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Delivering community benefits through REDD: The case of Joint Forest Management in Zambia.

1. Introduction and Background

The implementation of the United Nations Framework Convention on Climate Change (UNFCCC) Cancun Agreements on Reducing Emissions from Deforestation and Degradation (REDD) demands consideration of the ways in which local communities benefit from REDD (UNFCCC, 2010). While REDD is primarily intended to prevent forest loss (therefore reducing emissions through land use change), the UNFCCC has incorporated safeguards to ensure that communities are not negatively affected, and can benefit, from REDD measures. These safeguards include requirements for full and effective participation of relevant stakeholders, including communities; and for measures to incentivize protection and conservation while enhancing social and environmental benefits (UNFCCC, 2010). Such safeguards are intended to ensure that REDD can deliver win-win scenarios, whereby forests (including their biodiversity and ecosystem services) are conserved alongside community development (Harvey et al., 2010; Kelly, 2010). However, safeguards may continue to place community benefits at the periphery of REDD initiatives, creating concerns that community benefits are unlikely to be meaningful and may become a by-product (Visseren-Hamakers et al., 2012); or that there will be a return to centralised forest management (Phelps et al., 2010) or ‘fortress conservation’ (Beymer-Farris and Bassett, 2012) that results in injustice and harm (McDermott et al., 2012). The aim of this paper is to evaluate these concerns for Zambia by analysing the barriers and opportunities for providing community benefits through REDD initiatives.

The aim is explored through a study of Joint Forest Management (JFM) in Zambia. JFM is a form of Community Based Natural Resource Management (CBNRM), representing a shift towards considering conservation within an inhabited landscape to deliver conservation in tandem with development (see Hutton et al., 2005, for an overview). In 2000, the Zambian Forest Department initiated a range of individual JFM pilot projects across Zambia, intended to allow the “Forest Department, Non-Governmental Organisations and businesses [to] get together to manage forest resources” (Forest Department (Zambia), 2005). Since 2010, Zambia has been a partner country in the UN REDD programme. The programme aims to assist countries in preparing for REDD implementation (REDD readiness) by facilitating capacity building and assisting in outlining a National REDD strategy. The programme is at the centre of Zambia’s REDD preparations and should serve to plan, structure

and guide REDD implementation (ref REDD desk report). As part of their participation in the UN REDD programme, Zambia has identified JFM as a foundation for implementing REDD (UNDP et al., 2010). In addition, alongside the UN REDD programme there are currently two significant REDD pilot/demonstration projects (a USAID/CIFOR project in Eastern Province and BioCarbon Partners in Central Province). Both of these aim to demonstrate reduced deforestation and degradation based around elements of JFM and community resource management. In this way, Zambia is in common with most other countries participating in the UN REDD programme who have adopted Community Based Natural Resource Management (CBNRM) as a strategy for implementing REDD in accordance with safeguards (Blom et al., 2010; Phelps et al., 2010).

The paper's objectives are informed by the literature on CBNRM. Barriers and opportunities in delivering community benefits through CBNRM can be situated within the match between CBNRM design and community perceptions and the factors that influence this match. Within the community participating in CBNRM, there will be multiple groups and opinions based around how people use the resource (Blaikie, 2006; Kumar, 2007). These uses and perceptions lead to variation in people's rationale for involvement in a CBNRM initiative, and therefore multiple perceptions of benefit (Kumar, 2007; Matta and Alavalapati, 2006). However, project design may not reflect all or any of the community's resource uses and benefit perceptions; it is often local elites who are best able to access participation opportunities and therefore shape project design (Balooni et al., 2010; Shackleton et al., 2002), or even other implementing bodies with greater influence over project design (see e.g. Adger et al., 2001). If such benefits are to reach the community, clear rules (see Dolsak and Ostrom, 2003) must be in place (Dougill et al., 2012) and must be adhered to by all participants (Nkhata and Breen, 2010). In addition, the broader macro-scale context, including policy and legal frameworks, is important; such macro context shapes the benefits that are available for JFM to harness, and the opportunity costs that it must address (Reynolds, 2012). Therefore, the objectives of this paper are to:

- 1) Examine the policy context within which JFM operates;
- 2) Assess how the findings from objective 1 shape JFM design and delivery at a local-level;
- 3) Explore how delivered JFM matches the community uses of the forest; and
- 4) Evaluate the impact of Zambian REDD readiness in influencing these broader factors.

