

Reshaping Conservation: The Social Dynamics of Participatory Monitoring in Tanzania's Community-managed Forests

Mikkel Funder^{a,#}, Finn Danielsen^b, Yonika Ngaga^c, Martin R. Nielsen^d, and Michael K. Poulsen^e

^aDanish Institute for International Studies, Copenhagen, Denmark

^bNordisk Fond for Miljø og Udvikling, Copenhagen, Denmark

^cSokoine University of Agriculture, Morogoro, Tanzania

^dUniversity of Copenhagen, Copenhagen, Denmark

^eNordisk Fond for Miljø og Udvikling, Copenhagen, Denmark

#Corresponding author. E-mail: mfu@diis.dk

Abstract

Drawing on a study of community-managed forest reserves in southern Tanzania, this article discusses how community members engage and shape inclusive protected area management practices to produce outcomes that were not intended by external implementers. The article shows how a participatory natural resource monitoring scheme operating in the area becomes part of the villagers' collective and individual efforts to assert their claims to territory and resources *vis-a-vis* the state, other communities, and other community members. By altering the monitoring procedures in subtle ways, community members strengthen the monitoring practices to their advantage, and to some extent move them beyond the reach of government agencies and conservation and development practitioners. This has led to outcomes that are of greater social and strategic value to communities than the original 'planned' benefits, although the monitoring scheme has also to some extent become dominated by local 'conservation elites' who negotiate the terrain between the state and other community members. Our findings suggest that we need to move beyond simplistic assumptions of community strategies and incentives in participatory conservation and allow for more adaptive and politically explicit governance spaces in protected area management.

Keywords: protected area management, forest management, participation, incentives, monitoring, Tanzania

INTRODUCTION

In the past three decades, inclusive approaches to protected area management have become widespread and a variety of schemes for participatory management of forest and wildlife areas have been implemented worldwide (McShane and Wells 2004;

Borrini-Feyerabend et al. 2007; World Bank 2008). Initially, such schemes tended to see people in local communities only as 'beneficiaries' of externally implemented conservation interventions. Later, communities were provided with a more active role as 'participants' in the everyday implementation of conservation measures on the ground, but with only limited influence on decision-making. More recently, there has been an attempt to move away from these fairly instrumentalist notions of participation, towards a greater emphasis on communities as actual 'partners' who collaborate and share decision-making power with the state in co-management schemes¹.

Alongside the evolving role of local communities in protected area management, there has been increasing attention to the notion that if communities are to engage in conservation efforts, they must be provided with tangible incentives that support their livelihoods.

Access this article online	
Quick Response Code: 	Website: www.conservationandsociety.org
	DOI: 10.4103/0972-4923.121011

Such incentives may include financial benefits which are reallocated for local social development purposes, as well as use rights for selected wildlife and forest resources. Some approaches to the ongoing development of a global scheme for Reduced Emissions from Deforestation and Degradation (REDD+) reflect a similar notion, whereby communities may be financially compensated for forest conservation and restoration in order to reduce emissions (UNFCCC 2010).

Yet despite widespread implementation of and support to such schemes, our knowledge is still limited on the ways in which community members actually respond to and engage with participatory approaches in conservation, and what benefits they obtain from this. This article seeks to contribute to our understanding of these matters through a case study of a participatory forest and wildlife monitoring scheme operating in community-managed forest reserves in southern Tanzania. Other studies of this scheme have focused on the efficiency of the monitoring system in terms of providing reliable data on forest and wildlife trends as a basis for management decisions (Danielsen et al. 2011; Nielsen and Lund 2012; Danielsen et al. In press). The current article takes a more in-depth look at the social dynamics of the participatory monitoring system in question. The emphasis here is therefore not on whether the monitoring system is accurate and efficient as a conservation tool². Instead, we examine the forest and wildlife monitoring system as a case study of the ways in which a participatory conservation intervention may be reshaped by community members on the ground, and discuss what this implies for how we understand and implement participatory conservation measures.

Specifically, we show how community members in the study area employ an otherwise mundane monitoring scheme as a means of seeking greater territorial and individual control over forest and wildlife resources *vis-a-vis* the state, other communities and other community members. We further show how, in this process, community members seek to move the scheme beyond the aims and control of the government staff and experts who initiated it. In extension of this, we argue for a more nuanced understanding of the ways in which community members respond to participatory conservation schemes. This includes a greater appreciation of the ways in which community members actively seek to influence and reshape conservation interventions on the ground. It further entails an understanding of the interests of community members in participatory conservation schemes as composite and multi-layered, and involving complex relationships with the state, other communities and other community members.

