entry point to explore the interconnections between forest governance and practices in this study (Cleaver & Whaley, 2018; Hall et al., 2014). Tree resource users will not maintain the same practices over time – even in the most mundane, everyday chores, people do not repeat and do precisely the same every time (Arts et al., 2014). As people continuously re-arrange their doings and will not follow the rules, regulations, and laws as a given, unintended outcome in forest governance is inevitable (Kimengsi & Balgah, 2021). This perspective has been helpful for analytically approaching *why* certain forest practices, which, at first outlook, might be illegal or irrational, take place in Tonogo and Boessen. CI is, therefore, helpful to better understand the relationship between structures and individual agency in this study (Arts et al., 2014).

CI approaches institutions shaped by power relations and multi-scalar complexity (Cleaver, 2012). The social, historical, and power context interplays and shape complex relations that impact how forest management and

development schemes will be received by local communities and authoritative bodies (Cleaver & de Koning, 2015). This study addresses *how* contextual dynamics impact forest management and gendered access struggles in Tonogo and Boessen. Such contextual dynamics, for example, include local power dynamics (including customary authority), land conflicts, and local land management rules. Attention to contextual dynamics has helped explore the complexity of how women and men navigate plural politico-legal institutions, resource needs, and power dynamics in resource relations.

As mentioned above, institutional dynamics are arranged and occur at different scales. Forest governance arrangements, for example, can be formed at a supranational or international level and implemented at the local level, impacting individuals' or communities' ability to access and use forest resources. Other dynamics that can be considered part of informal institutions, for example, are norms and imaginaries of what forests should be and constructions of what gendered forest labor entails. This impacts how local forest users relate to forests, trees, and their produce and how forest management arrangements and policies are received (Behagel et al., 2019).

Constructions of gendered divisions of labor and resource control also affects how regulations and policies are formed. For example, since West African shea harvesting and trade are understood as female-dominated, it has influenced how the state and NGOs in policies and projects have assumed that an increased value of shea will empower women (Bello-Bravo et al., 2015; Rousseau et al., 2019). Such policies risk having a low impact on women's economic empowerment if local and intra-household power dynamics are overlooked (Elias & Arora-Jonsson, 2017). Understanding that institutions interact and play out on different institutional scales and actors – from the individual to international levels – therefore, is essential for exploring the contextual and power dynamics of forest institutions. Especially if the exploration, as in this study, seeks to understand how institutions impact social and environmental relations.

Institutional bricolage in forest institutions

How actors negotiate, resist, improvise and adapt to institutions depends on their power and social position (Agarwal, 1997). CI has addressed how these processes are shaped through the concept of institutional bricolage (Karambiri et al., 2020). This concept refers to the processes and ways formal and socially embedded institutions change and become entwined or pieced together through practices (De Koning, 2014). The forest users are, in this perspective, the *bricoleurs* who consciously and unconsciously adapt and

arrange their practices (Ingram et al., 2015). Central to this concept is that through the everyday forest practices, the bricoleurs assemble and reshape institutional arrangements (Benjaminsen, 2017; Cleaver, 2017; Gebara, 2019; Karambiri et al., 2020). The concept has been helpful in this study for analytically approaching how local authorities and forest users receive bureaucratic forest management initiatives such as CFM (article III) and woodcutting permits (article I). Specifically, how forest users in the study areas re-arrange, reject, or integrate forest management arrangements through their practices (Faggin & Behagel, 2018).

The complex and varying dynamics processes in which these institutional changes occur have been broadly categorized through the concepts of articulation, alteration, and aggregation (de Koning & Cleaver, 2012). Aggregation refers to recombining different institutions, often with socially embedded institutions. Alteration can be described as a process where institutions or practices are adapted to changing circumstances. Articulation involves the processes in which communities or actors resist and contest institutional arrangements introduced (Gebara, 2019). These conceptualizations have been helpful in analytically approaching how forest users and authoritative bodies in Tonogo and Boessen adapt, resist, and re-arrange forest laws, regulations, and rules.

As already mentioned, boundaries between formal and customary authorities and laws, rules, and regulations are separated into some segments in Boessen and Tonogo while overlapping in others (see also Karambiri et al., 2020; Lund, 2006). Customary institutions have strong decision power legitimacy, and state representatives are also present through elected village counselors and the CVD. Institutional bricolage has been useful for analytically approaching how forest management arrangements are embedded in the plural politico-legal structures. Also, how these power structures become adjusted and challenged in the struggles to access tree resources (see article III) (see also Hagberg, 2004; Lund & Boone, 2013; Sirimorok & Asfriyanto, 2020).

Practices as a unifying concept for change

In the previous sections, I argued that gendered forest relations and institutions continuously change as forest users navigate and adjust their everyday forest practices (Arts et al., 2014; Cleaver & Whaley, 2018; Nightingale, 2011; Pilon, 2021). In this way, practices are a focal analytical entry point in this study for approaching how forest governance co-produces and reproduces gendered and forest relations in the interaction between actors and struc-

tures (Arts et al., 2014). Forest governance, therefore, is not a stable equilibrium but a dynamic process that actors mold through their forest and social interactions. I draw from the practice-based approach to forest governance (Arts et al., 2014) to theoretically and empirically demonstrate how gender and forest institutions intersect and are shaped through practices. There is no single definition or theoretical conceptualization of the elements that define practices (Gherardi, 2019). In this study, I draw from Arts et al. (2014) conceptualization of *practices* as "an ensemble of doings, sayings and things in a specific field of activity."

Drawing from the practice-based theory (Arts et al., 2014), I conceptualize *doings* as embodied forest interactions – the practices. This entails bodily movements and how forest resources are harvested, transported, and used. This study furthers the practice-based approach by addressing forest doings as structured and supported by uneven gendered power relations that mediate norms, rules, and control of forests – thereby constitutive of forest governance (Arts et al., 2014; Wiersum et al., 2014). As such, forest doings are an outcome of, and a reproduction of the gendered division of labor and the intersecting factors that impact individuals' ability to access and control tree resources.

Inspired by Boserup's (1970) work, I have approached doings by deconstructing the various uses and practices of shea and firewood to understand how forest labor is gender divided, accessed, and controlled. This includes asking who in the household and community level harvests, transports, processes, and trades these resources, where, and how. Also, an approximate understanding of household consumption and how decisions and control of labor and produce are made. This deconstruction has also entailed an intersectional approach to shea and firewood doings to other income (im)possibilities. This has been useful for illuminating how firewood and shea labor are outcomes of and producing social difference. A deconstructive analysis of shea and firewood has also been useful in understanding how forest use norms and subjectivities are formed and changed through practices (see also Behagel et al., 2019).

Forest *saying*s as gendered

I draw from the practice-based approach (Arts et al., 2014) to address *sayings* as the discursive and power interactions of norms, rules, knowledge, and constructions of gendered forest practices. This conceptualization has helped to approach empirically and analytically how actors in the study express experiences and perceptions in this study. How different actors describe for-

ested areas, deforestation/degradation, practices, and management is useful for analyzing forest governance and practices as embedded in various knowledge, norms, and ways of doing (Cleaver & de Koning, 2015). Attention to the discourse in the sayings enables power relations, gendered dynamics, and forest governance perceptions to come forward (Behagel et al., 2019). The discursive interactions (Arts et al., 2014) includes how forest users describe tree resources, such as which tree varieties they prefer or availability. It also entails the doings, how people describe the way they navigate to access tree resources, and where they can or cannot collect. How men and women in Tonogo and Boessen describe the right to decide over women's labor and the forest products they harvest shows how forest resources are embedded in patriarchal power structures. Following the power relations and how they are expressed in sayings have been valuable for exploring how gendered subjectivities emerge in the struggles over shea.

Sayings are helpful in how forest norms and rules are expressed, the ones that forest users perhaps only sub-consciously are aware of, and which they deploy through their doings (Behagel et al., 2019). What is particularly interesting in studying sayings is how silences are expressed, both in what is unsaid and in people's body language and ways of speaking. If people are hesitant, lower their voices, and become agitated or tentative when they talk also matters in understanding the gendered dynamics in sayings (Ackerly & True, 2020, p. 170). Revealing the taken-for-granted and unspoken (Johnson et al., 2021), 'dragging' it out in the light, and putting words on what we see in the doings, can illuminate the discursive interactions of forest use with institutions (Behagel, et al., 2019).

Such exploration has helped to understand the institutional complexity and the gendered rules that forest users navigate (Johnson et al., 2021; Kevane & Gray, 1999; Wiersum et al., 2014). For example, the logic of practices embedded in how women navigate subsistence firewood collection and the embodied labor as women are "obliged" to carry wood on their heads to show that they collect legal wood (see article I) (Cleaver & de Koning, 2015). The focus on sayings as a discursive part of forest practices has provided a useful entry point for understanding how the institutional context impacts everyday experiences of firewood and shea collection. Sayings have, in this way, been essential for analytically approaching how institutional representatives, such as the forest guards, ascribe gendered norms and rules of forest labor, tree resources, and household power structures in their interaction with tree resource users.

The material as gendered

Together with the doings and sayings, the practice-based approach considers *things* as an analytical element of practices to how forest governance plays out on the ground (Arts et al., 2014). Things refer to the materials such as the trees and related artifacts, such as machetes used to cut branches, or the pots used to process shea kernels into butter. Feminist theory tells us that materiality, i.e., things, produces specific gendered interactions with nature (Sultana, 2009). The formation of gendered subjectivities, social marginalization, and forest institutions should not be analytically separated from the material itself (Sultana, 2009; Nightingale, 2011). This means that rather than acknowledging things as significant for how practices are done, I find it more relevant to refer to the material as a unifying concept. Therefore, in this study, the material includes things such as tools, nature in its broader meaning, forested areas, and tree resources. When studying the gendered struggles over shea (see article II), I approach this resource (the material) as attached to forest governance arrangements and what they bring for tree resource users and gendered relations – the ascribed meaning of femininity, resource access struggles, and land tenure control. Also, an analytical understanding of the material includes the embodied meanings and experiences of what, in this study, firewood and shea labor entail. For example, its bodily hardships, how women bargain with the forest guards to not become fined for illegal practices, how it is attached to food security and livelihoods, and knowledge of how to do it.

This means that approaching the material as gendered makes it possible to capture its embeddedness in resource struggles (Nightingale, 2011). I have drawn on such conceptualizations to show how gendered norms around tools and trees impact how forest guards interpret women's firewood collection as illegal or legal (see article I). The llalgo, for example, a long wooden stick with a hook for drawing down dry branches, is in Tonogo and Boessen only used by women. It is interpreted by the forest guards that those women using the llalgo intend to collect wood for household consumption. Approaching resource struggles from the gendered aspects of the material helps explore how institutional arrangements become contested, resisted, or acceptable ways of doing (Cleaver, 2017). People thus draw on or challenge the gendered meaning of the material through practices (Arts et al., 2014).

The material interactions are also analytically crucial for understanding how institutional bricolage processes can be multiple and varying within a community. People use tree resources differently – as this study shows, some people cut fresh wood and argue that it is legal (by historically rooted local

rules) and thereby resist "modern" (state) law, while others refrain from these practices as they are not permitted by state law. The material interactions, therefore, are central to understanding how forest governance plays out on the ground and what it means for forest users *and* forested areas (Behagel et al., 2019).

Concluding the theoretical framework

This study departs from that forest governance, and its impacts on forest use and resource struggles are settled in gendered power relations, subjectivities, and constructions of forest labor. Essentially, the *framework for analyzing gendered relations of forest governance* proposed here is focused on conceptualizing how gender relations, forest governance, and forests are shaped through practices. This means that this study explores the entwining process of how gendered forest practices and power relations are formed by and forming institutional processes (Pilon, 2021). This allows an analysis that encompasses how formal and socially embedded forest institutions are acted upon and play out on the ground, both regarding gendered relations and how this impacts forested areas (Bondi & Davidson, 2003; Nightingale, 2011; Sultana, 2009).

By exploring the gendered power dynamics in practices, the framework enables an analysis of how forest governance arrangements, such as woodcutting permits become contested, resisted, and re-arranged. The framework also allows an analysis that can harbor the relations between structure and the individual by focusing on how forest governance and forest resource struggles are embedded in gendered subjectivities. This approach helps inform this study of why specific forest interactions occur in Boessen and Tonogo and what they mean for those using forests (Colfer, 2011; Robinson, 2021; Sultana, 2009). Most importantly, the framework helps contextualize the gendered dynamics of forest governance and the relations to how marginalization and forest struggles emerge – which raises the question of how forest governance has an impact on a just and equal use of forests and their resources (Nightingale, 2019).

4
Methodology

This qualitative study has been developed with an ethnographic and feminist ethics approach to methodology and the methods I have deployed to collect data. I understand knowledge as socially constructed and produced, and where this study interrogates the conditions of its production (Ackerly & True, 2020, p. 22). With an interpretative approach, I draw on the theoretical framework to analyze the data (Ackerly & True, 2020, p. 152; Berg, 2009, pp. 339-340). To understand how I made these decisions and why, I will first describe how this research journey started. The study has been part of an interdisciplinary research project with a pre-defined geographic focus on Burkina Faso. The analytical focus of the research project was the sustainability impact of policy, market, and climate change on parklands in rural Burkina Faso.[11] As part of this project, I went on exploratory fieldwork to Burkina Faso in October 2012.

During the exploratory fieldwork, I visited five different geographical locations to select sites for this study. The five geographical areas were chosen after discussing the selection criteria with colleagues from the research project's collaborating partner at the Institut de l'Environnement et Recherches Agricoles (INERA). Our criteria were basic – we searched for communities in Burkina Faso with similar socio-political structures within the same climate zone, dominated by agroforestry and semi-dry forest patches. Thus, the northern Sahelian areas were excluded because of their low presence of trees, and the southern parts were excluded because they are dominated by dense forests.

As an outcome of the extensive literature review that I conducted before the exploratory fieldwork in Burkina Faso, I decided to shift away from the focus on parklands (which refer to farming systems integrated with trees and bushes) as the concept has a colonial legacy and does not correspond well with how people describe the land they farm (see also Côte & Gautier, 2018).

[11] The title of the SIDA-funded project is SWE-2011-155 Analyzing the sustainability of the Burkina Faso Parklands in the face of changing economic, policy, and climate conditions.

During the exploratory fieldwork, I spent about three weeks in Tonogo observing and interviewing people on how they navigate to access firewood and other tree resources such as shea. The purpose of the exploratory field research in the villages of Tonogo was foremost to gain a basic understanding of the key actors within the villages and forest resource access and governance. Another ambition was to map out household livelihood strategies and everyday challenges. The exploratory field research was a possibility to test out different questions and potential relations in tree resource access and use for the next phase in the research project (Taylor, 2016, p. 8). To access data and information during this field research, I conducted semi-structured interviews with three authoritative individuals at the communal level and five at the village level on the natural resource and politico-legal structures in Tonogo village. Furthermore, I interviewed 12 household-level men and 13 women on their daily challenges and practices of farming and using tree resources. I also talked informally to people at the local market and walking around the village. Moreover, I visited Boessen for one day and met with four village-level individuals holding authority. These interviews aimed to understand the context and map out the various uses and challenges in the landscape for the commune and village, specifically for households.

Another purpose of the exploratory fieldwork was to understand the diverse institutional settings and relevant gendered and intersectional structures of property access and rights in the villages. I supplemented the field research data with systematic observations as I walked to and spent time at the various quarters in the villages. I wrote down the observations in extensive notes.

The exploratory fieldwork showed that the main bulk of provisioning of tree resources, such as firewood, throughout the year seemed to take place outside of the farmlands and on the forest commons. This made me realize that I needed to include all the geographical locations from which people derive their tree resources to understand tree management and struggle to access them. I was puzzled by how women and men gave conflicting descriptions of the rules and laws they needed to adhere to for their resource extraction. This applied to how they described their use of forest commons and to which rules applied to agroforestry lands. This motivated my subsequent research focus on the governance and use of tree resources and a new direction that diverted from the SIDA research project.