This paper is pertinent because as yet, there has been no comprehensive and publically-available evaluation of JFM, or consideration of its prospects under REDD. From a biophysical perspective, some regeneration of tree species has been observed in Zambian JFM forests (Kalaba et al., 2012; Phiri et al., 2012; Syampungani et al., 2009). However, illegal harvesting of forest products continues (Umar and Vedeld, 2012). Existing explanations for this weakness point to the current Forest Act in Zambia, which has been in force since 1973, but does not allow for communities to manage or benefit from high-value forest products, such as timber (Moombe, 2004; Phiri et al., 2012). In many instances of CBNRM, financial reward is neither possible nor desirable, and instead, community benefits could include empowerment, stewardship and improved skills to increase productivity of food and non-food products (Murphree, 2009). Indeed in Zambian forests, many subsistence communities rely on the forest for a range of non-timber forest products and services, to provide both livelihood safety nets and financial income (Shackleton et al., 2011; Syampungani et al., 2009). For example, the forest provides edible products (e.g. caterpillars, mushrooms, honey) (Chidumayo and Mbata, 2002; Jumbe et al., 2008); fuel in the form of firewood or charcoal; and health services through medicinal plants (Chirwa et al., 2008; Syampungani et al., 2009). There is therefore a need to extend current studies to consider the broad range of potential benefits, and the way they are targeted, delivered and received.

This paper extends existing critiques of benefit distribution under CBNRM by providing a holistic overview, tied into policy structures, of the creation and distribution of benefits through JFM-based REDD projects. Largely, CBNRM critiques focus on community level processes and impacts. This is particularly so in the case of Zambian JFM (see e.g. Phiri, 2009; Phiri et al., 2012). However, producing meaningful community benefit through CBNRM is a question of contextual dimensions, including the pre-existing conditions that influence the abilities of communities to participate and benefit; of procedural dimensions, including who sets the parameters of social benefit and who benefits; and of distributive dimensions, including the mechanisms for benefit sharing (Reynolds, 2012; Visseren-Hamakers et al., 2012). Therefore, in this paper attention is placed on the role that the broader policy context has played in shaping JFM project design, facilitating access to a variety of benefits, and in influencing JFM implementation (objective one). The benefits that JFM targets are examined (objective two) and compared to those expected by the community (objective three). In addition, changes to the policy context under Zambia's REDD participation are considered in order to highlight the anticipated impact of REDD (objective four). Following presentation of the methodology and results for each

objective, the discussion section of this paper considers the implications from this Zambian study for harnessing safeguards through CBNRM. To this end, policy-focussed recommendations are made.

2. Research Design and Methodology

The Katanino JFM area was chosen as a case study because it represents a hot-spot in terms of the barriers and opportunities for benefit sharing. Katanino JFM area is located in Masaiti District, Copperbelt Province. It was established as a pilot JFM area under the Provincial Forestry Action Programme (PFAP, 1995-2006), which ran in Copperbelt, Central, Luapula and Southern Provinces. Katanino JFM was a joint initiative between the Zambian Ministry of Environment and Natural Resources and the Finnish Ministry of Foreign Affairs (FINNIDA). Since its inception, activities in the Katanino JFM area have been undermined by a lack of mechanisms to allow communities to benefit financially from timber forest products (Axberg et al., 2012; Umar and Vedeld, 2012). A recent review of FINNIDA's forestry activities (commissioned by FINNIDA) suggests that there are a range of policy drivers for this breakdown, including the Forest Act and the processes of engagement between forest officers and communities (Axberg et al., 2012). Katanino is therefore being used as a hot-spot case study, whereby it presents a richness of complex data for exploration (Yin, 2003). Although findings may not be generalizable to all Zambian JFM projects, they will highlight the kinds of barriers and opportunities that need to be considered in each context (*ibid.*).

Data collection was conducted in April and June 2012 through an iterative snowball sample of policy documentation and interviews with key stakeholders¹ (see Reed et al., 2009). Initially, an Internet search of policies and actors related to forest management, JFM and REDD readiness in Zambia was conducted. Policies and background documentation from all levels of governance were collected, and a list of actors named or involved in policy implementation was compiled. These actors were contacted, interviewed and asked for reference to further actors and policy documentation, with the aim of identifying the whole policy implementation network (Teye, 2013) engaged around JFM in Zambia. This snowball sampling approach continued until no further actors or policies were identified. The limitation of our snowball sample is that REDD actors or activities that are not connected to the main UN REDD programme activities or actors will be excluded and therefore not considered in the analysis. However, because the UN REDD programme is the

¹ For the purposes of this research, stakeholders were considered to be anyone who can influence or be influenced by, forest policy, JFM and/or REDD.

primary mechanism for REDD readiness, it is unlikely that activities have been missed. Furthermore, the sample was triangulated against the REDD desk report² for Zambia. All policies and actors were categorised according to whether they were related to REDD, JFM or forest policy context, and some actors were assigned to multiple categories where their roles overlapped, as shown in Tables 1 and 2 respectively.

