Forest Community Integration and Collective Agency in Korup National Park, Cameroon: Interactions with Forest Policies and the REDD+ Mechanism

by

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List of Abbreviations

CDA: conservation and development agreement

CED: Centre pour l'Environnement et le Developpement

CfRN: Coalition for Rainforest Nations

CIFOR: Center for International Forestry Research

COMIFAC: Central African Forests Commission

COP: Conference of the parties (to the UNFCCC)

DO: divisional officer

DRC: Democratic Republic of Congo

EESS: Strategic Environmental and Social Assessment unit

FAO: Food and Agriculture Organization of the United Nations

FCPF: Forest Carbon Partnership Facility

FLEGT: forest law enforcement, governance, and trade

FMC: final management convention

FSLC: first school leaving certificate

FPIC: free, prior, and informed consent

IEC: Information, Education, and Communication unit

IUCN: International Union for the Conservation of Nature

KNP: Korup National Park

MBABCIG: Mosongiseli Balondo Badiko Common Initiative Group

MINEPDED: Ministry of the Environment, Nature Protection, and Sustainable Development

MINFOF: Ministry of Forests and Wildlife

MRV: monitoring, reporting, and verification

NGO: non-governmental organization

NIS: National Institute of Statistics

NTFP: non-timber forest product

ONACC: National Observatory on Climate Change

PMC: provisional management convention

PSMNR-SWR: Programme for the Sustainable Management of Natural Resources in the Southwest Region

RoC: Republic of Cameroon

REDD+: Reducing Emissions from Deforestation and forest Degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries

R-PP: readiness preparation proposal

SEFE: Struggle to Economize Future Environment

SFM: sustainable forest management

SMP: simple management plan

UNDP: United Nations Development Programme

UNEP: United Nations Environment Programme

UNFCCC: United Nations Framework Convention on Climate Change

UN-REDD: United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries

VFMC: village forest management committee

WRI: World Resources Institute

WWF: World Wide Fund for Nature

Abstract

Cameroon is in the process of developing its program for reducing emissions from deforestation and forest degradation (REDD+). Two communities near the southern portion of Korup National Park in the Southwest Region were studied to understand the implications for REDD+ implementation in the area, in light of current forest policies including community forestry, agro-industry, and forest conservation. Frameworks used to understand the communities are an institutional analysis model, and the field-interactional perspective of community agency. I used qualitative methods of data collection, including a questionnaire survey, in-depth interviews with villagers and NGO (non-governmental organization) workers, and other ethnographic techniques. Various options have been proposed as mechanisms of implementing REDD+ projects in Cameroon. These are discussed, along with two possibilities for intra-community benefit sharing. There was no observable animosity between demographic groups in the study communities, but women and allogenes were less involved in decision-making. Allogenes also had additional barriers to accessing institutional processes, as well as forest land and resources. Youth showed higher levels of education compared to the older population, and women had lower levels compared to men. Processes of societal integration exist within the communities, and these could potentially aid in improving community agency, especially through educating community members about risks, opportunities, and their rights in relation to REDD+. The results indicated that there is a danger of local communities being excluded from REDD+ benefits, with simultaneous

loss of livelihoods, using proposed mechanisms of agro-forestry or land use fees. I recommend a payment for ecosystem services approach within community forestry, but considerable changes are needed to improve the process of establishing community forests, ensure participation of all segments of the population, and prevent exclusion of marginalized groups.

Chapter 1. Introduction

1.1. Background

This study investigates relationships between the aspects of integration and collective agency among two villages – Fabe and Mosongiseli – currently pursuing community forest land tenure near the southern portion of Korup National Park in Cameroon. The country is developing its REDD+ policy,[1] which poses both challenges and opportunities to these communities, due to the dependence of local people on the forest and its resources. One challenge comes from similarities that REDD+ shares with integrated conservation and development projects (ICDPs) as well as top-down measures of forest management that have alienated local people from their customary lands and sources of livelihood in favor of other ecological, political, and economic interests. This loss of access to forest land and resources has occurred both globally (Blom, Sunderland, & Murdiyarso, 2010; Chapin, 2004; Larson, 2011) as well as within the study area (Achobang, Nguiffo, & Schwartz, 2013; Diaw & Tiani, 2010; Schmidt-Soltau, 2004).

A second challenge comes from the commoditization of forest carbon, which has created political conflicts at different scales over control of the production of forest carbon in other countries (Mahanty, Milne, Dressler, & Filer, 2012; Phelps, Webb, & Agrawal, 2010). While the new commodity of forest carbon presents challenges for the

[1] REDD+ refers to the program known as "Reducing Emissions from Deforestation and forest Degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries" ("REDD+", 2014).

future, past and current phases of capitalism have created highly heterogeneous communities within Cameroon in general, and within the study area in particular, through the mobilization of labor to work on plantation camps (Geschiere & Nyamnjoh, 2000; Malleson, 2001). This heterogeneity has resulted in considerable divisions within Cameroonian society, and these divisions have been exploited in order to retain political power by the current administration and ruling political party. Existing tensions within the country may therefore create considerable challenges for communities to collectively engage with REDD+ policies.

On the other hand, REDD+ also presents opportunities to these villages. Community forestry may offer advantages for Cameroon in achieving its REDD+ goals. Outside of Cameroon, community forestry has demonstrated its potential as an effective, efficient, and equitable tenure regime that may be appropriate for implementing REDD+ projects (Phelps et al., 2010; Porter-Bolland et al., 2012; Skutsch & McCall, 2011). If the communities in the study area have the capacity to effectively assert their agency in Cameroon's REDD+ development and implementation process, they will be in a better position to prevent the loss of livelihoods, while gaining from REDD+ benefits. For its part, Cameroon has stated that the nation's REDD+ goals include ensuring the welfare of local communities, and obtaining the consent of indigenous populations (Forest Carbon Partnership Facility [FCPF], 2013a). In addition, lessons from the Korup Project ICDP have shown that conservation measures such as REDD+ will not be effective without the voluntary cooperation of the local populations (Diaw & Tiani, 2010; Mbile et al., 2005; Schmidt-Soltau, 2004).

Agrawal and Angelsen (2009) assert that REDD+ outcomes can be enhanced by involving communities in forest management, but parameters for the success of community forestry need to be addressed in order to optimize the results of these initiatives. Two of these "clusters of success factors" (Agrawal & Angelsen, 2009, Table 16.1, p. 205) include socio-political and economic *user group factors* such as group size and heterogeneity, as well as *institutional arrangements* such as tenure security and participation in deciding rules for forest usage. According to the authors, secure tenure rights and access to rule-making are well known as contributing to successful community forestry outcomes, but the effects of heterogeneity are not established, and often the results of studies investigating this factor vary considerably under different circumstances (Agrawal & Angelsen, 2009).[2] Thus, an understanding of socially heterogeneous forest communities in the local context can contribute to the current discussion on the relationship between heterogeneity and institutional arrangements, and improve the likelihood of successful outcomes for Cameroon's REDD+ program.

Through primarily qualitative methods, this study seeks to understand how societal integration of these heterogeneous communities could affect collective agency in REDD+ interactions. The analysis of this potential is based on the variation in agency between different demographic groups, and prior interactions of the community with forest policies such as community forestry, industrial agriculture, and forest conservation. The methods include villager surveys, semistandardized and unstandardized interviews

[2] Also, see Poteete & Ostrom (2004) for a similar discussion regarding collective action in community-based forest management.

with villagers and NGO workers, and other ethnographic methods such as mapping and participant observation.

The two communities in the study area are currently interacting with forest conservation policies. Because they exist within the peripheral zone of Korup National Park, the communities have been affected by the Korup Project, an ICDP that began in 1986 (Schmidt-Soltau, 2004) and covers a total area of 6,600 km^2, including Korup National Park and the surrounding "Support Zone" (Egute, 2012). Moreover, the communities are currently attempting to establish community forests, a process which involves extensive interactions with governmental agencies, including each level of the Ministry of Forests and Wildlife (MINFOF), from the district to national levels (Yufanyi Movuh, 2013). Understanding the basis for these interactions, and the issues faced by local communities in their application of collective action in these instances helps to determine the processes that connect societal integration within the community to the outcomes of these interactions. Furthermore, the REDD+ development process has already begun in Cameroon, and a pilot project was slated for Korup National Park (Freudenthal, Nnah, & Kenrick, 2011). Therefore, the communities should already be involved in the development process on the local as well as national scale, according to the principles of free, prior and informed consent (Mahanty & McDermott, 2013), and Cameroon's goals for participation of local populations in the REDD+ policy development process (FCPF, 2013a).

1.2. Problem Statement

Implementing REDD+ in Cameroon could endanger the livelihoods of forest communities. These risks originate from two different, though complimentary, frames.

Some observers, for instance Blom et al. (2010), argue that REDD+ as a variation of integrated conservation and development projects (ICDPs). REDD+ will be implemented nation-wide, but similar to ICDPs, many activities will occur at the sub-national project level, and will involve financial compensation to communities involved (Blom et al., 2010). The Korup Project, an ICDP that began in 1988 (Schmidt-Soltau, 2000), has been characterized by some as a "catastrophic failure" (Mbile et al., 2005, p. 1). The Korup Project intended, in part, to resettle the inhabitants of villages living within the park, in addition to restricting hunting, gathering, and farming practices that are essential to the livelihoods of the local communities (Diaw & Tiani, 2010; Schmidt-Soltau, 2004). As of 2010, only one village was ever relocated (Diaw & Tiani, 2010).[3] Resettlement was accomplished at a financial cost far higher than anticipated, while livelihood restrictions resulted in conflicts and considerable distrust between park authorities and those living in and around the park (Diaw & Tiani, 2010). Secondly, REDD+ threatens to recentralize control of forest management because of the desire for states to obtain financial benefits from the REDD+ mechanism (Phelps et al., 2010).[4] In studies of REDD+ implementation in the Philippines, Cambodia, and Papua New Guinea, Mahanty et al. (2012) observed conflicts between national, regional, and local actors as governments tried to accrue benefits flowing from control of the production of forest carbon.

[3] This village was Ikondo Kondo, resettled near the study site community of Fabe (Egute, 2012).

[4] In fact, NGO workers stated in interviews that Cameroonian officials viewed REDD+ as a source of development money (Organization 2 respondent), not a conservation program, and attested to the wide-spread mismanagement of funds from both economic development projects and conservation initiatives (Organization 2 respondent, Organization 4 respondent).

Past and current experiences with industrial agricultural in Cameroon have led to migrations throughout the country. Geschiere and Nyamnjoh (2000) argue that a fundamental characteristic of capitalism is to generate migration, followed by the reinforcement of social divisions between newly diverse populations. This was accomplished during the colonial era by forced and highly coercive relocations that displaced Cameroonians throughout and between the colonies, bringing laborers to work in plantation camps. The process was particularly strong in what is now the Southwest Region, where Korup National Park and the study site communities are located. Vast commercial plantations were established here during the early German colonial period. The result was a new heterogeneity of ethnic groups in Cameroon, that were themselves "historical constructs subject to constant change" (Geschiere & Nyamnjoh, 2000, p.427), and largely of European fabrication. Generations later, these immigrants in some areas of the country are still considered "strangers", in contrast to those claiming local status as "indigenes". In 1990 the government opened the political system to multi-party elections, but retained political hegemony by sewing discord between "indigenes" and "strangers" within communities throughout the country, successfully nullifying elections that proved not to be in the ruling party's favor. The historical "'freeing' of labor" (Geschiere & Nyamnjoh, 2000, p. 426) during earlier phases of capitalism was thus followed by exclusion during political liberalization.

Mahanty et al. (2012, p. 661) describe the system of carbon credits from REDD+ as a new commodity with its own "social life". The forest carbon commodity chain flows from production, to unitization into individual credits, to valuation on the carbon market, "and finally its displacement from the labor and resource context in which it was

‘produced’” (Mahanty et al., 2012, p. 661). These authors note that due to the intangible nature of carbon credits, knowledge and access to decision-making have been especially important factors for communities in struggles at different political scales for control of the production of forest carbon.

With the introduction of this new commodity into the local context around Korup National Park, will capitalist production have the same or similar effects as plantation agriculture had for Cameroon in general, and the Southwest Region in particular? That is, will the REDD+ mechanism promote the mobilization of workers followed by exclusion of immigrants from power, and if so, will this exclusion reduce the ability of forest communities to capitalize on opportunities presented by REDD+? The answers will have considerable impacts on the effectiveness, efficiency, and equity of any REDD+ projects in the area, and of projects involving forest communities with similar socio-political, economic, demographic, market, and macro-political factors (Agrawal & Angelsen, 2009). These are some of the questions which the present discussion attempts to address, but the final answers will not be known until implementation has been carried out.

1.3. Need for Research

Despite the possibility of loss and violation of local rights, REDD+ also poses opportunities to forest communities, in the form of financial benefits. Community forests (including forest tenure arrangements known variously as “community forest management”, “community-based natural resource management”, and the like) are particularly well suited to benefit from REDD+. First of all, community forests in settings throughout the world have demonstrated effectiveness in enhancing forest biomass (Skutsch & Solis, 2011; Phelps et al., 2010; Porter-Bolland et al., 2012). Secondly, they

have shown cost efficiency in terms of enhancing forest biomass, relative to protected areas (Agrawal & Angelsen, 2009; Phelps et al., 2010; Skutsch & McCall, 2011). Thirdly, community forestry can result in a more equitable distribution of forestry benefits (Agrawal & Angelsen, 2009; Maryudi et al., 2012).

Understanding factors that promote successful community forestry can help in successful implementation of REDD+ (Agrawal & Angelsen, 2009). These factors include "user group" characteristics such as heterogeneity. The effects of heterogeneity on successful outcomes of community forestry are uncertain, and the results of studies looking at different aspects of heterogeneity have yielded different results in different contexts (Agrawal & Angelsen, 2009; Poteete & Ostrom, 2004), warranting further investigation into this factor. The present study focuses on forest communities described by Malleson (2001) as highly heterogeneous. The research has attempted to uncover connections between integration (or lack thereof) and successful collective action, one proposition being that heterogeneity itself is not as important in influencing the outcomes of community forestry as is the integration of different demographic groups within a community.

Rist (2000) discusses the need for the application of qualitative social science methods to policy research, and defines three phases generally existing in the policy cycle: formulation, implementation, and accountability stages. He maintains that social research has the potential for the greatest impact during the first of these phases. Because of Cameroon's current position in the first phase of the REDD+ policy process (the readiness phase, according to the UN-REDD Programme [UN-REDD, 2012]), the present research comes at an optimal time to discover how the forest communities understand

and are responding to REDD+. Community studies are of particular importance during this early stage of the policy cycle (Rist, 2000). UN-REDD (2012), moreover, stresses the importance of assessing community and environmental impacts early in the REDD+ development process.

1.4. Objectives

This study comprises two principal objectives, one theoretical and one practical. The theoretical objective of the research is to understand connections between societal integration and collective agency for the forest communities involved in the study. From this understanding I hope to add to the literature on the relationships between user group factors, such as heterogeneity, and successful outcomes of community forestry and REDD+, particularly outcomes that are successful in terms of respecting local rights and social safeguards. The practical objective is to contribute to the improvement of REDD+ interactions with local communities in the area. While recommendations for REDD+ implementation given in this study are specifically suited to the communities studied, they may also be applicable to communities with similar institutional structures dealing with similar external policies and actors.

1.5. Conceptual Framework

1.5.1. Community

This study uses two frameworks for understanding the concept of "community" that may at first appear somewhat contradictory. Agrawal and Gibson (1999) propose an *institutional analysis* model of communities, and contrast this perspective with earlier notions advanced in the study of community-based conservation initiatives. The authors advocate a model in which diverse actors within the community interact in ways that

establish institutions (seen as rules and norms that constrain individual actions) through "processes of decision-making and enforcement" (p. 639). While institutions can direct actions, they are also in constant change as individuals and groups contest and negotiate their terms. They claim that this contrasts with earlier discourses in which communities were thought of as either spatially constrained territories (such as Tonnies), homogeneous social structures, or shared norms (Ascher, for instance). While the authors acknowledge that these three attributes can be found to some extent in many communities, taking these characteristics as unexamined truths fosters a simplistic interpretation which can lead to erroneous assumptions about how communities interact with their environment and conservation policies. A better understanding of conservation outcomes is obtained through a focus on institutions and the processes through which these rules and norms are shaped. Moreover, they argue, community institutions often cannot be clearly isolated from external institutions, so analyses should take into consideration interactions with external actors.

According to Bessant (2012), Wilkinson's *field-interactional* theory views community as a "field of interaction" (p. 632) between individuals having diverse interests. In this conceptualization, community is continually reconstructed through social interactions as individuals negotiate and define rules and norms. The perspective is primarily concerned with processes through which collective agency is produced. In the field-interactional model, collective agency is thought to come about through the empathic generalization of individual understandings to those of other individuals or groups within the community field. As a result of social interactions, "diverse lines of action coalesce around common interests" (Bessant, 2012, p. 629), leading to collective

action. Despite similarities to "community as common interests and shared norms," critiqued by Agrawal and Gibson (1999, p. 635), these authors do not deny that certain "community level norms" (p. 635) do often exist, and that in some cases they are amenable to conservation goals. They also note that shared understandings can encourage community members to work together in negotiating institutional arrangements. The authors' main concern is that researchers neglect the cases in which shared norms prove detrimental to ecological outcomes. In the field-interactional model, communities themselves are not necessarily composed of individuals having homogeneous understandings. Rather, the extent to which understandings *are* shared (due to social interactions between individuals from different groups) is theorized to result in collective agency when individuals generalize their own interests as being synonymous with those of others in the community. This generalization then produces collective action which is representative of a diversity of social groups, rather than the interests of only a small subgroup. Thus, social interactions between members of the community having diverse interests would modulate the processes by which communities make rules, implement them, and resolve disputes, in ways that give authority for these actions to broader sections of the community.

The current work synthesizes these two community frameworks by examining the demographic heterogeneity of the study communities; prevailing norms, formal institutions, and interactions with external actors; states and processes of integration between demographic groups; and an assessment of collective action in interactions with external policies. The main objective is not to describe whether or not the study communities are protecting the environment, nor to predict if they will do so under

REDD+. The objective is, instead, to understand the nature of agency among various actors within the community, and the implications of differences or similarities in agency for interactions with REDD+ once it is implemented. This follows Agrawal and Gibson's (1999) recommendation for organizations and governments to accept the legitimacy of decisions made by communities, even if these decisions are not helpful for immediate conservation goals. While doing so may sacrifice ecological sustainability (at least over the short-term), preserving social sustainability for the relevant populations could prove more beneficial in the long-run due to the necessary role of communities as partners in conservation policies.[5]

1.5.2. Research Questions

The following research questions guide the analysis of community institutions and interactions with forest policies. The research questions should be understood as limited to forest communities near the southern portion of Korup National Park, and specifically the two study communities. Current forest policies include industrial agriculture, forest conservation, and community forestry. Each of these has a particular agent carrying out the activities that form the basis of interactions with the communities. In this study, *industrial agriculture* refers to large-scale crop production other than timber. The relevant policy is the government's system of land rents, established by Decree 76-166 of 27 April 1976 (Assembe-Mvondo, Brockhaus, & Lescuyer, 2013). The primary agents of these policies in the study communities are two oil palm companies, specifically SG

[5] The terms *ecological sustainability*, *economic sustainability*, and *social sustainability* are derived from the interview with the respondent from Organization 4. This respondent specifically defined social sustainability as "justice in the way that locals can continue using the forest for their livelihoods."

Sustainable Oils Cameroon (SGSOC, a division of the American-owned Herakles Farms [Achobang et al., 2013]) in Fabe, and Pamol Plantations Plc (a parastatal company with majority government ownership [Pamol Plantations Plc, n.d.]) in Mosongiseli. *Forest conservation* refers to Cameroon's system of national parks, reserves, and other conservation projects. The Korup Project serves as the most important agent of this policy in the study communities. *Community forestry* is seen in this study as both a local institution, in that the community forest is managed locally by its executive committee and is supposed to represent the interests of the community, but also as an external institution with the government as its primary agent. This latter sense is due to the fact that establishing a community forest culminates in an area of land which is formally recognized by the government, through following an often highly politicized process directed and mediated largely by state and commercial actors. Both forest conservation and community forestry are guided by the 1994 Law Establishing Forestry, Wildlife and Fisheries Regulations (hereafter referred to as the 1994 Law). With these definitions in mind, the following are my two major research questions.

- How is societal integration related to collective agency towards current forest policies?
- What are the implications of local agency for REDD+ implementation in the area?

The theoretical objective of the research is guided by the first of these research questions. Communities around Korup National Park have been described as extremely heterogeneous, with a variety of conflicts and power relations existing within them (Malleson, 2001). Therefore, describing and understanding the range and qualitative nature of each village's heterogeneity, or diversity, comprises an important component to

begin an appreciation for the communities' user group characteristics. The component of *heterogeneity* examines the relative representation of members of the sample population within nine categories: gender, age, occupation, level of education, religion, land tenure status, place of origin, and clan group. The category *place of origin* includes demographic groups of "*indigenes"* (locally-born natives), and "*strangers"* (those who trace their identity to another location) (Malleson, 2001).[6]

In this study, measures of integration include a diversity-based set of three dimensions: geographical, social, and hierarchical (Figure 1.1). The analysis focuses on three primary demographic characteristics of age, gender, and place of origin; the remaining six categories are secondary demographic characteristics that are used to analyze issues of integration and agency between categories of the primary demographic groups. I define *geographical integration* as the degree to which demographic groups in each category are represented within the same physical area. This may not necessarily coincide with the degree to which various groups actually interact with one another, which I define as *social integration*. *Hierarchical integration* is defined as the presence of members of diverse demographic groups within formal decision-making bodies, and other institutions conferring status. Mbile (2005, pp. 10-11) remarks that while the societies in the study area have been described as relatively "flat" or "acephalous," policy makers and others should not construe this as equivalent to being disordered.

[6] In this study I have preferred the term *allogene* to *stranger*, because I believe it carries a more neutral tone. In the course of the fieldwork, however, I frequently used the term *stranger* during surveys and interviews. Another term used by respondents was *foreigner*. For indigenes, respondents used the terms *citizen*, and *native*.

After some aspects of diversity and integration are known, an examination of collective agency for the communities and specific demographic groups is possible. The component of agency is defined here according to three dimensions: attitudes, understandings, and empowerment. In short, this conceptualization of agency boils down to answering the following three questions, respectively: What does the community believe about relevant forest policies, and REDD+ in particular? Why do they have these beliefs? and How do they see themselves as affected by, and able to affect, the policy? This loosely follows from the identification by Hewson (2010) of three bases of agency: rationality, intentionality, and power. In this case, *attitudes* towards REDD+ policies are seen as rationality on the part of individuals within demographic groups, and on the part of the community as a whole, in deciding what is best for themselves. *Understandings* inform the question of why community members have certain beliefs regarding REDD+ and current forest policies, based on their knowledge and experiences, thus informing the intentionality of individuals, demographic groups, and the community. Empowerment is likely influenced by understandings, and informed by attitudes, but is largely based on the two key factors of decision-making and forest access, as discussed in further detail below.

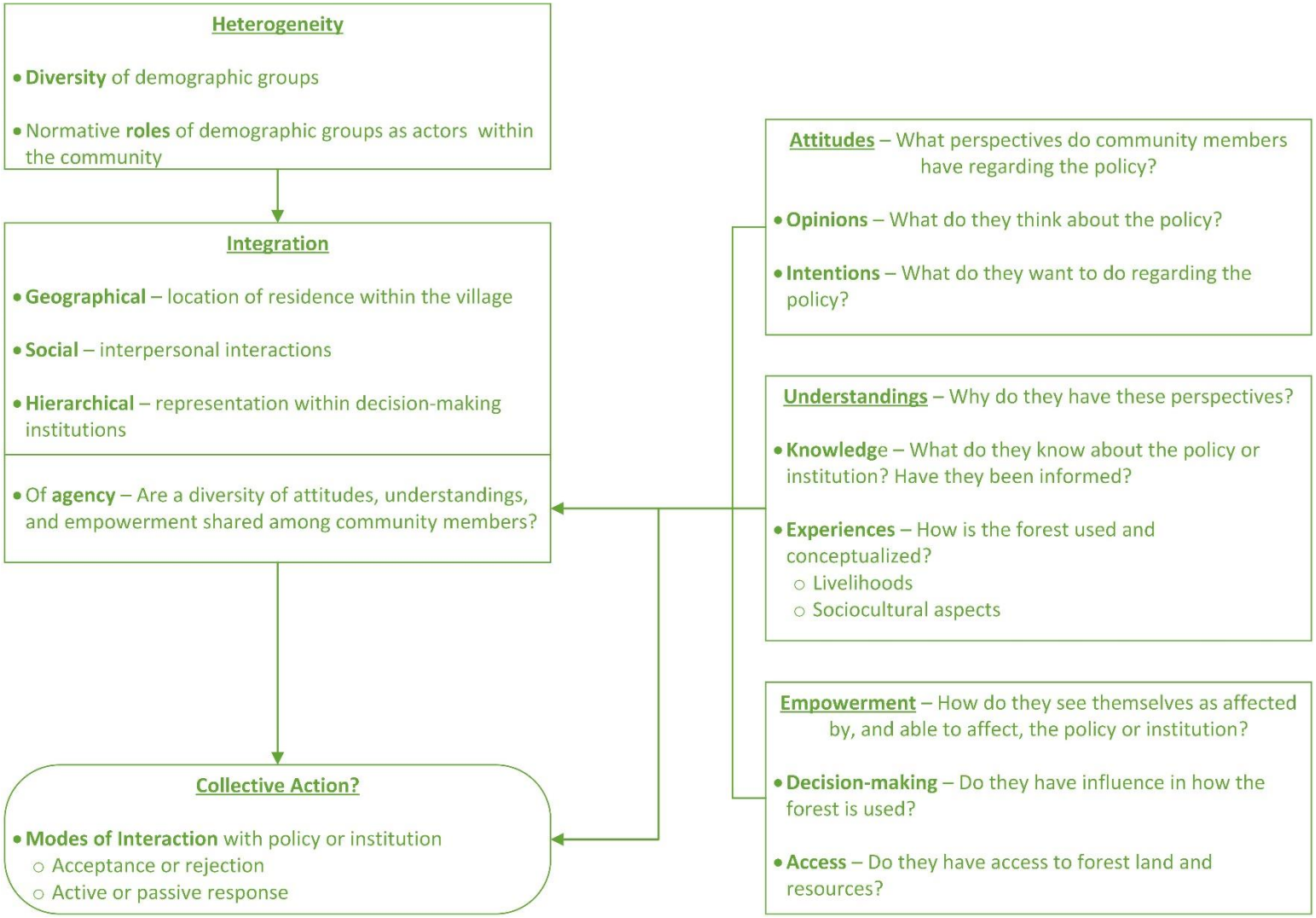

Figure 1.1. Concept map for the research.

Analysis of agency for the three primary demographic categories (gender, age, and place of origin) provides an additional dimension of integration. A low degree of variation found in attitudes, understandings, and perceived empowerment between different social groups implies a high level of integration in the dimension of agency, whereas large variation between social groups suggests a low level of agency-based integration. This provides a relationship between heterogeneity, integration, and agency for a particular community.

The capacity for collective action in interactions with REDD+ is examined as a specific feature of collective agency. This capacity is measured by past and current instances in which the community has interacted with policy design and implementation, to the extent that heterogeneous demographic and social groups (that is, the "multiple interests and actors" of Agrawal & Gibson, 1999, p.636) have been involved in the local-level processes of the collective action. Such interactions are characterized according to two different criteria: the *quality* of the interaction in terms of approval or rejection, and the active or passive *role* taken in response to the policy. This leads to four *modes* of policy interaction: active approval, passive approval, active rejection, and passive rejection.

Understanding community agency and institutions provides a basis for the analysis of REDD+ implementation in the area, which is the focus of the second research question. Varying levels of agency between demographic groups can have an impact on whether their interests are included in policies. This study shows how understanding the ways in which agency differs between these groups is important for analyzing issues of

equitability in the REDD+ mechanism. In addition, information provided by villagers on historical interactions of the communities with the relevant forest policies, and the insights from interviews with employees of environmental non-profits working in Cameroon, were used to examine how best to design REDD+ for the local context.

1.5.3. Dimensions of Agency

For this study, the dimension of collective agency referred to as *attitudes* is understood as whether community members share favorable or unfavorable opinions regarding specific environmental policies, and the intentions that community members have towards these policies, particularly towards interacting with the REDD+ mechanism (Figure 1.1). Respect for community attitudes is required for consent to forest policies in accordance with community desires, and therefore free of coercion, as determined by standards of free, prior, and informed consent (FPIC) in forest governance (Mahanty & McDermott, 2013). Opinions were solicited as REDD+ was understood by the respondents, but typically as explained to them by the research team, due to fact that very few villagers had prior knowledge about the program. Respondents were asked to indicate their attitudes towards the REDD+ mechanism of allocating benefits in two different proposed scenarios: as either direct payments to individuals, or as community benefits such as improvements in village infrastructure. Villagers who were interviewed in-depth were asked their opinion about receiving benefits from carbon trading, to the extent that the research team could communicate this difficult concept. In addition, respondents were asked if they had any additional hopes or concerns in relation to their future interactions with forest conservation and REDD+ (that is, their intentions) that were not anticipated from the prior research.

The dimension of *understandings* is relevant to why community members believe what they do, that is, why they have certain attitudes. In this study, the two key factors of understandings include knowledge of forest policies, and local experiences with the forest. The factor of knowledge informs the level of community empowerment in the context of community forestry (Maryudi et al., 2012) and is an essential component of multi-scale interactions in the context of REDD+ (Mahanty et al., 2012). It then becomes important to ascertain the degree to which communities comprehend REDD+, and other forest policies that affect them. Therefore, survey questions ask how community members have been informed about REDD+, if at all, and in the interviews villagers were asked about their knowledge of community forestry, plantation agriculture, and Korup Project policies. The forest land and its resources are important for local livelihoods, as well as for meeting the needs of social and cultural values. Because policies affect the ways that villagers can use the forest, I assume that local experiences of forest usage shape the attitudes of community members towards forest policies. In light of this, respondents were asked about their use and valuation of the forest in terms of livelihood as well as for personal and cultural values.

Finally, I define the dimension of *empowerment* as the ability to influence decision-making on how the forest is used, and the level of access to the forest and its resources. Maryudi et al. (2012) discuss these two characteristics as aspects of empowerment in community forestry that they see as an essential element in the success of such institutions. Agrawal and Gibson (1999) describe decision-making, in terms of institutional rule-making, as part of authority in community management of forest resources. Regarding the REDD+ mechanism, Mahanty et al. (2012) have found that

access to decision-making forms part of the power relations determining control of the production of forest carbon, and that these power relations affect "access to and exclusion from forest carbon and its underlying material resources" (p. 664). To discover which groups have access to decision-making, the survey therefore asked respondents if they have been involved in decision-making recently, and ways the village makes decisions on how to use the forest.

1.6. Hypotheses

This study offers two hypotheses related to collective action. These hypotheses follow from the field-interactional perspective that proposes that collective action is brought about through social interactions between diverse members of a community, due to the effect of these social interactions in generalizing understandings between community members. The hypotheses propose that the degree of heterogeneity (in terms of demographic diversity) itself is not as important a factor in collective action as is integration of the community along various dimensions. Although integration could be considered as a certain form of homogeneity, I argue that when heterogeneity is viewed in terms of diversity, as it is here, its obverse of homogeneity is different from societal integration.

In this research I focus on certain demographic characteristics, particularly age, gender, and place of origin, but these could be less important than other conceivable attributes. For instance, Poteete and Ostrom (2004) discuss the wide variety of forms that heterogeneity can take, including factors such as differences in distance to a resource. Collective action can also have a range of meanings, and in this study I consider collective action to consist of the actual interactions of the community with the agent or

agents of the forest-related policy[7]. This is in contrast to collective agency, which I treat as the characteristics of potential action.

The first hypothesis is that a greater degree of societal integration results in collective action that embodies more diverse interests and involves the perspectives of multiple demographic groups. The reasoning for this hypothesis is that different demographic groups within the community vary in their interests, and increased social interactions between them contribute to their interests becoming generalized for other members of the community. An example would be if the interests of both indigenes and allogenes were met through the attempt to establish a community forest in Mosongiseli.

The second hypothesis is that a greater degree of integration produces stronger responses of collective action with forest policies, indicated by more active acceptance or rejection of the policies. The basis for this proposition is that integration, along the dimensions described in the research framework, is associated with common goals of the multiple actors, and impetus for collective action as they interact within the institutional processes responsible for such actions.[8] These two hypotheses together constitute *modes* of collective action defined in this study (Figure 1.1). The first hypothesis addresses *qualities* of acceptance or rejection on the part of the "community," that is, the entity consisting of diverse groups and interests. The second examines the nature of active or passive *roles* the community plays in response to these policies.

[7] For example, community interactions with the Korup Project as an agent of Cameroon's forest conservation policy.

[8] Alternatively, a more segregated village (especially in the dimensions of hierarchy or agency) could allow those groups or individuals holding more decision-making power to interact directly with external actors to take action quickly, and without weakening their position through having to accommodate a diversity of competing interests.

Chapter 2. Literature review

2.1. Contextual Overview

2.1.1. Cameroon and its History within the Forestry Context

Cameroon is a land of vast natural resources and rich cultural heritage. Stretching from Afromontain forests and grasslands of the Northwest to the mangrove wetlands and volcanic Mount Buea on the Atlantic coast, to the deep tropical forests of the South and East, to the central highlands, and the desert and Sahel regions of the Far North, the national territory represents virtually every major type of ecosystem on the continent. Because of this, Cameroon is frequently referred to as "Africa in Miniature" (DeLancey, 1989; Mbaku, 2005). Situated at the northwest end of the Congo Basin of Central Africa and sharing a border with Nigeria, Cameroon lies at the intersection of Central and West Africa. Because of this, the country shares many of the blessings and troubles of both regions. Table 2.1 outlines some relevant population and geographic data for Cameroon. Of note are the widely divergent estimates of the deforestation rate. The World Bank estimate is 0.14%, while that of the FAO is closer to 1% per year.

The culture of Cameroon is highly heterogeneous, representing at least 230 languages (DeLancey, 1989), over 250 ethnic groups (Mbaku, 2005), and more than 200 ethnoliguistic groups (Topa, Karsenty, Megevand & Debroux, 2009). Mbaku (2005) identifies five major regional-cultural groupings: western highlanders, coastal forest peoples, southern tropical forest peoples, those of the semi-arid Sahel, and the central highlands Kirdi people. The diversity of ethnic and tribal groups further contributes to the

characterization of Cameroon as a microcosm of the entire continent. By virtually any classification of African cultural groupings, a large proportion of these are represented within the territory of Cameroon (DeLancey, 1989). Since pre-colonial times Cameroonian ethnic groups and tribes have existed in a dynamic state of change, and this flux of ethnic geographies and identities continues today (DeLancey, 1989; Geschiere & Nyamnjoh, 2000). Cultural ties and their associated political, economic, and social affiliations flow across national borders, as different groups merge, split, and return to previous identities (DeLancey, 1989).

Table 2.1. Facts and Figures for Cameroon.