I remained a part of the project and contributed to the overall understanding of forest resource use and resource struggles on the farmland through my data collection and analysis. I designed my research in a way that could understand in-depth how people navigate and struggle to access and control tree resources. This has allowed me to collect data that show relationships, com-

plexity in resource collection, and general distinctions on the significance of collecting firewood or shea fruits from the farmland versus the commons for households. From this exploratory field research and further reading, I developed a research design, including theoretical framework and a set of research questions for the second field research phase.

An ethnographic feminist research approach emerges

After the exploratory fieldwork and extensive literature review, I opted for an ethnographic approach. This is the best strategy to respond to my research interest in how forest governance plays out in and impacts everyday forest practices and livelihoods. This stance is based on an interpretive epistemological approach by trying to *understand* social action and human behavior, which can be contrasted with positivistic approaches concerned with *explaining* human behavior through theory testing (Bryman, 2012, pp. 29-32). I follow Kwame Harrison, who says that ethnography involves "studying, describing, representing, and theorizing (with a certain degree of particularity) a culture or social world" (Kwame Harrison, 2018, p. 5). It is well suited for exploring complex social relationships in everyday life as it involves in-depth exploration of the social world, events, and relations.

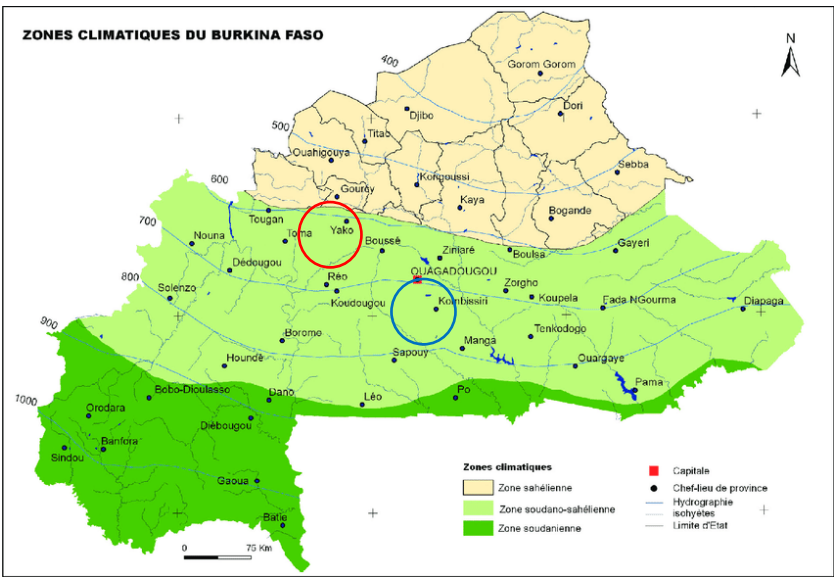
Atkinson (2007, p. 3) describes a typical ethnographic approach as starting with an open and broad inquiry and making it more precise as the fieldwork progresses. This captures my approach well. I started with a general idea and understanding of a not-well-understood problem of the discrepancy between forest governance and forest use in Burkina Faso. I wanted to know how people in rural Burkina Faso navigate to access tree resources, their experiences, and how this use impacts the environment. I was also interested in how this navigation plays into other aspects of social life where people's livelihoods recurrently are challenged by factors such as climate stressors, (such as droughts and flooding), gendered power structures that delimit women's control over resources, and lack of access to other common indicators of development, such as healthcare, education, infrastructure, and so forth. After spending time in Boessen and Tonogo during the primary fieldwork in 2014–2015, I became more acquainted with the forested areas, relationships, power dynamics, and historical events. In conversation with the theoretical underpinnings of this study, I could pin down and specify my research inquiry. This iterative-inductive research process (O'Reilly, 2005, p. 178) was made possible because I spent considerable time in the field research context, which enabled me to build trust and social relationships with people(Atkinson, 2007). This was valuable for probing further in-depth with my research inquiry.

The theoretical approach of this study and my positioning as a feminist means that my ethnographic approach is grounded in a feminist research ethic (Ackerly & True, 2020). This positionality includes being attentive to power relations, boundaries, relationships, and situatedness of myself within the fieldwork and research context (ibid). For the field research and writing up-process, this entails having critical awareness and reflexiveness that should be historically grounded and future-oriented toward how representation is made (Kwame Harrison, 2018, p. 34). In Burkina Faso, this includes an awareness of the colonial and political relations post-independence and attention to the gendered and hierarchical dynamics within society and households. It also consists of a critical understanding of my position as a white academic female from a western context, the responsibilities this obliges for conducting fieldwork, and how people and places are represented and described in the written material.

Site selection

After the exploratory fieldwork, I chose to select two primary research sites, Tonogo and Boessen in Burkina Faso, as suitable places for exploring forest users' navigation of firewood and shea access and control. The demands of

Figure 10: The map shows the climate zones of Burkina Faso (Kambire et al., 2015). The Sudano-Sahelian climate zone receives 600–900 mm of precipitation each year. This formatted map version shows Tonogo village, which lies within the blue circle, and Boessen within the red zone.



the ethnographic approach and my theoretical underpinnings suggested that I would need plenty of time in the research sites for the in-depth exploration envisioned. This also forced me to limit the number of sites I could include in the study, and thus, I excluded the other three sites I visited during the exploratory fieldwork. Including two research sites instead of one enabled a broader collection of material for analysis (Lune & Berg, 2017, p. 175). I draw from the data collected in both research sites to analyze forest governance and use of firewood and shea, without comparative ambitions. I use the data collected from various national, regional, and municipal actors to analyze the gendered power relations of forest governance

The two chosen primary research sites, Tonogo and Boessen villages, have similar socio-political and ecological conditions, facilitating a common ground for researching local use and practices of tree resources. Both villages are situated within the semi-arid Sudan-Sahelian climate zone and receive about 600–900 mm of precipitation yearly (MECV, 2007). Boessen village is located 135 km northwest of the capital. Tonogo village is situated 35 south of the capital. The presence of formal state bodies and customary powers provides a plural politico-legal context in both villages (Lund & Boone, 2013; Meinzen-Dick & Pradhan, 2002). The two villages were also chosen because they have similar cultural structures, where the ethnic group Mossi is regarded as the autochthons[12] and holds customary power. According to how village elders tell the history of the villages, a few other groups moved into the villages after that and are considered second and third comers. These socio-political relations are relevant to how land is controlled and distributed in the villages. There is no agri-business present, and the two villages have similar wealth and demographic size levels. None of the villages are connected to the electricity grid. Livelihoods are centered on agroforestry farming, with the main crops being sorghum and millet.

The similarities and character of the two villages do not differ on an overall level from what can be considered to represent an average village in the Sudano-Sahelian climate zone in Burkina Faso. Both villages had also set up a local management of forest and tree resources, initiated by a government-funded research institute. This made the villages particularly interesting for investigating the gendered dynamics of forest institutions and practices. Especially since both villages have forested areas within their vicinity but with varying legal statuses. Boessen and Tonogo were therefore suitable for exploring forest management arrangements, policies, donor projects, made at

[12] In Burkina Faso, autochthony refer to the ethnic lineage which is considered first-comers to the land (Côte, 2020). Autochthons are often, but not always, the ones having authority over land decisions and customary spiritual practices in Burkina Faso.

communal, provincial, national, and international levels. Moreover, how these impact local forest use and social power relations within the communities to the household level, as well as the impact on individual everyday life and forest interactions.

Sources

During the field research, I collected varying data on tree resources, gendered forest practices, subjectivities, and governance practices. Using several methods and sources enables triangulation and relating different sources of collected data and material (Taylor, 2016, pp. 93-95). This makes triangulation useful for cross-checking and validating the collected data from various sources (Berg, 2009, p. 5). This has been a vital part of providing the data for a rich analysis in this study. Especially regarding complex relationships of, for example, the power dynamics in how women and men navigate different rules, laws, and regulations when they cut firewood or collect shea. This enabled me to understand that people interpret, draw from, and perceive state legislation and local forest use regulations differently – and collect tree resources differently, not always in correlation with their interpretation of how forest practices *should* be done. It also allowed me to analyze and understand what the gendered dynamics in forest governance and use, specifically firewood and shea, means for local livelihoods. Also, what it means for the ability to access and control these resources in Boessen and Tonogo.

As firewood and shea resources and the gendered practices, which they entail, are central for my empirical investigation, it 'forced' me to follow the users. I followed them to the place of collection, cutting, processing, harvesting, and trade of tree resources. This enabled a thorough analysis of how gendered power relations in tree resource use and governance are formed over time and space and at the intersection of other sociocultural differences. It also facilitated a deconstruction of the gendered divisions of forest labor and access and control of forest resources on the farmlands and commons.

Most of my material was collected in Boessen and Tonogo. Still, I also collected data on the neighboring villages' forest practices and institutional interactions. I interviewed women and men about their perceptions of forest practices and management. This enabled me to cross-check whether activities and experiences which I had observed and listened to in Boessen and Tonogo, were replicated in other villages. This included questions of firewood and shea collection and trade, woodcutting permits, gendered divisions of forest labor, and the villagers' experiences of these matters. It was also essential to visit and talk to villagers in areas that women in Boessen and

Tonogo referred to as places where they collected firewood. This broadened area for data collection was also done to collect data on political and power-related issues, such as how customary authorities are structured between villages or for exploring specific events and conflicts. I also collected data from departmental, provincial, and national state representative offices and NGOs on forest governance and the use of tree resources at the local, regional, and national levels. This was vital for understanding various topics related to forest governance and use. For example, how the different actors relate to forest resources, their use, management, or development activities they were working with, and their perception of the challenges that forest governance and rural communities face.

Methods

As mentioned above, achieving a complete and in-depth understanding of the complex relationships between forest governance and practices requires a multitude of methods and data sources (Lune & Berg, 2017, p. 171). Five main methods have been used to collect data for the research questions. These include literature reviews, observation, in-depth interviews, focus group interviews, and collected data from documentation and archival records. These will be described in more detail below.

During the primary field research period, between October 2014 and April 2015, I aimed to spend as much time as possible in the villages of Tonogo and Boessen (Madden, 2010, p. 80). Still, I deployed a "step-in-step-out" ethnographic approach, which meant I did not spend the whole day at the research sites. For the research period in Tonogo, I commuted in from Ouagadougou and spent about 10 hours daily within the village from Monday to Friday. In Boessen, I stayed in a dormitory in a neighboring village and spent about 10 hours a day in the village. I commuted back to Ouagadougou for the weekends since I had my family there. This meant I could arrive in the villages at about 7.30 am, right after people had finished their morning chores and started their days outside their household compound. By staying until sunrise at about 6 pm, I could be involved in the daily village life until people started slowing down their most intensive work before the darkness set in.

As Flick (2018) points out, doing ethnography means more than just spending much time in the field. Still, there has to be quality to the observations and interactions: "it is a matter of 'tuning up' your body to the setting, and being able to note 'minor grunts and groans', subtle gestures, and bodily responses" (Flick, 2018, p. 314). In the fieldwork, this entails two-way communication, meaning I tune in and adapt my body language, gestures, lan-

guage, and bodily responses to the social setting that I am a part of while doing field research (Madden, 2010, p. 83).

Literature review

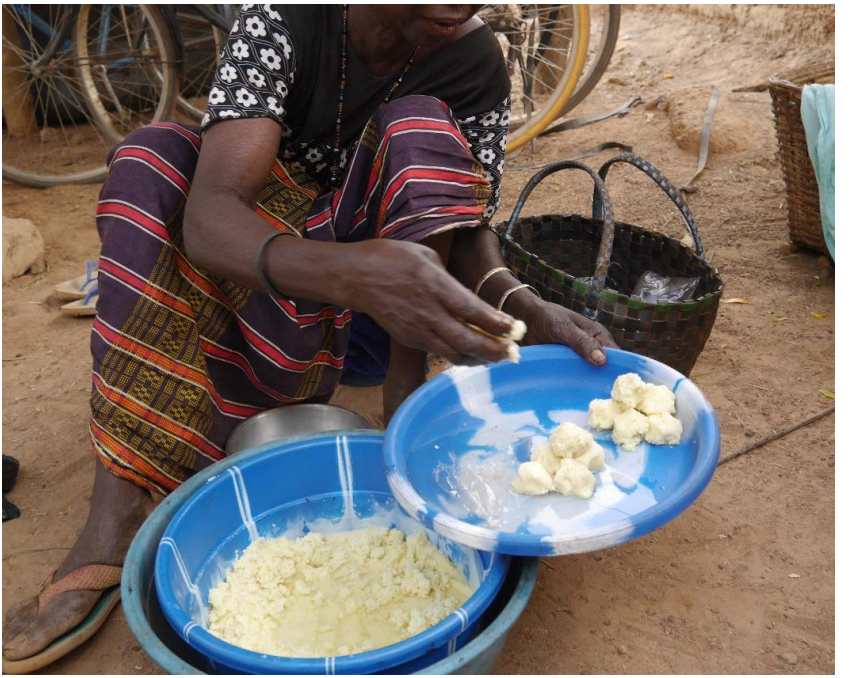
Before going to Burkina Faso for exploratory field research in October 2012, I conducted a literature review. This review included literature that spanned from general theoretical concepts on governance, gender, and institutionalism, to specific and contextual literature – such as studies covering the environmental status of agricultural and forest lands, the different tree species, and their significance for the ecosystem and humans in West Africa and specifically Burkina Faso. The review also included literature on the political, cultural, and historical context. This review provided a fundamental baseline from which I could understand the local and global challenges for forestry and livelihoods. I developed a few basic and initial research questions from the review for the exploratory field research. Further ahead in the research study, this review was vital as I developed my research design, conducted the fieldwork with an ethnographic approach, and explored tree resource access, control, and use. After the exploratory fieldwork I also added more literature to the review.

Observation

Throughout the primary fieldwork, I have carefully managed the data collection and questions posed to allow for new understandings or perspectives to come forward (Flick, 2018, p. 51). For this, observation as a 'systematized form of looking at others' has been a vital part of collecting data in this study (Madden, 2010, p. 101). Listening with a feminist research approach includes attention to the atmosphere of the setting, body language, and *how* the person talks (Ackerly & True, 2019; Flick, 2018, p. 318) but also to note what is not said or written in text (Kronsell, 2006). Such aspects were conveyed when people respond with their body and facial expressions to specific questions, or when they lower their tone when speaking on issues or expressed in the tense facial expression of the women who stop to listen if someone is approaching when they are cutting illegal wood.

I was also attentive to other power dynamics and atmospheres, which I could not fully grasp until after spending time in the villages (and in Burkina Faso in general). Such an example is the power dynamics between different authoritative individuals and between villages in the area. It can also be how people respond with their bodies and language in social contexts, such as the market, household compound, or meetings (Flick, 2018, p. 144). These observations were written down and were an integral part of how I interpreted hierarchical power relations and social differences, emotions of the forest, farm, and household labor, resource struggles, social relations, and other parts of everyday life in this study.

Figure 11: Woman selling shea butter at the market in Tonogo, Burkina Faso.



I have observed with an inductive approach, which means not only looking at others, but paying close attention to the material, practices, and behaviors throughout the forests, village centers, and within households in every observation. At the beginning of the fieldwork in Tonogo and Boessen villages, my interpreter and I systematically walked through the village with a local guide. In Tonogo, we were guided by the local forest manager. We visited two main forested areas and farm fields to observe the availability of the trees and the various sacred spaces and materials of the village. Likewise,

at the beginning of the fieldwork in Boessen, the president of the CVD group of the village walked with my interpreter and me to the classified forest, the main quarters, and the village vegetable garden. A person considered knowledgeable about the history of Boessen showed me and told me about sacred stones and trees in the village. These observational walks were important in enriching my understanding of the natural resource base in the village.

Other material observations were also, for example, if and how much wood women store in their household, what type of wood they cook with, what wood is traded at the market and what kind of wood people transport, and what type of transportation is used, and by whom. Other types of material observations are, for example, what type of and how many trees grow on the household farmland. Moreover, which tools or things women and men use and have access to, both for farming and forest resource extraction. These material observations were written down in field notes and were helpful for new insights and perspectives to come forward. To facilitate note-keeping and these material observations, I photographed various trees, crops, firewood stacks, buildings, signs, and bush areas. The latter is essential for visualizing differences in tree density and cutting techniques.

