



ACCESS TO FOREST - WHO BENEFITS?

A case study of the Karima forest

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Abstract

This report investigates how the implementation of participatory forest management, as a part of the recent decentralization in Kenya, affects the management of the Karima forest and the community around the forest. Ribot and Peluso's theory of access (2003) is used as a framework in order to understand how the implementation of participatory forest management has played out, this is done to identify the involved actors, the distribution of benefits and the power mechanisms that shape the benefit flows.

The study identifies four main actors; the community, the local administration, the Community Forest Association and the Iriaini Tea Factory Company. The distribution of benefits between the actors is highly unequal, which is a result of power relations between them. The study concludes that no real devolution of power has taken place so far, as the local administration is still in charge of the management of the forest. The Community Forest Association, which is to represent the community in the decision-making, is lacking power, which restricts them from being responsive to the needs of the community. The unequal distribution of benefits and power is not only present between the actors, but also within the community as an actor group. Low-income households are especially exposed, as they have few alternatives to the resources collected in the forest. It is therefore recommended that special attention need to be given to this group in the future planning of the management of the Karima forest.

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Abbreviations

CBO	Community Based Organisation
CFA	Community Forest Association
CGN	County Government of Nyeri
CM	Community members
GBM	Green Belt Movement
ITFC	Iriaini Tea Factory Company
KFS	Kenya Forest Service
KTDA	Kenya Tea Development Agency
MA	Management Agreement
MP	Management Plan
PFM	Participatory Forest Management
PFMP	Participatory Forest Management Plan
TCO	Town Council of Othaya

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Introduction

Throughout various regions of the world, state and national authorities are currently decentralising the forest management (Bruce 1999; Agrawal *et al* 2008). There is a growing engagement for applying a more participatory, collaborative form of management (Bruce 1999:iii). This trend has occurred due to studies indicating that inclusion of communities through participatory forest management (PFM) is the best way to achieve forest and biodiversity conservation, sustainability, and enhancement of livelihoods for those dependent on the forest (Larson *et al* 2010; Olson & Jerneck 2013; Mogoi *et al* 2012; Kallert *et al* 2000). The underlying assumption behind PFM is that communities are motivated to conserve the forest if they can benefit from the conservation (Warner 1997).

Debates concerning outcomes of decentralizing forest management are many. On one hand decentralization is widely believed to increase efficiency and equity (Ribot *et al* 2005; Kallert *et al* 2000). On the other hand it is argued that decentralization can lead to increased inequality, as access to forest resources can make some groups more vulnerable, if structural inequalities are not addressed in the decentralization policies (Larson 2007). Politics addressing specific challenges to the inhabitants in the local communities is key to improve their livelihoods from forestry-based activities (Larson *et al* 2007). Ribot *et al* (2010) state that relevant power needs to be devolved to representative local bodies that are responsive to local needs and aspirations, due to downward accountability. The decentralized power does from this perspective need to be equally and democratically distributed in the local communities, in order to benefit all inhabitants (Ribot *et al* 2010).

Changes of forest management in Kenya

The forest sector in Kenya has undergone radical changes during the last centuries. Forest areas were originally held and managed by communities, until the colonial government of Kenya created a forest department in 1902 to manage and control all forests within the country. Hereby the government alienated the pre-existing community-management (Ogada 2012: 4). Following independence in 1963, a new national forest legislation was formed in 1964, Forests Act (cap

385). This legislative framework lasted until 2005 with only minor amendments. Emerging national and global forest-related demands and challenges were the drivers behind the new Forests Act 2005 (Thenya 2008:5). The Forests Act 2005 presents a general shift in Kenya's forest management from an exclusionary to a more participatory and holistic approach, as it recognizes the concept of PFM and communities' spiritual and cultural relationship to forests (Ogada 2012).

Distribution of Power and Benefits

A growing amount of literature suggests that decentralization and PFM is more present in government and donor discourses than in the actual experiences of rural communities adjacent to forests (Ribot *et al* 2010: 35). Ribot *et al* (2010) argue that efforts to promote PFM in Sub-Saharan Africa, have led to more disappointment than success stories. It is further argued that the outcome of decentralization depends on the distribution of power. Power is vertically distributed between hierarchical institutions, and horizontally distributed among different kinds of local institutions (Ribot *et al* 2010). These power distributions shape local decisions and outcomes of forest management. It is crucial that the burdens and responsibilities that the communities bear are balanced with the benefits derived from the access to the forest, in order to secure the sustainable management of the forest (Adam 2012; Mogoi *et al* 2012).

The distribution of power is further explored by Larson *et al* (2010), who state that new statutory rights do not automatically result in rights in practice. This is why the transfer of rights to locals does not necessarily lead to improvement on livelihoods or forest conditions. It is therefore crucial to know the rights that people held previously, since statutory rights may place new restrictions on communities.

Case study - The Karima forest

This report seeks to examine the processes of decentralization of forest management in Kenya by taking departure in the Karima forest. Today the Karima forest is protected under the Forests Act 2005, labelled as *trust land* and is under the management of the County Government of Nyeri (Sub-county government officials; Forests Act 2005).

There are many actors with an interest in the Karima forest and its resources. In order to map out the different actors with an interest in the forest and their power and benefit distribution, it is not

enough to look at who has the legal property right alone, because according to Ribot and Peluso (2003) there can be other factors enabling access to the forest. It is important to map out the distribution of benefits, especially within group governance arrangements, as there is growing evidence showing that unequal distribution of benefits among individuals can undermine the joint management (Mogoi *et al.* 2012).

Research problem

Academic scholars point out that empirical knowledge lacks on how decentralization shapes forest governance and in particular, how it affects the livelihoods of forest-dependent people (Larson *et al* 2007: 251; Ribot *et al* 2010:38). Identifying the powers transferred to lower levels of authority and how they can materialize as benefits to different actors is crucial to explore, to ensure that all actors have an interest in conserving the forest. A central question is whether the local community around the Karima forest benefits from the so-called devolution of power and the PFM approach, and in addition who benefits most within the community. This report thus aims to investigate the dynamic processes and relationships of access to resources, in order to examine which actors are able to gain and maintain the ability to benefit from the Karima forest and its resources.

Problem statement

What benefits are the different actors gaining from the Karima forest, and what mechanisms do actors apply in order to gain, maintain and control access to the forest - and to what extent does this reflect a process of decentralisation?

Objectives

- 1) Map out the actors gaining access to the forest
- 2) Identify the benefits that the actors are generating from access to access to the forest
- 3) Analyze the mechanisms that the actors possess and are able to use to gain, maintain and control their access

Research questions

- 1) Who are the different actors gaining access to the Karima forest?
- 2) How have the access and interest in the Karima forest evolved?
- 3) What benefits do the different actors generate?
- 4) What mechanisms do the different actors use in order to gain, maintain and control access?
- 5) What factors within the community determine access to the forest?
- 6) How does the benefit- and power distribution reflect a process of decentralization?

Theoretical Framework

The following chapter will present the theoretical concepts applied in this report. The outset is a short description of how forest decentralization impacts and relates to aspects of access. These will be used in the discussion, where findings on the distribution of benefits and power will be discussed in relation to the proclaimed decentralisation of the management of Karima forest. Subsequently follows a presentation of Ribot and Peluso's theory of access framework from 2003. The framework will be applied to analyse who get to use and benefit from what, in what ways and under which circumstances (Ribot & Peluso 2003:154).

Linking Forest Decentralization and Access

Ribot *et al* (2010) criticize current forestry discourse by stating that everything is labelled as decentralization, hereby arguing that forest policies referred to as decentralization should be carefully analysed and not taken for granted (Ribot *et al* 2010:40). The outcome of decentralization depends on how and to whom power is distributed and how these powers can materialize as benefits (Ribot *et al* 2010:36). The Theory of Access can hence function as an analytical tool to investigate the level of decentralisation and the distribution of power. Ribot *et al* (2010) bring forward the concept of vertical and horizontal distribution of power and benefits in order to grasp how power is distributed. The vertical power distribution refers to the vertical division of power between the hierarchical institutions, and the horizontal distribution is the division of power among various local institutions and individuals (Ribot et al 2010:36).

Theory of Access

Ribot and Peluso (2003) have constructed an access framework that expands the conventional conceptualisation of access beyond rights-based approaches. Access is defined as “*the ability to benefit from things – including material objects, persons, institutions and symbols.*” (Ribot & Peluso 2003:153). The argument is that access differs from property, since property refers to the *right* to benefit, whereas access refers to the *ability* to benefit, which depends on other factors than property rights. An access analysis can in this sense serve to an understanding of why actors, who do not have property rights can benefit. Access is to be seen as a process, because access

patterns are changing over time (ibid:160). Benefits are constantly renegotiated. They can be redistributed and captured in times of new legal frameworks and changing social relations. Different people and institutions possess bundle of powers and are positioned differently in relation to specific resources (ibid:154). These powers are referred to as *mechanisms* and they shape people's and institutions' ability to benefit from forest resources. The framework puts forward an array of mechanisms that constitute "*the means, processes and relations, by which actors are enabled to gain, control and maintain access to resources*" (Ribot & Peluso 2003:159). *Access control* is the ability to mediate other's access. *Access maintenance* is the use of resources or power to keep access open for one self or others (ibid:159p). Maintenance and control are complementary in the sense that some people or institutions control resource access, while others maintain access through those who have control.

The mechanisms that shape access processes and relations are divided into the following two categories; rights-based access and structural and relational mechanisms of access (ibid).

Rights-based Access

The rights-based access includes both legal and illegal access. Legal access is sanctioned by law or customary rules and is by other theorists usually referred to as property rights (Ribot & Peluso 2003:162). Holding of titles, permits, lease agreements etc. are examples of rights-based means of access. Theoretically the property right holder has the means to control and maintain benefits. Illegal access is the gaining of benefit that is not socially accepted by the state and society. Establishment of illegal access can take place through coercion, orally or physically, or through criminal actions. Access can even be controlled and maintained through illegal means of access (ibid:164).

Structural and Relational Mechanisms of Access

The structural and relational mechanisms of access operate parallel to legal and illegal access and are shaping how benefits flow. They comprise the social and political-economic relations and discursive strategies. The factors found to be mediating access are; technology, capital, markets, labour, knowledge, authority, social identities, and social relations (Ribot & Peluso 2003:162).

Access to technology is important because tools and technology are needed for extraction of most resources. Vehicles, weapons and roads are examples of technology (Ibid:165).

Access to capital can provide access control and maintenance control i.e. through the purchase of rights, paying access fees or buying influence. Wealth is in addition often affecting other means of access since wealth, power and status are mutually constituted (Ibid:165p).

Access to markets mediate the ability to benefit due to the importance of having an entry into exchange relations. An individual cannot benefit commercially without access to markets even though he has rights to the specific resources (ibid:166).

Access to labour and labour opportunities is two central access mechanisms. Access to labour is important, since labour is often required for extraction and production of a resource. Access to labour opportunities refers to the ability to employ others or one self. Control over labour opportunities implies that one have the ability to allocate labour opportunities to certain people (ibid:167).

Access to knowledge is having the ability to shape discourse, ideology and systems of meaning. Through this, one is able to shape all forms of access and influence legal frameworks of resource access (ibid:168).

Access to authority mediates direct and indirect access. Through privileged access to individuals and institutions, which have authority to make and implement laws, one can get access legally and illegally (ibid:170). Access to state and non-state authorities tend to follow economic and social aspects, meaning that access to authorities mostly favour individuals with money and in good social positions.

Access to social identities refers to how status or membership in an identity-based group is often a determining factor for inclusion or exclusion from benefits. Identity-based access can be based by the following attributes; age, ethnicity, status, profession, place of origin, gender etc (ibid:171).

Access to social relation is another key means of access. It includes friendship, patrimonial ties, obligations, trust and loyalty practically and shapes all other elements of access (ibid: 172).

All these structural and relational mechanisms tend to overlap and are often used simultaneously. The categories shall therefore not be seen as fixed, but as operational categories (ibid:162).

Methodology

This section will examine the methods applied for studying access to benefits for the different actors in and around the Karima community. Several methods were applied during a two-week field study from 26th of February until 12th of March, to gain as nuanced and representative data as possible. A matrix explaining the purpose of the methods as well as a list of informants can be found in appendices 1 and 9. The results have furthermore been triangulated to cross check the gathered data and thereby improve the validity of the results. The combination of methods has provided a more nuanced picture, as it brings in different interpretations and dimension of the same topic (Halkier 2002). The different methods used are demonstrated in table 1.

Methods used during fieldwork	
Quantity	Method
38	Semi-structured interviews
3	Transect walk
1	Timeline exercise
2	Participatory mapping exercise
1	Wealth ranking
2	Focus group interview
33	Respondents for questionnaire

Table 1: Methods Used During Fieldwork (Source: fieldwork)

Semi-structured Interviews

Semi-structured interviews have been used in several occasions, in order to gain insight into the different actors' ability, interests and actual use of the forest. This method was used to collect and analyze qualitative data that presents the views and opinions as well as the narratives of several actors.

The informants were found with the help from interpreters, sub-chiefs and host families. The snowballing strategy as well as a purposive strategy was used to find key informants. In the beginning the snowballing strategy was necessary as the area and its inhabitants were largely unknown to us. In most of the semi-structured scenario interviews with community members, the informants were selected more randomly by meeting them in the area around the Karima forest. During each activity all statements, observations and personal reflections on the responses were noted down, to be able to share all the collected data.

Each interview was prepared with an interview guide for the different informants, to secure the gathering of essential information (appx. 2, 3, 4 & 5). This furthermore helped us for the preparation of our translators to secure a common understanding of the questions. The questions helped structure the interview, but the open structure allowed the interviewer to ask clarifying questions in relation to the responses. Some semi-structured interviews were structured around specific situations in relation to the collection of resources from the forest. This aimed to gather detailed information on the community members' use and perception of their access to the forest (appx. 6). One semi-structured interview was combined with a timeline, to gain more precise insight on the changes in access to the Karima forest. The semi-structured interviews have been combined with PRA-methods, to be able to gain further information of location specific details and topics.

Participatory Rural Appraisal Methods

Participatory mapping was carried out with four elders from the community and one CFA member, as a way to explore their perception of the relationship between the community and the forest. It became clear during the exercises that the informants were not used to orientate themselves through maps (CM 8, 9, 10, 11; CFA 2). A wealth ranking exercise was performed with four elders, where they identified important indicators of wealth, followed by a ranking of the importance of the identified indicators. The results were later used in the questionnaire to evaluate on the different respondents relative wealth.

Several transect walks were carried out, which contributed to an over-all introduction to the area and the forest. The information gathered on the walks helped with the development of the semi-structured interview guides and to gain insight in the problems at hand. GPS was used to locate

land marks during transect walks in Karima forest. This made it possible to get an overview of the characteristics of the forest and issues present.

Several focus group interviews were carried out, one focus group interview was combined with a transect walk in the forest. In some occasions, it was observed that the hierarchy of status limited some informants' statements.

Questionnaire survey

A questionnaire survey (appx. 8) with 33 respondents was conducted to generate quantitative data that could be translated into statistics (Casley and Kumar 1988). This was done to explore how socio-economic circumstances influence access and usage of the forest. A random sampling strategy was used to identify respondents from the whole area around the forest. The strategy was to choose every third household both counting the hillside and the other side of the road and the households on the side roads. The limited time restricted the number of questionnaires performed.

Description of study site

In the following the context of the conducted study will be presented. Karima forest is situated in the central highlands of Kenya in the Nyeri South district. Its special location on national, district level and local level is portrayed in figure 1.