Characteristic	Value	Source
Population	16.5 million	Topa et al. (2009)
Population growth rate	2.36 percent per year	Mbaku (2005)
Birth rate	35.66 per 1,000	Mbaku (2005)
Capital	Yaoundé	Mbaku (2005)
Largest City	Douala (1.2 million people)	Mbaku (2005)
Land Area	475,440 square kilometers	Mbaku (2005)
Exports Destinations	Italy, France, Spain, the Netherlands	Mbaku (2005)
Import Sources	France, Nigeria, Germany, United States	Mbaku (2005)
Gross National Product (2000)	U.S. $8.5 billion $570 per capita	Mbaku (2005)
Largest Sector by GDP	Agriculture (43.5% in 1999)	Mbaku (2005)
Forest Area	20 million ha (42% of land area)	FAO (2011) [a]
Average Forest Biomass	135 tons per ha	FAO (2011) [a]
Deforestation Rate	0.9% (1990-2000) 1.0% (2000-2005) 0.14 % (1990-2005)	FAO (2011) [a] FAO (2011) [a] Topa et al. (2009)

[a] As cited in Somorin, Visseren-Hamakers, Arts, Sonwa, and Tiani (2014).

The major religions practiced in the country include Islam (about 22% of the population), Christianity (over 50% the country, divided roughly equally between Protestants and Catholics), and indigenous African religions (around 25%) (DeLancey, 1989; Mbaku, 2005). While the Northern region consists of the greatest concentration of

Muslims, many Christians live in this area as well (DeLancey, 1989). Differences in religion between the north and south of the country have been sources of national conflict, as have differences in language between the western Anglophone region and the rest of the country, where the major language is French (DeLancey, 1989).

This unusual and arbitrary assemblage of linguistic and cultural groups largely has its origins in Cameroon's colonial history, as does the evolution of national forestry policy up to the present. Since the middle of the 18th century, ethnic groups established their territorial claims through the "law of status" (Mbatu, 2009). In this system, communal rights to the land and its resources were enforced through clan associations and by the "axe right," whereby common use of forest resources created a territorial identity for individual clans. In 1884, Germany officially claimed a portion of the Cameroon River as its colony of Kamerun, and subsequently expanded its territory to Lake Chad (Mbaku, 2005). Shortly thereafter, German rulers declared all land in the colony to be "vacant and ownerless," in an effort to amass as much territory as possible from the local population (Mbatu, 2009, p. 750). This was followed by large-scale exploitation of coastal forests for use as plantations, and explorations into the southern forests to export logs to Europe (Mbatu, 2009).

After Germany's defeat in World War I, the League of Nations declared Cameroon a mandate with the western fifth controlled by Britain and the rest of the territory controlled by France. The areas became UN Trust Territories following World War II, with the eastern portion remaining with France, and the western portion being

divided into British Northern Cameroons and British Southern Cameroons.[9] During this period, Cameroon's forests continued to be heavily exploited as they were under German occupation, particularly in the French territory. In this colony, forced labor was re-instituted and a head tax was imposed, similar to the draconian labor tax used by the German colony to force locals into wage labor (Mbaku, 2005). Both the British and French instituted laws reinforcing dispossession of the land from native populations. The French declared all land as "vacant land without masters" (Mbatu, 2009, p.752), and the British centralized ownership and control of the land under ordinances of the Land and Native Rights Law of 1927 (Mbatu, 2009). While both colonial powers continued exploitation of natural resources in the territories, the British took a more distant approach, allowing German plantation owners to regain control of their former holdings, and instituting a form of "indirect rule" by using proxy rulers such as local chiefs (Mbaku, 2005; Mbatu, 2009). During this period, the economy of British Cameroons generally languished (Mbaku, 2005). Meanwhile, the French made aggressive advances into the southern forest regions, extracting vast amounts of timber for export, and continued the intensive exploitation of coastal plantations (Mbatu, 2009). Initially the French wanted a policy of assimilation with their colony, however this later changed toward a policy of association, through which certain Cameroonian elites were given privileged positions, status, and training in French culture. The French intended this

[9] Different sources give various names for the French and British colonies. The French colony is known as French Cameroons (Mbaku, 2005), French Cameroon (DeLancey, 1989); and East Cameroon, or Cameroun (Mbatu, 2009). The literature refers to the British portion variously as British Cameroons (Mbaku, 2005; DeLancey, 1989), or West Cameroon (Mbatu, 2009).

policy to create divisions between the local people and Cameroonian nationals ruling the colony on behalf of France (Mbaku, 2005; Mbatu, 2009).

In 1960, French Cameroons gained independence, and in 1961, a plebiscite was held in which British Southern Cameroons voted to join with the newly formed *République du Cameroun*, leading to a two-state federation (Mbaku, 2005). The former territory of British Southern Cameroons would later form the English-speaking Southwest Region and Northwest Region. The newly formed federation was ruled by Ahmadou Ahidjo, who led the country until 1982 when he handed power over to the current president, Paul Biya. In 1972, the English and French speaking sections of the federation were unified into a single state (Mbaku, 2005). During the 1970s and 1980s, the government of Cameroon continued the colonial policies of land and resource centralization, by attempting to claim possession of all land not in private ownership. Moreover, Mbatu (2009, p. 755) concludes that these policies "targeted remnants of the law of status regime on land and forests that appeared to have survived the jurisprudence of the colonial powers." One means of accomplishing this task was the introduction of laws requiring a certificate of land occupancy in order to demonstrate ownership of forestlands. Obtaining the certificate was made so burdensome, however, that few were able to complete the bureaucratic process necessary. In this way, the government was able to maximize the extraction of forest resources and increase profits, with the former Department of Forests under tight control from the presidential administration. Furthermore, forest resources played an integral role in reinforcing the system of political patronage. Forests could be divided between supporters in proportion to political

importance, and were used as a powerful tool to encourage backing among rural populations (Topa et al., 2009).

Cameroon saw major changes during the 1980s and 1990s. With a sudden drop in prices for cocoa, coffee, and petroleum on the global market, the country's economy fell into a severe depression, from which it has yet to fully recover (Topa et al., 2009). The World Bank and International Monetary Fund (IMF) offered three structural adjustment programs to Cameroon that would help the country out of its economic crisis, on condition that the government adopt various reforms that focused on transforming the forest sector (Topa et al., 2009). Further changes occurred in 1990, when the government opened the electoral system to allow for multiparty politics, although the Cameroon People's Democratic Movement (CPDM) of President Biya continues to dominate the political system (Mbaku, 2005). The government is still widely regarded as "authoritarian" (Topa et al., 2009, p.18), and has been accused of a wide range of human rights abuses (United States Department of State, 2013).

According to the World Bank, the reforms imposed by the structural adjustment programs were aimed at creating "a more organized, transparent, and sustainable system that would benefit greater numbers of people and the environment" (Topa et al., 2009, p. 27). Two key provisions of these reforms were intended to benefit local communities and improve the livelihoods of rural populations. These are embodied in 1994 Law, and include the concept of community forestry as well as a new forestry taxation system designed to provide tax benefits derived from logging concessions to the local people (Djeumo, 2001; Fomété, 2001; Mbatu, 2009; Oyono, 2005; Republic of Cameroon [RoC], 1994). Unfortunately, the outcomes of these reforms have been mixed, and the

forestry sector continues to be plagued by problems of inefficiency, mismanagement, and poor governance (Djeumo, 2001; Fomété, 2001; Mbatu, 2009; Oyono, 2005). Some authors have argued that the community-minded reforms undertaken at the behest of the structural adjustment programs have actually continued the forest management practices of the colonial era (Mbatu, 2009; Yufanyi Movuh, 2012). In spite of such policy failures, the implementation of community forestry has nonetheless provided recognition of the tenure rights of rural populations to forest resources, and Cameroon remains a regional leader in the forest management decentralization process (Djeumo, 2001; Topa et al., 2009).

2.1.1.1. The 1994 Law. One of the primary accomplishments of the 1994 Law was the creation of a national forest zoning plan (Figure 2.1). This scheme organized the national forest estate (that is, all the area in the country designated as forest) into either the permanent forest estate or the nonpermanent forest estate. Figure 2.2 provides an illustration of the forest zoning situation in Cameroon. Areas denoted as permanent forest estate in this figure include protected areas, forest reserves, forest management units, hunting zones, and council forests. The areas of nonpermanent forest estate include agricultural zones, sales of standing volume, and community forests. Currently only four percent of the national forest estate is part of the nonpermanent domain, while the other 96% resides in the permanent forest domain.

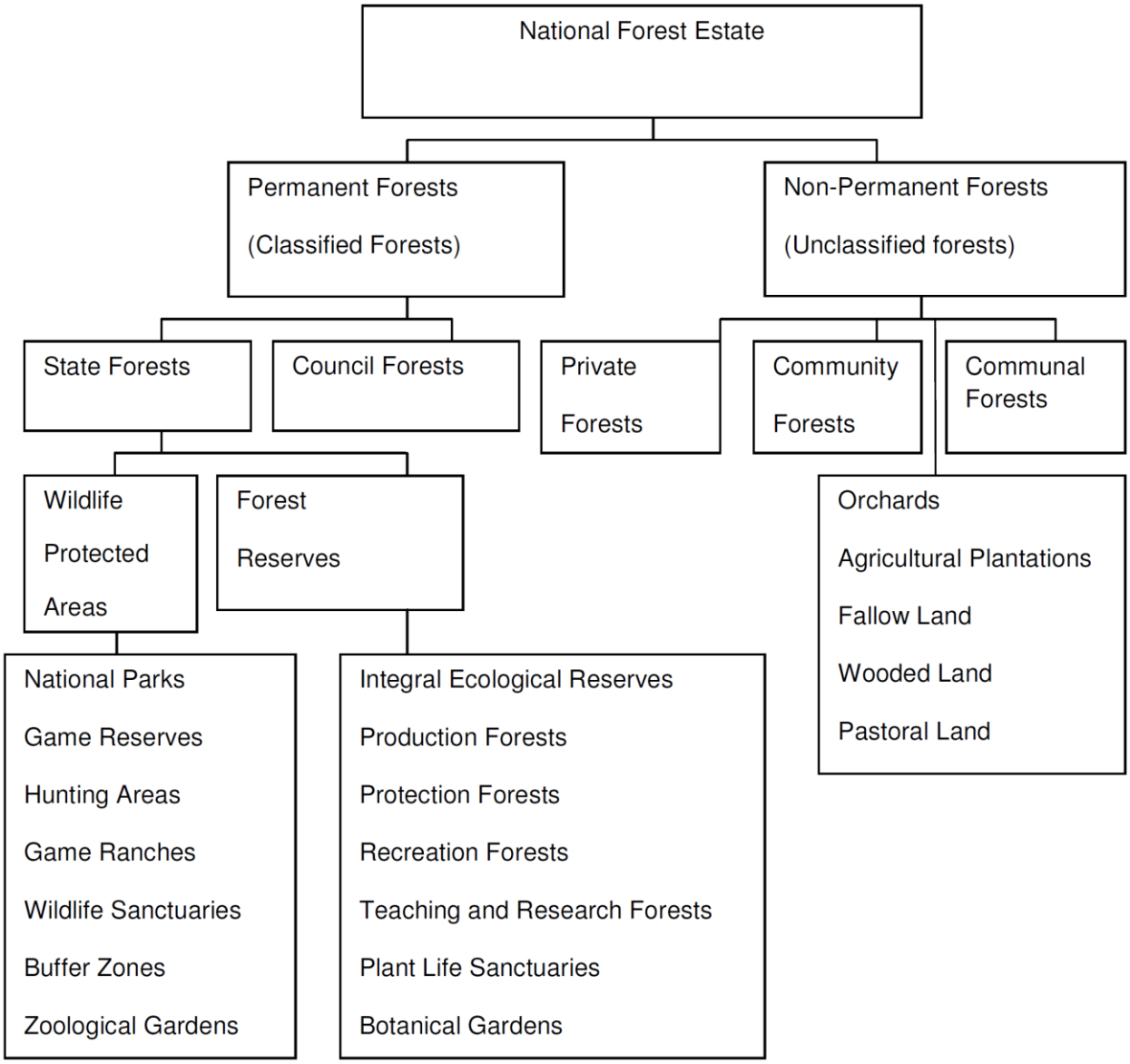

Figure 2.1. Divisions of Cameroon's National Forest Estate (Egute, 2012, p. 73).

The permanent estate consists of two major divisions: state forests and council forests. State forests comprise the bulk of the national forest estate, and include land allocated to commercial logging operations, such as forest management units (FMUs), in addition to various categories of protected nature areas. For instance, Korup National Park (KNP) is a state forest within the permanent forest estate.

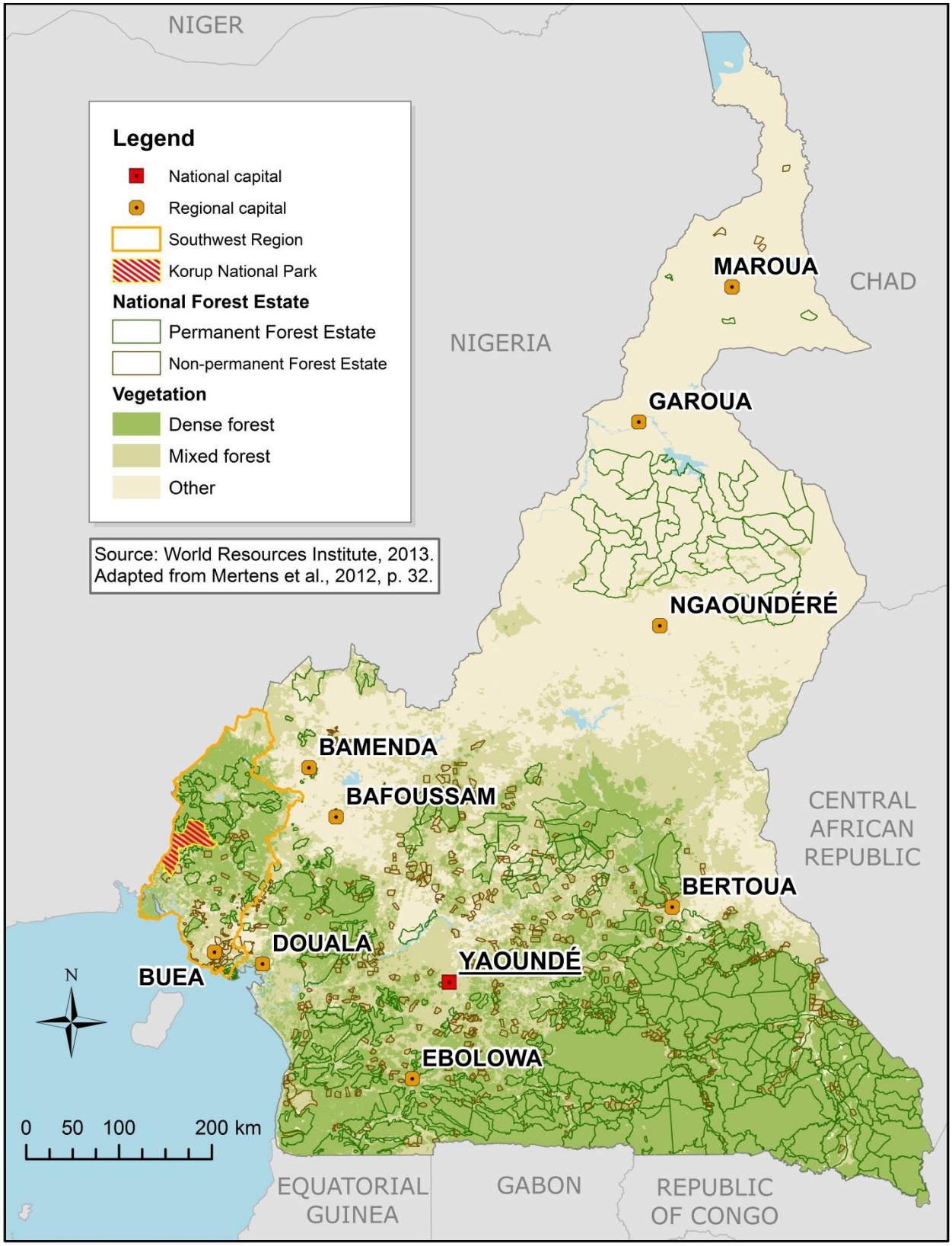

Figure 2.2. Distribution of the permanent and nonpermanent forest estates in Cameroon.

Council forests share many similarities with community forests, despite their different placement within the national forest zoning scheme. The nonpermanent forest estate includes private forests, communal forests, and community forests. Privately owned forests are those that have been planted by a natural person or corporation that holds a land title to the forest area (RoC, 1994, Section 39). Communal forests include lands where local communities hold customary tenure (RoC, 1994, Sections 35-36).

Community forests, described in further detail below, are legal entities established by one or more rural villages having boundaries demarcated to encompass a maximum area of 5,000 ha in the nonpermanent forest domain. The 1994 Law, in its implementation decree of 1995, defines a community forest as "a forest forming part of the non-permanent forest estate, which is covered by a management agreement between a village community and the Forestry Administration" (cited in Yufanyi Movuh, 2013, p.77). This definition stresses the formal institutional relationships between local and national scales. The associated villages and their inhabitants are allowed usufruct rights within the community forest, as well as ownership of the resources obtained within the forest boundaries. The community forest may also engage in collective resource management and sales of forest products (RoC, 1994, Sections 37-38).

According to the 1994 Law (Section 22), the permanent forest estate must encompass at least 30% of the total land area of Cameroon, and "reflect the country's ecological diversity" (RoC, 1994). Given that current estimates of forest cover in Cameroon provide figures around 40-42% of the national territory (Alemagi, Minang, Feudjio, & Duguma, 2014; Somorin et al., 2014; Topa et al., 2009), this leaves little leeway for either deforestation or the allotment of tenure in the nonpermanent domain.

Currently permanent forests occupy roughly 96% of the national forest estate, while the nonpermanent domain covers around 4% (Alemagi et al., 2014). This situation is illustrated in Figure 2.2, in which outlines correspond to areas gazetted within the national forest estate as either permanent or non-permanent forest.[10]

Another important aspect of the 1994 Law is that it established a decentralized forestry taxation system. The idea was to take some of the yearly taxes charged to logging companies, according to the area of their concession, and distribute these funds to local communities. With this intention, the Area Forestry Fees tax (AFF, also referred to as the RFA, or Royalties for the Forest Area tax) was designed so that 50% of the revenue is destined for the National Treasury, 40% is allotted to the local village council in which the logging operation takes place, and the final 10% goes to the specific village neighboring the operation. A prime ministerial decree in 2010 changed this slightly by splitting the council portion so that 20% of the fee goes towards the village council, but the other 20% goes to FEICOM (the Special Equipment and Inter-municipality Intervention Fund), which is responsible for distributing the proceeds to village councils nationally (Yufanyi Movuh, 2013). This was in important change because it was found that a large majority of funds from the AFF were going to certain local councils, mainly in the East Province, prompting the call for an "inter-council equalization fund" (Fomété, 2001, p. 27).

[10] The gazetting process in Cameroon results in a legally ratified border for an area designated within a particular forest zone (Topa et al., 2009).

The AFF, and another decentralized forest taxation scheme known as the Felling Tax (FT), have the potential to deliver significant benefits to local populations, particularly to local communities that take on an opportunity cost when their forest is logged for timber. Fomété (2001) estimates that the AFF and FT could provide 1,500 FCFA (about US$2.50) per person annually, compared to the yearly allotment of 500 FCFA (about US$0.83) provided to local councils. Unfortunately, mismanagement of funds at various levels and from various sectors, including corruption, bribery, elite capture, and practices by the "informal" sector (essentially, illegal logging operations), combine to prevent the benefits from reaching local people. In the end only about 20% of the funds that should arrive from forestry taxes and contribute to local development projects actually do so (Fomété, 2001). This trend is particularly troubling because Cameroon is exploring the possibility of using the AFF as a model for the distribution of REDD+ benefits to local communities (FCPF, 2013a; Fobissie, Alemagi, & Minang, 2014; Freudenthal, et al., 2011).

At this point, some further definitions of community-based forestry are warranted, as is a brief comparison between community forests and council forests. MacDermott and Schreckenberg (as cited in Yufanyi Movuh, 2013, p.77) discuss community forestry in general (that is, not specific to the Cameroonian context) with an emphasis on collective agency and the functioning of local institutions (Agrawal & Gibson, 1999). They define community forestry as "the exercise by local people of power or influence over decisions regarding management of forests, including the rules of access and the disposition of products." Yufanyi Movuh (2013, p.77) also emphasizes the role of community institutions, but stresses the importance of local-level processes in both community

forests and council forests in Cameroon. He defines these institutions as "forestry or forest practices which directly involve(s) local forest users in the common decision making processes and implementation of forestry activities." As a type of forest policy, community forestry in this thesis refers the formal institutional arrangements recognized by the national government.

As mentioned previously, community forests are part of the nonpermanent domain, whereas council forests exist in the permanent forest domain. The most important difference between the two forest types is that community forests can be gazetted to a maximum area of 5,000 ha, whereas council forests have no limit to their size. The area for a council forest depends on the range of villages comprising the council, and support that the council can gain from local villages to join the council forest. The community forest associated with the study site village of Mosongiseli, for instance, has an area of 2,739 ha according to its Provisional Management Convention (MINFOF, 2013). In contrast, the Mundemba council forest, which is situated just south and east of KNP, and within kilometers to the other study site village of Fabe, consists of 35,000 ha (World Resources Institute [WRI], 2012). Other differences exist in the management structure and processes of obtaining the formal title from the government. A village or villages interested in establishing a community forest are required to submit a simple management plan (SMP). This is somewhat of a misnomer, as the elaboration of the SMP is sufficiently complex so as to require the communities to higher experts to develop one, at a cost of roughly 5,000,000 FCFA (currently about US$10,000). To help cover these costs, communities are allowed to establish a Provisional Management Convention (PMC) for two years, during which an area outside of the prospective forest

can be logged, and the proceeds used in the elaboration of the SMP. Once the SMP is filed in Yaoundé it remains viable for only 5 years, and must be renewed every 5 years afterwards. This can be problematic because the step of gaining authorization for the final management convention (FMC) tends to drag on for so long that community forests have expired before the FMC was finally signed. Once a community forest does obtain an FMC, this contract is good for 25 years, and must be reviewed each 25 years subsequently. In contrast, the FMC for a council forest is renewable every 30 years (Yufanyi Movuh, 2013). In light of the difficulties in establishing community forests, council forests maintain a significant advantage because, owing to their larger size and population, they have a considerably larger pool of financial resources from which to draw, including better access to loans. Establishing a community forest is nearly impossible without outside assistance from NGOs or other development agencies. For this reason, several international agencies have shifted their focus towards aiding the establishment of council forests. (Yufanyi Movuh, 2013).

2.1.2. Cameroon and REDD+

Cameroon's structural adjustment programs, known as the Economic Recovery Credit, Structural Adjustment Credit (SAC) II, and SAC III, were approved in 1994, 1996, and 1998, respectively (Topa et al., 2009). The measures contained in these policies were implemented starting with the 1994 Law. Collaboration on forest sector reforms has continued between the government of Cameroon and international partners, including the World Bank, the IMF, donor countries, and international NGOs (Topa et al., 2009). More recently, Cameroon has become interested in coordinating its forestry policies with the international community in the sphere of climate change mitigation. The

policy now referred to as REDD+ includes "Policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries." (United Nations Framework Convention on Climate Change [UNFCCC], 2008, cited in Thompson, Baruah, & Carr, 2011, p. 101).

2.1.2.1. REDD+ Overview. The concept of an international forestry policy agreement based on compensating tropical developing countries for reducing their emissions from deforestation and forest degradation was first introduced at the 11th United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP) in 2005 (Agrawal, Nepstad, & Chhatre, 2011). The idea was proposed by the Coalition for Rainforest Nations (CfRN), of which Cameroon is a member, with the effort led by Costa Rica and Papua New Guinea (Agrawal et al., 2011). The current definition of REDD+, including the co-benefits of forest conservation and sustainable forest management (SFM) were introduced at COP 13 in Bali, Indonesia in 2007 (Thompson et al., 2011), at which point the "plus" designation was added to the acronym. REDD+ is designed as a policy instrument to compensate forested tropical developing countries and their citizens for opportunity costs associated with avoided deforestation (Karsenty & Ongolo, 2012). Much of the literature on REDD+, particularly that from UN-REDD and the Forest Carbon Partnership Facility (FCPF), promotes REDD+ for its potential role in protecting fragile ecosystems with rich biodiversity while providing economic benefits to poor local and indigenous peoples. REDD+ is also promoted as an economic development mechanism for developing nations, which now have the

opportunity to conserve their forests while receiving benefits and helping to mitigate climate change (Dickson et al., n.d.; FCPF, 2013b; Thompson et al., 2011).

While the discussion around REDD+ frequently refers to its potential to protect rainforests, preserve biodiversity, and promote economic development, REDD+ is primarily a climate-change policy (Larson, 2011), hence its negotiation within the UNFCCC. Its main goal is the sequestration of carbon from the atmosphere, although "multiple benefits", such as the protection of biodiversity and improvements in livelihoods due to carbon payments, may be obtained in the process (Dickson et al., n.d.). In order to participate in REDD+, countries must quantify the amount of carbon in their forests, and then have these assessments checked by monitoring, reporting, and verification (MRV) processes that assure the international community, and in particular the carbon market sector, that the emissions reductions are real. Thus "results-based finance" is provided for "results-based actions" (FCPF, 2013a; United Nations Framework Convention on Climate Change [UNFCCC], 2014, Decision 10/CP.19). While the potential for "non-market-based approaches to support actions" is acknowledged (UNFCCC, 2014, Decision 13/CP.19), the primary aim of the readiness process is to encourage financial investments in emissions reductions. There are three REDD+ phases described by the UN-REDD Programme. Phase 1 is the readiness phase, in which countries develop a framework for their REDD+ policies and outline future directions through documents such as the Readiness Preparation Proposal (R-PP). In the investment phase (Phase 2), countries pilot local to sub-regional scale carbon investment projects. Lastly, the implementation phase (Phase 3) commences with fully functional MRV systems and the receipt of financial benefits (Fobissie et al., 2014; UN-REDD,

2012). Thus, investment and involvement in the carbon market is seen as central to the REDD+ program.

To counter concerns about the potential for REDD+ to recentralize forest management in countries where local tenure rights have only recently been recognized, the UNFCCC adopted social safeguards at the COP16 held in Cancun in 2010. These safeguards acknowledge the rights of traditional and indigenous peoples, and specifically call on countries to respect the United Nations Declaration on the Rights of Indigenous Peoples (United Nations Framework Convention on Climate Change [UNFCCC], 2011, Decision 1/CP.16), of which Cameroon is a signatory. The same agreement adopts ecological safeguards to protect the natural environment.

International negotiations for REDD+ take place yearly at the UNFCCC, including side events organized by member nations to address issues of particular concern to their interests. Decisions adopted during the forum frequently call on the Subsidiary Body on Scientific and Technological Advice (SBSTA) to elaborate specific methods of implementation, such as establishing guidelines for national adaptation plans (UNFCCC, 2011, Decision 1/CP.16). While negotiation at the UNFCCC sets the framework for the REDD+ process, the implementation process is carried out primarily by two associated organizations, UN-REDD, and the FCPF (Thompson et al., 2011). UN-REDD is coordinated by the Food and Agriculture Organization (FAO), United Nations Environment Programme (UNEP), and the United Nations Development Programme (UNDP). UN-REDD provides capacity and financial assistance to countries for the development of technical provisions for their REDD+ readiness, such as developing MRV mechanisms. The FCPF is overseen by the World Bank, and aids countries in

developing the financial and economic ends of their REDD+ program. Other organizations that provide capacity and financial assistance include international NGOs, such as the World Wide Fund for Nature (WWF), World Resources Institute (WRI), the International Union for the Conservation of Nature (IUCN), and the Center for International Forestry Research (CIFOR). Moreover, several developed nations provide assistance through their own international development agencies. Significant international development partners include the United States, the United Kingdom, Germany, France, Japan, Norway, and the Netherlands. These agencies provide funding and capacity assistance to REDD+ countries in developing their national programs as well as funding local scale pilot projects (Thompson et al., 2011).

Despite the potential for considerable benefits to natural ecosystems, local livelihoods, and climate change mitigation, civil society organizations and academics have voiced concerns regarding REDD+ development and implementation. Early critiques centered on carbon issues such as additionality, permanence, and leakage. Additionality occurs when benefits are paid above those actually earned for a given amount of carbon sequestered. The issue of permanence revolves around the question of how long gains will last. Even if a country or local scale project demonstrates negative carbon losses over a short time period there is the possibility of a reversal of these gains in future years. Finally, leakage is the potential for conserving forest carbon stocks in one area, but doing so by displacing the emissions to areas or forests that are not covered by the REDD+ program or project (Agrawal et al., 2011). A related concern is that high-carbon density forests may be conserved to the detriment of areas with ecologies having lower carbon densities, such as savanna ecosystems (Miles & Kapos, 2008).

Some other concerns put forward regarding REDD+ implementation include the need to address what Agrawal and Angelsen (2009) term the "3Es+", of Efficiency, Effectiveness, and Equity. Equity in particular will remain an important issue as REDD+ implementation has already shown numerous instances where tenure, livelihoods, and local rights concerns were ignored or violated, to the detriment of indigenous peoples and local forest-dependent communities (Freudenthal et al., 2011; Thompson et al., 2011).

2.1.2.2. REDD+ in the Regional Context. Currently, there are 6 countries in Africa receiving financial assistance from the UN-REDD Programme, although Cameroon is not included in this list. UN-REDD also includes 17 African "partner countries," one of which is Cameroon. In addition to this limited involvement with UN-REDD, Cameroon receives UN-REDD assistance through the Support to National REDD+ Action program (UN-REDD Programme – Africa, n.d.). Cameroon is considered a "REDD+ country" by the FCPF, along with 17 other African nations (Forest Carbon Partnership Facility – REDD+ Countries, n.d.). Other multinational affiliations include CfRN, as well as the Central African Forests Commission (COMIFAC) (Alemagi et al., 2014; Fobissie et al., 2014; Somorin et al., 2014).

Nigeria's REDD+ demonstration state is the Cross River State that not only borders the Southwest Region of Cameroon but is also home to Cross River National Park which lies adjacent to Korup National Park (Astaras, Muhlenberg, & Waltert, 2007). UN-REDD has praised Nigeria for "applying safeguards and multiple benefits thinking" (Dickson, et al., n.d., p. 2). Moreover, Nigeria held a workshop in 2011 to review its REDD+ implementation plans, which put forward the necessity of early identification of benefits and risks in the REDD+ process (UN-REDD, 2012).

In terms of REDD+, Cameroon is most closely affiliated with countries of the Congo Basin. This region is the second largest area of dense tropical rainforest, next to the Amazon Basin. It covers 227 million ha across 6 countries, and represents 18% of the world's tropical forests (Fobissie et al., 2014). Overall, the deforestation rate in the region is modest, at 0.26%, compared to Cameroon's deforestation rate that currently hovers around 1% per year (Somorin et al., 2014). The region is united in its REDD+ policy efforts through COMIFAC, which has 10 member nations, 9 of which are involved in the REDD+ process. The four COMIFAC nations that are most advanced in their pursuit of REDD+ readiness include Cameroon, Central African Republic, Democratic Republic of Congo (DRC), and the Republic of Congo. Cameroon is the host to COMIFAC, and therefore has significant leverage within the organization (Fobissie et al., 2014). However, DRC has taken several initiatives both within COMIFAC and in UNFCCC negotiations to advance its presence. DRC is Chair of the COMIFAC Climate Working Group, and from 2009-2012 assumed the position of Chair and President of COMIFAC. It is important to note that COMIFAC works closely with, and maintains similar positions to, the CfRN, though lack of technical capacity restrains the organization to a certain extent in promoting its agenda in the negotiations (Fobissie et al., 2014).

Although Cameroon does not share a border with DRC, the two countries provide a useful case to compare in terms of the REDD+ readiness process (Fobissie et al., 2014). Both countries are FCPF "REDD+ countries," they are signatories to the REDD+ Congo Declaration, as well as members of both CfRN and COMIFAC (Fobissie et al., 2014). Both countries still require significant work in promoting participation by civil society, elaboration of carbon rights, and adoption of a REDD+ benefit sharing mechanism

(Fobissie et al., 2014). Significant differences also exist between the two nations in the status of REDD+ readiness, and in the ways that each country has pursued their REDD+ program. DRC is objectively further along in the REDD+ process. Beginning to elaborate its Emissions Removals Program Idea Note (ER-PIN), DRC is on its way to pass from the readiness phase into the investment phase. Meanwhile the readiness process in Cameroon appears to be stalled by comparison. The country's Readiness Preparation Idea Note (R-PIN) was submitted to the FCPF in 2008. The R-PP was not submitted until 2012, and finally accepted by the FCPF in 2013. In contrast to DRC, however, Cameroon enjoys a strong sense of ownership of the document. While the R-PP developed by DRC was prepared primarily by outside experts, Cameroon's R-PP was elaborated almost entirely by Cameroonian nationals. Moreover, the use of Cameroonian experts involved the agencies that will later implement REDD+. It is hoped that this will help these ministries and officials to have a high level of knowledge about the plan, improving the effectiveness of those tasked with carrying out the activities specified in the document (Fobissie et al., 2014). Another significant difference between the two countries in their REDD+ development process is that DRC has managed to obtain significantly larger sources of funding, in large part through their work with international aid agencies during the elaboration of their R-PP (Fobissie et al., 2014). DRC has also sent several times the number of delegates to UNFCCC negotiations, relative to Cameroon, and has proactively organized and participated in side events to discuss and promote their own interests. Despite this, Cameroon still maintains two advantages regarding the development of their REDD+ program. For one, Cameroon is a bi-lingual nation, and has the ability to send English-speaking representatives to the UNFCCC negotiations, whereas DRC has

difficulty pushing its agenda in the Anglophone-dominated COP meetings (Fobissie et al., 2014). Secondly, Cameroon was an early pioneer in reforming its forest sector, and therefore it has decades of experience and years of lessons learned that it can use to build off of, as well as to share with its neighbors (Somorin et al., 2014).

2.1.2.3. Status of REDD+ in Cameroon. Cameroon has been involved in REDD+ negotiations within the UNFCCC since the idea was first proposed by the CfRN in 2005 (Alemagi et al., 2014). The country is currently in Phase 1 (readiness phase), but has completed several milestones in its readiness process. The country's R-PP was accepted by the FCPF in 2013, and was a significant step in Cameroon's REDD+ process. The R-PP lays out the structure of its national REDD+ organization, identifies key drivers of deforestation and forest degradation, requests budgets for future readiness processes, and analyzes future work for Cameroon to address in its REDD+ program development. It is notable that this document states unequivocally that "for Cameroon, REDD+ is a development tool" (FCPF, 2013a, p.1). While Cameroon acknowledges other benefits of forest conservation and the role in mitigating climate change, the country sees economic development as a primary goal of its REDD+ program. Cameroon's progress on significant milestones in REDD+ readiness is summarized in Table 2.2 and Table 2.3 (Alemagi et al., 2014; Fobissie et al., 2014; Somorin et al., 2014).

Table 2.2. Initiatives and Institutions in Cameroon's REDD+ Readiness Process.

Activity	Complete	Begun	Not begun
R-PIN (Readiness Plan Idea Note), 2008	✓		
R-PP (Readiness Preparation Proposal), 2013	✓		
National REDD+ Steering Committee Including Technical Secretariat	✓		
Procedural Manual for REDD+	✓		
National REDD+ Strategy FPIC Guidelines formulated in R-PP		✓	
ONACC (National Observatory on Climate Change) established 2009, not yet operationalized		✓	
ER-PIN (Emissions Reduction Programme Idea Note)			✓

Note: The data are adapted from Alemagi et al. (2014), FCPF (2013a), and Fobissie et al. (2014).