I have also observed practices and behaviors in the tree resource interactions. These have been important for answering the research questions, for example, at what time during the day women (and men) come back from the forest, where in the village wood was circulated and by whom, how women and men farm, the ways shea is processed and traded, who picked leaves and cut firewood. In addition, I took general inclusive notes of events, phenomena, and practices in everyday village life that I observed (Flick, 2018, p. 314). As a part of following practices, behaviors, and emotions, I also used participant observations to collect data. Hence, I joined women in Boessen and Tonogo villages on ten occasions for each village as they gathered firewood. During these occasions, I joined to assist in cutting and carrying the wood and, on some occasions, without participating in the work. I also participated in bringing water from the well, watering the vegetable garden in Boessen, clearing rice, and picking leaves from trees. These are all considered female tasks within the villages.

These everyday tasks were essential to participate in as they gave me an inside perspective of the bodily undertakings of collecting natural resources (Yin, 2014, p. 117). This method has helped me observe and explore the actual practices and behavior of how people use and relate to the rules and regulations about trees. The participant observations also opened for details, nuances, and gendered differences in how the practices are performed daily, including tuning in and reading bodily language, tones, and gestures from the

individuals I encountered (Johnson et al., 2021). That is, it showed the situated interactions of what people are saying, doing, and using the material (Behagel et al., 2019). It also helped me understand how these processes are gendered and immersed in natural resource power relations (Flick, 2018, p. 321; Madden, 2010, p. 104).

I have also observed village council meetings, development meetings, and ceremonies. Participating by joining in on events and everyday practices and spending time in the villages was necessary for establishing trust between other individuals in the village and me (Ackerly & True, 2020; Lune & Berg, 2017). This is key to accessing sensitive data, such as illegal activities, conflicts, traumatic life happenings, and experienced injustices. Such trust can also put the researcher in an advocacy role, something I experienced in Boessen on one occasion, as the village chief asked me to accompany him to a meeting with the mayor's secretary at the commune. Although I might have been asked to join in observing, I sense that I was invited because of my position as an outsider (Faria & Mollett, 2016) to help the village chief gain leverage in negotiating with the secretary to make him invest in the development of the village.

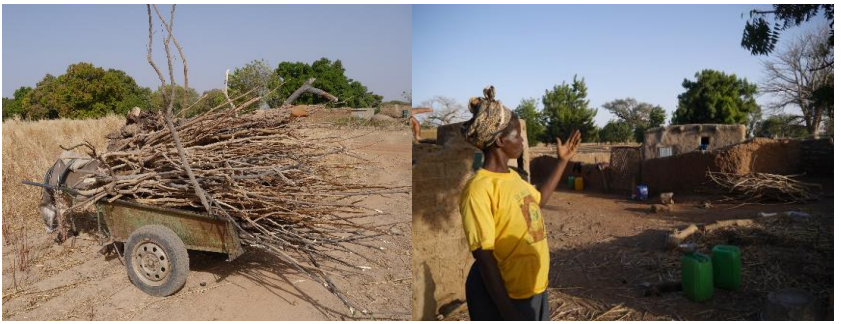
A challenge with different types of participatory observation is that the physical labor and constant moving complicate questions and note-keeping (Yin, 2014, p. 117). To manage this, I wrote field notes after we finished walks, meetings, and different activities and often returned to people for a conversation or interview. These observations have spanned the environment, material, gender, and intersecting social differences in resource relations. They have improved my contextual knowledge of the villages and contributed to how I approached the data analysis process by providing valuable themes for grouping the data and answering the research questions. For the articles, the observations have been crucial for how I have been able to analyze the firewood and shea practices but also forest management, power relations, and material interactions (forests, tools, trade on the market, processing, cooking, etc.).

In-depth interviews

Most of my data were collected through in-depth (conversational) interviews. These were conducted with 78 women and 119 men in the villages of Tonogo and Boessen throughout the primary field research, with varying focus depending on who was interviewed, and which inquiries were explored. To follow a line of investigation (Yin, 2014, p. 110), I developed a set of open-ended questions to ask the interlocutors. I deployed a mix between snowball and purposive sampling methods to identify and map the various

village quarters, professions, ethnic groups, organizations, and individuals with particular expertise and from authoritative positions in the villages (Bryman, 2012, p. 142). For the snowball sampling, the interlocutors were asked to recommend other relevant people to talk to or interview. Sometimes, I purposively asked to speak to a person with a certain position, such as the religious leaders or women's group leaders (Lune & Berg, 2017, p. 39). There were more interviews with men because they hold most authoritative and leadership positions in Boessen and Tonogo but also at departmental, regional, and national levels – such as village and land chiefs, religious leaders, "wise men," schoolteachers and state, municipal and NGO staff. At the beginning of the field research, I interviewed people with key positions in Tonogo and Boessen villages, such as the CVD and the committee members, the two village counselors, the village chief, and members of the local forest management group.

Figure 12: The left picture shows a donkey with a firewood-filled cart in Tonogo village. The woman selling the wood has walked to the forest five times to cut the wood. The left picture shows a woman outside her house with a stack of firewood.



Early in the field research period for each village, I interviewed the land chief, schoolteachers, religious leaders (the Muslim leader or the imam, protestant, and the catholic leader), youth group leader, the women's group, and elders from different ethnic groups. These interviews helped me better understand the village context, the history of the village, which development projects have been implemented (or failed to become implemented), and the challenges for the village that the various leaders assessed. They were also conducted to get a sense of the deciding power within the village.

Moreover, at the beginning of the fieldwork, I interviewed individuals at the household level to explore the various ways and places that firewood is collected and how this wood is used (i.e., vended or used in the household). Also, how the household and women and men access farmland and their

livelihood strategies. For this process, I foremost deployed a generic purposive sampling method where I developed criteria for selecting samples based on the research questions (Bryman, 2012, p. 422). These criteria were based on the fact that I sought to interview people from varying and intersecting differences within the villages. These criteria are age, livelihood strategies, gender, ethnic belonging, land titling status, civil status, wealth status, and geographic placement of the household within the village. This encompassing selection of criteria enabled me to explore how intersecting social difference matters for the various practices, materials, and spaces of how forest resources are used. A significant part of the interview focused on understanding the lived experiences, situations, and challenges of the person I interviewed (Taylor, 2016, p. 30). This meant focusing on forest resource practices and access, but other interview segments could concentrate on the village's history, life story, or livelihood strategies.

When many of the stories of forest relations, practices, and everyday life were repeated in interviews at the household level, and little new information emerged, I assessed that I had reached a saturation point (Bryman, 2012, p. 421). As an outcome, I interviewed people with authoritative positions in Boessen and Tonogo and woodcutters in neighboring villages. The purpose was to verify if the data on forest navigation could be observed elsewhere and to gain a broad understanding of how the woodcutting was done over a larger geographical area and how people related to woodcutting and tree resources use. This was also useful for exploring how people describe forest management and forest resource extraction in neighboring regions. I also complemented some of the interviews with specific questions about other types of tree use (i.e., leaf or néré collection). Moreover, I adapted the discussion to explore particular issues and questions (such as the CFM management in Tonogo, presented in the third article) that had emerged in the interview discussion or from other situations, such as observations. These in-depth interviews have provided rich data on everyday livelihood struggles, resource access and control struggles, personal life events, perceptions of forest resources, forest management, and decision-making.

I conducted in-depth interviews with decision-makers at the communal level, such as the mayor and vice-mayor (only in Tonogo as the coup d'état occurred before fieldwork was undertaken in Boessen), municipal secretary, and departmental protégé in both villages. Representatives from several international, national, and local NGOs, research institutes, and government representatives on forest governance, agriculture, and rural development at the departmental, regional, and national levels were also interviewed on forest and agriculture governance and rural development. These interviews were

vital for exploring how different actors describe a range of natural resource and development issues, such as forest management priorities, policies, projects, and limitations and opportunities of these, and not the least, firewood and shea extraction.

During the first four months of the fieldwork, I took extensive notes during the interviews, which I worked through afterward. After experiencing increasing pain in my hands, I realized I had to start recording the interviews. I used a small recording device that I always asked permission to use, had it visible to the person I interviewed, and informed them that I would not share the recording. One person asked me not to record, and as that person was involved in an infected conflict, I decided not to take notes. After the interview, I sat with my interpreter and wrote down what had been discussed. I am aware that the interlocutors might have provided a corrected or false description of their everyday challenges, agency, tree resource collection, and social relations. Especially regarding sensitive issues such as illegal practices, norm-breaking behavior, or conflicts. There are also issues, such as how people describe what they consider to be a change in the forested areas or how they can decide over tree resources in the household, which could be biased toward an answer they believed I wanted to hear.

I was aware of the possible tendencies of interlocutors to adapt their answers during the interview and, therefore, continuously assessed how people described certain issues and whether I should continue that specific line of dialogue. For these reasons, I have also been careful in how I have used and analyzed the data. It was also helpful to cover specific topics in individual interviews in neighboring villages to see how the answers matched the way people described these topics in Boessen and Tonogo. Another essential part of minimizing biased answers was the ethnographic approach. Spending much time in the communities allowed me to build trust and relationships with people to feel comfortable talking about sensitive issues. Structured and participatory observation has helped cross-check what people describe in the interviews with how practices are done. One such apparent way was seeing women transporting dry wood mixed with green branches that showed illegal practices or the different stacks of firewood outside a household compound that I learned witnessed how someone in the household vended the wood. These interviews, therefore, were vital for how I could draw the analysis in the articles and answer the research questions.

To talk with women about what I had seen or witnessed when joining other women in the forest often opened up the conversation and made people talk more freely than if I only asked how they cut their firewood. I, for example, never upfront asked anyone if they were cutting or trading wood illegal-

ly; no one would probably have answered me correctly. Moreover, I find that unethical given my position as a researcher since it could have signaled that I wanted to monitor practices. Instead, I approached this by talking about the firewood collection in general terms, and then we could discuss this in more detail after a while. These ways of probing the questions and assessing *how* people talked about specific topics provide one side of people's lived realities. From these discussions I feel confident to draw and interpret in order to answer my research questions and make meaning of tree resource navigation and practices.

Focus group discussions

In each village, I followed up interviews through focus-group discussions. The focus groups were set up to discuss the challenges women and men experience in their everyday life. I deemed them necessary for understanding why people provided such contrasting answers in the individual interviews (Flick, 2018, p. 251). The value of the focus groups was that different perspectives came forward in the argumentation between the participants. In Tonogo, I conducted two focus group discussions with men and two with women. In Boessen, I conducted two focus group discussions with men and three with women. The number of attendants in each focus group was between 10 and 20. The groups were formed with men and women separately to allow each group to discuss their challenges without necessarily moderating their answers for their wives or husbands.

As focus group interviews can be helpful for marginalized groups to voice and discuss sensitive issues, I intentionally separated women into different groups and men. I sampled people from the same geographic location of the village quarters in Boessen and Tonogo, which also broadly corresponds to ethnic group belonging. Thus, one of the focus groups, for example, was with women from the quarters of the village chief, whereas another was with women from a quarter where most people had borrowed land. The focus group members were selected by letting one person summon other participants. The person was asked to invite about ten people from various households above school age and still active in farming and collecting forest resources.

Although there is a risk that only a few people speak out in focus groups, the advantage is that people can find strength and build the discussion upon each other's answers. Especially when voicing shared experiences of injustices (Bryman, 2012, p. 501). The questions I posed were open-ended, and I steered the conversation through those questions and let the group raise issues for discussion. To allow the discussion to move forward while still al-

lowing people to drive the talk's content, I carefully moderated the focus group sessions (Flick, 2018, p. 254).

Through the group discussions, valuable information surfaced, especially regarding gendered household relations of forest resources and labor control issues. Some of these issues had already been explored in the individual interviews. However, I assessed that, especially, women voiced their challenges and concerns more strongly in the group than many did in the individual interviews. My interpretation of why specific issues were voiced more strongly in the group is that the discussions between women and between men also provided space and dynamic interaction for sharing experiences that people otherwise might not feel comfortable explaining in individual interviews. This was particularly useful for the data that I used in articles one, two, and four. The group interviews with men were also helpful in understanding the power dynamics between different quarters and ethnic groups in the village and how these were dealt with; this was especially useful for articles two and three. Overall, the group discussions provided valuable data that I could explore further and more in-depth in the individual interviews (Bryman, 2012, p. 503).

Documentation and archival records

Throughout the field research, I collected documents with various content, including information about demographics, projects, expenditures, lists of recipients of grain subsidies, and budget calculations in the villages studied. Similar records were also retrieved from the two villages' provincial forestry and agriculture departments. I also retrieved copies of formal studies and reports relevant to the study areas from these offices. The budget reports and official receipts from the forest authorities have been helpful in the analysis of how the governance plays out in practice.

As people can be reluctant to hand over documents for copying, I foremost took photos of the village and communal administrative protocols, meeting minutes, and records. I also took pictures of woodcutting or wood circulation permits (issued by the department's forest guards) and court decisions over land disputes. The court decisions and various protocols have been necessary for supporting and complementing the interlocutors' descriptions of events and situations. I also tried to retrieve copies of the process of establishing a community forest in the village of Tonogo. Many of the papers at the protectorate were damaged and not filed chronologically – they were as a result, in the end, impossible to find. I was occasionally shown ID cards if I asked the interlocutor's age. This also led me to not question about age but to assess the age category broadly.

I have also collected reports and records on related natural resources, forests, agricultural and development projects, and management from local, national, and international NGOs, SIDA, and national ministries. These documents have helped provide complementary data and information to the observations and interviews. For example, the list of different committee members has been helpful for mapping out the committee's structure and which persons hold single or multiple authoritative positions within the villages. Most of the government documents have been retrieved from official internet websites. These include applicable and expired government laws, policies, and statistical reports on the environment, forest, agriculture, and social development sectors. Other records include maps of the villages' communes and departments. These are important for getting to know the surrounding areas and villages. The maps were copied from Ouagadougou's geographic institute (Institut Geographique du Burkina). These laws have been useful for understanding the laws that regulate forest usurp rights, commercial use, and management. This has been especially useful for articles one, three, and four, as well for answering the research questions of the thesis.

Overall, these documents and records support the other methods used in this study. Still, I have treated the content of these documents with caution (Yin, 2014, pp. 107-109). For example, being a committee member does not equal active participation (Wagle et al., 2020), nor for that matter that a committee is engaged, nor do official receipts necessarily give a complete picture of the actual taxation of wood fuel in a department (see article I).

Working with an interpreter

During the field research, I worked closely with a female interpreter, Leila Werem, who interpreted from Mooré to English. She was chosen carefully among other candidates. She had the experience of working in rural areas in Burkina Faso with development issues as an interpreter. She was also familiar with the geographical context as her hometown was in Nord, the same region as Boessen. Soon Leila became my companion in the research and could grasp both the theoretical and the methodological approach during the fieldwork. I am well aware that this is not always the case and feel grateful that the relationship between the interpreter and me did not require much detailed management (Ackerly & True, 2020, p. 231). Instead, the interpreter had a well-balanced approach to her role as a language interpreter and intermediary between the interlocutors and me. Leila sometimes took the role of a research assistant by coordinating interviews instead of the local guide. This also meant that Leila explained cultural or contextual details that were per-

haps not always apparent to me, such as if and how many cola nuts[13] were appropriate to bring to an older person that was being interviewed.

Pursuing fieldwork can be a pretty lonesome endeavor (if you are not part of a larger research group), and working with an interpreter provides an additional possibility for reflection on the meaning of the ongoing research (Ackerly & True, 2020, p. 231). Leila was also responsible for transcribing the recorded interviews. To overcome language barriers, we went through the notes together after the end of a working day or week. After each interview, we also spent a few minutes discussing the interview, including specific sentences or the meaning of euphemisms and proverbs that come out strongly in Mooré.

Conducting the field research with a female interpreter enabled us to become close and spend time with the women in a relaxed manner. Although working with a female interpreter possibly restricted us from socializing with men, this did not affect the outcome of the data sampling. Instead, my experience is that as Leila was sociable and culturally respected, we were invited and could spend time with other men at leisure. It was also probably made possible due to my position as an outsider from a research project (Johnson et al., 2021). Working with an interpreter was thus not only crucial for pure language and cultural translations, but it also meant having an extra pair of eyes and ears and someone skilled with whom to debrief and have analytical discussions.