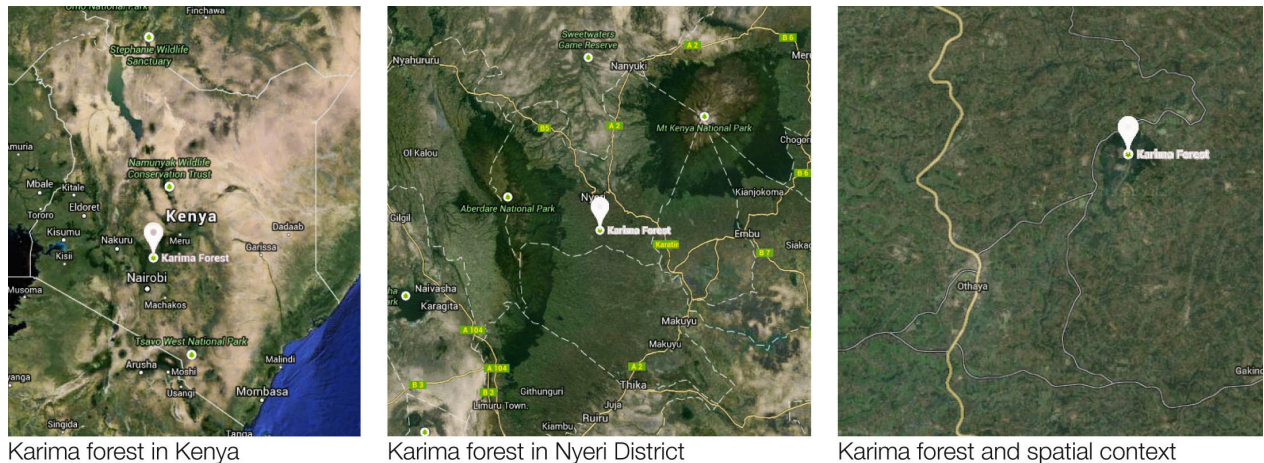


Figure 1: Location of Karima Forest (Source: Google Maps)

The Nyeri South district is well developed in terms of infrastructure and most villages are accessible by tarred road, and have power, tapped water and primary schools. The nearest major town and administrative centre is Othaya town. Nyeri South District has experienced a rapid increase in population size, which has resulted in land fragmentation, as the average landholding area is 0.64 ha (Owuor *et al* 2009).

The district is a highly productive agricultural area in Kenya. The main livelihood strategy for the population is coffee and tea production. The majority of the farmed land is used for cash crop production, while fodder is a second priority. The rest of the land is used for subsistence crops (Owour *et al* 2009).

The Karima forest is tapering a volcanic hill, in altitudes up to 6000 ft. above sea level and covers a surface of about 265 acres (Adam 2012; PFPM 2010:2). The topography and plantation of the Karima forest is illustrated in figure 2 and 3 underneath.

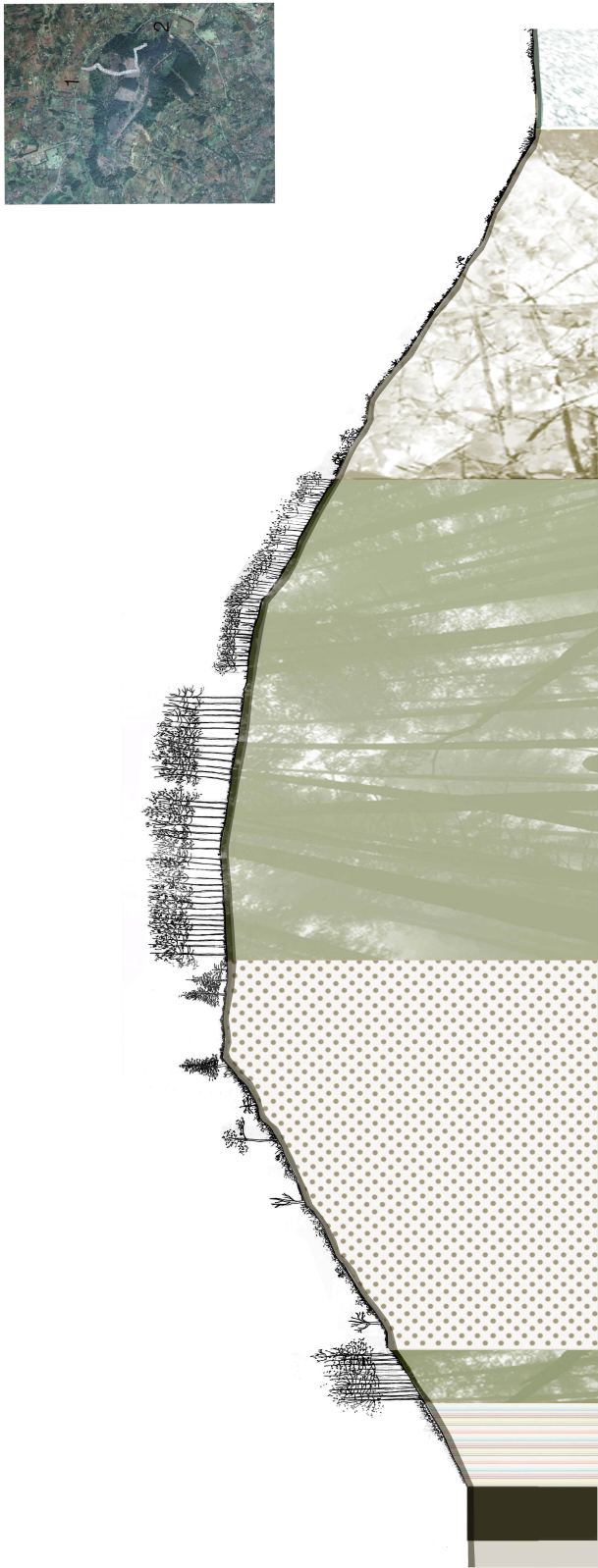


Figure 2. (source: Transect Walk)



Results

The results will firstly present the major changes of access and benefits generated from the forest by the various actors over time. Exploring the current benefit distribution and how different mechanisms of power between the actors influence this distribution will enable an exploration of how the PFM has been implemented with the decentralization of the forest management in Kenya.

Historical changes of access

The historical change of access affects the present situation and thereby gives insight to the present distribution of benefits and mechanisms of access.

Traditional Management

The history of the Karima forest, narrated by the elders of the community, dates back to the year 1600. The community believes that they originate from an ancestor named Mbaire and his wife from Ndai. The couple settled in Gakina on the slopes of the Karima hill and got four sons. The father sub-divided his territory of Karima hill between them; Ngai got Gatugi, Maigua Gakina, Gitenee Giathenge and Kirumwa Mutituf (CM 2, 34; CFA 1). The four sons turned into four clans, who managed the forest by a traditional rotational system based on the seasons between the four houses. Each clan was allocated a two consecutive seasons, and people who violated the rules had to go through a ceremonial cleaning (Gaia 12.2.2014; PFMP 2010:13).

The benefits derived from the forest at this time were divided between the four houses and were mainly forest products for domestic use like, wild fruit, traditional herbs, plant fibres for subsistence use and building materials. The Karima hill also had a high spiritual value for the locals, as traditional ceremonies and rituals were carried out in the forest (Youth 1, 2; PFMP 2010:14).

The elders of the community possessed both the access control and the maintenance control as they were securing the rotational management of the forest and mediated the access of others.

This access was achieved by their identity as elders, men and successors of Mbaire.

The mechanism of access was rights-based access, as the community had the social acceptance for accessing, maintaining and controlling the forest (PFMP 2010:12; CM 1, 2). Their rights-based access was also build on the community's access to authorities and access to social relations, in relation to their family ties and contact with the elders in the community. Other means of access, were access to labour and access to knowledge about the use of medicinal plants and handcrafts. The community member's ability to access also differed as some plants were identified as feminine plants, because they were for the handcrafts made by women. In the following figure 4, different species from the Karima forest is presented.

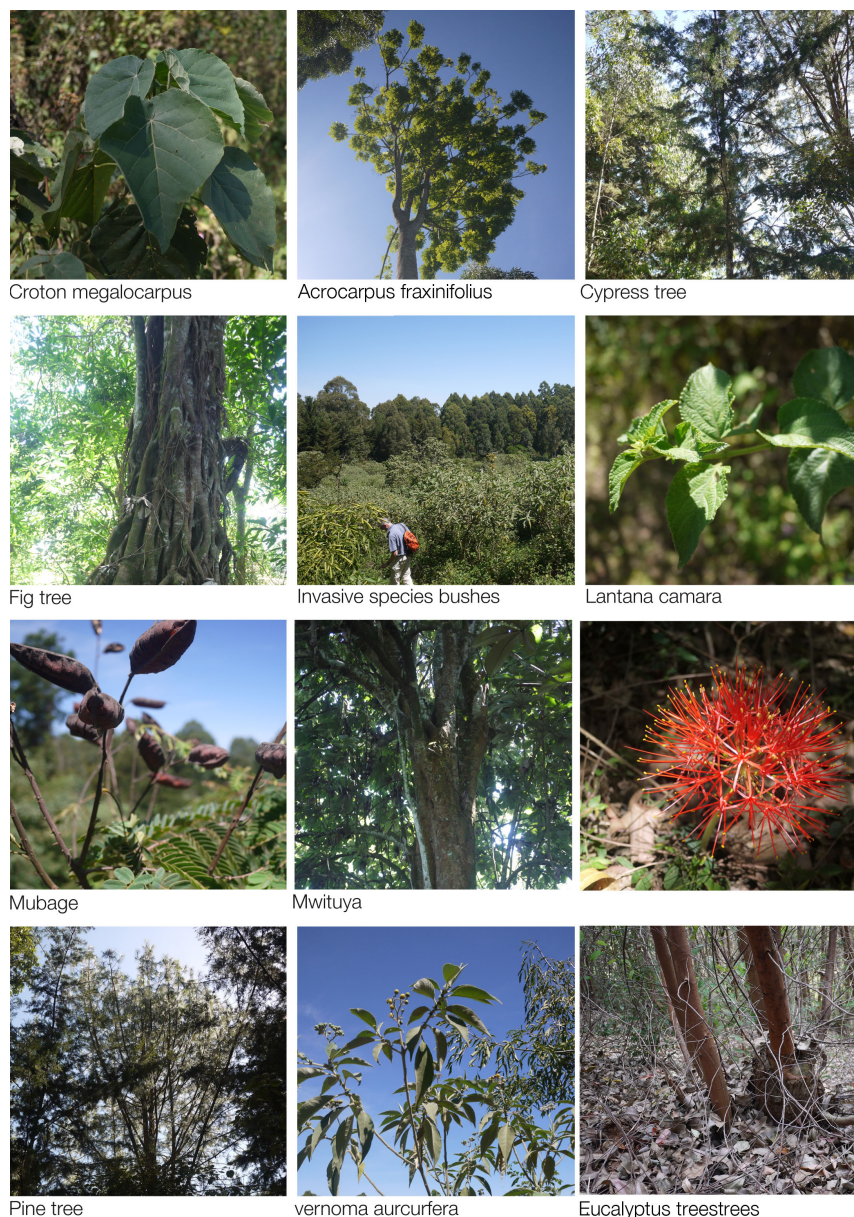


Figure 4

*Species Mosaic in
Karima forest
(source: transect
walks)*

British Colonialism

In the time of the British colonialism the access to the forest changed drastically. In 1953 the Mau Mau, a rebel group of mainly Kikuyu fighting the British colonial rule, was hiding in the forest. The British burned parts of the forest, to reveal the Mau Mau's hiding places. The burned areas were then replanted with commercial, exotic tree species, to provide timber and firewood for the growing population in the region and the country (PFMP 2010:15; CFA 1; KFS). The British spared the sacred shrines, because of their spiritual significance for the community (GBM; CFA 1; KFS).

The colonial government expanded the forest area by planting *acrocarpus fraxinifolius* on the border defining the forest, and they still define the border today (CM 2). This species can be seen in the upper part of figure 5. A community member explained that; *“the government came and pushed us down the slope in 1953”*(CM 28, 29, 30). The community had no chance of fighting against this encroachment on their land *“We could not do anything! We had no power...”*(CM 28, 29, 30). Despite of the presence of the colonial power, the elders still recall that the community was managing the forest up until 1958 (Youth 1, 2; CM 2, 3).

During the time of the British colonisation the community's mechanisms of access changed, because the colonial government gained part of the rights-based access through authority and their access to capital, labour, technology and markets. Although the social relations and identity of the community were partially respected by the colonial government, when saving the sacred shrine, these accesses of the community were also violated with the expansion of the forest border. The community continued to benefit from the forest resources by the rights-based access gained through custom and social acceptance in the community.

Post-colonial Management

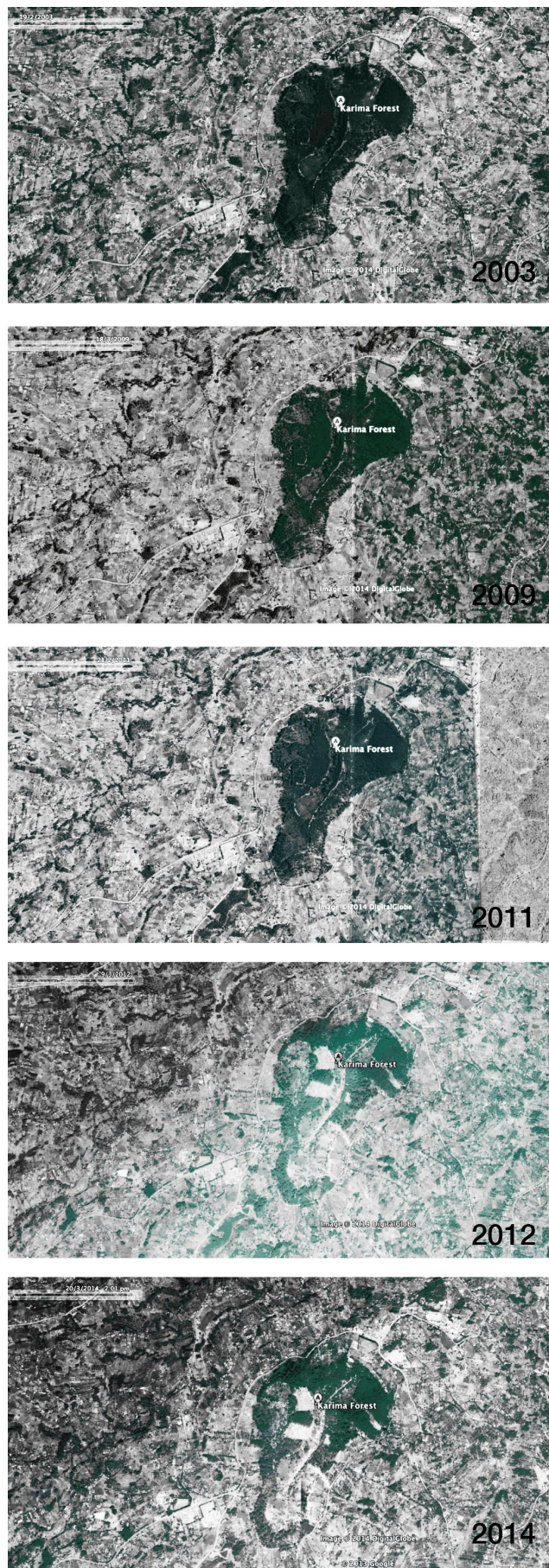
In the late colonial time the forest was under the administration of Nyeri County Council as trust land, but later the management of the forest was handed over to the local government in Othaya (PFMP 2010:7). The shift in ownership led to changes in relation to the utilization of the forest resources as the community were no longer allowed to collect firewood or bring cattle for grazing etc. (CM 2, 6). The community exercised intense harvesting of trees just before the local government in Othaya got the management over the forest, as they knew it would change their access to the forest (CM 6). They made use of their access to labour and social relation in order to

extract as many benefits as possible from the forest. The change in ownership led to a change of the community's access, from being a customary right to being an illegal access according to the local government in Othaya that gained the legal access to the forest.

Present Management of the Forest

In 2005 Kenya ratified a new Forests Act 2005. The Forests Act dictates that every local authority is responsible for having and preparing a management plan (MP) (Forests Act 2005: part II 34 (1) (3)). In 2010 the Town Council of Othaya (TCO), former local government of Othaya, and the Kenya Forest Service (KFS) developed a MP for Karima forest together with community members in a group called Local Planning Team. The Management Agreement (MA), which outlines the user rights of the community, was never signed, and it meant that the MP was never validated (Forest Act 2005: Part III 46 (2); KFS).

Despite of the lacking ratification of the MP, the TCO started implementing the MP and began replanting the forest with indigenous trees and felling and relocating exotic plantation. The clear felling of the exotic plantations should have happened over a five-year period, the TCO is however said to have authorized the felling over a one-year period, which sparked protests amongst the community (CM 34; Gaia 2014). Figure 5 shows the different states of the tree cover from 2003 to 2014. Here the difference between before and after the clear felling of exotic plantations between 2011 and 2012 is apparent. The drastic change in tree cover is only a result of harvesting by the TCO, since ITFC stopped harvesting in 2010. This is followed by figure 6 illustrating the specific landmarks in the forest, including the road blocked by the community to prevent further tree harvesting.



