Contested firewood collection in Burkina Faso: Governance, perceptions, and practices

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ABSTRACT

This qualitative study explores how forest governance is perceived and embodied in everyday firewood practices in two rural villages in Burkina Faso. The study specifically looks into women who rely on firewood for their livelihoods. Such an exploration helps show how women who rely on firewood for their livelihoods respond to and perceive regulations, the synthesizing efforts, and the environmental impacts of firewood collection. To situate the interrelations of forest institutions, perceptions, and practices, the study draws on a critical institutional and feminist political ecology approach. The study departs from that firewood practices are shaped by institutional complexity and historical, cultural, and taken-for-granted ways of doing, and this impacts how forest governance plays out on the ground. By exploring the discursive and the actual practices, the study contributes insights into the discrepancies between forest law enforcement and women’s perceptions of firewood collection. Such analysis advances understanding of how forest governance in Burkina Faso is embodied and internalized in how people relate to and use firewood and the complex and varying ways firewood practices are formed. The 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.

1. Introduction

Forest governance is the arrangements regulating forests and their uses (Agrawal, Chhatre, & Hardin, 2008; Wiersum, Ingram, & Ros-Tonen, 2014). This qualitative study explores the gendered dynamics of firewood governance through monitoring, control, and information in the two rural villages, Boessen and Tonogo, in Burkina Faso. The study addresses how governance impacts perceptions of the forest, embodied forest practices, and livelihood opportunities depending on firewood use. Such exploration is imperative for the possibility of improving governance arrangements of state forests so that it contributes to rural development and empowerment.

As in many other African countries, women are the primary providers of firewood and other forest products in Burkina Faso. As in many countries globally, firewood is used and vital for most households. Wood fuel makes up about 90 percent of the national energy consumption for cooking food in Burkina Faso. Firewood also provides useful income for women and is especially valuable as a safety net in times of crisis (Koffi et al., 2016). The firewood is mainly supplied by state-governed forest commons in Burkina Faso. The availability of these trees is diminishing annually by almost one percent (FAO, 2020, p. 143). Common strategies by states to reduce firewood consumption from such forest commons are often by banning and limiting collection and offering alternative or energy-efficient fuel methods (Amoah et al., 2019). In Burkina Faso, the local population’s use of trees has continuously been perceived as destructive (Wardell et al., 2003). Therefore, formal laws, regulations, and development projects in Burkina Faso have been formed to impede over-exploitation (Bouda et al., 2011). This has been done by emphasizing monitoring and control of forests as well as educating rural populations on regulations (Wardell et al., 2003). Subsistence collection of dead branches for firewood is allowed by state law, but local customs allow for the cutting of certain green wood (Friman, 2020). How women perceive firewood practices and interactions with the forest authorities, the institutions in place and the forests they depend on for everyday life.

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1 The names of the villages and the interlocutors have been anonymized in the study.

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are poorly understood. It is unclear how women who rely on firewood for their livelihoods respond to and perceive regulations, the synthesizing efforts, and the environmental impacts of firewood collection. This raises the question of whether these regulations and management strategies effectively sustain forest resources and how they impact women’s livelihood opportunities.

The fact that there is a law regulating forest use might seem obvious or taken for granted in a global context. However, in West Africa, as in many other former African colonies, state regulation of forest resources is a relatively new phenomenon for local communities. In polycentric governance settings such as Burkina Faso, customary authorities have maintained legitimacy to distribute land, and as this study explores, locally formulated rules of how to collect firewood remain (Hagberg, 2001; Pehou et al., 2020). Women must, therefore, navigate the complexity of statutory (formal) and customary forest institutions, household and income needs, and possibly decreased access to tree resources in their firewood collection. This navigation and the importance of the resources for livelihoods form a complexity for how the forest authorities can be efficient with monitoring, control, and sensitizing measures. I draw from critical institutionalism (CI) (Cleaver & Whaley, 2018) and feminist political ecology (FPE) (Clement et al., 2019) in this study to address this complexity and show how firewood governance through control and synthesizing efforts forms gendered inequalities and produces uneven power relations (Tsing, 2005).

To understand firewood practices, I followed women in various interactions, such as when they collected firewood, cooked food, and sold wood. I also made structured observations of these interactions and interviewed women, customary authorities, and forest guards. Attention to forest management from a bottom-up perspective is essential for contextualizing the relevance of governance mechanisms in women’s daily lives and how they play out on the ground (Atmadja & Sills, 2016; Colfer, 2011; Nhem & Lee, 2019; Sanchez-Mercado et al., 2020). Such exploration is imperative for state actors, NGOs, and civil society to critically engage in developing forest management laws, regulations, policies, and projects that relieve the dependence on firewood without reinforcing inequality and social differences.