Data analysis

The interpretative approach of this study has determined the data analysis process in this study. This epistemological approach to knowledge production means that data are interpreted in conversation with this study's readings and theoretical framework (Berg, 2009, pp. 339-340). As O'Reilly argues, analyzing and interpreting data are echoed in the whole research process, being subjective, to some extent – to my preconceived understandings and life experiences of nature, tree resource use, power dynamics, gender relations, and so forth. (O'Reilly, 2005, p. 177). This will inevitably impact how I develop an idea for research, understand the research problem, and interpret data. Therefore, with an interpretative and iterative-inductive approach, data analysis is an entangled process (O'Reilly, 2005, p. 177). The more questions I asked during the field research, the more questions came up, but what they were was also determined by the theoretical framework. With the interpreta-

[13] Kola nuts are a slightly addictive nut, rich in caffeine, and it has a strong importance for cultural and social network in West Africa (Ferrarini, 2016; Gray, 2002; Lovejoy, 1980).

tive approach, I continually evaluated the collected data during the fieldwork. By doing so, I made preliminary and elemental analyses of the empirics in conversation with the theoretical concepts of the research design (Kwame Harrison, 2018, p. 78). The iterative-inductive approach is thus an ongoing interplay between theory and data (Atkinson, 2007, p. 159), which during the fieldwork, enabled me to identify when I had reached a saturation point in the data collection (Flick, 2014, p. 49).

The continuous assessment of the data collection helped me as an initial structuring to sort the data during the main part of the analysis, which was done after the fieldwork. In this data analysis process, I have drawn from data collected from both villages (Lune & Berg, 2017, p. 175; Yin, 2014, p. 18). This means that I have not compared the data from the two sites. Still, I have allowed parallels or particularities in forest use between the two villages and forest authorities in the provinces to come forward through the analysis. Cross-checking the collected data from Tonogo and Boessen by observing practices and interviewing community members from neighboring villages has been valuable for how I have been able to draw conclusions from the analysis. Foremost, by providing better in-depth understanding of the interlinkages between forest governance and the everyday challenges of accessing firewood (Lune & Berg, 2017, p. 178).

The data collected through notes from observations, group discussions, and interviews have been analyzed by first sorting the data and searching for and defining themes in the material. I have done this manually and have not used a data program. I tried a data program (Nvivo), but felt I had more control over searching thematic groupings manually by reading and re-reading the material several times (Bryman, p. 579). Structuring the collected data has helped me make sense of the various layers of collected data and put it into conversation with existing research (Kwame Harrison, 2018, p. 82; O'Reilly, 2005, p. 184). I have developed the themes on the theoretical framework, and some emerged during the broad data analysis during the fieldwork period.

In the first stage, these themes were broad, covering tree resource use, tree management, tree resources, labor divisions, resource access and control rights, and forest management practices. These were narrowed down and made more focused in a process where I deconstructed shea and firewood resource practices and management. They were still broad categories of harvesting, trade, processing, and management schemes, such as woodcutting permits and perceptions of tree resources and forest management. After this process, I developed sub-themes and began to draw analytical linkages between categories, themes, and sub-themes (Kwame Harrison, 2018, p. 80).

This process has been done in close conversation with the theoretical framework and guided how I have drawn analytical linkages of the data.

By interpreting what I have observed and written down in the interviews, I also construct and represent people and nature in a specific version of their reality (Bryman, 2012, p. 33). As mentioned previously, this study approaches the social world as constructed and in constant change, which also, through interactions, changes forested areas. How I interpret and represent these changes and interactions is part of this constructivism as I draw on a specific set of theoretical conceptualizations to make my analysis (Bryman, 2012). The articles differ in how I construct, interpret, and represent the socio-nature world through the collected data. It depends on the themes of forest governance and tree resource navigation covered in the articles and the theoretical conceptualizations from which the analysis draws. All the methods and collected data have contributed to how I have made sense of the large body of data collected for this study. Some have been more important than others, of course. For example, I do not refer to all the interviews per se, but all play a role in how this study has taken shape and for me to understand how firewood and shea use are navigated.

In articles one, two, and four, and for the overall aim of this study, I draw from the broad collection of data from both Boessen and Tonogo to analyze the gendered dynamics of forest governance in how firewood and shea navigation become. I have drawn from theoretical conceptualizations within critical institutionalism, institutional bricolage, and feminist scholarship to analyze the data in the first article. To show relationships between institutional processes, gendered dynamics, and forest practices, in article one, I structured and analyzed the data based on the theoretical concepts of articulation, alteration, and aggregation (Cleaver, 2012). For this article, I used all the interviews with women about how they cut firewood, and the forest guards and the general overview from the data collected on men on how they do not cut firewood. I also used data from interviews with women from neighboring villages to check how they described their practices. Adding to this, I used data collected from observations on firewood cutting and vending in the villages.

In article two, the data analysis has been approached by deconstructing shea practices. From this, I could sort the data into sub-themes that emerged in conversation with the theoretical concepts of gendered divisions of labor, power relations, and access and control dynamics. In this article, I have used data from all the interviews and group discussions with women. I only had about half of the interviews with men for this article since I stopped asking men about shea at the beginning of the interviews. After women described

that male participation was problematic for their ability to access shea, I also included questions about this in the interviews with men. When I posed them in another way, men were more open to describing their participation. I usually first asked who picked shea in the household and, after that, if they also picked it. If I received a no, I asked if they sometimes picked shea or helped their wife. However, all the interviews with men were helpful because they gave me a context of household decision-making. For example, on how land and tree tenure and access rights were structured, as well as how farm yields and control of revenues were made within households. I also observed shea processing and local trade.

In article 3, I analyze CFM implementation's institutional and gendered dynamics in Tonogo, excluding Boessen. As such, the data analysis was guided by two main themes that emerged during the fieldwork of the two forest patches and their contrasting ecological conditions, conflicts, and firewood collection. In this article, I used the data collected from interviews with village authorities in Tonogo and neighboring village Oudi, such as wise men, youth representatives, the village chief, the CVD, and people who described how they had been involved in the land conflict over the forest. I also used the interviews with the municipal representatives and from the research institute to understand the decision-making processes and power relations. Adding to this, I used interviews with men to understand on a general level how people are involved in decision-making and women to understand from where they collect firewood, how this has changed in the village, and how they are involved in forest management. I also used the data collected by observing the forest areas and joining women when cutting wood.

In the fourth article, the data have been sorted into how the forest guards and mainly women, describe and relate to forests, tree resources, forest management, and practices. I also grouped the data from the observations of forest practices from where people go to cut, which tools and wood they cut and cutting techniques, which wood is transported and how, and how cooking is done. This means that I have mainly used the data from the interviews with and observations of women to conduct the analysis, but also from interviews with the forest guards and other state representatives at the regional and national levels. I interpreted the data by making connections between descriptions, practices, and theoretical conceptualizations.

Ethical considerations

Being attentive to the context

Ethical considerations have been relevant for multiple situations, social and environmental relationships, and data sampling strategies in this study. As a starting point in the feminist embodied research approach (Johnson et al., 2021), I have been careful to be attentive to the local context (Ackerly & True, 2020, p. 219). In rural Burkina Faso, this includes poverty, food insecurity (hunger at times), violence, conflict, and gender inequality, but also wealth, strength, caring, joy, ambition, and agency. Returning to what I discussed above, I always tuned in to the people and place and adapted myself to the setting (Flick, 2018).

A critical part of field research is to be culturally appropriate within the research setting (Ackerly & True, 2020, p. 219). Coming from an outside cultural context, specifically a western, white, colonial context, and the power imbalances that come with it, brings added responsibility for ethical considerations (Johnson et al., 2021). In this research process, it has been essential to be reflexive on my positionality as an outsider from a western academic context and the structural advantages it brings (Faria & Mollett, 2016). Following such considerations about power imbalances, I always dressed in a pagne (a long, wrapped skirt), the most common way to dress for women in the two villages. Furthermore, I always walked around the village in the company of the interpreter, rather than arranging for another form of transportation. By doing so, I could, through the interpreter, speak to people, observe, and join people in various activities throughout the village, rather than going from point A to B in, for example, a car.

One way to address my positionality is to be cautious about following culturally appropriate protocol. I learned some basic Mooré, spoken in Tonogo and Boessen. This enabled me to greet, introduce myself, and thank people correctly. I also learned how to greet people with the right gestures, as the greeting will look quite different depending on the person's age or situation. As the fieldwork proceeded, my Mooré also improved, and I could understand what people told me, although I was rarely able to reply.

The interview and observational situation

Ethical considerations entail conducting interviews and observations in a considerate manner. Therefore, the talks and interviews were conducted in Mooré, the mother tongue for most in Tonogo and Boessen, and not in French, which is learned at school. Apart from the importance of making the

interlocutors express themselves in a language they feel comfortable with, it was also vital for exploring how people describe and reflect upon nature, trees, their practices, and management without reproducing the categories or expressions of institutions that come with French. However, French is the language used at most formal institutions, and the interviews were conducted accordingly on those occasions.

Another contextual appropriateness was to make sure to sit with people in a way that makes them most comfortable. In a rural household setting, this often means sitting on the ground in the shade. Moreover, to be cautious about the timing of the interviews (Ackerly & True, 2020, p. 219) I arranged the discussion at a convenient time for the interlocutor. For the observations in the firewood collection, we met during times and to places decided by the participant. As people generally have many household tasks, I was careful to keep the discussions to a maximum of one hour, in order not to stress the person being interviewed (I also informed the interlocutor about the time limit before the interview). People stopped the interview on a few occasions, as they had to tend to things in the household. On two occasions, I interrupted the interview early to minimize further harm or stress to the interviewee (Bryman, 2012, p. 136). On one of these occasions, the interlocutor was drunk. On the other, the interlocutor had not eaten properly in several days and was affected by it. As I joined people when they, for example, were cutting wood or collecting water, I was careful not to let my participation infer too much from the work task. Moreover, I made sure not to rush into or out of an interview. I took time before and after the interview to greet people in the household, for an informal talk, play with the kids, looking at some crop or whatever came up in a specific place or setting. Such occasions were as crucial for building trust and relations with people (and this exchange also makes fieldwork a joyful endeavor).

Throughout the fieldwork, I have carefully considered how I pose the questions in order not to intimidate people (Madden, 2010, p. 69). Before the interview, I explained the purpose of the discussion and my role and that the answers would be anonymous in the published materials. I also asked if the interlocutor had any questions (before and at the end of the interview) and explained that they could interrupt or stop the discussion at any time. In the observations, I made sure to talk with the participants that I would not share any of the doings with anyone, especially not the forest guards. Starting the interviews as a basic rule, I explained that I wanted to understand their perspective. These questions have been followed by questions focused on understanding *how* people do or experience specific issues (Yin, 2014, p. 110). Not rushing into sensitive topics have been important for making people talk

about sensitive topics such as when they cut wood illegally, conflicts with other people, traumatic life events, or experiences of injustices.

The fact that a significant part of the population in Burkina Faso is suffering from malnutrition, food insecurity, and low ability to afford health care is a lived reality in Boessen and Tonogo. This poses a continuous need to make ethical considerations for how to proceed with interview situations. Not only for the well-being of the interlocutors but also as a consideration of how it impacted the interpreter I worked with, myself, and the interview situation (Bryman, 2012, p. 136). For example, a child who seemed malnourished and suffered from severe diarrhea was under the care of one of the interlocutors. During the interview, I had problems concentrating, which the interlocutor noticed as the person reassured me several times that the child was doing fine. During the fieldwork, many of the persons I interviewed suffered from the consequences of poverty, illness, injustices, hunger, and other concurrent, ongoing, and previous traumatic events. On some occasions, the person I interviewed was sad, and then I always informed them that they did not have to continue to talk about the issue, but if they wanted to, we (my interpreter and I) would listen.

In an ethical consideration to not harm (Yin, 2014, p. 78) or mislead, I also informed that as a Ph.D. student, I could not directly assist the village or individuals in the challenges that people told me about. Apart from not invoking expectations, it was also important to intentionally distance the fieldwork from the development industry (Faria & Mollett, 2016). It did happen that people, after the interview, asked what I, as a person who has attended school, thought they should do to improve their situation. I generally replied that I did not have the answer to this and that I could see that they were working hard to sustain their livelihoods. Other times I received more specific questions, such as what I thought they should do to stop trees from dying or if I could suggest how to make a mango tree grow to which I replied similarly as above or that they should talk to people who have been successful or the departmental forest guide who is trained on these issues. I answered this way to avoid providing inaccurate information or deceiving people with that I have expert knowledge (Bryman, 2012, p. 143).

Taking safety and violence into account

Other ethical dilemmas regarded the issue of violence and moral dilemmas. Occasionally, interlocutors forcefully pushed away children. On those occasions, my interpreter always stated that they did not have to do so and that we did not mind the child being around. After encountering this, the

interpreter took it as a habit to forego events by saying that it was all right that the children stayed. With the exception, if it was an older child and we noticed that the interlocutor was uncomfortable about the child overhearing, we asked the child if they could consider leaving us for a while. The most crucial part of ensuring the safety of the interlocutors and others was to opt for an isolated place for the interview. On some occasions, our reading of the context and being attentive to the atmosphere also meant that we did *not* seek out an isolated space, as we could sense by that this made a woman or a man uncomfortable as it signaled that we would talk about sensitive issues. These occasions were few and mainly occurred when we interviewed women. We were often able to de-dramatize such situations by explaining that the reason we wanted to sit a bit separately was to be able to hear each other and focus on the discussion.

Trying to avoid exposing oneself to seeing violence does not mean that it does not exist. Still, it was vital for me and the interpreter not to contribute to situations where it arose. We also encountered the use of violence against children outside the interview situation. In addition, we were told about men beating their wives. Several men in both villages asked me about my opinion about men beating women. Being a female outsider from a Western university context in Burkina Faso calls for postcolonial reflexivity in how I address such situations. I always stated calmly that it was something I disagreed with, and from that, the conversation often continued.

As others have called for and reflected on, my position enabled me to access persons, situations, and topics that most likely would be closed for 'insiders' (Faria & Mollett, 2016; Johnson et al., 2021). The use of violence challenged my positionality of being an outsider there to explore, understand, and listen while simultaneously having conflicting ethical beliefs. My interpreter and I discussed these issues in detail to deal with the emotional stress of seeing other people suffering. Overall, fieldwork is a beautiful and privileged pursuit in a research study such as this, but also an embodied emotional labor with possibilities for reciprocity. As Sultana (in Johnson et al., 2021) calls for, the researcher can also learn from and improve academic work from the unjust situations or spaces one encounters in the fieldwork. I take this message with me and hope it is reflected in this study.

Considering the safety of my interpreter and myself was also relevant during the Burkinabé uprising that took place in the last days of October 2014 (Chouli, 2015). The fieldwork was abruptly halted, and the demonstrations were met with shooting and tear gas. For two weeks, until the political unrest had stabilized, my interpreter and I stayed indoors in the capital to not take unnecessary security risks. I consulted our research collaborators at

INERA on the state of security before resuming fieldwork. To be transparent about our abrupt presence in the villages and as I was hospitalized with dengue fever during this period, my interpreter informed the CVD in Tonogo village (where we were conducting the field research at that time) of our absence. The CVD, in turn, told the interlocutors that the arranged interviews were postponed. From a safety perspective, the coup d'état played out on the streets of Ouagadougou and the larger cities. In the aftermath, it provided an interesting angle to observe institutional processes during the fieldwork, as all official installments were dismissed. The elected village counselors for example, had officially lost their titles but were still attending village meetings in the capacity as counselors.

Providing a safe environment for the data sampling participants has been essential both during the field research and after the study has been published (Yin, 2014, p. 78). Therefore, the names of the villages and the interlocutors have been anonymized in this thesis, including the published texts, to ensure confidentiality (Bryman, 2012, p. 136). When I explored the issue of land conflicts, I arranged the interviews so that the persons involved did not meet each other or were annoyed that I went directly to what they considered their opposing part. At the same time, I was also open that I would interview other people on the topic to gather other people's perspectives.

