



Comparative assessment of forest revenue redistribution mechanisms in Cameroon

Lessons for REDD+ benefit sharing

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Patrice Metennou Researcher for Center for International Forestry Research (CIFOR) interviewing Cyprien Mvondo a charcoal burner from the Ovangoul village, Center Region, Cameroon.

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Terms and abbreviations

CFAF	Francs de la Coopération Financière en Afrique
COVAREF	Comité de Valorisation des Ressources Fauniques (Wildlife Resource Enhancement Committees)
FEICOM	Fonds D'Intervention et d'Équipement Communal (Special Fund for Equipment and Inter-communal Intervention)
MINEF	Ministère de l'environnement et des Forêts (Ministry of Environment and Forest)
MINFI	Ministère des Finances (Ministry of Finance)
MINFOF	Ministère des Forêts et de la Faune (Ministry of Forests and Wildlife)
MINATD	Ministère de l'administration territoriale et de la décentralisation
MRV	Monitoring, Reporting, and Verification
NGO	Non-governmental organization
NTFP	Non-timber forest products
PSRF	Programme de Sécurisation des Recettes Forestières (Enhanced Forest Revenue Program)
REDD+	Reducing emissions from deforestation and forest degradation and enhancing forest carbon stocks
SBSTA	Subsidiary Body for Scientific and Technological Advice

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The topic of this study was identified as a knowledge gap and an issue of high priority during the "REDD+ Benefit Sharing Workshop" held in Yaoundé on 28th March 2014 as the Cameroon REDD+ stakeholders felt that it is critical to assess the many existing forest revenue redistribution mechanisms to learn from the experiences and to not create overlaps. We responded to the call by carrying out this study, and we hope that the information in this working paper will contribute towards the process of designing an effective, efficient and equitable REDD+ benefit sharing mechanism in Cameroon.

The authors are grateful for the efforts of the field research team who were involved in the data collection, notably Thanian Shiri (University of Yaoundé), Onana Evegue Annite (University of Yaoundé 1), Sam Donal Assembe Ndoum (University of Yaoundé 2) and Guy Bangué Bisseni (University of Dschang).

Executive summary

Cameroon has long established legal mechanisms for the redistribution of forest and wildlife revenues by which economic operators are to pay royalties that are transferred to local forest communities. An analysis of forest and wildlife royalties in Cameroon offers several lessons for the future design and implementation of REDD+ benefit sharing. This paper draws on a legal review and field data to assess the implementation processes and outcomes of forest and wildlife revenues in Cameroon, with an emphasis on the socio-distributional aspects.

Central to this analysis are four types of revenue redistribution mechanisms, created by the government with the aim of enabling local councils and local communities to receive some portion of the forest and wildlife revenues and be involved in forest resource management. The key objective of the revenue redistribution policy is to support poverty reduction and local development. Each of these four revenue sharing mechanisms involves specific governance and institutional arrangements: Annual Forest Fees, Council Forest Revenues, Wildlife Royalties, and Community Forest Revenue. This study focuses on implementation processes and outcomes of these mechanisms in 15 villages in four council areas, namely Yokadouma (Boumba and Ngoko division, East region), and Nieté, Lokoundje and Akom 2 (Ocean division, South region). We conducted 15 focus group discussions and 72 household questionnaires and interviews with key experts and authorities. We assessed these mechanisms using a 3E (effectiveness, efficiency and equity) lens to draw lessons for designing REDD+ benefit sharing.

The findings indicate that the forestry and wildlife revenue redistribution mechanisms in Cameroon do not entirely fulfill the 3E criteria, and that the trade-offs between the effectiveness, efficiency and equity criteria are not always clear or transparent. Specifically, the study results reveal that the institutionalized forest and wildlife revenue sharing models have not adequately achieved the policy objectives of reducing rural poverty and promoting local development. The poor outcomes are illustrated by the low development condition of local communities in all four council areas that

are our study sites (effectiveness criterion). There is also evidence that suggests that all the revenue redistribution mechanisms have high transaction costs, which hinders local communities from taking advantage of the presented opportunities (efficiency criterion). Lastly, the procedural and contextual dimensions of social justice underlying all environmental policies are poor (equity criterion), notably for women and marginalized groups such as the Pygmy minority. Despite the well-intentioned objectives behind Cameroon's forest and wildlife revenue redistribution models, the weak governance prevalent in the country's sociopolitical institutions at both national and local levels, and poor institutional processes have meant that the models do not manage to adequately achieve their goals.

For the current models of forest and wildlife revenue redistribution to be relevant for REDD+, our assessment highlighted the following shortcomings: (i) the political economy of Cameroon's forestry sector has colored the design of the revenue sharing mechanisms and exacerbated shortcomings and malpractices of the prevailing system; (ii) the central administration and authorities are highly present throughout the redistribution process and this has overridden the powers devolved to local authorities, and led to recentralization characterized by unstable framework regulations and benefit-sharing grids; (iii) the bureaucracy of the current mechanisms has caused high transaction costs for local participants and enabled related rent capture by some forest and political elites; (iv) the current models have contributed to and reinforced the political and socioeconomic marginalization of forest minorities such as Pygmies (*Baka* and *Bagyeli*) and women; and (v) local actors have weak capacity for influencing local forest governance. Possible solutions include distributing forest revenues from companies or councils directly to communities, and designing a revenue redistribution system that is based on egalitarian theory – whereby the prevailing understanding is that equal distribution is equitable/fair – and which minimizes opportunities for corruption and malpractice.

There is potential to address the shortcomings of Cameroon's current revenue redistribution

mechanisms through institutional reform of forest finance committees and financial flows, improvement of governance practices through the establishment of a participative financial monitoring, reporting and verification system, and distributing benefits in a more productive form (i.e. non-cash) that can contribute more effectively to sustained local development. Any future mechanism for benefit sharing within the framework of REDD+ in Cameroon should avoid duplicating or reinforcing the systemic regulatory, procedural and governance flaws inherent in the current forest and wildlife revenue-redistribution models. In this respect, the national REDD+ program could begin to prepare and adopt, in a participatory manner, a series of socio-environmental safeguards based on the principles adopted at the Conference of the Parties in Warsaw and Cancun, and concluded at 2015 Bonn Climate Change conference, and on lessons

from the country's own experience in the sharing of revenues from forest, wildlife, land and related sectors. A multi-stakeholder approach to identifying the actual and potential risks of a REDD+ benefit-sharing mechanism will be critical to the legitimacy of the process. It will also be important to clarify Cameroon's specific objectives for REDD+, to identify beneficiaries and comparatively assess the pros and cons of particular instruments, institutions, rules, procedures, modes of local community representation, modes of access to information and styles of governance in the design of the benefit sharing mechanism. Finally, the identification of criteria and indicators for the evaluation of safeguards in both forest and wildlife revenue-redistribution mechanisms and REDD+ benefit sharing will be important to ensure socio-environmental sustainability in the long term.

Introduction

Most tropical forests in developing countries are owned and administered by government bodies. Timber from these forests is sold to concessionaires – companies granted harvesting rights – at charges established by government agencies rather than by markets (Gillis 1980; Amacher et al. 2001). The most common charges are royalties, which are typically paid at a uniform rate (or rent) calculated according to the number of logs extracted from the forest, and not on the number of standing trees (Vincent 1990). Many studies have called attention to the negative impacts of the mispricing of royalties (Repetto and Gillis 1988) and how inefficient timber royalty systems drive non-sustainable forestry practices (Vincent 1990). However, forest royalties can make significant contributions to government revenues and domestic growth (Amacher et al. 2001). What is less studied is the redistribution of these revenues within society, given the nature of forests as a public good.

In Cameroon, land, forestry and wildlife royalties are levied by the State for the use of natural resources (Lipietz 1998). The two main legal instruments for the payment and redistribution of these royalties are contained in Ordinance No. 74-1 of 6 July 1974 to Establish Rules Governing Land, and Law No. 94 of 20 January 1994 on Forestry, Wildlife and Fisheries Regulations. The key objective of the forest and wildlife revenue redistribution policies is to support poverty reduction and local development of local forest communities. This study examines the distribution of these natural resource royalties, with an emphasis on the socio-distributional aspects, to draw lessons for REDD+. REDD+ is a payment mechanism to compensate developing countries and other actors who contribute to efforts to reduce emissions from deforestation and forest degradation (Angelsen 2009; Wertz-Kanounnikoff and Angelsen 2009). Revenue sharing within the REDD+ framework is a vital incentive for actors to initiate behavior change regarding forest resource conservation (Agarwal and Nairin 1991; Peskett 2011). However, revenue or benefit sharing is not specific to the REDD+ process. The model is common in the mining, hydrocarbons, forestry,

conservation and development sectors (Peskett 2011; Luttrell et al. 2013). Thus, the strengths and weaknesses of these models can inform the design of a revenue-sharing mechanism for REDD+ (Luttrell et al. 2013).