The community protested and wrote a complaint to the Public Complaint Commission. The Provision Commission decided that until a MA had been signed no more harvesting would be permitted in Karima forest (CFA 1; CM 1, 34; KFS; Gaia 2014, Sub-county government officials). Since this conflict of interest between the TCO and the community no harvesting has taken place.

In 2010 Kenya enacted a new constitution. This implied a change in trustee of Karima forest. The TCO had to hand the management of Karima to Nyeri County Council (KFS). The process is still underway. The devolution process has further delayed the development and implementation of the MP and the MA (KFS).

*Figure 5: Change in Tree Cover from 2003-2014
(Source: Google Maps)*

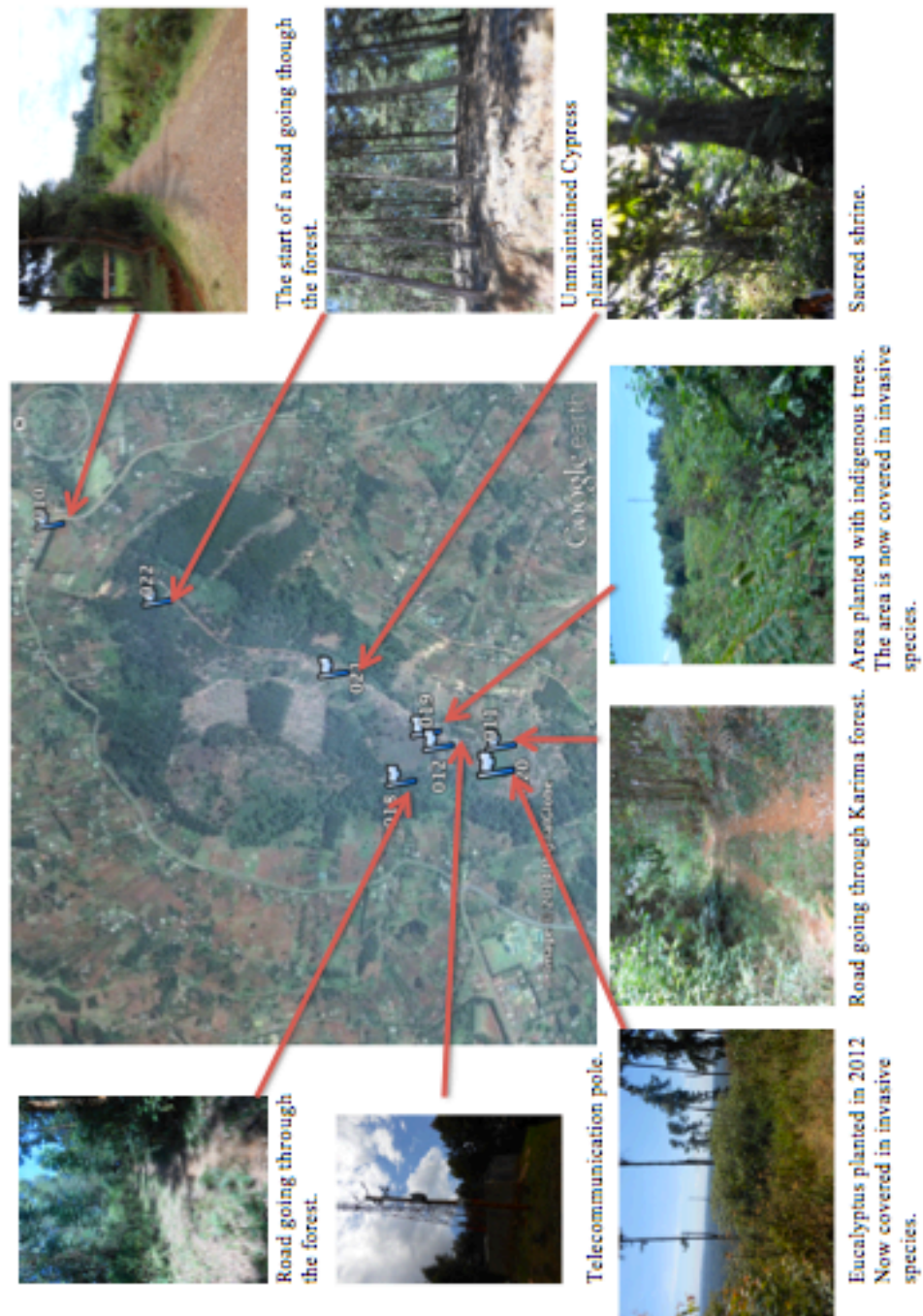


Figure 6: Illustration of Land Marks in Karima Forest (Source: Google Maps & Transect Walk)

Main Actors – Benefits and Means of Access

The following identifies the benefits that the different actors generate from the Karima forest. Some of the identified actors have recently experienced a change in their access due to the conflict concerning the MP. The results concerning the actors' benefits are hence structured by first presenting benefits before and after the conflict in 2011, in order to be able to discuss how the conflict has affected their ability to generate benefits. The identification of benefits will be followed by an analysis of the means of access applied by the actors to gain, maintain and control their access. The scope of the study is on the actors that are present in the initial part of the value chain of forest products. As demonstrated in table 2 there are several actors, who influence and benefits from Karima forest. Four main actors have been identified based on their significant role in the management of the forest. The secondary actors will be included in the analysis of the main actors.

Main actors	Abbreviation	Description
Local administration	County Government of Nyieri (CGN) Sub-County Government of Othaya (SCGO)	Trustee of the Karima forest
Iriaini Tea Factory Company	ITFC	Commercial Tea Company
Community Forest Association	CFA	The legal entity representing the community in forest management according to Forest Act (2005) section 46(1). CFAs have to be approved by the KFS.
Community	-	The community living around Karima forest
Secondary actors		
Kenya Forest Service	KFS	Semi-governmental corporation established in 2007 under the Forest Act 2005. Their role is to conserve, develop and sustainably manage forest resources for Kenya's social-economic development
Airtel limited	AL	Commercial Telephone Company, who has a telephone mast in the forest
Green Belt Movement	GBM	Environmental NGO

Porini	-	Local NGO advocating for community ownership over Karima forest in 2012. Not present anymore.
Community Based Organisations	CBO	Community self-help groups doing capacity building activities.

Table 2: Actors (Source: GM, kenyaforestservice, fieldnotes)

Community

It is important to underline that the community is not considered a homogenous social group. The concept, *community*, is used for operational purposes, and it is acknowledged that there are multiple interests and actors within the actor group called *community*. This is also why another actor group, the Community Forest Association (CFA), is being analyzed separately from the community, as they represent one out of many different institutions within the community.

Current Benefits

To identify what the community members derive from the forest, a questionnaire survey was performed. It shows that 60.6 pct collect firewood and 36.4 pct collect fodder. The forest is also used for other purposes as medicinal use, religious purposes, as well as the gathering of food, water from the rivers flowing from the forest and for recreational uses, where as none of the community informants use the forest for commercial purposes, illustrated in figure 7.

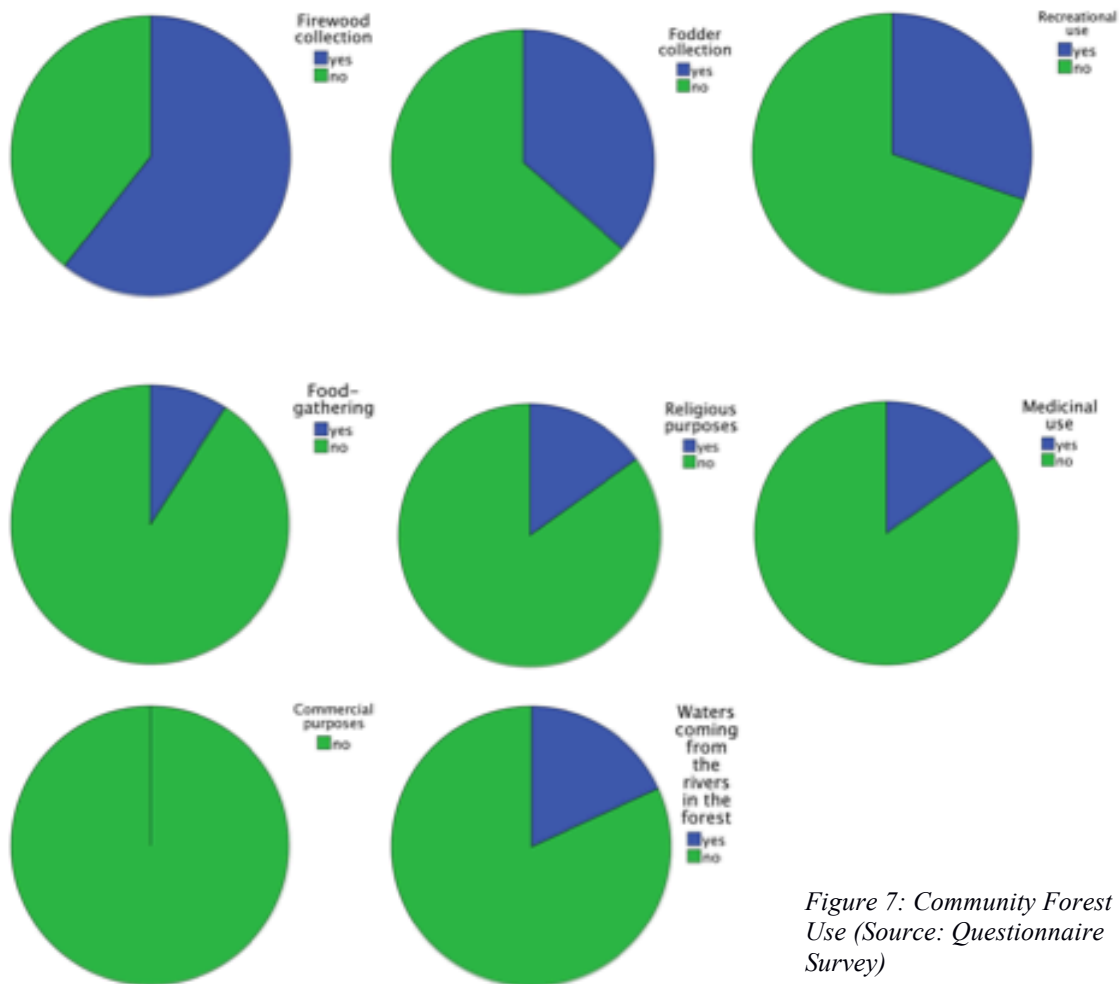


Figure 7: Community Forest Use (Source: Questionnaire Survey)

The relatively high number of community members collecting firewood, is due to several factors, which became apparent during the qualitative studies. The firewood is used for cooking and is therefore important in relation to food security and health. The survey indicated vaguely that households with a lower wealth, measured in relation to land size according to a wealth ranking exercise, are more dependent on firewood collection in the forest. Poor households with scarce land expressed, during the semi-structured interviews, that they did not have space for trees on their land and did not have the financial capacity to buy from neighbours or elsewhere: *“The household is only going to the forest for firewood. She has no other sources for firewood, she has no trees in her Shamba.”* (CM 22).

It is mostly women who gather firewood, as they are responsible for the cooking: *“Men do not collect firewood, but sons and wives goes to collect firewood”*(CM 23). The gender specific collection of firewood is confirmed by the questionnaire survey and is shown in figure 8¹.

Fodder for livestock is another resource that a large amount of the community members seek in the forest. People who collect fodder are more likely to collect firewood, where as people who do not collect firewood are unlikely to collect fodder².

From the semi structured interviews it became apparent that people harvest fodder, because they do not have fodder on their own land, and they cannot afford to buy fodder, or because it increases the fodder quality (CM 24; 32).

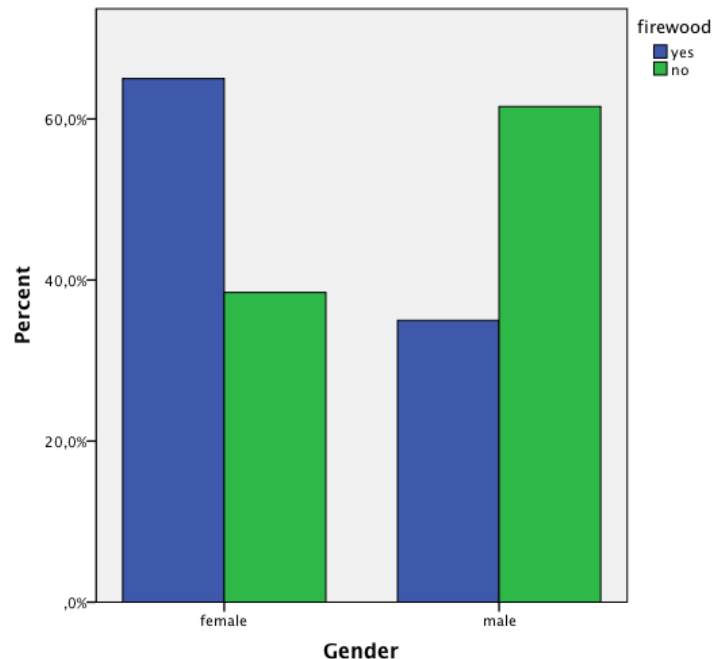


Figure 8: Correlation between Gender and Firewood (Source: Questionnaire Survey)

The community members view the eucalyptus plantations as problematic, expressing concern over the eucalyptus draining the water in the forest. Several informants have observed that some rivers started to flow again after the harvesting of the eucalyptus trees, and they are very attentive toward the role of the forest in securing rainfall (CM 3).

Even though the community does generate some benefits from the forest, it is on a small scale and there is widespread confusion about what is allowed. The community's benefits are limited to subsistence use and products with low financial value. They do not get access to commercial benefits as stated by one informant: *“The money is in big trees and that is what the community doesn't get.”* (Professor Thenya) and a large amount of the community members are unsatisfied

¹ Showed significance when chi-square test was performed (P = 0,01)

² Showed significance when chi-square test was performed (P = 0,006).

with the way the forest is being managed at the moment. They cannot get the right to income from a forest resource if there is no approved MP and MA. The study showed that community members organised in community based groups and associations, such as the GBM, CFA and CBOs had the possibility to get small payments for replanting of trees, but that payment was often delayed or never received. Besides the small payment for planting trees the organisation also helps its members with seminars and seedlings for helping with the food security. The only actual change in benefits since the conflict of interest is the capacity building seminars organised by the CFA, and the suspension of receiving permits for collection of timber in the forest.

Means of Access

The community around the forest goes long back, and their social identity is strongly anchored in the Karima forest. A CFA member stated: *“The community wants to benefit because it’s their land”* (CFA member 3). The community has access to identity in the sense that they use notions such as *“indigenous people”*, *“customary land”*, *“natives”*, *“cultural belonging”* etc. to legitimate their use and extraction of resources from the forest.

There is a lot of confusion about whether the community living around the Karima forest has legal rights to the forest resources or not. Many community members and local officials consider it illegal for the community to derive benefits from the forest at the moment (CM 1, 2, 32; Youth 1), but the Forests Act 2005 provides customary rights for the community to continue their customary use of the forest; gathering of subsistence products (Forests Act 2005: Part III 21). There is however a loophole in the Forests Act 2005 that enables the trustee to modify the customary rights if they find that these lead to forest degradation (Ibid: Part IV 46 (b)). The Environmental Minister of the Nyeri district acknowledges the community’s customary rights and claims that access to small-scale benefits is a legal right for the community members, and it is therefore by his understanding legal to collect dry firewood and fodder in the forest (Environmental Minister). This demonstrates the community’s lack of access to knowledge.

There is however no confusion in regards to tree harvesting. The community is not allowed to harvest the trees in the forest. There was a time before the change in governance, where the community could buy permission for cutting down trees, but because the MP is not functioning, this possibility is put on a stand still (Environmental minister, CM 32). The former arrangement was however not accessible for many in the community, as informants explained that it was way

more expensive to buy one or two trees than buying many trees. This implies that a community member who only needs timber for building a fence or a house is financially disadvantaged in comparison to a large timber company, who wish to purchase a lot of timber, because they have more access to capital (CM 12; CM 13; CM 14).

The crucial element is that Karima forest is not the property of the community, and they are not legally able to mediate their own and others' access to the forest, because they do not control access. An interview with a CFA member revealed that the community might face difficulties maintaining their access, if a proposal made by the CFA on fencing the forest and introducing fees to go into the forest will be adopted (CFA 3). The community has however been able to mediate some control over access, when they stopped the local administration from continuing harvesting trees in 2011 (KFS). The community did in this occasion control the direct access to the resources in Karima forest, being able to stop extraction by other actors.