ANALYTICAL APPROACH AND METHODOLOGY

How should we analytically approach and understand the relationship between communities and external actors in protected areas management? Critical analysis of conservation interventions has tended to focus on the power of the state and other external actors to impose protected areas and associated management practices on local communities against their interests (Escobar 1998; West 2006). From such a viewpoint,

even ostensibly ‘participatory’ approaches to conservation may represent little other than a means of co-optation, whereby communities are lured into conservation activities that first and foremost satisfy the “green agendas” of governments and conservationists in ensuring orderly, effective and low-cost conservation (Escobar 1998; Agrawal 2005; Selfa and Endter-Wada 2008). This critique echoes the debate within participation studies more broadly, where even ‘well-intended’ participatory schemes have been described as dominated by the worldviews of external participation ‘experts’ who employ imported approaches that inevitably impose particular norms and practices upon the participating subjects (Kothari 2001). Indeed, some authors have likened participatory schemes to Foucault’s metaphor of the “Panopticon”. Originally conceived in the late eighteenth century by Jeremy Bentham, the “Panopticon” was envisaged as the perfect prison, where inmates would be subject to discrete but invisible forms of external control and surveillance, and would eventually come to discipline themselves, thereby eliminating the need for violence and other more explicit means of domination (Foucault 1995; Kothari 2001).

While such a perspective on participatory schemes may be correct in some instances, it also contains a risk of portraying local communities as little more than helpless victims of conservation interventions. Seeking a more dynamic understanding, our research draws on the notion that project and policy interventions are social arenas where external and local actors engage and interact in struggles over resources, knowledge and institutions (Long 2001; Nuijten 2005; Cleaver 2012). Such interaction rarely takes place on an equal footing, as powerful actors bring their assets and advantages into play. Nevertheless as emphasised by Giddens (1984), any relationship of power is subject to the dialectics of control, whereby the dominated may act contrary to the expected. As conservation measures are introduced on the ground, they become subject to the everyday practices of local farmers, pastoralists, etc., and thereby almost invariably introduce some room for manoeuvre and efforts to resist external domination. Hence as Scott (1990) has famously shown in another context, there is frequently room for subversion and ‘silent resistance’ in the face of a powerful state. This may take many forms, including discrete everyday rule-breaking and ‘foot-dragging’ (Scott 1990; Holmes 2007), or exploiting legal pluralism and institutional fragmentation to serve the livelihood interests of oneself or the group (Juul and Lund 2002).

Conservation interventions involving local communities may thus go through a process of ‘localisation’ which modifies the outcomes intended by external initiators. This applies to both traditional ‘top-down’ forms of intervention and to more participatory styles of intervention (Cornwall and Coelho 2007; Funder 2010). This suggests an emphasis on the way local actors shape and reshape the everyday practices of conservation (the ‘how’ of things). It furthermore requires an understanding of the interests behind these actions i.e., what perceptions and rationales lie behind their dispositions and strategies *vis-à-vis* conservation interventions (the ‘why’ of things). Moreover,

in order to avoid superficial assumptions of communities as homogenous and 'closed' entities, intra-community power relations and patterns of inequality needs to be understood, and relationships to other actors and entities (such as the state and other communities) need to be captured.

Drawing on the above approach, our study set out to explore how community members have responded to a particular forest and wildlife monitoring scheme in Iringa Region in southern Tanzania. The study applied a combination of household questionnaires, in-depth qualitative interviews and focus group interviews in four study villages involved in the monitoring scheme, supplemented with supporting data from other sources beyond the villages. Fieldwork for the study was conducted during 2008-2009. Two of the authors resided in the area during most of this period and regularly visited the villages (sometimes daily), while other members of the research team visited the area for 2-3 week periods to conduct intensive fieldwork.