Based on Luttrell et al. (2013), benefit sharing is the distribution of the net direct and indirect gains derived from the implementation of the REDD+ mechanism. This study, therefore, focuses on four mechanisms used for the distribution of the forest and wildlife revenues in Cameroon: (i) Annual Forest Fees, (ii) Council Forest Revenues, (iii) Wildlife Royalties, and (iv) Community Forest Revenue. Many studies have already been conducted on this topic (e.g. Bigombé 2003; Oyono et al. 2006; Lescuyer et al. 2008; Oyono et al. 2009; Bigombé 2010; Cerutti et al. 2010; Assembe-Mvondo et al. 2013), however this study has dual significance. First, it makes a comparative evaluation of the different revenue redistribution mechanisms based on three criteria: (i) **effectiveness**, which refers to the performance of the mechanism to achieve local development and reduce poverty (Lindhjem et al. 2010), (ii) **efficiency**, which refers to the extent to which the revenue redistribution mechanism enables a more cost-effective achievement of the policy objective (OECD 2007) and the types of costs incurred in its implementation; and (iii) **equity**, which relates to the distributional aspects of associated costs and benefits, procedural aspects of participatory decision-making and specific contexts that shape stakeholders' perceptions of equity (Angelsen 2009; Brown and Corbera 2003, McDermott et al. 2012). Second, the study draws lessons that could help in design of a national REDD+ policy mechanism such as benefit sharing. The main research questions are (i) to what extent are the existing forest and wildlife benefit-sharing mechanisms in Cameroon effective, efficient and equitable (examining in particular, local perceptions of equity); and (ii) what lessons from current practice can help design the future REDD+ benefit-sharing mechanism.

The paper is organized as follows: Section 1 clarifies on the legal and regulatory frameworks of forest and wildlife revenue redistribution. The methods used in the study and details of the study areas are then presented in Section 2, and the data and

results in Section 3. The main findings of the study are discussed in Section 4. The paper concludes in Section 5 with final thoughts and recommendations for how Cameroon can adapt/improve these mechanisms for 3E REDD+ benefit sharing.

1 Legal and regulatory frameworks of forest and wildlife revenue redistribution

Environmental management policies have social consequences, especially on equity (Bagnoli et al. 2008; Dietz and Atkinson 2010). Policy implementation costs are often felt locally where the population is least capable of covering them. Such costs are typically borne by those whose access to biodiversity resources is constrained due to direct regulations (e.g., protected area establishment) or whose assets are affected by biodiversity enhancement. In addition, many people who are not directly dependent on the biodiversity resources or protected area often benefit indirectly from such policies. Thus, both direct and indirect gains from environmental policy can influence how equitable the redistribution of forest and wildlife revenue is. Box 1 presents the various goals of Cameroon's forestry and environment policies, where forest revenue redistribution for local development is one of the priorities.

Until 1994, the forest taxation system in Cameroon was mainly based on the assessment of undressed timber exports to generate revenue (Topa et al. 2009). The taxation system introduced by the 1994 forestry reform sought to ensure equitable distribution of forest revenue among non-state actors (Karsenty 2000; Bigombé 2003, 2010). In

this regard, Section 66 (1) of Law No. 94 of 20 January 1994 to lay down Forestry, Wildlife and Fisheries Regulations in Cameroon provides that annual forestry fees shall be assessed on the basis of surface area and that the rate shall be fixed by the 1998 Finance Law (see Table 1). These provisions are supplemented by those of Section 14 (2) of Law No. 98/9 of 1 July 1998: Finance Law of the Republic of Cameroon, which fixed the annual forestry fee at CFAF 1500/ha for forest concessions and CFAF 2500/ha for the exploitation of sales of standing volume. The same provisions provide for the distribution of the said annual forestry fee as follows: 50% for the State, 40% for local councils and 10% for bordering villages. Joint Order No. 122 of 29 April 1998 was issued to lay down conditions for the use of revenue derived from forestry fees allocated to villages. When it was found to be ineffective, this regulatory instrument was replaced by another joint order issued on 3 June 2010, which was subsequently repealed because of difficulties with implementation and because council officials argued that some of its provisions violated the autonomy of councils. It was replaced by Joint Order No. 76/MINADT/MINFI/MINFOF of 26 June 2012 to lay down conditions for the planning, use and monitoring of the

Box 1. Forestry and environment policy goals in Cameroon (derived from MINEF, 2003).

1. Sustainable forest management: the exploitation of the productive forest of the permanent national estate within the framework of management, which ensures the sustainability of the ecosystem through a 30-year rotation.
2. Contribution to economic growth and poverty alleviation: the production of tax revenues, part of which are passed back to local councils and communities, job creation in the wood subsector and establishment of community forest directly managed by the communities.
3. Participatory management with the involvement of all the stakeholders: consultation with civil society and private sector in the decision-making process, increased responsibility for rural populations in managing forests of the national estate, and openness to permanent dialogue with the international community.
4. Biodiversity conservation within a national network of managed protected areas and production forests.
5. Capacity-strengthening for the public sector in its basic functions.
6. The establishment of a regulatory framework favorable to the development of the private sector.
7. The establishment of coherence within the land ownership system: allocation of land to priority uses through the definition of a zoning plan.
8. Improved governance: clarification and simplification of rules, controls on corruption, increased transparency, and systematic public information sharing.

Table 1. Summary of the types of forest, wildlife and land revenues studied derived from MINFOF (2012).

Type of revenue	Legal and regulatory bases	Distribution grid	Type of community investments	Ownership of forest land
Annual forestry fee	Section 66 of the Forestry, Wildlife and Fisheries Law; Section 14 of the 1998 Finance Law; Article 3 of the 2012 Joint Order No. 76/ MINADT/ MINFI/ MINFOF	> 50% for the State > 20% for councils > 20% for subsidies > 10% for surrounding villages	Water supply; rural electrification; construction and maintenance of bridges; sports equipment; construction and maintenance of schools; construction and maintenance of health centers; purchase of medicines; reforestation and other socioeconomic projects	State property identified as permanent forest for production (forest concession) Local communities and indigenous people only have user rights
Council forest revenue	Article 5 of the 2012 Joint Order No. 76/ MINADT/ MINFI/ MINFOF	> 30% for surrounding villages > 70% for councils	Investments similar to those financed by annual forestry fees	Council property that is part of a permanent forest domain for production purposes. Local communities and indigenous people still have user rights
Community forest revenue	Article 7 of the 2012 Joint Order No. 76/ MINADT/ MINFI/ MINFOF	> 100% for village communities	Community investments provided for in the simplified forest management plan	National property that is part of the non-permanent forest domain. The State is the custodian and local communities and indigenous people could be recognized as customary owners
Wildlife royalty	Article 8 of the 2012 Joint Order No. 76/ MINADT/ MINFI/ MINFOF	> 50% for the State > 40% for local councils concerned > 10% for surrounding villages	Community investments similar to those financed by annual forestry fees	State property characterized as per that generating an annual forestry fee
Annual land revenue	Article 17 of the 1976 Decree No. 76-166	> 40% for the State > 40% for local councils > 20% for surrounding villages	Financing of public infrastructure for the community	National property characterized as per that generating community forest revenue

management of forest and wildlife revenue allocated to councils and local communities.

The new configuration of the forest and wildlife revenue allocated to municipal councils and local village communities is defined by Joint Order No. 76/MINADT/MINFI/MINFOF of 2012 and the legal basis of the annual land fee is set out in Article 17 of Decree No. 76-166 of 27 April 1976 (see

Table 1). According to Article 25 of the Joint Order No. 76/MINADT/MINFI/MINFOF, the forest and wildlife revenue allocated to municipal councils and local communities are public funds and its management is subject to supervision by the relevant state services.

However, Article 243 of the recent 2015 Finance Law has set up a new Annual Forestry Fee grid:

50% for the State and 50% for councils. This new grid contradicts the provisions of forest and other administrative decentralization laws. Notably it cancels the 10% of the Annual Forestry Fee allocated to local communities. To some extent,

such administrative practice can be qualified as tentative recentralization by the Cameroonian central government, characterized by communities having less financial autonomy and weaker political autonomy (Oyono 2004a).