To protect the people who were interviewed was especially relevant in one case, as I was shown a forest area in Tonogo by the local forest guard, the landowner, and the CVD, which had been illegally burned and logged. During the visit, a man from a neighboring village appeared agitated and informed us that he had a gun and that we should go away. After this incident, I took precautionary measures, such as the ones mentioned above, to not agitate the man further (he was also interviewed later). At the time of the visit to the forest, it should be noted that I was not aware of the full extent of the conflict over the forested area. This safety incident and the environmental status of the forested instigated an empirical inquiry into the institutional processes and practices within this area (see article III).

5
Summary of articles

Article I – Gender and institutional bricolage

Abstract: This article deals with gendered woodcutting practices and institutional bricolage processes in the villages of Tonogo and Boessen. The article addresses how women navigate and adapt their woodcutting practices to formal and socially embedded forest institutions. The theoretical framework of institutional bricolage and gender guides an analysis of how gendered woodcutting practices re-arrange the formal institutions.

Contributions: The study empirically shows how the woodcutting permit plays out on the ground. Women effectively navigate their woodcutting practices to avoid encountering the forest guards. They also draw on feminine woodcutting practices, synonymous with legal subsistence exploitation to cover illegal activities. This study shows that such activities are grounded in resource and income needs and local and historic tree use norms. An analytical focus on institutional bricolage processes contributes to situating how navigation and struggles over firewood are embedded in institutional processes. This intrinsically re-arranges and shapes formal and socially embedded institutions.

Article II – Masculinities and shea control

Abstract: Shea has historically been perceived as a feminine resource that women have controlled by the harvesting of fruits, processing, and trade of kernels and butter. Global demands for shea have reportedly increased the resource value and export levels from Burkina Faso. The findings corroborates previous studies in the West African region, which have pointed to an enhanced involvement of men in the shea value chain. The article explores how struggles over the resource play out through negotiations and contestations over gendered subjectivities. Male participation in the shea produce varies in Boessen and Tonogo. In some households, men control female labor, the shea produce, and its revenues. In other households, men cooperate

with their wife (or wives) in the collection and make joint decisions on how to use the resource. As the article argues, flexibility in gendered divisions of labor allows men to cross-gendered boundaries and participate in the feminized shea collection. With such processes, other masculinities emerge that would enable shea collection.

Contributions: The study provides empirical insights into how global demands for shea impact gendered relations and shea exploitation in rural Burkina Faso. Previous studies have argued that the increased value of shea has enhanced male control of revenues. This study contributes with more in-depth detail on the character of male involvement. The study conceptualizes how forest resource struggles are made in power relations of gendered divisions of labor, resource access and control, and subjectivities. The study furthers the insights into how masculinities are formed and re-arranged in the environment. Moreover, it shows how women respond to and contest male involvement by drawing on gendered subjectivities to claim the right to access and control shea.

Article III – Gender and forest institutions in community forestry

Abstract: This study explores the institutional processes and gendered dynamics in the (non-)implementation of community forest management (CFM) in two areas in the village of Tonogo in Burkina Faso. The study was enticed by the contrasting environmental conditions of the two forested areas, although they are within the same management authority. Kounghin forest is characterized by fire-ravaged and logged trees, while Tanglongo is densely forested. The theoretical framework draws on CI and FPE to situate forest management projects' complexity and gendered dynamics. The findings reveal that the apparent divergent ecological character of the two forests has been formed in two contrasting institutional contexts. The enforcement through customary authorities in Tanglongo was efficient but led to exclusion in management and ability to use forest resources. In the Kounghin forest, enforcement through customary authorities brought resistance and negotiations from a neighboring village over the right to customary power. This process dismantled the existing forest management but where women's firewood collection is blamed for the deforestation.

Contributions: The theoretical conceptualizations of CI and FPE is useful for analyzing the power and ecological relations of the CFM implementation process. The study addresses complexity in forest management as rooted in contextual social and gendered power relations. It also contributes to showing

how the project initiation itself changes social relations and reinforces gendered marginalization. This study, moreover, contributes with empirical insights on how struggles over the right to the forests continues, although the CFM projects have been closed. This knowledge can contribute to forest development and restoration projects taking historical and gendered power relations seriously. Such consideration is essential if NGOs and state organizations want to enhance equality.

Article IV – Forest governance, perceptions and practices of firewood collection

Abstract: This study takes its starting point in that formal and socially embedded institutions bring overlapping and sometimes contradictory laws, rules, and norms for forest users. It explores firewood practices and how women, the main providers of firewood to households, and forest guards as law enforcers, perceive forest management, firewood access, and practices. To situate the interrelations of forest institutions, perceptions, and practices, the study draws on a CI gender approach. Such approach sheds light on that forest perceptions are formed by lived experiences of forest change, ways of doing, and worldviews. These perceptions are not necessarily translated into practice where forest users adapt their practices to resource needs, the forest law enforcers, and internal justifications of doing right or understandings of just regulations.

Contributions: The study contributes with empirical insights into the complex and varying ways that firewood practices are formed. By paying attention to perceptions and practices, the analysis sheds light on the discrepancies between forest law enforcement and women perceptions of firewood collection and its impacts. Paying attention on the logic of practices is useful for showing why women struggle to access firewood. Such analysis contributes to empirical insights to how forest guards work with law enforcement becomes ineffective as the local need and demand for firewood remains high. Such findings suggest that women should be included in forest management, receive technical training in forest practices, and that attention should be directed toward decreasing firewood dependence.

6
Conclusions

This study set out to explore the relationship between gender and forest governance in Burkina Faso. It builds on data collected through ethnographic work in two rural villages, Boessen and Tonogo, in Burkina Faso. The thesis has approached forest governance as structured by and structuring power relations, with a focus on gendered *subjectivities*, *divisions of labor*, *access and control over resources,* and *institutions*. In the coming chapter, the results of the thesis will be presented in relation to its main research questions.

Divisions of labor, access to and control over forest resources

The first question asked in this thesis is how gender impacts the divisions of labor and the access to and control over forest resources. In approaching this question, the study has shown how small-scale and local firewood and shea extraction are firmly embedded in gendered divisions of labor within households in Boessen and Tonogo. These findings corroborate other scholarship (Coulibaly-Lingani et al., 2009; Gausset et al., 2005) that has found how the everyday usage, collection, and handling of firewood are strongly female-dominated and part of the feminine reproductive sphere of the household. The gendered norm of small-scale firewood collection being a female labor domain is reflected and reproduced at the household level, as well as in formal forest governance arrangements. Such labor norms were also observed in the domain of shea kernels. However, an increased participation of men in harvesting and trade in Boessen and Tonogo challenges the gendered norms of shea as a female-controlled crop.

Women and men in both villages describe that men's interest in participating in the shea harvest and trade came in conjunction with the resource's increase in value. The increased competition for the resource has several impacts on access and control relations. As Gausset (2005) similarly shows, the gendered power structures delimit women’s opportunities to decide over their bodies, income, and work in many households. In the case of shea, this

challenges women's abilities to negotiate for access and control of the resource when men a claim right to shea harvesting and profits from trade. It also means that in some households, women do the labor of collecting, processing, and selling shea kernels but men control the profit. The findings also shed light on how forest commons are a space where gendered norms and labor roles can be challenged as men cross gendered divisions of labor and harvest and trade shea. This crossing of gendered labor division was not observed in shea processing which were still a female dominated labor. Thus, household-level power dynamics provide multiple and varying shea resource relations. This means that the gendered relations were heterogeneous regarding shea access and control in Boessen and Tonogo.

Although firewood is described as a resource that has become increasingly expensive to purchase at the local market, the findings indicate that it is still a female-controlled resource. A few men were identified as professional woodcutters, but they described that they had sought other ways of earning an income due to wood scarcity. Such findings support women's account that the firewood trade is a labor-intensive occupation that one turns to when lacking other livelihood options. The study has also shown that forest governance mechanisms, such as CFM or woodcutting permits, that seek to delimit firewood exploitation, reproduce gendered differences, and further marginalize women in Tonogo and Boessen. Such management arrangements delimit women's possibilities to earn an income on tree resources and have excluded women from much of the decision-making. This marginalization should be viewed in the light that many households lack tenure rights and, thereby, the right to trees. In households with tenure rights, due to patrilineal land tenure structures, women are often deprived of their legal rights to land and its tree resources (Pehou et al., 2020). As previously mentioned, this makes the forest commons a vital space for women, especially the poorest, to access and control tree resources for subsistence and income use.

Navigating forest institutions

The second question asked in this thesis is how forest users perceive, navigate, and adapt to formal and informal forest institutions – and what implications this has for forest management and use. Exploring firewood and shea collection, transportation, and use, this study has shown the multiple practices people apply in their forest interactions to access and control these resources. The woodcutting permit that is explored in this study is expensive compared to what women gain from trading wood and time-consuming to access from the forest guards. Thus, most women cut without a permit, but

said they feared punishments and fees. To avoid being fined for not complying with the forest law, women deploy various strategies. Such as arguing that they cut dry wood for subsistence needs as they only have a machete or llalgo, or that they do not carry so much wood. Women also described that they take longer routes home from the forest or go early in the morning to avoid meeting the forest guard and mix green wood with dry to mitigate the forest guard's assessment that they have done something illegal. The forest guards in both villages interpreted and delimited subsistence use to the amount of wood women could carry on their head or on the bike rack. This meant that women adapted the ways they transported the wood. In Tonogo especially this meant that forest management reinforced gendered forms of labor.

These findings demonstrated the complexity of forest governance arrangements to regulate resources that local populations depend on for everyday life. Especially as assessment of legality relies on individual state representatives (forest guards) interpretation. My application of the theoretical framework demonstrated how women's adaptation, and navigation of their firewood practices, rendering current forest governance arrangements inefficient and arbitrary. This was especially so, regarding its application of how legality and illegality are assessed. Stricter regulations would most likely not significantly impact the sustainability of forest and tree resources if the households' need for firewood is sustained or if women lack other income opportunities. Women would most likely continue to adapt their practices to ensure a continued access. This situates households' firewood and income needs in conflict with the ambitions of the forest management. From how the forest guards in Boessen and Tonogo describe management, the ability to restrict firewood outtake is a prerequisite for how forest governance can bring successful protection of forest resources.

Expanding the conceptual understanding of practices beyond the actual doings to also encompass material and discursive interactions helped show the complexity of how women navigate access to tree resources. Some women said they disagreed with the state laws that interdict the cutting of living wood from certain species, since the local rules have treated these as being acceptable to cut. Other women described that they find the state regulations of firewood extraction necessary, as otherwise, "the bush would disappear" (Nikiema, a woman from Tonogo, interview, 2015). However, the regulations mean that she and other women constantly are adapting their forest practices not to get caught by the forest guards.

The findings also demonstrated how the increased resource competition for firewood and fruits from the shea tree has led both women and men to

challenge formal legislation and cultural norms and practices of extraction. For firewood, this is, for example, shown in how forest users describe that the demand for shea wood has made it more relevant to cut the tree, since it provides a valuable income. While others, especially middle-aged women and older women, refrain from cutting the shea because it holds emotional and cultural value. Both women and men described that while the shea kernel previously used to be harvested as it had matured and was felled to the ground – the resource competition had changed these practices as the fruit was often harvested before it had ripened. The availability of shea trees is decreasing on a national level, even if it is subject to special protection in state legislation. This means that the increased resource competition between women, and between men and women, provides additional strain on the ability to comply with formal forest governance arrangements.

As feminist scholarship has already pointed out, providing women with tenure rights is crucial for women to be able to access and take part in the benefits of agroforestry tree resources. My findings show that, for forest governance arrangements to be sustainable in the long-term, it is vital that women are actively involved in the management and steering decision-making. Moreover, it is crucial to pay attention to how women (and some men) navigate to access firewood. To secure the longevity of tree resources in rural Burkina Faso, geographically fragmented community-driven forest management is insufficient. Such solutions only risk averting firewood cutting to other places and adding pressure on the other forested areas. The study's analytical focus on practices showcased that institutional arrangements and forest projects must take their starting point from the actual use and resource needs. A holistic perspective on how and where firewood is retrieved, and which includes women's livelihood situation would be advantageous for arranging forest management.

Subjectivities

The final question asked in this thesis relates to how gendered subjectivities are formed and contested in struggles over forest use and management. Paying attention to gendered subjectivities has provided another way for this study to analytically approach how struggles over forest use and management are deeply related to gendered norms and rules. Especially regarding what are acceptable or desirable forest practices and for whom this is acceptable. These norms and rules manifest power relations that are both embedded within and embodied through people's forest interactions. This is visible in that both women and men describe how women *cannot* plant trees and in how

men describe that men should have “real jobs” and not harvest shea kernels. The study also draws attention to how forest governance arrangements re-enforce gendered subjectivities when they guide and steer legality and illegality in firewood collection through gendered notions of forest labor (see article I).

The theoretical framework has been highly useful to approach the power dynamics of institutional and resource change analytically. For example, in article two, where I analyze shea harvesting, it reveals that increased resource value led to increased resource competition. This made it more attractive for men to cross the gendered division of shea harvesting. In this process, women and men draw on shea as feminine labor to de-masculinize and contest men who harvest shea. Resource struggles also changes gendered subjectivities. Male involvement in the harvesting allows other masculinities to take place that encompass intra-household cooperation. While it also relationally challenges the feminization of the shea resource and the labor. Such findings support conceptualizations that gendered subjectivities continuously change, but also demonstrate how these processes shift in intensity in times of value or resource change.

Although firewood ‘has become business’ in Tonogo and Boessen due to its increased economic value, access struggles are not playing out over a masculinization of the resource. Instead, such struggles are a question of negotiating and re-arranging forest institutions. The findings suggest that the gendered divisions of labor, which situate women as main providers of firewood, shape specific gendered firewood subjectivities. These are reflected by state representatives, customary authorities, and in how women themselves describe women rather than the practices, as causing deforestation. Women are in this way, often portrayed as forest villains that destroy the forested areas. Some women also described themselves as being forced to be illegal as the scarcity of deadwood obliges them to cut green wood. The impacts of firewood access struggles thus become gendered as women becomes portrayed as being immoral, illegal, or destroying forests. Especially since the consumption of firewood is a necessity for cooking food for the household. Forest governance arrangements can thus reinforce gendered power relations and especially in situations of resource scarcity and competition. From an analytical perspective, such findings show that power dynamics, labor divisions resource value and resource competition are essential to consider in forest governance arrangements.

Concluding remarks

The theoretical framework for *analyzing gendered relations of forest governance* has enabled an analysis that demonstrates the gendered power dynamics and resource struggles in Boessen and Tonogo. The study has shown that gender differences in access and control to forests, agroforestry farmland, and decision-making in Boessen and Tonogo produce uneven and unequal ability for women and men to benefit from tree resources for their livelihoods. The study identified discrepancies and overlapping structures between state legislation, management arrangements, and local usage rules. These are reflected in the firewood collection and shea practices and how users relate to their practices in Boessen and Tonogo. Forest governance arrangements that restrict access to forest resources will inevitably re-arrange local power dynamics and forest interactions. Such findings point to a continuous dilemma for forest users to comply with forest governance laws, rules, and norms and their need for firewood and shea kernels for household or vending purposes. The increased value of shea re-arranged household power relations and has increased resource competition.

Thus, it is vital to understand the dynamics that change forest interactions in tree resource dependent communities, and the intersecting differences that impact access. These dynamics inform how forest governance and forest development projects will shape power dynamics and resource struggles and thereby also how inequalities are formed. The empirical contributions of how the state forest law (Forestry code, 2011) becomes enforced on the ground and how this enforcement interacts with how firewood and shea collection is done can be of use for policy managers in Burkina Faso. Especially since it shows inefficiency in protecting and providing a sustainable management of forested areas. Policy managers must better consider how forest governance translates into practice, so it does not reinforce physically burdening gendered labor roles and gender inequalities, The findings that the analysis shed light can also be useful for policy managers, development and forestry practitioners beyond the national scale of Burkina Faso. Especially as the study addresses how forest governance regimes such as CFM, woodcutting permits and usurp rights forms unexpected, unequal, and arbitrary outcomes. The conclusions made in this study has shown how important power dynamics and contextual specifics are for how forest governance will play out in practice. The analysis has laid out the details of how these relations are formed in Boessen and Tonogo. However, the framework presented and the analysis it allows would likely be useful for analyzing gender relations in forest governance in other research contexts as well.