Table 2.3. Steps in Cameroon's REDD+ Development Process.

Activity	Status
REDD+ benefit sharing mechanisms	Proposed, mostly unelaborated
National REDD+ Regional Consultations	5 held
National REDD+ Sensitization Workshops	35 held
REDD+ pilot projects conducted or ongoing	31
MRV processes and procedures	Largely established
Carbon rights	Mostly unelaborated
Conflict resolution mechanisms	Proposed, mostly unelaborated

Note: The data are adapted from Alemagi et al. (2014) and FCPF (2013a).

The organizational structure of Cameroon's REDD+ institutions is described in its R-PP and diagrammed in Figure 2.3 (FCPF, 2013a, p. 7). In Cameroon's national REDD+ organization, the Ministry of the Environment, Nature Protection, and Sustainable Development (MINEPDED), hosts the UNFCCC REDD+ Focal Point. The National REDD+ Steering Committee is composed of members from each other Ministry. In addition, members of the Steering Committee include one representative from the REDD and Climate Change Platform, one representative of indigenous peoples, one representative of the private sector, as well as two additional elected representatives (FCPF, 2013a). The Technical Secretariat is composed of the UNFCCC Focal Point, the National Coordinator, and a representative of the Ministry of Forests and Wildlife (MINFOF). The tasks of the Technical Secretariat include coordinating meetings, preparing documents, as well as monitoring and assessment of activities conducted by the Steering Committee. Moreover, the Technical Secretariat is composed of four separate units in charge of, respectively: information, education and communication (IEC); strategic environmental and social assessment (EESS); reference scenarios and MRV systems; and implementing REDD+ projects and programs. The Technical Secretariat also coordinates with departmental technical committees by way of Regional Coordination Structures. Further duties of the Technical Secretariat are to coordinate with the National Observatory on Climate Change (ONACC), the Forest Law, Governance and Trade (FLEGT) unit within MINFOF, as well as with conflict resolution bodies. (FCPF, 2013a).

Despite certain efforts to engage civil society and hold open participatory workshops, Cameroon's REDD+ process still requires significant improvements in terms

of creating a means of incorporating participatory input (Alemagi et al., 2014). While Cameroon has formulated guidelines in the R-PP on issues related to free, prior, and informed consent (FPIC), numerous violations of this principle were reported in the implementation of REDD+ pilot projects before 2011 (Freudenthal et al., 2011). Moreover, the benefit distribution mechanisms proposed in the R-PP are based on forest taxation systems that have been troubled in the past with considerable misuse and mismanagement of funds. Cameroon has therefore made significant progress in its REDD+ program development, but a great deal of work remains (Mbatu, 2015) in order to tackle these and other technical issues as the country moves forwards into the investment stage.

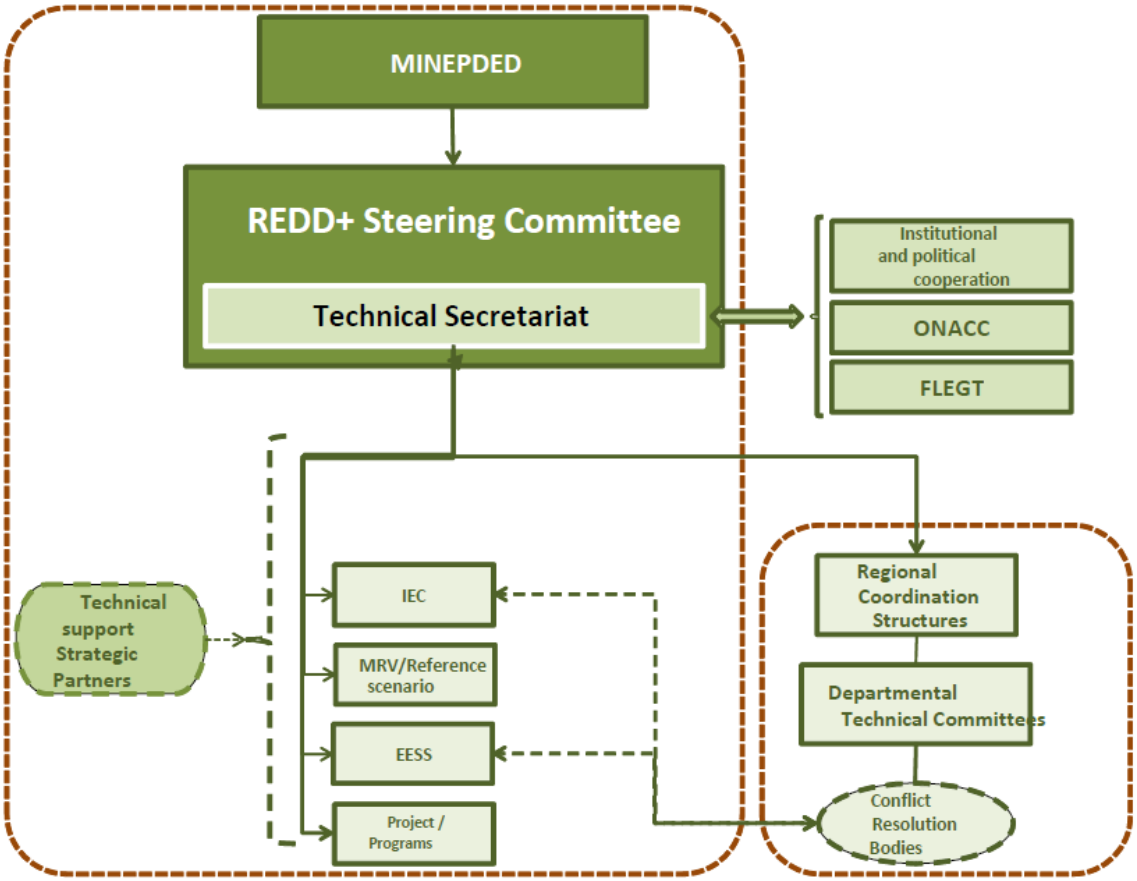

Figure 2.3. Organization of Cameroon's REDD+ Institutional Bodies. (FCPF, 2013a, p.7).

2.2. Analysis at multiple societal scales

The societal scale extends from fine to coarse levels (Leemans, 2006). In the present study, individual beliefs, experiences, and actions are considered to coalesce into those of the various social groups to which the individual belongs. Heterogeneous actors with varying interests then create formal and informal institutions governed by local-level processes (Agrawal & Gibson, 1999). This forms the basis for local collective agency, as these actors, institutions, and processes interact with those at the extra-local scale in the area around the southern portion of Korup National Park, and sub-national scale of the Korup Project Support Zone.[11] According to Cameroon's R-PP, local communities are meant to take an active participatory role in REDD+ development and implementation, with their recommendations being heard by the REDD & Climate Change Platform, to "ensure that the process is truly bottom-up," as part of the decentralized governance structure (FCPF, 2013a, p. 14). The government of Cameroon interacts on the regional scale with members of COMIFAC, and globally in negotiations at the UNFCCC Conference of the Parties. In turn, the REDD+ development processes in Cameroon (Freudenthal et al., 2011; Somorin et al., 2014) and at global institutions such as the UN-REDD Program (Thompson et al., 2011) need to consider the livelihoods, participation, and tenure status of local communities and forest-dependent peoples.

At the same time that national and multinational institutions continue interacting with one another in developing REDD+ policies, local communities distributed on a global spatial scale are engaging with, and being affected by, REDD+ pilot projects and

[11] In terms of political boundaries, extra-local institutions and government administrations include those within the Ndian Division and Mundemba Subdivision; sub-national ones extending to the area of the Southwest Region.

participation in the carbon market (Mahanty et al., 2012). Similarly, countries across the world are implementing community-based paradigms of forest management (Maryudi et al., 2012), a policy that is inherently local in nature. There are also clear interactions between scales. For instance, Yufanyi Movuh and Schusser (2012) document ways in which German international development agencies and Cameroon's Ministry of Forests and Wildlife (MINFOF) have collaborated since 2004 in the Southwest Region. The goal of this partnership has ostensibly been to promote the devolution of forest management from centralized state control to local communities through the implementation of community forestry. Contrary to this aim, the authors claim that the actual result has been recentralization, and greater control over forest communities by both state and non-state actors.

The literature identifies certain threats to and opportunities for local communities. Impacts on the livelihoods of people who live in these communities are the subject of debate, and in some cases the very existence of the community itself, at least in its original form or location, is at stake. Sometimes the difference between risks and opportunities does not exist as distinguishable or separate policies, as in the case of community forestry itself. Some authors describe community forestry as an effective management system for increasing local stocks of forest carbon (Phelps et al., 2010; Porter-Bolland et al., 2012; Skutsch & McCall, 2011). This suggests that community forests could also provide an equitable source of monetary benefits to local communities, provided REDD+ institutions are designed to compensate for the relatively small amounts of carbon stored (Agrawal & Angelsen, 2009; Blom et al., 2010; Skutsch & McCall, 2011). Meanwhile, others suggest the practice, particularly as it exists in

Cameroon, has led to disenfranchisement and a loss of power to these same peoples (Oyono, 2005; Yufanyi Movuh, 2012). Both community forestry and REDD+ have the potential to affect local livelihoods and ways of life when they come into contact with the area, resources, or social functioning of a local community. These risks and opportunities are therefore each accompanied by a potential occasion for the expression of collective agency as the community choses to accept or reject the given policy and pursue its wishes through collective action.

2.2.1. Community forestry and REDD+

Community forestry has been theorized to work in a complimentary manner with REDD+ initiatives, because in many cases the acceptance of conservation measures on the part of people living in and around the site is necessary for success. Indeed, the origin of community forestry lies in the failure of top-down national forestry practices that did not involve local people in their establishment, decision-making, or management (Mbatu, 2009; Buchenrieder & Balgah, 2013). Such policies have been shown to cause resentment among local populations, which is counterproductive to conservation goals (Agrawal & Angelsen, 2009; Larson, 2011; Phelps et al., 2010). Agrawal and Angelsen (2009) describe ways in which REDD+ could make use of community forestry to achieve its goals of carbon sequestration through effective design of community forest initiatives, as well as appropriate community forest site selection. They identify four major categories associated with the success of community forests, and elaborate on specific elements that can affect outcomes. These categories include factors related to the resource system, the user group, institutional arrangements, and contextual characteristics such as the stability of demographic, market, and political conditions. The authors further recommend that

when locations or communities having unfavorable characteristics for community forest initiatives are selected, care must be taken to address potential difficulties, and resources should be allocated to provide assistance in monitoring and enforcement capacity.

Skutsch and McCall (2011) maintain that community forestry is more appropriate for sites experiencing forest degradation due to unsustainable local use of forest resources, as opposed to intensive degradation by commercial activities, or complete deforestation. The authors defend the compatibility of REDD+ and community forestry. In their study of the Kyoto: Think Global, Act Local Programme, which looked at 30 community forests in 8 countries, community forestry was associated with enhancements in forest biomass, although exceptions were observed where illegal exploitation of the forest had occurred. Moreover, community forestry potentially links the climate change measures of both mitigation and adaptation, through the participation of local people (Awono, Somorin, Eba'a Atyi, & Levang, 2014; Skutsch & McCall, 2011).

Despite these potential synergies, concerns have been raised regarding the future effects of REDD+ on the current trend of forest management decentralization. Phelps et al. (2010) claim that decentralized forest management has brought about improvements such as increasing rights and livelihood benefits, protecting biodiversity, and increasing carbon sequestration, while reducing forest management costs. Meanwhile, recentralization could increase costs, generate counter-productive resentment among local stakeholders, and is limited to the boundaries of protected areas. Moreover, carbon commodification could create incentives for recentralization in which unreasonable requirements are placed on communities, or that result in evictions from carbon rich areas, in order to prevent loss of carbon stocks that now would provide income to the

state or actors in the private sector. Phelps et al. (2010) maintain that certain technical factors may promote recentralization. For instance, issues of leakage and permanence, as well as monitoring, reporting, and verification, are better handled on the national scale. Economic factors could also create pressures for recentralization. The costs of entering the carbon market directly could be too great for small community forest projects, whereas centralized institutions benefit from economies of scale. On the other hand, it should be noted that Skutsch and McCall (2011) contend that the receipt of financial benefits from REDD+ could provide an incentive to further promote decentralized community forest management if it is effective in enhancing carbon stocks.

Similar concerns regarding centralized policies that have negatively affected local populations in the past are discussed by Larson (2011). This study looked at recent tenure reforms at sites across 10 countries, including Cameroon, and analyzed recurring issues in granting statutory forms of tenure, implementation of reforms, and obtaining access to benefits. For instance, in Cameroon, communities seeking to establish a community forest can face costs of up to US$55,000 just to create a simple management plan, followed by restrictions on impacts from forest usage, whereas private logging concessions do not require a management plan and are less regulated (Larson, 2011).

Regarding the implementation of community forestry in Cameroon, Djeumo (2001) discusses problems that surfaced after implementation of the 1994 Law, which ostensibly sought to bring communities into the forest management process. Many issues were encountered, particularly related to a lack of information available to communities, capacity and funding problems, as well as regular conflicts with logging interests. The distribution of financial benefits that will result from REDD+ projects could mirror the

current distribution of decentralized forest taxes that was introduced in the 1994 Law. Therefore, this situation must be studied in order to understand potential obstacles to the responsible and equitable distribution of benefits. Fomété (2001) reported that the decentralized forestry taxation system at the time resulted in dissolution of local relations and traditional power structures, as well as conflicts over ownership and logging rights. A fundamental issue was a persistent lack of transparency that allowed corruption and mismanagement of funds, preventing much of the revenue from ever reaching the intended communities. To address these issues, Fomété makes several recommendations, including an increased role for NGOs, a national assessment of the taxation system, and an inter-council equalization fund. These same recommendations may prove useful in designing funding distribution mechanisms for REDD+ payments.

Chapter 3. Methodology

3.1 Study Site

The location for this study focuses on two villages around the southern end of Korup National Park, Southwest Region, Cameroon. Understanding the characteristics of this place and the people who live there is important to understand what makes this such an appropriate location to study the interrelationships between collective identities, collective agency, and collective action with respect to environmental policies, such as REDD+. The area has had a rich but troubled history stemming from both current and colonial area policies of plantation agriculture. It has also been subject to attempts, widely regarded as unsuccessful, that sought to impose Western ideas of conservation on populations that are in many regards unwilling and unable to make the drastic livelihood changes required to satisfy these demands. The societies living in the area have been characterized as simultaneously having non-hierarchical decision-making institutions (Mbile et al., 2005), but also as being quite heterogeneous, with conflicts over power and resources existing between different demographic groups, depending in large part on the characteristics and location of the village (Malleson, 2001).

3.1.1. Southwest Region

The Southwest Region of Cameroon is bordered by the Atlantic Ocean and Nigeria to the west, and to the east by the Littoral, West, and Northwest Regions. The region falls under the coastal agro-ecological zone characterized by Cameroon's R-PP as having monomodal rainfall averaging between 2,500 to 4,000 mm per year (FCPF,

2013a). Precipitation peaks from June through September, while there is a distinct dry period from December to February. The agro-ecological zone covers 45,658 km^2 along the coastal part of the country. Daily temperatures average 25°C, with little variation throughout the year (Molua, 2002). The Southwest Region occupies approximately 25,000 km^2 (WRI, 2012), with soil that varies from marshy along the coast to volcanic rocky soils in the center of the region (FCPF, 2013a).

Large-scale commercial agriculture has played an important part in the economy of the region since the German colonial occupation. During German rule, and continuing under French and British control, massive migrations took place within Cameroon in order to find work in the plantations of the Southwest, due to strongly coercive measures employed by the colonial governments (Geschiere & Nyamnjoh, 2000). Food production continues to be the most significant portion of the regional economy, with approximately 80% of the population involved in farming or plantation agriculture (Molua, 2002). In addition to the vast complex of plantations around Mt. Buea, the Ndian Division of the Southwest Region is home to the Pamol oil palm plantation. In addition, the company Sithe Global Sustainable Oils Cameroon (SGSOC), a subsidiary of the American-owned Herakles Farms, is in negotiations with the national government to establish a 20,000 ha oil palm plantation to the immediate south and east of KNP (Achobang, et al., 2013). These plantation camps continue to draw agricultural workers from other parts of the country, especially from the Northwest Region (Malleson, 2001). The ruling government has meanwhile capitalized on the migration of laborers to promote social divisions and sew discord among citizens in the Southwest Region, and in the country as a whole, for political gain (Geschiere & Nyamnjoh, 2000).

A wide variety of crops are grown in the region, on commercial plantations as well as for subsistence. These include various tubers, cereals, legumes, and fruit trees, in addition to important commercial crops such as bananas, rubber, palm oil, sugar cane, cacao, coffee, and plantains (FCPF, 2013a; Molua, 2002). In addition, goats and sheep are commonly raised as livestock in the region (Molua, 2002). The population receives on average 1980 Calories per day, but climate change is threatening food security largely due to shorter but more intense periods of precipitation. This is having negative effects on soil characteristics, such as compaction and erosion, as well as making it more difficult for farmers to anticipate the weather in order to adapt their farming practices (Molua, 2002).

According to Cameroon's National Institute of Statistics (NIS) (2014), the total population of the Southwest Region was 1,316,000 in 2005, and projected to rise to 1,534,000 in 2015. In 2005 over half the population was rural, at 757,000 people. The average and median age was, respectively, 22.3 and 19 years old. The NIS counts 27 cities within the Southwest Region. Mbaku (2005, p. 2) classifies the inhabitants of this region as "coastal tropical forest people" who comprise a number of ethnic groups. English is the primary language in the Southwest, where a dialect known as Pidgin English, or Kamtok, is common (Ngefac, 2011).

In the Southwest Region, at least eight community forests exist or are in the application process, and two council forests are in the later stages of establishment (Yufanyi Movuh, 2013). The R-PP identifies several causes of deforestation and degradation in the region's agro-ecological zone, with the most significant being

industrial agriculture, cash crop farming, and infrastructural development (FCPF, 2013a, p. 41).

3.1.2. Korup National Park and Surrounding Area

The highest point in KNP is Mt. Yuhan, at 1079 m, however most of the area lies between 30 and 500 m above sea level, with some remote areas having steep-sided valleys (Malleson, 2001; Mbile et al., 2005). The park itself, sharing a border with Nigeria to the west, occupies an area of 1,250 km^2 and is located between the coordinates of 4°54'N to 5°28'N and 8°42'E to 9°16'E (Astaras et al., 2007; Mbile et al., 2005). The monomodal climate is similar to the rest of the region, though having higher annual precipitation averaging over 5,000 mm (Astaras et al., 2007; Mbile et al., 2005). Average annual temperatures in the southern portion range between 24-30°C, with an annual mean maximum of 30.6°C (Astaras et al., 2007; Moyersoen, Fitter, & Alexander, 1998). Although the soils are generally sandy and low in organic content, the area enjoys a high degree of endemism and rich biodiversity (Moyersoen, et al., 1998; Mbile et al., 2005), likely due in part to its location in the middle of the Guinea Congolean refugium of the last ice age (Mbile et al., 2005). The ecology is composed of dense moist tropical forest of the Atlantic Biafran coastal region (Astaras et al., 2007).

The area currently designated as Korup National Park has a complex history. As its protected status evolved through the years, changes in tenure rights have accompanied changes in the interactions between local communities and park authorities. KNP began as a forest reserve in 1937, during which time three legally-recognized enclaves were allotted to the villages of Bera, Esukutan, and Bakumba within the reserve. The village of Bakumba has since become abandoned, however the village of Erat was later provided

the same status as a legal enclave. With a 1986 presidential decree, the reserve became a national park. This decree extended the borders of the park to include two additional villages, Ikenge and Bareka Batanga (Mbile et al., 2005). The park is surrounded by a 4700 km^2 Support Zone (Schmidt-Soltau, 2004) and a 3km Peripheral Zone (Egute, 2012). The Korup Project began by attempting to restrict virtually all livelihood activities within the park, along with the intention to resettle park inhabitants to locations within the support zone (Diaw & Tiani, 2010; Mbile et al., 2005). This situation was formalized in the management plan of 1989, known as the Master Plan, and further solidified by parts of the 1994 Law, despite the intention of the law as a legal mechanism to promote decentralization processes in the forest sector (Diaw & Tiani, 2010). However, by the early to mid-1990s, following expensive, unsuccessful, and conflict-ridden resettlement efforts, the strict policy of removing the park's inhabitants gave way to implicit tolerance of those populations and their activities, despite their continued illegal status. This has itself resulted in conflicts between park management and local inhabitants, as the laws are arbitrarily enforced, creating confusion and distrust on the part of both the local people and park management (Diaw & Tiani, 2010).

Currently five villages, with a total population of 1,500 people, exist within the borders of KNP. The 3 km Peripheral Zone encompasses 23 villages having a population of 2,700 individuals (Egute, 2012). It is worth noting that, according to Mbile et al. (2005, p. 2) "very little human disturbance has occurred in the past," despite the presence of these populations within and immediately surrounding the park. The major indigenous ethnicity around the southern portion of KNP is the Oroko ethnic group, a classification that Mbile et al. (2005, p.6) characterizes as "a somewhat artificially created entity

grouping a wide range of culturally similar groups." Below this designation exists identities strongly affiliated with the individual's particular Oroko clan and the specific village community (Mbile et al., 2005).

The communities in and around the southern portion of KNP are characterized into four major types according to Malleson (2001). These are remote settlements, creek settlements, roadside settlements, and plantation camps. Remote settlements are further characterized as being either high forest edge settlements of abandoned forest frontier. The former of these remote settlements contain rich stocks of non-timber forest products (NTFPs), but the latter are characterized by areas that have recently been exploited, and valuable timber products have been removed, often along with important NTFPs. This has left the abandoned forest frontier settlements consisting of primarily secondary forests low in natural resources useful for subsistence or trade (Malleson, 2001). Some prominent livelihood activities that do take place within the KNP area include the local exploitation of NTFPs, especially the collection of bush mango and *njansanga*, as well as bushmeat hunting. In roadside settlements, commercial crop farming is becoming increasingly prevalent, and is the major economic activity within the plantation camps. In addition, selective logging of the most valuable timber products occurs, often under the direction of wealthy elites or "strangers" (Malleson, 2001).

Malleson (2001) comments that villages in this area are characterized by a striking degree of heterogeneity. In particular, major socio-economic differences and power relationships exist between *indigenes* on the one hand and strangers on the other. Those who are regarded as strangers, or *allogenes* (Geschiere & Nyamnjoh, 2000), have in many cases lived in their current village for generations. In fact, throughout the

Southwest Region in particular, many now known as strangers are the descendants of those who migrated to plantation labor camps during the German, and later the British, colonial periods (Geschiere & Nyamnjoh, 2000). But even now, there are influxes and out-migrations, particularly among youths looking for work elsewhere, often returning to their original village after finding few opportunities in the cities. Aside from the *indigene* / *allogene* split there also exist socio-economic and political divisions within these communities. One of these divisions involves elders and wealthy elites on the one hand, and generally disenfranchised youths and strangers on the other. Despite these differences, Mbile et al. (2005, p. 6) claim, at least for the Batanga clan, which also falls under the Okoro grouping, that it, "like most forest societies, does not have a hierarchical decision-making structure but a complex one built on egalitarian principles, checks and balances."

3.1.3. Study Villages

The two villages that comprise the focus of this study are Mosongiseli and Fabe (Figure 3.1). Official information about community forests is difficult to obtain, however, due in part to a lack of institutional capacity. Moreover, according to Yufanyi Movuh (2012, p. 73), "There are conflicting figures concerning number and areas of CFs already approved and this is at times political." Even information from the World Resources Institute, arguably the most comprehensive source of information regarding the status and boundaries of forest zoning for Cameroon, is therefore not always accurate, and the actual situation requires confirmation by local residents and observations in the field.

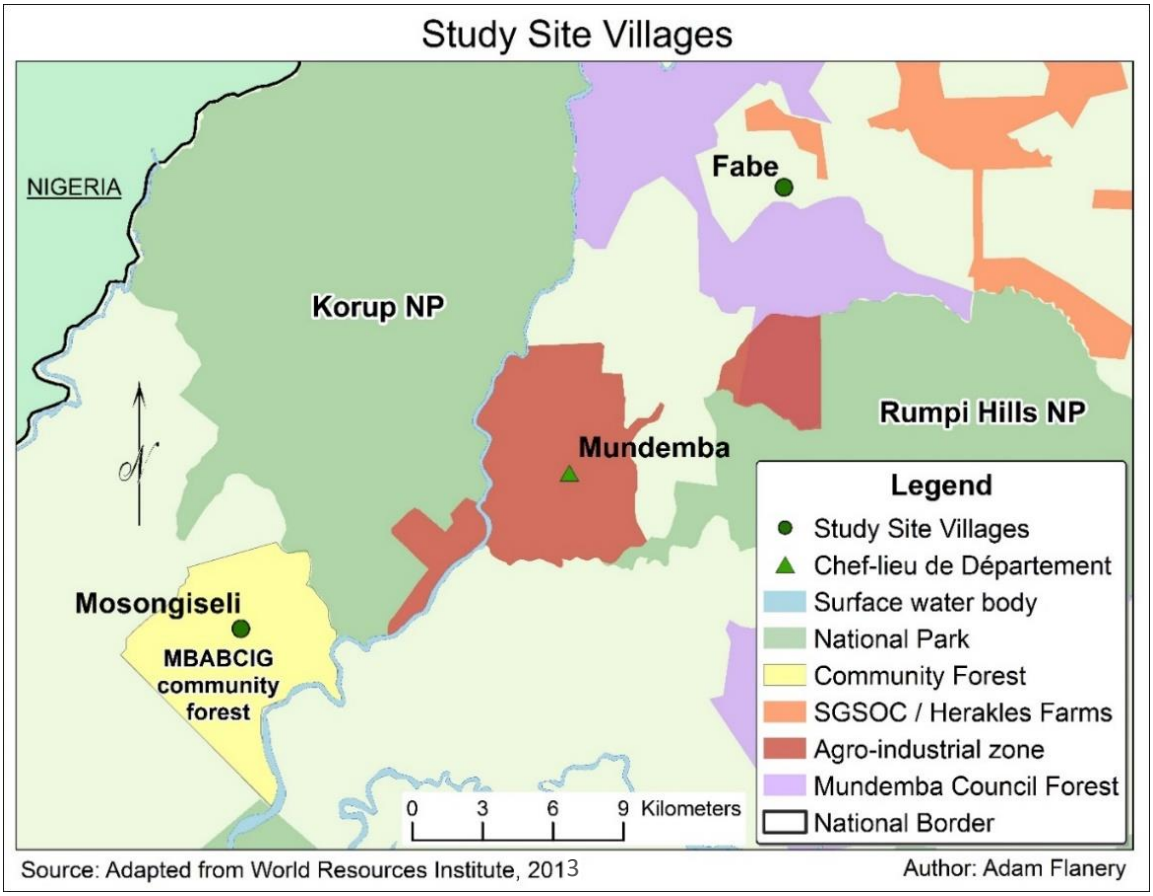

Figure 3.1. Approximate locations of the study site villages Fabe and Mosongiseli.

Fabe Village is situated to the northeast of Mundemba. This community mainly consists of individuals from the Bima clan, and the major occupation is farming. According to Malleson's (2001) typology, Fabe would probably fall within the roadside settlement classification. The community has generally good relations with KNP and the Korup Project. The major source of conflict has been the Herakles Farms oil palm plantation, which established a palm nursery on the village's lands without a consensus of the community. There also appears to be a community forest in the early planning stages, but few members of the community are aware of it.

Mosongiseli Village lies to the southwest of Mundemba, just outside the most southern end of KNP, and has a majority belonging to the Balondo Badiko clan.

Mosongiseli could be considered a creek settlement, enjoying rich natural resources (Yufanyi Movuh, 2013, p. 80). The categorization of roadside settlement also applies to the village, which now even shares some characteristics of plantation camps. A parastatal oil palm company known as Pamol began establishing a plantation in the village less than a year before we undertook fieldwork in the village. The community is also in the process of trying to establish a community forest, consisting of 2,739 ha (MINFOF, 2013) to the east of the village (Figure 3.2). Recently, the community wrote a letter to the Korup Project over the park's new stricter enforcement of the 3 km Peripheral Zone, which community members say interferes with farming and other livelihood activities.

Figure 3.2. Location of Mosongiseli's community forest according to its Provisional Management Convention. The PMC gives the area as 2,739 ha.

3.2. Field Research Methods

The primary research methods for this study included a survey consisting of closed- and open-ended questions, interviews, and other ethnographic methods such as mapping and participant observation. With the exception of the survey, which included a quantitative coding component, these methods emphasize the collection of qualitative data. The primary means of triangulation within the study was the use of several different methods for data collection (Figure 3.3). Triangulation provides one mechanism to address validity threats, and involves the use of "multiple lines of action" (Berg & Lune, 2012, p. 6), in which several approaches to the study are used simultaneously in order to fill gaps in knowledge left by one approach while providing any counter-examples to take into consideration that could invalidate the theories or claims of the study.

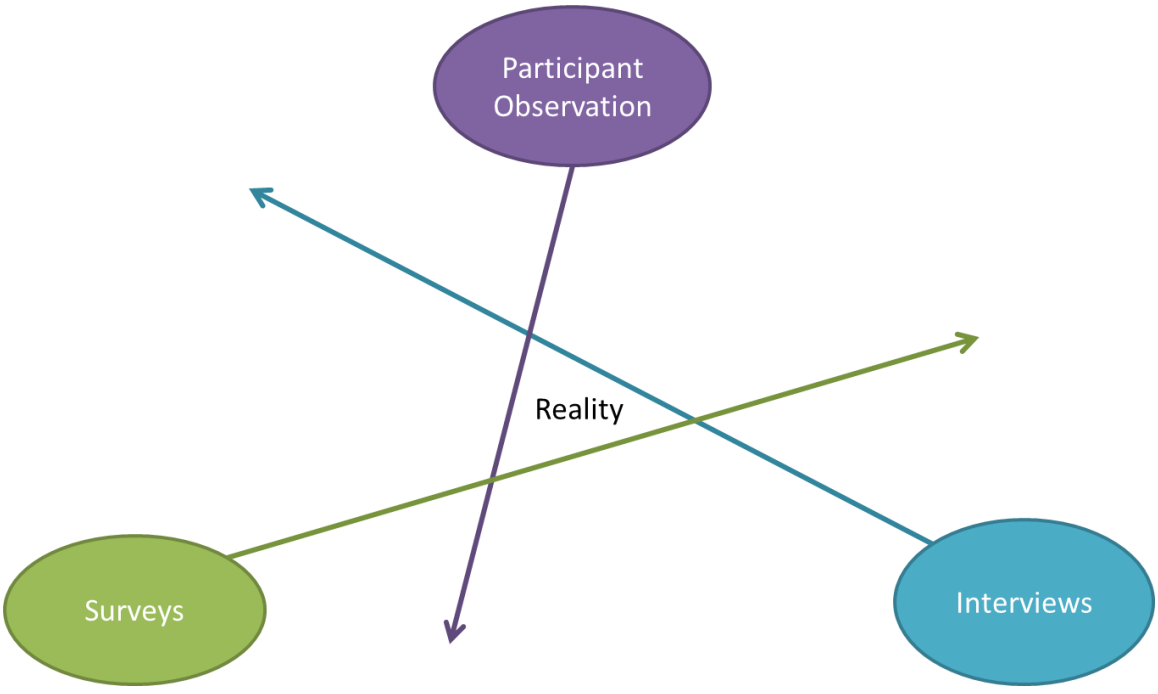

Figure 3.3. Illustration of triangulation using multiple qualitative data gathering methods.

While quantitative data can be useful to incorporate into anthropological studies (Maxwell, 2013), qualitative data have the ability to increase the depth of understanding necessary in order to ground the theories and claims of the research in the complex situations and subjective experiences of the study subjects (Berg & Lune, 2012; DeWalt & DeWalt, 2011; Maxwell, 2013). Part of the strength of such methods relies on the ability to understand both the explicit and tacit characteristics of the human subjects and the society in which they live. While data pertaining to certain explicit aspects, in other words those qualities that are clearly observable, may be collected using both quantitative and qualitative methods, data about the tacit aspects can only be gained through qualitative fieldwork. Tacit features include those that are understood through inference, intuition, and subjective experience (DeWalt, 2011; Maxwell, 2013). Understanding the tacit qualities of a society can lead to better interpretation of the data, as well as the development of theories and claims that reflect a more accurate picture of the actual situation than that presented only by explicit data (DeWalt, 2011; Maxwell, 2013). Furthermore, an understanding of the tacit provides one means of achieving an emic approach to a study, in which the issue under investigation is viewed from the perspective of the members of the society itself. This contrasts with the etic approach, where the problem is framed according to the perspective of the researcher (DeWalt, 2011). Analyzing the situation from both perspectives can provide a fuller understanding of the issues (DeWalt, 2011), and create what Denzin refers to as "theory triangulation" – the use of multiple perspectives in the research design (as cited in Berg & Lune, 2012, p. 6).

One benefit of using qualitative methods in this study lies in the ability to obtain comprehensive data about the issues under investigation and members of the society from

several different perspectives. The collection of such "rich data" involves analyzing the entire text of interviews and taking thorough notes on observations (Maxwell, 2013). This allows validity threats to be tested because the presence of multiple instances of the same account from different respondents, or the repeated observation of a phenomenon, can provide checks on these accounts and on researcher bias. Moreover, a detailed description of the situation provides data to ground the theory in the particular case study (Maxwell, 2013).

Qualitative methods are also well suited for understanding situations, as in the present study, for which the cases are complex and probability sampling is not viable. While quantitative research seeks to define statistical correlations between different variables, qualitative methods allow an understanding of the connections between people, events, settings, and phenomena in the given context. Maxwell (2013) argues that, "the generalizability of qualitative studies is usually based not on explicit sampling of some defined population to which the results can be extended, but on the development of a theory of the *processes* operating in the case studied, one that may well operate in other cases, but that may produce different outcomes in different circumstances" (p. 138, emphasis in original). Assuming the validity of this argument, processes underlying the connections uncovered in my study could allow for further generalization to other community settings as well as future interactions with environmental policies. As Haynes (1991, p. 5) has noted, "if we are to leave behind the notion that change is the inexorable result of anonymous historical forces and view [it] instead as a product of specific men and women in specific historical environments, constantly construing the meanings of

their social actions as they seek power and struggle for justice, then it is only through studies concentrating on particular places or groups that we can capture these processes."

3.2.1. Field Research Schedule

The timeline for the fieldwork (Table 3.1) began with my arrival on August 8, 2015, in Douala, the largest city in Cameroon, and the closest city to the study site with an international airport. From here I travelled to Mundemba, a small town towards the southern end of Korup National Park (KNP). The next day I traveled northeast to Fabe Village, where I spent four days (August 10 – August 13) conducting fieldwork. Following a brief return to Mundemba to resupply, I traveled southwest to Mosongiseli Village and spent an additional four days there (August 15 – August 18) on fieldwork. Three people were involved in collecting data in Fabe and Mosongiseli. These included my thesis advisor, Dr. Richard Mbatu, Chief Ngwese Adolf Ekokola of Esukutan Village, and myself. Dr. Mbatu and Chief Ngwese helped in both the selection of respondents and in translating responses into standard English when necessary. Another four days were spent in Yaoundé interviewing NGO workers from August 24 – August 27.

In Fabe there were 45 survey respondents, and four in-depth interviews were conducted with villagers (Table 3.2). Thirty-six surveys were administered in Mosongiseli, along with three in-depth interviews. Fieldwork in Yaoundé consisted of interviews with four employees of NGOs involved in environmental governance who were knowledgeable about one or both issues of (1) forest policies in the Southwest Region and (2) the REDD+ process in Cameroon.