2 Methodology and characteristics of study sites

2.1 Methodology

There are many factors that impact individuals' motivation toward sustainable forest management and conservation, including procedural and distributive fairness (Vatn 2010). REDD+ and payments for ecosystem services are economic incentives that are expected to increase motivation by providing additional benefits to or compensation for the costs of sustainable forest management and conservation. However, perceptions of unfairness can undermine the effectiveness of these incentives even if they provide a net benefit (Pascual et al. 2010). Powerful interests tend to influence the design of benefit-sharing mechanisms to reinforce prevailing structures, even if flawed (Brockhaus et al. 2014a). Consequently, individuals' perception of fairness and their own net benefit can have a substantial impact on the participation of the wider community and thus the efficacy of such incentives (Sommerville et al. 2010). Although the implicit or explicit promotion of 'equity' has become an integral part of many policy instruments/interventions (McDermott et al. 2012; Skutsch 2013), it is often unclear if equity refers to participation in decision-making or distribution of benefits or other. For example, goals in the Forest Carbon Partnership Facility REDD+ Readiness Preparation Proposals often include implementation equity in benefit sharing, but this is left abstract and vague (Skutsch 2013).

The objective of this study was to understand how existing forest and wildlife benefit-sharing mechanisms are operationalized in Cameroon and if these mechanisms are effective, efficient and equitable. We also aimed to understand the local perceptions at various levels (i.e. household, village and council) of the performance of these benefit-sharing mechanisms, focusing on equity/fairness, and provide suggestions for improving the operationalization of equity in these mechanisms. To do so, we examined available official statistics on the PSRF¹ and at local levels, on the flows of revenues from national to local levels. We then

1 The *Programme de Sécurisation des Recettes Forestières* (PSRF) is a joint program between the Ministry of Finance and Ministry of Forests and Wildlife. Under the General Directorate of Taxation, it is charged with calculating, collecting, managing and verifying all forest taxes.

compared that with data gained from local revenue management institutions or committees during the field research.

Data for the study were collected through a combination of a literature review on the different revenue sharing mechanisms in the forest sector in Cameroon, legal review on the laws and policies related to the distribution of forest and wildlife revenues, focus group discussions with communities at selected research sites, and in-depth interviews with key experts and authorities at various levels. In the initial desk-based preparation phase, the abundant literature on revenue distribution in Cameroon and the relevant legal and regulatory instruments in force were reviewed. Two types of questionnaires were designed: a semi-open questionnaire to be administered in focus group discussions at all the villages and a household questionnaire to understand socioeconomic parameters and livelihoods, and local development dynamics. These two survey instruments were complemented by interviews with key respondents in municipal councils and local NGOs, and local officials of the Ministry of Forestry and Wildlife, and the Ministry of State Property, Surveys and Land Tenure.

The second phase consisted of two field trips to the main site lasting 10 days (Yokadouma Council) and to the secondary site (three councils located near the seaside town of Kribi: Nieté, Lokoundje and Akom 2) lasting seven days.² In the main site, field visits were made to eleven villages, and in the secondary site, field visits were made to four villages (see Table 2). The data on the following socioeconomic variables were collected during focus group discussions comprising between 15 to 20 people: demographic, ethnographic and gender data; type of revenues received; existence of a revenue management committee; type of socio-economic activities; identification of the community infrastructure built using forestry revenue; amounts paid to villages; terms and

2 Yokadouma Council was considered the main site due to the total amount of forest revenues received.

Table 2. The councils, villages and number of households surveyed.

Council	Focal villages	Number of households surveyed
Yokadouma	Zoulabot Nouveau	7
	Madjoué	3
	Mbol 12	5
	Landjoue1	8
	Moampack	6
	Bonda	1
	Mezion	6
	Djalobekoe	4
	Mopouo	5
Nieté	Nko'olong	12
	Bidou III	8
Lokoundje	Bidou II	7
Akom 2	Ndja bi lobe	-
Total		72

conditions of access to community infrastructure; services and benefits from forest stands; perceptions of revenue-distribution mechanisms; and perceptions of the impact of revenue received on the living standards of local inhabitants. The household questionnaire was administered to ten households in each of the villages. It used similar parameters to those of the focus groups, but concentrated on the impact of community revenue on the living standards of the households, conditions of access to and management of land and forest resources, and the level of household participation in community activities related to the management of revenue. Individual interviews were held with heads of technical services (forests, wildlife and land tenure administrations), council authorities and local NGOs. These focused on the procedure of access to the revenues, the community infrastructure constructed, the amounts allocated, the participation of beneficiary communities in the process of redistribution, socio-economic impacts, and constraints and challenges inherent in redistribution mechanisms.

The data were combined with data collected in 2012 for a study on the mechanism for the distribution of revenue derived from land in Cameroon (Assemble-Mvondo et al. 2013). We also collected financial information from the 2011 financial year relating to the distribution of wildlife revenue in Yokadouma.

The methodology in this study had some limitations. For example, some villagers declined to participate in the household survey on the grounds that forestry, wildlife and land revenue should legally be paid to the entire village community and not to individual households. Thus, only the information collected from focus groups, those based on the verification of community infrastructure and quantitative data from the PSRF, were considered the main raw data for this work. Also, it was not possible to cover all villages that theoretically receive land and wildlife revenue, and to verify the community infrastructure constructed. To address this gap, information collected from secondary sources was used, mostly from previous works.

2.2 Characteristics of the study sites

Yokadouma Council in Ngoko Division was selected as the main study site for two reasons. First, the rural council, which is located over 600 km from the capital of Cameroon (Yaoundé), houses 15 forest concessions, a council forest, and two community forests and hunting areas. Second, it received the highest cumulative amount of forestry fees in Cameroon between 2000 and 2011. More than USD 18 million was paid into the council's coffers and USD 6 million to the surrounding villages (Commune de Yokadouma 2012; Nodem et al. 2012). Data was collected in 11 of the 63 villages spread throughout the three main cantons, namely Mpou-Mpong, Kounabembe and Bidjouki. The total population of the council area was estimated at 75,648 in 2012 (Commune de Yokadouma 2012). It comprises two main ethnic groups: the *Bantu*, particularly the *Kounabembe*, *Mbimo* and *Mpong-Mpong* tribes; and the *Baka* who are considered the minority ethnic group. The main economic activities of the population are subsistence farming, hunting, gathering and harvesting of NTFPs, and small-scale fishing in rivers (Ontcha Mpele et al. 2005). The overall poverty rate in East Cameroon increased from 48% to 56% between 2000 and 2007, particularly worsening in rural areas (INS 2010).

The forest stands surrounding Yokadouma Council are semi-deciduous rainforest of low and medium altitude, which are classified under Congolese forests. These forests harbor many species of high commercial value (Commune de Yokadouma 2005): alep (*Desbordesia glaucescens*), emien (*Alstonia boonei*), tali (*Erythropheum ivorense*), sapelli (*Entandrophragma cylindricum*), fraké (*Terminalia superba*), sipo

(*Entandrophragma utile*), padouk rouge (*Plerocarpus soyauxii*), afromosia (*Pericopsis elata*), kossipo (*Entandrophragma candollei*), bilinga (*Nauclea diderrichii*), etc. There is diverse and abundant wildlife (Commune de Yokadouma 2012; Ontcha Mpele et al. 2005), notably gorillas (*Gorilla gorilla*), chimpanzees (*Pan troglodytes*), bush pigs (*Potamochoerus porcus*), elephants (*Loxodonta cyclotis*), civets (*Viverra civetta*), duikers (*Cephalophus sp*) and pangolins (*Manisticuspis*).

The second site is located in three small rural council areas – Nieté, Akom 2 and Lokoundje – near the seaside town of Kribi, in Ocean Division. Nieté Council has a population of over 40,000 (Gerber 2008) made up mainly of the majority *Boulou* (*Bantu*) ethnic group and a minority *Bagyeli* (Pygmy) ethnic group. Nieté Council shares boundaries with the Campo Ma'an National Park and a forest concession, and harbors agro-industrial plantations. Socio-economic activities include small-scale subsistence farming, cash crop farming (cocoa and rubber), harvesting and gathering of NTFPs, hunting, and fishing in the many rivers (MINEPAT 2010). The poverty rate in southeast Cameroon dropped from 31.5% to 29.3% between 2001 and 2007. This rate varies according to the area of residence (INS 2010). The vegetation of the locality of Nieté is strongly influenced by rainfall, proximity to the sea, altitude, soil and human activities. Plant formations are classified under the Guinea-Congo rainforest rich in *Caesalpinaceae* with *Calpocalyx heitzii* and *Sacoglottis gabonensis* (Letouzey 1985).

