

Double Inequity? The Social Dimensions of Deforestation and Forest Protection in Local Communities in Northern Cambodia

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In Cambodia, numerous powerful drivers of land-use change threaten the remaining natural forest and the livelihoods of local communities living on the forest periphery. In an attempt to protect remaining forests, Community Forestry (CF) and Reduced Emissions from Deforestation and Forest Degradation (REDD+) were implemented in the north-western province of Oddar Meanchey. This case study examines the distribution of costs and benefits within local communities participating in the CF/REDD+ project. Qualitative interviews conducted in the communities indicate how the costs of deforestation disproportionately affect the poorest households, which are more reliant on forest products due to less land and more insecure tenure. Meanwhile, the benefits from CF/REDD+ hardly reach these vulnerable households since their access to forest resources is constrained by physical barriers and a lack of resources or information. Their ability to enjoy benefits from forest protection is likewise limited by social exclusion facilitated by prevailing power structures. Instead, benefits are biased towards the better-off households who engage in forest protection activities and decision-making. In the context of weak governance, contested tenure arrangements, high agricultural dependency, and power discrepancies, this paper analyzes and critically discusses this 'double inequity' of deforestation and forest protection in Cambodia, and recommendations on how to ensure more equitable distribution of costs and benefits are put forward.

Keywords: Cambodia; Community Forestry; Deforestation; Equity; Social Assessment

Zahlreiche Triebkräfte von Landnutzungsveränderungen gefährden in Kambodscha sowohl die verbleibenden Regenwälder als auch die Lebensgrundlagen von lokalen Gemeinschaften, die am Rand der Waldgebiete leben. Um die verbleibenden Wälder zu schützen, wurden in der nordwestlichen Provinz Oddar Meanchey Community Forestry (CF) und Reduced Emissions from Deforestation and Forest Degradation (REDD+) implementiert. Die vorliegende Studie untersucht die Verteilung von Kosten und Nutzen innerhalb von lokalen Gemeinschaften, die am CF/REDD+ Projekt beteiligt sind. Qualitative Interviews, die in den Dörfern durchgeführt wurden, zeigen, wie die Kosten der Abholzung die ärmsten Haushalte, die aufgrund von weniger Land und unsichereren Besitzverhältnissen

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abhängiger von Forstprodukten sind, unverhältnismäßig stark treffen. Indes bewegt sich der Nutzen von CF/REDD+ weg von diesen benachteiligten Haushalten, weil ihr Zugang zu Waldressourcen durch physische Barrieren und einen Mangel an Ressourcen oder Informationen eingeschränkt ist. Ihre Möglichkeiten, mehr Vorteile aus dem Waldschutz zu ziehen, werden zudem durch soziale Exklusion, die durch vorherrschende Machtstrukturen bedingt wird, begrenzt. Stattdessen profitieren bessergestellte Haushalte stärker, indem sie sich an Maßnahmen zum Schutz des Waldes und an der Entscheidungsfindung beteiligen. Im Kontext von schwacher Governance, umkämpften Besitzverhältnissen, hoher Abhängigkeit von der Landwirtschaft und Machtdiskrepanzen analysiert und diskutiert dieser Artikel die „doppelte Ungerechtigkeit“ von Abholzung und Waldschutz in Kambodscha und bringt Vorschläge für eine gerechtere Verteilung von Kosten und Nutzen vor.

Schlachworte: Abholzung; Community Forestry; Fairness; Kambodscha; soziale Bewertungskriterien

Introduction

In many South-East Asian countries, rapid and extensive deforestation and other massive land-use change have not only impacted both nature and ecological services, but also local livelihoods. Cambodia is perhaps the most extreme case due to the compression of many sources of change in a short period of time and a relatively small space (Hall, Hirsch, & Li, 2011). These trends have concerned researchers (e.g. Le Billon, 2002; Poffenberger, 2009) as well as development agencies and donors in the past decades (e.g. Danish Ministry of Foreign Affairs [Danida] & Department for International Development [DFID], 2006; Thul, 2011). At the local, regional, and national scale, various drivers such as agricultural expansion by local communities and Economic Land Concessions (ELCs) by private companies led to deforestation in Cambodia (Poffenberger, 2009) – particularly in the north-western province of Oddar Meanchey (Bradley, 2009). In an attempt to protect remaining forests, the Cambodian government and international donors initiated a national Community Forestry (CF) program, with projects emerging from this program in the early 2000s (The Center for People and Forests [RECOFTC], 2011), following the trend of many other South-East Asian countries and regions across the world. More recently, projects under the Reduced Emissions from Deforestation and Forest Degradation (REDD and REDD+) program have also emerged, with Cambodia's first project established in Oddar Meanchey (United Nations REDD programme [UN-REDD], 2010).

Despite the growing number of critical studies on REDD+ (e.g. Hansen, Lund, & Treue, 2009; Thompson, Baruah, & Carr, 2011), international organizations plan and

implement these projects together with government agencies at a fast pace and extensive scale across continents (Cerbu, Swallow, & Thompson, 2011). Social co-benefits and local livelihoods are high on the agenda; yet, social assessments of the feasibility and implications in the participant communities are lagging behind (Jagger, Sills, Lawlor, & Sunderlin, 2010). The proposed social assessment approaches rely heavily on quantitative measures, while aiming at capturing the complexities of REDD+, such as intangible issues of participation and diverging interests of various stakeholders (e.g. Thompson, Baruah, & Carr, 2011). Thus, there seems to be a gap or mismatch between the realities of REDD+ and the proposed social assessments relying on indicators, which preferably are tangible, measurable, and observable (Pasgaard, 2013). For instance, while equity is one of the main challenges in REDD+ (e.g. Springate-Baginski & Wollenberg, 2010), few indicators describe intra-community political impacts, which could help to assess equitability in the distribution of costs and benefits. Indeed, intra-community indicators describing existing or changing power relations among groups or individuals in a community are needed to assess people's rights to access and use resources, e.g. to reveal if restrictions of use disproportionately affect poorer people (Schreckenberget al., 2010). Drawing on empirical data from Oddar Meanchey, this paper aims to address this specific gap in social assessments by investigating how the costs and benefits from forest protection under CF/REDD+ are distributed within communities. First, the paper provides the background for the study followed by a presentation of the REDD+ initiative. Second, the theoretical foundation is presented, followed by the methodology of the case study. Subsequently, the paper presents and discusses the results of the case study from a distributional equity perspective and concludes by suggesting specific recommendations to ensure increased equity in REDD+.