Social identity and social relations mediate individual's ability to benefit from the forest. Many community members explained that the forest guard does not say anything, if he sees them collecting dry firewood or fodder, even though the guard explained that it is not allowed to go into the forest with out a permit. The guard lives in the community, and shares a social relation and identity with the community (forest guard 1). One informant explained that social connections to people in the local administration could be a way out of paying fines, if caught doing illegal activities in the forest (Questionnaire survey). Individuals with social relations can thus in some cases better achieve access to the forest.

The community tries to acquire more power over the forest management by uniting in different CBOs, local NGOs and the CFA. The volunteers of the GBM get a small payment as a reward for planting trees in the forest (GBM 1; CM 7) and their social relations hereby become a mean of getting extra benefits from the forest.

The community's perception of the access differs, as some believe they have the legal access through the customary right, while others perceive the access as illegal. They get access to the benefits through means of customary rights, direct access, social identity and social relations. Their means of access are limited; it is therefore a limited amount of benefits that the community members can derive from the forest.

Local Administration

The TCO was until the making of the new Kenyan constitution the trustee of Karima forest. With the new constitutional changes, the TCO became the sub-county government of Othaya (SCGO) and vested state forests in county governments, so as from 2010 the County Government of Nyeri (CGN) was formally managing Karima Forest. The administrative division of responsibilities has still not been divided (sub-county officials), therefore the Town Council of Othaya, Othaya Sub-county and Nyeri County Government will be considered as *local administration*, for analytical purposes.

Benefits before Conflict

As outlined before the local administration managed to harvest parts of the planned compartments before the escalation of the conflict in 2011. The revenue of the harvested timber was estimated to 25,673,780 Ksh (Karima Hill PFMP:59p), but only parts of it were harvested. The figure 8 shows the planned compartments for harvesting, indicated with yellow, and the ones that were actually harvested before a conflict with the locals escalated, indicated with orange.

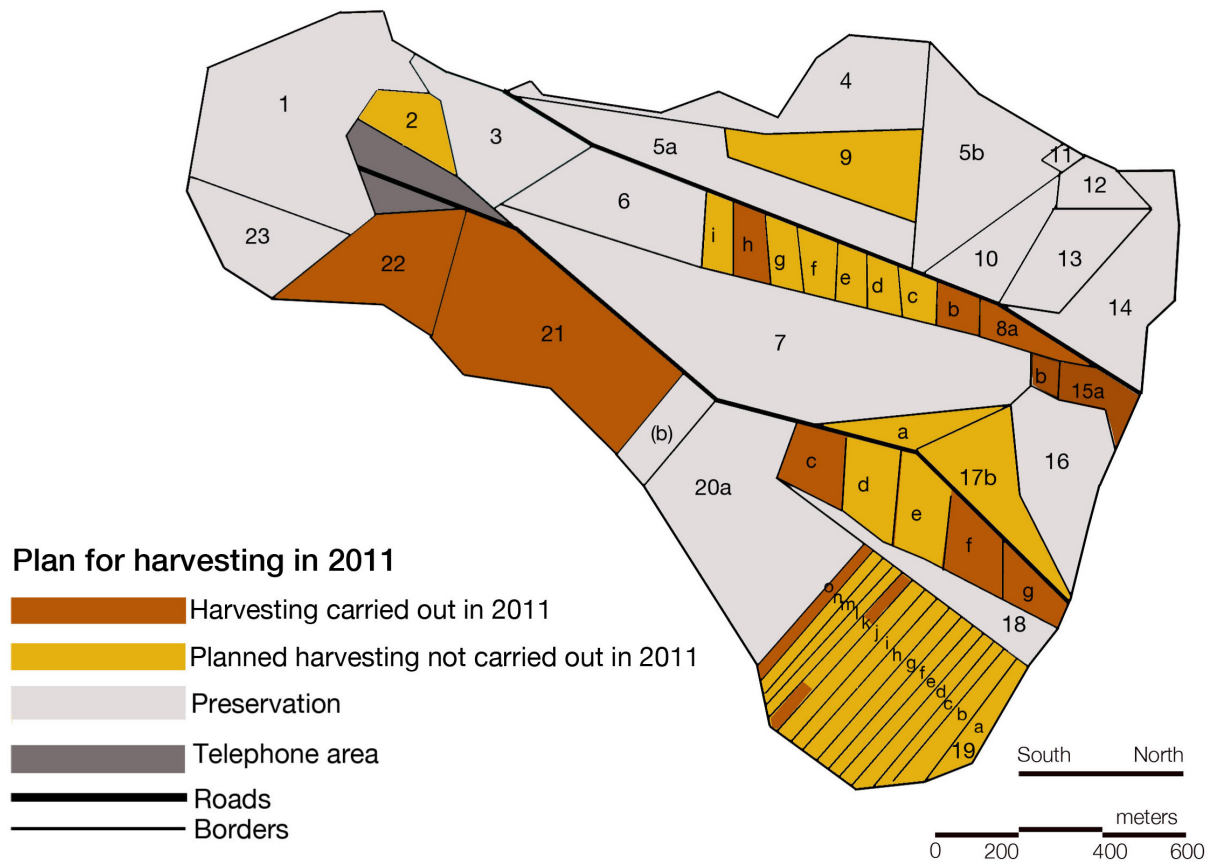


Figure 9: Harvested and Planned Compartments for harvesting in 2011 according to PFMP (Made by Authors, Source: Forest Guard 2, Gaturu, PFMP)

According to the representative of KFS: *"100 pct of the money from harvesting trees in Karima Forest goes to the local government. The KFS gets nothing."* (KFS). This was underlined by three community members, who said that monetary benefits derived from the timber harvesting went to the local administration. They criticised the local administration for not investing the money in improvements that could benefit the community (CM 28, 29, 30).

The local administration receives annual rents from two sources, the telecommunication company Airtel and the Iriaini Tea Factory Company (ITFC). Airtel pays an annual rent of 250,000 Ksh for having a telephone mast placed on the forest ground (Sub-county government officials, KFS). The local administration, insinuated by a local, also received the revenues from the trees harvested to clear the approximately 2 km long road that enabled the construction of the telecommunication line (CM 34). The ITFC rents 32.3 ha of the forest, approximately 30 pct, to

sustain the tea production with fuel wood. The local administration receives 50,000 Ksh from rents annually since they made the lease agreement in 1999, which is valid for 30 years (ITFC). The local administration received 300,000 Ksh yearly from rents alone, and furthermore revenues from fuel wood harvested by the ITFC in 2009 to 2010. Since the conflict in 2011 no harvesting has taken place. Unfortunately, the exact gained revenue for the TCO was not available (ITFC). Lastly the local administration benefitted from the fines collected, when people were caught doing illegal activities, i.e. 10,000 Ksh for illegal logging and 5,000 Ksh for cutting wet firewood (CM 7).

Current benefits

The suspension of the PFMP has changed the amount of benefits derived by the local administration. The local administration claims that they have not been harvesting trees since 2011, and three locals support this statement: *"The town council came and cut trees all the time and these money did not go to the community. Now when Nyeri controls the forest, we never see anyone."* (CM 28, 29, 30). The same counts for ITFC who has not harvested timber or fuel wood since 2010. The local administration is currently not receiving any revenue from fuel wood or timber. Whether ITFC still pays rent or not is a matter of confusion for the two parties, because of the institutional rearrangement (ITFC). The local administration does however still receive annual rent from Airtel and to some extent fines from illegal activities in the forest.

The value of the forest should not to be underestimated, as according to the representative of KFS, Mr. Wahome: *"The value of the forest is actually really high because of all the plantations with eucalyptus, cypresses and pines."* (KFS). These are possible future benefits.

Means of Access

The local administration's main mechanism of access is its right-based access. They have the legal access to the management of the forest as the trustee, stated in the law made by the state (Sub-county government officials; Forest Act 2005). The community acknowledges the local administration's role as trustee and the legal access that follows, but tends to make contradictory statements where they as a community also claim the ownership. As the trustee the local administration has the access control, which means they have the ability to mediate other's access, for example by making the lease agreement with ITFC.

The local administration also has the maintenance control as they can keep access open for themselves and others. A community member expressed: *“The Town Council benefits more because they are the owners of the forest. People don’t benefit anymore because it is illegal to get resources from the forest.”* (CM 22). As already mentioned the local administration has the ability to modify the customary rights of the local community, if they state that too much collection or harvesting is taking place (Forests Act 2005 part III 21).

The local administration applies their control of access through the employment of two forest guards, who should ensure that people do not go into the forest, and that no harvesting of trees is taking place. The guard explains: *“According to the law people are not allowed to go in the forest, because it is mostly to look for resources of value”*(forest guard 2). Some community members state that they will be arrested and fined by the local administration if they are caught doing illegal activities. The guard and the fines can be seen as coercion and a threat of violence, which are effective means of access control. The enforcement is however weak, as the guards tend to allow collection of dry firewood and fodder (CM 17, 18, 19; forest guard 2).

An extensive use of misinformation has been identified; the local administration has the opportunity to misinform the community because they to a large extent control access to knowledge. They have the ability to shape discourse and influence the legal frameworks that determine access to the forest resources. They have selected and paid the experts that formed the PFMP and have carried out the research behind it. They control which narratives are “scientific” and which are not by suggesting that the activities of the community have ecological consequences. In this way they can justify their control over the forest, by producing an ethic of access. The ethic of access was especially present in the discourse concerning the community’s inability to manage the forest, since this open access is argued, by the local administration, to lead to overharvesting, despite the fact that the PFM presents an alternative to this perspective (Ostrom 1999: 3).

Several community members accused the local administration of promoting replanting of indigenous species only for the purpose of making money from selling the timber harvested. One community member said: *“The project was about replanting indigenous species. But the idea was that the council received a lot of money and the tea company as well by cutting down the*

eucalyptus and plant indigenous species, but they knew that the trees would regrow. It was a smoke screen – a façade play. For them it is more about making money.” (CM 2). This can be exemplified with the poor maintenance of the seedlings that has allowed for invasive bushes to take over the areas with indigenous species. By a comparison, see the figure 10, which contains maps showing the current state and the desired outcome of the PFMP. It becomes clear that a lot of reallocation of the present indigenous trees and eucalyptus plantations will take place.

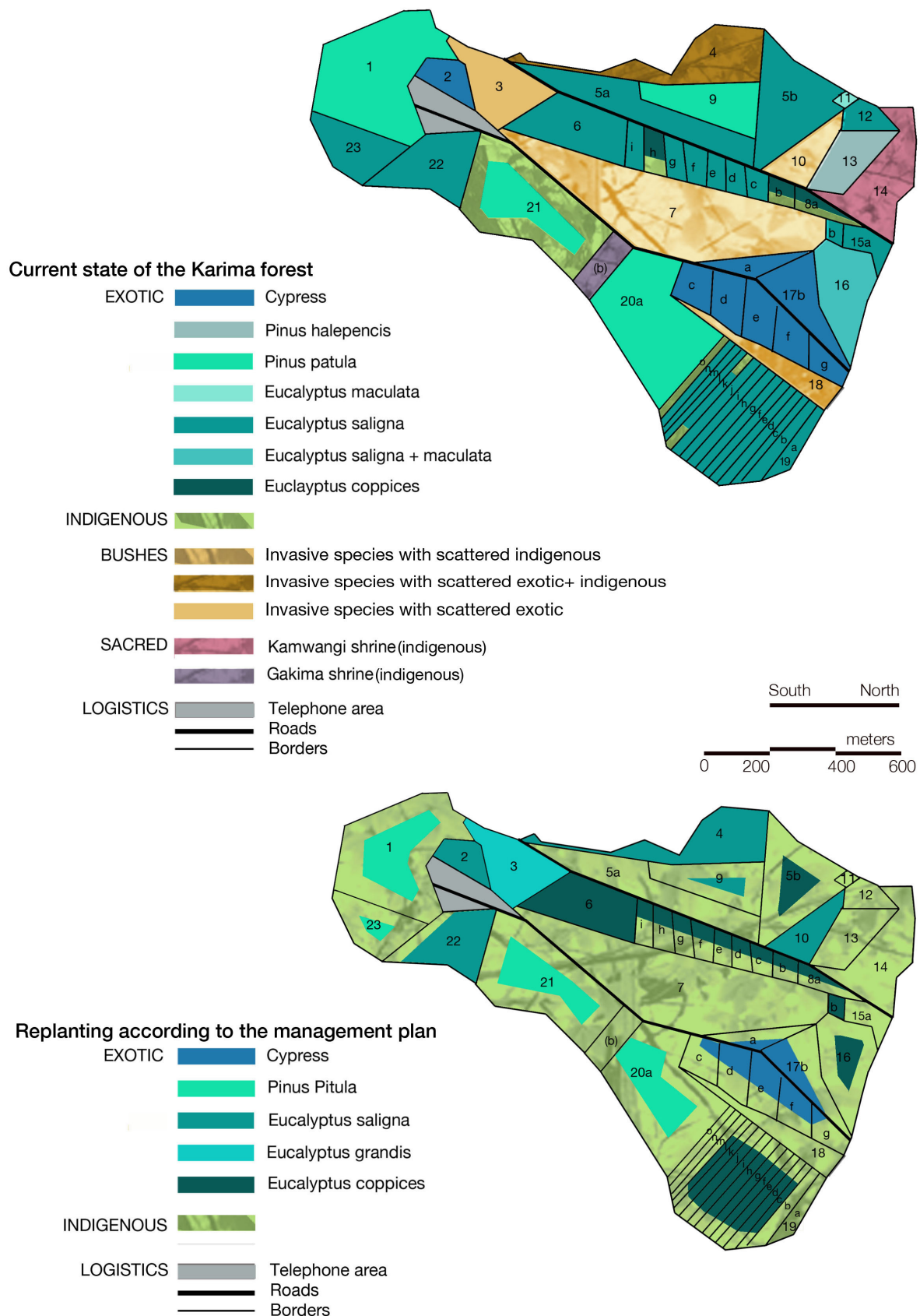


Figure 10: Map Containing the Current and the Desired Replanting of Karima Forest (Made by Authors, Source: PFMP)

Mr Wahome from the KFS expressed: *"There is this saying in Kenya: We are planting trees in the same holes every year."*(KFS) He indicated that tree planting is more about politics and image than actual tree planting. A community member said: *"You can cheat the world to think that you do something!"* (CM 34). He argued that the local administration says that they want to invest in the forest supporting the community, but that the interest in the community is just a mean to gain resources (CM 34).

Iriaini Tea Factory Company

Iriaini Tea Factory Company (ITFC) is leasing plantations in the Karima Forest. The factory is under the management of Kenya Tea Development Agency (KTDA) that manages 63 factories in Kenya (Kenya Tea development Agency Ltd). Figure 11 shows the compartments leased by the ITFC in relation to the species of the compartments, showing that ITFC plantations are exotic. The comparison of the two maps indicate that there are more plantations of exotic species in the forest, then those leased to the tea company, which underline that the local administration also has large areas of exotic species.