The questionnaire was conducted with a total of 160 households in the four villages, and focused on providing information on livelihoods, forest use and overall perceptions of and engagement with the participatory monitoring scheme. The questionnaire was tested through pilot interviews, and thereafter administered through enumerators. Selection of respondents was based on stratified sampling using well-being rankings, thereby allowing us to examine differences between wealth groups (Grandin 1988; IIED 1992). In practice this entailed: (1) asking key informants to provide information on core features that were considered indicators of well-being in the villages (e.g. land, livestock, marital status, children in school, etc.), followed by; (2) a ranking exercise in which multiple informants divided each household in the village into different well-being categories, leading to an aggregate score for each household which was then; (3) triangulated with other data from the household survey and personal observation of the interviewee's household condition, etc., This allowed us to stratify households into three well-being groups, namely a 'Poorest', a 'Middle' and a 'Wealthy' group (our terms).

The qualitative interviews were conducted with a total of 39 households, and centred on tracing people's actions and interactions in relation to the participatory monitoring scheme since its initiation, and exploring their rationales and perceptions *vis-a-vis* the monitoring scheme and their actions. This was complemented by focus group interviews with (1) members from each of the different well-being categories; (2) members from different forest user groups; and (3) members of the Village Natural Resource Committees that operated the monitoring system. The qualitative interviews with individuals and focus groups used semi-structured interviewing, combined with ranking and scoring techniques of how people perceived different aspects of the monitoring scheme and forest management more broadly (Kvale 1997). Careful probing was used to bring out controversial aspects. Information on actions/interactions were checked with other interviewees and/or informants. The combination of information on actions and perceptions allowed us to check

stated perceptions against actual behaviour. Additional data were obtained from key informants in the villages and archival material (minutes from meetings in Village Natural Resources Committees, monitoring records, etc.).

The study also benefitted from a series of other past and ongoing studies in the area on the local economics and effectiveness of participatory forest management and monitoring (Topp-Jørgensen et al. 2005; Poulsen et al. 2007; Lund 2007b; Lund and Treue 2008; Vyamana et al. 2008; Danielsen et al. 2011; Nielsen and Treue 2012; Nielsen and Lund 2012; Danielsen et al. In press).

LIVELIHOODS AND FOREST MANAGEMENT IN THE STUDY AREA

In the late 1990s, the Tanzanian Government instigated a major reorientation in its approach to forest management, shifting from a centralised, state-led policy towards a greater emphasis on Participatory Forest Management (PFM) (Wily 2001; Blomley et al. 2008; Robinson and Maganga 2009). The new approach was enshrined in the Tanzanian Forest Act of 2002, which provided communities with two different ways of engaging in PFM. The first of these is known as Community Based Forest Management (CBFM) and takes place on village land or privately owned land in communities. Under CBFM, villages (or groups and private entities within villages) may gazette Village Forest Reserves (hereafter referred to as Village Forests), and thereby transfer management authority over these forest resources from the state to the community. This includes the right to collect fees on forest utilisation, and to impose and retain fines on illegal use. The second form of PFM is known as Joint Forest Management (JFM) and takes place on state-owned land. Here communities engage in collaborative forest management agreements with the Government (or other forest owners) and share management responsibilities for State Forest Reserves. This provides communities with certain use rights, but revenue collection opportunities for villages are more limited than under CBFM, and the forest land remains under direct state control and ownership.

Today, some 11% of Tanzania's forest area is managed under either of these PFM arrangements, involving more than 1800 villages across the country (Blomley et al. 2008). Our study focused on four such villages, located in Iringa Region in southern Tanzania (Figure 1).

The communities of Itagutwa and Mfyome are located in Iringa District, in an area characterised by dry Miombo woodlands and with a population of 2,136 and 2,375 respectively. The communities of Kidabaga and Magome are located in the neighbouring Kilolo District, some 2 hours drive further south in the montane part of the region. They are characterised by wet closed canopy forest, and have a population of 2,240 and 1,671 inhabitants respectively.

The main ethnic group in the four villages are the Hehe, who are primarily engaged in smallholder agriculture centred on subsistence maize production, as well as cash crops including tobacco. The population of the area also includes a number of

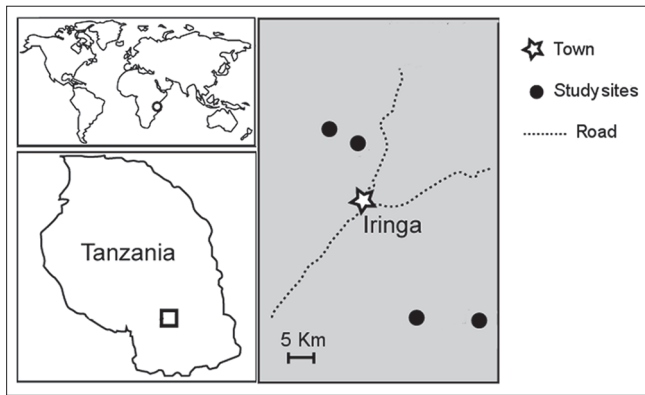


Figure 1
Location of study sites

ethnic minorities, including pastoralists in the woodland areas who have historically migrated to the area from further north.