Background

The Case Study Site

Throughout South-East Asia, REDD+ initiatives are emerging in a context of high deforestation rates and rapid land-use change. In an attempt to protect the remaining forests in Cambodia, the government, working together with donors, began to es-

establish a national CF program, which was officially recognized as a national policy in 2003 (RECOFTC, 2011). In the north-western province of Oddar Meanchey (see Figure 1), which has suffered from a deforestation rate of more than 2 percent decline in forest cover per year (Bradley, 2009), 13 CFs have been established and are managed by local communities. These CFs provide the platform for the country's first REDD+ demonstration project initiated in 2008, followed by the approval of the National UN-REDD Program a few years later (UN-REDD, 2010). The REDD+ project in Oddar Meanchey CFs is expected to provide financing and development to the communities through carbon credits generated from the forest protection and regeneration (Terra Global, 2012). The 13 CFs in Oddar Meanchey participating in the REDD+ demonstration project consist of 58 villages and cover an area of approximately 68,000 hectares of forestland (see Table 1). An international NGO (Pact) and two local NGOs



Source: Kmusser (2010)

(Children's Development Association and Monks' Community Forestry) facilitate the preparation and implementation of the CF/REDD+ project in partnership with the government (the Forestry Administration). In the CFs, the Management Committees have the main responsibilities and decision-making power, including recruitment and fund management, and these committees are elected by CF members on five-year terms (Royal Government of Cambodia [RGC], 2003). In order to reach the targeted emission reductions, the REDD+ project aims to mitigate the local drivers of deforestation, including the conversion of forestland to agriculture by the increasing number of residents who rely on cropland (Blackburn, 2011). Specific project activities that aim to reduce deforestation in the project area include the reinforcement of forest land-tenure and formulation of land-use plans as well as a range of site-based activities, such as community-based forest protection, introduction of fuel-efficient stoves, agricultural intensification, and development of non-timber forest products (NTFPs) (Terra Global, 2012). According to the Forest Administration, a minimum of 50 percent of net income from the sale of carbon credits, after project costs are covered, is expected to flow directly to local communities (Bradley, 2009). Both monetary and non-monetary benefits from the protection of the forest (e.g. in terms of NTFPs) are to be shared among the community members. One of the main policy docu-

COMMUNITY FORESTS	VILLAGES	POPULATION	CF MEMBERS (%)	CF SIZE (HA)
Angdong Bor	4	3,267	99	6,114
Chhouk Meas*	1	641	42	383
Dung Beng	4	1,611	100	1,843
Ou Yeay Kaov	1	577	74	960
Phaav	4	1,383	100	2,025
Prey Srornng*	5	3,058	71	6,344
Prey Srors	2	1,371	97	1,604
Ratanak Ruka	16	16,214	79	12,872
Rolus Thom	4	4,123	46	2,666
Romdoul Veasna	4	4,252	100	6,016
Samaky*	4	2,669	44	1,079
Sangkrouy Preychheu*	3	2,179	62	4,151
Sorng Rokavorn*	6	3,551	100	18,261
Total	58	44,896	81	64,318

Source: Pact 2012

ments calls for a pro-poor approach to benefit sharing to specifically ensure that the poorest households receive substantial benefits from the project (Terra Global, 2012). Drawing on empirical findings from Oddar Meanchey, the question of how costs and benefits from CF/REDD+ are shared within communities on the ground is addressed in this paper. First, some background on deforestation and migration in the province is provided, as the direct drivers of and the patterns inscribed in pressures on land and forest resources play an important role in the analysis of distributional equity within communities.

Deforestation and Migration Pressures in Oddar Meanchey

Complex factors at the local, national, and regional level drive deforestation in Cambodia – and in the Oddar Meanchey province in particular (Table 2). At the local level, agricultural expansion, forestland encroachment, and illegal logging as well as land speculation and firewood consumption lead to deforestation (Bradley, 2009; Strange, Theilade, Thea, Sloth, & Helles, 2007). At the national and regional level, large-scale Economic Land Con-

DEFORESTATION DRIVER	MIGRANTS	PRIVATE COMPANIES	LOCAL COMMUNITIES	HUNTERS	SOLDIERS	OTHER NON-LOCAL
Forest clearing for land sales	X		X			
Conversion to cropland	X	X	X			
Conversion to settlements	X		X			
Fuel wood gathering	X		X			
Forest fires induced to clear forest understory			X			
Forest fires induced by hunters				X		
Illegal logging for commercial on-sale		X			X	X
Timber harvesting for domestic use	X		X		X	
Large economic land concessions		X				
Timber concessions		X				

Source: Adapted from Terra Global (2012).

cessions (ELCs) as well as influential elites and the military drive deforestation through the encroachment on forests and crop land (Poffenberger, 2009). These actors are often reported to be involved in illegal logging of valuable timber (e.g. Sidon, 2011).

Behind these direct drivers are underlying causes contributing to deforestation such as poverty and population growth, pushing migrants to clear land and settle in the forest-rich remote provinces like Oddar Meanchey (UN-REDD, 2010). Weak forest sector governance, external commercial interests, ELCs granted by the government, and displacement of rural populations aggravate the problem (UN-REDD, 2010) with high levels of corruption and violence in the forestry sector also playing a role (Global Witness, 2007). Furthermore, the influx of poor, landless people to Oddar Meanchey and other forest-rich resource frontiers plays an important role in the competition for land and resources (United States Agency for International Development [USAID], 2004). Indeed, communities in the area are relatively young. A household survey conducted in the province shows that on average, people migrated to their present villages in 1999 with a steady rise of migration until the mid-2000s, when the migration rate leveled off (Blackburn, 2011). In a migration study, McMahon (2008) notes how community leaders in Oddar Meanchey around the turn of the century freely allowed newcomers to join and clear necessary land with available labor as the only apparent limitation. Recent years of violent upsurge and unrest at the Thai-Cambodian border has brought military families to the province, adding a further dimension to the migration pressure. For instance, more than 740 migrant families have moved into one of the CF areas over the past two years, claiming land for settlement and cultivation in local communities, while forestry officials have been unable to control their widespread clearance of forest (Bradley, 2012).