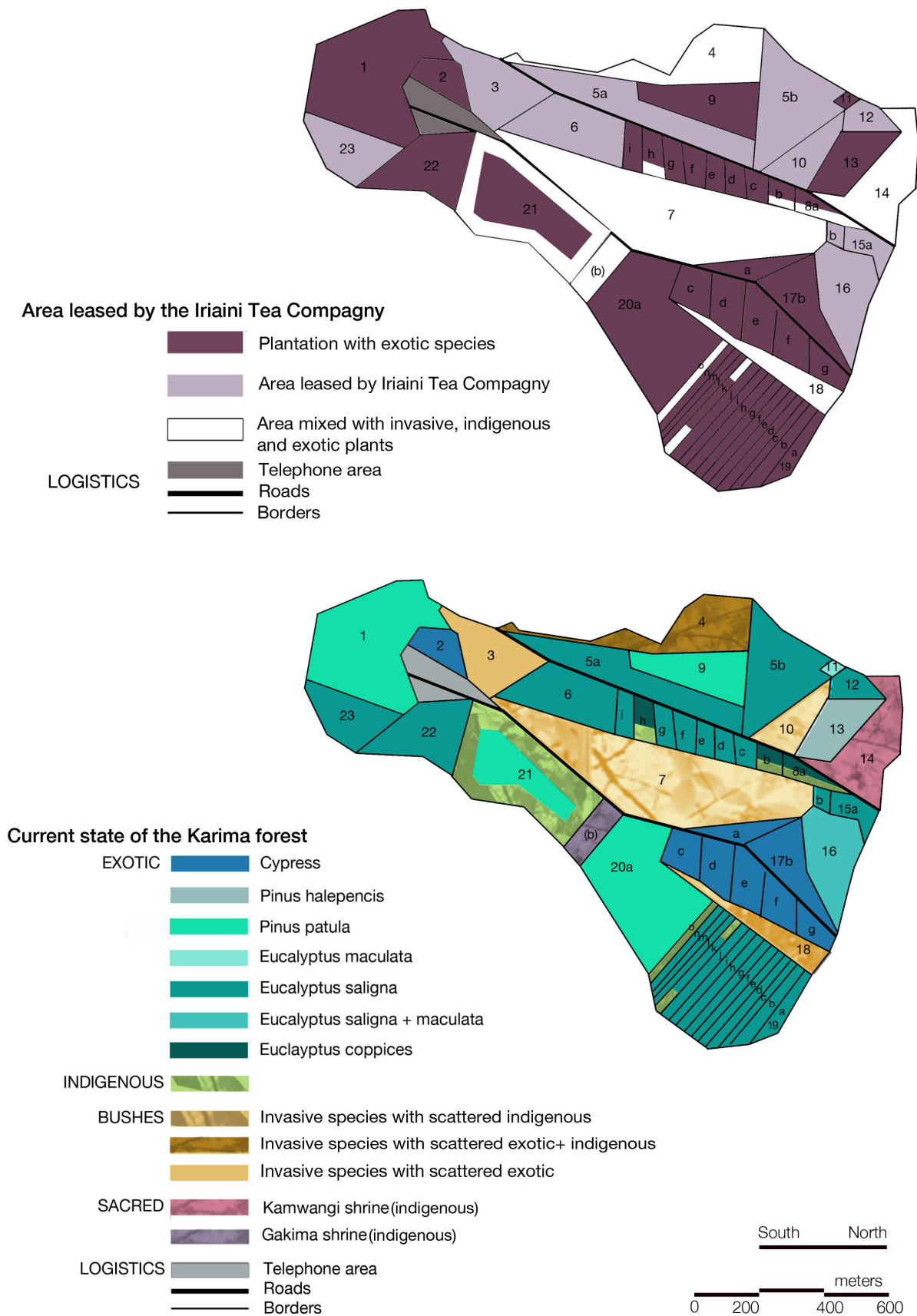


Figure 11: Compartments Leased by ITFC and Species
(Made by Authors, Source: PFMP 2010 & Forest Guard 2)

Benefits

ITFC has a signed agreement with the local administration on leasing an area of 32.3 ha (80 acres) in Karima forest for the supply of fuel wood (PFMP 2010:10). The agreement dictates that ITFC prepares the land and seedlings, maintains the plantation and replaces any trees harvested for fuel wood, to keep the tree cover. ITFC pays an annually rent on 50,000 shillings to the local administration and revenue for the fuel wood that they harvest (PFMP 2010, ITFC). The factory uses fuel wood because it is cheaper than other sources such as oil and electricity (ITFC). ITFC harvested in 2009/2010 and has after the conflict in 2011 not been able to harvest.

Means of Access

ITFC has legal access to the Karima forest by having a signed agreement with the local administration. This legal access it gained through their access to capital, which furthermore strengthens ITFC's maintenance control, as the lease agreement is valid for 30 years.

KDTA, which manage the ITFC, is an agency with access to national and international markets. This status provides access to authority, identity and capital, which makes it possible for them to establish a lease agreement with the local administration.

ITFC also controls the access to labour opportunities; they can hire people to plant, maintain and harvest the fuel wood from their plantations. ITFC claimed to have hired community members around the forest to harvest fuel wood, but community members argued the opposite, saying that ITFC only hires “mufitis” – their own working force (CM 12, 13, 14, 25). *“It is always people coming from outside, who come and harvest trees in the forest.”* one community member says and continues; *“They just come, cut trees and leave with the timber – I don't know where they go (...)”* (CM 25). ITFC also holds the technology and tools for harvesting large plantations and removing the fuel wood with trucks out of the forest.

Community Forest Association

A CFA is according to the Forests Act 2005 a legal arrangement and a direct channel through which communities can participate in the decision-making of the management of forests (Forest Act 2005 Part IV 46 and 47). Although the CFA is treated as a uniform entity, there have been internal disagreements, during the development of the MP. Some members decided to leave the

CFA, as they thought the local administration was only interested in the revenues from the harvested timber and not in helping with the replanting of the Karima forest (CM 34). The CFA has existed since 2009 but was officially founded after the making of the PFMP (CFA 3). The CFA consists of a board of eleven members; nine of them are elected in the different sub-location and two of them nominated by the other members. The CFA is an umbrella organisation, with registered Community Based Organisations (CBO's). The CFA arranges capacity building activities for the CBO members, i.e. beehives or tree nurseries. The aim of the CFA is explained by one of its members: *"We in the CFA want the ownership of the forest back."* (CFA 1). The CFA spreads its information by announcements in churches, informing people about information meetings in the sub-chiefs office (GBM).

Benefits before Conflict

The CFA was formally registered in 2011, but some of the board members had been included as advisors in the making of the PFMP in so-called local planning teams (CFA 1, 4). The local administration promised the CFA a part of the revenue from the timber harvested and the rent from the Airtel telephone mast, but the promise was not kept (CFA 3). One CFA member described: *"The telephone buster should also have been given money to the community, but we haven't seen any. The TCO is the treasury of the hill, and they have more power than us in the CFA."* (CFA 3). The CFA was clearly disappointed that the promise was not met, and it shows that the benefits derived by the CFA are few. They were only included as advisors for the PFMP and were unable to follow up and demand a revenue as promised by the local administration (CFA 3; KFS).

Current benefits

A key element in the Forests Act 2005 is the inclusion and recognition of communities in the development and implementation of MP's, and the CFA should thereby in theory be able to influence the decision-making of the development of the MP.

One CFA member stated: *"We have not been very successful in our mission. We have not achieved much."* (CFA 3). The lack of achievements is explained by the KFS representative, to be caused by the lacking MA, and because the CFA fails to share information (KFS). It was found that several informants were not aware of the existence of the CFA or any other forest groups. This fact was underlined by Mr. Wahome, who explained that only few people showed

up for the community meetings arranged by the CFA and KFS; *“The CFA can manage the forest, but there are not enough incentives to get into the CFA”* (KFS). Some community expressed dissatisfaction with the CFA: *“They just benefit themselves. The CFA have not helped the community! The CFA members can benefit more from the government than the community. The CFA should be banned!”* (CM 12). The lack of community support weakens the CFA further.

The board members of the CFA do not get salaries, although they do get a small payment from attending meetings (CM 34). The CFA is also in charge of approving project applications for funding from NGO's, the UN and the World Bank, and they can thereby decide what projects to apply for (CFA 1). Another benefit derived by the CFA is the privilege of choosing people that should plant seedlings in the forest, which is a paid activity by the local administration (CFA 2).

Means of Access

Several of the present board members of the CFA were in the local planning team for the MP before the founding of the CFA. They have most likely used their access to authorities, social identity and social relations to gain their position as elected or nominated members in the CFA. The head of the CFA is the former Sub-chief of the Othaya location, and the access to identity and social relations can thereby be said to have had an impact on the members of the CFA (CFA 1, 3).

Both in the development of the PFMP and in relation to their present role as representatives of the community, the CFA has access to knowledge, authorities and information. They thereby also control the community's access to knowledge and possible ways of impacting the decision-making in relation to the management of the forest. The CFA should, according to their role as a representative of the community, be given the access control and access maintenance of the community's access. Their role as a representative is weakened by the lack of a MA that clarifies the CFA's responsibility, role and benefits from the forest. The CFA's lacking power disables the CFA from being representative for the community, as they cannot be responsive to the community's needs. The information and knowledge sharing between the CFA should be strengthened, as the community is not aware that they should apply for permissions to do activities in the forest.

Summary

Figure 12 illustrates the main benefit flows represented in the results chapter. The ellipses illustrate the main benefits, the squares the four main actors and the arrows the benefit flows. The benefits flowing currently are indicated with blue, and the ones that have been put on a hold are red. It becomes evident that the community's access has not changed much after the MP and the conflict, and that the local administration and ITFC are currently benefitting very little due to the conflict with the community. Failed implementation of the PFMP has in this sense deprived these two actors valuable benefits. The situation is thus that no actors are truly benefitting currently.

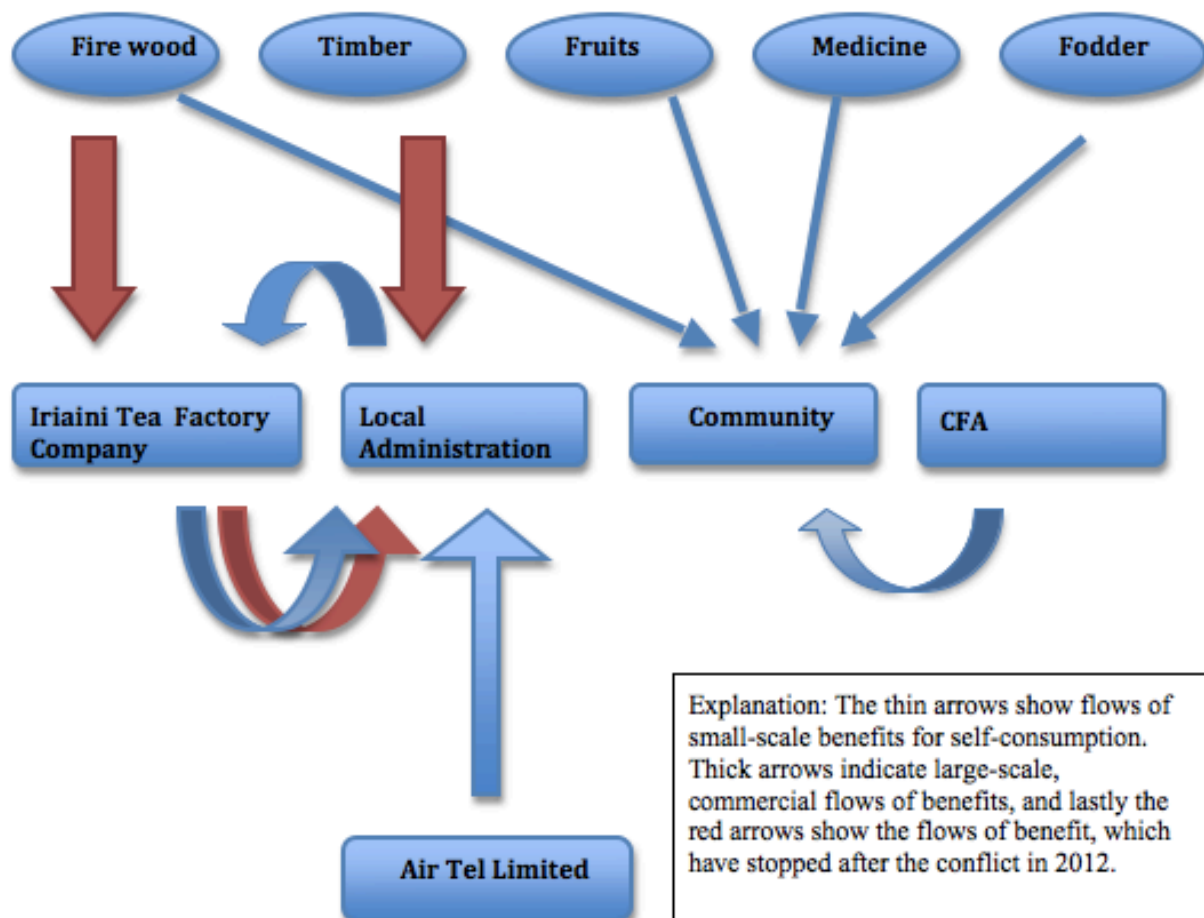


Figure 12: Main Benefit Flows (Made by Authors, Source: fieldwork, PFMP 2010)

Discussion

The first part aims to discuss how the applied methods have influenced the results, followed by a part that discuss the results of the investigation compared with other research on PFM in Kenya. Finally a few reflections on recommendations for the future management of the Karima forest will be made.

Methodological reflections

While conducting the research, sensitive issues have been touched upon, such as asking community members whether they enter the Karima forest to collect subsistence resources without a permit. The unclear legislative access makes the community activities in the forest a sensitive issue, as many of the community members believe that collecting forest resources is illegal. This means that contradictory answers both in the questionnaire survey and the semi-structured interviews have been reported. I.e. a woman explained that she could not afford to buy firewood and had no other source than the forest, where she went weekly. During the interview she changed her statement, saying that she did not go to the forest, but bought firewood from her neighbour (CM 22). Throughout the interview it was clear that the informant started to feel uncomfortable as questions started to evolve around authority. Going more into detail with the research purpose might have prevented this.

The use of translators is in addition an aspect that might have obscured information. It was experienced that a lot of talking back and forth between the informant and translator took place when questions were asked. This mostly happened when the questions were too analytical and had to be explained, and it led to an obscurity between which answer was the respondent's and which came from the translator.

The selection of informants has been influential for the results as well. The main sampling strategy for finding informants for focus group and most of the semi-structured interviews was snowballing. This implies that many of the informants were from the same social network, although the informants representing the various actors can be said to come from both overlapping and different networks. Attempts to counter the limitations of snowballing were made, through triangulation with the survey questionnaire and the semi-structured interviews, where informants were selected with use of random sampling strategies.

The Karima forest and forest decentralization in Kenya

The following part builds on the previous analysis that unfolded how the benefits are vertically distributed between the Karima community, the local government and other actors, and how they are horizontally distributed among the different members of the Karima community.

The research, conducted in the area around Karima forest, found that benefits derived from the forest are unequally distributed between the actors. The community's restricted use of the forest is a result of the suspension of the MP and the lack of a MA that outlines the use of the different actors and the benefit sharing. A study conducted by Mogoi *et al* in 2012 shows that Karima forest is a classic example, as very few MP's have been approved and no contract signed, throughout Kenya, which leaves the communities with user rights (Mogoi *et al* 2012: 185). The study furthermore argues that on a national scale, revenues do not benefit communities adjacent to forests and that large companies still dominate timber harvesting (ibid: 183). This correlates with the case of Karima, as the revenue from ITFC and Airtel are not shared with the community, but kept by the local administration. It is furthermore observed that the community around the Karima forest is expected to invest time and effort in the replanting of the forest without receiving any meaningful benefits.

On national level it is found that there is a general lack of involvement and exclusion of the communities from the decision-making (ibid: 183). This corresponds with the case of Karima, in which the development of the MP has not been participatory, and where the community was not included in the decision-making, which led to a conflict between the local administration and the community. Another problem has shown to be the limited protection and monitoring (ibid:183). Although the Karima forest is a relatively small area with a well-defined border the monitoring of the forest is not optimal, as the two forest guards are not capable of securing that the rules are kept.

Restrictions of forest use tend to become more effective when decentralising the forest management, and this implies that the processes of decentralisation mostly affect the forest-dependent people (Mbuvi *et al*, 2007). In this research indicators of an unequal horizontal distribution of benefits within the community around the Karima forest. The distribution of benefits is important as unequal distribution can lead to elite-capture, undermine the management and marginalize the forest-dependent people further.

In the analysis it was found that community members possessing small pieces of land and with little economic capacity had difficulties gaining fodder and firewood from alternative sources than the Karima forest. They were in this sense more dependent on forest resources than people who were able to grow trees on their shamba or buy from neighbours or elsewhere. Some informants collecting firewood in the forest only went a few times a year, which indicate that they usually get it from other sources. This correlate with other research conducted in Kenya that suggests that forest resources function as a safety net for poor rural households in time of hardship (Ribot *et al* 2010).

Monetary benefits derived from the forest by the community were mainly distributed to community members, who were socially well connected. Labour opportunities in the forest paid by the local administration or other donors went to either CFA members or people who had a social connection to the CFA. In addition, it was suggested by multiple informants that people who had the economic capability to bribe the forest guards were able to extract resources even though it was illegal. Empirical data from other research addressing the horizontal distribution of forest resources within rural societies indicate the same pattern; that wealthy or resourceful community members have a higher absolute forest income (Ribot *et al* 2010).