The following section introduces the institutional context in which tree resources are regulated on the commons. After that follows a conceptual framework for how this study approaches perceptions and gendered dynamics. A methods section follows this, and the results on how women and forest guards perceive the forests, governance, and their practices are presented. The paper concludes with the main findings and recommendations for future research in the last section.

2. Background

Forest resources such as firewood in Burkina Faso are regulated by statutory laws and policies and locally established norms and rules of doing. In this study, regulations imposed by the state are referred to as formal institutions, and regulations formed by socially shared norms, culture, social organization, and daily practices are viewed as informal, socially embedded institutions (Cleaver, 2002; Wiersum et al., 2014). This separation is helpful to empirically, theoretically, and analytically approach how women perceive and act upon various layers of laws, regulations, rules, and norms as they collect firewood.

These institutions are also gendered (Wagle et al., 2020). In Burkina Faso, there are often clear gendered roles and norms of who should do what. Women tend to be responsible for the reproductive sphere, which includes providing several tree resources such as firewood and food from fruits and leaves (Gaussset et al., 2005; Pehou et al., 2020). Studies have shown that firewood collection tends to be time-consuming, negatively impacting women’s health and other income-bringing opportunities (Matanga & Clancy, 2020). However, as the collection requires little investment, it is a common and necessary, albeit small, source of income for women who lack financial means (Friman, 2020; Poulion et al., 2012).

In Burkina Faso, local patrilineal customs tend to delimit women’s possibilities to inherit the land, placing ownership on men. As a rule, this also means that women do not own trees and are not entitled to plant trees (Kevane & Gray, 1999). The husbands often mediate access and control of farmland trees and their resources (Pehou et al., 2020). The lack of firewood from household farmlands and gendered tenure structures makes state-owned forest commons a vital source of firewood. As mentioned above, these forests are formally governed by state authorities, giving women little to no possibility to be involved in managing or deciding the forests they depend on.

Exploitation of firewood for commercial purposes is permitted through a permit scheme. With a permit, everyone can cut firewood wherever one wants on state land, except in forest reserves (foret classée) (Forestry law, 2011). This permit is relatively expensive compared to the amount of wood women can collect (Friman, 2020). This means that many choose to cut wood without a permit. Each department in Burkina Faso has two (sometimes one) forest guards patrolling forests and controlling so that firewood collection is done legally.

3. Theoretical approach

Much forest governance scholarship has focused on understanding what makes for ‘good’ governance, to provide equitable access to tree resources for local communities and sustainable forest management (Cleaver & Whaley, 2018; Nagendra & Ostrom, 2012; Yami et al., 2021). The CI and FPE perspective applied here can show why it is challenging to design forest institutions that can accurately predict beneficial social and ecological outcomes (Clement et al., 2019; Quintana & Campbell, 2019). In this study, I draw from these perspectives to show how knowledge about laws, regulations, and the environmental status of resources does not imply that users will conform to regulations (Robinson, 2021) and how it can form disempowered forest users.

As CI scholars have argued, forest interactions and human behavior are dynamic, continuously changing, and thus impossible to predict or steer entirely (Arts et al., 2014). This perspective can provide valuable insights into how the co-existence of plural authorities in forest management forms divergent perceptions of forest regulations and firewood practices (Cleaver & De Koning, 2015; Hagberg, 2006; Koning and Benneker, 2012). Drawing from CI and FPE scholarship, I approach forest governance as becoming through practices. More specifically, this is done by exploring the firewood collection and situating this to women’s and the state forest representative’s (the forest guards) perceptions of the forests, firewood use, and governance arrangements. Following perceptions and practices is vital for understanding how knowledge about the forest and regulations interrelates to the actual doings and how governance plays out on the ground (Hagberg, 2001).

Central to my reading of forest governance and practices is the understanding that forested areas are gendered spaces where women and men have differentiated access, control, and relations to tree resources and their management (Elías et al., 2017). Studies have shown how gender intersects with other social differences, such as age, socioeconomic status, and ethnic belonging, and impacts the ability to access forest resources and participate in decision-making and forest management (Agarwal, 2002; Arora-Jonsson, 2009). Women who use the forest, know it and depend on its resources risk being excluded from participating in decision-making and enhancing their well-being (Matanga & Clancy, 2020; Scheurlein, 2015). Approaching firewood practices as shaped by gendered power relations helps analyze the impact of forest governance on women’s ability to provide for their livelihood and participate in decision-making.