Underlying these deforestation and migration pressures are insecure and contested land tenure arrangements in Cambodia (So, 2010). Land tenure security and rights to carbon are central themes in REDD+ and essential to the discussion of benefit distribution (e.g. Sikor et al., 2010; Springate-Baginski & Wollenberg, 2010). Yeang (2012) analyzes tenure and REDD+ in Oddar Meanchey, arguing that in addition to securing tenure rights over land and forest resources of local communities in the project, tenure arrangements need to be continuously enforced in order to avoid overlapping claims. It is important to distinguish between *forest* tenure, which is strengthened under CF and REDD+ (Yeang, 2012), and *agricultural* tenure arrangements in the participating communities (Biddulph, 2011). While the rights to the forest, trees, and car-

bon are directly related to the implementation and success of REDD+, land rights and patterns for settlement and farming affect deforestation and benefit sharing in a less direct way. Based on research in Oddar Meanchey, Biddulph (2011) for instance argues that people with insecure access to agricultural land present a greater threat to the forests than people with secure access, as the latter have less incentive to clear patches of forest for land use. From this perspective, agricultural tenure is strongly linked to deforestation and in turn the success of CF/REDD+. The role of agricultural tenure for the distribution of costs and benefits within communities participating in CF/REDD+ in Oddar Meanchey are further discussed in this paper.

Equity in REDD+

McDermott and colleagues (2013) provide a comprehensive conceptual framework that identifies and brings together three dimensions of equity in REDD+, namely distributional, procedural, and contextual equity. Distributional equity is a major concern and widely discussed in the REDD+ literature, e.g. in terms of *which* actors should have the right to benefit from the program (Angelsen, Brockhaus, Sunderlin, & Verchot, 2012; van Noordwijk, Purnomo, Peskett, & Setion, 2008). Procedural equity relates to representation, participation, inclusion, and recognition in decision-making processes, while contextual equity concerns the underlying political processes and the social context; the latter issues are often overlooked and underplayed in the design of interventions such as REDD+ (Hansen, Lund, & Treue 2009; McDermott, Mahanty, & Schreckenber, 2013).

At the center of investigation, distributional equity provides the main theoretical anchoring in this paper for the assessment of how costs and benefits are shared within communities. In this context, the intra-community level represents the specific target and social scale of the study (McDermott et al., 2013), namely the individual and household level. The three dimensions of equity are not separate elements but highly interrelated and interdependent, and issues concerning procedural injustice and contextual dimensions are continuously present and affect distributional equity. In particular, social exclusion, constrains to access, and existing power structures are recurrent issues in REDD+ that can compromise distributional equity. Additional

insights in these matters are therefore provided in the following.

Threats to an Equitable Distribution of Benefits

The risk of social exclusion from forest benefits has been studied and documented in various forest conservation projects, indicating problems with elite capture and exclusion of certain groups (Edmunds & Wollenberg, 2003; Dahal, Larson, & Pacheco, 2010). Studies on community forestry groups in Nepal, which are at a more advanced stage than in Cambodia, point to the exclusion of certain disadvantaged user groups as a serious equity concern. Studies describe how poorer households benefit significantly less than wealthier households, as the poorer face more restricted access and are often excluded from the forest management decision-making body (Adhikari, Di Falco, & Lovett, 2004). Decision-making bodies are often dominated by wealthier groups who have greater levels of awareness, while poorer groups have limited information and greater time constraints (Malla, Neupane, & Branney, 2003). For instance, decisions by resource-rich groups also concern the principles applied for the distribution of benefits, e.g. whether benefits should be allocated in proportion to contribution (merit-based), in accordance with needs, or based on other criteria (McDermott et al., 2013). Such principles are central to distributional equity, in particular in contexts of procedural inequity, where disadvantaged groups are excluded from participation or decision-making or are less able to contribute to forest protection activities (Agarwal, 2001).

Paying special attention to the social context and structures within communities is likewise essential in order to understand how costs and benefits are shared. Patron-client systems are informal social structures, which can affect distributional equity. These structures are highly relevant in a Cambodian socio-political context and can play an important role in community-based forest protection programs such as CF/REDD+. Scott (1972) defines a patron-client relationship as a largely instrumental friendship in which an individual of higher socioeconomic status (patron) uses his or her influence and resources to provide protection or benefits for a person of lower status (client) who reciprocates by offering general support and assistance to the patron. Cambodian socio-political life is replete with such patronage networks involving exchange of resources and benefits between individuals (Hinton, 2005). Complex, interrelated networks of clients and powerful patrons are clearly prevalent

in the forestry sector (Global Witness, 2007; Le Billon, 2000, 2002). Since strong formal institutions are often absent or incomplete in this context, such informal institutions can emerge with socially shared rules that converge or diverge from formal rules (Helmke & Levitsky, 2004). Historically, patron-client structures have flourished in both colonial and post-colonial times, with brutal consequences in Cambodia during the Khmer Rouge regime in the late 1970s (Hinton, 2005). New external resources for patronage such as development programs have also been created, in which jobs, cash, and favors can flow down the network, and votes and support can flow upward (Ledgerwood, 1998; Scott, 1972). Such changes in the external environment may change the distribution of power and resources within a community, strengthening actors who benefit from a particular informal setup while weakening others (Helmke & Levitsky, 2004). In other words, patronage practices seem to co-evolve with the development of the country (e.g. Hughes, 2001; Ledgerwood, 1998, 2012). CF and REDD+ projects fall into this category of developments introducing decentralized control of physical and virtual forest benefits. With an electoral system, the leaders and committees are appointed by the members (RGC, 2003), providing the potential clients (CF members) with a new resource, namely the power to re-elect and support the appointed patron (CF leader). In return, the leader can use his or her discretionary power to control the access to forest resources, for instance, by distributing benefits such as employment (appointing selected patrol teams) and permits (to extract resources) (Ministry of Agriculture, Forestry and Fisheries [MAFF], 2006).

Methodology

The findings presented in this paper are mainly based on a case study conducted in Oddar Meanchey in 2011. Data primarily consist of semi-structured interviews with local villagers in five CF sites (eight villages in total, see Table 3).