Trends from empirical research on benefit distribution show how decentralisation in Kenya and Tanzania transfer forest revenues from the poorest households to more well-off households and to communities' common funds, through taxation and licensing mechanisms for extracting commercial forest products (Mbuvi *et al* 2007). The CFA in Karima had made a proposal to the Nyeri County Government to put up a fence around the forest and introduce monthly fees for collecting forest resources. Many of the community members were not aware of this proposal and were, according to themselves, not able to pay a monthly fee. So the question is how the CFA, as the only legal source of influence for the community, really represents the community? A comprehensive study from Kereita Forest showed that it was middle-income groups, who were mainly represented at CFA meetings and elections. The richest did not attend by choice, because they had other commitments, while the poorest did not have time and energy and were hindered by their low social status (ibid). The CFA board members in Karima were typically better-off community members. The CFA board members have the authority to present the voice of the

community, even though they in the case of Karima do not seem to represent their needs and aspirations. On the other hand, the trend on national scale shows that all decision-making is still in the hands of the government, as the KFS approves the MP and decides the work tasks of the CFA and the financial benefit sharing (Mogoi *et al* 2012: 185). The poorest and most forest-dependent community members in Karima are in this sense a marginalized group, whose interest in the forest is not brought into consideration.

The change in forest management in Kenya is characterized as a shift from the command and control system to PFM that ensures the inclusion of forest adjacent communities and other stakeholders in the decision-making process (Thenya *et al* 2008: 4). This description is in line with democratic decentralization, but in the case of the management of the Karima forest, the decentralization process can be characterized as a weak form of decentralization, referred to as deconcentration and delegation. Insufficient power has been transferred, as the CFA's primary responsibility is to the local administration, which is the official manager of the forest (Ribot 2002: 4).

The lacking integration of the marginalized groups in the community around the Karima forest underlines the importance of devolution to democratically elected local governments, to secure flexible management in relation to the context specific diversity and complexity. Downward accountability from the democratically elected representatives is underlined as a mean to secure the interests of local-level minorities (Ribot 2002; Lund and Treue 2008).

As highlighted above the CFA is at present not securing an equitable, justice and efficient management of the Karima forest. This is because there has been no transfer of discretionary power to the CFA. The discretionary power is underlined as crucial for an effective decentralization to take place, as it enables the CFA to respond flexibly to local needs and aspirations (Ribot 2002:13).

Conclusion

The aim of this report was to examine how various actors are able to generate benefits from the Karima forest and what power mechanisms they apply to gain, maintain and control their access. This investigation have been conducted in the context of the recent decentralisation process of the forest management in Kenya and seeks to explore whether the local community around the Karima forest has benefitted from the decentralization of the forest management. The decentralization of the forest management introduces PFM, with the aim of including forest adjacent communities and other stakeholders in the decision-making process, in order to improve rural livelihoods, resource distribution and sustainable forest management.

With the use of the theory of access it became clear that the community's ability to benefit from the forest has changed profoundly since before the colonial time. In recent years the community has only derived benefits from the forest for subsistence use, and no improvements in relation to resource distribution and livelihoods have been recorded, as benefits did not trickle down. The lack of improvement is arguably due to the fact that the constituted CFA is not representative and have not received discretionary power. The CFA is therefore not able to be responsive to the community's problems and wishes, which is problematic as they are the community's only source of influence on decision-making concerning Karima forest. The CFA board members are making proposals that may compromise the access of the community, i.e. introducing fees, which is especially problematic for marginalized groups, as they have no alternative access to firewood and fodder, which they now collect in the forest.

The local administration was the actor that benefitted the most before the conflict of 2011, having the legal access, and being able to control and maintain access. Most benefits from Karima forest still flow to the local administration, but have decreased profoundly after the conflict of 2011, when the community made use of their direct access to the forest and their access to social relations and identity to stop other actors from harvesting trees in the forest. The local administration benefits from rent and revenues generated from commercial enterprises, ITFC and Airtel, which have gained access to the forest through access to the authority, the local administration. This report has found that the local administration tends to prioritize commercial companies with access to capital instead of the community with limited financial capital.

Through the analysis of benefits and means of access in the case of Karima forest, it has become clear that the decentralization has still not come into place. The present situation indicates that the process must be termed as a weak process, as there are no indications of a greater integration of the community members in the decision-making and no signs of improved benefit sharing.

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Appendices 1

Method Matrix

Problem Statement	<i>What benefits are the different actors gaining from the Karima forest, and what mechanisms do actors apply in order to gain, maintain and control access to the forest - and to what extent does this reflect a process of decentralisation?</i>		
Objectives	Research question	Data required	Methods
1) Map out the actors gaining access to the Karima forest	1. Who are the different actors gaining access to the Karima forest?	Identification of actors gaining access to the Karima forest	<p>Semi-structured interviews with beforehand identified actors from literature search</p> <p>Individual semi-structured interviews by applying snowballing-method to gather further information</p>
	2. How have the access and interest in the Karima forest evolved?	<p>Historical knowledge of use, benefits and access of the forest from all identified actors</p> <p>Policy changes concerning access, use and ownership of Karima forest</p>	<p>Interviews with identified actors</p> <p>Mapping activity with elder inhabitants</p> <p>Transect historical walk/block diagram with interpreters</p> <p>Semi-structured interviews and timeline exercise with elder inhabitants</p> <p>Comparison of satellite maps</p> <p>Timeline exercise</p>

2) Identify the benefits that the actors are gaining from the access to the forest.	3. What benefits do the different actors generate?	Information on what the different actors derive from the forest	<p>Semi-structured interviews with identified actors</p> <p>Participatory observation</p> <p>Questionnaire survey</p> <p>Scenario interviews</p>
3) Analyse the mechanisms that the actors possess and are able to use to gain, maintain and control their access.	4. What mechanisms do the different actors use in gaining and maintaining access and in order to control access?	Identification of factors (red. theory of access) the different actors possess. Who are the most powerful institutions related to Karima forest.	<p>Semi-structured interviews with identified actors</p> <p>Participatory observation</p> <p>Questionnaire survey</p>
	5. What socio-economic factors within the community determine access to the forest?	Identify socio-economic differences within the village and link this knowledge with the different groups of people's access to the forest	<p>Wealth ranking exercise</p> <p>Questionnaires</p> <p>Scenario interviews</p> <p>Focus group according to gender/age</p>
	6. How does the benefit- and power distribution reflect a process of decentralisation?	Identify the evolution of the powers and the objectives for every actors	<p>Literature</p> <p>Semi-structured interviews</p> <p>Scenario-interviews</p> <p>Group meeting</p>

Appendices 2

Methods used during fieldwork	
Quantity	Method
38	Semi-structured interviews
3	Transect walk
1	Timeline exercise
2	Participatory mapping exercise
1	Wealth ranking
2	Focus group interview
33	Respondents for questionnaire

Source: fieldwork

Appendices 3

Interview guide for the community

Introduction to the subject:

In our project we are interested in Karima forest. In this interview we are interested in your opinion and experience with Karima forest. I/we would like to understand how and by whom Karima forest is used, and how it has been used historically.

Socio-economic characteristics

1. Identify the interviewee's age, origin, profession, gender, marriage and number of children
-

Access to the resources of the Karima forest – before and now

2. How would you describe Karima forest?
 3. Do you use the forest? (For what purpose?)
 4. Who in community use the forest most? (Why them?)
 5. What do people use the forest for? (What value does the forest represent?)
 6. Are you restricted from using or enjoying any forest resources (which?)
 7. How has the usage of the Karima forest developed over time?
 8. How has the forest physically changed over time?
-

Authority and control over access to the forest

10. Who has the authority over the Karima forest?
 11. How are decisions over the forest made?
-

The Forest Management Plan - decentralization

12. Do you know about the new Forest Management Plan?
13. Have you been part of the making the Forest Management Plan? (Was it participatory? Where you heard?)

15. Who do the Management Plan benefit? (Who win?)
 16. Do you see any obstacles with the Forest Management Plan? (Which?)
 17. Who benefits from the forest resources?
 18. Has the forest Management Plan been implemented yet? (What parts?)
 19. Do some actors benefit more after the implementation of the Management Plan?
-

Different actors and conflict

21. Who are using the Karima forest from outside the community? (Why?)
 22. Do you consider their presence as good or bad?
 23. Are there any obstacles for people of the community to carry out activities in the forest?
 24. What is the issue of the eucalyptus trees within the forest?
 25. We have heard about a dispute concerning telecommunication lines within the forest. Can you tell us about that?
 26. We have observed that plots within the forest are cleared from trees? Who use these plots and for what purposes?
-

Vision for Karima forest

27. How do you think the forest looks like in 10 years?
 28. How do you wish to see the forest in 10 years?
-

Closure

Is there something that I should have asked in the interview?

Is there anything else you would like to add?

Appendices 4

Interview guide for the local administration

Introduction to the subject

In our project we are interested in Karima forest. In this interview we are interested in your opinion and experience with Karima forest. I/we would like to understand how and by whom Karima forest is used, and how it has been used historically.

Personal characteristics

1. Will you present yourself - tell about your profession
2. For how long have you been working in the municipality?

The local authorities' relation to the Karima forest

3. How is your job related to the Karima forest?
4. How would you describe the Karima forest?
5. What is the role of the local administration concerning the forest and its resources?

Access to the resources of the Karima forest – before and now

6. Who has the legal access to the forest?
7. Who use the forest?
8. What is the forest used for? (What does the forest represent?)
9. How has the usage of to the Karima forest developed over time?
10. How has the forest physically changed over time?

Authority and control over access to the forest

11. Who has the authority over the Karima forest?

12. How are decisions over the forest made?

The Forest Management Plan - decentralization

13. What is the main purpose of the new Forest Management Plan?

14. Who was part of making the Forest Management Plan? (How was the process? Participatory?)

15. The Forest Plan aimed to include the locals in the decision-making – who do you consider as “locals”?

16. What are the opportunities and benefits of the establishment of the Management Plan?

17. Do you see any obstacles with the forest Management Plan? (Which?)

18. Who benefits from the forest resources?

19. Has the forest Management Plan been implemented yet? (What parts?)

20. Do some actors benefit more after the implementation of the Management Plan?

21. How does the Management Plan affect the local administration?

Different actors and conflict

22. Which actors are interested in the forest?

23. Do the actors have conflict of interest? (If yes; which and how do you believe that they can be solved?)

24. Are there any obstacles for people, organizations, companies or groups to carry out activities in the forest?

25. What is the issue of the eucalyptus trees within the forest?

26. We have heard about a dispute concerning telecommunication lines within the forest. Can you tell us about that?

27. We have observed that plots within the forest are cleared from trees? Who use these plots and for what purposes?

Vision for Karima forest

28. How do you think the forest looks like in 10 years?

29. How do you wish to see the forest in 10 years?

Closure

Is there something that I should have asked in the interview?

Is there anything else you would like to add?

Appendices 5

Interview guide for the Karima Forest Association

Introduction to the subject

In our project we are interested in Karima forest. In this interview we are interested in your opinion and experience with Karima forest. I/we would like to understand how and by whom Karima forest is used, and how it has been used historically.

Personal characteristics

1. Will you present yourself and how you got into this association?
2. For how long have you been working in the association?
3. What is your role and responsibility in the association?

The local administration's relation to the Karima forest

4. How and why did the Karima Forest association form?
5. How would you describe the Karima forest?
6. What is the role of the Karima Forest Association concerning the forest and its resources?

Access to the resources of the Karima forest – before and now

7. Who use the forest?
8. What is the forest used for? (What does the forest represent?)
9. How has the usage of to the Karima forest developed over time?
10. How has the forest physically changed over time?

Authority and control over access to the forest

11. Who has the authority over the Karima forest?

12. How are decisions over the forest made?

The Forest Management Plan - decentralization

13. What is the main purpose of the new Forest Management Plan?

14. Who was part of making the Forest Management Plan? (How was the process? Participatory?)

15. The Forest Plan aimed to include the locals in the decision-making – who do you consider as “locals”?

16. What are the opportunities and benefits of the establishment of the Management Plan?

17. Do you see any obstacles with the forest Management Plan? (Which?)

18. Who benefits from the forest resources?

19. Has the forest Management Plan been implemented yet? (What parts?)

20. Do some actors benefit more after the implementation of the Management Plan?

21. How does the management plan affect the local administration?

Different actors and conflict

22. Which actors are interested in the forest?

23. Do the actors have conflict of interest? (If yes; which and how do you believe that they can be solved?)

24. Are there any obstacles for people, organizations, companies or groups to carry out activities in the forest?

25. What is the issue of the eucalyptus trees within the forest?

26. We have heard about a dispute concerning telecommunication lines within the forest. Can you tell us about that?

27. We have observed that plots within the forest are cleared from trees? Who use these plots and for what purposes?

Vision for Karima forest

How do you think the forest looks like in 10 years?

How do you wish to see the forest in 10 years?

Closure

Is there something that I should have asked in the interview?

Is there anything else you would like to add?

Appendices 6

Interview guide for CBO members

1. What is the objective of forming a CBO?
2. How is the CBO working?
3. How many members do the CBO have?
4. Do members of the CBO pay a member fee?
5. How do you come up with project ideas?
6. Do you have meeting with locals?
7. How many meetings do the CBO have in a year?
8. How do the CBOs get funding and from who?
9. What is the relationship between CFAs and CBOs?
10. What do you think about the Karima Forest Association?
11. Do KFA represent your wishes and needs well?
12. How do you communicate with the Karima Forest Association? And how do they communicate with you?
13. Do you know the management plan of Karima forest? What do you think of it?
14. How have you been part of the making of the management plan?
15. How is the CBO representing the community?
16. Does the community agree on how they want to benefit from the forest?
17. How do the CBOs communicate with the community?
18. How does the community communicate with the CBO?
19. Have the CBO been a part of planting seedlings in the forest?
20. Are CBO members paid?
21. Are there other ways that the CBO is benefitting their members?
22. How many CBOs are there in the Karima area?
23. What different projects do CBOs in the Karima area implement?
24. Are the CBOs independent of the local authorities?

Appendices 7

Scenario Interviews for focus groups and community interviews

Ask them first:

How often do you use the forest and for what purpose?

If they say they do not collect firewood or fodder, then ask why not? (To find out the alternatives)

(Try to find out if some of the reasons underneath the arguments for why they do not collect the firewood:

- E.g. is it because they grow their own trees for firewood or own fodder?
- Or maybe because they think it is illegal to collect it and they therefore do not collect the firewood).

Depending on the purpose you can ask questions from the following thematic:

(After the thematic questions there are some more general questions that can be asked to everybody)

FIREWOOD:

What would happen if the forest guard meets you, when you are in the forest collecting firewood?

(Wait for the answer)

(ask if they know any cases where this has happened?)

Follow up questions:

1. Would he ask you if it is dry or fresh firewood and then depending on that let you bring the firewood home if it is dry?
2. Would he tell you to put the firewood back to the forest and tell you to stay away?
3. Would he tell you that it is illegal to collect firewood in the forest?
4. Would he give you a fine?

What if a fee is implemented for collecting firewood in the forest?

(Wait for the answer)

Follow up questions:

1. How much would you be willing to pay in fee pr. stack?
2. What if they start charging 1000 Ksh pr. stack?
3. What are the alternatives to firewood in your household?

4. How much would it cost approximately if you had to buy the firewood you are now collecting?

FODDER: (many of the same questions as for firewood)

What would happen if the forest guard meets you when you are in the forest collecting fodder?

(Wait for the answer)

(ask if they know any cases where this has happened?)

Follow up questions:

1. Would the amount of fodder you are harvesting affect his decision on letting you go with the fodder or not?
2. Would he tell you to put the fodder back to the forest and tell you to stay away?
3. Would he tell you that it is illegal to collect fodder in the forest?
4. Would he give you a fine?

What if a fee is implemented for harvesting fodder in the forest?

(Wait for the answer)

Follow up questions:

1. How much would you be willing to pay in fee?
2. What are the alternatives to the collected fodder in your household?
3. How much would it cost approximately if you had to buy the fodder you are now collecting?

EVERYBODY SHOULD BE ASKED ABOUT THIS:

TIMBER

If you need timber to build a new house, how would you do it?

(Wait for answer)

(ask if they know any examples of this has taken place)

Follow up questions:

1. Do you need to ask for permission?
2. Who do you ask for permission from?
3. What are the expenses to gain timber from the forest?
4. Are there any fees to be paid?

5. Are there other expenses in regards to tools needed or work effort?

SOCIAL RELATIONS

1. Do you think it is easier for CFA members to get permission to collect firewood or timber in the forest?
2. Do you think it is easier for people with connections to the Town Council Government members to collect firewood or timber in the forest?