Akom 2 Council has a population of over 12,000 comprising mainly of the *Bulu* majority ethnic group and the *Bagyeli* minority ethnic group. It shares boundaries with the Campo Ma'an National Park and a forest concession, and harbors a council forest. The main socio-economic activities are subsistence farming, cash crop farming (cocoa), harvesting and gathering of NTFPs, hunting, and river fishing (CTFC 2009). Forests in the area are categorized as low and medium altitude dense moist evergreen forest (Letouzey 1985) with Atlantic Biafran forest, with dominant species such as Azobé (*Lophira alata*), Bongossi (*Saccoglottis gabonensis*) and Ewomé (*Coula edulis*). The area also has very diverse wildlife, including monkeys (*Cercopithecus sp*), duikers (*Cephalophorus sp*), giant pangolin (*Manis gigantea*), bush pig (*Red river hog*), vipers (*Bitis gabonensis*), etc. (CTFC 2009).



Figure 1. Map of Cameroon including the study locations (produced by Shu Gideon Neba (CIFOR)).

A = Nieté, Lokoundje and Akom 2 Councils in Ocean Division.
B = Yokadouma Council in Boumba and Ngoko Division.

Lokoundje Council has a population of over 23,000 spread over 33 third degree chiefdoms (SNH 2010).³ It is noted for its ethnic diversity, dominated by the *Bantu* ethnic group (*Ewondo*, *Mabi*, *Fang* and *Bakoko*) and Pygmy minority (*Bagyeli*) ethnic group. The locality harbors oil palm agro-industry and three new agro-industrial plantations (oil palms, rubber and banana), which at the time of the study were being set up. The main activities of the population are subsistence farming, cash crop farming (cocoa and palm), hunting, fishing, and harvesting and gathering of NTFPs. The area is surrounded by two forest concessions and a wildlife reserve, and its forest stands are classified as Atlantic Biafran forests, Atlantic coastal forests and small low inland mangroves (Letouzey 1985).

³ There are three degrees of Chiefdoms in Cameroon, ranking by hierarchy order: first degree; second degree and third degree

3 Key study findings

3.1 Socioeconomic characteristics of the sample villages

Tables 3 and 4 show the socioeconomic data from the sample villages. The villages located in Yokadouma Council were characterized by high population density and moderate ethnic

heterogeneity (see Table 3). Though the villages visited in the municipal councils in Ocean Division were fairly homogeneous and less densely populated (see Table 4), the socio-economic activities and practices of the local population were similar to that in Yokadouma Council.

Table 3. Socio-economic data from the village sites in Yokadouma Council, Ngoko Division based on the focus group discussions.

Council	Villages	Population	Ethnic groups	Number of pygmies	Main economic activities
Yokadouma	Zoulabot Nouveau	800	Kako, Kounambebe, Baka	40	Agriculture, gathering NTFPs
	Madjoué	2,000	Dadjouloum, Djsouazen, Baka	0	Agriculture, gathering NTFPs, hunting
	Landjoue1	900	Kako, Mpu-mpoung, Baka	30	Agriculture, gathering NTFPs, hunting
	Moampack	7,000	Mbimo, Mpu-mpong, Baka	50	Agriculture, gathering NTFPs, hunting
	Bonda	Unknown	Mpu-mpong, Kako, Baka	0	Agriculture, gathering NTFPs, hunting
	Ngola 35	945	Mbimo, Baka	42	Agriculture, gathering NTFPs, hunting
	Bompello	884	Mbimo, Baka	100	Agriculture, gathering NTFPs, hunting
	Mezion	1,000	Mbimo, Mekouo, Baka	0	Agriculture, gathering NTFPs, hunting
	Djalobekoe	1,150	Djamparo, Djawawo, Baka	47	Agriculture, gathering NTFPs, hunting
	Mopouo	1,000	Djawawo, Mbimo, Mekouo	0	Agriculture, gathering NTFPs, hunting
	Mbol 12	4,500	Mpu-mpong, Baka	0	Agriculture, gathering NTFPs, hunting

Table 4. Socio-economic data from the village sites in Akom 2, Lokoundje, and Nieté Councils, Ocean Division based on focus group discussions.

Council	Village	Population	Ethnic Groups	Numbers of Pygmies	Main Economic Activities
Akom 2	Ndja-bi lobe	350	Bulu; Bakola	47	Agriculture, logging, gathering NTFPs
Lokoundje	Bidou II	600	Fang	Unknown	Agriculture, gathering NTFPs, hunting
Nieté	Bidou III	500	Bulu	271	Agriculture, gathering NTFPs, hunting
	Nko'olong	3,000	Bulu; Bakola	25	Agriculture, gathering NTFPs, hunting

Table 5. Summary of the forestry fees received by three councils for the 2011, 2012 and 2013 financial years based on PSRF statistics.

Councils	Total cumulated amount in 2011–2013 (CFAF)	Total share received by the councils	Total share received by the villages
Yokadouma	1,612,869,333	71%	29%
Nieté	41,973,255	67%	33%
Lokoundje	187,660,665	67%	33%

Table 6. Forestry fees paid to villages in the Yokadouma Council from 2009 to 2013 based on focus group discussions.

Village	Forestry fees paid to villages (CFAF)				
	2013	2012	2011	2010	2009
Zoulabot Nouveau	0	0	0	0	0
Madjoué	0	0	0	0	0
Landjoue1	0	0	0	0	0
Moampack	0	0	0	0	0
Bonda	5,000,000	1,500,000	0	0	0
Ngola 35	0	0	0	0	0
Bompello	0	0	0	0	0
Mezion	0	0	0	0	0
Djalobekoe	0	23,000,000	0	0	0
Mopouo	800,000	0	0	0	0
Mbol12	1,300,000	0	0	0	0

3.2 Revenues received at each site

3.2.1 Annual forestry fees

According to PSRF statistics, Yokadouma Council received over CFAF 7.3 billion (about EUR 11 million) in annual forestry fees from 2001 to 2009, or about CFAF 818 million (EUR 1.2 million) per year, distributed as 80% to the Council and 20% to the village communities. Since 2011, however, this amount has declined drastically and the Council received only CFAF 538 million /year (EUR 0.8million/year), with a 70% distribution to the Council and 30% to the surrounding communities. In the same vein, Nieté Council, received a total of CFAF 117,070,500 (EUR 178,734) between 2006 to 2009, distributed as: 79% to the council and 21% to the village communities. Since the 2011 financial year, Nieté Council has received an annual amount of CFAF 13,991,085 (EUR 21, 361). Lokoundje Council received a total of CFAF 48,963,057 (EUR 74,753) from 2008 to 2009, distributed as: 80% for

the Council and 20% for the surrounding villages. Since the 2011 financial year, the Council has received CFAF 62,553,555/year (EUR 95,502/year). Table 5 for presents a summary of the annual forestry fees received from 2011 to 2013 based on PSRF statistics, and Tables 6 and 7 present the information of forestry fees received at village-level based on the knowledge of local respondents.

3.2.2 Wildlife royalties

The revenue of Wildlife Resource Enhancement Committees (COVAREF) consists mainly of annual fees derived from the leasing of community-managed hunting areas and 10% of felling tax. Although MINFOF regularly transferred lease taxes to COVAREF for hunting seasons between 2008 and 2011, felling taxes were transferred for the last time only in 2009. In total, CFAF 118,759,210 (EUR 181,318) was transferred to COVAREF communities 1, 2, 3, 6 and 10 in 2009, 2010, 2011(see Table 8).

Table 7. Forestry fees paid to villages in the Ocean Division from 2009 to 2013 based on Focus Group Discussion.

Council	Village	Forestry fees paid to villages (CFAF)				
		2013	2012	2011	2010	2009
Lokoundje	Bidou 2	0	0	0	0	0
Nieté	Bidou 3	0	0	0	0	410,000
Nieté	Nko-olong	0	0	0	0	450,000

Table 8. Summary of wildlife revenue paid to local communities in the Yokadouma Area between 2009 and 2011 based on MINFOF statistics (2013).