In the firewood collection, women have intention, routine, knowledge of the place, resources, and how to do it (Arts et al., 2014). Therefore, how firewood is collected and governed can be taken for granted but can reinforce uneven gendered power dynamics (Blaser, 2014; Lau & Scales, 2016). Women adjust, interpret, and arrange their
practices to the institutional setting, in which they will resist and contest norms, rules, laws, or institutional arrangements through their doings (Kimengsi & Balgah, 2021; Nightingale, 2011), albeit in a way that they find legitimate or necessary to their everyday challenges and to respond to the needs they are facing. There is thus a logic of practice to how firewood is collected (Cleaver & Whaley, 2018; De Koning & Cleaver, 2012; Karambiri et al., 2020). Such perspective matters for understanding why women might not conform to regulations although expressing sentiments of environmental deterioration due to firewood collection.

Scholars have argued that forest management and resource needs should be understood as a process that, for the individual, produces multiple relations and perceptions of the forest and practices (Choi, 2020; Fletcher, 2017). Forests, their resources, and people’s interactions also matter in more ways than the pure functions people derive from them (Sayer, 2011). These relations have emotional, symbolic, and moral dimensions of varying importance for people (Cleaver & De Koning, 2015; Gonzalez-Hidalgo & Zografos, 2019; Hagberg, 2006). This implies that forest users’ perceptions of forest laws and regulations do not necessarily correspond with their actions and that they draw on varying subject positions in their practices (Robinson, 2021). Such a perspective helps to address the varying and contradictory forest perceptions, practices, and impacts of firewood governance in this study.

4. Materials and methods

The primary data for this study were collected in the villages of Boessen, situated 140 km northwest of the capital, and Tonogo, 35 km south. The names of the villages and interlocutors have been anonymized to ensure the safety of the participants in this study. An exploration of perceptions and practices requires an in-depth approach to data collection. Therefore, this study has been developed with an ethnographic, methodological, and methods approach (Kwame Harrison, 2018). The data was collected using qualitative research methods over seven months in 2014 and 2015 and a shorter pilot study in 2012.

The two villages were selected out of a starting sample of 10 villages. They were chosen because they have the characteristics of quite typical villages within the Sudano-Sahelian climate zone. Both villages have similar socio-ecological and socio-political characteristics and about 2000–3000 inhabitants. Small-scale subsistence agroforestry farming dominates the agricultural landscape, with smaller patches of bush and forested areas between farm fields and fallows. The villages are, as so many other Burkina Faso villages, also characterized by legal pluralism (Côte & Gautier, 2018; Lund, 2006), where both government and customary authorities have a strong presence and are active in the decision-making regarding forest matters. A few differences in the ecological and forest governance character made the villages interesting for studying the management, perceptions, and navigation to access ecological and forest governance character made the villages interesting for decision-making regarding village matters. A few differences in the customary authorities have a strong presence and are active in the firewood. Boessen village is adjacent to one of 64 protected forests in Burkina Faso. The village had an inactive forest management committee varying subject positions in their practices (Robinson, 2021). Such a collection.

I held focus group discussions (FGDs) in each village’s first period of fieldwork. In Boessen, two were held with men and three with women. In Tonogo, two were with women and two with men. These discussions aimed to ask attendants about their livelihood challenges regarding forest resources precisely and in the village. As the discussion is in a group, people might feel less singled out than if it were individual interviews (Lune & Berg, 2017, p. 97). During the FGDs, we discussed, on a general level, the gendered labor norms, access and control of forest resources, and perceptions of the forest governance regimes. The FGDs opened for discussions on sensitive issues that many might have experienced, such as illegal firewood collection and resource struggles. These topics were then discussed more in-depth in the individual interviews.

Structured observations were essential for understanding forest practices and their relations to perceptions. I, for example, visited women in their household compound when they were cooking dolo beer and observed which tree types were used for maintaining a steady fire or how the firewood was stacked outside the compounds for later vending. A vital part of the observation was to join the women when cutting firewood for household consumption or selling to get insights into the lived experiences of navigating access (O’Reilly, 2005, p. 84). In doing so, I could observe and tune in to how women navigate forest management arrangements. For example, the subtle gestures of how women were keeping a lookout for the forest guard or the actual physical endurance of cutting the wood and walking home with the wood package on the head. It also meant observing which tools were used to collect firewood and when women were venturing out to collect wood or coming back to the household compound. Adding to this, I also observed forest labor viewed as masculine chores such as charcoal production, the felling of larger timber, or the households growing tree seedlings.