Historically the forests have played a key role in local livelihoods and continue to do so even today. This is particularly so in the woodland villages of Itagutwa and Mfyome, where crop-farmers rely on forests for firewood, construction materials, charcoal (sold locally and in towns), as well as subsistence foods including wild fruits and vegetables. Pastoralists furthermore graze cattle in the woodland forests. The woodland areas have in recent decades suffered from degradation caused chiefly by wood extraction, including for firewood, charcoal, and small-scale timber harvesting. While this is currently aggravated in some areas by new settlement, there are indications that local management in some areas has contributed to slowing forest degradation and possibly, to reducing utilisation to a sustainable level (Lund and Treue 2008).

In the montane villages of Kidabaga and Magome, many households obtain wood from private woodlots, while wood extraction from natural forests is more limited. However, non-timber forest products such as honey, medicinal plants, plant fibre and particularly bushmeat is of some subsistence importance for poor households in the montane villages (Nielsen 2006). The montane forests constitute an important catchment for the national hydropower supply, and form part of the 'Eastern Arc', a globally important biodiversity hotspot. The montane forest areas were subject to commercial logging in the 1970s and 1980s, but are today *de jure* protected as government/state forest reserves, and illegal logging is not a major concern (Dinesen et al. 2001; Nielsen and Treue 2012).

The four villages studied include examples of both of the two types of PFM permitted within the National Forest Act. In the woodland villages of Itagutwa and Mfyome, the main emphasis is on the CBFM scheme in Village Forests. Here, community members are allowed to extract both wood and non-wood resources from the Village Forests, based on rules and quotas established by the communities and approved by the District Lands, Natural Resources and Environment Office (hereafter referred to as the District Forest Office or DFO). The woodland villages benefit from community taxation of forest use, including charcoal production, small-scale timber extraction,

etc. Taxes are then used to cover operational expenses and surplus may be used for small-scale community projects.

The montane villages of Kidabaga and Magome also manage small Village Forests, but these are relatively insignificant and the main emphasis here is on JFM schemes in which communities participate in the management of State Forest Reserves. These reserves have an important strategic role as catchments for hydropower production and for conservation of biodiversity. In accordance with the JFM principles, the state thus formally remains the principal manager in these reserves, and communities are involved mainly as partners who organise local awareness-raising and take part in forest restoration activities and monitoring. Unlike the Village Forests of the woodland villages, wood extraction is illegal in the State Forests, and the ability of communities to generate revenues from forest user fees is limited to a small number of non-timber forest products. As a result, community revenues from the scheme are more limited in the montane villages. Bushmeat hunting is illegal in both woodland and montane forests as this falls under the separate jurisdiction of the Wildlife Department and is not included in the PFM agreements under the Forest Law. Nevertheless, in all of the study villages some households continue to illegally harvest game meat for subsistence or trade³.

The main organising bodies for forest management in both the woodland and montane communities are Village Natural Resource Committees (VNRCs). These consist of 8-10 members each, democratically elected at Village Assemblies. VNRCs are responsible for decision-making, coordination and administration of all village involvement in forest management. VNRCs formally report to the elected Village Council, and are furthermore obligated to provide relevant information (regular reports including plans, financial statements, monitoring data, etc.) to the state as represented by the DFO. All major management decisions on forest use and taxation in Village Forests must be approved by the DFO to ensure compliance with national law and avoid unsustainable use. Despite the participatory nature of the CBFM and JFM schemes in the four villages, the state formally retains the ultimate authority in overall forest management in the area.

INTERVENTION: THE PARTICIPATORY MONITORING SCHEME

Participatory monitoring in natural resource management constitutes a relatively recent approach to monitoring the status and trends of biodiversity and natural resources in protected areas and elsewhere (Danielsen et al. 2005; Stuart-Hill et al. 2005). Through simple techniques, local community members contribute to, or are responsible for data collection on e.g. wildlife abundance, tree cover, and the extent of natural resource use in a given area.