Table 3.1. Field Research Schedule.

Location	August, 2015																	
	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Fabe																		
Mosongiseli																		
Yaoundé																		

Table 3.2. Summary of data collected.

Site	Surveys	Semistandardized interviews	Participant observation	Field notes and unstandardized interviews
Fabe	45	4 villagers	Korup Project meeting	✓
Mosongiseli	36	3 villagers	Apostolic church service	✓
Yaoundé	N/A	4 NGO workers	N/A	N/A

3.2.2. Survey Methods

The survey sampling was a combination of purposive and convenience sampling, using the snowball technique of acquiring new respondents from the suggestions of previously sampled individuals (Berg & Lune, 2012; Maxwell, 2013). Responses were sought, in particular, from women, youth, and allogenes in order to obtain the views of villagers who could be more reluctant to share their views, as was the case with youth in Fabe, some allogenes in Mosongiseli, and some women in both villages. These segments of the population were also anticipated to be less involved in traditional power structures (Malleson, 2001), while their views have been emphasized as important for participation in REDD+ (Fobissie, Essomba, Sonne, Ndobe, & Retana, 2012). Much of the sampling process involved simply greeting people in their homes while walking through each village as systematically as possible.

Selecting respondents generally began up-village (the side of each village closer to the road), and proceeded generally towards the down-village side (Figures 3.4 and 3.5). In Fabe this meant we started in Becheke quarter, and moved down village towards Makpara, however on the first day one survey was administered at the Council House in Becheke and then several surveys were administered in Green City. The next two days we walked from Becheke to Makpara, and finally returned to the entrance of the village where we surveyed respondents in what they called Njoh and GRA quarters along the main road.

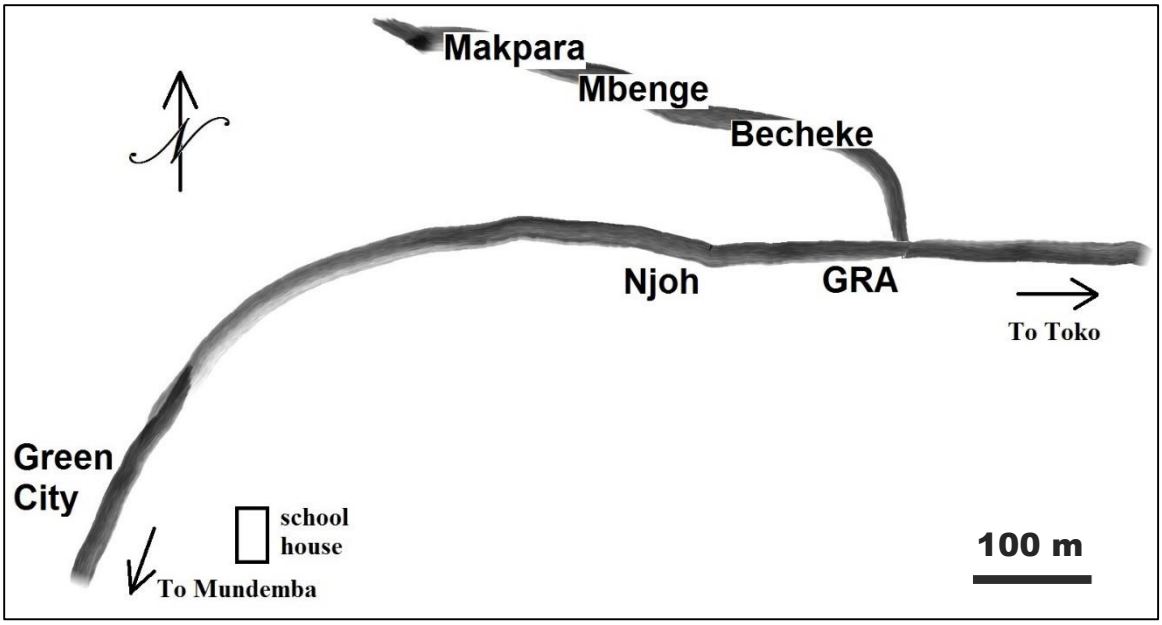

Figure 3.4. Diagram of Fabe Village.

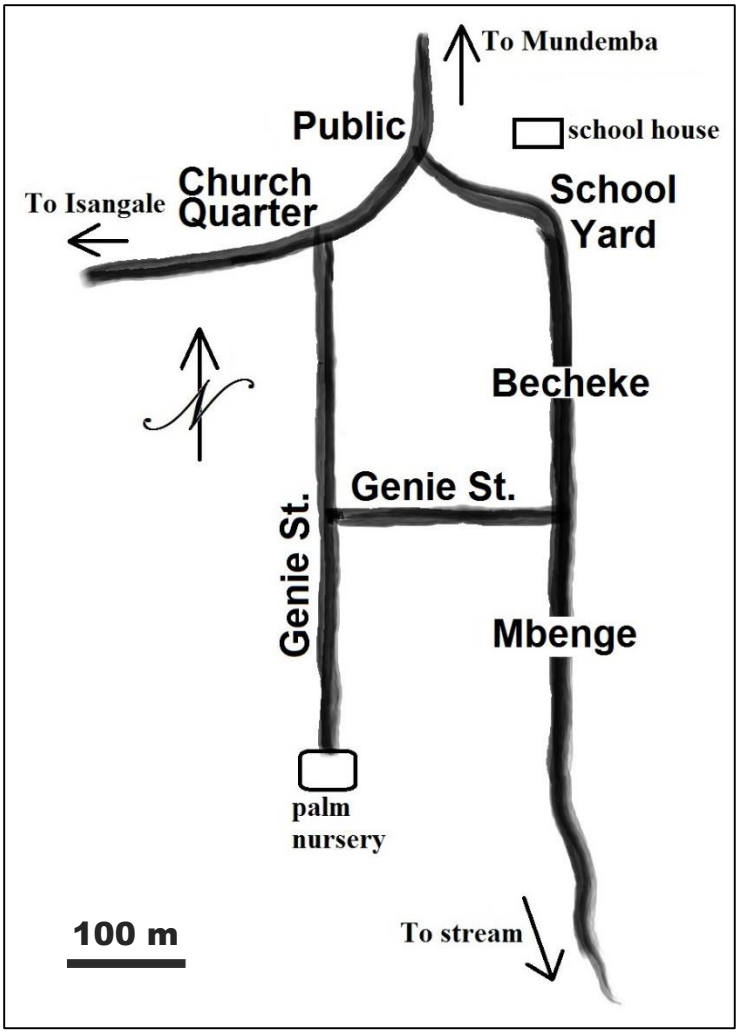

Figure 3.5. Diagram of Mosongiseli Village.

The first day of fieldwork in Mosongiseli, we met the Chief Councilor, who granted us an interview. We then began administering surveys in the Church Quarter, followed by some houses in the School Yard area. In order to get an idea of the village layout, we then walked to the other end of the village, where the street ends, becoming a stream. We then picked up in this quarter, called Mbenge, and worked our way back towards the road. The next day we began in Becheke and continued until we reached the intersection with Genie Street. Here we sampled respondents by first walking down the connecting east-west portion, then the few houses southwards on the north-south stretch.

Most of the houses on the north-south part of Genie Street were close to the intersection. There was also a multi-unit housing bloc across from these houses where several allogenes were staying, but they refused to participate in our research without approval of the Pamol head office. From there we picked back up in Mbenge, south of the intersection with Genie Street, and continued until we reached where we had left off before.

On several occasions a node-based procedure was used to gather multiple respondents together at once. This method was employed with three main variants. At times, each of the three members of the research team were assigned to record the responses of one respondent in a small group, for instance inside a person's home. I read the question, which was subsequently translated into Pidgin by Dr. Mbatu, or if the respondent spoke only a local dialect the translation was provided by Chief Ekokola. Each respondent heard my original survey question, the translation, and then responses and clarifying questions were generally audible to all respondents. The script for obtaining verbal informed consent was read to the respondents and translated into the local language or dialect before the survey was administered, so all respondents understood that they had the option not to respond or to respond only to the extent that they felt comfortable. At other times a second, more private method was used, in which each member of the research team was assigned to administer the survey individually to one villager. This was possible mainly when one or more of the respondents in a given location (such as a family's home) could understand standard English, which allowed me administer the survey to that person separately, without the need for continual translation and clarification. Meanwhile the other two members of the team could administer the

survey to separate individual respondents. On other occasions, it was assessed that the respondents were literate enough to write their own responses to the survey. These respondents wrote their answers on the paper survey as I read each question, which was then clarified and translated into concepts more appropriate to the local context, as needed. For instance, this third approach was taken in Mosongiseli while obtaining responses from the men at the youth association meeting.

The survey instrument contained 30 questions including both open and closed-ended questions (Appendix A). The first 11 were demographics questions. The intention of these questions was to gain information about the basic demographic makeup of the village and the survey sample (for instance, gender and age), characteristics related to the respondents' social identity (religion, place of origin, clan group), and characteristics more directly related to agency (such as occupation, level of education, land tenure status, and languages spoken; see Figure 1.1). Questions 12-21 were related to the respondent's agency in terms of understandings of the forest (how forest land and resources are used culturally and for respondents' livelihoods), and perceived empowerment (in terms of access to decision-making). Questions 22-29 ask about the respondent's current knowledge of REDD+, and their attitudes towards the program. These questions specifically sought to understand respondents' opinions about how REDD+ might affect the community and the forest, and their intentions towards two proposed mechanisms of REDD+ benefit distribution. A final question asked about the respondents' experiences with forest conservation. This open-ended question allowed them to voice any other opinions about REDD+, community forestry, or the Korup Project, the latter of which was expected to have been an important issue to many villagers.

3.2.3. Interview Methods

Interviews were conducted with villagers who were encountered during the survey sampling process. These respondents were chosen more selectively, however, in an effort to obtain responses from individuals who would be highly knowledgeable about the village and its governance, or who were from potentially disadvantaged social groups (i.e., women, youth, and allogenes). Ideally the interview respondents shared both characteristics, that is, a high degree of knowledge about the village in addition to being a woman, youth, or allogene. Interviews from allogenes (such as a retired teacher in Fabe), and the interview of a woman in Mosongiseli (whose interview was taken over by her husband when he entered the home towards the end of the questions about village characteristics) did allow a broader understanding of the socio-cultural characteristics of the communities. Of note, this split interview in Mosongiseli was very fruitful because the woman's husband was a member of the community forest executive committee, so he was extremely knowledgeable about this governance institution, while she did not know much about the community forest but was able to give her perspective as a woman on the roles of various segments of the community. While valuable responses were obtained for both major sections of this particular interview, this example illustrates the often unstructured nature of the survey and interview processes, as well as a rather dramatic example of the role of some women in the village communities. Some characteristics of villager interview respondents are given in Table 3.3.

Table 3.3. Some characteristics of villager interview respondents.

Fabe	Mosongiseli
Respondent 1 • 55-year-old man • Farmer • Was very active in Herakles issue	**Respondent 5** • 55-year-old man • Farmer • Chief councilor and MBABCIG member
Respondent 2 • 49-year-old man • Farmer • Currently on village council	**Respondent 6** • 28-year-old woman • Tailor • Allogene
Respondent 3 • 55-year-old man • Teacher (retired) • Allogene	**Respondent 7** • Man (age unknown) • Farmer • Member of MBABCIG
Respondent 4 • 32-year-old man • Farmer • Involved in youth association	**Respondent 8** • 35-year-old man • Farmer • Member of MBABCIG

The in-depth interviews in Fabe lasted between 30 minutes and 1 hour. Two of the interviews in Mosongiseli had a duration of about 90 minutes, although there was no recording for the third interview, requiring reliance on interview notes. The interviews were designed to achieve two main objectives. First, they were intended to obtain more detailed and personal information about topics covered in the survey, by providing a longer time-frame and the opportunity for probing and follow-up questions. Several of the interviews were administered to members of the community who were better informed about forest policy interactions, for instance the first respondent in Fabe was very knowledgeable about the community's interaction with SGSOC, and in Mosongiseli three respondents were quite well-informed about community forestry in that village. This was particularly valuable because the surveys did not indicate a high degree of

knowledge about community forestry among most respondents in either Mosongiseli or Fabe. The second objective of the in-depth interviews was to have the opportunity to ask questions that may have been too sensitive to ask every villager. The interviews were divided into four sections, beginning with the demographics of the respondent. This was followed by the respondent's assessment of the community, its culture, as well as formal and informal governance structures. The third section asked about the respondent's knowledge of current and prior interactions of the community with forest policies, particularly industrial agriculture, community forestry, the Korup Project, and the AFF tax on logging. The fourth section allowed for a more detailed examination of villagers' views on REDD+.

The interviews with NGO workers in Yaoundé lasted between about 45 minutes and 90 minutes. The interview guide inquired about four main topics, and sought to obtain information from the respondents' first-hand experiences working in the field and interacting with village community members, industries, and government agencies, especially in the Southwest Region. These interviews were intended to obtain the perspective of experts on the policies shaping the situation on the ground, and having a larger-scale perspective compared to individual villagers. Interviews with these respondents also provided another data set in order to further triangulate the information collected directly from community members. The first topic was whether the respondent or their organization had worked in the Korup area. This set of questions was designed to inquire into their first-hand knowledge of community interactions with the Korup Project, in particular. Another section asked about their understanding of the SGSOC/Herakles Farms issue, and also allowed for further discussion about other industrial agriculture

projects, such as Pamol. A third set of questions examined the organization's involvement in community forestry. Finally, respondents were asked about their understanding of REDD+, how their organization is involved in the process, and how the program is being developed and implemented in Cameroon. Table 3.4 provides information on the organizations that respondents worked for, which are being kept anonymous to honor respondent concerns.

Table 3.4. Summary of NGOs interviewed.

Organization 1 The organization works as a facilitator for partnerships between smallholders and agro-industry. Activities are mainly focused in the South and East regions, but has had some recent involvement in the Southwest.	**Organization 2** Technically not an NGO but a state development bank and bilateral donor. The organization is responsible for funding its technical branch and NGOs involved in community forestry, as well as conservation and development projects.
Organization 3 An international conservation NGO. The organization works to establish a collaborative framework between various stakeholders and has been heavily involved in Cameroon's REDD+ process.	**Organization 4** A Cameroonian NGO working on a range of issues concerning forests of the Congo Basin.

3.2.4. Ethnographic Methods

There were two opportunities for participant observation, other than routine observations that I jotted in my fieldnotes during the course of the research in Fabe and Mosongiseli. The first occasion occurred on the last day in Fabe, and involved a meeting between the villagers and Korup Project staff, including a representative of the Conservator of KNP. The meeting lasted for approximately 2 hours, of which I had the opportunity to observe about 60 to 90 minutes. It included a participatory rating of the park by the villagers, and of the village by the park, on various aspects of the Conservation and Development Agreement between the park and the community. From a

laptop projected onto a screen in a room big enough for about 50 to 70 attendees, the Korup staff marked the ratings of the men, women, and youth in attendance, and averaged their ratings of the park's performance. In Mosongiseli I had the opportunity to participate in the Sunday service of an Apostolic church that was worshipping in the older wood-frame schoolhouse next to the newer schoolhouse where the research team was given lodging.

The day after we arrived back to Mundemba from Mosongiseli I was able to speak with the Conservator of KNP at the park's headquarters. This was largely an unstandardized interview in which he gave his perspective on the functioning of the park and the Korup Project. On the way out we were stopped by another park official who requested to speak with us about our research, and this became a second unstandardized interview with a Korup Project staff member.

3.3. Methods of Analysis

To conduct the statistical analyses, SAS was used to find the proportions of the three primary demographic groups and six secondary demographic characteristics examined in this study. Chi-square tests for independence of variables, Fisher's exact tests, and measures of association were also calculated using SAS. Following the method of Healey (2007), the contingency tables were arranged with the independent variables in columns and the dependent variables in rows. Significance was generally regarded to be at the level of alpha = 0.05, however significance at alpha = 0.10 was considered in some of the results, particularly when supported by other sources of data such as field notes and interviews.

The independent variables were regarded to be the three primary demographic characteristics of *gender*, *age*, and *place of origin*. The dependent variables included six secondary demographic characteristics: *occupation, level of education, land tenure status, location of residence within the village*, *religion*, and *clan group*. The phi measure of association was used to quantify the strength of association between variables. Phi is a chi-square based measure of association that is often used for 2 by 2 tables (Healey, 2007). The lambda measure of association is useful because it can be interpreted as a percentage increase in the ability to predict the frequencies of one variable given frequencies of the other variable,[12] but it has the significant disadvantage that it tends to calculate an association of 0 when the total number of responses for one row is much larger than another, even when an association exists (Berman, 2002; Healey, 2007). For this reason, phi was preferred over lambda.

Like other measures of association, phi provides an indication of the strength of the relationship between the two variables, whereas the chi-square test itself only specifies whether or not the relationship is statistically significant. Sirkin (2006) illustrates this point using phi and chi-square values to show how statistical significance can be highly dependent on sample size, as increasing sample size tends to result in greater statistical significance, though the measure of association between the two variables can remain small. Healey (2007) states that the values of phi lack a meaningful interpretation, in contrast to the proportional reduction in error interpretation for lambda, and provides three ranges of values that have been developed as rules of thumb in

[12] This is referred to as *proportional reduction in error* (Berman, 2002; Healey, 2007) or *proportionate reduction in error* (Sirkin, 2006).

interpreting the strength of association from values of phi. The ranges of phi are given as (Healey, 2007, p. 263):

0.00 – 0.10	(weak)
0.11 to 0.30	(moderate)
0.30 – 1.00	(strong).

In the chi-square test for independence, the null hypothesis maintains that there is no relationship between the two variables being compared. To meet the standards for validity of the chi-square test, two commonly cited conditions must be met, based on the expected frequency in each cell of the contingency table (Healey, 2007; Sirkin, 2006). The expected frequencies are determined by calculating the number of respondents (often an unrealistic fractional number) that would be expected to have the particular combination of characteristics according to the total number of respondents for each combination of categories of the two variables. The total numbers are presented on the right side and bottom of the contingency table, and are therefore known as the row and column marginals, respectively. For the chi-square test to be considered valid, no expected frequency can be less than 1, and no more than 20% of expected frequencies can be less than 5. This presents a challenge for 2 by 2 tables, because if even a single expected frequency (25% of the total) is less than 5, then the entire test can be considered invalid (Sirkin, 2006). In these cases, the sample size may be too small to accurately approximate the chi-square distribution that is used to calculate the probability of error from the chi-square test statistic. Healey (2007) recommends using the continuity corrected chi-square test (otherwise known as Yate's correction) in these circumstances. Another option with small sample sizes is Fisher's exact test, which is used for 2 by 2

tables derived from small samples that may not meet the assumptions for validity of the chi-square test. It compares the probability of the given table with the probability of all other possible tables having the same row and column marginals (Berman, 2002; Sirkin, 2006). The chi-square test relies on an approximation to the chi-square distribution, and therefore Fisher's exact test may be more reliable for small sample sizes (Berman, 2002; Sirkin, 2006) because it does not rely on a test statistic but calculates a *p*-value directly (SAS, 2011, p.2334).

In addition to the drawback that small sample sizes can produce results with questionable validity due to low expected frequencies, the chi-square test assumes independent random samples. The samples in this study were independent but cannot be considered random because purposive selection of respondents was used in order to obtain the perspectives of various demographic groups, as explained in Section 4.2.2 above. Therefore, a degree of caution is warranted in interpreting the statistical results, which should be considered more as a guide to trends in the sample population, rather than definitive findings that precisely represent the nature of the study communities.

Teachman (1980) describes two measures of qualitative variation, *H* and *D*, given proportions for *I* categories. He notes that preference for one or the other is largely a subjective choice, so both have been included in this analysis. The measure *H* is an entropy-based descriptor of heterogeneity (Theil, 1972), defined as $H = \sum_{i=1}^{I} p_i \ln(1/p_i)$. There is a useful interpretation of *D* as the probability that two individuals from the sample population chosen at random will belong to different categories of the particular characteristic being measured. It is defined as $D = 1 - \sum_{i=1}^{I} {p_i}^2$. Teachman (1980) further defines normalized versions of *H* and *D*,

denoted H' and D', for which the minimum value of each is 0 and the maximum is 1. These measures are defined as $H' = H/\ln I$, and $D' = D[I/(I-1)]$. It is important to note that D' and H' typically have different values given the same set of data, despite each having a range from 0 to 1, where 0 is complete homogeneity (all responses fall within only one category), and 1 is complete heterogeneity (each category has the same number of respondents). Moreover, these measures are based on non-random sampling of the population, so they are used here to illustrate possible trends in diversity for the two communities, rather than rigorous statistical description.

All survey data was first entered into an Excel spreadsheet, then codes were assigned to responses. The choice of codes is described for several demographic characteristics in the Results chapter. Data reduction for villager interviews involved creating an outline of indexes based on concepts that originated from the literature and research design. This list was fairly exhaustive, so few additional themes arose in the course of reviewing interview transcripts and survey data, although several indexes were elaborated and given more nuanced understanding following fieldwork and data analysis.

I have considered my social positionality during the field work, and later in the course of data analysis. Particularly while in the field, it is possible that villagers' understandings of Americans could have influenced responses, either through perceptions of unequal power relations or distrust. For example, some respondents could have mistaken the explanation of infrastructure and monetary benefits as items that I or the research team might bring them depending on their responses. To counter this possibility, all participants were read the informed consent document that specifically promised no benefits from involvement in the research. Other respondents could have been skeptical

of our work, particularly those who have been negatively impacted by the American-owned Herakles Farms. It was also difficult if not impossible to explain the stated goals of REDD+, possible risks and benefits of the program, and what was meant by terms used in the survey questions, without potentially introducing some degree of bias for or against these notions. I have therefore tried to consider these issues in the course of analysis.

Chapter 4. Results

When I visited Fabe Village it was during the rainy season. The trip took about an hour to an hour and a half, traveling by motorbike in the direction northeast relative to Mundemba. The road leading to the village, which was constructed within the last 20 years using funds from the Korup Project (Respondent 1), consisted of red clay earth, and for most of its stretch appeared to exist between two walls of forest on either side. During the four days of fieldwork in Fabe, I estimated a 40% chance of rain, by which I mean that at any given point in time there was approximately a 40% chance that it was raining. The precipitation ranged from an almost imperceptible sprinkle to rather heavy downpours, interrupted on occasion by beaming sunshine. On one night the clouds completely dissipated and I saw the truly amazing spectacle of the entire Milky Way visible in the skies above the rural Southwest Region.

At the entrance of the village there was a signboard along the road, already moldy and becoming shrouded in new vegetation, announcing the presence of the Fabe Solar Power Plant, a project that the signboard stated was sponsored by SunErgy Cameroon. This is a Norwegian company whose website claims it has support from organizations including Norad (the Norwegian Agency for Development Cooperation) and a host of private partnerships (SunErgy, n.d.). No central electricity currently exists in Fabe. In talking about Herakles Farms/SGSOC, Respondent 3 commented on the electricity situation:

"Well, SGSOC. See, when they came by here there were lots and lots of promises. They even constructed a borehole down there. The borehole worked for a short while and ceased. . .. And there was a time that I passed here and saw poles, with small cables. I thought that by now Fabe would have been completely electrified, but I don't know what happened." I asked if the company said they would bring electricity. "Of course, they said they would be providing them electricity." He continued with a little laughter, "But I guess it will still come."

There are two boreholes in Fabe. One was constructed by the Korup Project, while the other one was the malfunctioning tap from Herakles. Respondents I talked to early in the fieldwork considered Herakles to have stolen their land by claiming that the project was only to be temporary, when the company in fact had no such intention. The respondents asserted that the gendarmes had even harassed the community by walking around in an attempt to pressure them to accept the company (fieldnotes). Respondent 4 pointed out that Herakles was the only major source of disagreement within the village.

Most of the residents lived along either side of the main street that goes down the center of the village. Towards the entrance was Becheke quarter (Figure 3.4). A little further down was Mbenge, and the street ended in Makpara quarter, becoming a small footpath leading into the forest. A few houses have also sprouted up along the road in recent years. Njoh quarter contains just one house and is named after the stream that runs behind it. Two residences joined into one building made up the GRA quarter, a tongue-in-cheek reference to the Government Residential Areas in Cameroonian cities where government employees live and typically enjoy a relatively high standard of living. Respondent 4 said that Njoh and GRA could also be considered part of Becheke. Down

the road and up a hill about a 10-minute walk in the direction leading towards Mundemba was an area known by the community as “newly out”. More recently, the people in the house here have named it Green City, “Because,” explained Respondent 1, “if you look around you’ll see all green pastures.” Across the road are two recently-built classrooms, and a farming school financed by MINFOF and PSMNR-SWR (Programme for the Sustainable Management of Natural Resources in the Southwest Region). I was informed by Dr. Mbatu that the area will be the future seat of the district administration, making this an advantageous place to relocate. Having an administration in the village will help the community obtain funds because they will then have representation with the government, so the community is apparently supportive of the idea. In all, there are three to six quarters in the village, depending on the particular respondent’s classification of the sections. “But,” Respondent 2 wanted to emphasize to me, “we are one village.”

Ailments seem to be common in Fabe, including one woman who asked us for medicine that unfortunately we were unable to give her. Another respondent confirmed that she wanted to participate in the survey, but complained of abdominal pain; the practically sullen look on her face said as much, to the point that I worried she was angry. I noticed a nearly ubiquitous odor of fermentation in the village. Some houses smelled to me like gasoline, and others had fires that burned inside with no smoke ventilation – a cloud slowly seeping out through the thatched roof. There was a mixture of houses made of earth or timber, having thatched or zinc roofs, with a greater number of the more desirable zinc-roofed homes present in the village.

Obtaining a zinc roof appears to be an important issue in Mosongiseli Village. Respondent 5 said that some of the young people have been refusing to honor a local

tradition he says goes back a hundred years. When someone upgrades to a zinc roof it shows that they have moved up in prosperity and status, so they are required to give a large goat and food to the village. At that point in time, five people had refused to donate these things, even when confronted in the village council. The situation had caused a controversy, and they were waiting for the chief of Mosongiseli to return and resolve the dispute. If he could not settle the matter, then the village authorities would take it to the administration in Mundemba. According to Respondent 7, one reason why the community signed an agreement with Herakles three years earlier was that the company had promised that each house in the village would get 50 sheets of zinc.

I met the chief of Mosongiseli in Mundemba, where he was resting after returning from Douala where he needed treatment for an acute illness. In Mosongiseli, I met a man who had a small foot wound but he was not able to get first aid supplies for it. Overall, though, the people in Mosongiseli appeared to be happier than those in Fabe. On more than one occasion I noticed a contented couple walking and holding hands. Kids gleefully played football on a field with simple goal posts in front of the school where we were staying. Several times I noticed a smell like incense. Part of the cheerful atmosphere could have been due to the celebration they were having. Unfortunately, I was unable to observe the festivities because we arrived on the last day it was being held. According to Respondent 5, the occasion was a death celebration in honor of an elderly person (a similar event had recently been held in Fabe for a woman who had died). I asked Respondent 6 what the celebration was like. She explained that they dance, the family brings food, and the women are very sad. Despite their sadness, that night it sounded like a party, with joyful sounds filling the village as I wrote my fieldnotes.

We had to travel into Mosongiseli from Mundemba on motorbikes because the bridge over a small river was out, preventing access by the Korup Project SUVs that we were able to take on the way back from Fabe. The road to Mosongiseli takes a path through KNP. The first third of the trip was fairly smooth, but until we came out of the park it was nearly unpassable, requiring us to stop over and over again to get off the bikes so they would not get stuck in the mud. On the positive side, this allowed me to observe the interesting geology here. The deep red soil contrasted remarkably with the green of the forest. In it were granite pebbles mixed with black and gray clay stones that were soft enough I could squish them between my fingers. The pebbles sat atop little towers a few centimeters high where the rain had evidently eroded the earth around them. Leaving the park, the soil became noticeably sandier, and with it came a relatively uneventful final stretch.

The quarter that the villagers called Public was on the right side as we arrived near the entrance to Mosongiseli (Figure 3.5). About 100 meters further down the road from Public was the Church quarter. The School Yard quarter consisted of a small area near the entrance of the village in front of the primary school. Mosongiseli had Becheke (up-village) and Mbenge (down-village) quarters, as in Fabe, and in both villages the chief lived in Mbenge. There was no Makpara quarter in Mosongiseli, but there was a road built by Cameroon's Génie Militaire that ran roughly parallel to the main street in the village. The community members facetiously called this area Genie Street. I found a small nursery at the end of Genie Street, with hundreds of tiny potted oil palms.

Compared to Fabe, there were longer breaks in the rain at Mosongiseli, but the sky almost never became completely sunny. There always seemed to be a thin overcast that never quite reached direct sunlight. When the rain came it could be almost torrential, which I suppose is why the thatched roofs here came down surprisingly low in front of most houses – so low that I kept hitting my head on them, not quite expecting the four-foot clearance. Overall, though, the buildings in Mosongiseli appeared to my untrained eye as generally more sturdy. As in Fabe, many were constructed from timber and capped with zinc roofs. The chief councilor's house was under construction using cinderblocks. Interestingly, two satellite dishes were being installed in front of a housing block in Mbenge, even though the village did not currently have electricity.

Some of the first people who took the survey were allogenes living in the Church quarter. One of these was a man who wore a Pamol employees' union t-shirt, so I asked him about the union. He said it fights for their pay sometimes, such as ensuring a seniority bonus. The union also fights for discounts at the Pamol hospital for workers, and to improve working conditions. He explained that not everybody is part of the union, but there are no dues. Personally, the man believed he had benefited from the union. In terms of the union being involved in Pamol's decision-making, he told us that in cases like the decision to establish in Mosongiseli they had not been part of the initial discussion. The union was informed of the decision after it had been made, but then they did go along with it.

On Sunday, 16 August, I had the opportunity to attend an Apostolic church service. This choice was largely out of convenience, being the closest of three congregations holding services that day. It took place in the older wooden-frame

schoolhouse built by the Korup Project (Respondent 7). Just a few meters to the east of the cinder-block schoolhouse that the research team was staying in, I assumed it was a barn or stables at first. The congregation was very warm and inviting, at one point saying in unison to me, “Welcome broda Adam.” Most of the time the pastor stood in the middle of the congregation, while a man and a woman beat drums at the front of the partially enclosed room. Behind them was a chalkboard with some Christian writings in Pidgin that I could only get the gist of. The drums were often played in a hemiola rhythm, and the beats lent themselves to moving slightly side-to-side while singing and clapping. The pastor gave a sermon in mostly standard English about “divine connections.” He explained these as connections from God to people, and illustrated the idea using the example of Cornelius from the Bible. During the sermon I could hear another church playing their Western-style drum set at times.

On the final day of fieldwork, I came down with a strong cold. While unpleasant, it did give me the opportunity to use some traditional medicine. Chief Ekokola pointed out some bunches of lemon grass growing next to the house in the Public quarter. He told me that Cameroonians use the plant to sooth a cold, and showed me how to grind up several leaves in my hand and breath in the aromatic oils. My cold came back later that day, but I was relieved that it helped during the long motorbike trip back to Mundemba.

Both villages left me with a relatively cozy impression very different from the sterile suburban environment with which I am most familiar. In Mosongiseli, people tended to socialize frequently, walking around and talking with one another. In Fabe there was a house under construction, part of which was being used as a little store, while the other part served as a gathering place where people socialized. Especially youths

hung out here, playing checkers and drinking afofo (locally made crude whisky). Yet along with the welcoming and relaxed atmosphere in these communities there was an observable and expressed need for improvements in living conditions.

4.1. Heterogeneity and Integration

4.1.1. Roles of the Major Demographic Groups as Actors within Each Community

4.1.1.1. Gender. Both men and women in Fabe are typically farmers (Respondent 1), possibly indicating social integration between the genders while working in their occupation. Both genders are also on the village council, so they are represented in this formal community decision-making body. Women and men each have their own secret, or elite, societies. In Fabe, the women's society is called *Ekpa*, and the men's is called *Motamo*.

The women in Fabe appear to have a cooperative approach in which they socialize together and work toward common goals. Women have their own social hall and society, both of which are known as *Diyala*, where all the women in the village come together to socialize and educate themselves (Respondent 2, Respondent 4). Other socio-cultural activities include decorating the village at the end of the year to appease the ancestors (Respondent 4). This is a benefit to the whole community because the villagers believe that this tradition brings peace to the village. Women in Fabe also organize to clean the village, particularly the roads and water points, such as the boreholes and catchment areas (Respondent 2, Respondent 4). Moreover, Respondent 4 stated that the women have a common initiative and bought a grinding machine that they all use.[13]

[13] This did not appear to be a formal common initiative group, although the activities are carried out cooperatively by the women.

Women in Fabe also carry out day-to-day activities of farming and gathering NTFPs such as *njansanga* and bush mango. They can then sell these products to help finance their children's education. Because of this importance of the forest to their livelihoods, Respondent 1 says that many of the women were extremely upset when Herakles began its operations. He declared that, "In fact, some of them were even about to collapse where they stand!"

In Mosongiseli, both men and women (along with youths) come together every first Friday to do "community labor" – a cleanup campaign focusing on maintaining the streets, bore holes, and the creek – similar to the work respondents described as being done by women, as a group, in Fabe.[14] As in Fabe, both men and women were involved in decision-making in Mosongiseli. Women are included on MBABCIG (Mosongiseli's community forest executive committee), and were involved in writing the letter to the Korup Project about the peripheral zone issue (where the community has recently been told they cannot farm in the 3km peripheral zone around the park). Moreover, when Pamol first came to Mosongiseli they did not follow the procedures normally expected for establishing a project in the village. Typically, companies that seek to use the community's forest land are supposed to talk to members of the community, bring offerings, and see the village, but Pamol bypassed these local protocols and some of the villagers were unhappy with this. Respondent 6 and Respondent 8 said that women and youths were the main demographic groups that complained, and the situation was eventually settled after the DO (Divisional Officer) appealed to the villagers to accept

[14] It is possible that this work is done by both men and women in Fabe as well, but no respondents mentioned this kind of community cleanup campaign for both genders taking place in that village.

Pamol. While women are involved in many aspects of decision-making and were involved in collective action in the Pamol issue, the youth association in Mosongiseli appears to be completely segregated in terms of gender, only including men.[15] This was observed during their meeting, after which we were able to administer surveys to several of the youths, and confirmed in the interview with Respondent 6.

Interview respondents replied that the role of women included similar activities to those of women in Fabe. Respondent 5 stated that women were responsible for keeping drinking points clean, and Respondent 8 indicated that their role is to provide hospitality to guests by preparing food. Respondents also identified subsistence as a major role of women in Mosongiseli. These subsistence activities include catching aquatic animals, farming, and collecting food from the forest (Respondent 5, Respondent 6). They are also expected to use money from selling these products to pay for their children's education, and raising their children is generally another aspect of their role in the community (Respondent 6, Respondent 8).

While Respondent 1 in Fabe seemed to have a gendered perspective on the future of Cameroon – framing his hopes as reflecting the moral strength of young men – during this interview a woman who was familiar to the respondent interjected her own thoughts into the interview several times, which suggests she did not believe her opinions took a second place to the respondent's. This appears to differ strongly with the case of an interview in Mosongiseli during which the husband of a woman I was interviewing came in, and this abruptly shifted the conversation so that he was the only one who answered any further questions. This second framing of the placement of women in the local

[15] It is not certain if the youth association in Fabe is also only composed of men.

society was observed in both villages while administering the surveys. In both Fabe and Mosongiseli, women respondents were often hesitant to give their own opinions, and frequently their responses were heavily supplemented by the input of their children (even if their children were women themselves) or other family members. This effect was particularly apparent when a woman's husband was present, and at times women did not want to give their own opinions without their husband's permission.