It is challenging to capture how people describe their perceptions of forests, laws, norms, and rules. There is an inherent contradiction and power dynamic in being open and perhaps criticizing the authoritarian relations that forest institutions entail. In my position as an outsider, coming from a country such as Western society, it was essential for me to spend much time in the villages to become well-known and trusted in the community. I was also careful to interact in culturally appropriate ways during the fieldwork and cross-check the information given to me to ensure that I understood it correctly. To analyze the data, I have drawn on the theoretical concepts in this study to interpret the perceptions and practices. To structure the data analysis, I sought general themes and sub-themes in the collected material (Kwame Harrison, 2018, p. 82). I first grouped the data into broad themes of how people...
describe forests, their practices and management arrangements, and how women collect and use firewood. After that, I formed sub-themes to analyze the data in more detail and make analytical connections between the sub-themes (O’Reilly, 2005, p. 184).

5. Forest governance in Boessen and Tonogo villages

In this result section, I present how women perceive and contest firewood regulations, why “their” firewood forests are deteriorating, and how the forest guards describe their role as law enforcers. This will be done by first presenting how women describe the status of forested areas in their firewood collection sphere. After that follows a section on how women adjust their practices to laws, norms, and rules. One section is dedicated to discussing the contestations of dolo-beer producers since women strongly described beer production as a root cause of why the statutory laws and culturally embedded norms on exploiting shea trees for firewood so often is breached. I will then move forward to women’s argument about why they resist and contest statutory and socially embedded rules and culturally appropriate ways of collecting firewood. Lastly, I present and discuss the forest guard’s perceptions of firewood practices and their impact on enforcing statutory forest laws. Combined, these sections provide an argument for the inefficiency of the control, monitoring, and synthesizing approach to forest governance in Burkina Faso (see also Gautier et al., 2015).

5.1. When women describe their firewood forests

In both Boessen and Tonogo villages, women consistently describe the status of the forested areas – namely, that they are decreasing. This came out strongly in the interviews and is commonly described as stated by Kolgo, a female firewood collector from Boessen, who says that “the trees are disappearing, and land is becoming dry.” Especially the older generations (from about 40 years and older) situate their perceptions of forested areas to what once was. Older people describe tree density in the villages by visualizing the changes – like Raomisi, a woman from Boessen who says, “you see the village center over there, when I was young you could not see any buildings, everything was just forest here.” These descriptions of increased plantations and decreasing naturally generated forests concur with statistical data that show the same phenomenon at a nationally aggregated level (FAO, 2020, pp. 143-150). As argued by CI scholars, these perspectives show that knowledge is not necessarily imposed from above (Arts et al., 2014; Robinson, 2021). Instead, it shows the impact of lived experiences on perceptions of forest change. How one relates to the ecological status of the land is thus individual and conveyed by both historical knowledge and current relations with trees (Hagberg, 2001). Such a perspective helps us understand how perceptions of practices and forest governance arrangements emerge.

A majority of the interviewed women moreover expressed knowledge about linkages between deforestation and a changing climate, by describing that deforestation leads to less or disappearing rain and droughts. Both men and women describe that their ability to grow crops has become affected by irregular rainfall, and the limited possibility of watering animals in forest ponds complicates livestock keeping. In these ways in which the impact of deforestation is described, it is not an abstract imagination but an observable phenomenon and an expressed knowledge that women testify to. As developed further in the following sections, women’s concerns regarding droughts can help explain why some firmly follow the forest law (Cleaver & Whaley, 2018).

5.2. Women’s perceptions of firewood availability and adjusting practices

Women described in detail their experiences of deforestation and degradation in the context of firewood. In Boessen and Tonogo, women cut firewood for household consumption, and some sell branches at the local market or to the traders. Women and men, therefore, become affected differently by deforestation and degradation, especially in the context of firewood. Nikiema, a woman from Boessen, described her embodied experience that firewood nowadays is further away and harder to find – “so, you must go far on the bike to see it [firewood].” Women often expressed similar accounts in the interviews. In Tonogo, women described how they have changed where they search for firewood and nowadays go outside the village territory. In Boessen, several women described going to the classified forest reserve bordering the village. Other women commonly referred to a forested area about 4–5 km from the village center. This corroborates other studies, finding that lack of firewood has gendered implications as it adds to the work burden of women and decreases their possibilities for other income-generating activities (Ammoah et al., 2019; Njenga et al., 2021; Reij et al., 2005).

The scarcity of firewood is interlinked with how state laws define usurped rights. According to state law, only deadwood can be allowed for subsistence collection. Often when women described the lack of firewood in the interviews, they referred to a low availability of deadwood. Hence, it became clear that they were aware and familiar with these formal regulations. Deadwood is also preferred, as it burns better. However, through the observations of firewood practices, it was common to see that women cut green living wood. This implies that when women cut living wood, they do not do so out of ignorance of the legislation. It can instead be seen as grounded in a logic of practice where women need to fulfill the responsibilities of their household chores (Faggin & Behagel, 2018). For example, Mariam stated, “we cut to cook, so even if we have to hide to cut, we have to do it.” Other women claimed they now buy wood as they cannot find deadwood.