Data may be collected by dedicated community monitoring patrols who conduct regular transect walks, and be provided by villagers through regular interview sessions in which they provide information on their everyday observations and perceptions of resource use and trends. Based on these data, trends can be interpreted and used in management

decision-making. The extent to which communities are involved in and control the data interpretation and decision-making process may range from an entirely externally led data interpretation and decision-making process to a relatively endogenous process (Danielsen et al. 2009).

The participatory monitoring scheme in the Iringa Region was initiated in 2001 as part of a larger forest and agricultural development programme funded through Danish Government aid. The monitoring scheme was developed with the stated aim of providing information on the status and trends of forest use and forest and wildlife resources for use by communities in daily forest management in the PFM areas. The information would further provide the DFO and Central Government with information on resource trends, and contribute to overall assessment of forest trends and management in the area.

The monitoring scheme was from the outset anchored in the Village Natural Resource Committees, which were to form the main organisational and decision-making body for the scheme at the community level. The scheme was developed through meetings between Government forest staff, international consultants, and community members in the involved villages (including both VNRC members and the broader community). An initial catalogue of methods based on experiences elsewhere was discussed and adapted to fit local conditions. During this process, community representatives requested a particular emphasis on monitoring forest use. Monitoring of biodiversity and specific wildlife species was therefore toned down, although certain indicator species were selected on the basis of VNRC members' recommendations. Following initial testing in two pilot communities, the scheme was rolled out to other communities on a voluntary basis and eventually covered 23 villages with a total population of 54,000 people and 140,000 hectares of forest and woodlands, including the four villages discussed in this article.

The practical monitoring procedure consists of two key activities namely: 1) systematic data collection during patrols (henceforth called 'transect walks') through the forest areas by community monitoring patrols consisting of two to four village scouts, who record signs of resource use, disturbances and selected species (large mammals, birds and tree species); and 2) perception interviews with community members (minimum five households per month) undertaken by VNRC members, asking about household perceptions of forest use and associated changes and trends. The information from these monitoring activities is recorded using standardised forms, and intended to be used by VNRCs to develop and propose specific management actions. Such actions include setting restrictions on particular forms of resource extraction (e.g. disallowing harvesting of certain tree species), changing harvest volumes (amount of firewood to be collected per household), changing prices for resource use (e.g. charcoal licenses) and setting fines for illegal activities.

The monitoring scheme furthermore includes basic procedures to monitor VNRC performance and thereby enhance transparency. This includes regularised records of all VNRC meetings, proposals and activities, as well of

financial management transactions (issuing of permits, fees, fines, expenditures, etc.). These records are in principle freely accessible to all community members at any time. VNRCs are required to present collected data on both forest and wildlife trends and financial management at quarterly Village Assemblies. These assemblies also serve as a forum for presenting and debating new regulations on forest use, and for voting on how to spend surplus funds from fees and fines for community use.

Data from the monitoring activities are synthesised in monthly monitoring reports and are in principle submitted along with proposed management interventions to the DFO and other relevant authorities at district level. Significantly, forest management actions proposed by communities require approval from the DFO prior to implementation. Management actions related to wildlife specifically cannot be proposed by communities, being under the separate jurisdiction of the Central Government's Wildlife Division. Hence, while wildlife is monitored by communities under the participatory monitoring scheme, they have no legally backed options for regulating its use or benefitting financially from hunting licenses.

The monitoring scheme was designed to be economically self-sustaining, with operating costs to be financed from the incomes from forest user licenses and fines. Accordingly, no funding was provided for monitoring activities in communities by the donors or government authorities, other than for initial training workshops and technical input in connection to set-up of the scheme. When the larger Danish-funded programme was phased out in 2003, the scheme was left to operate on its own with no external inputs.

MONITORING SUSTAINED: BUT WHY?

In 2005, a field study examined the operational and financial sustainability of the scheme (Topp-Jørgensen et al. 2005). It found that although monitoring activities were carried out less frequently than originally planned in some sites, the scheme was generally continuing to function at the village level⁴. Furthermore, it was found to operate with a high degree of autonomy in the communities, with very little engagement by the DFO.