COVAREF number and community	Revenue per hunting season from lease fees and felling tax (CFAF)						Total
	2009		2010		2011		
	Lease fees	Felling tax	Lease fees	Felling tax	Lease fees	Felling tax	
COVAREF No. 1: Salakomo	5,414,900	5,525,730	5,414,900	0	5,354,000	0	21,709,530
COVAREF No. 2: Bouba-Ndjombi	17,733,960	1,352,040	17,733,960	0	17,633,960	0	54,453,920
COVAREF No. 3: Ndjombi-Bolo	5,939,360	2,470,740	5,939,360	0	5,939,360	0	20,288,820
COVAREF No. 6: Boulaba	6,688,410	0	0	0	10,007,000	0	16,695,410
COVAREF No. 10: Bouba-Bek- Dja	1,439,550	0	0	0	4,171,980	0	5,611,530
Total	37,216,180	9,348,510	29,088,220	0	43,106,300	0	118,759,210
		46,564,690	29,088,220		43,106,300		

3.2.3 Revenue derived from council and community forests

The Yokadouma Council forest is logged in partnership with an industrial logging company. Average annual production was estimated at 25,622 m³ of timber from 2007 to 2009 (Ngouhou Poufoun et al. 2013). The average revenue was estimated as CFAF 290 million/year (EUR 442,748). According to the 2012 Joint Order No. 76/MINADT/MINFI/MINFOF, 30% of the revenue generated from the Yokadouma Council forest should be used for the development of the 22 bordering villages. The Dja bi-lobe community forest, which is located in Akom 2 Council, generates an average of CFAF 3 million/year (EUR 4,580) for the village. However, in Yokadouma Council, the officers responsible for the management of the community forests of the villages of Mopouo, Mezion, Ngola 35,

Djalobekoue, Bonda and Bompello, were unable to give a statement of account of their forest condition. This shows, to some extent, the opacity that characterizes the management of community forests. However, the community forests in the Yokadouma area tend to be remote and distant from the main local timber markets of Yaoundé, Douala and the northern regions of the country. This adversely affects their rate of exploitation (uneven).

3.3 Facilities and support provided in villages using forest revenue

According to the legal and regulatory provisions in force, forest and wildlife revenue received by local communities should be used to carry out socioeconomic activities, build community facilities in beneficiary communities and restore degraded

Table 9. Facilities and support provided using forest and wildlife revenue in villages in Yokadouma Council from 2001 to 2013 based focus group discussions.

Village	Facilities/ infrastructure	Villager access	Other support received from the benefit-sharing committee
Zoulabot Nouveau	Construction of classrooms; provision of school benches; incomplete shed; construction of water point	Partial payment (villager has to pay half)	Medicines; mud brick machine
Madjoué	Construction of classroom block and shed; provision of school benches.etc.	Partial payment	Corn mills; fungicides; planks
Landjoué 1	Construction of water point	Free access	Not applicable
Moampack	Construction of water point; distribution of fungicides; provision of minimum packages for schools	Partial payment	Medicines, plasma TV set; electric generator
Bonda	Construction of classrooms; construction of water point; provision of grinding mill and jet jersey; provision of plastic chairs	Partial payment	Payment of teachers' salaries by parents; support to organization of events; availability of road
Ngola 35	Construction of staffroom; construction of village market; building of house for the Village Chief; purchase of an electric generator	Partial payment	Medicines, donation of coffin by logging operator in the event of death
Bompello	Incomplete classroom; provision of minimum package to school; payment of teachers' salaries by parents in 2011/2012; purchases of TV screen and chairs for teachers	Free	Donation of coffin by logging operator in the event of death
Mezion	Provision of school benches; construction of shed; provision of plastic chairs, and metal sheets	Partial payment	Donation of coffin by logging operator and CFAF 50,000 by the municipal council in the event of death
Djalobekoe	Not applicable	Not applicable	Distribution of food items such as salt and fish
Mopouo	Construction of school	Payment	Distribution of meat
Mbol 12	Construction of a pro-pharmacy, provision of an electric generator and a refrigerator	Payment	Plastic chairs, medicines

Table 10. Facilities and support provided using forest and wildlife revenue in villages in the Ocean Division from 2006 to 2012 based on focus group discussions.

Council	Village	Facilities	Villager access	Other support received from the benefit-sharing committee
Akom II	Ndja bi-lobe	Construction of school building; payment of teachers' salaries	Payment	Training for adults in French language; building materials
Lokoundje	Bidou II	No community facilities	Not applicable	Not applicable
Nieté	Bidou III	Purchase of mud brick machine and chairs	Free access	Food, chairs, construction of shed
Nieté	Nko'olong	Construction of health care center and shed; purchase of chairs	Payment	Food

forest ecosystems. Tables 9 and 10 show the facilities constructed and the support provided using forest and wildlife revenue in the sample villages in the early 2000s.

3.4 Local communities' perceptions of revenue distribution mechanisms

From the household survey, all the interviewed villagers across both study sites reported that the governing procedures of the annual forestry fee mechanism are unfair and only contribute to increasing the wealth of the political and administrative elite, from the national to the council level. Similarly, all those interviewed expressed that the management of the annual forestry fee is not transparent at the national and council levels. That is, 100% of villagers reported negative feelings about the procedures, rules and practices governing the management of the forestry fee. However, 45% of villagers interviewed reported that the share of annual forestry fee paid to local communities is equitably managed in a transparent manner within the beneficiary villages. This suggests that communities have better access to information at the local level of governance.

From the focus group discussions concerning the revenue derived from the use of community forests and wildlife royalties, 100% of villages reported that it is evenly distributed within the communities and well managed. On the other hand, 100% of the local communities interviewed in the Yokadouma Council area believe that the management of revenues generated from the exploitation of council forests – of which 30% should benefit the community – is not transparent and results in marginalization within the local communities. The communities are not yet receiving the 30% share, partly because the financial management of decentralized local councils is subjected to a single account principle that does not allow them to keep separate accounts based on the origin of the revenue. Overall, the majority of the local communities (65%) interviewed in this study believe that shares of forest and wildlife revenue contribute, to some extent, to local development and improve living conditions in rural areas.

Based on the focus group discussions, the degree of participation in the benefit-sharing decision making

and the transparency of the committee's management in most of the villages is generally perceived to be low (reported by 67% and 73% respectively of the villages). The most frequently expressed weaknesses in the current implementation of benefit-sharing mechanisms was the lack of information and transparency about the size of the fund a village should receive and the management of the fund by the benefit-sharing committee. For example, Bidou 3 villagers did not know how much the village received in annual forest fees from the council. Another weakness identified was the lack of participation in benefit-sharing implementation. For example, Zoulabot Nouveau villagers said that the general assembly schedule is not well distributed among villagers. Landjoue 1 villagers reported that they have to pay CFAF 2000 (approximately EUR 2.50) to participate in the general assembly, which can act as a barrier to the poor to participate. These weaknesses likely result in the overall perception of the benefit-sharing design as inequitable; as perceived by 60% of the villages. Of note, four of the villages surveyed had benefit-sharing committees that were not elected by the villagers. Consistently, these committees were perceived as not accountable or transparent in the benefit-sharing implementation. Thus the villagers perceived the overall benefit-sharing mechanism as inequitable.

Data from the household survey showed similar trends. Most respondents (72%) reported that participation in the benefit-sharing decision making at the village level is low. Most of the respondents – including all of those surveyed in Nieté and Lokoundje Councils – also perceived the benefit-sharing design and implementation as inequitable and not transparent (63% and 65% respectively). The household respondents expressed more varied disadvantages of the benefit-sharing mechanism than that expressed in the focus groups. Factors raised as impacting the perceptions of equity include: the lack of information sharing, irregular fund delivery and lack of participation, as well as other factors (see Figure 2).

Furthermore, 100% of household survey respondents (though admittedly only a small sample) in all villages visited clearly stated that the forest and wildlife revenue destined for local communities does not directly affect their individual household income. This is largely because the revenue is spent on the

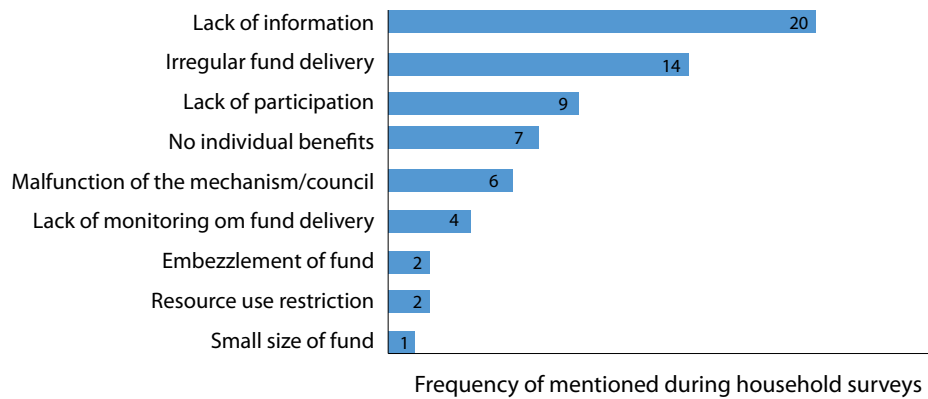


Figure 2. Disadvantages of the benefit-sharing mechanism and the frequency of which each was raised by household respondents based on Focus Group Discussion.

collective and not on individual households. Most households depend on agricultural activities, the gathering of NTFPs, and on hunting and fishing in many of the rivers found in the locality. Household heads expressed approval for when revenue paid to their communities is used to purchase food and

beverages that is distributed to each village household. Some respondents, however, acknowledged that the community infrastructure built with forest and wildlife revenue has a positive impact on their living conditions if well executed.