Table 1: Policy documentation

Table 2: Key actors

All actors identified (Table 2) were interviewed, apart from those that are listed as communities. The interviews served a triple purpose. Firstly, they were used to discuss the policies' contents and increase the researchers' understanding of their broader context. Secondly, they were used to discuss the rationale of forest policies, perceived problems or strengths of the policies, and planned future activities and policies. Thirdly, interviews provided a forum for discussing the actions or activities of the actor, including what they did, why and how this is supported (or otherwise) by the policy context. When a participant consented, interviews were digitally recorded and transcribed; otherwise, the researcher took detailed notes. All respondents were guaranteed limited anonymity and as such quotes used in the results section are only attributed according to the relevance of the actor (REDD, JFM or policy context).

A different approach was taken with the communities listed in Table 2. Villages and settlements had been organised into four groups, called communities, to collaborate with the Forest Department for the purposes of JFM. Two of the communities were selected for this research: the first was the closest to the JFM boundary, and the second was the furthest away. During April-May and August, 2012, meetings were held in both communities with notice given in advance through the village headman. Community meetings were used for group discussions about JFM and forest uses. A rapid rural appraisal (Chambers, 1981) was conducted, whereby all present were asked to raise their hands if they participated in each use from a list of forest activities. The list was based upon a list given in the Joint Forest Management Guidelines published by the Forest Department. Such count data gave an idea of the popularity of different forest uses. The community meetings highlighted that there were different perceptions of benefits held by men and women. Therefore in

² The REDD desk (www.redddesk.org) is an NGO-led, collaborative online platform for information sharing on REDD. They publish comprehensive overview reports on REDD activities in UN REDD partner countries.

both communities, a focus group was held with women (n=3 and n=4), to allow deeper discussion of their ideas. These participants were invited following the community meeting.

All data collected was subjected to iterative content analysis. The different data sources were brought together and content was sought appropriate to each objective, as outlined in Table 3.

Table 3: Data Analysis

3. Results

3.1 Objective One: The Policy Context

The Zambian forestry sector is largely centralised, office-based and relies on a system of permits to regulate and manage forest resources. The Forest Department is currently situated under the Ministry of Land, Tourism and Natural Resources. The legal framework for forestry is provided by the Forest Act 1973, and a forest policy of 1998. Technically, the forest department has legal jurisdiction over all trees on non-private land in Zambia. However, in practice, their focus is on forest reserves and plantation forests.

"...it is hereby declared that the ownership of all trees standing on, and all forest produce derived from, the State Lands, Customary areas, National Forests and Local Forests is vested in the President on behalf of the Republic..." **Forest Act, 1973 Part II, 3.**

Forest reserves are split into national reserves, where the forest plays some nationally important role such as the water catchment for a major river, and local forest reserves. The Forest Department has a national office in the capital, Lusaka, provincial offices in each of the nine provinces, and district offices within each of the 72 districts. Prior to 1997, each district also had a team of extension field workers who would be present in villages. However, following a restructuring process in 1997, there are no longer any field workers in the government forestry sector, and the provincial forest department stated that the role of forest officer has become a desk-based job. Therefore, local management and regulation of resource use is now lacking. In order to exploit timber resources, a person must apply at the national level for a permit.

Joint Forest Management was an initiative that was established during a review of forest policy in the 1990s that aimed to decentralise the forest sector and provide community regulation of forest resource use through

the establishment of community committees and forest guards. During this time, a process of strategic planning resulted in the Zambian Forest Action Plan, and a review of legislation and policy was held, supported by FINNIDA. The resulting Forest Policy of 1998 specifically promotes JFM through its various strategies. In order to provide the legal framework for the Policy's strategies, a revised Forest Act was proposed in 1999. The new Act was to support decentralisation of the forestry sector. Here it was proposed that there would be a forestry commission (ZAFCOM), which would enable the private sector, communities and the forestry department to collaborate for forest management. Policy context actors reported that it was to link local level village management institutions to district level actors, and would help to create and support markets for forest products, with a particular focus on timber. FINNIDA explained that their involvement in JFM was initiated as a pilot programme to demonstrate the models supported by the new Act.