The observations and interviews thus showed that women had adapted their practices by walking further distances to search for deadwood, and many women also cut green wood. The fieldwork also showed that women have adapted their cooking practices because of the scarcity of deadwood (also shown by Waswa et al., 2020). Women said they do not cook as often as they used to and prepare food for several meals instead. Some women also explained that they try to cook more with other burnable materials than wood, such as field straws. In an FGD with women in Boessen, one woman laughed when asked how they determine if someone is poor, adding, “Everyone is poor, and you know, even wood, we cannot get it. We use cow dung for cooking. We are like the Fulani people.” The Fulani are a nomadic ethnic group who usually use cow dung to make a fire.

As the woman from the FGD expressed, the scarcity of dry firewood has changed their cooking practices and how they relate to themselves as they “become” like the Fulani. The sentiments from the woman in the FGD can be seen as a way to explain that deadwood scarcity means that women abandon their culturally grounded and routine ways of collecting firewood and cooking. Thus, there are differences between which wood women cut and how they described the adjustment of practices. Some women described that they are forced to cut green wood, and others described that they try to adjust their practices to make up for the scarcity of deadwood. There is thus a logic of practice in both adjustments, but which are grounded in two separate reasoning. These will be explored in more detail in the coming sections.

5.3. Adjusting firewood practices to laws, norms, and rules

Women who expressed knowledge of the environmental impact of forest degradation often inserted with a moral reflection on their firewood collection practices. Hawai, a woman from Boessen, described how women in her household “refuse to cut fresh wood because trees bring rain, so if we cut fresh wood, we will have a drought.” This reveals how the practices of how firewood collection should be done, for some women, are embedded in experiences and knowledge of the ecological consequences of deforestation. It might have been a timely coincidence, but the wood at Hawai’s household at the time of the interview was only dry wood. Although it was more common to see women mixing dry wood with fresh or completely cutting green branches, some women
were only observed collecting or storing dead wood. The hardships of finding the dry wood and having long transportation back and forth to the household can be acceptable for women like Hawa because it aligns with internal justifications for doing what they perceive is morally as well as legally right (see also Asiyandi et al., 2019).

During the fieldwork, many women expressed that they did not want to cut shea or other fruit-bearing trees. This was confirmed when observing firewood cutting and the type of wood transported in Boessen and Tonogo. That many perceive shea as a sacred tree, and its use in ceremonial practices are two of the reasons why many refrain from cutting firewood from this tree. The male imam leader from Boessen explained that the interdiction to cut fruit trees has been deeply embedded in moral and embodied understandings of life:

In the past, people would stay away from cutting fruit trees. Morally, people thought like that. Women thought they would stop having babies if they cut fruit trees.

To abstain from cutting fruit-bearing such as the shea trees therefore not only reflects obedience to the law but can be anchored in several aspects – local norms of forest practices, reflections of worldviews, and because women want to ensure access to the fruits (Friman, 2020).

The overlapping formal laws and socially embedded rules are also described by Rilly, a female woodcutter from Boessen, who asserted that apart from living trees, “every tree that gives fruit the tis naaba (refers to forest guards and translates to the chief of the trees in Moore language) forbids to cut. Even us, we usually forbid it.” In these descriptions, the imam leader and Rilly distinguish between the forest guards and themselves. The forest guard, in that way, is the other, the outsider whose regulations and laws are separate from the community itself. When women align their practices with the forest laws, it should not necessarily be viewed as accepting state authority. (Hagberg, 2001).

Several women, however, expressed an acceptance of the forest laws by describing the forest laws as good, often with sentiments in line with Hawa’s argument above, namely that cutting green wood destroys the forest. Aminata, a woman from Boessen, shared that the forest laws “are necessary. If the tis naaba would allow everyone to do what they want, it will become a razom piiga (empty space in the local Moore language).”

Eva, a woodcutting woman from Boessen, described her trust in the forest law by saying that “we think that if the tis naaba has forbidden it [cutting fresh wood], it is to help us.” These women described the forest law as an acceptable way of regulating their practices. This was also shared by some women whom the forest guard had caught collecting green wood and women who described fear of the forest guards.