Appendices 8

Questionnaire survey

Date:_____

Questionnaire number:_____

Village:

Location:

Hill side_____

Close to main road(First two households closest to the road): _____

Further down the valley:_____

(1) Gender: __ Female (1) __ Male (2)

(2) Head of the household: __ Yes (1) __ No (2)

(3) Age/Year of birth: _____

(4) Ethnicity: __ Kikuyu (1) __ Abaluhuhya (2) __ Luo (3) __ Kalenjin (4)
__ Kamnba (5) __ White (6)
__ Other (7)

(5) Marital status: __ Married (1) __ Engaged (2) __ In a relationship (3) __ Widowed (4) __
Divorced (5)
__ Single (6)

(6) Number of children:

(7) Educational level:

___ University (1)

___ Other further education (2)

___ Secondary school (3)

___ Primary school (4)

___ No diploma (5)

(8) Religious belief:

___ Protestant (1) ___ Roman Catholic (2) ___ Traditional (indigenous?) beliefs (3)

___ Other (4)

(9) Do you own any land? If yes how much?

___ No (1)

___ Yes (2)

(10) What is your job?

(11) Do you have any livestock? ___ Yes (1) ___ No (2)

(12) (If yes) How many cows? ____

(13) (If yes) How many goats? ____

(14) (If yes) How many chickens? ____

(15) How do you rank your own wealth?

____ Rich (1)

____ Middle (2)

____ Poor (3)

____ No answer, don't know (4)

(16) Are you a member of the Karima CFA? Or any other forest group?

____ Yes (1)

____ No (2)

(17) How often are you in the Karima forest?

__ Daily (1) __ Weekly (2) __ Monthly (3) __ Yearly (4) __ I am never in the forest (5)

(Daily= everyday, Weekly= at least once a week, Monthly=if only three times a month and above,
Yearly=5 times a year or less)

I use the forest for:

	Yes	No
(18) Recreational purposes:	_____	_____
(19) Firewood collection:	_____	_____
(20) Fodder for animals	_____	_____
(21) Food gathering:	_____	_____
(22) Religious purposes:	_____	_____
(23) Commercial purposes:	_____	_____
(24) Medicinal herbs:	_____	_____
(25) Water from rivers coming from the forest	_____	_____

(25) Do you consider the forest important to the Gakina community?

___ Yes (1)

___ No (2)

Elaborate:

(26) Who has the most power over the forest?

___ Chief (1)

___ Kenya Forest service (2)

___ Community forest association/Karima forest association (3)

___ Town council of Othaya (4)

___ Commercial companies (5)

___ NGO's (6)

___ Nyieri county government (7)

___ Do not know (8)

(27) Are you satisfied with the way the forest is managed at the moment?

___ Yes (1)

___ No (2)

___ Maybe/Do not know (3)

(28) What do you think should happen to management of the forest?

Thank you for your time.

May we contact you later?

Appendices 9

This is the list of informants interviewed by date, name, profession, location and method. Only the government officials will be mentioned by name, the rest of the informants are anonymous, informants from the community is mentioned as; CM1 etc.

Nr	Date	Name	Profession	Location	Method
1	28.2.14	CM 1	Farmer	House of informant	Semi-structured interview
2	28.2.14	Nikolas Wahome (KFS)	Representative of KFS in Nyieri south	Phone interview	Semi-structured interview
3	1.3.14	CM 2	Carpenter farmer – friend of the Kiamas	House of the Kiama	Semi-structured interview
4	1.3.14	CM 3	Lives in Gakina	House of the Kiama	Semi-structured interview
5	1.3.14	CM 4	Farmer	House of informant	Semi-structured interview
6	1.3.14	Youth 1 and youth 2	Students	Karima forest	Transect walk and Semi-structured interview
7	1.3.14	CM 5	Farmer	Karima forest – informant was on the way to collect firewood	Semi-structured interview
8	2.3.14	CM 6	Farmer	House of informant	Time-line and Semi-structured interview
9	3.3.14	CFA 1	Farmer and member of CFA- Karima forest Association	Subchief Charles office	Semi-structured interview
10	3.3.14	CFA 2	Farmer and Elected CFA member	Subchief Charles office	Semi-structured interview and participatory mapping exercise
11	4.3.14	Wahome (KFS), GBM, CFA 1, professor Thenya and supervisors	-	Karima forest	Transect walk and Focus group discussion
12	4.3.14	Nicolas Wahome	Representative of KFS in Nyeri South – Forest manager	House of the Kiama	Semi-structured interview
13	4.3.14	GBM	Greenbelt movement member and representative for GBM in the CFA	House of the Kiama	Semi-structured interview
14	4.3.14	CM 7	Farmer	House of informant	Semi-structured interview
15	4.3.14	CM 8,9,10 &11	Farmers	House of the Kiama	Wealth ranking and participatory mapping
16	5.3.14	Jenny and James (Subcounty Government officials)	Subcounty Government Officials: Administator of forestry and forest officer and Establishment officer	Office of the Subcounty Government	Semi-structured interview
17	5.3.14	Samuel and James (ITFC)	Production manager and manager of operation	Iriani Tea Company/factory	Semi-structured interview
18	6.3.14	CFA1, forest guard 1 & 2 and Gathuru	Forest guard, former forest guard, forest officer and CFA member	Karima forest	Transect walk and semi structured interview

19	6.3.14	Forest guard 1	Forest guard	House of Karima	Semi-structured interview
20	6.3.14	Nicholas Wahome (KFS)	Representative of KFS in Nyeri south	KFS Office	Semi-structured interview
21	6.3.14	CFA 1	Farmer and Chairman of CFA- Karima forest Association	Phone interview	Semi-structured interview
22	7.3.14	CM 12, 13 & 14	Unemployed	On the road next to the Karima forest	Semi-structured interview
23	7.3.14	CM 15 & 16	Farmer	On the road next to the Karima forest	Semi-structured interview
24	7.3.14	CM 7 and five friends	Farmers, CFA members and GBM volunteers	House of informant	Focus-group interview
25	7.3.14	CM 17, 18 & 19	-	On the road next to the Karima forest	Semi-structured interview
26	7.3.14	Forest guard 1	Former forest guard	Bus terminal in Othaya	Semi-structured interview
27	8.3.14	CFA 3	Secretary of CFA	Karima Boys High school	Semi-structured interview
28	8.3.14	CM 20	Farmer	On the road next to the Karima forest	Semi-structured interview
29	8.3.14	CM 21	Farmer	On the road next to the Karima forest	Semi-structured interview
30	8.3.14	CM 22	Farmer	On the road next to the Karima forest	Semi-structured interview
31	8.3.14	CM 23	Farmer	On the road next to the Karima forest	Semi-structured interview
32	8.3.14	CM 24	Farmer	On the road next to the Karima forest	Semi-structured interview
33	8.3.14	CM 25	Farmer	On the road next to the Karima forest	Semi-structured interview
34	8.3.14	CM 26 & 27	Farmer	On the road next to the Karima forest	Semi-structured interview
35	8.3.14	CM 28, 29 & 30	Farmer	On the road next to the Karima forest	Semi-structured interview
36	8.3.14	CM 31	Farmer	On the road next to the Karima forest	Semi-structured interview
37	8.3.14	CM 32 & 33	Farmer	On the road next to the Karima forest	Semi-structured interview
38	10.3.14	Timothy Ngunyangi (environmental minister)	Minister of Environment Nyeri	Office of the County government of Nyeri	Semi-structured interview
39	10.3.14	CM 34	Member of CBO	In a cafe in Giatengue	Semi-structured interview
40	10.3.14	CFA 4	CFA member	In her home	Semi-structured interview

Appendices 10

Synopsis

SYNOPSIS

ACCESS TO THE FOREST - WHO BENEFITS?
A case study of the Karima forest

Interdisciplinary Land Use and Natural Resource Management



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Introduction

Throughout various regions of the world state and national authorities are currently decentralizing the forest management (Bruce 1999). In the attempt of increasing democratic decision-making and benefit sharing, a large number of countries have decentralized their forest management to local institutions and local authorities. This is derived from the belief that local authorities can deliver more relevant services to their local people being physically closer (Larson *et al* 2005). The local authorities can in this way establish participatory management, where communities govern their own resources. This trend has occurred due to studies indicating that inclusion of communities through participatory forest management (PFM) is the best way to achieve forest and biodiversity conservation, sustainability, and enhancement of livelihoods for those dependent on the forest (Larson *et al* 2010; Olson & Jerneck 2013; Mogoi *et al* 2012; Kallert *et al* 2000). The underlying assumption behind PFM is that communities are motivated to conserve the forest if they can benefit from forest-based products and income, because of this vested interest (Warner 1997).

Debates concerning outcomes of decentralizing forest management are many and contain conflicting views. On one hand decentralization is widely believed to increase efficiency and equity (Ribot *et al* 2005; Kallert *et al* 2000), but on the other hand it is argued that decentralization can lead to increased inequality, as access to forest resources can make some groups more vulnerable, if structural inequalities in the communities are not addressed in the decentralization policies. They argue that specific politics addressing specific challenges to the inhabitants in the local communities are the key to improve their livelihoods from forestry-based activities (Larson *et al* 2007). The decentralised power does from this perspective need to be equally and democratically distributed in the local communities, in order to benefit all inhabitants.

Decentralization and community forest governance in Kenya

In Kenya a reform to decentralize the forest sector was adopted in 2005 - called the Forest Act 2005. The Forest Act recognizes Sacred Natural Sites and communities' spiritual and cultural relationship with forests. The policy encourages community self-governance, but at the same time dictates that communities need to form legal entities called Community Forest Associations (CFAs) and enter an agreement with the Kenya Forest Services (KFS) in order to participate in the safeguarding of forest resources (Mogoi *et al* 2012). Even though the Kenyan government has in this sense transferred some forest governance to the communities, a comprehensive case study conducted from 12 forest sites in Kenya shows that the overall decision-making and revenue generated from the resources, still is channelled to the KFS (Mogoi *et al* 2012). This is a problem as the burdens and responsibilities the communities bear needs to be balanced with the benefits derived from the access to the forest, in order to secure the sustainable management of the forest (Adam 2012; Mogoi *et al* 2012).

Case study - The Karima forest

The case study of the processes and relationships of access to forest resources will take its point of departure in the Karima forest. The Karima forest is situated in the central highlands of Kenya, more specifically in Othaya, division of Nyeri County between Kiriinyaga Mountain (Mt Kenya) and the Nyandarrua (Aberdare ranges). The forest covers a surface of about 265 acres (estimated in 2012), tapering a volcanic hill, in altitudes up to 6000 ft. above sea level (Adam 2012).

The Karima forest is referred to as a Sacred Natural site, *Ihero* in local language. The Karima hill is viewed as having special spiritual and religious significance and is believed to be where the local God Ngai stepped, when he jumped from Mount Kenya. In the forest there is a sacred fig tree, which served as a place for prayer and sacrifices to God in the face of drought epidemics and invasions. According to the surrounding communities, the Karima forest is deeply anchored in their story of origin, laws, governance systems,

knowledge system and language because the traditional governance of the forest aging back to 1900 was a rotational system between 4 clans based on seasons (Gaia 12.2.2014).

The forest went through significant destruction before Kenya's independence, and the British colonial power introduced exotic eucalyptus plantations that today cover approximately 70 % of the total area of the Karima forest. The eucalyptus trees have, according to the local communities in the outskirts of the Karima forest, drained several rivers in the forest (Gaia 12.2.2014).

Today the Karima forest is protected under the Forest Act of 2005, labelled as "trust land" and is under the management of the Othaya Town Council (Adam 2012; Forest Act 2005). In the Trust Land Act the Karima forest falls under the category 'quasi-government forest', having the Othaya County Council as safeguard of the forest, which implies a blurry and unclear line of ownership between state government, local authority and community. The unclear ownership to the forest has resulted in disputes.

In 2010 the Town Council of Othaya and KFS completed a Participatory Forest Management Plan (PFMP), but it is claimed that the local communities have not been adequately consulted (Gaia 12.2.2014). In a two-year programme the forest should be enriched by replanting indigenous trees and by felling the eucalyptus in a period of 5 years. The Council of Othaya is however said to have authorized the felling of the eucalyptus in one year, which have sparked protests among the communities, demonstrating their dissatisfaction, as they were worried about the impacts this would have on their livelihoods (Gaia 12.2.2014).

There are many actors with an interest in the Karima forest and its resources. In order to map out the different actors with an interest in the Karima forest, it is not enough to look at who has the legal, property right alone, because according to Ribot and Peluso (2003) there can be more actors able to gain access to the forest and derive benefits from the forest. Access is defined as "*the ability to benefit from things - including material objects, persons, institutions, and symbols.*" (Ribot & Peluso 2003). This approach includes a wider range of social relations that either constrain or enable people to benefit from resources. By taking

departure in the Theory of Access (Ribot & Peluso 2003) it becomes clear that different actors have different abilities to derive benefits from the Karima forest. The actors' ability to gain benefits depends on a range of powers embodied and exercised through various mechanisms, processes and social relations. The actors possess a bundle of powers and are positioned differently in relation to specific resources (Ribot & Peluso 2003). It is important to map out the distribution of benefits, especially within group governance arrangements, as there is growing evidence showing that inequitable distribution of benefits among individuals holding joint rights can undermine group rights (Mogoi *et al* 2012).

Research problem

Larson *et al* (2007) points out that knowledge lacks on how decentralization shapes forest governance and in particular, how it affects the livelihoods of forest-dependent people (Larson *et al* 2007). The question of whether or not the process of decentralizing forest management benefits the local communities, or is simply a cheaper way for the state to secure a sustainable management of the Karima forest by outsourcing the management activities to locals, remains to be explored. This report aims to investigate the dynamic processes and relationships of access to resources, in order to examine who are able to gain and maintain the ability to benefit from the Karima forest and its resources.

Problem statement:

What benefits are the different actors interested in and able to gain from Karima forest, and what mechanisms are applied by the actors in order to gain, maintain and control access to the forest?

Objectives:

- 1) Map out the actors' interest in gaining access to the Karima forest.
- 2) Identify the benefits that the actors are interested in and gain from the access to the forest.
- 3) Analyse the mechanism that the different actors possess and are able to use to gain, maintain, and control their access.

Research questions:

1. Who are the different actors interested in gaining access to the Karima forest?
 - 1.1 How have the access and interest in the Karima forest evolved?
2. What benefits does the Karima forest represent for the different actors?
 - 2.1 What are the benefits accessed by the actors?
 - 2.2 What potential benefits are the actors interested in gaining access to?
3. What mechanisms do the different actors use in gaining and maintaining access and in order to control access?
 - 3.1 What are the narratives of the different actors?
 - 3.2 What factors within the community determine access to the forest (gender, class, age, status, ethnicity, profession, origin, social networks, and patrimonial ties)?

Outline:

The synopsis is structured according to the theory of access (Ribot & Peluso 2003). The first part aims to contextualise the field of study by looking into historical forest governance, forest-related disputes and competing interests and uses, as well as present interests and uses of the Karima forest. This also gives an insight in why the different actors have a present interest in gaining access to the forest.

The second part evolves around which benefits are and can be derived from the Karima

forest. We approach benefits as being of both tangible and intangible nature, based on the view that a benefit can also be recreation, biodiversity etc. This part will include both present and potential benefits, as the strategy to access the forest by the different actors can be both short- and long-term.

The third and last part of the synopsis aims to explore what mechanisms the different actors make use of. We look into what strands in the web of power determine access to the Karima Forest by assessing what structural and relational mechanisms the different actors possess and choose to make use of. We are aware that the benefit distribution from the Karima forest resources follow a long value chain, but we have chosen only to look at the upstream of the value chain located in close proximity to the forest itself.

Methodological reflections

In the following we will consider the choice of methods in relation to collection of the needed information. It has been sought to implement different methods in order to triangulate the obtained information. Through triangulation of methods we are able to check the reliability of the collected data and thereby improve the validity. Combining methods will furthermore give a more nuanced picture, as it brings in different interpretations and dimension of the same phenomenon (Halkier 2002).

Semi-structured interviews:

We will make use of semi-structured interviews in several occasions, both in relation to our key informants, but also for when the occasion arise. The interviews with key informants will be crucial for the investigation, as this will provide us with more thorough information on their interest in gaining access and ability to gain access. In the preparation of the interview we will develop an interview guide (see appendix), to secure the gathering of essential information, though the guide will have a loose structure in order to secure the possibility of flowing up on new information provided by the interviewees.

We will furthermore make use of semi-structured interviews during our participation in the daily activities in the households and when participating in work in the fields, after the church ceremony and during the Wangari Mathai environmental day.