The main interview questions revolved around respondents' crop land and land titles, their use of the forest and engagement in CF and REDD+ activities as well as their views on deforestation and their future plans for agricultural expansion. In total, 114 qualitative interviews were conducted (see Table 4 summarizing the main results). Interviews were conducted in Khmer (native language of one of the authors) and

Table 3: Description of the CFs and Villages Included in the Study		
COMMUNITY FOREST	VILLAGES INCLUDED IN STUDY	BRIEF DESCRIPTION
Chhouk Meas	Chouk Meas	Established in August 2004 as a response to increasing levels of deforestation. The CF covers 166 families.
Prey Srorng	Korki Kandal Sralau Srorng	Established in 2004 and covers 666 families. The forest is rich in timber resources and abundant wildlife, but was logged by a Thai company and influential elites between 1999 and 2003, and locals have cleared the forest land for farming.
Samaky	Ou Sramor Ou Anrae	Established in 2004 and covers 686 families. Historically, this CF was rich in high quality timber and abundant wildlife, but has been logged by locals and influential elites, and cleared to provide agricultural land.
Sangkrouy Preychheu	Day Thmey	Initiated in 2001 and covers 633 families. The forest holds important mammal and bird species and a Resin Enterprise Group was initiated in early 2010.
Sorng Rokavorn	Tom Nub Thmey Poum Thmey	Initiated in 2001 by the local monk, venerable Bun Saluth, who took the lead in setting up a “Monk’s forest”, which evolved into community forestry. Covers 982 families. One of the largest CFs, with many bird species and mammals, including endangered species.

** CF area based on CF Agreement*

Source: Pact (2011) Community Forestry profiles

ranged from 15 minutes to over 60 minutes. The selection of respondents was random and covered about 10 percent of the village residents. Being an explorative study and one of the first of its kind to qualitatively assess local impacts from CF/REDD+ in the province, a relatively open and flexible interview approach was chosen. This allowed for many follow-up questions based on the respondents’ answers, which often led the interview in unpredictable directions revealing useful information related to the three dimensions of equity. Relevant site-specific field observations were also an essential part of the data collection and subsequent analysis. For instance, wealth status was assessed and assigned for each respondent using a combination of infor-

mation gained from the individual interviews (e.g. amount of land, type of land title, and income sources) and field observations (e.g. type and location of settlement, clothes, and jewellery). Besides wealth, respondents were categorized according to their settlement location and entitlement to farm land, and their position and engagement in the CF. In-depth interviews and meetings with other stakeholders (government authorities, NGOs, and donors) were also conducted, and various secondary data sources were exploited.

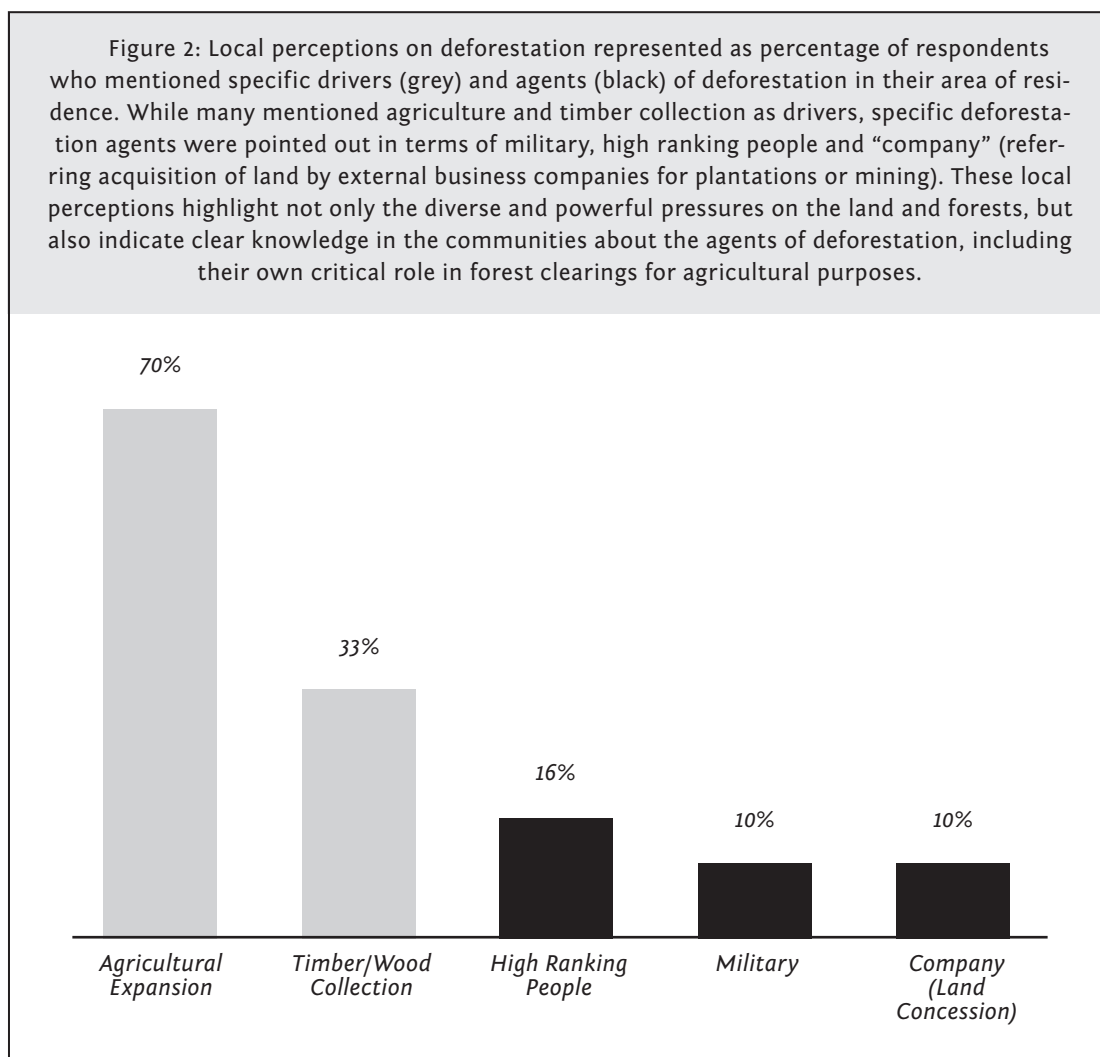
Deforestation, Forest Protection, and Equity

As outlined above, the extensive and rapid land-use changes and deforestation in the Oddar Meanchey province and throughout Cambodia show significant implications at the local community level. Similarly, forest protection initiatives such as CF/REDD+ lead to changes in the participating communities. Empirical findings from the case study in Oddar Meanchey suggest that both deforestation and forest protection affect equity in its various dimensions. Two aspects here are of particular relevance: First, to what extent deforestation and migration patterns coupled with contested

Table 4: The main socioeconomic data from case study conducted in CF/REDD+ communities in Oddar Meanchey province 2011.							
NUMBER OF RESPONDENTS	GENDER	AVERAGE AGE	WEALTH ASSESSMENT	CF MEMBERS	FARM LAND (AVERAGE)	DESIRE MORE LAND	EXPERIENCED EVICTIONS
114 (across 5 CFs and 8 villages)	50% f 50% m	44.3	Poor 29% Medium 45% Rich 27%	54% (13% involved in forest patrols)	3.6 ha (29% with land title*)	68%	25%
<i>*land title recognized by village chief, district authorities and/or the commune council</i>							

Source: UNHCR, 2000, p. 98.

tenure arrangements affect the poorest in the local communities; and second, to what extent are forest benefits from CF/REDD+ biased away from the poorest households, facilitated by a complicated web of constraints and social structures.