4 Discussion

The redistribution of forest and wildlife revenue in Cameroon has already been the subject of numerous studies, which highlight the weaknesses that characterize the present system, particularly in terms of governance and impact on local development (Bigombé 2003; Oyono et al. 2006; Lescuyer et al. 2008; Oyono et al. 2009; Bigombé 2010; Cerutti et al. 2010; Assembe-Mvondo et al. 2013). This study adds to the literature in that it uses analytical parameters defined by Lindhjem et al. (2010) to assess the system's performance. According to Lindhjem et al. (2010), a REDD+ benefit-sharing system has two main dimensions, namely: (i) vertical sharing of benefits involving the distribution of revenue among stakeholders from the national to the local level or central level to the peripheries, and (ii) horizontal sharing of benefits within a community or household. Lindhjem et al.'s (2010) parameters

align with the three criteria specified by Stern (2006) and Angelsen (2009) for assessing climate change mitigation mechanisms: effectiveness and efficiency are best suited to the verification of vertical redistribution, and the equity criterion is suitable in horizontal redistribution of revenue. Table 11 illustrates the indicators used for each criterion in our analysis.

4.1 Vertical redistribution of forest and wildlife revenues

Overall, the findings show that the vertical redistribution of forest and wildlife revenues in Cameroon is efficient. In this regard, three clearly identified key stakeholders are the beneficiaries of forest revenue: the State (central level), councils

Table 11. Indicators used in the assessment of Cameroon's forest and wildlife benefit-sharing mechanisms.

Criteria	Criteria definition applied to assessing Cameroon's forest and wildlife benefit-sharing mechanism	Indicator
Effectiveness	Effectiveness refers to the achievement of the policy objectives behind forest revenue redistribution	<ul style="list-style-type: none"> • Poverty reduction • Local development through building of basic facilities
Efficiency	Efficiency refers to the transaction costs: <ul style="list-style-type: none"> • costs related to the preparation and implementation processes of the current forest policy • costs connected to the bureaucracy 	<ul style="list-style-type: none"> • Percentage of revenue received by stakeholders • Time taken to distribute benefits to stakeholders • Cost of implementing the policy • Cost of receiving the revenue
Equity	The process of revenue distribution is equitable if: <ul style="list-style-type: none"> • beneficiaries are represented, recognized, and participate in the process of defining targeting criteria and making decisions on size, timing and type of benefits • the share of incentives distributed among stakeholders adheres to an agreed fairness criterion (equality, merit, need, libertarian) • all potential stakeholders' capacity to engage in the benefit-sharing mechanism is enabled 	<ul style="list-style-type: none"> • Targeting beneficiaries according to the objectives • Benefits reach the targeted groups and fit their defined criteria • The level of participation and inclusiveness of civil society, indigenous peoples, academia and other stakeholders in decision making on: <ul style="list-style-type: none"> - conditionality factors - targeting criteria - investment of benefits - access to information - transparency - the timing and type of benefits

(*meso* level) and local communities (local level). This is illustrated by annual financial flows between the Treasury (central) and the taxation services of the Yokadouma, Nieté and Lokoundje councils during the process of transferring shares (council and local community) of annual forestry fees. To a lesser extent, the redistribution of wildlife and land royalties follows the same pattern used for forest revenue and involves similar actors (the State, local councils and communities). However, it should be noted that in the case of wildlife and land royalties, the administrative bodies responsible for redistribution are located at the *meso* level (taxation and land revenue collection service) rather than at the central level as is the case with forestry fees. This clarification is important because it involves different transaction costs during the sharing process. Regarding the mechanisms for the redistribution of council and community forest revenue, the bodies in charge of sharing are located within the two local entities and are also *ipso facto* major stakeholders, but with the right of control over public administrative services.

4.1.1 Effectiveness of forest and wildlife revenue redistribution mechanisms

The effectiveness of a mechanism depends on the extent to which it meets the objectives assigned to it. The two main objectives for forestry policy in Cameroon are to involve local communities in the sustainable management of forests and, to utilize the forest and wildlife revenue to promote local development and reduce poverty (Topa et al. 2009). In this respect, the various revenue redistribution mechanisms in force were established to promote community-driven sustainable management of forests and local development. While there is no doubt that the financial flows generated by the different mechanisms are important and could help promote local development and reduce rural poverty, the findings of this study show that questions remain over the full achievement of these objectives.

For example, despite a significant influx of revenue from forest and wildlife fees, which should have contributed to improving the living conditions of local communities, poverty increased by more than 8% (from 48% to 56.3%) in the Yokadouma Council area between 2000 and 2007 (INS 2010). Conversely, the poverty rate for council areas in the Ocean Division reduced from 31.5% to 29.3% between 2001 and 2007 (INS 2010), though such council areas received less financial revenues than

those of the Yokadouma Council area. The difference in poverty reduction between Yokadouma and other local councils could be due to: poor local governance in Yokadouma marked by systematic embezzlement of council revenue;⁴ the remoteness of the Yokadouma Council area; and the proximity of agro-industries and markets for the sale of agricultural products and NTFPs in the case of the Nieté, Lokoundje and Akom 2 Councils. However, the UNDP (2014) noted that between 2001 and 2007 rural poverty increased across the whole country, which shows that the economic growth observed in Cameroon over the same period did not reach local communities.

Regarding the objective of promoting local development through the construction of community infrastructure, the overall results show that socioeconomic facilities were built at different sites. However, it was observed that in the case of the Yokadouma Council, some infrastructure was left incomplete. There was also a clear difference between the cost of planned infrastructure specified in the 2012 Council Development Plan (Commune de Yokadouma 2012) and actual achievements observed on the ground (see Table 12). Similar to the Yokadouma Council, the community facilities built in villages in the Nieté and Lokoundje council areas did not reflect the amount transferred to improve basic infrastructures. Such differences are consistent with the findings of studies by Oyono et al. (2009) and Cerutti et al. (2010), and are one of numerous indications of a system overbilling for socioeconomic structures, likely through connections between officials of forest area councils and selected contractors.

In addition to less infrastructure being provided than planned, the frequency of revenue redistribution may also contribute to the lack of socioeconomic benefit that villages see. The forestry and financial legislation prescribes that redistribution occur annually. However, local practices in all sample council areas differed. Some local communities did not benefit from any infrastructure or receive their share of forest revenue for several years. Similarly, in the case of revenue from the exploitation of community forests, the frequency of revenue redistribution depends on the extent of logging operations carried out. As such,

⁴ The former Mayor of Yokadouma Council and the Council Treasurer were sentenced to 12 years imprisonment for embezzling over CFAF 1248 billion during the 2002–2007 period.

Table 12. Differences between forecast cost of planned infrastructure and estimates of the actual amount spent using annual forestry fees in Yokadouma Council based Commune de Yokadouma (2012).

Village	Estimated cost of planned achievements in the 2012 Council Development Plan (CFAF)	Estimated cost of actual achievements (CFAF)	Cost difference between planned and actual achievements (CFAF), and percentage achieved
Ngola 35	28,975,000	8,075,000	20,900,000 (28%)
Bompello	24,250,000	3,850,000	20,400,000 (16%)
Mezion	16,000,000	8,075,000	7,925,000 (50%)
Mopouo	87,700,000	8,067,500	79,632,500 (9%)
Djalabokoue	36,500,000	8,000,000	28,500,000 (22%)
Bonda	11,500,000	12,575,000	-1,075,000 (109%)
Mouampack	56,478,000	14,675,000	41,803,000 (26%)
Landjoue 1	82,600,000	Not available	Not available
Mbol 12	72,500,000	11,975,000	60,525,000 (17%)
Zoulabot	16,500,000	8,000,000	8,500,000 (48%)
Madjoué	58,950,000	19,400,000	39,550,000 (33%)
Total	491,953,000	102,692,500	369,935,500 (21%)

village communities with forests (community forests) in the Yokadouma Council area did not receive or benefit from this revenue source when there were no logging activity.