Participatory mapping:

Access is a turning point to the research objective of this paper, by having the villagers mapping out the area of the community we will gain a better insight to the area that the locals perceive as a part of their community and the different land use techniques applied by them. We will furthermore use the mapping activity to map out the points of interest and the community's use of Karima forest, because participatory mapping is a useful tool to

explore distribution information related to natural resources (Mikkelsen 2005).

Wealth ranking:

The wealth ranking assessment should be developed by heads of households with similar level of wealth in one group, and different levels of wealth between the groups assessing. This will secure a more diversified insight in the perception of wealth in the community. The informants will be selected on the background of information gained during the questionnaire survey.

Timeline and transect historical walk:

In order to gain greater insight in the historical events and changes that have taken place in Gakina community and in the Karima forest and in their mutual interaction, we will make use of the PRA method called a timeline, to be able to look into in the changes in ability to gain access to benefits in the Karima forest. By triangulating the timeline exercise with the transect historical walk we will be able to gain a deeper insight in the major changes of land use and interests of conflict. From the information gathered during the transect walk we will be able to construct a cross-sectional map or diagram of the Karima forest area.

Venn diagram:

This type of diagram will enable us to study the participants' perception on social relations between different individuals, groups or organisations (Mikkelsen 2005). The size of the circles represents importance, and the degree of overlap represents the intensity of interaction; in other words how close the relationship is. Through this method we can examine who the most influential people are in decision-making processes concerning the Karima forest and the social relations between the different actors.

Questionnaire survey:

We will conduct a questionnaire survey in the beginning of our field work in order to get an idea of the socio-economic situation of Gakina village and to get a quick overview of the issues related to Karima forest. It will be designed to generate quantitative data that can translate into statistics (Casley and Kumar 1988).

Focus group interview:

The study area is dominated by contesting interests and we therefore find the focus group interview a beneficial approach to gain insight in the different key informant's argumentation and relations. We can see if the different arguments are the same as for the actors as it was for the semi-structured interview and better analyse the narratives. The relations between the actors may also become clearer - who has the power over one and another.

Sensitive issues reflections:

We are aware that access and the interest in the Karima forest can be a sensitive issue. Especially because there have been collision between the local villagers and the municipality before. We will be aware of possible tensions between groups, and adjust the questions asked in order to not offend anybody. If necessary anonymity will be offered, we will furthermore consider when to use the dictaphone.

Word count: 2437

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Sampling strategies

Semi-structured interviews:

For the sampling strategy we will mainly use snowballing when finding our key informants, because the different types of actors can be difficult to find. We will furthermore make use of the insights gained during the questionnaire survey, to be able to identify and point out the informants needed for the semi-structured interviews.

Participatory mapping:

The exercise will be done with different sampling groups; males, females, elders, and youth to be able to gain a diverse and nuanced view on the variety of interest and use of Karima forest. We will do the exercise with elders and youth separately. By elders we refer to people above the age of 50, because they can remember how the forest looked like before the plantation of eucalyptus. We identify youth as people younger than 25.

Timeline and transect historical walk:

The informants for these methods will be elders, above 50 years of age, from Gakina community, who have experienced the historical changes and know the time pre and after different policies and plans concerning the management of Karima forest.

Venn diagram:

There will probably be great difference in diagrams made by different socio-economic groups, based on gender, age and status, so making this exercise with different people will be beneficial. This method could very well lead to semi-structured interviews or focus group discussions.

Questionnaire survey:

The sampling of informants for this method will be random by choosing i.e. every fifth person on a list of inhabitants, and if a list like that is not available or exist, we can for instance visit every fifth household.

Focus group interview:

The informants for the focus group interview will be the identified actors with an interest in gaining access to the Karima forest, we will use the snowball method, and use the insights gained during our questionnaire survey.

Problem statement	What benefits are the different actors interested in and able to gain from Karima forest, and what mechanisms are applied by the actors in order to gain, maintain and control access to the forest?				
Objectives	Research question	Sub-research question	Data required	Methods	Challenges
1. Map out the actors' interest in gaining access to the Karima forest.	1. Who are the different actors interested in gaining access to the Karima forest?		Identification of actors interested in access to the Karima forest	Interview with before hand identified actors from literature search. Interview with newspaper journalists to help identify the interested actors Venn diagram	In case it will not be able to make interviews with all the key informants, we will have to ask the other key informants of the role of the missing key informants role in the conflict of interest – through triangulation it might be possible to reach a broad idea of about the role of the referred key informant.
		1.1 How have the access and interest in the Karima forest evolved?	Historical knowledge of access and use of the forest from all identified actors Policy changes concerning access, use and ownership of Karima forest	Interviews with identified actors Mapping activity with elder inhabitants Interview with newspaper journalists Transect historical walk/block diagram (evolution) Semi-structured interviews and timeline exercise with elder inhabitants Comparison of satellite maps Timeline excersice	In case we will not be able to gain access to the public papers concerning the ownership and management of the Karima forest, we will triangulate the information gather through the interviews to seek the most representative presentation of the history of the Karima forest.
2. Identify the benefits that	2. What benefits do the Karima forest represent for the different actors?		Information on what the different actors derive from the forest	Interviews with identified actors Participatory observation Questionnaire survey Forest resource assessment Soil sampling of soil fertility	

the actors are interested in and gain from the access to the forest.	2.1 What are the benefits accessed by the actors?		Interviews with identified actors Participatory observation Questionnaire survey
	2.2 What potential benefits are the actors interested in gaining access to?	Information on potential, future benefits from the forest identified by the actors	Interviews with identified actors Participatory observation Questionnaire survey Forest Resource Assessment Soil fertility
3. Analyse the mechanism that the different actors possess and are able to use to gain, maintain, and control their access	3. What mechanisms do the different actors use in gaining and maintaining access and in order to control access?	Identification of factors (red. theory of access) the different actors posses. Who are the most powerful institutions related to Karima forest (Sampling: priest, teacher and other knowledgeable people who are not directly involved)	PRA: Institutional power ranking exercise Interviews with identified actors
	3.1 What are the narratives of the different actors?	Narratives and notions used by different actors	Semi-structured interviews Participatory observation Focus group interview Litteratur analysis
	3.2 What factors within the community determine access to the forest (gender, class, age, status, ethnicity, profession, origin, social networks, patrimonial – capitals)?	Identify socio-economic differences within the village and link this knowledge with the different groups of people's access to the forest	Wealth ranking exercise Questionnaires Interviews

Sheet1

	Fieldwork														
	Week	9				10							11		
	Day	27	28	1	2	3	4	5	6	7	8	9	10	11	12
Field Work activities															
Meeting with Kenyan student at Langata															
Arrival in Barima Village												<div>Legend</div> <div></div> Major activity			
Preliminary survey															
Village and field walk															
Preparation of village map and timeline activity															
Participation in field activities															
Participation in household activities															
Mapping activity with elder community members															
Timeline activity with elder community members															
Church service in the village															
Semi structured interviews															
Walk – historical walk diagram															
Wealth ranking															
Refinement and questionnaire testing															
Wangari Mathai environmental day															
Semi structured interviews															
Interview with journalist															
Questionnaire survey (15 households)															
Key informative interviews															
Key informative interview – Othaya Municipality															
Key informative interview – Tea company															
Key informative interview – Porini member															
Questionnaire survey (15 households)															
Key informative interview – KFS															

Legend

Major activity

Sub-activity

Fixed dates

Sheet1

Ven diagram														
Forest ressource assesment														
Soil sampling 1. site														
Soil sampling 2. site														
FRA: meassuring trees 1. site														
Mapping activities of local people in the forest														
FRA: meassuring trees 2. site														
Mapping activities of local people in the forest														
Evaluation of research progress														
Recreational leisure day														
Focus group														
Focus group interview with local community														
Ranking exercise: Institutional power														
Buffer day														
Feedback meetings in village/Othaya														
Farwell party														
Travel to Nairobi														

Questionnaire number: _____

Date: _____

Questionnaire

(1) Gender:

☐ Female (1)

☐ Male (2)

(2) Year of birth: _____

(3) Ethnicity:

☐ Kikuyu (1)

☐ Abaluhuhya (2)

☐ Luo (3)

☐ Kalenjin (4)

☐ Kamnba (5)

☐ White (6)

☐ Other (7)

(4) Marital status:

☐ Married (1)

☐ Engaged (2)

☐ In a relationship (3)

☐ Widowed (4)

☐ Divorced (5)

☐ Single (6)

(5) Number of children:

(6) Educational level:

☐ University (1)

☐ Other further education (2)

☐ Secondary school (3)

☐ Primary school (4)

☐ No diploma (5)

(7) Religious affiliations:

☐ Protestant (1)

☐ Roman Catholic (2)

☐ Traditional (indigenous?) beliefs (3)

☐ Other (4)

(8) Do you own any land? If yes how much?

(9) What is your job?

(10) How do you rank your own wealth?

___ Rich (1)

___ Middle (2)

___ Poor (3)

___ No answer, don't know (4)

(11) Membership of groups?

(12) How often are you in the Karima forest?

___ Daily (1)

___ Weekly (2)

___ Monthly (3)

___ Yearly (4)

___ I am never in the forest (5)

Consider the following statements:

I use the forest for:

	Strongly agree	Agree	Don't know	Disagree	Strongly disagree
--	----------------	-------	------------	----------	-------------------

(13) Recreational purposes:

_____	_____	_____	_____	_____
-------	-------	-------	-------	-------

(14) Firewood collection:

_____	_____	_____	_____	_____
-------	-------	-------	-------	-------

(15) Food gathering:

_____	_____	_____	_____	_____
-------	-------	-------	-------	-------

(16) Religious purposes:

_____	_____	_____	_____	_____
-------	-------	-------	-------	-------

(17) Commercial purposes:

_____	_____	_____	_____	_____
-------	-------	-------	-------	-------

(18) Are you active in politics concerning the Karima forest?

___ Yes (1)

☐ No (2)

(19) Do you consider the forest important to the Gakina community?

☐ Yes (1)

☐ No (2)

Elaborate:

(20) On a scale from 1-10 how big an influence do you think the Gakina community has upon the forest?

(21) Who has the most power over the forest?

☐ Village chief (1)

☐ Forest service (2)

☐ Community forest association (3)

☐ Othaya municipality (4)

☐ Commercial companies (5)

☐ NGO's (6)

☐ Others (7)

(22) How satisfied are you with the way the forest is managed at the moment?

☐ Very satisfied (1)

☐ Satisfied (2)

☐ Do not know (3)

☐ Dissatisfied (4)

☐ Very dissatisfied (5)

(23) What do you think should happen to the forest?

Thank you for your time.

May we contact you later?

Interview guide for Gakina villagers

Introduction to the subject

In our project we are interested in knowing how the Karima forest and the use of it have changed over time.

In this interview we are interested in your opinion and experience with Karima forest. I/we would like to understand how and by who Karima forest is used, and how it has been used historically.

Socio-economic characteristics

1. Identify the interviewee's age, origin, profession, gender, marriage and number of children

Access to the resources of the Karima forest – before and now

2. How would you describe Karima forest?
3. Do you use the forest? (For what purpose?)
4. Who in Gakina community use the forest most? (Why them?)
5. What do people use the forest for? (What value does the forest represent?)
6. Are you restricted from using or enjoying any forest resources (which?)
7. How has the usage of the Karima forest developed over time?
8. How has the forest physically changed over time?

Authority and control over access to the forest

10. Who has the authority over the Karima forest?
11. How are decisions over the forest made?

The Forest Management Plan - decentralization

12. Do you know about the new Forest Management Plan?
13. Have you been part of the making the Forest Management Plan? (Was it participatory? Where you heard?)
15. Who do the management plan benefit? (Who win?)
16. Do you see any obstacles with the forest management plan? (Which?)
17. Who benefits from the forest resources?
18. Has the forest management plan been implemented yet? (What parts?)

19. Do some actors benefit more after the implementation of the management plan?

Different actors and conflict

21. Who are using the Karima forest from outside the Gakina community? (Why?)

22. Do you consider their presence as good or bad?

23. Are there any obstacles for people of the Gakina village to carry out activities in the forest?

24. What is the issue of the eucalyptus trees within the forest?

25. We have heard about a dispute concerning telecommunication lines within the forest.

Can you tell us about that?

26. We have observed that plots within the forest are cleared from trees? Who use these plots and for what purposes?

Vision for Karima forest

27. How do you think the forest looks like in 10 years?

28. How do you wish to see the forest in 10 years?

Closure

Is there something that I should have asked in the interview?

Is there anything else you would like to add?

Interview guide for the Karima Forest Association

Introduction to the subject

In our project we are interested in knowing how the Karima forest and the use of it have changed over time.

In this interview we are interested in your opinion and experience with Karima forest. I/we would like to understand how and by who Karima forest is used, and how it has been used historically.

Personal characteristics

1. Will you present yourself and how you got into this association?
2. For how long have you been working in the association?
3. What is your role and responsibility in the association?

The municipality's relation to the Karima forest

4. How and why did the Karima Forest association form?
5. How would you describe the Karima forest?
6. What is the role of the Karima Forest Association concerning the forest and its resources?

Access to the resources of the Karima forest – before and now

7. Who use the forest?
8. What is the forest used for? (What does the forest represent?)
9. How has the usage of to the Karima forest developed over time?
10. How has the forest physically changed over time?

Authority and control over access to the forest

11. Who has the authority over the Karima forest?
12. How are decisions over the forest made?

The Forest Management Plan - decentralization

13. What is the main purpose of the new Forest Management Plan?
14. Who was part of making the Forest Management Plan? (How was the process? Participatory?)

15. The Forest Plan aimed to include the locals in the decision-making – who do you consider as “locals”?
 16. What are the opportunities and benefits of the establishment of the Management Plan?
 17. Do you see any obstacles with the forest management plan? (Which?)
 18. Who benefits from the forest resources?
 19. Has the forest management plan been implemented yet? (What parts?)
 20. Do some actors benefit more after the implementation of the management plan?
 21. How does the management plan affect the municipality?
-

Different actors and conflict

22. Which actors are interested in the forest?
 23. Do the actors have conflict of interest? (If yes; which and how do you believe that they can be solved?)
 24. Are there any obstacles for people, organizations, companies or groups to carry out activities in the forest?
 25. What is the issue of the eucalyptus trees within the forest?
 26. We have heard about a dispute concerning telecommunication lines within the forest. Can you tell us about that?
 27. We have observed that plots within the forest are cleared from trees? Who use these plots and for what purposes?
-

Vision for Karima forest

How do you think the forest looks like in 10 years?

How do you wish to see the forest in 10 years?

Closure

Is there something that I should have asked in the interview?

Is there anything else you would like to add?

Interview guide for the Municipality

Introduction to the subject

In our project we are interested in knowing how the Karima forest and the use of it have changed over time.

In this interview we are interested in your opinion and experience with Karima forest. I/we would like to understand how and by who Karima forest is used, and how it has been used historically.

Personal characteristics

1. Will you present yourself - tell about your profession
 2. For how long have you been working in the municipality?
-

The municipality's relation to the Karima forest

3. How is your job related to the Karima forest?
 4. How would you describe the Karima forest?
 5. What is the role of the municipality concerning the forest and its resources?
-

Access to the resources of the Karima forest – before and now

6. Who has the legal access to the forest?
 7. Who use the forest?
 8. What is the forest used for? (What does the forest represent?)
 9. How has the usage of to the Karima forest developed over time?
 10. How has the forest physically changed over time?
-

Authority and control over access to the forest

11. Who has the authority over the Karima forest?
 12. How are decisions over the forest made?
-

The Forest Management Plan - decentralization

13. What is the main purpose of the new Forest Management Plan?
14. Who was part of making the Forest Management Plan? (How was the process? Participatory?)
15. The Forest Plan aimed to include the locals in the decision-making – who do you consider as “locals”?
16. What are the opportunities and benefits of the establishment of the Management Plan?
17. Do you see any obstacles with the forest management plan? (Which?)

- 18. Who benefits from the forest resources?
 - 19. Has the forest management plan been implemented yet? (What parts?)
 - 20. Do some actors benefit more after the implementation of the management plan?
 - 21. How does the management plan affect the municipality?
-

Different actors and conflict

- 22. Which actors are interested in the forest?
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Vision for Karima forest

- 28. How do you think the forest looks like in 10 years?
 - 29. How do you wish to see the forest in 10 years?
-

Closure

- Is there something that I should have asked in the interview?
- Is there anything else you would like to add?