Source: Data collected by the authors

The Costs of Deforestation and Migration Among the Poorest

In Oddar Meanchey, findings show how the local perceptions on deforestation presented in Figure 2 confirm the drivers outlined in Table 1.

According to many respondents in the case study, village chiefs, local and district authorities as well as ‘people with guns’ are involved in capturing the benefits of natural resources. In one of the villages visited during the case study, several respondents reported how the village chief threatened them to sell their land to him at a low price, after which he would sell it to a company with substantial economic surplus. Such

examples of land grabbing⁴ and evictions, some involving threats, violence, and under-compensation, seem to be common in the province (Mengleng, 2011). Among the respondents, fewer than one in three had a land title⁵ formally recognized by authorities while one in four of the respondents was somehow affected by land grabbing. Typically, their previous agricultural land or settlement had been taken over by outsiders such as plantation companies or the military, forcing them to migrate; or some or all of their present land was demarcated for take-over. In Oddar Meanchey, the real or perceived threat of land grabbing led villagers in some of the visited sites to clear the forest land for agriculture in order to ‘claim’ it, thereby intensifying deforestation (Nathan & Boon, 2012). However, even if local or district authorities recognize a land title and communities have crops on the field, concession companies frequently take over the land, maybe with a small compensation or with the promise to hire workers from the villages.

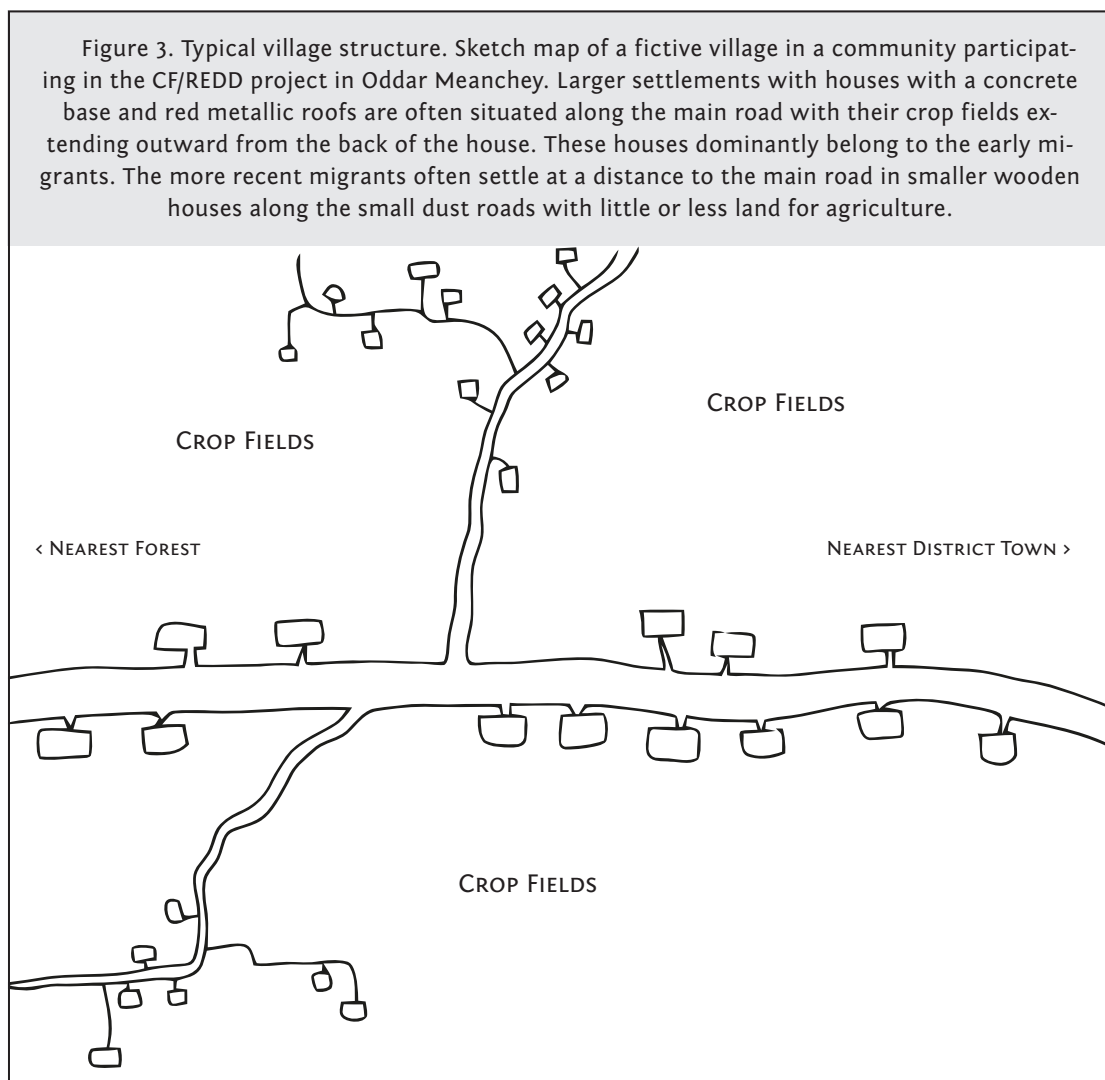
From an intra-community equity perspective, the findings from the case study indicate that land grabbing and companies’ demarcation of villagers’ land disproportionately affect the poorest households. Poorer households are more vulnerable and less resilient in a variety of ways. First, the empirical data and interviews suggest that better-off groups of respondents have more diverse and stable livelihood options in terms of larger land and more secure tenure as well as other sources of income. In contrast, the poorer respondents have no or less land, often without formal titles, and they rely more on forest resources such as non-timber forest products (NTFPs) and wood for charcoal production – resources which are in decline due to the rapid deforestation and land-use changes. Even with the extensive and on-going land grabbing in the area, the interviews revealed that the vast majority of respondents planned to expand their current agricultural land; however, these plans or desires were often constrained by lack of resources or available land. The opportunities to fulfill this desire diminish with the expansion of ELCs and the increased protection of forestland, which comes at a greater prize to the poor and landless that are short of other means to sustain their livelihoods.