"The idea [of the commission] was to decentralise it [the forestry sector] and to try to get authority into the provinces and the districts as much as possible. To try and promote the value of forest products, all of them, through developing market systems". **Policy context actor.**

Unfortunately, the new Act has never been commenced, meaning that the only legal basis for JFM is provided by Statutory Instruments that cannot change the overriding principles embodied in the in-force Forest Act. FINNIDA stated that they worked in Katanino to put in place all of the structures and procedures necessary to begin JFM once the new Act was commenced. However, they reported a sudden change of direction by government that resulted in the new Act never making it through parliament. Suspicions of a number of actors indicated that the idea of a commission was too expensive to establish and/or threatened too many important jobs within the forest department. Therefore, the new Act has never been ratified, and instead the 1973 (centralised) Act persists and shapes JFM. To support JFM, a Statutory Instrument (SI 52 of 1999, superseded by SI 47 of 2006) outlines the official procedures for JFM. Under the Forest Act, an SI can only be used to permit exploitation of non-major forest products (leaves, flowers, fruits). Therefore, even with the SI 47, the underlying legal framework for sharing timber management and revenue with the community is lacking. FINNIDA said that in response to the effective end of the decentralisation programme, they went into a no-cost extension with their involvement.

*“It was just really to wind up. Within the local communities we had some of these user groups, they went ahead and started looking at the financial benefits using the non-timber forest resources. And part of what the extension tried to ensure that these groups received all of the equipment that they needed with the income generation. With a lot of expectation. So you find that some people in these groups may have continued to do this income generation - bees, basketry.” **JFM actor***

The persistence of the centralized policy means that JFM had to focus on non-economic benefits. FINNIDA focused on benefits including increased food security and increased capacity. The district forest officer stated that an additional benefit was the presence of community level institutions for forest management (the village user groups and committees).

*“The JFM model is more touchy feely - certainly the stuff I saw. And it wasn’t looking at the economics quite so much. It was more about the community living there, therefore they have rights to the produce. But until you work through the economics, if it’s not financially worth their while investing in the product, they’re not going to.” **Policy context actor***

3.2 Objective Two: JFM Design and Delivery

In order to implement the SI for JFM, the Forest Department compiled guidelines that detailed the structures and procedures for implementation. The guidelines require that once an area has been identified for JFM, an application is sent to the forest department, supported by the chief and the district forest officer. A verification committee is then formed, consisting of the district forest officer, alongside representatives from agriculture, community development, and other applicable parties. The committee must verify whether or not the community is ready to adopt JFM. Following verification, the district forest officer must work with communities to establish user groups that reflect the uses of the forest; village resource management committees (VRMCs) (including representatives of from the user groups) and forest management committees (including representatives from the VRMCs). Collectively, they must design and implement a management plan. These guidelines were written at the time of the proposed Forest Act, but were revised around the time

(approximately 2005) that FINNIDA went into their no-cost extension (FINNIDA). They thus reflect the embodiment of JFM under SI47 rather than the grand vision of the proposed Act.

In Katanino, the established user groups reflect the permitted forest uses under SI47. These were all focussed on non-extractive forest uses, such as caterpillar or mushroom collection and bee-keeping. Equipment was distributed, including bee-hives, to improve honey production, and food driers so that users could preserve mushrooms for sale in specialist markets outside of the immediate area. Each community also had forest guards who were given permits to patrol the forest and powers of arrest.

“We had the beekeeping, we had the firewood group. We had the food preservation group. We had a carpentry and joinery. We had nursery. We had these other ones; the mushroom and the wild fruits. These were the groups that we had identified could bring some income in the community... In the area today, as we can go into the communities, and we can still point at some activities these were initiated by the JFM process.”

JFM actor

Despite guidelines, the procedures for realising and sharing benefits under JFM are unclear. The forest department’s guidelines for establishing JFM do not make reference to how benefits should be decided, realised or distributed. The national forestry department stated that the management plan should be used to define benefit sharing, but that in most cases of JFM, project implementers have not understood this. The Katanino management plan and constitution does not make any reference to how finances (and other costs) are to be distributed between participants.

The management plans devised were highly focussed on forests alone, and only engaged other sectors to a limited degree. Representatives from community development and health were involved in the inception workshops for JFM. They were to represent the communities and act as a bridge between the community and the forest department. In particular, agriculture is not considered despite this being the main livelihood activity of all the rural communities (see objective three). At the Masaiti district offices, both the agriculture and forestry officer reported to not being able to work with their counterpart. Despite being located in adjacent office buildings, the officers both reported that collaboration is logistically difficult. Both state that they lack the financial resources to collaborate, and the forest officer argued that their belonging to different ministries means that collaboration is tricky.

Because of the lack of on-the-ground forest officers, there is a distinct lack of on-the-ground forest department presence to support communities' JFM activities. The Masaiti district forest office is 1-2 hours' drive from Katanino. The district forest officers reported that they have no transport or resources to go to the forest and to meet with the communities. In Katanino, the communities report similarly, and said that this results in problems in gaining renewal of their permits to patrol the forest; in total they therefore have no legal rights to enforce forest protection, and there are no forest officers present to back-up enforcement. With such limited communications between the communities and the forest department, there is no way to regulate or monitor extractive uses of the forest.