4.1.1.2. Age group. Both youths and elders are represented on the village council, and therefore have a significant role in Fabe's decision-making. The way that these two demographic groups assert their agency appears to vary greatly, however. The youth are very well organized as the Bima Youth Association, and this organization has frequent meetings. In these meetings they discuss issues such as the best ways for the village to be developed, as well as maintaining the association's motivation and focus. In the discord concerning Herakles Farms, the youth actively intervened in the issue when they discovered that, according to Respondent 2, Herakles wanted to "enter by force", it became clear that their project was not temporary as the company had claimed, and that promises of development benefits for the community would not come to fruition. According to Respondent 1 and Respondent 2, the elders who were in favor of Herakles made decisions with the company largely without consulting the rest of the community, relying on their pre-established positions of power within the hierarchy of the village social structure.

According to respondents, youth in Fabe are involved to a large extent in both livelihood activities and community development. While Respondent 1 maintains that the youth are concerned about preserving the forest, he said that at the moment their

livelihood requires them to clear land to grow cocoa, which is the basis of the local economy. Some youths are students, and on their break they help by working on their parents' cocoa farms. They are also involved in construction projects and development activities like digging wells and fixing bridges. Culturally, one respondent (Respondent 3) observed that the youth are becoming less active in traditional activities, such as involvement in elite societies, because they are adopting Christianity.

Respondents in Fabe considered the role of elders to involve cultural matters and arbitrating disputes. Respondent 2 understood elders to act in the capacity of resolving conflicts such as those between two different families. Respondent 4 held that elders served the principal role of passing traditions down to the younger generation so that they can learn the culture of their community.

Compared to Fabe, where the recent issue over Herakles Farms seemed to divide youth and elders, at least one interview respondent in Mosongiseli (Respondent 8) stated that there generally are no substantial disputes between these two groups in his community. There have only been small differences in opinion over things like exactly what timber revenues should be used for. Regarding access to decision-making on issues of forest usage, both youth and elders are represented on MBABCIG (the community forest executive committee), and the two groups were involved in writing the letter to the conservator regarding the Peripheral Zone issue. Moreover, youth and women were the main groups who complained about the way in which Pamol tried to establish in the community, and Respondent 8 expressed that these two groups (youth and women) were "very active" in community issues.

During the monthly community labor in Mosongiseli, men, women, and youths participate, but the elderly do not take part. Thus, one respondent (Respondent 5) stated that the role of youth in the village is to maintain "the cleanliness of the community." According to Respondent 8, this includes both men and women youths, in contrast to the local youth association, which apparently only includes men. Respondent 5 also identified youth as the community's labor force, helping to construct houses, build bridges, and do other repairs, which is very similar to the role of Fabe's youth in community development.

As in Fabe, elders serve an important function in maintaining the village's cultural traditions and in settling disagreements within the community. Respondent 5 emphasized the role of elders as providing guidance to the youth, and in teaching them the history and boundaries of their community as a means of protecting against encroachment after the elders pass on. He joked, "If you don't know the history, neighboring villages can take right up to your toilet! They claim the land." As part of the elders' cultural responsibilities they are also responsible for handing traditional powers to the youth.

4.1.1.3. Place of origin. According to interview respondents, Fabe was established by people who originally migrated from Isangele, and consists mainly of villagers belonging to the Bima clan. Other clans represented significantly include Ngolo and Batanga, in addition to Grafi (people from the Northwest Region), Balue, and Ikondo Kondo. In addition to the diversity mentioned by respondents, there are several processes of integration and examples of cohesion between indigenes and allogenes in Fabe. Respondent 2 asserted that there was harmony in the village. Respondent 3, who is an

allogene and not of Bima ethnicity, remarked that "the people here are very open," in describing that he would be allowed to attend a village assembly meeting and believed his opinion would be respected by the community. This same respondent commented that there is a farmer's field school where villagers are trained on modern methods of growing cocoa, and he supposed that both Bima people and allogenes worked together there once a week. Also, a recent death celebration in honor of a woman who got lost in the forest brought in people from a few neighboring Bima villages, according to Respondent 3. In another example of camaraderie, Respondent 4 explained that at the end of the year all the people in Mbenge quarter celebrate together.

Despite these illustrations of solidarity, in some respects allogenes are excluded from access to the forest and decision-making in Fabe. For instance, while allogenes can participate in the general assembly they are not included on the village council. In accessing forest land, indigenes are allowed to claim any piece of virgin forest and begin farming it. But Respondent 4 explained that for allogenes, the chief and the village council decide whether to simply give the land to the person, or, if they determine that the allogene may cause problems for the community they will let them have the land but will take money for it. Similarly, for allogenes to collect NTFPs from the forest they must pay a fee, whereas Respondent 4 stated that "citizens" of Fabe are not required to pay for access to these resources.

One fascinating note about Fabe is that Chief Philip Wangwe, the current chief of that village, is apparently both a Muslim and partially a "foreigner" himself. The story was related to me by Chief Ekokola. According to him, Chief Wangwe's father was a Muslim who followed a young lady who lived in Fabe. The two had children there, but a

dowry was never paid. The man who was chief of Fabe at the time only had one son, but he was irresponsible. However, the Muslim's son was "dynamic, loveable, and good." So when it was time to decide on a new chief, the son of the previous chief suggested that Wangwe be crowned instead, and the king makers (who come from secret societies) agreed. In the local tradition, if you have a love affair without paying a dowry then the child belongs to the mother's side. So even though Chief Wangwe's father was from outside the village and was a Muslim, the king makers considered his son to be enough of a native because his father never paid a dowry.

Mosongiseli was settled about 300 years ago (Respondent 5, Respondent 8), by people who came from the Ngolo area (Respondent 5). Interview respondents estimated that about 5 – 10% of the village inhabitants were allogenes until Pamol established its plantation in the village. Respondent 5 and Respondent 8 maintained that quite a large number of allogenes came in with Pamol. In fact, Respondent 5 went so far as to say the influx of people "is almost changing the status from a village to a semi-town," and laments that with it the local traditions are disappearing. This same respondent remarked that the new allogenes are mixing with indigenes. When asked if different groups of people (including allogenes or youth) lived in different quarters, both Respondent 6 and Respondent 8 responded that these groups were spread throughout the village, although it is not clear if this includes the new arrivals who were brought in by Pamol. Interview respondents upheld the view that allogenes in Mosongiseli are upstanding members of the community who simply go about their farming and live their lives. Respondent 8 stated that most allogenes that were established here before the arrival of Pamol belong to the Ibibio clan of neighboring Nigeria. According to Respondent 5, the workers brought in

by the company come from both within Ndian Division (including Bima, Batanga, Ngolo, and Bakoko clans), and outside of the division. Similar to Fabe, respondents also stated that one of the last major cultural activities in the village was a death celebration, here in honor of an elderly person. These occasions bring in people from neighboring villages, including those from Isangele, Ikassa, and Ngumu, with everyone in the village participating in the festivities.

There was no apparent ill-will towards allogenes in Mosongiseli, whether Nigerian migrants nor Pamol workers. But as in Fabe, allogenes are not generally involved in community decision-making, and they have additional hurdles in acquiring access to forest land compared to indigenes. One respondent (Respondent 6) affirmed that allogenes do participate in the village assembly. But she acknowledged that allogenes are not represented on the community forest executive committee, and when the village wrote the letter to KNP regarding the peripheral zone issue allogenes were not part of that process. According to Respondent 5, indigenes are free to farm in any virgin forest of Mosongiseli unless they have not been living in the village for a long time. In the latter case these individuals are required to pay a token to the community before they can begin farming. Similar to Fabe, allogenes must pay per hectare of land and give a certain amount of food to the community.

4.1.2. Heterogeneity

The proportions given in Table 4.1 summarize the consolidation of demographic categories into dichotomous codes. Although the consolidation resulted in very coarse categorizations, this was necessary in order to achieve results for the chi-square tests of independence having some degree of statistical validity. Condensing the demographic

characteristics into two categories per variable also obtains 2 by 2 contingency tables that make the use of Fisher's exact test possible in cases where the distribution of the sample population limits the usefulness of chi-square tests. Tables 4.2 and 4.3 give percentages of the sample population in finer detail. In each of Tables 4.1, 4.2, and 4.3, the columns for *n* and *percent* for each village refer to the number and proportion of respondents, respectively, in the sample population for that village. For some variables the number and proportion of respondents does not add to the total for each village due to question nonresponse and responses that were not intelligible. Diversity distributions (Table 4.4) are used here to illustrate trends in heterogeneity for characteristics having more than two categories, where responses were mutually exclusive and could be consolidated into a reasonable number of categories, and that were deemed most relevant to respondents' social identity. These criteria left age group, religion, and clan group as the most appropriate characteristics for these measures of diversity. *H* is not included in the analysis because the measure does not have an interpretation relevant to this study, and is not normalized for purposes of comparison with *D*. The quantitative and statistical results presented here are supported with data from field notes and interviews, as well as detailed responses to the survey.

Table 4.1. Proportions for dichotomous consolidation of demographic variables. The columns for *n* give the number of responses for each variable category, separately for each village, and combined in the Sample Total column. *Percent* is the proportion of responses in each category divided by the total number of responses for that question.

Characteristic	Category	Fabe		Mosongiseli		Sample Total	
		n	%	n	%	n	%
Village	Fabe	45	100	0	0	45	55.6
	Mosongiseli	0	0	36	100	36	44.4
Gender	Women	21	47.7	9	25.0	30	37.5
	Men	23	52.3	27	75.0	50	62.5
Age group	18-30	14	31.1	13	36.1	27	33.3
	>30	31	68.9	23	63.9	54	66.7
Origin	Indigene	24	53.3	23	63.9	47	58.0
	Allogene	21	46.7	13	36.1	34	42.0
Occupation	Farmer	34	79.1	18	50.0	52	65.8
	Non-farmer	9	20.9	18	50.0	27	34.2
Education	Below FSLC	13	30.2	14	38.9	27	37.2
	FSLC or above	30	69.8	22	61.1	52	65.8
Land tenure	No land	6	13.3	6	16.7	12	14.8
	Formal or customary	39	86.7	30	83.3	69	85.2
Location	Inner village	39	88.6	29	85.3	68	87.2
	Other quarter	5	11.4	5	14.7	10	12.8
Religion	Christian	38	86.4	35	97.2	73	91.3
	Non-Christian	6	13.6	1	2.8	7	8.8
Clan	Majority clan	31	68.9	24	66.7	55	67.9
	Minority clan	14	31.1	12	33.3	26	32.1

Table 4.2. Proportions for finer detailed consolidation of demographic variables.

Variable	Category	Fabe		Mosongiseli		Sample Total	
		n	%	n	%	n	%
Gender	Women	21	47.7	9	25.0	30	37.5
	Men	23	52.3	27	75.0	50	62.5
Age group	18-30	14	31.1	13	36.1	27	33.3
	31-45	13	28.9	13	36.1	26	32.1
	46-65	11	24.4	8	22.2	19	23.5
	>65	7	15.6	2	5.6	9	11.1
Origin	Indigene	24	53.3	23	63.9	47	58.0
	Allogene	21	46.7	13	36.1	34	42.0
Occupation	Farmer	34	79.1	18	50.0	52	65.8
	Student	3	7.0	9	25.0	12	15.2
	Industrial Ag.	0	0	5	13.9	5	6.3
	Other	6	13.9	4	11.1	10	12.7
Education	Below FSLC	13	30.2	14	38.9	27	34.2
	FSLC	24	55.8	11	30.6	35	44.3
	O-Level	2	4.7	4	11.1	6	7.6
	A-Level	2	4.7	5	13.9	7	8.9
	University	2	4.7	2	5.6	4	5.1
Land tenure	Formal	5	11.1	1	2.8	6	7.4
	No land	6	13.3	6	16.7	12	14.8
	Customary	34	75.6	29	80.6	63	77.8
Location	Becheke	27	61.4	10	29.4	37	47.4
	Mbenge	4	9.1	13	38.2	17	21.8
	Makpara or Genie St.	8	18.2	6	17.7	14	18.0
	Other/peripheral	5	11.4	5	14.7	10	12.8
Religion	Christian	38	86.4	35	97.2	73	91.3
	Muslim	3	6.8	0	0	3	3.8
	Traditional	3	6.8	1	2.8	4	5.0
Clan	Bima	31	68.9	2	5.6	33	40.7
	Bamileke	1	2.2	0	0	1	1.2
	Ngolo	7	15.6	2	5.6	9	11.1
	Batanga	3	6.7	0	0	3	3.7
	Manu-Bayangi	1	2.2	0	0	1	1.2
	Bakundu	1	2.2	1	2.8	2	2.5
	Korup	1	2.2	2	5.6	3	3.7
	Bikom	0	0	1	2.8	1	1.2
	Balondo Badiko	0	0	24	66.7	24	29.6
	Grassfield	0	0	1	2.8	1	1.2
	Oron	0	0	1	2.8	1	1.2
	Ibibio	0	0	1	2.8	1	1.2
	Efik	0	0	1	2.8	1	1.2

Table 4.3. Proportions for finest detailed consolidation of demographic variables. All other demographic variables are presented in the finest detail in Table 4.2.

Variable	Category	Fabe		Mosongiseli		Sample Total	
		n	%	n	%	n	%
Occupation	Farmer	34	79.1	18	50.0	52	65.8
	Student	3	7.0	9	25.0	12	15.2
	Industrial Ag.	0	0	5	13.9	5	6.3
	Teacher	0	0	2	5.6	2	2.5
	Pastor	1	2.3	1	2.8	2	2.5
	Business person	2	4.7	0	0	2	2.5
	Other	3	7.0	1	2.8	4	5.1
Land tenure	Title	1	2.2	0	0	1	1.2
	Certificate	3	6.7	0	0	3	3.7
	Rent	1	2.2	1	2.8	2	2.5
	No land	6	13.3	6	16.7	12	14.8
	Customary	34	75.6	29	80.6	63	77.8
Location	Becheke	27	61.4	10	29.4	37	47.4
	Mbenge	4	9.1	13	76.5	17	21.8
	Makpara	8	18.2	N/A	N/A	8	10.3
	Genie Street	N/A	N/A	6	17.7	6	7.7
	Green City	2	4.6	N/A	N/A	2	2.6
	Njoh	1	2.3	N/A	N/A	1	1.3
	GRA	2	4.6	N/A	N/A	2	2.6
	Church Quarter	N/A	N/A	2	5.9	2	2.6
	School Yard	N/A	N/A	3	8.8	3	3.9

Table 4.4. Some measures of heterogeneity for relevant demographic variables. Numbers in parentheses refer to *I*, the number of demographic categories for each variable. Variables used the coding consolidation illustrated in Table 4.2

Variable	Heterogeneity measure	Fabe	Mosongiseli	Total
Age group	D	0.74 (4)	0.69 (4)	0.72 (4)
	D′	0.98 (4)	0.92 (4)	0.96 (4)
	H′	0.98 (4)	0.89 (4)	0.95 (4)
Religion	D	0.24 (3)	0.05 (2)	0.16 (3)
	D′	0.37 (3)	0.11 (2)	0.25 (3)
	H′	0.45 (3)	0.18 (2)	0.32 (3)
Clan group	D	0.49 (7)	0.54 (8)	0.73 (13)
	D′	0.58 (7)	0.60 (8)	0.79 (13)
	H′	0.55 (7)	0.59 (8)	0.66 (13)

4.1.2.1. Gender. Overall, one third of those sampled were women and two thirds were men. The sample population in Fabe had a somewhat more equal representation of genders, compared to Mosongiseli where 75% of respondents were men. This could be partly due to the sampling procedure, because on at least three occasions we were able to administer surveys to groups of several respondents at a time, however all of the respondents in these instances were men. In one of these occasions we were able to survey a number of individuals after they concluded their youth association meeting. At this meeting it appeared that all the members who were active in the discussion were men (field notes). This suggests that the primary organization for collective action of the youth in Mosongiseli is segregated in terms of genders, and is almost exclusively dominated by males.

4.1.2.2. Age group. About a third of the sample population from each village were youth (considered here as those who are from 18 to 30 years old). Table 4.4 shows that the proportions were distributed quite evenly across the four age groups defined in the study, with D' and H' near 0.9 or above in each village. In Fabe, each measure approaches its theoretical normed maximum of unity with scores of 0.98 for both D' and H'. These results suggest that the sample population in Mosongiseli has a slightly less even distribution of age groups, and analysis of Table 4.2 shows that the sample is more heavily weighted in the two youngest age groups.

4.1.2.3. Place of origin. In terms of the proportions of indigenes versus allogenes, the Mosongiseli sample population was about two thirds natives and one third allogenes. The distribution of respondents in Fabe was somewhat more even, with a native to allogene ratio of 53% to 47%. It is interesting that with this high proportion of allogenes

in the sample, Fabe's chief gave a brief address at the beginning of a Korup Project meeting with the community in which he talked proudly that Fabe was not a village "over-run with strangers" (field notes). This might indicate that the sample was biased towards responses from allogenes in an attempt to obtain their views and experiences in the survey and interviews. The statement could also reflect an ideological position that the chief desired to portray in speaking about his village.

In Monsongiseli, the indigene-allogene situation is currently very complicated. According to Respondent 5, Pamol only began operations near their village in the last six months (before the fieldwork was conducted), and the company brought with them a large number of workers from outside of the village. Respondents 5, 6, and 8, in Mosongiseli estimated that not including Pamol workers only about 5 to 10% of villagers in Mosongiseli were allogenes, but when including those who came in with Pamol that number is far higher. Therefore, assessing the actual proportion of allogenes in the village at this time is particularly problematic, especially as many of the Pamol workers will soon be moved out of the village and into a newly constructed plantation camp nearby (field notes). Given the temporary residential nature of many of the allogenes in Mosongiseli, the proportions from the survey data likely represent a mixture of temporary and settled allogenes in Mosongiseli Village.

The proportion of those survey respondents belonging to a majority or a minority clan group are given in Table 4.2. I initially expected that the two variables would be almost entirely redundant, under the assumption that indigenes will belong to the majority clan in that particular village, while allogenes will all belong to any other, minority, clan. A slight difference in proportions exists between the *clan group* variable

(as majority or minority clan) and the *place of origin* variable (as indigene or allogene) (Table 4.1). In the samples from both villages there was a somewhat larger proportion of individuals from the majority clan, and a smaller proportion belonging to a minority clan, compared to the proportions of indigenes and allogenes, respectively. In Fabe there were 16% more Bima respondents than indigenes, and in Mosongiseli there were 4% more Balondo Badiko respondents than indigenes. This suggests that a certain number of allogenes have migrated within the geographic range of their traditional clan to live in their current village.

4.1.2.4. Occupation. Farming is the main occupation in each of the two villages, with at least half of respondents in each community identifying as a farmer. In Fabe, nearly four fifths of respondents were farmers, compared to one half of those in Mosongiseli. In viewing the data in greater detail (Table 4.2), those occupations with the second and third highest representation were students and people working in industrial agriculture. Mosongiseli had three times the number of respondents who identified as students. Only respondents in Mosongiseli stated that they worked in industrial agriculture, and these five people either worked as field headmen (three respondents) or general labor (two respondents) for Pamol. Other occupations reported in the survey (Table 4.3) include teachers (two in Mosongiseli), business women (two in Fabe, specifically engaged in petty trading), and pastors (one in each village); four respondents identified as having a miscellaneous occupation, including a nurse, tailor's apprentice, and welder.

4.1.2.5. Education. The First School Leaving Certificate (FSLC) certifies that a Cameroonian student has attained a primary school education (Mbaku, 2005). In order to

improve the validity of the results, the variable of *education* needed to be condensed into two categories, comprising those with some education (FSLC or higher) or those with essentially no education (below an FSLC). Table 4.1 shows that overall, approximately two thirds of respondents had attained at least the FSLC level, with Mosongiseli having a slightly lower percentage (61%) with no education, relative to respondents in Fabe (70%). As illustrated in Table 4.2, this coarse consolidation of responses does not do justice to the number of individuals in each community having attained levels of education above an FSLC. Mosongiseli, while having proportionally more respondents with no education, had higher proportions of those with O-Level, A-Level, and even university degrees of some kind, with 31% of the sample population having above an FSLC. Villagers in Fabe also possessed these higher levels of education, but only14% had attained above an FSLC.

4.1.2.6. Land tenure. To achieve meaningful dichotomous categories for the variable of *land tenure status*, I chose to organize the responses into categories of formal or customary ownership of land, or no land ownership at all. The survey instrument gave respondents the option of three types of formal land ownership,[16] in addition to the choice of "no land ownership". However, it became evident at the beginning of the fieldwork that most of the respondents held some form of customary land tenure. For these respondents, members of the research team made a note in the margin of the survey instrument indicating customary ownership, and respondents who wrote their answers on the survey themselves were instructed to do the same. Nevertheless, the possibility exists

[16] Formal land ownership is defined here as forms of land tenure recognized by the Cameroonian government, and operationalized as the following categories: ownership of a land title, ownership of a land certificate, or renting land.

that some of the responses indicating formal ownership or no land ownership should have actually been coded as customary ownership.

Two options existed for condensing the responses for this variable into dichotomous categories: either consolidating no land ownership together with customary ownership, or formal with customary. The latter was chosen in the present analysis because it emphasizes the conditions for agency of the various demographic groups within the village community, specifically access to land. The other option would emphasize the agency of demographic groups later on, in their interactions with REDD+, as formal land tenure will give villagers a stronger legal basis to demand compensation for REDD+ benefits, relative to customary tenure or no land ownership. Nonetheless, in terms of heterogeneity and integration of the village community, those with no land ownership hold the lowest degree of security in terms of both access to resources and potential REDD+ benefits. That being the case, reasons for lack of land ownership vary, and it is not clear form the survey whether a given respondent does not own land because of their disadvantaged status within the community or simply because they do not choose to own any land. For instance, in Mosongiseli, two respondents who marked “no land ownership” also commented “(stranger)” in the margin, indicating that they did not own land because they were either not from that village or they were only there temporarily. One of these respondents was a field headman for Pamol, and the other was a student. Both of these respondents also had an A-Level of education or above, as did two other respondents from Mosongiseli who did not own any land, including a Nigerian pastor with a Diploma in Theology and a teacher with an M. Ed. degree. Those respondents without any land in Mosongiseli therefore tend to be those who are better educated and

perhaps choose not to own land because their occupation as a non-farmer brings income that allows them to sustain their livelihood without owning land that they would have to spend time and energy cultivating.

A large majority of respondents in both villages (78% overall) indicated that they held customary ownership of land (Table 4.2). Several respondents noted that this land was specifically passed down to them from previous generations. Interestingly, one female respondent from Fabe stated that her customary land was under the ownership of her husband, and in Mosongiseli a male allogene indicated that his customary ownership was due to being married to a native woman. In contrast to the large proportion of those with customary tenure, only five respondents in Fabe and one in Mosongiseli enjoyed formal land ownership. Of those with formal land tenure status, the most common form was a land certificate, which was held by three respondents in Fabe, two of whom identified as business women in terms of their occupation. As previously stated, those in Mosongiseli who owned no land tended to be well educated, while in Fabe, non-land owners almost all had an FSLC, indicating some level of education, but not a clear educational advantage or disadvantage compared to land owners.

4.1.2.7. Location within the village. Given the number of quarters in each village (Table 4.3, variable *Location*), several ways of consolidating the responses into dichotomies was possible, however the only meaningful option appeared to be grouping respondents living in the center part of each village compared to those living in peripheral quarters. The center of both Fabe and Mosongiseli consisted of *Mbenge* and *Becheke* quarters, also called by respondents “down village” and “up village”, respectively, with Becheke lying closer towards the road near the entrance to the village (Figures 3.4 and

3.5). In Fabe, a quarter known as *Makpara* continued after Mbenge, further away from the road. Mosongiseli had a section that villagers called Genie Street, named after the Génie Militaire, the government agency that constructed the street, which runs down the middle of this quarter, forming an H-shape with the Mbenge and Becheke sections. These three sections, then (Becheke, Mbenge, and Makpara in Fabe; Becheke, Mbenge, and Genie Street in Mosongiseli), formed the inner part of their respective village. Several smaller quarters existed in each village that were somewhat separated from the main quarters, however. In Fabe these included parts of the village that respondents called Njoh, GRA, and Green City, while those in Mosongiseli were known as Public, School Yard, and Church Quarter.

Table 4.2 shows that most of the villagers in the sample (over 80% in each case) lived in one of the three inner quarters. From Table 4.3, a majority of the respondents in Fabe (61%) lived in Becheke, while most of those in Mosongiseli (76%) lived in Mbenge quarter. Assuming this distribution is not simply an artifact of the sampling procedure, the result indicates that there is a greater proportion of villagers living near the road towards the entrance of the village in Fabe, whereas residents of Mosongiseli tend to live further away from the road. This could be for reasons of access, as Respondent 1 in Fabe mentioned the vital importance of the road for the community. In contrast, the conservator of KNP said that many residents of Mosongiseli are fishermen. This occupation was never indicated in the survey, although it is possible that farmers and those with other occupations engage in fishing in addition to their main source of livelihood. In this case, it would therefore make sense for some members of this community to live further down village in Mbenge, which terminates at a stream leading

to a larger river, which itself flows to the ocean after about a two-hour trip by canoe (field notes).

4.1.2.8. Religion. Table 4.1 shows that the vast majority of respondents in both villages were Christian. The non-Christian category includes Muslims and those who observe traditional views and practices (animist beliefs). In Fabe, three respondents identified as Muslims and three as observing traditional religion (Table 4.2), while in Mosongiseli only a single person identified as traditional religion, and none as Muslim. Respondent 8 confirmed this finding, stating that there are no Muslims in Mosongiseli. The measures of heterogeneity given by D, D' and H' help reveal the varying degrees of religious diversity between the two village sample populations (Table 4.4). In each community, H' is slightly higher relative to D', and both indices are considerably higher in Fabe than in Mosongiseli. Interpreting D as the theoretical probability that two randomly selected individuals from the community will observe different religions, the probability is nearly one quarter (24%) in the Fabe sample population, compared to only one twentieth (5%) for Mosongiseli. The greater degree of religious heterogeneity for respondents in Fabe is apparent from Table 4.2, which reveals that not only are the minority religions both represented in this sample, but in equal proportions to one another as well.

4.1.2.9. Clan group. The clans identified from the survey are listed in Table 4.2. Because clan groups are strongly linked to geographic location, a particular village will have a clan that is traditionally associated with that village (for instance, Fabe-Bima within the Bima clan group), and the members of that clan will typically form a majority, relative to members of any other clan group. In Fabe, the majority clan was taken as

Bima, and in Mosongiseli the majority clan was Balondo Badiko. In each village, over two thirds of respondents were from their respective village's majority clan group, however a significant number of respondents identified as members of another clan. In Fabe, seven respondents (over 15%) identified as belonging to the Ngolo clan group, and the Batanga clan group was also fairly well represented with three individuals (nearly 7% of respondents). The rest of the population, according to the sample, included Bamiléké, Manu-Bayangi, Bakundu, and Korup people (one respondent each, or 2.2% of the Fabe sample population). There were no minority clan groups in Mosongiseli that were represented with a clearly larger proportion than other minority groups (as was the case of the Ngolo clan in Fabe). Instead, two respondents each (5.6% of the Mosongiseli sample population) identified as Bima, Ngolo, or Korup, while one respondent each (2.8%) identified as Bakundu, Bikom, Grassfielder, Oron, Ibibio, or Efik. In all, one respondent in Fabe and five in Mosongiseli came from clan groups that originate outside of the Southwest Region. Specifically, the Bamiléké respondent in Fabe said he was originally from the West Region. In Mosongiseli, the Bikom and Grassfielder respondents came from the Northwest Region, while the remaining three respondents from Mosongiseli were of Nigerian origin, and identified as belonging to the Oron, Ibibio, and Efik clans. The number of respondents from outside the Southwest Region illustrates the fluid nature of migration patterns in the study area, not just within Cameroon itself, but even between Cameroon and neighboring areas of Nigeria. Of note, the two respondents from the Northwest Region are both relatively well educated (one has achieved O-Level certification, and the other A-Level), and work as field headmen for Pamol. This suggests that Pamol is recruiting workers from other parts of Cameroon

to work on palm oil plantations. Of the three Nigerian respondents in Mosongiseli, two were farmers (one had an FSLC; the other had no education), and the third was a pastor who holds a diploma in theology. Thus, Nigerians living in Mosongiseli do not appear to be involved in the industrial agriculture sector, and live by similar means of livelihood as the majority of the community.

Also present in Mosongiseli were six respondents who were not Nigerian, and in fact belong to the majority Balondo Badiko clan, but speak a Nigerian dialect, specifically Ibibio or Efik, the latter of which is itself a dialect of Ibibio (field notes). This suggests that there is significant communication between Balondo Badiko and traditionally Nigerian peoples. Another interesting feature the data reveal is that two Bima respondents lived in Mosongiseli, whereas no Balondo Badiko respondents were found in the Fabe sample. This could be due to people from within the division coming in to work for Pamol, as discussed by Respondent 5, although the two Bima respondents in Mosongiseli did not specify that as their occupation. On the other hand, given Mosongiseli's higher level of prosperity and standard of living observed by myself and others on the research team (and also acknowledged by the conservator), it is possible that this village simply attracts more people from other locations, whereas the native Balondo Badiko people have less of an incentive to find other places to settle. Another possibility is that there are simply more people of Bima ethnicity, so these individuals tend to be more dispersed throughout the area.

The D' and H' measures of heterogeneity illustrated in Table 4.4 suggest a moderate degree of heterogeneity within each community in terms of clan diversity. The slightly higher values for Mosongiseli reflect the greater number of clan groups indicated

by respondents there (Table 4.2). Under an assumption of perfect integration within the community, (un-normalized) *D* can be interpreted as the probability that two individuals of the sample population coming in contact with each other belong to a different clan group. This is around 50% for each village (49% in Fabe; 54% in Mosongiseli).

4.1.3. Integration and Segregation

This section contains an analysis of segregation and integration derived from the results of chi-square tests of independence and Fisher's exact tests (Table 4.5), incorporating details from the survey and data provided by interview respondents to further qualify and add depth to the statistical results. The chi-square and Fisher's exact tests yield *p*-values that indicate whether a statistically significant relationship exists between the two characteristics being compared. The chi-square test assumes a null hypothesis of independence between the variables. This means that there is no statistically significant difference between demographic groups, and is interpreted as indicating societal integration among these groups in terms of the secondary demographic characteristics (considered in this study to be the dependent variables). Dependence indicates that there is a relationship between the demographic characteristics (that is, one variable depends on the other variable), and suggests a lack of integration among demographic groups that is interpreted as segregation. Statistical significance does not explain integration and segregation in all cases, so the results are further qualified by detailed analysis of the survey responses and inclusion of data from other sources. The phi measure of association is used to provide an indication of the strength of the relationship between the characteristics, while the principal means of analyzing the patterns of association comes from observing how the column percents change from one

category of each primary demographic characteristic to the other (Healey, 2007). Because the chi-square tests are used here as a guide to analysis, where the *p*-values and strength of association have suggested characteristics that warrant detailed analysis of the data, some of the chi-square tests have been identified as "nearly valid" in terms of meeting the minimum requirements for expected frequencies. These refer to cases in which only one of the four expected frequencies in the 2 by 2 contingency table is less than 5 and this expected frequency is at least 3.

Table 4.5. Statistical measures of integration. Chi-square (X^2) results that met the validity criterion of having no expected frequencies less than 5 are denoted with two asterisks (**); those with only one expected frequency less than 5, but at least 3, have one asterisk (*). Fisher's Exact *p*-values are for the 2-sided test. Chi-square and Fisher's Exact *p*-values less than alpha = 0.05 are in **bold** for clarity.

Variable	Measure of Integration	Statistical Measure	Gender (Male or Female)		Age group (18-30 or >30)		Origin (Indigene or Allogene)	
			Fabe	Mosongiseli	Fabe	Mosongiseli	Fabe	Mosongiseli
Occupation	Social	X^2 statistic	0.0879	0.1481	6.0307*	14.5686**	1.4481	1.0836**
		X^2 *p*-value	0.7669	0.7003	**0.0141**	**0.0001**	0.2288	0.2979
Farmer		Phi	0.0452	-0.0642	-0.3745	-0.6361	0.1835	0.1735
Non-farmer		Fisher's Exact	1	1	**0.0398**	**0.0003**	0.2806	0.4887
Education	Agency	X^2 statistic	3.1015**	0.1558*	4.4883*	4.7301**	3.8659**	2.1406**
		X^2 *p*-value	0.0782	0.693	**0.0341**	**0.0296**	**0.0493**	0.1434
Below FSLC		Phi	0.2686	0.0658	-0.3231	-0.3625	-0.2998	0.2438
FSLC or above		Fisher's Exact	0.104	0.7115	0.0675	**0.039**	0.0943	0.175
Land tenure	Agency	X^2 statistic	2.6866	0.2667	1.1525	0.602	0.0309	2.9137
		X^2 *p*-value	0.1012	0.6056	0.283	0.4378	0.8604	0.0878
No land		Phi	-0.2471	-0.0861	0.1600	0.1293	-0.0262	-0.2845
Formal or customary		Fisher's Exact	0.1884	1	0.3564	0.6454	1	0.1608
Location	Geographical	X^2 statistic	2.199	0.1261	2.5134	0.6004	0.0677	6.0808
		X^2 *p*-value	0.1381	0.7225	0.1129	0.4384	0.7947	**0.0137**
Inner village		Phi	-0.2261	0.0609	-0.2390	0.1329	-0.0392	0.4229
Peripheral quarter		Fisher's Exact	0.1853	1	0.1441	0.6347	1	**0.0289**
Religion	Social	X^2 statistic	2.6866	0.3429	3.2421	0.5814	6.3432	0.5814
		X^2 *p*-value	0.1012	0.5582	0.0718	0.4458	**0.0118**	0.4458
Christian		Phi	0.2471	0.0976	0.2714	0.1271	-0.3797	-0.1271
Non-Christian		Fisher's Exact	0.1884	1	0.1547	1	**0.022**	1
Clan	Social	X^2 statistic	7.8300**	0.0000*	0.8890*	0.0602*	23.2258**	31.8462*
		X^2 *p*-value	**0.0051**	1	0.3458	0.8062	< **0.0001**	< **0.0001**
Minority clan		Phi	-0.4218	0.0000	0.1406	0.0409	0.7184	0.9405
Majority clan		Fisher's Exact	**0.0088**	1	0.4921	1	< **0.0001**	< **0.0001**

4.1.3.1. Occupation and level of education. The chi-square test for *occupation* by *age* in Mosongiseli met the expected frequency requirement for statistical validity and gave a statistically significant *p*-value of 0.0001 from a chi-square test statistic of 14.5686 (Table 4.5). The *p*-value from Fisher's exact test was 0.0003, which also supports rejecting the null hypothesis. Therefore, there is evidence of a relationship between the primary demographic characteristic of age and the secondary demographic characteristic of occupation. The phi value of 0.6361 suggests that this association is quite strong (Healey, 2007). Examination of the column percents in Table 4.6 reveals that there was a much greater percentage of respondents who were youth that did not identify as farmers (92%), while for those respondents older than youths, a large majority (74%) are farmers. Of the 12 youths who identified as having an occupation other than farming, nine were students, two worked for Pamol (including one field headman), and one was a teacher. It is possible that the nine students also are farmers but consider their primary occupation to be furthering their education. This result suggests that the sample population may be segregated in terms of occupation, with youth and older populations spending less time working together in their occupation. In terms of agency, the results suggest that youth in the sample population may have a more diverse skill set, while the older respondents could be more limited in their livelihood options, because of their dependence on farming. Moreover, older segments of the population could be affected to a greater extent by REDD+ if the program adopts the approach of limiting the size of farms in the forest in exchange for benefits. This means that under this mechanism, the older age groups have the potential to gain more in terms of benefits, particularly if benefits are distributed as individual financial compensation, but also more to lose in a

scenario where they are required to scale back their farm more than would allow them to maintain their livelihood.