Secondly, the migration and settlement dynamics in the communities also disadvantage the poor. As noted earlier, villages and communities visited during the case

4 In this paper, land grabbing refers to large-scale land acquisitions on villagers’ crop land, either legally granted by the government or through illegal, forced encroachment (for further discussions on land grabbing, see Anseeuw, Alden Wily, Cotula, & Taylor, 2012, p. 11, or De Schutter, 2011, who refers to land grabbing as the “acquisition or long-term lease of large areas of land by investors” (p.249)).

5 A formal land title is signed by the village chief and with stamps from the district authorities and/or the commune council, the latter considered more ‘secure’ than the signature only.

study were relatively young. On average, the respondents had moved to their respective villages about 10 years ago. The influx of people has historically been driven by relocations related to the actions, downfall, and aftermath of the Khmer Rouge regime (1975-1979, followed by unrest and civil war until the 1990s). More recently, the perceived opportunities for getting agricultural land in Oddar Meanchey have attracted the poor and landless from both adjacent provinces and the lower Mekong area. According to some of the older settlers interviewed, the first people who migrated to the villages could clear the forest for agriculture “based on their abilities” (personal communication, July 6, 2011). Today, the case study findings suggest that new migrants have to buy land from other villagers because there is no more free land available. Interviews and observations in Oddar Meanchey indicate that early migrants settled by (or formed) the main road, while recent migrants settle off the main road at smaller



Source: Authors

dirt roads (Figure 3). What is crucial to this settlement pattern is that land concessions are often planned and realized at a certain distance away from the main road. Consequently, the settlements and agricultural land of the poor located at a distance to the main road face a higher risk of land grabbing than the land near the main road belonging to the wealthier group.

With the presence of companies and the threat of losing land, poor villagers are then pushed to seek other means of survival. Without alternative sources of subsistence there appears to be no local safety net to alleviate the negative social consequences for the poorest groups. Several respondents stated in the interviews that they were depressed and left with no options but to work for hire or (illegally) migrate to neighboring countries to work at plantations under harsh conditions (Barney, 2009). In sum, the costs of deforestation and migration disproportionately affect the poorest groups. How benefits from the forest protection are allocated within communities is detailed below.

Benefits From Forest Protection: Constraints and Deliberate Exclusion

In the CF/REDD+ villages studied in Oddar Meanchey, the most vulnerable groups appear to be excluded from the benefits of CF (Bradley, 2012). Several constraints can hinder villagers from participating and enjoying the benefits of forest protection and thereby lead to distributional inequity. By analyzing recurring themes in the interviews, four types of constraints became apparent: *disabilities* such as physical health (e.g. amputee or old age), *resources* such as money to buy petrol for patrolling or time to engage in CF activities, *distance* to the forest such as when limited resources (e.g. mushrooms) are captured by the villagers residing closer to the resource, and *information* such as being present during recruitment and having access to knowledge about activities. For instance, a village deputy stated that his CF now covers more than 100 families, but about 10 families were not members because they lived too far from the forest or were sick. Four male respondents, all amputees (missing a leg or a foot), did not engage in the CF because of their disabilities. One of them explained this was because of a requirement to join activities like patrolling. Others said they got no information about enrolment, including an elderly woman who claimed she was not informed because she was old and incapable of contributing to any CF activities. Several respondents said they did

not participate in activities because they were too busy working or due to a lack of financial support for petrol to travel to the forest.

All four constraints can, to different degrees or acting in synergy, limit the ability of a person to join the CF and/or participate actively, in particular in patrolling activities, during which many forest products (e.g. mushroom, fish, fuel wood) can be extracted. In turn, such constraints can exclude a person or household from enjoying the forest benefits because of their lack of contribution to the CF. The background for applying distributive principles based on contribution can be found in the CF regulations. While the Sub-decree on CF management states that Cambodian citizens living within the participating communities can be members, it also lists the roles and duties of community forestry members, including participation in forest resources management, in monitoring the use of community forest resources, and in conserving, protecting, and planting the forest (RGC, 2003). All these duties require a certain level of good health and available resources not likely to be present in all strata of a community. Whether these legal requirements are even feasible and how and to what extent they are followed across the CFs is likely to vary.

According to the Sub-decree, the specific benefit sharing principles are part of the CF regulations passed by the individual CF Management Committees (RGC, 2003, Article 5.8) who engage in decision-making and contribute to forest protection. Empirical findings from five CFs show that in many instances, only the better-off households can afford to engage and participate actively in the management of the CF, consequently dominating decision-making bodies and enjoying the benefits of forest protection. The case study also indicates that the requirements of active participation are explicitly interpreted at the local level when it comes to extracting forest benefits. This is true both for non-members or non-active members, who willingly or less willingly disengage with the CF, and for the CF committee and other active members, who expect to get a larger share of the forest resources, including expected benefits from carbon funding. As told by a former CF patroller (personal communication, Samaky CF, July 6, 2011):

Subcommittee told me I could collect timber during patrols, but [I] never got the benefits from the sale, which were shared among other patrollers and [CF] committee.