"You know the forest we are talking about it is 45, 50 km away. And the last time you were here, we had no means of transport of going there. And even this time, the situation is the same. So we don't go there. So we don't go there, to be specific. But whenever transport is there, we are willing and we are very much ready to go." **JFM actor**

3.3 Objective Three: Community Perceptions of Benefit

The JFM's focus purely on forestry, and the user groups created do not match the role that forests play in the livelihoods reported by communities, as shown in Table 4. There is little in the way of formal employment. Communities rely on rain-fed agriculture, predominantly for growing maize, supplemented with beans, tomatoes and other non-staple crops. Excesses of all crops are sold, with a particular focus on maize. Producing charcoal serves a household's energy needs, and helps to generate income, both for household expenses and to finance agricultural inputs such as fertiliser. The nearby Ndola to Lusaka road creates a ready market for charcoal. In addition to charcoal, the forest represents a source of tools and building materials. It also provides food to supplement crops. Food can be foraged for subsistence purposes, such as caterpillars, mushrooms, chikanda (wild orchids), or generated within the forest through activities such as bee-keeping. Any excess of forest products is sold. The women's focus groups reported that maize generates more money than any forest product. Of the forest products, charcoal fetches the most money. However, agriculture and charcoal are not explicitly included in JFM and are prohibited under the Forest Act.

Participants show that the mismatch between JFM activities and livelihood activities prevents communities from balancing the various forest uses. There are suggestions from community meetings and the district forest

department that the people burning charcoal are not the same as those who were involved in JFM.

Additionally, one village stated that a person who had been allocating land in the forest for farming had not been part of JFM. The women in both focus groups reported that they can no longer collect caterpillars because the forests are now too far from the village and are in too bad condition for caterpillars. They also reported that they now have to walk great distances to collect firewood because the edge of the forest is increasingly far from the villages.

In addition, because of the focus on peripheral activities, the communities reported that the measures and activities of JFM did not increase the benefits that they already receive through forest products. They argued that there was lots of talk about JFM and the potential financial benefits, but that none ever materialised. The communities talked about some equipment and training being delivered. However, the bee hives and food driers that were provided are said to be of sub-standard quality and therefore unusable. Bikes were delivered to allow the community forest patrollers to reach the forest. However, the patrol person from Biwa said that she did not receive one because they were not delivered to all the villages involved.

The lack of tangible and promised benefits has created a general feeling amongst the communities of being used by the forest department. One example given is that the forest department required the communities to demarcate the boundaries of the Katanino forest. The community said that they were not given materials for this work, and that they were not paid for it. In addition, one forest patroller argued that they were not given sufficient tools to do the job; he used the example of footwear and said that he was expected to conduct forest patrols without boots, despite the dangers of snakes. They reported that their lives are the same now as before JFM, except with the added burden of managing the forest. As a result, the communities are suspicious that the forest department were undertaking JFM for reasons of self-interest, perhaps benefitting from payments for attending the training workshops. One of the women's focus groups said that the forest department had collected dried mushrooms to take them for sale, but never returned the proceeds.

"We are not motivated to protect the forest. We don't receive any money for the work we do, in the forest we risk our lives from snakes as well as people who come to harvest trees illegally, armed with axes and chain saws." **Community Meeting.**

Table 4: Fit of JFM to community forest use

3.4 Objective Four: REDD Activities

Currently, REDD readiness in Zambia occurs through the UN REDD programme and is focussed on national level planning, and tying REDD activities into broader climate change governance. The UN REDD programme is being headed by the Government Department of Forestry and is divided into three strands (see The REDD Desk, 2013). Under the first strand, studies are being conducted to inform REDD strategy development and outline the challenges that Zambia must overcome in designing and implementing REDD. These include a review of the legal preparedness (IDLO and FAO, 2011) and of the drivers of deforestation (Vinya et al., 2011). Both highlight the role of charcoal markets in driving deforestation, and the need to change the forest governance system towards decentralisation. The legal preparedness study also highlights clashes in jurisdiction between various ministries and departments that must be engaged in REDD implementation. However, as yet, no national strategy has been devised and there is no clear timeframe for one. The second strand relates to finding synergies and linking to broader policies, and thus is also a national planning activity. It includes the cross-departmental Second Integrated Land Use Assessment (ILUA II), intended to quantify and catalogue forest resources for REDD Monitoring, Reporting and Verification (MRV). Under the third strand, the programme should be engaging stakeholders and building partnerships for implementation. So far, activities have been limited to national level workshops with potential REDD stakeholders, though as mentioned in the introduction, two demonstration projects are being developed by private companies and NGOs, and are building partnerships with the community and forest department along a CBNRM model.