An acceptance of state regulations is also described by Kolgo, a female firewood collector from Boessen, who described the formal forest laws and management authorities by saying, “I think this is a change in the world.” Kolgo describes that the forest authorities brought new tree species, such as Nim, Acacia, and Eucalyptus, from which the village has benefited. This she argues, has given the forest guards the legitimacy to decide over the forest resources. Kolgo concluded by saying – “we cannot decide over the trees ourselves.” Within this kind of argumentation and by cutting dry wood, women reinforce the authority of state forest management and de-legitimize local rules and norms of firewood practices and management. This shows the significance for formal institutions to establish legitimacy for regulations. It also shows how local populations, and especially women who rely on firewood, are excluded from being involved in management. The women who describe their understanding this way clearly understand and know of the regulations but do not necessarily agree with them (see also Garnek et al., 2016). In the following sections I will discuss the firewood practices by women who contest and resist the formal law.

5.4. Over-harvesting as caused by the female dolo-beer producers

When asked why firewood is decreasing, people recurrently described that it was due to dolo beer producers which generally is done by women. As Sophie, a woman from Boessen who cooks beer twice a week, described that firewood is decreasing because “the population is increasing, and beer-makers are becoming numerous”. Making the dolo beer is a wood-demanding process requiring thick branches, preferably from the shea tree, as this takes longer to burn than small branches. Women in both Tonogo and Boessen described that such large deadwood cannot be found and that beer-making, therefore, requires the cutting of green wood. Due to the high demand for beer, dolo producers and firewood collectors described a continuous surge for shea wood on the local market. Sophie reflected on this by saying that if dolo-producers would go to the forest to cut wood, “they would destroy it. One year later, there would be no more trees left.” Women in this way take a double blame for causing forest degradation and deforestation in Boessen and Tonogo by themselves calling out firewood collection and dolo-production as the main causes. Rarely the end use such as eating cooked food and never drinking dolo-beer nor, inefficient cooking stoves (Bensch et al., 2015).

Blaming firewood degradation on the dolo-production can be viewed as a way for women to distance themselves from the scarcity they are witnessing. Although both woodcutters and dolo-producers depend on trees for their livelihoods, it is from two gendered socio-economic positions with different firewood relations. Dolo beer production requires investment capacity only women from relatively well-off households can access. Firewood collection on the other hand is described as a low-ranked income activity that women deploy out of necessity. Most women referred to dolo trade as the occupation they would prefer to have.

Most woodcutting women cannot exploit shea because they often lack tools, such as a saw or axe, for thicker wood. For women with the right equipment to cut larger shea branches, the trade to dolo producers brings a recurring income. However, they put themselves at risk for heavy fines as the tree is under special protection by state law and forbidden to cut even with a permit.

The differences between firewood collectors and shea producers were also reflected in how women talked about protecting the shea tree. Most women who trade firewood depend on forest commons to be able to harvest shea fruits. While most interviewed beer producers secure access to shea kernels either through purchase, from the household farmland or from industrially produced oil at the market. There is, thus, competition between dolo-producers’ need for shea branches and firewood collectors’ need and desire to protect the shea tree from being cut down. This competition forms two divergent ways for how women relate to firewood extraction where some women clearly refrain from cutting shea while others do it because it provides income.

To secure the provisioning of logs for dolo-production, the women producing the beer in Boessen and Tonogo tend to navigate the scarcity from the local female firewood collectors by purchasing wood from male traders from other villages. The traders can transport about five times the amount of wood in motorized carts compared to what women can carry on their heads or bikes. The wood often includes shea that has been logged without a permit. While state legislation regulates which wood is legal to cut, there is no regulation on how dolo is produced. There are two conclusions that can be made from this. First, that men tend to have access to transportation and equipment that makes it possible to extract larger amounts of large branches such as shea. This access moreover provides possibilities for larger income for men than for woodcutting women. It, moreover, ensures that women can produce dolo beer for the local market and provides income opportunities. This indicates that, despite proven difficulties with implementation, there is a potential to work with energy-efficient measures both for households and for larger food producers (Bensch et al., 2015).
state defines as illegal fresh wood (Coulbaly-Lingani et al., 2009). When Yilli, a woman from Tonogo, is asked what she thinks about the legislation that prohibits the cutting of fresh wood, she describes that “if the forest guard forbids it, we should respect it, but we do not know why he forbids the cutting of fresh wood.” This expression reflects the local rules and how, historically, it was allowed to cut the green wood from nonfruit-bearing tree varieties. Several women described this local rule, which is also commonly practiced for picking edible leaves from tree varieties with thorns. Momana, an older woman from Boessen who sometimes cuts wood for vending, expresses her sentiments about the state legislation by saying:

It is not a good rule to forbid living wood/...especially not for older women, as you must go several kilometers. If living wood was allowed, they could collect within 3 km. Those who can go far should go farther, and those who cannot should go closer.