From the perspective of the CF committee, the biased distribution of benefits is considered fair, as reflected in interviews with two CF leaders:

[We/I] don't want to distribute in cash to all members . . . The [carbon] funds will contribute to village development, and cash will provide to the members who are active in patrol activities, to fire breaker building and so on. For those who are not active, they will not get any cash. (personal communication, Samaky CF, July 2, 2011)

The committees and members who are active will get benefits from the [carbon] project, such as the patrol team for example. (personal communication, Prey Srornng CF, July 13, 2011)

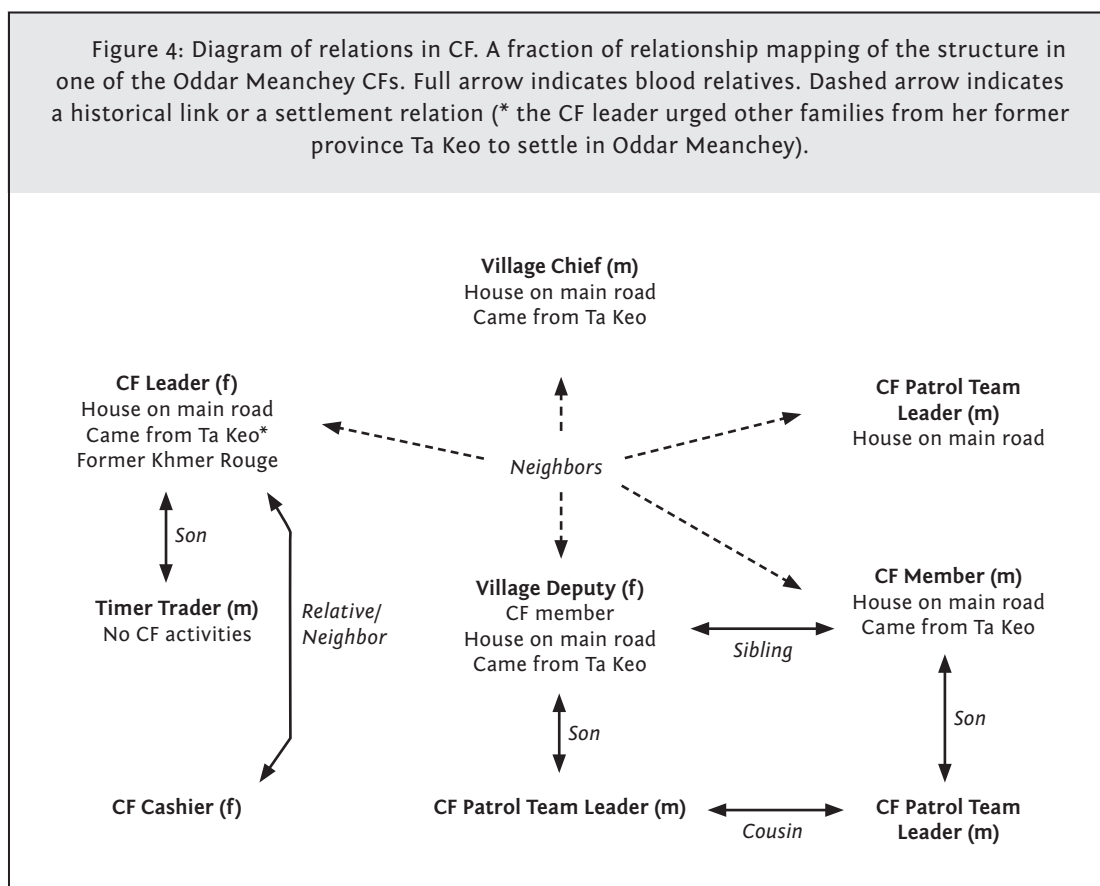
Moreover, the empirical findings indicated a risk of inequitable distribution of benefits when some CF members were deliberately kept out of the information flow and thereby not able to participate. This in turn ensures a larger share of the benefits for the other members. It can happen when the CF leader calls in (or refrains from calling) individual members to participate in patrols or delegates this task to selected patrol team leaders. A few respondents directly accused high level CF members, who control the information flows and delegates tasks, of (de-)selecting certain members when benefits were ready to be extracted. Several indications of such deliberate exclusion and unequal benefit sharing were found, for instance as put forward in an interview with a former CF patroller:

[I] used to be active [in CF], but stopped being called to patrols and other activities five months ago . . . Other CF members share the benefits among them. [I] didn't get any benefits - other members do - [there is] favoritism of a closed group of related patrollers who keep the information and benefits to themselves. (personal communication, Samaky CF, July 5, 2011)

Following up on statements as the ones presented above, a further investigation of the CF structures was conducted in order to explore the internal relations among some of the active CF members. This study revealed that many members of the management committees and forest patrol teams were often relatives, neighbors, or otherwise closely acquainted, e.g. with a shared history of settlement, as reflected in Figure 4. Finally, some respondents also directly accused their CF committee of illegal activities depleting the forest for personal gain, as exemplified by a male interviewee:

Some members collect valuable, endangered timber for sale. [There are] no big trees left. Subcommittee and leader [are] involved. Now, a few people work with patrolling and do timber business" (personal communication, Samaky CF, July 6, 2011).

These accusations and their relation to the social structures in the CFs are discussed below from an equity perspective together with the other findings from the case study.



Source: Data collected by the authors

Discussion and Conclusion

Put together, the findings from the case study in Oddar Meanchey indicate the following: The poorest households are often more recent migrants with less secure tenure and risky settlement locations. As a result, this group is disproportionately affected by land-use changes in terms of deforestation and land grabbing. Meanwhile, the sharing of the benefits from protecting the remaining patches of forest seem to be biased away from the poorest households, facilitated by various constrains and social exclusion. In turn, the risk of inequity is two-fold, as both costs and benefits are shared unevenly within communities, creating a ‘double inequity’. The case study specifically indicates that the poor are more reliant on forest products due to less agricultural land and more insecure tenure. In turn, as the poorest respondents are excluded or constrained from enjoying the benefits of the remaining forest protected under CF/REDD+, this minimizes the role of the forest in providing livelihood alternatives or supplements. This poses