In response to studies under the first strand, some shifts are occurring in forest governance in response to REDD, with the intention of creating a more decentralised governance system to support JFM. A new revised Forest Act has been tabled. Its commencement has been imminent since early 2012. No actor interviewed had seen a final copy of what had been placed before parliament, with the exception of one at the national level. This respondent explained that the Act no longer creates a ZAFCOM, and instead the forestry department has been restructured and given different powers that will enable them to act in a similar way to a commission. The Act is thought to allow for partnership parks to be created, allowing communities to enter into partnership with private companies to share resources and expertise. However, a number of other national level respondents argued that drastic change is required, and voice disappointment that the ZAFCOM proposal has been removed from the new Act. While the public-private partnership idea is welcomed, they

argued that the department would be unable to integrate production and conservation to the necessary degree.

“A commission would be more broad based, with power and legitimacy for both production and preservation.”

Policy context actor.

Under the second strand, there has also been some level of broader reform in considering forestry within its fit to other sectors. Zambia has a programme of climate change resilience, which seeks to facilitate adaption and mainstream climate change throughout government policies. This Pilot Programme for Climate Resilience has led to the establishment of a national climate change secretariat (the Climate Change Facilitation Unit), which is inter-ministerial and has ministry representatives attached to it. However, the agricultural representative on the CCFU highlighted practical problems in securing such representation, saying that many ministries are awaiting clarification on the secondment process, or are waiting for letters of permission. The forest department have also convened a national level REDD committee that consists of representatives from the department of forestry, agriculture, the chiefs and energy. The committee meet to discuss strategy, assign roles and ensure that the departments are supporting progress. Respondents stated that their involvement is because the sectors they represent could be threats to forest protection. The committee is led by the department of forestry, with respondents reporting that collaboration with the forest department for REDD is on a “by invitation”, project-based basis, focussing on forestry objectives. One respondent reported that for the department of energy, such collaboration is beneficial because energy has no sub-national representation. Collaboration therefore enables them to think about on the ground measures for energy management.

“So we are working with the forestry department for REDD because we are a driver of deforestation.” **REDD actor.**

“We should have a significant role to play; REDD attributes deforestation to agricultural land use.” **REDD actor.**

Despite inter-sectoral REDD committees, there are many concerns that structural reforms are not far-reaching enough. Some respondents voiced concern that a focus on forestry leads to a focus on the benefits of REDD as being carbon payments, which will not be instantaneous, are likely to be small. It should also be noted that there may not be payments at all because whether or not REDD will be based on a carbon market model is yet

to be decided by an on going UNFCCC working programme. Thus, they argued that finding some way of helping communities to wait for benefits will therefore be critical in the success of REDD. One respondent argued that a forest focus ignores the needs of people living in the forest, and threatens to undermine forest management. Instead, respondents argued that for REDD to work, individuals within a community must benefit from alternative livelihoods, such as conservation agriculture practices, alongside alternative energy sources, and alternative employment. Such an approach requires an even greater role from the departments of energy and agriculture.

“We know that the [carbon] payments are not so much. But these are just the icing on the cake.” REDD actor.

“We would want to see energy and agriculture taking action. So pilot projects on charcoal production or cook stoves. Or on conservation farming. But these actions are not in the forest sector.” REDD actor.

“[through REDD] we are not saying, if you are dependent on the forest, how can we work with you. We are saying, you are an inconvenience. You are not supposed to be in the forest. We want to secure the forest. And for me, that has been a bother. For as long as we don’t want to address their needs, include them in our approach, it won’t work.” REDD actor.

There is a reported barrier to deeper structural changes in the form of resistance from the forestry department. At the national level, the forestry department reported reluctance for institutional change unless all its implications are understood. The forest department is concerned that if REDD were based on a carbon market approach, turning carbon into a commodity in Zambia would serve only third parties and consultants and not the Zambian people. Indeed, one respondent reported frustration with the number of conditions for institutional change that are being attached to REDD participation, arguing that such prescriptive measures do not fit with the Zambian context of forest management. Non-forest department respondents have reported that they believe this reluctance to be linked to a concern not to lose power or influence. They suspect that such concerns underlie the invitation only approach to collaboration, as well as previous problems in revising the Forest Act (see objective one).

“We need to understand the Zambian situation before we can start thinking about the options” REDD actor.