Several other factors reduce the effectiveness of the revenue redistribution mechanisms. For example, many observers have highlighted fraudulent practices in the use of wildlife revenue transferred to local communities (Defo et al. 2010; Defo and Tchamba 2012; Lescuyer et al. in press). This trend was recently confirmed in an assessment by Cameroon's Ministry of Forests and Wildlife: "We noticed a high amount of funds reported to have been stolen from COVAREF. The assessment detected 26.67% of missing funds from the overall amount transferred to COVAREF, that is, a total loss of CFAF 32 155 851" (MINFOF 2013: 17). Equally as concerning, according to the local communities of the Yokadouma Council forest, some revenue-sharing mechanisms are simply not functioning. They report that, for example, they are still to receive their 30% share or subsequent socioeconomic facilities from the exploitation of council forests. Finally, the 2012 Joint Ministerial Order prescribes that the money derived from forest and wildlife benefit-sharing mechanisms should be used to protect forest ecosystems. Yet, in none of the sample councils was the forest and wildlife revenue used to create environmental awareness among the rural communities. Instead of building environmental awareness at the village level,

local communities prefer to duplicate the dominant model that contributes to over-exploitation of the natural stocks.

Results of this study show that rural households in the Cameroonian forest zones are dependent primarily on family agriculture and, to a lesser extent, on gathering NTFPs (including hunting) for their livelihood. Levang et al. (2015) recently corroborated this in the south and east regions of Cameroon. As such, we can extrapolate that poverty alleviation in rural areas in Cameroon depends mostly on the capacities of local communities to enhance their agricultural production and not on the potential revenues from forest and wildlife resources. How the expansion or intensification of agricultural production will relate to forest management will be a key issue – and unless there are changes to the dominant forest management model to provide for increased community involvement in sustainable value-added forestry, forests may not be seen as a resource that is worth protecting.

In any case, our results indicate that forest and wildlife revenue redistribution mechanisms are not effective because the objectives of promoting local development, reducing rural poverty and promoting sustainable management of forest resources have not been achieved. This is consistent with the findings of previous studies (e.g. Bigombé 2003; Oyono et al. 2006; Lescuyer et al. 2008; Oyono et al. 2009;

Table 13. Factors that generate high transaction costs in benefit-sharing mechanisms based on focus group discussions

Types of benefit-sharing mechanisms	Level of management body	Factors affecting transaction costs
Annual forestry fee	National level (PSRF; FEICOM)	Long and complex procedures; long time frame; bureaucracy; mode of governance; several stakeholders involved; lack of information; uncertainty about quota/share expected; lack of accountability.
Wildlife fee	Meso level (Treasury and divisional delegation of MINFOF)	Many actors involved; lack of information; mode of governance; bureaucracy; lack of accountability.
Community forest revenue	Local level (village management committee)	Lack of information; bureaucracy; distance and market structures; weak local capacity; mode of governance; lack of accountability.
Council forest revenue	Meso level (councils)	Bureaucracy; complex procedures; lack of information; weak local capacity; mode of governance; lack of accountability.
Land revenue	Meso level (Divisional Land Revenue Service)	Lack of information; mode of governance; lack of accountability; weak local capacity.

Bigombé 2010; Cerutti et al. 2010; Assembe-Mvondo et al. 2013). Admittedly, some social facilities such as the rehabilitation and construction of classrooms, the construction of drinking water points, the purchase of chairs and payment of teachers' salaries are positive realizations. But a closer look shows that this is a marginal performance compared to the total revenue generated by the various revenue-sharing mechanisms. Moreover, as underscored by Angelsen (2009), effectiveness could be impeded by poor governance prevailing in a given system. Cerutti et al. (2010: 130) has also documented poor governance as a persistent problem in the management of forest and wildlife revenue in Cameroon, stating: "One of the most significant findings is that mayors, although elected and unanimously blamed for embezzlement and mismanagement of the annual forest fees, are often only scapegoats in a complex political system that does not allow the rural population to directly sanction culprits through the current electoral system."

4.1.2 Efficiency of forest and wildlife revenue redistribution mechanisms

The efficiency of an environmental policy mechanism is linked to the transaction costs inherent in its preparation and implementation (Coggan et al. 2010; McCann 2013). Implementation of the forest and wildlife revenue redistribution mechanisms in Cameroon has incurred several types of transaction

costs. In the focus group discussions, all local communities expressed negative sentiments about these, blaming bureaucratic red tape, and the rules and practices governing the revenue-sharing mechanisms. The underprivileged members of the community, in particular, see these procedures as real barriers to the access and enjoyment of their rights.

This dislike of local communities for procedures, rules and practices was more pronounced for the transfer of annual forestry fees, which is characterized by bureaucratic and complex procedures. In fact, the administrative services responsible for its management (such as the PSRF, which is attached to the General Directorate of Taxation, and FEICOM) are at the central level in the Nation's capital city, Yaoundé. Checks bearing the various amounts earmarked for councils and local communities are sent to the paymasters of each regional capital. The Yokadouma Council have to collect their checks at the regional capital of Bertoua 300 km away, and the councils of Nieté and Lokoundje collect their checks at Ebolowa 180 km away. The specified amount is then transferred to the council accounts, which are managed by the mayor and the council treasurer, with assistance from a council Forest Revenue Management Committee. The local communities benefiting from a share of forest revenue remain almost on the sidelines of such a complex and long administrative transfer process. They have no access to information about the true amounts due to them, the disbursement dates or the future use of the

revenue. The entire system is opaque, far from the daily concerns and reach of local actors.

In order to extract from community forests, the issuance of administrative documents against a financial contribution and the negotiation of contracts for the purchase of products – typically with partners located in major urban centers – also engender transaction costs. These activities require local communities to have qualified expertise in negotiating contracts for the sale of their products, and financial means to cover travel expenses and possible bribes to obtain administrative documents. According to Lescuyer et al. (2013: 185), since 2009 Wildlife Revenue Management Committees have been supporting high transaction costs related to complex and cumbersome procedures. Another sizeable share of the funds transferred to local communities is devoted to the running of management committees, which tend to become genuine bureaucratic structures in the villages (Bigombé 2010) to the detriment of community investments.

Oyono et al. (2009) identified another type of transaction cost, that is, the difference between the amounts published at the central level and the ones declared by council authorities. According to a Yokadouma Council officer, officials at the central level in charge of managing forestry revenue often demand a ‘payment’ between 5%–10% of the total share a council or local community is expected to receive. Such practices highlight the endemic corruption present in administrative services in Cameroon (Titi Nwel 1999; Assembe-Mvondo 2009). In any case, all forest and wildlife revenue-sharing mechanisms are attached to transaction costs, many of which are caused by sociopolitical factors (see Table 13). This renders such benefit-sharing mechanisms inefficient.

4.2 Horizontal redistribution of forest and wildlife revenues

The equity criterion is at the center of the horizontal distribution of benefits (Lindhjem et al. 2010; Luttrell et al. 2013; Pham et al. 2013). Within the framework of this study, the concept of equity includes three dimensions, namely the distributive, procedural and contextual dimensions (see Section 4.0) (McDermott et al. 2012; Di Gregorio et al. 2013). Table 14 presents the overall assessment of equity for each type of revenue mechanism.

Table 14. Summary of the assessment of equity by type of revenue mechanism based on focus group discussions.

Types of revenue redistribution mechanism	Perceptions of equity
Annual forestry fee	1) Distributive equity: yes 2) Procedural equity: no 3) Contextual equity: no
Wildlife revenue	1) Distributive equity: yes 2) Procedural equity: no 3) Contextual equity: no
Land revenue	1) Distributive equity: yes 2) Procedural equity: no 3) Contextual equity: no
Community forest revenue	1) Distributive equity: yes 2) Procedural equity: no 3) Contextual equity: no
Communal forest revenues	1) Distributive equity: no 2) Procedural equity: no 3) Contextual equity: no

First, distributive equity involves the allocation of both costs and benefits. Our results show some form of distributive equity within local communities. For example, all social groups in the community had the same conditions of access to the infrastructure that was constructed using forest and wildlife revenue. That is, access was payable, free of charge or partially free (see Tables 9 and 10) for all, regardless of gender or ethnic group.