a serious concern for reaching the equity objectives and social co-benefits in REDD+ (UN-REDD, 2009). Although framed as constraints to participation and deliberate exclusion, these types of social exclusion can also be viewed from a broader “access” perspective (Ribot & Peluso, 2003) as “the ability to derive benefit from things” (p. 153). In this perspective, access includes a wider range of social relationships that constrain or enable benefits from resource use. Shaping how benefits are gained, controlled, and maintained, the mechanisms of access also include technology, capital, markets, labor, knowledge, authority, and identities. Several of the issues covered in this analysis clearly relate to these mechanisms, such as knowledge (e.g. information about CF enrolment and patrols), authority (legal or customary rights to manage resources), labor (e.g. forest patrol), and social relations and identity (e.g. distribution of and exclusion from benefits). In particular, identity and social relations were shown to profoundly affect access and distributional equity, based on CF membership positions and forest patrol groupings facilitated by prevailing power structures. Empirical findings specifically raise concerns about the presence of patron-client relations in the CF management with their interdependencies and mutual exchange of benefits. The social structures seem to pose a risk, not only to the equitable distribution of benefits but also in terms of facilitation of illegal forest activities, such as logging of valuable timber, within the core clientele. Combined with the exclusion of peripheral members, such activities can potentially flourish and be effectively covered-up to the benefit of the patron and the selected core clients. The forest offenders could thereby be the same people who are supposed to monitor illegal activities, and they could easily blame outsiders or the lack of funding for protection activities to cover their own illegal extraction. However, such potential illegal activities are frequency-dependent, as too much illegal harvesting will harm project outcomes and in turn reduce carbon funds, while some illegal harvesting might go unnoticed. It also depends on whether the long-term perspective of forest protection outcompetes the short-term gains in the offenders’ view. Arguably, even with some slip, the illegal activities are fewer than with no protection at all. The management committees and in particular the CF leader, who are selected to represent the community, are granted an important domain of power to shape resource access and rights on the ground (Larson, Marfo, Cronkleton, & Pulhin, 2010). This is of concern in relation to procedural equity and benefit sharing – at least on the daily basis, where the elected committee acts at the local level without interference from forestry au-

thorities and CF/REDD+ implementing agencies, who visit the sites and meet with the leaders only when time and resources allow.

The findings presented in this paper question the common development discourse arguing that democratic institutions play a largely positive role in catalyzing pro-poor policies (see Hickey, 2009). Instead, the formal democracy in CF structure and procedures tend to reinforce social and economic inequities in the community (Young, 2000) as benefits are captured and distributed in already present informal institutions. Thus, while such community-based programs seem ideal, there is a strong likelihood that the newly created structures will come to mirror prevailing patron-client structures that dominate the region, and it is unreasonable to assume that forming new committees through elections will automatically create a nonbiased and representative body (Ledgerwood, 1998). The practical outcome of the forest tenure arrangements in CF/REDD+ in Oddar Meanchey then falls between a statutory system with legally defined and enforced rules and rights, such as CF regulations, and a customary system with rules that are socially defined, where some community members participate in decision-making while simultaneously taking on exclusion and monitoring responsibilities (Doherty & Schroeder, 2009). The case study findings suggest that simply formalizing customary tenure will not automatically yield positive outcomes to all members of communities. Thus, even when laws are seemingly fair, they can be unevenly implemented or selectively enforced, and are thereby not sufficient to overcome existing inequities (Larson & Ribot, 2007). From a more practical perspective, policies promoting participation and assisting poor and marginalized groups across rural Cambodia and beyond require the engagement of such private power structures at the village level, even at the risk of legitimizing and becoming reliant upon these networks for the implementation of projects (Hughes, 2001). This in turn presents a dilemma and a challenge for policy makers and practitioners on how to integrate development goals with culturally embedded power relations in the implementation of policies such as REDD+. In the case presented here, the biased distribution of both costs and benefits creates a double inequity for the most vulnerable groups in the participating local communities; quite contrary to the ambitious social objectives of the forest protection programs. From a policy perspective, such adverse impacts on local actors could even compromise the overall effectiveness of REDD+ (Doherty & Schroeder, 2011), which highlights the relevance of assessing the local equity dimensions.

Tackling the social implications of deforestation and forest protection in order to ensure more equity is not an easy task. However, based on the findings and analyses in this paper, five recommendations (to researchers, donors, and practitioners) on how to address the sharing of benefits from remaining protected forests are presented (see also suggestions by Mahanty, Burslem, & Lee, 2007).

Besides strengthening formal institutions as a catalyst of informal institution change over time (Helmke & Levitsky, 2004), one of the greatest challenges here and now lies in how to ensure that forest management committees and leaders are more representative and accountable to the community. Specific measures suggested to ensure this could be:

1. Granting special consideration to non-members and to members who are not active in CF. Project implementers who are responsible for reaching social objectives should strive to ensure that benefit sharing principles are agreed on and implemented accordingly, such as a need-based or pro-poor approach outlined in the Project Design document (Terra Global, 2012, see the fourth point below);
2. Using a rotational system for patrol teams and committee members (the five-year duration could potentially be reduced and re-election prohibited) to increase participation and representation. However, the time limit could potentially *enhance* illegal activities as offenders would seek to optimize benefits during their time of authority. This could potentially be counteracted by:
3. Involving a so-called external insider in each CF management group as a respected figure who can mediate conflicts and improve internal unity (Dahal & Adhikari, 2008). Specifically for Cambodia, greater involvement of Buddhist monks beyond Sorng Rokavorn CF which is mainly managed by monks (e.g. Brady & Rukavorn, 2011) might mitigate risks of exclusion and illegal harvesting. Besides these three specific measures, more comprehensive interventions are needed:
4. Pro-poor initiatives and policies⁶ should be considered, such as special income-generating projects and land allocation (Dahal et al., 2010) and pro-poor benefit sharing mechanisms to balance the equity in the communities and create incentives towards forest protection. Finally, to alleviate detrimental social impacts

⁶ For the Oddar Meanchey REDD+ project, specific social objectives and activities have been outlined based on the findings from this and other studies, including improved inclusion and representation of the poorest in management committees and CF activities, frequent visits to vulnerable households, and continued research and surveys to capture changes in livelihoods (Terra Global, 2012, p. 164).

- from both land grabbing and inequity in CF/REDD+.
5. Strengthening the conflict management capacity is needed for building trust and common understandings, for example, with the establishment of legal recourse mechanisms to ensure people's rights. In order to assess and address these social dimensions at the intra-community level, specific mechanisms and minimum standards for benefit sharing are needed (Mahanty et al., 2007), supported by comprehensive social assessments including more qualitative indicators such as indicators reflecting people's ability to participate in decision making and to access resources (Pasgaard, 2013). Importantly, in-depth qualitative research is valuable to supplement quantitative household surveys at individual sites.

The scenario described in this paper is probably not unique to Oddar Meanchey. Rather, it is likely that other communities in Cambodia and throughout South-East Asia, where forest protection is high on the agenda, exhibit similar social imbalances and risk of enhanced inequity. The findings indicate an urgent need to better address distributional equity in community-based forest protection like CF/REDD+. Such programs cannot afford to further increase the already skewed social imbalance in many local communities, as it threatens the global objectives of reducing deforestation whilst encouraging environmental and social co-benefits.

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