“There should be trust. I should not be forced to do something because there is a conditionality... but those are the things we are seeing in REDD” **Policy context actor.**

“So then we realised that they [the forest department] preferred the centralised system” **Policy context actor**

Actions around REDD have not yet tested how structural changes are enacted or functioning, as they have focussed so far on establishing an Integrated Land Use Assessment (ILUA II) to inform MRV. The forest department are working closely with the FAO and FINNIDA to design and instigate ILUA II. Both FAO and FINNIDA have a member of staff seconded to the forestry department. Collectively, they have worked to design a sampling protocol, identify 5000 sampling locations, take socio-economic information, and train on-the-ground staff in the provinces to collect and record data. Such training has included the use of GIS software and has been supported with vehicles and equipment for the survey. UNDP stated that the focus on MRV and emissions levels and not on pilot projects is because knowledge of sustainable management practices already exists, even if it is not being used in practice.

“...the only thing that was not done before was to establish emissions levels and the MRV systems. These are the only new things [under REDD] and these are what we would like to build capacity on.” **REDD actor.**

4. Discussion

In the case of Zambian JFM analysed in this paper, the policy and implementation context mean that community level benefits are not considered to have been significant and meaningful by the community they supported. Barriers to providing meaningful community development benefits are provided by the broader macro context of JFM, specifically in the legal framework for forest management and the isolated, single sector focus of forest governance. As a result of the macro context, JFM targets benefits as they are perceived by the forest policy and, to a more limited extent, the perceptions of the original JFM funders (FINNIDA), and not as they are perceived by communities. These barriers prevent creation of resource management rules that allow the forest to be considered in its broader context. Because the rules of JFM participation do not deliver tangible benefit, and do not allow the communities to manage all aspects of forest use, rules are not followed by the communities. Indeed, there is some suggestion that the forest department have also not followed the

rules of the initiative, resulting in mistrust between the forest department and communities (as per Idrissou et al., 2013). In addition, the lack of in-forest personnel means that there is no enforcement.

As it currently stands, if JFM is to be used as a model for delivering REDD with safeguards, these safeguards will be peripheral and unlikely to secure win-win scenarios of community development alongside forest protection. In this instance, CBNRM is not delivering community benefits; it is not resulting in a return to fortress conservation (in contrast to Beymer-Farris and Bassett, 2012), but is shifting the burden of forest management onto communities without proportional benefit, thus suggesting injustice (as per McDermott et al., 2012). By not delivering benefits to the community, there is little to support community development. The barriers to delivering community development are not however purely related to benefit sharing. Instead, they are about the focus of benefits and therefore activities within the CBNRM initiative. To deliver safeguards, greater attention must be paid to delivering community benefits, and therefore development, through targeting drivers of deforestation. Greater long-term-sustainable benefits are likely to be perceived by the community when wider livelihood activities, such as improved agricultural practices that increase yields are targeted. By decreasing the forest focus, such activities should remove the need to encroach upon the forest, thus delivering forest preservation (see also Pirard and Belna, 2012).

The extent to which Zambia's REDD process will facilitate forest protection with safeguards seems limited. The results suggest that participation in UN REDD+ is prompting some changes in forest governance, in particular around the legal framework, opportunities for capacity building and structures for greater intersectoral collaboration. However, these shifts in Zambian forest governance will need to be supported by implementation actions at the village level in order for UN REDD to be an opportunity for delivering community benefits. In particular, the placing of REDD firmly within the forestry department with only peripheral involvement of agriculture and other sectors raises concerns that REDD will not be considered within the wider livelihood activities of forest communities. While the forest department have the technical expertise for forest management, they lack in both the wider context and resources. Instead, the creation of a livelihoods commission at the local level could act as a way to integrate the separate departments (agriculture, energy, forestry); tap into their skills and resources (including agricultural extension workers); and link into village and forest management councils.

Our analysis therefore leads us to argue that CBNRM as a basis for delivering REDD with safeguards must be broadened in both its scale and its scope. In terms of scale, a broader shift towards inter-sectoral, collaborative governance is required to facilitate landscape-relevant activities (see also Stringer et al., under review). Indeed, REDD must be seen as a broader project of environmental governance rather than as project level, forest-based actions (in agreement with Thompson et al., 2011). In terms of scope, forests must be seen as part of a broader landscape of natural resources, all of which play varying roles in local livelihoods and therefore offer variable contributions to community development. While forests must be preserved and managed under REDD, the direct benefits they provided are perceived by the communities to be peripheral. Therefore, they cannot outweigh the drivers of deforestation, for example agriculture and charcoal burning. A focus on the resource to be protected is not sufficient; instead it needs to be considered in its broader resource landscape. Therefore, CBNRM should not be narrowed to the specific resource to be conserved (forestry, wildlife, etc.), but should remain natural resources in the broadest sense.