As this study has demonstrated forest governance and management arrangements need to account for gender and carefully consider how social differences are constructed through decision-making processes at various scales. Equal tenure rights, and equal inclusion in management and knowledge production is crucial to make forests into spaces that do not further shape marginalization and exclusion for people. This also needs to include how policies and projects consider gendered power dynamics when targeting resources or activities such as shea or forest restoration.

Suggestions for future research

This study has shown that a gender analysis helps understand the relationships between forest governance and practices and the impact this has on livelihoods, gender equality, and forested areas. Recent years have been a time of political turmoil in Burkina Faso with recurrent coup d'états. The country has also been struggling with terrorist attacks on civil society and societal institutions that have rendered the state without control of large parts of the nation. The villages of Boessen and Tonogo have so far been spared, but neighboring communities have not. This situation has a widespread impact on human security, with millions of people being internally displaced, schools and health institutions closing, and food insecurity rising. This challenges the possibilities for long-term engagement and investment in the forestry sector. Given this situation, there is still a commitment to implement community-based forest projects in Burkina Faso and people devoted to solving deforestation, degradation, and inequality issues. In the light of this, there is a need for research that explores how development and forestry projects can support local communities in times of uncertainty. There is also a need for research that investigates how these insecurities and political turmoil have affected forests, management, and use of tree resources in Burkina Faso.

The challenges that rural livelihoods and forested areas in Burkina Faso are facing are also, as this study has raised, further indebted to intersecting issues such as climate change impacts, high poverty levels, and low education levels. This raises the need for the research community to continue to pursue research in Burkina Faso to understand how cross-sectoral and multiple stressors impact people's forest practices. There is also a need for research in Burkina Faso, as elsewhere, to understand how these societal and environmental changes affect women's ability to access and control tree resources, land, labor, and income. Further research on forest management arrangements is needed, explicitly addressing social differences and benefit sharing. It would be especially interesting for action-based research in the areas of gendered inclusion in the sector that targets tenure and resource

rights, female-led restoration projects, and explores the use and adoption of alternative cooking energy or energy-efficient stoves that can relieve forest resource exploitation and women's labor burden. Although such research might be complicated to establish from action-based research, there is still a need to understand why these arrangements have not worked correctly or to learn from the cases that have shown positive outcomes.

Svensk sammanfattning

I den här avhandlingen har jag utforskat skogsförvaltning (forest governance) och kampen om att kunna ha tillgång och kontroll över trädresurser i Burkina Faso. Skogsförvaltning syftar till att skogar och människors användning av dessa, måste regleras av väldesignade institutioner för att de inte ska användas felaktigt. I den här studien undersöker den dynamiken och vad det innebär för människor som är beroende av trädresurser för sitt uppehälle, men även det motsatta, hur användning inte kan styras och kontrolleras helt av institutioner. Avskogning och utarmning av skogsresurser sker runtom i världen och bidrar till minskad biodiversitet och klimatförändringar. Det påverkar också de tre miljarder människor som är beroende av skog och träd för sitt uppehälle och välmående negativt. Så är även situationen i Burkina Faso där skogsområden årligen minskar med runt 0.87 procent (FAO, 2020a, p. 143).

Under de senaste decennierna har regeringar och icke-statliga organisationer genomfört åtgärder för att decentralisera skogsförvaltningen genom att ge lokala samhällen större inflytande i skogsskötseln. Utgångspunkten har också varit att det ska ge lokalbefolkningen större möjligheter att ta del av fördelarna och inkomster från skogsområden (Etongo, Kanninen, Epule, & Fobissie, 2018). Dock fortsätter skogsområden att minska och fattigdomsnivåer är fortsatt höga i områden där folk är beroende av skogsresurser. Det gör frågan om varför institutionella ramverk ger oväntade och till och med negativa resultat inom skogsbruket mycket relevant. I den här studien försöker jag ta itu med detta genom att utforska hur skogsförvaltningen genom daglig användning av trädresurser omstruktureras, ifrågasätts och internaliseras.

Som på så många andra ställen runtom i världen är det framför allt kvinnor i Burkina Faso som ansvarar för att säkerställa att trädresurser som hushållen behöver finns hemma. Trädresurser är också viktiga inkomstkällor för kvinnor. Tidigare forskning har visat på hur kvinnor och män har olika tillgång och kontroll över skog, dess resurser och skötsel. I den här studien undersöker jag hur statliga lagar, regleringar och policys samt lokala, socialt förankrade normer, regler och förhållningssätt påverkar och förkroppsligas i den dagliga användningen av träd. Den här studien strävar efter att bidra med ny empiriska och analytiska perspektiv för hur vi, ur ett genusperspektiv, kan

förstå hur den vardagliga användningen av ved och shea omförhandlas, motsätts, och struktureras av institutioner. Med detta hoppas studien på att kunna bidra med ökad förståelse för hur och varför ojämlika och ojämna sociala förhållanden skapas i skogsförvaltning.

Syftet med studien är därför att kritiskt undersöka relationerna mellan skogsförvaltning, skogsanvändning och maktförhållanden ur ett genusperspektiv. För att möta detta syfte har studien tre övergripande frågeställningar. 1) På vilket sätt påverkas arbetsfördelningen, tillgång till och kontroll över skogsresurser i byarna Boessen och Tonogo i Burkina Faso av genus?

2) Hur uppfattar, navigerar och anpassar sig skogsanvändare till formella och informella institutioner - och vilka konsekvenser har detta för skogsanvändning och skogsskötsel?

3) Hur formas och bestrids genusrelaterade subjektiviteter i användning och skötsel av skog?

Studien utgår från ett teoretiskt ramverk som adresserar genusrelationer i skogsförvaltning. Ramverket tar sitt avstamp i att både förvaltning av skog och användningen av den beror på ojämlika maktförhållanden och resursrelationer. Ramverket utgår från att skogsförvaltning är format av och formar subjektiviteter, arbetsfördelning, tillgång och kontroll av skog och formella och informella institutioner. I studien undersöker jag hur dessa relationer formas igenom användningen av skogsresurser.

För att förstå och utforska relationer mellan skogsförvaltning, praktiker och människors erfarenheter och uppfattningar har den här studien utvecklats med ett etnografiskt angreppssätt till metodologi och metod. För att kunna göra en djupgående undersökning valde jag ut två byar, Boessen och Tonogo där jag observerade skogsområden, användning, tillgång och kontroll av träd, samt maktstrukturer och beslutsfattande. För att förstå dessa relationer strävade jag efter att spendera mycket tid i Boessen och Tonogo och genomförde 78 intervjuer med kvinnor och 119 med män. Jag genomförde också två gruppintervjuer med kvinnor och två med män i Tonogo samt tre med kvinnor och två med män i Boessen. För att säkerställa anonymiteten är mina samtalspartners samt byarnas namn i studien utbytta mot pseudonym. Jag har också samlat in dokument om lagstiftning, policys, kartor och andra dokument som berör skog och markresurser i Burkina Faso.

Studien har på olika sätt utformats för att ta etiskt ansvar. Jag är en vit kvinna från ett välbärgat västerländskt land och universitet som har gjort fältstudie i ett av världens fattigaste länder, som under många år styrdes av en fransk kolonialmakt, där många saknar läs- och skrivfärdigheter, trygg tillgång till mat och inkomstmöjligheter. Jag har gjort mitt yttersta för att hantera de ojämlika maktpositioner som dessa skillnader innebär under mitt

fältarbete och när jag har skrivit den här avhandlingen. Under fältarbetet var jag bland annat noga med att förklara syftet med studien och hur det insamlade materialet skulle användas. Vid intervjutillfället informerade jag om att intervjun var helt frivillig och att den kunde brytas närhelst av samtalspartnern. Intervjun hölls till max en timma för att inte ta för stort anspråk på folks dyrbara tid.

Dataanalysprocessen i studien antar ett interpretivistiskt förhållningssätt och förståelse för att kunskap är socialt konstruerad och producerad. Detta epistemologiska förhållningssätt till kunskapsproduktion innebär att den insamlade datan tolkas i konversation med det teoretiska ramverket. Datan har strukturerats i övergripande grupperingar som sedan har delats upp i undergrupper. Därefter har jag analyserat dess innehåll och dragit kopplingar och paralleller mellan olika delar.

Utifrån analysen drar studien slutsatsen att skogsförvaltningen är inbäddad i en maktdynamik som förstärker ojämlikhet och marginalisering i Boessen och Tonogo. Genusanalysen visar på ojämlika möjligheter för män och kvinnor, men också emellan könen, att få tillgång till och kontrollera ved och shea. Skogsförvaltningen förstärker exempelvis feminiserade arbetsnormer för hur ved huggs och transporteras och exkluderar kvinnor från att vara delaktiga i skogsskötseln i byarna. En vag och godtycklig definition av vad som räknas som hushållsbehov gör att kvinnor behöver anpassa och ordna sina praktiker efter hur skogsvaktarna tolkar och bedömer vad som är tillåtna mängder. Istället för vad som är praktiskt för kvinnor. Studien visar också att bristen på tillgänglig död ved tenderar att leda till att kvinnor löper en kontinuerlig risk att straffas för illegalt skogsbruk.

Ojämna maktförhållanden på hushållsnivå och det ökade värdet av shea har inneburit att män har ökat sitt deltagande i skörd och kontroll av sheakärnan. Framförallt visade studien att inom hushållen har män har ökat sin kontroll av vinsten från försäljning av shea. Genom att män tar del i skördandet utmanar de också rådande föreställningar om shea som en kvinnligt kontrollerad resurs. Kampen om tillgång till, och kontroll över shea öppnar upp för nya maskulinitetsnormer att komma fram. Exempelvis genom att par samarbetar i skördandet av shea och tillsammans bestämmer hur de ska använda inkomster. Det i sig utmanar rådande uppfattningar om hushållet som en genusuppdelad domän.

Som så många andra studier redan har visat, så behöver skogsförvaltning och skötselarrangemang beakta och ta hänsyn till genus och sociala skillnader i beslutsprocesser så att inte förvaltning förstärker marginalisering och utanförskap.

References

Ackerly, B. A., & True, J. (2019). *Doing feminist research in political and social science*: Red Globe Press.

Ackerly, B. A., & True, J. (2020). *Doing feminist research in political and social science* (2nd ed). London: Red Globe Press.

Agadjanian, V. (2002). Men doing “women's work”: Masculinity and gender relations among street vendors in Maputo, Mozambique. *The Journal of Men's Studies, 10*(3), 329-342.

Agarwal, B. (1997). "Bargaining"and gender relations: Within and beyond the household. *Feminist Economics, 3*(1), 1-51.

Agarwal, B. (2009). Gender and forest conservation: The impact of women's participation in community forest governance. *Ecological Economics, 68*(11), 2785-2799. doi:10.1016/j.ecolecon.2009.04.025

Agrawal, A., Chhatre, A., & Hardin, R. (2008). Changing Governance of the World's Forests. *Science (American Association for the Advancement of Science), 320*(5882), 1460-1462. doi:10.1126/science.1155369

Alvar-Beltran, J., Dao, A., Dalla Marta, A., Heureux, A., Sanou, J., & Orlandini, S. (2020). Farmers' Perceptions of Climate Change and Agricultural Adaptation in Burkina Faso. *Atmosphere, 11*(8), 827. doi:10.3390/atmos11080827

Arevalo, J. (2016). Improving woodfuel governance in Burkina Faso: The experts′ assessment. *Renewable & Sustainable Energy Reviews, 57*, 1398-1408. doi:10.1016/j.rser.2015.12.178

Arora-Jonsson, S. (2013). *Gender, development and environmental governance : theorizing connections*. New York: New York : Routledge.

Arora-Jonsson, S. (2009). Discordant Connections: Discourses on Gender and Grassroots Activism in Two Forest Communities in India and Sweden. *Signs: Journal of Women in Culture and Society, 35*(1), 213-240. doi:10.1086/599259

Arts, B., Behagel, J., Turnhout, E., de Koning, J., & van Bommel, S. (2014). A practice based approach to forest governance. *Forest Policy and Economics, 49*, 4-9341.

Arts, B., & de Koning, J. (2017). Community Forest Management: An Assessment and Explanation of its Performance Through QCA.

World Development, 96, 315-325. doi:10.1016/j.worlddev.2017.03.014

Asiyanbi, A. P., Ogar, E., & Akintoye, O. A. (2019). Complexities and surprises in local resistance to neoliberal conservation: Multiple environmentalities, technologies of the self and the poststructural geography of local engagement with REDD. *Political Geography*, 69, 128-138. doi:10.1016/j.polgeo.2018.12.008

Atkinson, P. (2007). *Ethnography: Principles in Practice* (Vol. 11). London: London: Routledge.

Awono, A., Ingram, V., Schure, J., & Levang, P. (2013). Guide for small and medium enterprises in the sustainable non-timber forest product trade in Central Africa: CIFOR.

Batterbury, S. P. J., & Bebbington, A. J. (1999). Environmental histories, access to resources and landscape change: an introduction. *Land Degradation & Development, 10*(4), 279-289. doi:10.1002/(SICI)1099-145X(199907/08)10:4<279::AID-LDR364>3.0.CO2-7

Behagel, J. H., Arts, B., & Turnhout, E. (2019). Beyond argumentation: a practice-based approach to environmental policy. *Journal of Environmental Policy & Planning*, 21(5), 479-491. doi:10.1080/1523908X.2017.1295841

Bello-Bravo, J., Lovett, P., & Pittendrigh, B. (2015). The Evolution of Shea Butter's "Paradox of paradoxa" and the Potential Opportunity for Information and Communication Technology (ICT) to Improve Quality, Market Access and Women's Livelihoods across Rural Africa. *Sustainability*, 7(5), 5752-5772. doi:10.3390/su7055752

Benjaminsen, G. (2017). The bricolage of REDD+ in Zanzibar: from global environmental policy framework to community forest management. *Journal of Eastern African Studies, 11*(3), 506-525.

Benjaminsen, T. A., & Hiernaux, P. (2019). From desiccation to global climate change: A history of the desertification narrative in the West African Sahel, 1900-2018. *Global Environment, 12*(1), 206-236.

Bensch, G., Grimm, M., & Peters, J. (2015). Why do households forego high returns from technology adoption? Evidence from improved cooking stoves in Burkina Faso. *Journal of Economic Behavior & Organization, 116*, 187-205. doi:10.1016/j.jebo.2015.04.023

Berg, B. L. (2009). *Qualitative research methods for the social sciences* (7th ed.): Boston : Allyn & Bacon.

Berkes, F., Folke, C., & Colding, J. (1998). *Linking social and ecological systems : management practices and social mechanisms for building resilience*. Cambridge: Cambridge : Cambridge Univ. Press.

Bixler, R., & Shmelev, S. (2015). The political ecology of participatory conservation: institutions and discourse. *Journal of Political Ecology*, 22(1), 164-182. doi:10.2458/v22i1.21083

Blaikie, P. (2006). Is Small Really Beautiful? Community-based Natural Resource Management in Malawi and Botswana. *World Development, 34*(11), 1942-1957. doi:10.1016/j.worlddev.2005.11.023

Bondi, L., & Davidson, J. (2003). *Troubling the Place of Gender. In Handbook of Cultural Geography.* London: SAGE Publications Ltd.

Borrini, G., Kothari, A., & Oviedo, G. (2004). Indigenous and local communities and protected areas: Towards equity and enhanced conservation: Guidance on policy and practice for co-managed protected areas and community conserved areas: IUCN. Gland, Switzerland and Cambridge, UK. ISBN: 2-8317-0675-0

Boserup, E. (1970). *Women's role in economic development*. London: George Allen & Unwin.

Bouda, H. N., Savadogo, P., Tiveau, D., & Ouedraogo, B. (2011). State, forest and community: Challenges of democratically decentralizing forest management in the Centre-West Region of Burkina Faso. *Sustainable Development, 19*(4), 275-288.

Bryman, A. (2012). *Social research methods* (4th ed.): Oxford : Oxford University Press.