Table 4.6. Occupation by age in Mosongiseli.

Primary occupation	Age group		
	18-30	**>30**	**Total**
Farmer	1 6.5 2.78 7.69	17 11.5 47.22 73.91	18 50.00
Non-farmer	12 6.5 33.33 92.31	6 11.5 16.67 26.09	18 50.00
Total	13 36.11	23 63.89	36 100.00

Frequency
Expected
Percent
Col Pct

The chi-square test of *education* by *age* in Mosongiseli gave a test statistic of 4.7301, with a *p*-value of 0.0296, and Fisher's exact test *p*-value of 0.039 (Table 4.5). From this, there is evidence to reject the null hypothesis and to support the conclusion that there is a relationship between age and level of education for the sample population in Mosongiseli. Table 4.7 shows that for youth in the sample population only 15% had below an FSLC, while for older age groups over half (52%) of respondents had not attained an FSLC. The value of phi was 0.3625, which indicates a moderately strong association between the two characteristics. The youth respondents in Mosongiseli who identified as students had a broad range of educational levels, from below FSLC to above A-Level, so the fact that these respondents were in the process of increasing their level of education suggests that the youth demographic group may have considerably greater capacity in understanding and negotiating formal and written agreements under REDD+. One respondent from Mosongiseli (Respondent 6) stated that youth and women were the main demographic groups who complained against Pamol not following the traditional

processes of gaining access to use a village's land, and it is not unreasonable to hypothesize that a higher educational level of the youth could have been a factor for taking part in this action. While the statistical results suggest that within the sample population older age groups have a disadvantage in terms of educational capacity, if the youth are able to share their knowledge and skills then they could help create a more meaningfully participatory relationship with the REDD+ process and its implementation.

Table 4.7. Education by age in Mosongiseli.

Highest level of education attained	Age group		
	18-30	**>30**	**Total**
Below FSLC	Frequency: 2 Expected: 5.0556 Percent: 5.56 Col Pct: 15.38	12 8.9444 33.33 52.17	14 38.89
FSLC or above	11 7.9444 30.56 84.62	11 14.056 30.56 47.83	22 61.11
Total	13 36.11	23 63.89	36 100.00

Similarly to the case in Mosongiseli, there is evidence that the characteristics of *occupation* and *age* are not independent of one another in the Fabe sample population. While the chi-square test did not meet the requirements for validity, the continuity adjusted chi-square (Yate's correction) test statistic was 5.7088, giving a *p*-value of 0.0398. The *p*-value from Fisher's exact test yielded the same value of 0.0398 (Table 4.5), which is statistically significant for alpha at 0.05. Moreover, the value of phi was 0.3745, which indicates a moderately strong association within the sample population. Viewing Table 4.8, it can be seen that there is a greater percentage of youth who identify as farmers rather than non-farmers in Fabe (57% compared to 43%). This contrasts with

the case in Mosongiseli where respondents who were youth almost exclusively identified as non-farmers. For older respondents, however, the trend in Fabe resembled that in Mosongiseli, with a much higher percentage of non-youths in the sample population in Fabe identifying as farmers (90%) compared to non-farmers (10%). As in Mosongiseli, a large proportion of youths who did not identify as farmers stated their occupation as being a student, but only half of these non-farmer youths in Fabe were students, compared to three quarters in Mosongiseli. The three respondents in Fabe who identified as students had a broad range of current educational attainment, including one having an FSLC, another having completed A-Levels, and one with a Higher National Diploma, but in Mosongiseli students also included one respondent who had not yet attained an FSLC, and several who had completed O-Levels, suggesting a higher diversity of educational levels in Mosongiseli. In the same vein, it is interesting to note (Table 4.1) that in Fabe there was a higher proportion of respondents having an FSLC or above (70%), relative to the proportion in Mosongiseli (61%), yet more respondents in Mosongiseli identified as students, and these individuals were in a wider range of educational advancement.

Table 4.8. Occupation by age in Fabe.

Primary occupation		Age group		
		18-30	>30	Total
Farmer	Frequency	8	26	34
	Expected	11.07	22.93	
	Percent	18.60	60.47	79.07
	Col Pct	57.14	89.66	
Non-farmer	Frequency	6	3	9
	Expected	2.9302	6.0698	
	Percent	13.95	6.98	20.93
	Col Pct	42.86	10.34	
Total		14	29	43
		32.56	67.44	100.00
Frequency Missing = 2				

While the chi-square test for *education* by *age* in Fabe (Table 4.9) did not meet the expected frequency requirement for statistical validity, the continuity adjusted chi-square test statistic was 3.0873 with a *p*-value of 0.0789. Fisher's exact test gave a *p*-value of 0.0675 (Table 4.5), so both tests provided evidence for a relationship between education and age group in Fabe, but only at the level of alpha at 0.10, and therefore this significance should be considered with caution. The value of phi was 0.3231, which suggests a moderately strong association between the two demographic variables, similarly to that found in Mosongiseli. The association compares those with essentially no education to those with at least an FSLC. In Fabe this association is due to many educated youth-aged respondents having an FSLC (9 out of a total of 12), whereas in Mosongiseli the binary division into those with no FSLC or those with an FSLC or above obscures the much larger proportion of educated youth in the sample who have above an FSLC (7 out of a total of 11). Moreover, a higher proportion of youth respondents in Mosongiseli were in the process of advancing their level of education, whereas in Fabe only one respondent below the A-Level identified as a student.

Table 4.9. Education by age in Fabe.

Highest level of education attained	**Age group**		
	18-30	**>30**	**Total**
Below FSLC	1 3.9302 2.33 7.69	12 9.0698 27.91 40.00	13 30.23
FSLC or above	12 9.0698 27.91 92.31	18 20.93 41.86 60.00	30 69.77
Total	13 30.23	30 69.77	43 100.00
Frequency Missing = 2			

Frequency
Expected
Percent
Col Pct

In my experience of administering surveys to respondents, an FSLC did not typically provide a sufficient level of education for those individuals to read documents or converse proficiently in standard English. There is the danger, then, that they could lack the ability to read and negotiate potentially complex government documents about REDD+ policy, provided these documents are even written in English rather than in French. Under the assumption that the sample population is representative of the educational level in each village as a whole, this would suggest that the villagers in Mosongiseli have a greater capacity for directly understanding and negotiating the conditions of REDD+, compared to those in Fabe, who may require a greater degree of cooperation between youth and older age groups to facilitate knowledge of REDD+ policies that would affect them both. In light of the potential mechanism of rewarding or imposing restrictions on the area of individuals' farms in exchange for REDD+ benefits, this cooperation may be particularly important in Fabe because of the overall higher proportion of farmers in this village, relative to Mosongiseli, according to the sample population. Significantly, one interview respondent (Respondent 2) stated that it was the youth of Fabe who were the primary agents who intervened against Herakles Farms when the company began to make it clear that they would not allow the villagers to decide whether or not the plantation could continue. The sample population of youth in Fabe indicates a more consistent, though generally lower, level of education compared to Mosongiseli. Nevertheless, more youth in Fabe identified as farmers, and it is possible that their understanding of, and reliance on, the forest and cropland may have been as much a motivation for their action than knowledge of formal laws from written documents.

In contrast to the chi-square results for *level of education* by *age group* (Tables 4.7 and 4.9), which provide cautious evidence for a relationship between these two variables for both communities, the two chi-square tests of *education* by *gender* and *education* by *place of origin* indicate differing statistical significance between the two villages' sample populations. The chi-square test of *education* by *gender* in Fabe (Table 4.10) met the expected frequency requirement for statistical validity. It gave a test statistic of 3.1015, so with one degree of freedom this gives a *p*-value of 0.0782 (Table 4.5), which is statistically significant but only at the level of alpha at 0.10. Thus there is evidence that the null hypothesis of independence can be rejected, with a degree of caution, particularly as the *p*-value from Fisher's exact test (0.1040) is greater than alpha at 0.10. The value of phi is 0.2686, which suggests a moderate association between the variables. Examining the column percents in Table 4.10 shows that for women there is a slightly higher proportion (57%) of respondents who had an FSLC or above, relative to those women without an FSLC. For men, the column percents show that a much higher proportion (82%) have at least an FSLC. From detailed analysis of the survey, the disparity in educational level in Fabe is found both as a higher proportion of women with essentially no education, and as a greater proportion of men having degrees more advanced than an FSLC. Only one woman in Fabe stated she had an O-Level certification, while for men, respondents included one with an O-Level certification, two with an A-Level, and two with degrees above A-Level.

Table 4.10. Education by gender in Fabe.

Highest level of education attained		Gender		
		Female	**Male**	**Total**
Below FSLC	**Frequency**	9	4	13
	Expected	6.3488	6.6512	
	Percent	20.93	9.30	30.23
	Col Pct	42.86	18.18	
FSLC or above		12	18	30
		14.651	15.349	
		27.91	41.86	69.77
		57.14	81.82	
Total		21	22	43
		48.84	51.16	100.00
Frequency Missing = 2				

For the test of *education* by *gender* in Mosongiseli (Table 4.11), the expected frequency requirements for statistical validity were not quite met, with one cell having an expected frequency of 3.5 (the minimum expected frequencies must be at least 5 for all cells in a 2 by 2 table). Taking this fact into consideration, the continuity adjusted chi-square test statistic was found to be 0.0000, giving a *p*-value of 1.000. In addition, Fisher's exact test produced a *p*-value of 0.7115 (Table 4.5), providing no evidence to reject the null hypothesis. The phi value of 0.0658 indicates a week association between these characteristics, and suggests that there is very little if any difference in the level of education between men and women in the Mosongiseli sample population. Observing the column percents in Table 4.11, both men and women have a similar majority of respondents with at least an FSLC, although the proportion was slightly higher for men (63%) compared to women (56%). Yet on examination of the detailed results from the survey, women in the Mosongiseli sample population had a much lower level of educational attainment compared to men. As was the case in Fabe, only one woman in Mosongiseli had an O-Level certification, and no women in that community stated that

they had any degree higher than O-Level. In contrast, three men in the Mosongiseli sample had attained O-Level certification, four had attained A-Level, and two had degrees above A-Level. Some of the discrepancy could be due to the sample size (which is also responsible, in part, for the validity issue of the chi-square test). For a larger sample of women there is the possibility that more women with higher levels of education would have been surveyed, whereas in the current sample almost all women had attained only the minimum level of education, which, as noted earlier, is likely insufficient to provide the capacity for reading complex documents in standard English.

Table 4.11. Education by gender in Mosongiseli.

Highest level of education attained		Gender		
		Female	Male	Total
Below FSLC	Frequency	4	10	14
	Expected	3.5	10.5	
	Percent	11.11	27.78	38.89
	Col Pct	44.44	37.04	
FSLC or above	Frequency	5	17	22
	Expected	5.5	16.5	
	Percent	13.89	47.22	61.11
	Col Pct	55.56	62.96	
Total		9	27	36
		25.00	75.00	100.00

Comparing the results of the tests for *education* by *gender* between the two villages, it appears that the major difference is not necessarily a much more equitable distribution of educational attainment in Mosongiseli. Rather, there was simply a higher proportion of men in Mosongiseli, compared to Fabe, who had essentially no education at all. Meanwhile, women respondents in Fabe, as well as both men and women respondents in Mosongiseli, had a relatively high proportion of individuals who had not attained even

an FSLC. In both villages, however, the samples showed higher levels of educational attainment for men.

The chi-square test of *education* by *origin* in Fabe (Table 4.12) both met the expected frequency requirements for statistical validity and produced a test statistic of 3.8659, which gives a *p*-value of 0.0493 (Table 4.5) that is significant at the level of alpha at 0.05. The *p*-value from Fisher's exact test (0.0943) was found to be significant only at the level of alpha at 0.10, which suggests caution in rejecting the null and presuming a difference in educational attainment between indigenes and allogenes in Fabe. The value for phi is 0.2998, suggesting a moderate degree of association between these two characteristics. Table 4.12 shows that while a majority of both indigenes and allogenes in the sample have at least an FSLC level of education, a much smaller percentage of indigenes have below an FSLC (17% for indigenes compared to 45% for allogenes). Looking at the details of the survey responses, it appears that allogenes do seem to have an educational disadvantage among the Fabe sample population, in large degree because of the greater proportion of these respondents with essentially no education at all. For levels of education above the FSLC, both indigenes and allogenes included one respondent each having attained an O-Level and A-Level certification, but indigenes also included two respondents with degrees higher than A-Level, whereas no allogenes sampled in Fabe had higher than an A-Level certification. In summary, allogenes in the Fabe sample population had a higher proportion of respondents with no education, and fewer individuals with advanced levels of education. This result could be due to the farmer's field school, which Respondent 3 stated was established by Korup to educate the villagers on cocoa farming practices. It is possible that allogenes did not have

the advantage of this educational institution, although the data are not clear on whether this school provides general education, such as that which could lead to an FSLC, or only vocational training to improve farming techniques. Nonetheless, while this interview respondent was an allogene and cautioned about the certainty of his assessment of the Fabe community, he guessed that the farmers educated there included both indigenes and allogenes, who then work together accomplishing their farming tasks. Thus, while there is evidence for a disparity in educational levels between indigenes and allogenes in Fabe, it may be that the occupational-educational system itself brings integration between these two demographic groups, both of which consist of farmers in relatively equal proportions (Table 4.13).

Table 4.12. Education by origin in Fabe.

Highest level of education attained	Origin as indigene or allogene		
	Indigene	**Allogene**	**Total**
Below FSLC	Frequency 4 Expected 6.9535 Percent 9.30 Col Pct 17.39	9 6.0465 20.93 45.00	13 30.23
FSLC or above	19 16.047 44.19 82.61	11 13.953 25.58 55.00	30 69.77
Total	23 53.49	20 46.51	43 100.00
Frequency Missing = 2			

Table 4.13. Occupation by origin in Fabe.

Primary occupation		Origin as indigene or allogene		
		Indigene	**Allogene**	**Total**
Farmer	**Frequency**	19	15	34
	Expected	17.395	16.605	
	Percent	44.19	34.88	79.07
	Col Pct	86.36	71.43	
Non-farmer		3	6	9
		4.6047	4.3953	
		6.98	13.95	20.93
		13.64	28.57	
Total		22	21	43
		51.16	48.84	100.00
Frequency Missing = 2				

The chi-square test of *education* by *origin* for Mosongiseli (Table 4.14) met the expected frequency criterion for validity, as was the case for the Fabe sample. The results diverged in terms of statistical significance, however, with the chi-square test statistic from the Mosongiseli sample having a value of 2.1406, giving a *p*-value of 0.1434 (Table 4.5), which does not provide evidence that there is a difference in the level of education between indigenes and allogenes in the sample population. In this case, the value of phi was a moderate 0.2438. Interestingly, the association was due to a smaller proportion of allogenes with no education (23%) relative to the proportion for indigenes (48%) (Table 4.14). Examining the survey responses in more detail, the number of allogenes with educational attainment above the level of FSLC was also very similar to that for indigenes. For allogenes, one respondent had an O-Level certification, three had A-Level certification, and one had a degree above A-Level. For indigenes, there were three respondents having O-Level certification, two with A-Level certification, and one with a degree above A-Level. These data support the results of the chi-square test, and the conclusion that, according to the sample population in Mosongiseli, there is no evidence

that either indigenes or allogenes are disadvantaged educationally. Therefore, to the extent that the sample population is representative of the total population of the community, both demographic groups likely have about the same capacity for understanding and communicating any REDD+ information in standard English. Moreover, if both groups are involved in participatory decision-making they could increase their capacity by combining their educational assets, and indigenes could have more to gain from this given their greater proportion with no education.

Table 4.14. Education by origin in Mosongiseli.

Highest level of education attained	Origin as indigene or allogene		
	Indigene	**Allogene**	**Total**
Below FSLC	11 8.9444 30.56 47.83	3 5.0556 8.33 23.08	14 38.89
FSLC or above	12 14.056 33.33 52.17	10 7.9444 27.78 76.92	22 61.11
Total	23 63.89	13 36.11	36 100.00

Frequency
Expected
Percent
Col Pct

4.1.3.2. Land tenure, within-village location, and religious identification.

None of the chi-square tests of independence for the demographic characteristics of land tenure status, location of residence within the village, or religion met the expected frequency requirement for statistical validity (Table 4.5). This was largely because of the need to condense each of the secondary demographic characteristics into only two categories, constrained by the requirement of maintaining some form of meaning in the categorization. This tended to result in one of the two categories containing a large number of respondents, leaving the other category with few respondents to distribute into

each of the two categories of the primary demographic characteristic. As an example, for the characteristic of land tenure status, the dichotomy was chosen to have one category of respondents with either formal or customary ownership of land, and the other category to consist of respondents with no land ownership at all. From Table 4.1 it can be seen that a much larger proportion of the sample population in both communities indicated that they had either formal or customary ownership of land, relative to those with no land. In the case of *land tenure status* by *origin* in Mosongiseli (Table 4.15), only six respondents indicated that they owned no land, whether formal or customary. In the chi-square analysis, this meant that these six respondents would be distributed according to the proportion of respondents who identified as indigenes or allogenes. The result is an expected frequency of 3.8333 indigenes with no land, and 2.1667 allogenes with no land. Therefore, the results run the risk of not fitting an approximation to the chi-square distribution required for statistical validity of the test. Because of this, the analysis for these three secondary demographic characteristics – land tenure, location in village, and religion – relies on the *p*-value given by Fisher's exact test to determine statistical significance.

Table 4.15. Land tenure by origin in Mosongiseli.

Land tenure status	**Origin as indigene or allogene**		
	Indigene	**Allogene**	**Total**
No land	**Frequency** 2 **Expected** 3.8333 **Percent** 5.56 **Col Pct** 8.70	4 2.1667 11.11 30.77	6 16.67
Formal or customary	21 19.167 58.33 91.30	9 10.833 25.00 69.23	30 83.33
Total	23 63.89	13 36.11	36 100.00

As stated earlier, for the demographic characteristic of land tenure status, no chi-square tests of independence met the expected frequency requirement for statistical validity, necessitating reliance on Fisher's exact test to determine statistical significance. For land tenure status none of the *p*-values from Fisher's exact test were less than either alpha at 0.05 nor alpha at 0.10, providing no evidence of an association between land ownership and gender, age group, or place of origin in the sample population of either community. This suggests that there is no disparity in land ownership between men and women, youth and older respondents, nor indigenes and allogenes. The finding is significant to the research particularly because according to both interview and survey respondents there can be considerable hurdles to allogenes obtaining land. For instance, Respondent 4 stated that in Fabe some allogenes are free to claim land that they would like to farm, whereas others whom the chief and chief council believe will create conflict in the community are required to pay for the land. In Mosongiseli, Respondent 5 said that all allogenes are required to pay FCFA 50,000 to 60,000 to claim farmland in the village, and must additionally feed the community with a pig and other food and drinks. Notably, only two of the respondents who stated they did not own land also did not grow crops in the forest. One of these respondents was a forester who lives in Fabe only part of the time, and the other was a pastor visiting Mosongiseli from Nigeria. Thus, it appears that those who do not own land are still dependent on growing crops on land in the forest, but may not see direct benefits from changing the size of their farm under REDD+.

For the secondary demographic characteristic of place of residence within the village (variable *Location*), the only statistical test that gave a significant *p*-value was

Fisher's exact test for *location* by *origin* in Mosongiseli (Table 4.16), which was 0.0289 (Table 4.5) and therefore significant at the level of alpha at 0.05. The value of phi was 0.4229, which suggests a strong association between place of residence within the village and place of origin for respondents in the sample population. Both indigene and allogene respondents lived in inner parts of the village (Becheke, Genie Street, and Mbenge) in greater proportions than in peripheral quarters (Church Quarter, School Yard, and Public). But examining the column percentages in Table 4.16 shows that over a third of respondents who identified as allogenes lived in one of the peripheral quarters, whereas this was the case for less than 5% of indigenes in the sample population. If the sample is representative of the total population of Mosongiseli, this result suggests there may be a certain degree of geographical segregation in Mosongiseli. All three interview respondents in Mosongiseli stated that there are many new allogenes in the community since Pamol established their plantation in the village, which, according to Respondent 5 only began six months ago. In this short time, these allogenes may not have had time to integrate into the geographical space of the community.

Table 4.16. Village location by origin in Mosongiseli.

Where respondent lives within village	**Origin as indigene or allogene**		
	Indigene	**Allogene**	**Total**
Inner village	**Frequency** 22 **Expected** 19.618 **Percent** 64.71 **Col Pct** 95.65	7 9.3824 20.59 63.64	29 85.29
Other quarter	1 3.3824 2.94 4.35	4 1.6176 11.76 36.36	5 14.71
Total	23 67.65	11 32.35	34 100.00
Frequency Missing = 2			

However, in looking at the survey details only one of the four allogenes who lived in a peripheral quarter specifically stated that their occupation was working for Pamol. The result is also in contradiction with Respondent 6 who stated that allogenes are mixed together in the different quarters of the village.[17] Because of the modest sample size and uneven breakdown of the geographical categories between inner village and peripheral quarter, further caution should be placed on using the statistical results to infer segregation within the community. Nonetheless, if the conclusion of geographical segregation were sound for the population of the community as a whole, this finding would be important because it could impact the degree to which allogenes tend to socialize and communicate with indigenes, simply because they would spend less time in the same geographical location. Despite this, the result does not necessarily mean that allogenes are disadvantaged because of where they live in the community, especially because the peripheral quarters are closer to the main road, which provides access to markets and other population centers. Yet if social segregation follows geographical segregation this process could limit the capacity of allogenes to participate in decision-making and any negotiations for benefits from REDD+.

The secondary demographic characteristic of religion did not meet the minimum expected values needed to produce statistically valid chi-square results in any of the tests, suggesting that little weight should be given to their statistical findings. In Mosongiseli,

[17] Notably, this respondent herself lived in a peripheral quarter of Mosongiseli and was originally from another village, although she identified as belonging to the majority Balondo Badiko clan.

only one survey respondent was non-Christian, so the results in that community suggest a lack of religious heterogeneity more than integration of different religious demographic groups within the sample population. For the community in Fabe, the only statistically significant finding was for the test of *religion* by *place of origin*. In this case, Fisher's exact test gave a *p*-value of 0.022 (Table 4.5), which is significant at the level of alpha at 0.05, and the value of phi was 0.3797, possibly indicating a strong association between religious affiliation and place of origin. Table 4.17 shows that among the sample population only indigenes were non-Christians. This included all three Muslims and all three respondents who observed traditional religion. Because a large proportion of the sample population in Fabe were Christians (86%), this could mean that during times of worship the Christian population is very integrated according to other demographic characteristics such as place of origin and clan group. In fact, the row percents in Table 4.17 show that a slight majority (55%) of Christian respondents were allogenes. On the other hand, the survey did not ask the respondents to specify which denomination they considered themselves to belong, so there is still the possibility that the Christian populations are segregated by denomination according to place of origin. Because all non-Christians in the sample population are natives, they are less likely to be excluded from decision-making in Fabe, where, according to Respondent 1, allogenes are prevented from serving on the village council. Aside from the Village Forest Management Committee, which was established to coordinate with the Korup Project, the village council is the main body that decides how the community uses the forest, both in terms of forest usage, such as the distribution of logging revenues, and in deciding whether individuals have access to forest land for growing crops (Respondent 2,

Respondent 4). Consequently, there is no evidence to indicate that non-Christians in Fabe will be disadvantaged in access to benefits from the forest, nor in local decision-making and benefit distribution from REDD+.

Table 4.17. Religion by origin in Fabe.

Religion		**Origin as indigene or allogene**		
		Indigene	**Allogene**	**Total**
Christian	**Frequency**	17	21	38
	Expected	19.864	18.136	
	Percent	38.64	47.73	86.36
	Col Pct	73.91	100.00	
Non-Christian	**Frequency**	6	0	6
	Expected	3.1364	2.8636	
	Percent	13.64	0.00	13.64
	Col Pct	26.09	0.00	
Total		23	21	44
		52.27	47.73	100.00
Frequency Missing = 1				

4.2. Agency and REDD+

This section analyzes the agency of respondents according to dimensions of attitudes, understandings, and empowerment (Figure 1.1). The extent to which a diversity of shared perspectives exists within each community indicates a stronger potential for collective action according to the Wilkinson's field-interactional theory (Bessant, 2012). The section begins with an examination of understandings of the forest and policies. I propose that these understandings inform the opinions and intentions of the community members, which are analyzed next. Finally, access to decision-making and access to forest land and resources are investigated as factors of empowerment.

Table 4.18. Responses to questions about agency and REDD+. Percentages are given as percentage of responses for each question, as in Tables 4.1 to 4.3. Several questions in this table were dependent on responses to earlier questions, therefore some response rates are lower because respondents were directed to skip the question if it did not apply to them.

Question Context	Category Context	Fabe Responses		Mosongiseli Responses		Total Sample Responses	
		n	%	*n*	%	*n*	%
Village	Fabe	45	100	0	0	45	55.6
	Mosongiseli	0	0	36	100	36	44.4
Forest importance	Total responses	45	100	36	100	81	100
	Culture & religion	25	55.6	14	38.9	39	48.1
	Recreation	18	40.0	24	66.7	42	51.9
	Learning	22	48.9	22	61.1	44	54.3
	Social cohesion	16	35.6	20	55.6	36	44.4
	Beauty	23	51.1	28	77.8	51	63.0
	Food	44	97.8	35	97.2	79	97.5
	Other	9	20.0	2	5.6	11	13.6
Used NTFPs	Total responses	45	100	36	100	81	100
	Yes	37	82.2	35	97.2	72	88.9
	No	8	17.8	1	2.8	9	11.1
NTFP Usage	Total responses	37	100	35	100	72	100
	Food or drink	35	94.6	31	88.6	66	91.7
	Medicine	29	78.4	32	91.4	61	84.7
	Construction material	33	89.2	34	97.1	67	93.1
	Tools	33	89.2	32	91.4	65	90.3
	Fragrances	32	86.5	32	91.4	64	88.9
	Livestock food	27	73.0	30	85.7	57	79.2
	Ornaments	27	73.0	33	94.3	60	83.3
	Fuel wood	37	100	33	94.3	70	97.2
	Other fuels	24	64.9	29	82.9	53	73.6
	Other uses	2	5.4	1	2.9	3	4.2
NTFPs livelihood	Total responses	37	100	35	100	72	100
	Subsistence	33	89.2	35	100	68	94.4
	Trade by barter	12	32.4	29	82.9	41	56.9
	To sell	34	91.9	30	85.7	64	88.9
	Other livelihood uses	4	10.8	1	2.9	5	6.9

Table 4.18 Continued

Crops in forest	Total responses	45	100	36	100	81	100
	Yes	40	88.9	33	91.7	73	90.1
	No	5	11.1	3	8.33	8	9.9
Crops livelihood	Total responses	40	100	33	100	73	100
	Subsistence	37	92.5	32	97.0	69	94.5
	Trade by barter	10	25.0	26	78.8	36	49.3
	To sell	36	90.0	30	90.9	66	90.4
	Other livelihood uses	3	7.5	1	3.0	4	5.5
Decision involvement	Total responses	44	100	31	100	75	100
	Yes	31	70.5	17	54.8	48	64.0
	No	12	27.3	14	45.2	26	34.7
Involvement change	Total responses	43	100	32	100	75	100
	Yes	9	20.9	7	21.9	16	21.3
	No	34	79.1	25	78.1	59	78.7
REDD sensitization	Total responses	44	100	29	100	73	100
	Yes	3	6.8	4	13.8	7	9.6
	No	41	93.2	25	86.2	66	90.4
Community benefits	Total responses	36	100	33	100	69	100
	Very likely	20	55.6	16	48.5	36	52.2
	Likely	5	13.9	6	18.2	11	15.9
	Somewhat likely	4	11.1	4	12.1	8	11.6
	Not at all likely	7	19.4	6	18.2	13	18.8
Financial benefits	Total responses	37	100	31	100	68	100
	Very likely	17	45.9	17	54.8	34	50.0
	Likely	6	16.2	6	19.4	12	17.6
	Somewhat likely	8	21.6	6	19.4	14	20.6
	Not at all likely	6	16.2	2	6.5	8	11.8

4.2.1. Understandings

4.2.1.1. Understandings of the forest. To understand how community members experience the forest, respondents were first asked to indicate the forest's importance to them for various sociocultural purposes. The answer choices (Table 4.18) were drawn from Ngwatung and Roger's (2013) investigation of uses for NTFPs among communities north of KNP, and Wilson's (1993) biophilia hypothesis. In both villages all but one respondent (over 97%) said that the forest was important to them for *food*, indicating a

basic reliance on the forest for practical subsistence uses. On the other hand, the more abstract concept of *beauty of the forest* ranked second (in Mosongiseli) and third (in Fabe). Interestingly, *cultural and religious practices* were second most important among respondents in Fabe, but of least importance to those in Mosongiseli. This might be attributable to the lower degree of religious heterogeneity, and to more of the allogene respondents in Mosongiseli being recent arrivals to the village with less attachment to place. Indeed, the three Pamol headmen surveyed did not indicate this as an important value of the forest to them. Moreover, in Fabe two thirds of respondents who were Muslim or observed tradition religion (2 out of 3 for each religious category) stated that the forest was important to them for cultural and religious practices, which was above the 56% proportion for the Fabe sample as a whole. No aspect was valued by less than one third of respondents, indicating a fairly broad diversity of shared sociocultural understandings of the forest.

During the surveys and interviews, some respondents attributed religious understandings to the forest and land. Regarding forest conservation, Respondent 1 conceptualized his village of Fabe as the Garden of Eden, and Herakles as the serpent telling them lies to drive them out of it. When asked about his experiences with forest conservation, one survey respondent in Mosongiseli likened the forest to an ark for preserving species for future generations. A Nigerian pastor in Mosongiseli stated that he was in favor of development, because "God is God of development". He was therefore hopeful that REDD+ would bring these kinds of changes, although skeptical that the program would be truthful. This view was due to his experience that Pamol had made many promises to the village that they would bring light, employment, and hospitals. But

the company did not deliver these benefits, and instead brought in the gendarmes (a para-military wing of the Cameroon armed forces) to quell down their protest.

In both villages almost all respondents had used forest resources, specifically plant and animal products from the forest, in the last year. A somewhat greater percentage of respondents in Mosongiseli (97%) replied that they had used NTFPs, compared to those in Fabe (82%). Among those who had used NTFPs, all of the purposes given as answer choices were indicated by at least 73% of respondents in both villages (Table 4.18). These were drawn from Ngwatung and Roger (2013), and included both practical uses like *tools*, and *fuelwood*, as well as for cultural practices such as making *ornaments or decorations*.

The overwhelming majority (over 85%) of respondents who used NTFPs in each village both sold them and used them directly for subsistence (Table 4.18). All respondents in Mosongiseli who obtained NTFPs from the forest used them for subsistence, and nearly 90% of those in Fabe used them in this way. Among those surveyed in Fabe, only about a third engaged in trade by barter with NTFPs, while in Mosongiseli this means of livelihood was almost as prevalent as selling them. The results suggest that NTFPs constitute an important part of local people's livelihoods in both direct subsistence as well as monetary sale. Two interesting uses indicated in Fabe included NTFPs as gifts, and as part of studies.[18]

As for understandings of the forest land, nearly all respondents (around 90% in each village) made use of forest land in order to grow crops. Most of the respondents in

[18] A student surveyed said he had found an electric fish in local waterways and this became part of a class report.

each village (72% in Fabe, 76% in Mosongiseli) grew cocoa on these farms. Other crops included a variety of root vegetables such as cassava and yams, as well as various fruits and other vegetables. Roughly the same proportion of respondents in each village used crops for the three means of livelihood as for NTFPs. Thus crops grown on farms in the forest also appear to comprise an important part of livelihood needs and play an important role in the local economy. This corroborates what Respondent 1 said regarding cocoa, a crop that he maintained was the basis of the local economy. In addition, one respondent each in Fabe stated that they had used crops grown in the forest for shelter or as gifts.

It is important to note that in both villages interviewees (Respondent 3 in Fabe and Respondent 5 in Mosongiseli) stated that most of the forest land is understood to be held communally as a common resource. Whatever an individual has cleared and has begun working is considered the person's property, however. So there exists two major regimes of land ownership, and possibly two different levels of decision-making (community-wide and individual) that would be necessary for the effective implementation of REDD+.

The widely held reliance on both NTFPs, as well as crops grown in the forest, suggests a shared understanding of the forest as a means of livelihood that could lead to collective agency, and also explains conflicting views about development, conservation, and uses of the forest for industrial agriculture. As Respondent 3 stated, acknowledging a hint of irony,

> *If they really come up, [REDD+] will help to conserve the forest. But all the same, when we talk of conservation - naturally, I hear that there can never be construction without destruction. People*

here have to live. And they only can live through farming. And no effective farming can take place without deforestation.

To solve this contradiction, two survey respondents in Fabe and Respondent 7 in Mosongiseli suggested having separate areas of the forest. Some areas would be for REDD+, while other areas would allow for cultivation or development activities.

4.2.1.2. Knowledge and understandings of forest policies.

Community forestry. In speaking with interview respondents in Fabe there appears to be a great deal of confusion over community forestry in that village. Some respondents were not really aware that there was a community forest, and, for instance, Respondent 1 only knew that a signboard reading "government land" had been erected along the main road. The signboard was installed during the Herakles issue without the knowledge of most of the community. Respondent 2 believed that Fabe was only part of Mundemba Council Forest, and despite being a member of the Village Council did not seem to know that a community forest was in the making. Respondent 4, who is probably a member of the Bima Youth Association, stated that the community had established a community forest in response to Herakles, as an effort to set aside a portion of forest that could be leased out to commercial interests such as industrial agriculture. This community forest was going to be carved out of the Mundemba Council Forest, with assistance from the local NGO known as SEFE (Struggle to Economize Future Environment), but paperwork for it had not yet begun. This narrative was confirmed by Chief Ekokola who had the same understanding of the issue as Respondent 4.

In contrast, interview respondents in Mosongiseli had a good deal of knowledge of the community forest situation, although it should be noted that three of these

respondents were members of MBABCIG (Mosongiseli Balondo Badiko Common Initiative Group – the name of the executive committee for Mosongiseli's community forest). Here the status of the community forest was clear. It currently has a provisional management convention (PMC) that was obtained after the German-funded organization PSMNR-SWR provided additional funds for its elaboration and "pushed the community forest right to the level of Yaoundé" (Respondent 5) over 11 years after the process began. The MBABCIG members were worried that after their now 14-year struggle to formalize the community forest the entire process might be reversed before they are able to secure a final management convention (FMC). The PMC expires after three years, by which time the community must elaborate a simple management plan to obtain its FMC. Because the elaboration costs around 5 million FCFA (about US$10,000), they need to acquire a timber exploiter that will advance them the money to conduct the inventory over the entire community forest area. The community found a company, Cawadel, to exploit their forest and fund the elaboration, but in the meantime the director of the company died and passed the company to his wife, who may have been involved in mishandling money for the elaboration. This has caused a controversy within the company and the community is now without an exploiter to fund the next stage of the process before the PMC expires.