Momana’s statement reflects not only a contestation of the state law but also sheds light on how legislation impacts women differently, as described by her and other women. Here, Momana reflects upon age, but women also described other limitations in accessing firewood, such as being occupied with other time-consuming household chores or physical conditions – a broken arm, heart problems, back pains, or other issues. While some women can purchase wood, it is generally different from those who described their inability to collect. These women also tend to lack the financial means to pay for firewood. Thus, there is a logic of practice (Arts et al., 2014) as to why several women are motivated to cut green wood and shea, although most have refrained from doing so. There is also a logic of practice as to why most women refrained from cutting shea and why some women expressed discontent with the state law prohibiting the cutting of non-fruit trees.

The perspective of legislation being imposed from the outside and separate from the inside norms, rules, and forest relations as reported by Hagberg (2001) is in the case of firewood reflected in how people in Boessen talk about the forest reserve forest classée Boessen, where many women collect their firewood. The community’s forest is called nazara weogo (the white man’s forest in the Mooré language). Amadou, an older man from Boessen, described that before the nazara (white man in Mooré, which refers to the French colonial authorities), there were no laws on trees. After the nazara left, the forest guards arrived in the village and forbade the cutting of fresh wood. A hesitant approach to the forest guards is expressed by firewood collectors, like Komkaga, an older woman from Boessen, who answered the question of why there is a forest guard by saying: “I do not know; it is a matter of the nazara [white people].” As argued for earlier, this does not mean women necessarily argue for that the rules and formal authorities are illegitimate. It does, however, show that the colonial legacy that current legislation carries (as Wardell et al., 2003 and others have shown) is reflected in how people describe and relate to state law.

Several women also described being afraid of cutting green wood as they could be charged with illegal practices and fined by the departmental forest guard. Some women explained that they were afraid even though they carried dry wood. The forest guards in both villages expressed that women need not be afraid to meet them if they only carry dry wood. In the village of Tonogo, women feared the forest guard would beat them. The forest guard that these women refer to had quit his position a few years earlier, and even though the women said the new guards did not beat them, the fear still lingered. At the same time, others described that they were not afraid since they only cut dry wood. Women use several strategies to avoid meeting the forest guards when cutting and transporting green wood. They, for example, walk or hike on smaller trails rather than travel on the roads; hide when they hear a moped or someone approaching; and collect early in the morning or on Sundays to avoid the forest guard’s working hours (see also Friman, 2020). The forest guards described that they try to patrol the forested areas at different hours and days of the week to be unpredictable for woodcutters.

As this chapter has shown, women’s resistance to follow the statutory forest law derives from varying relations and perceptions of the legitimacy of state law and its enforcement. It can also be motivated as done in a logic of practice as some women describe it as necessary to cut green wood in order to manage their everyday life (Behagel et al., 2019). As women who cut green wood often avoid fruit bearing trees it is likely that this necessity also occurs in conjunction with that, according to local practices, “useless” trees have been considered acceptable to cut for firewood. Traditional ways of doing thus becomes reinvented in times of resource decline and forms a new meaning as it is intertwined with a logic formed around necessity to cut green wood.

5.6. Forest guard’s perceptions of firewood practices and legal enforcement

From the managerial side, i.e., the three forest guards representing the forest departments that Boessen and Tonogo belong to, all of them described the firewood collection as the main challenge for forests and the primary cause of deforestation. The forest manager in the departmental forestry office in Tonogo blames women for this when he says, “women are destroying the forests here with their reckless cutting.” Such sentiments, which explicitly identified women as destroyers, were also expressed by the regional forest manager in Boessen. Other forest officials were not so upfront with depicting women as forest destroyers, but they identified their practices as destructive. In Boessen, the forest guard provided a more nuanced description of firewood extraction by saying that the women do not have a choice but to cut wood as they need it for their households.

To solve this problem, the departmental forest and agricultural office officers, on several occasions during the interviews, returned to a need to sensitize women. This means educating and informing women about the forest law so that they cut firewood ‘sensibly.’ The forest guard in Tonogo stated that women should learn not to be reckless when cutting the branches, thus alluding to the fact that woodcutting women lack something – a sense – which they need to acquire. Such reasoning assumes that if women only understand and know of the regulations, they will obey the law. To sensitize women, the forest guards have interacted with woodcutting women using different approaches. When he started his position in Boessen village, the forest guard had gathered all the women who cut firewood to “talk to them,” i.e., to educate women on forest law. Otherwise, the primary strategy in Boessen and Tonogo is to “sensitize women” when they meet them in the forest, especially when encountering women cutting the branches illegally. The forest guard in Boessen concluded that if they continue to sensitize women for 10–20 years, they will achieve the objective of sustainable forest practices.