Carney, J. (1993). Converting the Wetlands, Engendering the Environment: The Intersection of Gender with Agrarian Change in The Gambia. *Economic Geography, 69*(4), 329-348. doi:10.2307/143593

Carney, J., & Elias, M. (2006). Revealing gendered landscapes: indigenous female knowledge and agroforestry of African Shea. *Canadian Journal of African Studies/La Revue canadienne des études africaines, 40*(2), 235-267.

Cash, D. W., Adger, W. N., Berkes, F., Garden, P., Lebel, L., Olsson, P., . . . Young, O. (2006). Scale and Cross-Scale Dynamics: Governance and Information in a Multilevel World. *Ecology and Society, 11*(2), 8. doi:10.5751/ES-01759-110208

Chouli, L. (2015). The popular uprising in Burkina Faso and the Transition. *Review of African Political Economy, 42*(144), 325-333. doi:10.1080/03056244.2015.1026196

Cleaver, F. (2002). Reinventing Institutions: Bricolage and the Social Embeddedness of Natural Resource Management. *European Journal of Development Research, 14*(2), 11-30. doi:10.1080/714000425

Cleaver, F. (2012). *Development Through Bricolage: Rethinking Institutions for Natural Resource Management* (1st ed.). Abington, Oxon: Routledge.

Cleaver, F. (2017). *Development through bricolage: rethinking institutions for natural resource management*: Routledge.

Cleaver, F., & Whaley, L. (2018). Understanding process, power, and meaning in adaptive governance: a critical institutional reading. *Ecology and Society, 23*(2), 49. doi:10.5751/ES-10212-230249

Cleaver, F. D., & De Koning, J. (2015). Furthering critical institutionalism. *International Journal of the Commons, 9*(1), 1-18. doi:10.18352/ijc.605

Environmental Code (2013). Environmental code: Loi n°006-2013/AN portant Code de l'Environnement du Burkina Faso. Retrieved from http://extwprlegs1.fao.org/docs/pdf/bkf124369.pdf

Forestry Code. (2011). Forestry code: Loi nº 003-2011/AN portant Code forestier au Burkina Faso. Retrieved from http://extwprlegs1.fao.org/docs/pdf/bkf106703.pdf

Colfer, C. J. P. (2020). *Masculinities in forests: representations of diversity*: Routledge.

Cote, M. (2015). *Struggle for autonomy: seeing gold and forest like a local government in northern burkina faso.* ProQuest Dissertations Publishing,

Côte, M. (2020). Community-based citizenship: Autochthony and land claim politics under forest decentralization in Burkina Faso. *Geoforum, 109*, 171-179. doi:10.1016/j.geoforum.2019.07.012

Côte, M., & Gautier, D. (2018). Fuelwood territoriality's: Chantier d'Aménagement Forestier and the reproduction of "political forests" in Burkina Faso. *Geographica Helvetica, 73*(2), 165-175.

Coulibaly-Lingani, P., Savadogo, P., Tigabu, M., & Oden, P. (2011). Decentralization and community forest management in Burkina Faso: Constraints and challenges. *International Forestry Review, 13*(4), 476-486.

Coulibaly-Lingani, P., Tigabu, M., Savadogo, P., Oden, P.-C., & Ouadba, J.-M. (2009). Determinants of access to forest products in southern Burkina Faso. *Forest Policy and Economics, 11*(7), 516-524. doi:10.1016/j.forpol.2009.06.002

Cronkleton, P., Larson, A. M., Feintrenie, L., Garcia, C., & Levang, P. (2013). Reframing Community Forestry to Manage the Forest–Farm Interface. *Small-scale Forestry, 12*(1), 5-13. doi:10.1007/s11842-012-9229-8

Cruz-Torres, M. L., & McElwee, P. (2017). Gender, Livelihoods, and Sustainability: Anthropological research. In (1st ed.), pp. 133-145): Routledge.

De Koning, J., & Cleaver, F. (2012). Institutional bricolage in community forestry: an agenda for future research. In Bas Arts, Séverine van Bommel, Mirjam Ros-Tonen, & G. Verschoor (Eds.), *Forest-People Interfaces* (pp. 277-290). Wageningen: Wageningen Academic Publishers.

de Koning, J. (2014). Unpredictable Outcomes in Forestry-Governance Institutions in Practice. *Society & Natural Resources*, 27(4), 358-371. doi:10.1080/08941920.2013.861557

Dietz, T., Dolšak, N., Ostrom, E., & Stern, P. C. (2002). The drama of the commons.

Dietz, T., Ostrom, E., & Stern, P. C. (2003). The Struggle to Govern the Commons. *Science (American Association for the Advancement of Science), 302*(5652), 1907-1912. doi:10.1126/science.1091015

Djoudi, H., & Brockhaus, M. (2011). Is Adaptation to Climate Change Gender Neutral? Lessons from Communities Dependent on Livestock and Forests in Northern Mali. *The International Forestry Review, 13*(2), 123-135. doi:10.1505/146554811797406606

Elias, M., & Carney, J. (2007). African shea butter: A feminized subsidy from nature. *Africa: The Journal of the International African Institute, 77*(1), 37-62.

Elias, M., Hummel, S. S., Basnett, B. S., & Colfer, C. J. P. (2017). Gender Bias Affects Forests Worldwide. *Ethnobiology Letters, 8*(1), 31-34. doi:10.14237/ebl.8.1.2017.834

Elias, M. A, & Seema, A.-J. (2017). Negotiating across difference: Gendered exclusions and cooperation in the shea value chain. *35*(1), 107-125.

Etongo, D., Kanninen, M., Epule, T. E., & Fobissie, K. (2018). Assessing the effectiveness of joint forest management in Southern Burkina Faso: A SWOT-AHP analysis. *Forest Policy and Economics, 90*, 31-38. doi:10.1016/j.forpol.2018.01.008

Evans, A. (2016). The Decline of the Male Breadwinner and Persistence of the Female Carer: Exposure, Interests, and Micro-Macro Interactions. *Annals of the American Association of Geographers, 106*(5), 1135-1151. doi:10.1080/24694452.2016.1184557

Faggin, J. M., & Behagel, J. H. (2018). Institutional bricolage of Sustainable Forest Management implementation in rural settlements in Caatinga biome, Brazil. *International Journal of the Commons, 12*(2), 275-299.

FAO. (2018). *Global Forest Resources Assessment 2020. Terms and Definitions*. Retrieved from Rome:

FAO. (2020a). *Global Forest Resources Assessment 2020 Main report*. Rome. https://doi.org/10.4060/ca9825en

FAO. (2022). FAOSTAT - Burkina Faso. Retrieved from https://www.fao.org/faostat/en/#country/233

FAO, IFAD, UNICEF, WFP and WHO. (2022). The State of Food Security and Nutrition in the World 2022. Repurposing food and agricultural policies to make healthy diets more affordable. Rome, FAO. https://doi.org/10.4060/cc0639en

Faria, C., & Mollett, S. (2016). Critical feminist reflexivity and the politics of whiteness in the 'field'. *Gender, Place & Culture, 23*(1), 79-93.

Feeny, D., Berkes, F., McCay, B. J., & Acheson, J. M. (1990). The Tragedy of the Commons: Twenty-Two Years Later. *Human Ecology, 18*(1), 1-19. Retrieved from http://www.jstor.org.ezproxy.ub.gu.se/stable/4602950

Ferrarini, L. (2016). The dankun network: the donso hunters of Burkina Faso between ecological change and new associations. *Journal of Contemporary African Studies, 34*(1), 80-96. doi:10.1080/02589001.2016.1190529

Flick, U. (2014). *The SAGE handbook of qualitative data analysis*: Los Angeles: CA: SAGE.

Flick, U. (2018). *The SAGE Handbook of Qualitative Data Collection*. London: London: SAGE Publications Ltd.

Foli, S., Ros-Tonen, M. A. F., Reed, J., & Sunderland, T. (2018). Natural Resource Management Schemes as Entry Points for Integrated Landscape Approaches: Evidence from Ghana and Burkina Faso. *Environmental Management (New York), 62*(1), 82-97. doi:10.1007/s00267-017-0866-8

Freidberg, S. (2001). To garden, to market: gendered meanings of work on an African urban periphery. *Gender, Place and Culture: A Journal of Feminist Geography, 8*(1), 5-24.

Galvin, K. A., Beeton, T. A., & Luizza, M. W. (2018). African community-based conservation: a systematic review of social and ecological outcomes. *Ecology and Society, 23*(3), 39. doi:10.5751/ES-10217-230339

Gausset, Q., Yago-Ouattara, E. L., & Belem, B. (2005). Gender and trees in Péni, South-Western Burkina Faso. Women's needs, strategies and challenges. *Geografisk Tidsskrift-Danish Journal of Geography, 105*(1), 67-76.

Gebara, M. F. (2019). Understanding institutional bricolage: what drives behavior change towards sustainable land use in the Eastern Amazon? *International Journal of the Commons, 13*(1), 637-659. doi:10.18352/ijc.913

Gherardi, S. (2019). *How to conduct a practice-based study : problems and methods* (2nd ed.): Cheltenham, UK : Edward Elgar Publishing.

Gilmour, D. (2016). Forty years of community-based forestry: A review of its extent and effectiveness. *FAO Forestry Paper*(176).

Gray, L. C. (2002). Environmental Policy, Land Rights, and Conflict: Rethinking Community Natural Resource Management Programs in Burkina Faso. *Environment and planning. D, Society & Space, 20*(2), 167-182. doi:10.1068/d256

Hagberg, S. (2004). Political decentralization and traditional leadership in the Benkadi hunters' association in western Burkina Faso. *Africa Today*, 51-70.

Hagberg, S. (2006). The Transformation of ritual boundaries in resource-use practices in Burkina Faso. *Africa Today*, 109-129.

Hajjar, R., Oldekop, J. A., Cronkleton, P., Newton, P., Russell, A. J. M., & Zhou, W. (2021). A global analysis of the social and environmental outcomes of community forests. *Nature Sustainability, 4*(3), 216-U223. doi:10.1038/s41893-020-00633-y

Hall, K., Cleaver, F., Franks, T., & Maganga, F. (2014). Capturing Critical Institutionalism: A Synthesis of Key Themes and Debates. *European Journal of Development Research, 26*(1), 71-86. doi:10.1057/ejdr.2013.48

Hardin, G. (1968). The tragedy of the commons. The population problem has no technical solution, it requires a fundamental extension in morality. *Science (American Association for the Advancement of Science), 162*(3859), 1243-1248. doi:10.1126/science.162.3859.1243

Harris, L., Kleiber, D., Goldin, J., Darkwah, A., & Morinville, C. (2017). Intersections of gender and water: comparative approaches to everyday gendered negotiations of water access in underserved areas of Accra, Ghana and Cape Town, South Africa. *Journal of Gender Studies, 26*(5), 561-582. doi:10.1080/09589236.2016.1150819

Harris, L. M. (2006). Irrigation, Gender, and Social Geographies of the Changing Waterscapes of Southeastern Anatolia. *Environment and planning. D, Society & Space, 24*(2), 187-213. doi:10.1068/d03k

Harsch, E. (2017). *Burkina Faso: a history of power, protest, and revolution*: Bloomsbury Publishing.

Ingram, V., Ros-Tonen, M., & Dietz, T. (2015). A fine mess: Bricolaged forest governance in Cameroon. *International Journal of the Commons, 9*(1).

Jackson, C. (1999). Men's work, masculinities and gender divisions of labour. *The Journal of Development Studies, 36*(1), 89-108.

Johnson, O. E. A., Zalik, A., Mollett, C. S., Sultana, F., Havice, E., Osborne, T., . . . Billo, E. (2021). Extraction, entanglements, and (im)materialities: Reflections on the methods and methodologies of natural resource industries fieldwork. *Environment and Planning. E, Nature and Space (Print), 4*(2), 383-428. doi:10.1177/2514848620907470

Joshi, D., Monterroso, I., Gallant, B., Perera, K., & Peveri, V. (2021). A gender–natural resources tango: Water, land, and forest research. In P. Rhiannon & v. E. Anouka (Eds.), *Advancing gender equality through agricultural and environmental research: Past, present, and future* (pp. 182-220). Washingtong DC: International Food Policy Institute.

Kaijser, A., & Kronsell, A. (2014). Climate change through the lens of intersectionality. *Environmental Politics, 23*(3), 417-433. doi:10.1080/09644016.2013.835203

Karambiri, M., Brockhaus, M., Sehring, J., & Degrande, A. (2020). 'We Are Not Bad People'- Bricolage and the Rise of Community Forest Institutions in Burkina Faso. *International Journal of the Commons, 14*(1), 525-538. doi:10.5334/ijc.1061

Kent, R. (2018). "Helping" or "Appropriating"? Gender Relations in Shea Nut Production in Northern Ghana. *Society and Natural Resources, 31*(3), 367-381.

Kevane, M., & Gray, L. C. (1999). A Woman's Field Is Made At Night: Gendered Land Rights And Norms In Burkina Faso. *Feminist Economics, 5*(3), 1-26. doi:10.1080/135457099337789

Kimengsi, J. N., & Balgah, R. A. (2021). Colonial hangover and institutional bricolage processes in forest use practices in Cameroon. *Forest Policy and Economics*, 125, 102406.

Koffi, C. K., Djoudi, H., & Gautier, D. (2016). Landscape diversity and associated coping strategies during food shortage periods: evidence from the Sudano-Sahelian region of Burkina Faso. *Regional Environmental Change, 17*(5), 1369-1380. doi:10.1007/s10113-016-0945-z

Koffi, C. K., Lourme-Ruiz, A., Djoudi, H., Bouquet, E., Dury, S., & Gautier, D. (2020). The contributions of wild tree resources to food and nutrition security in sub-Saharan African drylands: a review of the pathways and beneficiaries. *International Forestry Review, 22*(1), 64-82.

Kooiman, J. (2007). *Fish for life interactive governance for fisheries*. Amsterdam: Amsterdam : Amsterdam University Press.

Kothari, A., Camill, P., & Brown, J. (2013). Conservation as if People Also Mattered: Policy and Practice of Community-based Conservation.

Conservation and Society, 11(1), 1-15. doi:10.4103/0972-4923.110937

Kronsell, A. (2006). Methods for studying silences: gender analysis in institutions of hegemonic masculinity. In B. A. Ackerly, M. Stern, & J. True (Eds.), *Feminist methodologies for international relations* (1st ed.), pp. 108-128). Cambridge University Press: Cambridge.

Kwame Harrison, A. (2018). *Ethnography*. New York: New York: Oxford University Press.

Lambrecht, I. B. (2016). "As a husband I will love, lead, and provide." Gendered access to land in Ghana. *World Development, 88*, 188-200.

Łapniewska, Z. (2016). Reading Elinor Ostrom through a Gender Perspective. *Feminist Economics, 22*(4), 129-151. doi:10.1080/13545701.2016.1171376

Rural land law. (2009). Loi nº 034-2009/AN du 16 juin 2009 portant régime foncier rural. Retrieved from http://extwprlegs1.fao.org/docs/pdf/bkf95496.pdf

Leach, M. (2007). Earth Mother Myths and Other Ecofeminist Fables: How a Strategic Notion Rose and Fell. *Development and Change, 38*(1), 67-85. doi:10.1111/j.1467-7660.2007.00403.x

Lemos, M. C., & Agrawal, A. (2006). Environmental governance. *Annual Review of Environment and Resources, 31*(1), 297-325.

Leßmeister, A., Heubach, K., Lykke, A. M., Thiombiano, A., Wittig, R., & Hahn, K. (2016). The contribution of non-timber forest products (NTFPs) to rural household revenues in two villages in south-eastern Burkina Faso. *Agroforestry Systems, 92*(1), 139-155. doi:10.1007/s10457-016-0021-1

Linkow, B. (2016). Causes and Consequences of Perceived Land Tenure Insecurity: Survey Evidence from Burkina Faso. *Land Economics, 92*(2), 308-327. doi:10.3368/le.92.2.308

Lovejoy, P. E. (1980). Kola in the history of West Africa (La kola dans l'histoire de l'Afrique occidentale). *Cahiers d'Études Africaines*, 97-134.