Industrial agriculture. Oil palm is the major agro-industry that the communities have interacted with, and these interactions have been quite different for the two communities. When Herakles Farms came into Fabe they made a number of promises to the community that were never borne out. According to interview respondents there, these promises included that the company would bring electricity to the community. The

borehole was constructed, but is no longer functional. Because of these false promises, much of the community other than the chief and some elders turned against the company. With the help of several NGOs (SEFE, Greenpeace, Nature Cameroon, and Center for Environment and Development [CED], according to Respondent 1) the company has essentially left the village, although the nursery remains and is currently selling the remaining palms.[19]

Meanwhile, the parastatal company Pamol recently established a plantation in Mosongiseli. According to interview respondents the company did not follow the ordinary procedures for establishing in the community, and as stated above this was briefly met by resistance from youth and women. Since that time there does not appear to have been much conflict between the community and the company, although Respondent 5 stated that Pamol refused to provide them any rent for use of their communal lands, instead offering a 50-hectare oil palm plantation to the community. He also stated that the community was approached by SGSOC about three years earlier. The community signed a contract with the company after it promised to bring water, electricity, and a modern zinc roof to every villager. In the meantime, the national government decided that the company's paperwork was not up to par, and subsequently Pamol was allowed to establish its plantation on the village's lands.

Forest conservation. The community in Fabe has generally good relations with the Korup Project and park staff. While conducting fieldwork in the village the park staff held a meeting with the community during which they discussed Fabe's Conservation and

[19] Interestingly, Respondent 5 mentioned that the nursery in Fabe was selling their palms to some individuals in his Mosongiseli Village.

Development Agreement (CDA). The staff brought a projector and a laptop that they projected onto a screen in the hall where the meeting was being held. The park rated the community on a scale from 0 to 5 on its obligations under the CDA, and the village rated the park, with youth, women, and men each giving a score, then averaging the three. Evidently the same kind of meetings are held from time to time in Mosongiseli as well. Most of the ratings from the park were a 4, and those from the community were generally similar, although sometimes the scores from one group or another were substantially lower. For instance, the women in attendance gave a 0 to the park in relation to CDA aspect of "Community ensure transparent use of conservation initiatives," and the park also gave a low score of 2.5 for the village. Respondents maintained that Fabe has received a large amount of support from the Korup Project, and they only experienced minor disagreements. Korup, with financial assistance from GIZ, has given them two classrooms, a functioning borehole, and less than 20 years earlier had provided significant support for the road that Respondent 1 states is vital to their economy. The Korup Project also operates a farmer's field school in the village that teaches villagers sustainable cocoa farming methods. One interviewee (Respondent 3, an allogene), stated that Korup was also very important in deciding how the village uses its forest, in that the project had established eight-member Village Forest Management Committees (VFMCs).

Respondent 5 in Mosongiseli is a member of that community's VFMC, and as the Cluster Facilitator, he serves as the head of the committee and provides a monthly report to the conservator of the park. It was in this capacity that he wrote down and sent the letter that his community composed regarding the peripheral zone issue. According to the conservator, the peripheral zone has always existed since the park was established. In

talking to respondents in the village they appear to believe that it is a new development; that before there had been a smaller buffer zone, but now KNP is expanding its range up to the middle of their village because of the Peripheral Zone. The Peripheral Zone also happens to be where the village carries out its farming activities, so after receiving no response from the Conservator they have continued farming in the area. Despite this issue, there does not seem to be strong conflict with the park or the Korup Project. This sentiment was stated by Respondent 7 and the peripheral zone issue did not come up when survey respondents were asked about their experiences with forest conservation, including KNP. The villagers here do not see Korup as providing many benefits to them, however. Korup built a small wooden schoolhouse in 1990, and has given a scholarship to a primary school student, but generally the benefits from the project have been minimal. More substantial infrastructure has come from FEICOM, which financed a new and much more durable schoolhouse, and from a rural development project called Rumpi,[20] which provided two new boreholes.

REDD+. While Freudenthal et al. (2011) note that KNP was in the planning stages as a REDD+ pilot project, and an employee at the Korup Head Office in Mundemba had recently been solicited by the representative of a German/British carbon market company, the survey and interviews with villagers found that very few had heard of the program. Specifically, three respondents (about 7%) in Fabe, and seven in Mosongiseli (about 14%) had heard of REDD+. These numbers may even be slightly over-estimated because some respondents initially confused REDD+ with the Red Cross,

[20] According to Chief Ekokola, Rumpi was part of SOWEDA, the Southwest Development Association, in collaboration with the territorial administration.

although members of the research team attempted to address this misunderstanding once it became apparent early in the fieldwork. In Fabe the main source of REDD+ information was NGO workers, while respondents in Mosongiseli gave various media sources as the most prevalent. Out of the seven interview respondents only one was familiar with REDD+, and this was Respondent 5, who is the community's chief councilor and cluster facilitator of the VFMC. That few villagers had been informed about REDD+ is not particularly surprising given that the program has not officially begun in the area, and in fact the online resource, The REDD Desk (2016), lists the project cited by Freudenthal et al. (2011) as having been put on hold as of 2013. Ideally some sensitization process would have begun by this point, nonetheless, since the area has been earmarked as a future REDD+ project site for some time.

4.2.2. Attitudes.

4.2.2.1. Community forestry. In Fabe, the intention to form a community forest was not known by all respondents, with Respondent 1 believing that the government had put the signboard up without consulting the community, and expressing resentment that this action was taken in such a manner. Curiously, Respondent 4 stated that the establishment of a community forest there was being aided by SEFE, which was the same NGO that Respondent 1 understood as being helpful to the efforts he supported in opposition to Herakles. In Mosongiseli, Respondent 5 and Respondent 7 expressed frustration with the process of establishing their community forest. After 14 years, at least 1 million FCFA spent, and nearly abandoning the effort before obtaining their PMC, MBABCIC is faced with the possibility that the government will now cancel the community forest if they cannot find an exploiter to finance the next stage of the process.

They are therefore looking for another exploiter, following the debacle with Cawadel, but Respondent 7 expressed that they are happy that at least they have finally obtained their PMC.

4.2.2.2. Industrial agriculture. According to interview respondents in Fabe, the issue with Herakles Farms is the only major point of disagreement within the community (Respondent 1, Respondent 4). Respondent 1 and Respondent 3 believed that the chief and certain community elders were the significant social groups in favor of the company. Respondent 2 stated that the youth association organized against it, although Respondent 4 (who was likely a member of the youth association) stated that opinions on the issue did not vary according to demographic characteristics, with some villagers approving and some not, based on their personal preference. According to Respondent 2 there are also some villagers who remain undecided about the issue. Respondent 1 indicated that more people in the community were against the company than for it. In describing why these villagers were not happy about the plantation he conveyed that some women were upset because it would interfere with their livelihood of gathering NTFPs, and that many members of the community turned against Herakles when they discovered that the company had made promises that they did not intend to follow through on. He also expressed his appreciation of the forest's biodiversity that he believed should be maintained for posterity:

> *If we can compare palms with the forest, we don't have njansanga there, we don't have poga tree, we don't have mango tree there. . . . So that sort of thing we don't want. That is what we can do for conservation. We want our land to remain with us in this way. While we make our small small farms, our little one's generation – it may be [that] Fabe in 100 years is not our Fabe – all of us are gone, dead, rotted. But these young men . . . are the future of Cameroonians for tomorrow. They might do better than what we*

are trying to do. So if [REDD+] will come and assist us to conserve our area more, we will be happy, rather than destroying.

As stated above, the community of Mosongiseli has not received royalties from Pamol for use of the village's communal lands, instead offering only a modest oil palm plantation as compensation. Moreover, some segments of the community were not happy that Pamol did not follow the expected norms for companies that come in to use a village's land. As Respondent 6 explained, through translation from the Pidgin, "Normally [we] will be hearing that they bring things, they see the village, they explain what they are trying to do." But Pamol neglecting these actions prompted the youth and women to organize against the company at first, until the DO came in to resolve the dispute. Since that time there has not been considerable tension between the community and Pamol. Despite these issues, Respondent 5 and Respondent 8 maintained that the community has the intention to allow Herakles to return and use part of their land if the national government decides to approve the company's paperwork.[21] According to Respondent 8, support for Herakles comes from the many promises that the company made to the community, and this respondent is confident that Herakles will indeed fulfill these pledges because of the agreement that the community signed with them.

4.2.2.3. REDD+ and conservation. Both REDD+ and conservation are addressed together in this section because of the overlapping nature of REDD+, as a form of ICDP, and potential similarities to past and current measures taken by the Korup Project in its conservation initiatives. Several mechanisms of benefit sharing have been proposed for REDD+ in Cameroon. Fobissie et al. (2012) briefly evaluate the AFF tax, community

[21] I did not ascertain what groups within the community were for or against this plan, if not the "whole village" as claimed by Respondent 8.

forestry, payment for environmental services (PES) projects, and land fees from agricultural concessions. Assembe-Mvondo et al. (2013) also investigate the agricultural land fees for use of communal lands that was established by Article 17 of Decree No. 76-166 of 27 April 1976. This law is similar to the AFF fee but is applied to agro-industry and stipulates shares of 40%, 40%, and 20% to the national government, local council, and village, respectively. Freudenthal et al. (2011) discuss the benefit sharing mechanisms advanced in Cameroon's R-PIN that at the time proposed indirect payments to communities based on the AFF, or direct payments to individuals for conducting what they describe as essentially forestry work. In 2013, Cameroon's R-PP proposed several options, including the AFF, and, vaguely, PES as well as "revenue sharing mechanisms in other sectors (mining, for example)," that may include options such as the agricultural land fees (FCPF, 2013a, p.72). In this light, respondents were asked about their preferences for benefit sharing, specifically how likely they would be to reduce the area of their farm in the forest in exchange for either indirect community benefits or direct financial benefits. Examples given for community benefits included infrastructural improvements such as roads, schools, or pipe-borne water, similar to the benefits that should be obtained through royalties from the AFF tax or agricultural land fees. Financial benefits were described as payments directly to the owner of the farm. Responses were only recorded for those participants who had stated earlier in the survey that they grew crops in the forest (Table 4.18).

Around half of these respondents said they would be "very likely" to reduce the size of their farm for community benefits. Similarly, approximately half of respondents in each village stated they would be "very likely" to reduce the area of their farm in the

forest for direct financial benefits. The percentage was slightly higher (around 55% in each case) in Fabe for community benefits and in Mosongiseli for direct financial benefits. The other three answer choices had roughly similar percentages of responses in each village for each of the two different benefit sharing scenarios, generally ranging from 12% to 22% of respondents. One exception was the low percentage in Mosongiseli that would be "not at all likely" to reduce the area of their farm in exchange for direct financial benefits (6.5%), suggesting that this option is potentially more acceptable to respondents sampled in Mosongiseli.

For those who would be "not at all likely" to reduce their farm area under each scenario, the next question asked to state their opinion for this (albeit hypothetical) intention. Most responses indicated a concern for loss of livelihood (specifically food or money) due to reduced crop output, and problems that this might create, such as increasing hunger for their family or the community as a whole, and difficulties paying for their children's education. Several responses framed this as an issue of equitability, particularly for those who only had a small area that they cultivated, and who could not afford to reduce the area without potentially serious consequences for their family's livelihood. Regarding community benefits, one respondent stated that these things will not provide them with money, pointing to the local importance of the cash economy, as was found earlier in the survey with the high percentage of respondents who sold NTFPs and crops. A respondent in Fabe was concerned that funds for community benefits may not be managed properly, which is indeed frequently the case among various benefit sharing mechanisms in Cameroon, including the AFF tax, agricultural land fees, and community forestry. On the other hand, one person in Mosongiseli preferred community

benefits over direct financial benefits because “money can be spent or misused quickly” by individuals. A concern was voiced regarding community benefits that “the forest can be taken without any arrangement”, but it is not clear if this was viewed as specific for community benefits.

In discussing the issue with interview respondents, views in both communities were mixed. One person in each village (Respondent 4 and Respondent 7) stated a preference for community benefits because these were seen as more durable compared to financial compensation. On the other hand, Respondent 5 doubted whether benefits distributed to the entire community would be substantial enough to offset costs incurred by those who participate in the program, whereas he viewed monetary benefits paid to individuals as more likely to fully compensate them, and more likely be accepted by the community. Respondent 1 preferred the direct financial mechanism because he believed that infrastructure like roads were the responsibility of the government. Both Respondent 3 and Respondent 5 brought up the problem of different layers of ownership of forest land. In the local conceptualization, virgin primary forest is viewed as belonging to the community as a whole, while cultivated secondary forest belongs to the individual who holds customary ownership of that land. This then becomes problematic for REDD+ because the community can decide how to use their communal lands, but individuals locally have the right to decide what happens with their own land. Thus there could be a difference between the willingness of the community to use their land for REDD+ and that of individuals with farms in the forest. For this reason, Respondent 3 stated that he could not take a position on which type of benefit to prefer, instead the issue would have to be decided by the community as a whole, at least for the communal forest land.

When survey respondents were asked about how REDD+ might impact the community, several of the negative responses were similar to opinions that had been expressed as to why they would not be willing to reduce the area of their farm for benefits. These included agricultural concerns about reduced crop yield and damage from wild animals, societal concerns such as conflicts over benefit sharing and the desire to pass their farm on to their children, as well as concerns about the way that REDD+ might be implemented, including the potential for arbitrary appropriation of land by the government and skepticism that benefits will actually be delivered. For example, one response from the survey mentioned that Pamol had made promises to the Mosongiseli community to bring light, employment, and a hospital, but that these were not delivered. This respondent did view REDD+ favorably, but only in the case that benefits are actually delivered if promised. Interview respondents from both villages expressed similar concerns, particularly regarding livelihoods from agriculture. These respondents also conveyed a certain degree of apprehension based on their experiences with external institutions. In Mosongiseli, Respondent 5 specifically related the program to his community's interactions with KNP and the peripheral zone issue, fearing that REDD+ could interfere with the geographical expansion of the village. He explained his reasoning, saying "It is just like conservation with Korup National Park. But what I will say is, if such a forest is quite near a community, and in future the community is developing – they want more buildings – will such a forest stand in the center of the town?" Respondent 4 in Fabe seemed to draw on his community's experiences with Herakles Farms, communicating that the contract under REDD+ will likely be for a lifetime (as is the case of the 99-year contract granted by the government to Herakles

Achobang et al., 2013), and that the community will need to carry out some kind of cost-benefit analysis before committing to such an agreement. He also believed that the community would need outside assistance to conduct this analysis.

Despite these concerns, most survey respondents and all the interview respondents expressed at least qualified approval of the program, if not unequivocal acceptance. Support for REDD+ was largely communicated as a desire for socio-economic development, whether from improvements in infrastructure or monetary benefits. A few survey respondents stated that reducing the size of their farm would also have benefits of its own, like spending less time for cultivation or allowing them to diversify their livelihood with other activities. Several respondents from both villages stated that they liked the idea that REDD+ could compensate them for reducing their impact on the forest, creating a balance between conservation and development. This result is interesting since it is supposed to be precisely the goal of the Korup Project in its role as an ICDP. When asked about their experiences with forest conservation, no survey respondents conveyed that the Korup Project had played a part in enhancing their quality of life though development or infrastructural improvements. In fact, one respondent in Mosongiseli specifically articulated the view that his community had not received any significant benefits from the project.

Several respondents voiced their qualified support for REDD+ on the condition that the program does follow through with any promised benefits, indicating that they were not entirely confident that the program would deliver on promises of development or ecological goals. Sometimes this was explicitly based on experiences with other forest policies or projects, specifically the Korup Project and Herakles Farms in the case of

interview respondents, although survey respondents did not generally specify the source of their skepticism. The major concern was that REDD+ would not provide benefits that would adequately compensate for the loss of livelihood from reduced crop output. Others simply stated that they would have to see how the program performs before they could judge it.

Many survey and interview respondents had a favorable outlook for REDD+ to contribute to beneficial environmental effects. This included increasing the number and maintaining the biodiversity of trees and animals in the forest, improving stream flow, reducing erosion, and mitigating climate change. An overwhelming number of survey responses communicated an appreciation for conservation for reasons similar to the positive impact that REDD+ could have on the forest. Several respondents in both communities framed these as benefits for future generations that could enjoy the forest and its resources. Improving the ecology of the forest would be of value, they said, in large part because it would preserve forest resources like medicinal plants as well as plants and animals for food. Other responses included the hope that it would bring tourism, and boost the morale of the community. Only one respondent was able to identify a potential negative impact to the forest, saying that reducing the size of her farm could require her to clear more land if the soil becomes exhausted.

4.2.3. Empowerment

4.2.3.1. Local decision-making institutions. Decision-making within each community was largely based on traditional institutions, with the chief at the top of the local decision-making hierarchy, followed by the chief councilor. The village council is made up of several councilors, who are rotated every few years, and in Mosongiseli

respondents specifically stated that councilors are elected to this body. The village assembly is composed of everyone in the community, including women, youth, and allogenes, whereas allogenes are not allowed to sit on the village council. One survey respondent from Fabe noted that some decisions are made in Bima clan meetings, which include members of the Bima clan from many different villages in the area. Other decision-making structures were brought up in the interviews. In instances where a dispute cannot be resolved within local institutions, the leadership may take the matter to the Ndian Division administration in Mundemba. Both communities also have village forest management committees (VFMCs), that have been instituted by KNP. These eight-member committees are headed by the cluster facilitator, who provides a monthly report to the conservator of the park. In Fabe, Respondent 3 stated that the VFMC is important for deciding how the village uses the forest. Respondent 5, who is the cluster facilitator for the VFMC in Mosongiseli, said that the Korup authorities direct the VFMC on forest issues. The committee can serve as a two-way line of communication between the park and the village, however, as it was through his role as the cluster facilitator that the letter regarding the Peripheral Zone was delivered to the Conservator. KNP also provides opportunities for involvement in decision-making in the form of community meetings such as the one in Fabe in which the village rated the park and the park rated the village on elements of the CDA. Mosongiseli's community forest executive committee, MBABCIG, has an elected board of members, but it does not appear that this institution plays much of a role in forest usage at the moment because the community forest will not be operational until the FMC is obtained.

4.2.3.2. Forest access and usage. Villagers were asked about two principal ways that their community decides on forest usage. These included decisions affecting individuals or families, and those affecting the whole community or most members of it. The former refers mainly to access to forest land to grow crops, and the latter to commercial logging or industrial agriculture. Both communities observe the traditional axe law for indigenes, who typically are allowed to clear any virgin forest in the village territory and begin cultivating the land. Allogenes usually have to buy their land and, in Mosongiseli in particular, provide some food to the chief or the village as a whole. Respondents in Fabe noted that indigenes sometimes sell their land to allogenes, while in Mosongiseli payment normally goes to the village council. In both communities, allogenes must also inform the traditional village authorities of their desire to obtain land. Malleson (2001) comments that, in the study area, the practice of selling land to allogenes can complicate issues of land tenure, because the land is not recognized by either formal or customary laws as belonging to the new tenant. In some instances, this has led to allogenes and relatively poor indigenes being dispossessed when relatively wealthy elites claim a formal title to the land that has been paid for. This is a problem to look out for, but it did not come up in any interviews or surveys, so there is no evidence from the present study to indicate that this has been an issue in the two study communities.

The two villages appear to have somewhat different understandings and experiences of decision-making regarding commercial operators. In Fabe, several respondents stated that NGOs were an important part of decision-making, specifically in relation to the issue with Herakles Farms. In Mosongiseli, the process for commercial logging or industrial agriculture is similar to that for an allogene asking for personal

farmland, in that they must meet with the traditional council and provide payment for the land. Several respondents described the process as beginning with the commercial operator approaching the chief, who then assembles the village (not including allogenes), and the village collectively makes the decision whether or not to allow the activity.

4.2.3.3. Decision-making involvement. A majority of respondents in both communities stated that they had been involved in decision-making in the last year. In Fabe, 8 out of 20 allogenes, 7 out of 20 women, and 4 out of 14 youths said they had *not* participated in decision-making. Three respondents (comprising 3 allogenes, 2 women, and 1 youth) had only been involved regarding the SGSOC issue, which, in light of a comment noted for one respondent, probably referred to a meeting that was held in 2011. While participation in this meeting is significant given the importance of the SGSOC issue to the community and its use of the forest, it lies outside the one-year window the question asked about, suggesting that these respondents have not been involved in day-to-day decision-making for the village. In Mosongiseli, 8 out of 10 allogenes, 5 out of 9 women, and 3 out of 10 youths who gave a response to this question said they had *not* been involved in decision-making in the last year. From this sample, it appears then that allogenes and women both tended to have lower rates of participation in each village, while youths are relatively involved. Allogenes in particular were not involved in decision-making, especially in Mosongiseli. Most respondents in each village had not seen their role in decision-making change in the last year.

Chapter 5. Discussion

This chapter begins with an analysis of the hypotheses presented in the Introduction. These are important for analyzing the theoretical objective, guided by the first research question, that asks how societal integration is related to collective agency towards current forest policies. The next section examines some practical implications of integration and disparities among demographic groups for implementation of REDD+ in the study area. It focuses on two aspects of REDD+, one of conservation and one of commodification of the forest, with analysis informed by the insights of professionals working in development and conservation organizations.

5.1. Relationship of Integration to Collective Agency

While some differences exist in their degree of integration (Figure 1.1), I cannot make a definitive distinction between the two communities. There are several reasons for this, which are discussed in the Conclusions chapter (Limitations section). Both communities share many of the patterns of diversity and integration to a similar extent. For instance, each sample population was similarly diverse in clan group. Given the strong association between clan group and place of origin, this likely indicates a similar diversity in place of origin as well. Community celebrations create a space for processes of integration in both communities. Both community showed disparities between demographic groups in terms of education, with women having lower levels of educational attainment compared to men, and youths having higher levels compared to

non-youths. This indicates a low degree of agency-based integration in the factor of *knowledge*.

There do appear to be some differences in the degree of diversity and integration between the two communities, and in a majority of these cases Fabe was identified as the more integrated community, but the actual states or processes of integration remain hypothetical to a large extent. Fabe is probably more integrated *geographically* according to location of residence within the village, as allogenes in the sample population were found to live more in peripheral quarters in Mosongiseli. The study revealed processes of *social integration* in both communities. Fabe showed more potential for social integration according to occupation, because a similar proportion of youths and the older population were farmers, and also the farmer's field school operated by the Korup Project likely provides a means of integration between indigenes and allogenes. The *Diyala* society in Fabe could also provide a setting for integration between women of different origin, although the data did not specifically indicate the demographic composition of this social group. On the other hand, Mosongiseli is probably more socially integrated in their monthly cleanup campaigns compared to Fabe, the latter of which apparently relies more on women to accomplish this task. Fabe appears to be more integrated *hierarchically*. In this village, women have their own elite society, *Ekpa*, in addition to the men's *Motamo* society. Although genders are not integrated within each individual social group, the presence of a secret society for women, as well as for men, suggests that the community affords a certain hierarchical status to women. In addition, Fabe has a higher degree of religious diversity, and given that all religious minorities in the sample population were indigenes this probably enhances the hierarchical integration in terms of religion.

Regarding agency-based factors, the survey indicated that Fabe is likely more integrated in terms of *access to decision-making*, because a somewhat higher percentage of indigenes and women in Fabe reported involvement in decision-making. Mosongiseli is probably more integrated in the agency-based factor of *knowledge*, as allogenes in the village sample population had equivalent or even higher levels of education compared to indigenes, whereas those in Fabe had lower levels of education. Fabe may be less integrated in terms of *attitudes*, specifically towards industrial agriculture, as interview respondents indicated that there had been divisions between some elders and other parts of the community on the Herakles issue. Yet respondents also stated that different demographic groups did not necessarily have cohesive opinions; instead, opinions were held mainly as an individual choice. Moreover, the disagreement could easily be an effect of the socially corrosive nature of Herakles's actions more than any latent difference in opinions on the matter of allowing industrial operators access to communal lands.

The modes of collective action for each community are categorized in Table 5.1 into *qualities* of acceptance or rejection and active or passive *roles* in the interactions. But the responses were not always coherent throughout the community, and I found that the ways in which communities asserted their agency varied over time and in response to different aspects of the policy. The duration of the fieldwork and complexity of the interactions limited the information available to make a clear assessment in every case.

Table 5.1. Modes of interaction with forest policies.

Policy	**Fabe**	**Mosongiseli**
Forest conservation	Passive acceptance • Community works with CDA; appreciation of modest benefits received	Active rejection • Community wrote letter in opposition to Peripheral Zone
Industrial agriculture	Mixed: Passive acceptance followed by active rejection • Elites accepted Herakles; other members of community worked with NGOs in opposition	Mixed: Active rejection followed by passive acceptance • Youth and women organized against Pamol; community then accepted the company • Previously signed agreement with Herakles
Community forestry	Passive acceptance • Some community members worked with a local NGO to establish, but not widely known	Active acceptance • 14-year attempt by management committee to establish, with eventual aid from international development agency, despite many difficulties and setbacks

The first hypothesis was that a greater degree of societal integration results in collective action that embodies more diverse interests and involves the perspectives of multiple demographic groups. Addressing this hypothesis is limited by not knowing precisely what the interests of different segments of the communities were. A more detailed understanding of socio-economic circumstances would be needed. For example, there are differences between the two villages in response to industrial agriculture, but there could also be differences between the villages regarding where local farming activities take place relative to where the plantations were established. If many community members in Fabe had farms where land was being set aside for Herakles this

would significantly disadvantage these families, but if the Pamol plantation in Mosongiseli was not where most farms were located then this could explain the different responses more than societal integration and the recognition of different interests during processes of decision-making.

The second hypothesis proposed that a greater degree of integration results in stronger responses to forest policies. In this case, it appears that Mosongiseli has taken more active roles in policy interactions, especially in response to the Korup Project and in pursuing community forestry. Even regarding industrial agriculture, segments of the community actively organized against Pamol when the company first came into the village. It is not clear, however, whether these responses followed from social interactions between different demographic groups, creating common goals and motivating action. While integration was observed in more dimensions for Fabe (see Figure 1.1 for dimensions of agency), Mosongiseli pursued more active roles, in contrast to the research hypothesis. On the other hand, there is a large amount of uncertainty about whether the states and processes of integration found in the study actually constituted integration. Moreover, information on the processes by which collective actions were taken was not sufficient to make a definitive statement that integration or segregation of demographic groups led to the policy responses.

5.2. Implications for REDD+

Implications of the institutional analysis for REDD+ implementation in the area are analyzed in the following sections according to the two frames discussed in the Introduction chapter: ICDP-related issues, and those associated with monetary or

commercial aspects of REDD+. Even though REDD+ is supposed to serve mainly as a carbon mitigation strategy, for the forest communities most directly impacted by it the program will probably operate like an integrated conservation and development project (ICDP) (Blom et al., 2010). ICDPs, including the Korup Project, have caused significant difficulties for forest communities because of top-down efforts to enforce conservation goals through resettlement of local populations and livelihood restrictions. This constitutes the first frame of challenges that forest communities face from REDD+. The second frame comes from the large amounts of money at stake, as the funding mechanism for REDD+ is tied in with the international carbon market. This raises questions about what actors will control the production of carbon, and the distribution of money from the sale of carbon credits or receipt of REDD+ funds. What mechanism should be used to distribute benefits from REDD? How should these benefits be shared within the relevant communities, if the money even reaches down to the local level? If the communities do receive benefits, will there be conflicts over ownership and distribution? These issues are addressed in the discussion on carbon commodity issues, although it is beyond the scope of this work to examine the role of actors outside of the local or national context, such as investment firms and multilateral institutions.

5.2.1. Forest conservation

Recent trends of decentralizing forest management and investing local communities with these responsibilities have been motivated in large part by the expense of centralized approaches to forest conservation (Phelps et al., 2010). To counter this, there has been a move toward community-based conservation measures. ICDPs were promoted as a means of encouraging both local participation in conservation measures

and compensating these communities for costs they were being required to bear in order to comply with the rules established by the projects (Blom et al., 2010). The Korup Project has had mixed success in both compensating communities for livelihood restrictions and its efforts to relocate communities living within park boundaries, which have been largely unsuccessful in meeting conservation goals while also far outspending its estimated budget (Diaw & Tiani, 2010; Schmidt-Soltau, 2004). With REDD+, both the prospects for beneficial outcomes and risks of detrimental effects are increased as potentially much greater funding is introduced compared to current conservation spending (Phelps et al., 2010).

5.2.1.1. Conservation, development, and livelihood restrictions. Both of the study communities exist within the Korup Project Support Zone, so they currently interact with the park as the principal agent of forest conservation policy. Korup does not seem to actively restrict farming activities in the two villages, although park authorities are threatening to enforce the 3km Peripheral Zone in Mosongiseli. In Fabe, Korup programs helped improve farming techniques, and the road the project partially financed has brought about livelihood benefits because it facilitates access to markets for locally-grown crops.

When Mosongiseli was faced with restrictions in crop production, the community possessed the agency to take an active approach to their concerns. While these concerns have not yet been addressed, there was both the channel to transmit the village attitudes, as well as organization within the community to take such a coordinated action. This suggests that the means of communication through the VFMC to the park management should be a minimum requirement for any similar REDD+ project as a way for

communities to express their disagreement. The fact that no response has been given regarding the letter does not, however, bode well for REDD+ implementation. The community has continued to farm in the area, so the intended conservation goals are not being met. At the same time, there has been no resolution of the matter, leaving the community in a position of uncertainty. On the other hand, the park has not taken forceful or intimidating measures in order to enforce the Peripheral Zone – enforcement that could be disastrous for both the community and future conservation efforts if not carried out with a large amount of assistance and compensatory funding. It is important that this dispute is resolved, and the solutions devised primarily by the community (Agrawal & Gibson, 1999). Because the local people were not involved to a significant extent when the rules were developed and the CDA was signed (Schmidt-Soltau, 2004), this would be a good opportunity to engage the community in participatory decision-making.

Organization 2 has been heavily involved with the Korup Project. The respondent from this organization expressed the view that the communities have signed the CDA, and in exchange for receiving development assistance from the project they must respect the rules and the boundaries of the park. While conservation along with socioeconomic development may be the project's intention, benefits to the villages do not appear to be very substantial. This was particularly the case in Mosongiseli, where the community is also now being told not to carry out farming and other activities in their traditional location. A cost-benefit analysis would indicate that complying with this demand requires considerably greater compensation than the community currently receives from the Korup Project in development benefits.

This study did not ask villagers about hunting activities because these are not the major focus of REDD+, but this is an issue of concern to the Korup Project. Moreover, requirements for biodiversity safeguards, and the importance of multiple benefits stressed by UN-REDD (Dickson et al., n.d.), suggest that hunting restrictions are not out of the question for REDD+ projects. Adequate compensation for opportunity costs could reduce the pressure for villagers to hunt in support of their livelihood. Also, reducing the size of farms could allow more time for villagers to undertake other livelihood activities, as suggested by the survey respondent who stated that he would start a poultry farm if he were able to spend less time farming. Another option is to encourage partnerships in which smallholders can harvest abandoned palm plantations, as Organization 1 is working towards. If REDD+ funds are invested in the capacity to process cash crops locally, farmers could also make more money for a given amount of farmland, further reducing deforestation and hunting pressures.[22]

5.2.1.2. Local participation. While the Korup Project is seeking to increase the participatory role of local communities, these communities were not substantially involved in the processes that established the rules that they are now expected to obey (Schmidt-Soltau, 2004). The meeting in Fabe that I observed looks like a step in the right direction by involving large parts of the communities in the social processes of implementing park rules. But the project should also draft new rules with the communities in which it seeks to work. This would ensure that the rules are accepted by the current generation of villagers and community leaders, and increase their legitimacy

[22] Karsenty, Vogel, and Castell (2012, p. 4) refer to this secondary effect as a potential "benefit" from REDD+ projects, as opposed to financial "rents" gained from sales of carbon credits.

for standards of free, prior, and informed consent. These rules should be developed by the communities themselves in order to be appropriate for the local context and local values, or risk creating rules that are not followed because they are seen as unreasonable. The communities should then be invested with the principal authority to implement the rules (with guidance and assistance from the park and civil society), and resolve problems arising from the implementation (Agrawal & Gibson, 1999). A similar approach is needed in future REDD+ projects.

It will not be feasible for entire communities to be directly involved in the national REDD+ process, although representatives from villages should have a direct role. These representatives need to be from a diversity of demographic groups, and not only include local or economic elites. The same would be true for sub-national REDD+, at the regional, divisional, and sub-divisional levels. The conservator of KNP explained that there are also plans to expand the Korup Project into a landscape-level project, similar to the TRIDOM landscape in the southern part of the country, by expanding its range in the north to Takamanda and across the border into Nigeria. Something like the VFMCs established by Korup for each community could be an option for coordinating with these larger scales of implementation. Villagers stated that VFMCs are elected and consist of men, women, youth, and elders. To ensure that all local interests are recognized, they should also include members who are from a minority clan in their own communities. However, as noted by Oyono, Ribot, and Larson (2006), the interests of entire villages should not be condensed into one committee, neglecting the diversity of views and needs of each community. Moreover, it is important that local committees are

actually elected by the community, and that women and local minorities are encouraged to participate in the elections (Oyono et al., 2006, p. 59).

The respondent from Organization 3 says his NGO uses a procedure for consulting with villages that is similar to the meeting observed in Fabe, and they take the additional step of ultimately addressing different demographic groups individually. This method would be helpful in ensuring that segments of the population with lower participation rates, such as women and allogenes, are included in the discussion and sensitization. Although the process used in the Korup meeting allowed interactions between each of the three demographic groups – men, women, and youths – the meeting that I observed was conducted in a room that was completely full, indicating that smaller groups would be appropriate for some meetings.

REDD+ projects will need to be formulated on a local scale, probably separately for each community, with coordination at the divisional, regional, and landscape levels. The rules for these projects, and also their implementation and resolution of disputes, should be determined by the communities themselves (Agrawal & Gibson, 1999), not solely by a government ministry or conservation organization, and then simply presented to community leaders for their signature. This is not to say that government ministries and conservation organizations should not play an important role in facilitating the rule-making process (Agrawal & Gibson, 1999). These external actors have the initial information and capacity to put in place a REDD+ project, and communities will need candid advice and guidance from them in developing the terms of their local REDD+ project. But the communities involved need to have considerable information on both the opportunities and the full range of possible risks from participation. Government

ministries, and particularly civil society organizations, can play a vital role in helping communities understand the risks they may be exposed to, and how to get the best out of the project. This information must be provided by organizations that are both knowledgeable about the local situation, and also have nothing to gain or lose from the community's involvement in the project (Vickers, Trines, & Pohnan, 2012, p. 157).

Discussions about REDD+ should include all members of the community in the processes of decision-making, implementation, and resolving disputes (Agrawal & Gibson, 1999). In both communities, allogenes were not involved in all levels of decision-making, and were also disadvantaged in access to forest land and resources. Both women and allogenes report lower rates of participation in decision-making compared to youths in both communities. Despite their vital contributions to the cultural and economic life of the village, women appear to have social barriers to decision-making, evidenced for example as their hesitance to provide opinions to the survey. Allogenes also play a role as stakeholders in the community, so discussions need to include them. Villagers with very small farms or no land at all need to have opportunities to contribute, as well, because they are particularly at risk from loss of livelihood and exclusion from benefits. Women's relatively weak involvement in decision-making means that their input should be actively encouraged. Both allogenes and women were involved in the Herakles discussion, probably through meetings held by the local NGO, which suggests this could also be an effective model to use in facilitating REDD+ conversations.