The costs of providing infrastructure were almost entirely paid for by the share of forest and wildlife revenue allocated to each local community. However, maintenance costs of these facilities were not included. This has led to the abandonment or lack of use of facilities in the medium and/or long term. For example, the electric generator that supplied power to the village of Ngola 35 in Yokadouma Council remained broken for more than 2 years as there were no spare parts or fund for the village to pay for repairs. This situation is not unique, with similar stories described in many local communities. Ideally, the costs inherent in the maintenance of public structures would be included in the budgets of forest area councils.

With regards to procedural equity and participation/involvement of stakeholders in decision-making processes, most respondents reported that village-

level organizations or management committees (benefit-sharing committees) tasked with managing the forest and wildlife revenue redistribution are inefficient. Village representatives often play a minor role or serve as foils when faced with the influence of mayors and other officials who are members of such committees. The main shortcoming identified was that members of the councils' Forest Revenue Management Committees have no influence on decision-making, as that power tends to be confiscated by mayors who, by law, chair such committees.

Similarly, it was observed that the so-called minority groups, such as the Pygmies (*Baka* and *Bakola*) and women, despite making up a large share of the community, are still not represented in management committees. The Ndja bi-lobe Village Community Forest Management Committee in the Akom 2 Council was the exception with a woman holding the position of Treasurer. The lack of minority group representation in decision-making bodies supports observations made in previous studies, which concluded that the procedural equity in the redistribution of forest and wildlife revenue in Cameroon is weak or absent (Bigombé 2003; Oyono 2004b; Assembe-Mvondo 2006; Oyono et

al. 2009; Cerutti et al. 2010). In fact, the model of redistribution in Cameroon may continue to exacerbate the exclusion of marginalized groups (Oyono 2005; Tiani et al. 2005). In this regard, Topa et al. (2009: 99) assessed that:

“The experience with Cameroon’s forest reforms revealed some limitations in helping indigenous people rights to their forest resources. First, forest zoning allocated a significant area of indigenous community land to permanent forest domain, where community forest cannot be established. The current regulatory framework for these areas does not sufficiently specify local inhabitants’ rights to hunt, gather, or fish. Second, in the non-permanent estate, where community forests can be established, the dominant Bantu communities have already claimed the land, perpetuating a history of marginalization of Pygmy people. Finally, aspects of community forests are inconsistent with livelihoods and resources of indigenous people, such as the emphasis on small-scale timber production or administrative structures that conflict with traditional forms of land use.”

This runs contrary to Cameroon’s forestry policy objectives, particularly in terms of community-driven management and social justice (Topa et al. 2009).

5 Conclusion

In conclusion, none of the existing forest and wildlife revenue-sharing mechanisms evaluated in this study fully meet the three criteria of being effective, efficient and equitable, each necessary for REDD+ (Stern 2006; Angelsen 2009). In particular, the study results show that Cameroon's forest policy objectives of reducing rural poverty and promoting local development have not been achieved through the institutionalization of forest and wildlife revenue redistribution models (effectiveness criterion). This is illustrated by the low levels of development of local communities in the Yokadouma, Lokoundje, Nieté and Akom 2 council areas. There is also a clear indication that these types of revenue redistribution mechanisms have high transaction costs, which hinders local communities from taking advantage of the available opportunities (efficiency criterion). Lastly, the procedural and contextual dimensions of social justice underlying the environmental policies are poor (equity criterion). The underperformance of Cameroonian forest revenue-sharing models is largely attributable to the endemic poor governance prevailing in the country's sociopolitical institutions (Assembe-Mvondo 2009; International Crisis Group 2010). This conclusion is consistent with that of Assembe-Mvondo et al. (2013: 652) concerning the sharing of land revenue in Cameroon:

“The mechanism for land rent redistribution is based on land in the national domain that is granted or leased to economic operators in Cameroon. It is not really effective, efficient or equitable. The Cameroonian model of land fees sharing is incomplete, poorly designed and lacks a viable monitoring mechanism. This is why there are many shortcomings and challenges to its implementation on the ground.”

For Cameroon's current models of forest and wildlife revenue sharing to be relevant for REDD+, our assessment highlighted the following shortcomings in need of improvement: (i) the political economy of Cameroon's forestry sector has colored the design of the revenue sharing mechanisms and exacerbated shortcomings and malpractices of the prevailing system; (ii) the central administration and authorities are highly present throughout the redistribution process and this has overridden the powers devolved

to local authorities, and led to recentralization characterized by unstable framework regulations and benefit-sharing grids; (iii) the bureaucracy of the current mechanisms has caused high transaction costs for local participants and enabled rent capture by some forest and political elites; (iv) the current models have contributed to and reinforced the political and socioeconomic marginalization of forest minorities such as Pygmies (*Baka* and *Bagyeli*) and women; and (v) local actors have weak capacity for influencing local forest governance.

One possible solution is to distribute forest revenues from companies or councils directly to communities. Indeed, direct distribution of (oil) revenues was proposed by Sala-i-Martin and Subramanian (2003) and Shaxson (2008), who argue that such systems would minimize opportunities for corruption and malpractices, which have often characterized and hampered benefit-sharing mechanisms. While an egalitarian perspective of revenue redistribution, as derived from distributive justice (see Vallier 2010), may be attractive, it may be unrealistic particularly when revenues are too small to share. However, a direct distribution scheme could contribute to the democratization process of the country. A final consideration is that there is evidence to suggest cash transfers are likely to be spent on non-productive consumption in Cameroon (Oyono et al. 2009; Topa et al. 2009). Although cash may alleviate short-term poverty if distributed broadly, it does not generally contribute to sustained local development (Pagiola 2008). Thus, consideration of the form in which benefits are distributed could help to realize the goal of promoting local development.

There is potential to address the shortcomings of Cameroon's current revenue sharing mechanisms through institutional reform of forest finance committees and financial flows, improvement of governance practices through the establishment of a participative financial monitoring, reporting and verification system, and distributing benefits in more productive forms (i.e. non-cash development options) that can contribute more effectively to sustained local development. Any future mechanism for benefit sharing within the framework of REDD+ in Cameroon should avoid duplicating or

reinforcing the systemic regulatory, procedural and governance flaws in the current forest and wildlife revenue-redistribution models. In this respect, the national REDD+ program could begin to prepare and adopt, in a participatory manner, a series of socio-environmental safeguards based on the principles adopted at the Conference of the Parties (COP) in Warsaw and Cancun, and concluded at 2015 Bonn Climate Change conference, and on lessons from the country's own experience in the redistribution of revenues from forest, wildlife, land and related sectors. A multi-stakeholder approach to identifying the actual and potential risks of a REDD+ benefit-sharing mechanism will be critical

to the credibility and legitimacy of the process (Brockhaus et al. 2014b). It will also be important to clarify Cameroon's specific objectives for REDD+, to identify beneficiaries and comparatively assess the pros and cons of particular instruments, institutions, rules, procedures, modes of local community representation, modes of access to information and styles of governance in the design of the benefit sharing mechanism. Finally, the identification of criteria and indicators for the evaluation of safeguards in revenue redistribution and future REDD+ benefit sharing mechanisms will be an important process to ensure socio-environmental sustainability in the long term

6 References

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Cameroon has long established legal mechanisms for the redistribution of forest and wildlife revenues from economic operations in logging and wildlife extraction to forest communities. This paper draws on a legal review and field data to assess the distribution of these revenues, with an emphasis on the socio-distributional aspects, to draw lessons for the future design and implementation of REDD+ benefit sharing in the country. Central to our analysis are four benefit-sharing mechanisms – Annual Forest Fees, Council Forest Revenues, Wildlife Royalties, and Community Forest Revenues – created by the Cameroon government for supporting poverty reduction and local development in the communities living near and around forests. This study focuses on the implementation and outcomes of these mechanisms in four council areas, and assessed them using a 3E (effectiveness, efficiency and equity) lens.

Our findings indicate that the benefit-sharing mechanisms in Cameroon do not entirely fulfill the 3E criteria, and that the trade-offs between them are not always clear or transparent. Despite the well-intentioned objectives behind these mechanisms, weak governance at both national and local levels and poor institutional processes have meant that they do not manage to adequately achieve their goals. There is potential to address these shortcomings through institutional reform of forest finance committees and financial flows, improvement of governance practices through participative financial monitoring, reporting and verification systems, and distribution of benefits in more productive forms that can contribute effectively to sustained local development. In addition, the national REDD+ program could begin to prepare and adopt, through a participatory multi-stakeholder process, a series of safeguards to support implementation of effective, efficient and equitable REDD+ benefit sharing mechanisms in Cameroon.



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