5. Conclusions

This research has shown that in order for CBNRM to deliver REDD safeguards, the design of a CBNRM initiative and the broader policy context must all align. This paper has studied JFM in Zambia as a basis for REDD implementation. The results have shown that the delivery of community benefits is hindered by the policy context, shaping which benefits can be targeted; the sectoral focus solely on forestry rather than livelihoods including their largely agricultural basis; and the processes of enactment of JFM. As such, CBNRM should not be assumed to be an automatic strategy for delivering safeguards under REDD. Instead, CBNRM must be facilitated and supported throughout the governance system. In particular, it is necessary to understand the community context; the way that the design of the initiative fits to this context; and the role of the broader policy context in shaping fit and supporting CBNRM operation. Within this scenario, REDD participation should be framed as a vehicle for changing the governance context where necessary to improve fit and support.

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Tables

Table 1: Policy documentation

Document	Description (author)	Relevance
ILUA I Background Report	Report on the first national survey of land use. Details forest resources (FAO, Government of the Republic of Zambia - GRZ)	Policy context
National Forest Policy (1998)	National Forest Policy, outlines aims and strategies and activities to manage forests (GRZ)	Policy context
Forest Act of 1973	In-force legal framework for forest management, controls options for forest management and designates protected areas (GRZ)	Policy context
SI 47 of 2006	The local forests (control and	Policy context

	management) regulations, outlines official procedures for JFM (GRZ)	
Zambia Forestry Action Plan (ZFAP)	Strategic planning document behind Forest Policy and SI 46(GRZ)	Policy context
Copperbelt Forestry Action Plan	Strategic plan for Copperbelt Province, outlining area specific goals and opportunities (GRZ)	Policy context
JFM guidelines	Outline of procedures for establishing JFM, guides establishment and operation of JFM areas (Forestry Department, GRZ)	JFM
Katanino management plan	Outlines management objectives, actions and responsibilities	JFM
Katanino constitution	Details principles for governing Katanino JFM (Forestry Department - FD, Katanino Forest Trust - KFT)	JFM
Memorandum of understanding	Between forest department and forest trust, establishing roles and responsibilities (FD and KFT)	JFM
Map	Hand-drawn diagram of Katanino forest area, villages and the split of areas of responsibility for each community (FD and KFT)	JFM
National Programme Document	Agreement for collaboration in preparing Zambia for REDD participation (FAO/UNDP/UNEP/GRZ)	REDD
Integrated Land Use Assessment (ILUA) II Project Agreement	Agreement on collaboration for a programme of land use assessment to underpin forest planning and REDD MRV (FAO/GRZ)	REDD

Table 2: Key actors

Actor	Role	Relevance
Senior policy advisor	Worked on review of forest act and policy	Policy context
Copperbelt provincial forestry officer	Worked on Katanino JFM, manages forests within Copperbelt province	Policy context JFM
Masaiti district forest officer	Worked on Katanino JFM, manages forests within Masaiti district	Policy context JFM
FINNIDA	Funded Katanino JFM	JFM
Serenje, Biwa, Bwengo and Oposhi communities	Groupings of smaller villages for participation in JFM	JFM
Zambian Institute of Environmental Management	Civil society, contributing to a broad range of research and project evaluation surrounding forest policy	Policy context REDD
Zambian climate change network	Civil society, contributing to a broad range of activities surrounding REDD, climate change and forest policy	Policy context REDD
National REDD coordinator	National forestry department representative heading Zambian	Policy context REDD

	REDD participation	
MRV Facilitator	FAO representative, collaborating on ILUA II	REDD
UNDP natural resources programme	Participation on REDD implementation	REDD
Climate Change Facilitation Unit	Mainstreaming of climate change into broader policy context	REDD
Masaiti district agricultural officer	Oversees agricultural initiatives surrounding Katanino	REDD

Table 3: Data Analysis

Objective	Data Source	Content Analysed
1	Forest policies Policy context interviews	Uses of forests Management procedures and mechanisms
2	JFM policy documents JFM actor interviews Community meetings/focus groups	Benefit sharing mechanisms Procedures Functioning of mechanisms and procedures
3	Community meetings/focus groups	Changes to forest use under JFM Benefits of JFM Problems of JFM
4	REDD policy documents REDD actor interviews	Actions taken under REDD Planned actions Rationale behind actions

Table 4: Fit of JFM to community forest use

Activity	Role in communities	Role in Forest Policy	Role in JFM
Agriculture	Food, sale of excess	None	None
Charcoal, timber	Energy, sale for household and agricultural inputs	Prohibited	None
Forest foraging (mushrooms, caterpillar, chicanda)	Supplement food, some sale	Permitted	Targeted through user groups and equipment
Forest based (bee-keeping)	Supplement food, some sale	Permitted	Targeted through user groups and equipment