Considering voluntary carbon markets, Vickers et al. (2012) urge that community members need to "learn together" about potential projects, and they should "speak as a

group" in order to carry more weight when addressing external actors (p. 157). These recommendations would be effective in negotiating REDD+ projects as well. Youth and other highly educated community members should be both encouraged and assisted in the opportunity to learn – in-depth – about the program, and then to share their knowledge about it with other members of the community. Local youth associations would be effective venues for this process to take place, if these organizations are mindful to include women and minority clan groups in order to make the most of the social resources within the community. Women's groups, such as *Diyala* in Fabe, could also help by providing the setting for these discussions and information sharing. Coordination and advice from local and national NGOs, such as SEFE and CED, would likewise strengthen the villages' capacity in negotiating successful REDD+ policies. Importantly, the communities must be aided in conducting a thorough cost-benefit analysis *before* signing any contracts or agreements. Initial REDD+ funds, as well as grants from NGOs and development agencies, would be particularly valuable for this purpose.

According to Agrawal and Gibson (1999), "those interested in community-based conservation should seek to implement reasonable processes of decision-making rather than focus upon guarantees about outcomes" (p. 641). The authors continue by defining the characteristics of these "reasonable processes", including acknowledging the interests of different segments of the local population. The organizations and government ministries involved in the rule-making process need to accept the decisions made by the communities (in collaboration with these external actors). Doing otherwise defeats the purpose of community-based forest conservation, and will likely be ineffective and

inefficient for the same reasons that non-participatory approaches to impose conservation were phased out in the first place (Agrawal & Gibson, 1999).

5.2.2. Carbon commodification

While both villages have experienced impacts from conservation, specifically the Korup Project, the more troubling threats to these communities seem to have come from industrial agriculture. The companies, aided by state actions, have used oppressive measures to coerce the communities into accepting appropriation of their land with little to no compensation. Community members in Fabe stated that Herakles had made many false promises, and in Mosongiseli, Pamol has refused to pay royalties, claiming that the company is state-owned and therefore is not required to compensate communities.[23] The report by Achobang et al. (2013) details how Herakles Farms has violated FPIC principles, operated illegally in the country, and with assistance from government authorities has harassed and detained those who disagree with its actions. Also, one respondent mentioned the use of gendarmes in Mosongiseli when the community complained about Pamol.

Given the contentious nature of disputes over commodified land, it is important to look at the concerns about REDD+ as it functions as a market for carbon credits. Large amounts of money are potentially at stake from the sale of credits, and control over this revenue, as well as the production of credits through ownership of land and carbon rights,

[23] According to the company's website, the national government has 79.53% ownership (Pamol, n.d.).

could easily prove as problematic as control of the land for large-scale forest concessions and agricultural plantations.

5.2.2.1. Issues of free, prior, and informed consent. Any REDD+ projects implemented in the area must comply with standards of free, prior, and informed consent, which Mahanty and McDermott (2013) describe as "the central social safeguard" for protecting the rights and interests of forest communities (p. 407). This means that methods of intimidation and heavy-handed coercion reported in imposing industrial agriculture on communal lands in the study villages is in violation of the UN Declaration on the Rights of Indigenous Peoples, against REDD+ Decision 1/CP.16 (UNFCCC, 2011), and contrary to the goals Cameroon has committed to in its own R-PP. Detaining dissidents and bringing in the gendarmes implies that the choice of the communities to allow the appropriation of their land was far from *free*, even if the decision was eventually accepted by the community. Manipulative promises given by the agricultural companies also violate the principles of freedom from coercion and *informed* consent. Moreover, suddenly establishing a large oil palm plantation, as was the case in Mosongiseli, does not satisfy *prior* notice for the community to decide whether or not to accept the project. It is not clear that either community was genuinely given the option to withhold their consent to Herakles or Pamol, although the community of Fabe did seem to manage to do so, with assistance from several local, national, and even international NGOs.

According to the survey results, most people in the study villages have not been given information yet about REDD+. This situation is the same as that reported for nine REDD+ projects in Cameroon assessed by Freudenthal et al. (2011), including the one

planned for KNP, which found that community sensitization was not undertaken. Villagers will need to be educated about the program, including possible benefits and risks from involvement in it. This process will need to be undertaken in (Pidgin) English and local dialects. Given that almost no respondents spoke French, educating villagers in this area using French would be entirely inappropriate. Moreover, important documents must be published and available in English. The communities must also be given the option not to participate, at both the village level as well as that of individual community members and their families.

Because of fears that villagers will not accept their work, Organization 3 apparently avoids informing villagers that REDD+ could create any limitations for them. Warning villagers of the risks might not be the best way to begin the conversation, but involvement in REDD+ projects could have major livelihood impacts, so these issues need to be discussed. Survey results from the study villages indicated that most community members rely heavily on farms in the forest, and reducing the area of these farms could adversely affect their livelihood. On the other hand, most survey respondents were at least open to the idea of REDD+, even given the recognition that it may require a reduction in farm area. Moreover, Respondent 5 believed that the villagers in his community would accept REDD+ if they are sensitized about the program. Therefore, neglecting to inform villagers of potential risks is both a breach of FPIC standards, and would also be unnecessary to avoid hostility from community members in the study area during the sensitization process.

Organization 3 tries to minimize the potential impact of reducing farm sizes by teaching villagers how to intensify their crop production. This is similar to the approach

currently being implemented in Fabe by Organization 2 that teaches villagers how to improve cocoa harvests, which appears to be valued by the community. Yet the percentage surveyed in each village who said they would not even consider reducing the size of their farm for benefits from REDD+ (between 6.5% and 19.4%, Table 4.18) suggests that a significant number of community members would be severely impacted if they were required to do so by REDD+. Before any REDD+ project is implemented in the area, rules need to be established to address this problem in order to ensure that these families are not dispossessed by the project.

While FPIC is a useful concept to meet minimum standards of fair treatment for local communities and vulnerable populations, it suffers from a conflict between the need to secure property rights on the one hand (particularly against powerful state and market actors), versus relatively informal and communal tenure arrangements on the other. Mahanty and McDermott (2013) explain that formalizing ownership rights can disadvantage those who lack even customary land tenure. The results of the survey did not find any association between demographic group and those with no land ownership. But it is important not to exclude individuals who do not own land from the REDD+ process and benefit sharing mechanism, whatever segments of the population they may be from.

5.2.2.2. Benefit distribution options. Organization 3's "collaborative framework" works with the government, private companies, NGOs, and local communities to achieve conservation goals. Cameroon's R-PP describes the role of similar players in the country's REDD+ process. While all stakeholders need to be involved in order to ensure that the relevant actors are in agreement, it is important that

powerful commercial interests like mining, timber, and industrial agriculture are not allowed to have undue influence on the process, excluding the rights of local communities. The respondent from Organization 4 used the metaphor of a cake to describe forest and land policy in Cameroon. In this analogy, the forest is divided up into pieces by the government, with different sectors receiving bigger or smaller portions depending principally on the amount of money they have to influence government officials holding the knife in the allocation process. In his assessment, loggers receive the largest piece, followed by conservation. Local communities typically receive the smallest share. Cameroon's R-PP is ambiguous on the actual role that private entities will play in the REDD+ process, but does state that "the private sector, not only logging, but also mining and petroleum, agriculture, etc., may seize the REDD+ [sic] as a business opportunity" (FCPF, 2013a, p. 15). Local communities, which are often the least powerful actors in land and forest issues, could lose out in power struggles that are not closely monitored by civil society organizations.

What are some possibilities for handling REDD+ funds, and the mechanism of REDD+ benefit distribution? One option proposed in Cameroon's R-PP is to use the model of the AFF tax established by the 1994 Law, which allocates 50% of annual timber concession fees to the national government, 40% to the village councils and FEICOM, and a final 10% to the communities on whose communal land the concession is located. Unfortunately, as currently applied in the forestry sector, this system has been regrettably inadequate in delivering even the meagre 10% of revenues to the local communities that bear the greatest burden in hosting the timber companies (Fomété, 2001). Moreover, the respondent from Organization 4 stated that a new finance law that supersedes the 1994

Law has changed the distribution so that the 10% no longer goes to local communities but instead to tax officials.[24]

Another option is the land rent model established by Decree 76-166 of 27 April 1976, used in the case of industrial agriculture concessions on national lands (Assembe-Mvondo et al., 2013). In similar proportions to the AFF, this system distributes 40% of land rents to the national government, 40% to village councils, and 20% to local communities. The analysis of Assembe-Mvondo et al. (2013) shows that typically these rents are either not paid by the industrial operators, or the funds are lost to corruption within the Ministry of State Property and Land Tenure. The law also has never established the minimum or maximum fees that companies must pay per hectare, and lacks the record-keeping requirements of the AFF (Assembe-Mvondo et al., 2013). It seems clear that both of these mechanisms (the AFF and agricultural land fees) as they currently function will not meet the goals of Cameroon's R-PP in respecting local rights, livelihoods, and the UN Declaration on the Rights of Indigenous Peoples. Of course, these mechanisms only distribute the fees per area of land, not the revenue derived from the business operation itself. Even assuming that actual REDD+ funds received in either of these scenarios, and not merely land fees, are distributed in their respective proportions, they would not compensate for the opportunity costs calculated by Lyonga (2012) for the study area, who found that 80% of the value of carbon credits would need to reach local communities.

[24] The argument for this change is that it will provide motivation for these employees to collect tax revenue and not succumb to corruption.

In either case, it is a dangerous option for REDD+ to operate through companies, whether government owned, parastatal, or private enterprises, where these companies, and not the local communities, own the carbon rights themselves. This could be a disaster because it would completely disenfranchise communities from REDD+ benefits while still appropriating village land and imposing livelihood restrictions. In fact, the Establishment Convention signed between Herakles Farms and the national government gives that company all carbon rights on the land allotted to it, in addition to complete usage rights and the authority to alienate those rights from local communities (Achobang et al., 2013). Moreover, communities would have no incentive to reduce their deforestation activities. It is therefore critical that civil society organizations ensure that this method of REDD+ implementation is avoided.

PES is one system mentioned in Cameroon's R-PP as a tool with "great potential" for the implementation of REDD+ (FCPF, 2013a, p. 70). The respondent from Organization 4 described PES projects that were recently implemented in the South and East Regions in the context of community forestry (an early review of these projects is detailed in Awono et al. [2014]). He stated that this system has brought in two and a half times the maximum amount of money the respondent was aware of any community forest receiving from logging. The project was sponsored by funds from a bilateral development agency. Rules were established in cooperation with the relevant communities. A certain amount of money was guaranteed to the communities per year, depending on the extent to which conservation goals were achieved, as assessed together by the organization and the communities. If a certain percentage of the goals were not reached then a corresponding amount of money was withheld, but still available for the next year. The

respondent stated that there was also the option for a REDD+ project, but it was not implemented for two reasons. First, because of concerns the large amounts of money that could be given to the communities would cause internal conflicts. Second, the communities might be held financially responsible to investors for losses of carbon or failure to meet goals, as opposed to the PES system in which full payment was only withheld until goals were achieved.

Community forestry essentially sets aside a piece of forest to be used by the community for some purpose, potentially forest conservation, while the rest of the communal land is available for other uses. The separation of conservation areas from those where socioeconomic development takes place was proposed by some villagers as a way to reconcile the conflicting needs of protecting the forest while improving living conditions. It is also similar to what Organization 3 is recommending to a community forest in the TRIDOM area, where they are encouraging the village to divide their community forest into separate areas for agriculture, non-commercial uses, and REDD+.

Applying a PES-type project to community forestry therefore sounds like a suitable mechanism for benefit distribution under REDD+, particularly if performance is de-linked from liability to investors. It would also be an improvement on the current use of community forests, enhancing conservation goals, and providing more income to the community. The respondent form Organization 4 stated that community forests in Cameroon are currently designed mainly to support timber operations, and described how communities have to acquire the same technical capacity of logging companies in order to process timber and make use of their community forest. In contrast to the activities of

industrial agriculture operations and top-down conservation projects, the community could decide where to locate the forest in order to best avoid livelihood restrictions.

To support this effort, villages must be allowed to collectively decide where this forest area is located, and the decision should not be allowed to be taken by a small group within the village, like the situation in Fabe where most of the village was not involved in the negotiations with Herakles Farms. In another example, a chief and two council members from a village in the northeastern area of the Herakles concession met with members of the government and the company through the land consultative board, as required by Cameroonian law for gaining access to communal lands. In this case, the village representatives all came from the same family, and lived in the same village quarter. They agreed on the land to give to Herakles, which was in a different quarter, without informing those residents or involving them in the discussions (Organization 4 respondent). These instances are from dealings with agro-industry, but Fobissie et al. (2012) mention several problems that have arisen specifically for community forests in Cameroon. These include issues of elite capture, "conflicts between individual and collective interests," and "conflicts between customary and modern laws" (p. 15). Oyono (2005) and Djeumo (2001) have found similar problems in the implementation of community forestry. Furthermore, the process of establishing a community forest also needs improvement so that communities are not forced to wait over a decade for their PMC only to have the possibility of losing the community forest if they cannot find a commercial operator before it expires.

Organization 2 is exploring a "corridoring" approach that would use community forests to connect conservation areas to one another. This initiative could be a motivation

for Organization 2 to provide assistance in helping communities pursue community forestry, as in the case of PSMNR-SWR in Mosongiseli. Directly providing technical assistance to communities to help elaborate their management plan, possibly with a participatory approach to the enumeration, could also reduce the potential for mismanagement of funds. In implementing this approach, it is important that the community be given the final say in deciding where the community forest should be, for reasons stated above, rather than strategically placing the forests along corridors without considering the diversity of interests within the community.

5.2.2.3. Intra-community benefit sharing. Respondents expressed similar preferences for community benefits and direct benefits (Table 4.18). Community benefits were slightly more favored in Fabe, whereas direct benefits were slightly more favored in Mosongiseli. There appeared to be less opposition to livelihood changes if direct benefits were received compared to community benefits, especially in Mosongiseli. This result is in agreement with the respondent from Organization 2, who believed there must be a "direct link between conservation and revenue", and recommended some kind of monetary benefits, whether cash disbursements or employment from tourism, to create that connection. The respondent did not view community benefits as providing as good of a connection.

Another perspective comes from Fobissie et al. (2012), who note that communities often prefer financial compensation, but the authors recommend community benefits because of their greater durability. This advantage was acknowledged by some survey respondents, as well. Community benefits may also be more appropriate for intergenerational equity, as described by Assembe-Mvondo et al. (2013) for the use of

revenues from land rent fees. Another concern is that direct financial benefits will not be distributed equitably within the community.

In his analysis, Lyonga (2012) found that subsistence farms in the southern part of the KNP buffer zone had the highest financial yield at 50% canopy cover. Given the 2008-2009 value for carbon credits at US$10 per tonC, REDD+ would come close to compensating for opportunity costs in a scenario where 80% of revenues (US$8 per tonC) reach local farmers with percentages of canopy cover higher than 50%. In the case that only 25% of revenues (US$2.5 per tonC) reach local farmers, the system would fail to offset reductions in crop output at canopy cover higher than 50%. If farmers are currently operating with less than 50% canopy cover, significant financial gains could be possible by increasing the canopy cover to 50% and receiving 80% of revenues from carbon credits.

Because many farmers will not be working at the most income-efficient canopy density, REDD+ will likely work only by using a fairly straight route between REDD+ and local communities. Indirect channels through government ministries and state or private enterprises will almost certainly run the risk of reducing the efficiency of benefits to the extent that opportunity costs for participating in REDD+ are not balanced by financial gains in the communities. Another option is entrusting civil society or international development agencies with a history of reliability to handle the funds, as in the PES system described above.

Lyonga's (2012) finding that 50% canopy cover produced the highest income for farmers in the area suggests that the initiative of the Korup Project to teach sustainable

farming methods is probably valuable for increasing crop revenues, reducing impacts on the forest, and potentially for generating income from REDD+ benefits. The focus on efficient farming techniques is also the major goal of Organization 3's work in the southern part of the country. This is one of several ways that community benefits could help to provide important infrastructure and services, while also improving villagers' financial situation.

According to the respondent from Organization 4, cocoa harvests in the area often spoil before they can reach markets, meaning that farmers are not paid what they could potentially earn for their crop. One reason for this is because the roads leading out of the villages are very poor. Another way that income could be increased is by improving the processing capacity in the villages themselves. Electrical drying ovens would be particularly helpful for this purpose, but this would probably also require providing electricity to the communities. Either of these options could improve the money earned per area of farm for many villagers, which would both reduce the pressure for deforestation and improve livelihoods. Applying REDD+ benefits to education, in the form of schoolhouses, educational materials, and scholarships, could also have beneficial effects for both the forest and livelihoods. Materials written by Cameroonian authors, with a shift in focus away from a European or American outlook towards local perspectives would be especially valuable (Mbaku, 2005).

5.2.2.4. Intra-community conflict. While this study did not find any major discord currently existing between demographic or social groups, the entrance of Herakles Farms into Fabe created divisions there, and evidently Pamol was a source of social disruption when the company first established in Monsongiseli. Tensions in Fabe

were mainly between community elites and much of the rest of the village, but there was no evidence that this conflict was rooted in any particular demographic differences between the two sides. In Monsongiseli there are even a number of Nigerians and newly arrived allogenes, but indigenes do not appear to harbor any animosity towards either group. Still, allogenes are significantly disadvantaged in decision-making and forest access. This situation is similar to the problems described by Geschiere and Nyamnjoh (2000) in relation to the historical process of migration followed by exclusion of immigrants from power, driven largely by industrial agriculture.

One difference, however, is that the results did not find that immigrants were specifically excluded from power because of the actions of political intrusion into decision-making processes. The case could be made that this type of interference did occur indirectly, though. Some allogenes in Fabe reported involvement in decision-making only in relation to the Herakles issue, albeit through meetings held by SEFE, despite opposition from the company and government.[25] Secondly, financial gains from carbon credits will probably not rely on introducing labor from outside the village. Because of this, community disputes arising from REDD+ will likely result from structural disenfranchisement of allogenes, (and to an extent, women), rather than active socio-political conflicts between members of the community.

[25] The civil society organization's director was physically assaulted by Herakles workers in 2011, followed by his detention, the detention of several other SEFE organizers, and continued legal action in 2015 (Achobang et al., 2013; Worldwide Movement for Human Rights [FIDH], 2015, https://www.fidh.org/en/issues/human-rights-defenders/cameroon-continued-judicial-harassment-against-mr-nasako-besingi).

Attempts at establishing community forests have not been a significant source of conflict in the study villages. The Korup Project also has not caused major social disruptions there. But the communities' experiences with industrial agriculture show that there is the potential for conflicts to emerge, particularly between those with greater traditional authority in decision-making, although this power is checked to some extent through social organization by women and youths. That Herakles has claimed carbon rights in its Establishment Convention gives clear evidence that private entities could be involved in the region's carbon market, to the exclusion of local communities. The destructive effects the company has had on Fabe Village and other communities (Achobang et al., 2013; Organization 3 respondent; Organization 4 respondent) could very well be transferred over into REDD+ activities if the REDD+ mechanism is allowed to operate using this model.

Chapter 6. Conclusion

6.1. Findings

Most women, youth, and allogenes in the sample were farmers, and made extensive use of NTFPs. Community members widely reported using NTFPs for a number of practical and cultural purposes. The forest itself also had socio-cultural value for most respondents. Both NTFPs and crops were extremely important for livelihoods. The communities were fairly heterogeneous according to clan, with several different clan groups represented in the sample population. There was a low degree of religious heterogeneity in both community samples.

Respondents mentioned certain local institutions that could potentially foster processes of societal integration. These included occupational interactions while learning farming techniques at the Farmer's Field School in Fabe, community clean-up campaigns in Mosongiseli, and community-wide celebrations in both villages. It is unclear from the data whether these have contributed to generalized understandings leading to collective action. Women, and especially youths, were understood by community members as having a high degree of social organization, and this has, to some extent, provided these groups a means of asserting their collective agency.

The data uncovered differences in educational attainment, with youth tending to have higher levels of education and women having lower levels. The results for allogenes were mixed, with these community members having lower levels of education in Fabe,

but equivalent or higher levels in Mosongiseli. These educational differences could limit the information available to women, allogenes, and older community members needed for discussions related to REDD+, if they are unable to read documents pertaining to the conditions of the agreement. It may also discourage participation in discussions, like the Korup Project meeting I observed in Fabe, where the ability to read the slides would likely be helpful in engaging in the conversation. At this meeting, I estimated about 85% of those in attendance to be men. Social organization of women, such as through the Diyala society in Fabe, could provide a means for information sharing that may help compensate for lower educational levels.

Whether due to educational disadvantages, socio-cultural pressure on some women to refrain from decision-making, or other unidentified barriers, women did report lower levels of involvement in decision-making relative to youths. Allogenes reported even lower levels of decision-making involvement than women, and were also barred from participation in important local decision-making institutions such as the village council. In addition, allogenes had obstacles to accessing forest land and resources.

Respondents described both communal and individual levels of forest ownership in these communities. While most respondents were supportive of REDD+, there was a significant proportion of respondents (6.5-19.4%) who would not accept reducing the size of their farm for either community or direct benefits. Moreover, some community members owned no land, including customary tenure, which places them in danger of their rights and interests not being recognized. These individuals and their families could be subject to loss of livelihood, then, if REDD+ projects fail to take their interests into account.

Out of the benefit distribution mechanisms proposed in Cameroon's R-PP, PES combined with community forestry appears to have the best potential for equitable REDD+ project implementation. Community forestry would allow communities to choose the conservation area having the lowest impact on livelihoods. While still in the early stages of implementation, PES projects have demonstrated that ability for appropriate community involvement, while avoiding the problem of financial liability to carbon investors.

6.2. Limitations

Analysis of the hypotheses, and to an extent the implications for REDD+ implementation, was limited by the timeframe and the number of villages that could be studied. First, the data do not comprise entirely parallel information, especially between the two villages. For example, the youth association in Fabe was exclusively composed of members of the majority clan group in that village, but it was not clear whether the association also excluded women, as did the youth association in Mosongiseli. Secondly, the data do not directly show connections to collective agency arising from states and processes of integration or segregation. To illustrate, the *Diyala* society in Fabe is where women can gather to socialize and educate themselves. This setting could foster processes of integration between women of different origin, and if so it would be useful to see if integration through this community institution contributed to collectively buying the grinding machine mentioned in one of the interviews. Specifically, respondents could be asked how the idea for the purchase started, why they saw a need for the machine, and if women coming from different backgrounds all had a use for it. Greater depth of information on topics like this would provide more information on the processes of social

interactions that connect characteristics of a village and its institutions with specific outcomes.

The difficulty in determining relationships between integration and collective action reflects the comments of Poteete and Ostrom (2004), who discourage "further contests over the effect of group heterogeneity and size of group" (p. 454). They instead view these factors as potential "challenges or opportunities" (Poteete & Ostrom, p. 454) that communities face, and stress the importance of local institutions as well as considering local context when developing conservation programs. A reformulation of the research question from a variance-oriented framework to a process-oriented one (Maxwell, 2013) would be more useful to future research. Questions that focus on processes in which integration influences collective action could improve understandings of the nature of social interactions in directing the development of local institutions. They could also help researchers and conservation organizations have a better grasp of conservation outcomes, and design more appropriate projects that recognize the realities and agency of the relevant populations. The social factors that contribute to more effective collective agency could be supported by civil society organizations. This would allow communities to take the lead in developing conservation strategies that are successful and suitable to the local context, while helping to reduce the risk of contributing to violations of FPIC and the rights of indigenous peoples.

Time constraints also prevented better identification of actors and interests within the communities. A longer duration of fieldwork could potentially allow greater access by enhancing rapport. This in turn could have increased the depth and reliability of

responses. Regarding the quantitative component, a random sample would have improved the validity of the results, while reducing uncertainty.

Another limitation to the study was the language barrier. I only understood a small amount of Pidgin English, and no French or local dialects. Because of this, interviews in these languages were conducted through interpreters (see Methods chapter). This could have prevented the most accurate understanding of participants' responses, grounded in their precise meaning. The study also suffered from a lack of clear definitions of demographic groups grounded in the local understandings. The concepts of "indigene" and "allogene" would have particularly benefited from knowing more precisely what qualifies a community member as a "native" or "citizen" versus a "stranger" or "foreigner." Geschiere and Nyamnjoh (2000) describe the situation in Cameroon, and the Southwest specifically, as one where "strangers" may be those who immigrated to their current location generations before. Yet it is not clear to what degree this same situation exists in the study villages.

A better understanding of the local historical context outside of environmental policies could only improve future work, if not hindered by widening the scope of the research too much. An important factor not considered was the Bakassi conflict between Cameroon and Nigeria. Fongot (2013) has written about the troubles for natives of (traditionally Nigerian) Efik and Ibibio ethnicity living on the Bakassi peninsula, which is not especially far from Mosongiseli on the Ndian mainland. Cameroon has denied citizenship to many of these people, despite their family lineage going back several generations in Bakassi. Tensions in the area between the governments of Cameroon and Nigeria, and Cameroon's treatment of people living in the Bakassi area, cast suspicion on

activities carried out by the national administration (Fongot, 2013, p. 131). It is not unrealistic to consider that forest policies in the area could be strongly influenced by this situation.

6.3. Future Research

Further studies could investigate different categories as primary demographic characteristics, such as clan group and other forms of heterogeneity. For instance, differing levels of wealth and distance to the forest resource are discussed as types of heterogeneity by Poteete and Ostrom (2004). Another factor to explore in greater depth is the role of civil society, NGOs, and foreign development agencies in modulating the agency of forest communities. What segments of the population benefit from these interactions, and who has access to various organizations could have important implications for their outcomes.

In this study, I only explored the influence of integration through the field-interactional perspective, which proposes that collective action comes about by generalizing the interests of others in the community through social interactions, resulting in common understandings. This proposition does not necessarily involve the presence of ethnic diversity, only that those members of the community with differing interests are involved in social interactions, especially during institutional processes. But there could be other possible contributions to collective agency and collective action that come out of integration, such as the inclusion of ideas that are not part of the dominant way of thinking and offer alternative solutions to how the situation can be managed most effectively. There could also be an effect of generalized tolerance that carries over into an

atmosphere of unity. In these cases, ethnic, racial, cultural, or geographic diversity would be an important factor, along with integration of the different groups.

6.4. Reflections

While local people do contribute to deforestation, the impact of subsistence farming is relatively temporary (FCPF, 2013a, p. 38). Cameroon's R-PP notes that the dynamic nature of subsistence farming methods, in which forest area is cleared, then allowed to regenerate for several years, creates a prospect for REDD+ (FCPF, 2013a). This fact could prove to be a mixed blessing by providing forest communities with opportunities to benefit from REDD+, but also creating a motivation to enforce livelihood restrictions without fair compensation or respecting the rights of villagers.

Given the large number of projects authorized and encouraged by the Cameroonian government that clear-cut astonishingly large areas of forest for plantations, dams, and other projects (Organization 4 respondent), where should efforts to reduce deforestation be focused? Subsistence agriculture does contribute to deforestation and carbon emissions. Yet these communities are not directly involved in bulldozing thousands of hectares of forest land in order to plant a permanent monocrop with very little biodiversity or other ecological benefits. I believe that a far greater emphasis should be placed on preventing large scale clear-cutting projects, rather than focusing on restricting the traditional cultivation of forest land. To this effect, conservation areas in the permanent forest domain could best be used as a tool for designating places that are permanently off-limits to industrial operations. Moreover, many local communities and civil society organizations will no doubt be prepared to collaborate in efforts to control

the expansion of projects that typically acquire their traditional land with little to no compensation.

Many conservation organizations were involved in the Herakles issue, and through laudable efforts the area of the concession was reduced from 73,000 ha to 20,000 ha (Organization 2 respondent, Organization 4 respondent). Similar action should be used to enforce Cameroon's land use laws that require the consultation of local communities and their compensation whenever projects take place in communal forests on national lands. Efforts to strengthen existing laws could considerably improve both local livelihoods and forest conservation goals. One important step would be to stipulate the range of fees per hectare required to be paid for the use of national lands, as was required by Decree 76-166 of 27 April 1976 (Assembe-Mvondo et al., 2013).

The people who live in these communities value the forest not only because of their strong dependence on its natural products, but they also appreciate the forest for a variety of social and cultural reasons. If the communities are allowed to benefit from the forest without transforming it into timber or an industrial plantation (whether by choice, force, or deception), the data from this study suggest they will likely implement effective conservation measures to preserve their heritage for themselves and future generations. On the other hand, it seems unrealistic to expect any people to make sacrifices for the sake of abstract ideas such as park boundaries when struggling to meet their immediate and vital needs. REDD+ does offer the possibility of filling this livelihood gap, if implemented in a way that respects the realities of forest societies and the basic necessities of life.

In conclusion, I stop short of recommending against developing REDD+ in the country, because so many of the respondents were hopeful about the program, and have a tremendous need for socio-economic development. Moreover, the program could result in considerable ecological and environmental gains. But the potential for harm to the local populations is serious and should not be diminished. If social safeguards cannot be assured, then the REDD+ process should not go forward. This must include active oversight by the UN, World Bank, international development agencies, as well as conservation and human rights NGOs. The Cameroonian leadership in MINEPDED, MINFOF, and the REDD+ Steering Committee should take this opportunity to courageously design and implement the program in the most far-sighted and equitable form possible.

While Cameroon is seen as a leader in forest policy reforms (Djeumo, 2001; Fobissie, 2014), the content of these reforms was largely dictated by the World Bank as conditions for obtaining structural adjustment credits, and were not "home-grown" solutions (Mbatu, 2009; Topa et al., 2009). This remnant of colonialism may be part of the reason why these policies have largely failed (Yufanyi Movuh, 2012). Taking bold initiatives of its own accord to implement REDD+ in a way that protects the rights of indigenous people and local communities would likely help to maintain social, economic, and ecological sustainability, providing far better long-term gains for the country than implementing projects without these guarantees. Already host to COMIFAC, and an economically important country in Central Africa, the appropriate design and implementation of REDD+ would heighten Cameroon's status as a leader in the region. As the ecological beauty and ethnic diversity of Cameroon exemplifies Africa in

miniature, if done right, the country's REDD+ program could serve as a model for the rest of the continent.

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Appendices

Appendix A: Survey Instrument

Forest Community Integration and Collective Action in Korup National Park, Cameroon: Interactions with Forest Policies and the REDD+ Mechanism

Adam Flanery, Principal Investigator; Dr. Richard S. Mbatu, Co-Principal Investigator

My name is _____. I'm assisting in research being conducted for the Environmental Science and Policy program at the University of South Florida St. Petersburg, in the United States. The title of the research is called "Forest Community Integration and Collective Action in Korup National Park, Cameroon: Interactions with Forest Policies and the REDD+ Mechanism". The purpose of the research is to understand how local communities in the area could be affected by a forestry program that the Government of Cameroon is developing, called REDD+. The answers you give in this survey will be kept confidential. The information will not include your name, and will only be used for academic purposes. You might feel that some of the questions are of a sensitive nature, so remember you can skip any questions you do not wish to answer. Your participation in this survey is appreciated, but completely voluntary, and no negative consequences will occur to you if you choose not to participate.

Survey # ……. Date: …… Village: ……..

1. **Sex of the respondent:**
   □ Female □ Male

2. **How old are you?** …….. years old

3. **What is your occupation?** ……..

4. **What is your highest level of education?** ……

5. **What is your religion?**
   □ Christian □ Muslim □ Traditional religion

6. **Which of the following best describes your land ownership?**
   □ Own a land title □ Own a land certificate □ Rent land □ No land ownership

7. **Are you originally from this village?** (If NO, continue to #8, If YES, skip to #9)
   □ Yes □ No

8. **Where are you originally from?** ……

9. **Where in this village do you live?** ……
   ……

10. **What clan do you consider yourself?** ……

11. **What languages do you speak?** ……

Thank you. Now I'd like to ask about how you and your community use the forest land and resources.

12. **In which of the following ways is the forest important to you, if any?** (MARK ALL THAT APPLY)
    □ Cultural and religious practices □ Recreational activities □ Learning activities
    □ Resolving conflicts or improving friendships □ Beauty of the forest □ Food
    □ Other: ……..

13. **In the past year, have you used plant or animal products from the forest?** (If YES, continue to #14. If NO, skip to #16)
    □ Yes □ No

14. **What have you used these plant or animal products for?** (MARK ALL THAT APPLY)
    □ Food or drink □ Medicine □ Construction materials □ Tools □ Fragrances □ Food for livestock
    □ Ornaments or decorations □ Fuel wood □ Other fuels □ Other: ……

15. **How have you used these plant or animal products for your livelihood?** (MARK ALL THAT APPLY)
    □ Subsistence □ To trade □ To sell □ Other: ……..

16. **In the last three years have you grown any crops in the forest?** (If YES, continue to #17. If NO, skip to #19)
    □ Yes □ No

17. **In the last three years, what are the main crops you have grown in the forest?**
    ……
    …… ……

18. **How have you used these crops for your livelihood?** (MARK ALL THAT APPLY)
    □ Subsistence □ To trade □ To sell □ Other: ……..

19. **How does this village make decisions for how to use the forest?**
    ……
    ……

20. **In the last year, have you been involved in deciding how this village uses the forest?**
    □ Yes □ No

21. **Compared to the last year, has your role in decision making changed?**
    □ Yes □ No

Now I'd like to ask you about a forest policy the Government of Cameroon is developing.

22. **Have you heard of the program called REDD, or REDD+?** (If Yes, continue to #23, if NO, skip to #24)
    □ Yes □ No

23. **Where do you get your information about REDD+?** (MARK ALL THAT APPLY)
□ NGO workers □ Korup Park staff □ Other government staff □ Government publications □ Radio □ Television □ Internet □ Newspaper □ Books □ Word of mouth □ Community leaders □ Other sources: …….

The program called REDD+ ("R.E.D.D. plus") stands for reducing greenhouse gas emissions from deforestation and forest degradation. The Government of Cameroon is working on REDD+ with international organizations like the United Nations and the World Bank. Basically, it proposes to put a price on the amount of biomass in the forest (for example, the weight of the plants and trees there - but not removing them from the forest). Then the government receives money in exchange for how much there is. This money will come from selling the value of the biomass (the weight of plants and trees left in the forest) to international buyers. The government will then distribute the money to local communities.

24. **How do you think REDD+ will impact your community?**
……
……

25. **How do you think REDD+ will impact the forest?**
……
……

(If answered YES to #16 continue to #26. If answered NO to #16, skip to #30.)

Some ways that are being considered to implement REDD+ are by providing benefits when farmers reduce the size of their farms in the forest. One way of providing these benefits is by giving money to the community for village improvements, and another is to give money directly to farmers who participate in the program. In the next few questions I'd like to ask what you think about these ideas.

26. **How likely would you be to reduce the area of your farm in the forest in exchange for community benefits like electricity, pipe-borne water, or hospitals?** (If NOT AT ALL LIKELY continue to #27. Otherwise skip to #28)
□ Very likely □ Likely □ Somewhat likely □ Not at all likely

27. **What is the most important reason why you would not reduce the size of your farm in exchange for these community benefits?**
……..
…….....

28. **How likely would you be to reduce the area of your farm in the forest in exchange for financial benefits directly to you?** (If NOT AT ALL LIKELY continue to #30. Otherwise skip to #31.)
□ Very likely □ Likely □ Somewhat likely □ Not at all likely

29. **What is the most important reason why you would not reduce the size of your farm for financial benefits directly to you?**
……..
……..

30. **Is there anything else you would like to add about your experiences with forest conservation?**

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Thank you for your time and willingness to participate in this survey. Your input is very important for this research and is sincerely appreciated.