Lund, C. (2006). Twilight Institutions: Public Authority and Local Politics in Africa. *Development and Change, 37*(4), 685-705. doi:10.1111/j.1467-7660.2006.00497.x

Lund, C., & Boone, C. (2013). Introduction: Land politics in Africa – Constituting Authority Over Territory, Property and Persons. *Africa: The Journal of the International African Institute, 83*(1), 1-13.

Lune, H., & Berg, B. L. (2017). *Qualitative research methods for the social sciences* (Vol. 9). Essex, England: Pearson.

Madden, R. (2010). *Being ethnographic : a guide to the theory and practice of ethnography*. Los Angeles: CA: SAGE.

MAHRH. (2004). *Document de strate´gie de de´veloppement rural a` l'horizon 2015. Ministe`re de l'Agriculture, de l'Hydraulique et des Ressources Halieutiques*. Ouagadougou, Burkina Faso

Matlon, J. (2016). Racial Capitalism and the Crisis of Black Masculinity. *American Sociological Review, 81*(5), 1014-1038. doi:10.1177/0003122416658294

Mattijssen, T., Buijs, A., & Elands, B. (2018). The benefits of self-governance for nature conservation: A study on active citizenship in the Netherlands. *Journal for Nature Conservation, 43*, 19-26. doi:10.1016/j.jnc.2018.01.006

MECV. (2004). Arrêté n°2004-019/MECV portant détermination de la liste des espèces forestières bénéficiant de mesures de protection particulière.

MECV. (2007). *Programme d'action national d'adaptation a` la variabilite´ et aux changements climatiques du Burkina Faso*. Ouagadougou, Burkina Faso

MEDD. (2012). *Strategie et plan d'actions de l'initiative grande muraille verte au Burkina Faso*, Ouagadougou

Meinzen-Dick, R. S., & Pradhan, R. (2002). *Legal pluralism and dynamic property rights*. Retrieved from

Morales, M. C., & Harris, L. M. (2014). Using Subjectivity and Emotion to Reconsider Participatory Natural Resource Management. *World Development, 64*, 703-712. doi:10.1016/j.worlddev.2014.06.032

Murray Li, T. (2007). Practices of assemblage and community forest management. *Economy and Society, 36*(2), 263-293.

Nadembega, P., Boussim, J. I., Nikiema, J. B., Poli, F., & Antognoni, F. (2011). Medicinal plants in Baskoure, Kourittenga province, Burkina Faso: an ethnobotanical study. *Journal of Ethnopharmacology, 133*(2), 378-395.

Nhem, S., & Lee, Y. J. (2019). Women's participation and the gender perspective in sustainable forestry in Cambodia: local perceptions and the context of forestry research. *Forest Science Technology*, 1-18.

Nightingale, A. J. (2006). The nature of gender: work, gender, and environment. *Environment and Planning D: Society and Space, 24*(2), 165-185.

Nightingale, A. J. (2011). Bounding difference: Intersectionality and the material production of gender, caste, class and environment in Nepal. *Geoforum, 42*(2), 153-162.

Nightingale, A. J. (2019). Commoning for inclusion? commons, exclusion, property and socio-natural becomings. *International Journal of the Commons, 13*(1), 16-35. doi:10.18352/ijc.927

O'Reilly, K. (2005). *Ethnographic methods*. London: Routledge.

Ostrom, E. (2009). A General Framework for Analyzing Sustainability of Social-Ecological Systems. *Science (American Association for the Advancement of Science), 325*(5939), 419-422. doi:10.1126/science.1172133

Paré, S., Tigabu, M., Savadogo, P., Odén, P. C., & Ouadba, J. M. (2010). Does designation of protected areas ensure conservation of tree diversity in the Sudanian dry forest of Burkina Faso. *African Journal of Ecology, 48*(2), 347-360. doi:10.1111/j.1365-2028.2009.01113.x

Paulson, S. (2017). Changing Masculinities and Femininities in the (Re) Production of Andean Silvopastoral Systems. *The Earthscan Reader on Gender and Forests*, 163-280.

Pehou, C., Djoudi, H., Vinceti, B., & Elias, M. (2020). Intersecting and dynamic gender rights to néré, a food tree species in Burkina Faso. *Journal of Rural Studies, 76*, 230-239. doi:10.1016/j.jrurstud.2020.02.011

Peloso, M. M., & Harris, L. M. (2017). Pathways for Participatory Water Governance in Ashaiman, Ghana: Learning from Institutional Bricolage and Hydrosocial Perspectives. *Society & Natural Resources, 30*(12), 1491-1506. doi:10.1080/08941920.2017.1364451

Pilon, D. (2021). Beyond codifying common sense: from an historical to critical institutionalism. *Studies in Political Economy, 102*(2), 101-118. doi:10.1080/07078552.2021.1949787

Pouliot, M. (2011). Relying on nature's pharmacy in rural Burkina Faso: Empirical evidence of the determinants of traditional medicine consumption. *Social Science & Medicine, 73*(10), 1498-1507. doi:10.1016/j.socscimed.2011.08.037

Pouliot, M. (2012). Contribution of "Women's Gold" to West African Livelihoods: The Case of Shea (Vitellaria paradoxa) in Burkina Faso. *Economic Botany, 66*(3), 237-248. doi:10.1007/s12231-012-9203-6

Pouliot, M., & Treue, T. (2013). Rural People's Reliance on Forests and the Non-Forest Environment in West Africa: Evidence from Ghana and Burkina Faso. *World Development, 43*, 180-193. doi:10.1016/j.worlddev.2012.09.010

Quintana, A., & Campbell, L. M. (2019). Critical Commons Scholarship: A Typology. *International Journal of the Commons*, 13(2), 1112-1127. doi:10.5334/ijc.925

Resurrección, B. P. (2017). Gender and environment in the global south: from 'women, environment, and development' to feminist political ecology. In S. Macgregor (Ed.), *Routledge Handbook of Gender and Environment* (1 ed., pp. 71-85). London: Routledge.

Ribot, J. C. (1999). A history of fear: imagining deforestation in the West African dryland forests. *Global Ecology and Biogeography, 8*(3-4), 291-300.

Ribot, J. C., Agrawal, A., & Larson, A. M. (2006). Recentralizing while decentralizing: how national governments reappropriate forest resources. *World Development, 34*(11), 1864-1886.

Ribot, J. C., Lund, J. F., & Treue, T. (2010). Democratic decentralization in sub-Saharan Africa: its contribution to forest management, livelihoods, and enfranchisement. *Environmental Conservation, 37*(1), 35-44. doi:10.1017/S0376892910000329

Ribot, J. C., & Peluso, N. L. (2003). A Theory of Access*. *Rural Sociology, 68*(2), 153-181. doi:10.1111/j.1549-0831.2003.tb00133.x

Robinson, E. (2021). Citizens, custodians, and villains: Environmentality and the politics of difference in Senegal's community forests. *Geoforum, 125*, 25-36. doi:10.1016/j.geoforum.2021.06.017

Rocheleau, D., & Edmunds, D. (1997). Women, men and trees: Gender, power and property in forest and agrarian landscapes. *World Development, 25*(8), 1351-1371.

Rocheleau, D., Thomas-Slayter, B., & Wangari, E. (1996). *Feminist political ecology: global issues and local experiences*. New York: London: Routledge.

Rocheleau, D., Thomas-Slayter, B., & Wangari, E. (2013). *Feminist political ecology: Global issues and local experience*: Routledge.

Rousseau, K., Gautier, D., & Wardell, D. A. (2017). Renegotiating access to shea trees in Burkina Faso: Challenging power relationships associated with demographic shifts and globalized trade. *Journal of Agrarian Change, 17*(3), 497-517.

Rousseau, K., Gautier, D., & Wardell, D. A. (2019). Socio-economic differentiation and shea globalization in western Burkina Faso: integrating gender politics and agrarian change. *The Journal of Peasant Studies, 46*(4), 747-766.

Samndong, R. A., & Kjosavik, D. J. (2017). Gendered forests: exploring gender dimensions in forest governance and REDD+ in Équateur Province, Democratic Republic of Congo (DRC). *Ecology and Society, 22*(4). doi:10.5751/ES-09753-220434

Schroeder, R. A. (1999). *Shady practices agroforestry and gender politics in the Gambia*. Berkeley, CA: University of California Press. http://ark.cdlib.org/ark:/13030/ft5n39p01v/

Shackleton, C. M., Willis, T. J., Brown, K., & Polunin, N. V. C. (2010). Reflecting on the next generation of models for community-based natural resources management. *Environmental Conservation, 37*(1), 1-4. doi:10.1017/S0376892910000366

Sirimorok, N., & Asfriyanto, A. (2020). The return of the muro: Institutional bricolage, customary institutions, and protection of the commons in Lembata Island, Nusa Tenggara. *Forest and Society*, 4(1), 61. doi:10.24259/fs.v4i1.7676

Skutsch, M. M., & Ba, L. (2010). Crediting carbon in dry forests: The potential for community forest management in West Africa. *Forest Policy & Economics, 12*(4), 264-270.

Sola, P., Schure, J., Eba'a Atyi, R., Gumbo, D., Okeyo, I., & Awono, A. (2019). Woodfuel policies and practices in selected countries in Sub-Saharan Africa—A critical review. *Bois et Forêts des Tropiques, 340*, 5-19.

Sorgho, R., Mank, I., Kagoné, M., Souares, A., Danquah, I., & Sauerborn, R. (2020). "We Will Always Ask Ourselves the Question of How to Feed the Family": Subsistence Farmers' Perceptions on Adaptation to Climate Change in Burkina Faso. *17*(19), 7200. Retrieved from https://www.mdpi.com/1660-4601/17/19/7200

Sultana, F. (2009). Fluid lives: subjectivities, gender and water in rural Bangladesh. *Gender, Place & Culture, 16*(4), 427-444. doi:10.1080/09663690903003942

Sultana, F. (2021). Political ecology 1: From margins to center. *Progress in human geography, 45*(1), 156-165. doi:10.1177/0309132520936751

Taylor, S. J. (2016). *Introduction to qualitative research methods : a guidebook and resource* (4th ed.). Hoboken, New Jersey: John Wiley & Sons.

Thorsen, D., & Reenberg, A. (2000). Marginal producers or breadwinners: Women's cropping strategies and access to agricultural key resources in Boulgou province, Burkina Faso. *Geografisk tidsskrift, 100*(1), 47-59. doi:10.1080/00167223.2000.10649438

Thorsen, D. (2002). 'We Help our Husbands!'Negotiating the household budget in rural Burkina Faso. *Development and Change*, 33(1), 129-146.

Tegegne, Y., Cramm, M., Van Brusselen, J., & Linhares-Juvenal, T. (2019). Forest Concessions and the United Nations Sustainable Development Goals: Potentials, Challenges and Ways Forward. *Forests*, 10(1), 45. doi:10.3390/f10010045

Umaru Baba, S., & Van der Horst, D. (2018). Intrahousehold relations and environmental entitlements of land and livestock for women in rural Kano, northern Nigeria. *Environments, 5*(2), 26.

UNDP. (2022). *Human Developent Report 2021/2022 Uncertain times, unsettled lives: shaping our future in a transforming world*. Retrieved from: https://hdr.undp.org/system/files/documents/global-report-document/hdr2021-22pdf_1.pdf

UN Geospatial,. (2016). Burkina Faso (Cartographer). Retrieved from https://www.un.org/geospatial/content/burkina-faso

Wardell, A. D., Reenberg, A., & Tøttrup, C. (2003). Historical footprints in contemporary land use systems: forest cover changes in savannah woodlands in the Sudano-Sahelian zone. *Global Environmental Change, 13*(4), 235-254. doi:10.1016/S0959-3780(03)00056-6

Wagle, R., Pillay, S., & Wright, W. (2020). Gender Perspective in Forestry and Feminist Institutionalism. In Feminist Institutionalism and Gendered Bureaucracies (pp. 13-66). Singapore: Palgrave Macmillan.

Wiersum, K. F., Ingram, V. J., & Ros-Tonen, M. A. F. (2014). Governing access to resources and markets in non-timber forest product chains. *Forests, Trees and Livelihoods, 23*(1-2), 6-18. doi:10.1080/14728028.2013.868676

WorldBank. (2011). *Wood-based biomass energy development for sub-Saharan Africa: issues and approaches*. Retrieved from

Worldbank. (2021). *Poverty and Equity Brief Burkina Faso*. Retrieved from https://databank.worldbank.org/data/download/poverty/987B9C90-CB9F-4D93-AE8C-750588BF00QA/AM2020/Global_POVEQ_BFA.pdf

Yin, R. K. (2014). *Case study research : design and methods* (5. ed. ed.): London : SAGE.

Zougouri, S. (2008). *Derrière la vitrine du développement: aménagement forestier et pouvoir local au Burkina Faso.* Uppsala universitet,

Appendix I: Interview guide

- What is your name
- Are you married and do you have children?
- Who do you provide for in your family?
- Are you part of any association?
- How do you earn income?
- (Do you have any more ways to earn an income?)
- What do you use your money for?
- What would you like to do to earn income if you could choose?
- Do you have any animals?
- What do you farm?
- How big is your farmland?
- How long does the harvest last?
- How do you decide over the harvest in your household?
- Do you sell any of the harvest?
- Have you planted any trees on the farmland?
- (if no) why not?
- (if land is borrowed) can you use the yields from the trees?
- (if land is borrowed) who did you lease the land from?
- (if land is borrowed) have you given any lands back to its owner?
- (if yes), why did the owner ask to get it back?
- (if yes), do you give anything to the owner?
- Can a woman plant trees?
- (If no), why not?
- Which trees do you prefer to plant? (Or would you prefer)
- What is the biggest challenge for you and your household?
- How is the quality of your soils?
- Have you done anything to improve the quality of your land?
- Has anything changed in the village since you were young (younger/child)
- Who decides in the village?
- Who owns the forest?
- Who decides over the forests? What rules do you have for using trees?
- What do you think of these rules?

- If you could decide, how would the rules be? (Why?)
- Can you collect shea/firewood in the farmlands? Can you collect on other people's farmlands?
- What is the status of the forested areas?
- Do you cut firewood?
- Have you received any training on how to manage and cut trees?
- Do you harvest shea?
- How do you decide over the shea kernels in your household?
- What do you use the revenues for (if trade)?
- Have you had any conflicts over land?
- Has your land been parceled?
- What is your opinion about the parcels?

For women:

- Do you have your own farmland?
- (if yes) how did you get it?
- How do you find firewood?
- How is it to collect firewood?
- How was it to collect firewood when you were young/younger?
- Do you collect shea?
- Do you know of any man that collects shea?
- Does your husband collect shea?
- How do you decide over the kernels?

For village elders

- What is the history of this village?
- Has the village changed since you were young?
- If yes, how?
- How do you solve disputes in the villages?

Appendix II: List of interviews

1. Tree Aid - NGO
2. Ministry of Environment
3. Director at Agricultural Department in Kombissiri
4. FDC - Foundation le Développement Communitaire
5. Animateur ADRA – NGO
6. Director of Environnement - PDRP/BKB - Kombissiri
7. Directeur Générale des Forêts et de la Faune - Yako
8. Directeur SEMUS – NGO
9. Provincial Directeur de Agriculture – Yako & Kombissiri
10. Technical agriculture officer – Yako
11. Director of agriculture/ chef de service de la produit amenagement agricole – Ouahigoya
12. Direction Environnement – Ouahigoya
13. AZN – NGO
14. Opposition leader
15. Program director of climate issues (ministry of environment)
16. Commission of ecosystem (former director of INERA)
17. Forester provincial office – Yako & Kombissiri
18. ODE commune of Boessen
19. Land technician in commune of Boessen and Tonogo
20. SG of commune of Boessen and Tonogo
21. UAT Unité d'Animation Technique - leader of Sapone market
22. Land naaba, drum naaba and naabas in Tonogo and three neighboring villages, also in Boessen and two neighboring villages
23. CVDs and the CVD members in both villages
24. Youth groups in Boessen, Tonogo and Odui
25. Women's group in Boessen and Tonogo
26. Catholic, Protestant and Muslim leaders in Boessen and Tonogo
27. Four male woodcutters in Boessen and Tonogo
28. President of the hospital in Boessen
29. Swedish Embassy, Ouagadougou
30. Director of SP/CONEDD
31. Community members in Boessen and Tonogo