To increase compliance with the law, the forest guards patrol and monitor the forested areas. One of the forest guards in Tonogo motivates the need for patrolling by saying that women “know that if I am no longer there, they can do whatever they want. They seem to forget that this is to help.” The forest guard in Boessen described that “land is degraded, and 80 % of this is because of poverty,” but he cannot always issue fines for illegal collection as people are too poor to pay. He concludes, saying, “This is irritating because life as a forest guard is not easy.” The sensitizing is mainly accomplished by controlling the firewood collection, where women risk being punished with heavy fines for illegal practices.

Uneven gender dynamics were made visible in the comparison to men, at least some men have received education in tree pruning techniques that allow for the regeneration of branches. None of the interviewed women had training in cutting techniques or forest management. Unequal access to knowledge and training thus further marginalizes women and becomes embedded through firewood practices (Clement et al., 2019; Nightingale, 2019). Without this training, women continue to cut living forest branches with a machete, often without a clean cut, which does not allow the regeneration of branches and then risks taking the full blame for deteriorating forests.
6. Discussion and conclusions

This article explored the perceptions and practices of firewood collection and its governance from a FPE and CI perspective. The study has explicitly shown the complexity in women’s firewood practices and heterogeneous relations to the forest, practices, and governance arrangements. Following perceptions and practices in firewood collection, this study shows how firewood governance is profoundly gendered and brings ambiguous impact on reducing firewood consumption. Drawing from FPE and CI conceptualizations, the concept of logic of practices has helped situate the varying ways that women perceive and motivate contestations and compliance to statutory laws, regulations and gendered norms of doing firewood collection. As the study showed, several women in both villages testified to that they felt obliged to follow the forest law as they did not want to contribute to drought and deforestation. Several women also testified that scarcity of dry wood means they feel forced to cut the illegal green wood to provide for their household or the market. The logic of practices moreover helped show that the search for an income makes women who cut fruit-bearing trees abandon local, historical norms of forest practices and situate themselves at the risk of being fined by the forest guards.

Analyzing the heterogeneous firewood collection from FPE and CI conceptualizations has moreover shown that the practices depend on various intersecting factors such as economic capacity, moral beliefs, age, norms of doing, gender labor roles, and household needs. These intersecting factors complicate forecasting the impact of the forest guards’ sensitizing efforts or the impact of patrolling and handing out fines for illegal small-scale firewood practices. Paying attention to everyday decision-making and practices of firewood collection and identifying local consumption patterns can help policy makers make visible how law compliance is interconnected to everyday livelihood struggles. That women resist or comply to statutory firewood regulations will likely not solve deforestation problems. The analysis reveals that women have information about the environmental impact of forest degradation and know of the regulations. Sensitizing efforts will therefore more likely lead to that firewood collecting women continue to feel chased, as environmental villains and illegal (see also Robinson, 2021).

Drawing from both FPE and CI has also helped shed light on how firewood governance arrangements in Boessen and Tonogo has formed several counterproductive practices. The forest law is designed to protect forest resources from being over-exploited. However, nonetheless, on the ground, the implementation excludes women from receiving education in tree pruning and management and makes historically established and local norms illegal. This discrepancy depends on the scarcity of firewood and how the actual needs of local households and women to earn an income create an insoluble dilemma for women to navigate in their everyday lives. This means that attempts by the forest guards to educate and ‘sensitize’ women risk becoming misdirected and instead enhance the emotional, economic, and labor burden for women. Attention to perceptions and doings has displayed forest guards’ misconceptions about women’s knowledge about forests in both villages. Such findings show that forest governance must broaden its scope and address households’ dependence on firewood. Gendered labor norms, firewood dependency in combination with low availability thus place women in an exposed position as they also put in hard labor and time while also risk paying, for them, high fines. Such findings stress the need for developing education and vocational training for women in sectors that do not rely on forest resources.

As other studies suggest, for the sustainable management of forest resources, it is vital to include women in decision-making (Agarwal, 2009, 2010; Colfer, 2010) and understanding the cultural barriers for using energy efficient stoves (Bensch et al., 2015). This is especially so regarding how forest commons should be managed so that women’s needs and preferences can be considered in developing forest policy and law. This also requires that forest authorities work to bridge the gender power structures that often deprive women of having tenure rights and the right to plant and manage trees. Foremost, including women in the management of forests which they know and depend on is vital for shaping an inclusive and equitable forest governance in Burkina Faso.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The data that has been used is confidential.

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