This picture was largely unchanged when our fieldwork for the current study began in 2007, five years after external technical assistance terminated. The monitoring scheme continued to operate in most of the target villages and VNRC meetings were held on a monthly or bimonthly basis in most villages. The scheme also appeared to sustain relatively broad support among community members. In the four villages covered by our household survey, 86% of all respondents said they felt the monitoring scheme benefitted their household, while 3% were unsure and 11% said it had mainly negative impacts on their household⁵. The latter group included respondents whose forest use was illegal according to state law (mainly hunters), or who had been subject to repressive actions by the VNRCs. We return to this issue below.

But while the continued operation of the monitoring system thus suggested a generally positive situation from the initiator's point of view, it also raised questions. The fact that the monitoring scheme has continued in operation without the need for external financial or technical support, and the fact that it maintains a relatively broad support among villagers suggests that the scheme contains significant incentives for communities. But what are these incentives?

In terms of immediate financial benefits, the monitoring scheme forms an important part of the overall PFM system operating in the villages, and thereby contributes to the generation of community revenues from taxation of commercial forest use under PFM. However, for most community members these revenues are of limited significance. One study showed an average annual revenue of USD 604 among the 15 woodland villages involved in the PFM scheme (Topp-Jørgensen et al. 2005). A subsequent study found that the majority of these revenues were used to cover operational and administrative costs associated with the management and monitoring of the Village Forest Reserves (accounting for 69% of expenses), including salaries and allowances for VNRC members and monitoring patrols (Lund 2007b). A much lesser share, accounting for 21% of expenses, were used for community development activities implemented by communities themselves, such as support to school construction, dispensaries and water pipes⁶.

In the montane villages, revenues are even smaller. Because the montane villages are engaged in management of State Forest Reserves from which wood extraction is illegal, the most profitable sources of PFM revenues such as charcoal production and commercial firewood collection are unavailable. A study of revenues in the montane PFM villages found an average annual revenue of USD 403 per village. Here, just 12% of revenues have been allocated to community projects. The remainder is insufficient to cover management and monitoring expenses, and monitoring patrols in the montane villages therefore mainly work as volunteers without compensation.

The limited revenues from the scheme were also reflected in our household survey, where only 27% of all respondents said they had benefitted from the community development projects funded by PFM revenues. Despite this, the monitoring scheme has continued to operate in both the woodland and montane villages, and as mentioned above 86% of community members responded that they were positive towards the scheme during our household survey.

This suggested that immediate financial revenues and community projects were not the only perceived benefits from the monitoring scheme. Indeed, when asked directly to name the benefits of the monitoring system, all of the respondents that were favourable to the system mentioned protection against encroachment on forest resources as the main benefit from the scheme. This was also borne out in the qualitative interviews with individuals and focus groups in the villages. During these interviews, community members recognised the value of the community projects, especially when they supported longer-term livelihood strategies. However, they

placed even greater emphasis on how the monitoring scheme was a way of supporting individual and collective access to and control over forest resources, thereby ensuring long-term access to forest products and services. Indeed, during ranking exercises, focus groups and most individuals consistently ranked improved community control over forest resources as the most significant benefit of the monitoring scheme.

In the following section, we elaborate on this, discussing how the monitoring scheme is perceived and used by community members as a means of asserting and demarcating rights over forest resources at three levels, *vis-à-vis* other communities, the state, and fellow community members.

MONITORING AS TERRITORIAL DEFENSE

For both the DFO staff and the technical experts involved in the initial development of the monitoring scheme, its main purpose was to provide information on the status and trends of forest resources. This was also emphasised during training and establishment of the scheme. Apart from this, the village monitoring staff has the mandate to apprehend illegal forest users whom they encountered during their monitoring transect walks (i.e., users that have no permits or are otherwise breaking the rules set down by the VNRC). For the DFO staff and technical experts, this was merely an add-on benefit from the monitoring process, to which they did not afford much attention during the original design and training. Nevertheless, in all of the villages studied, the policing role of the monitoring staff has become a key aspect of their work, and is afforded much emphasis by both VNRC members and the majority of other community members interviewed, regardless of wealth status. In the household survey, 56% of all respondents stated that making arrests and reporting on illegal activities was the most important task of the village monitoring staff. Just 35% of the surveyed households found that monitoring of forest and wildlife trends was the most important task, despite this being the original focus of the scheme⁷.

In daily practice, the monitoring staff is encouraged by VNRC members to abandon monitoring activities whenever they encounter illegal users, in order to apprehend and return them to the village, where fines are issued. If the illegal users prove hostile or escape, larger search parties involving other community members may be organised in order to locate the offenders. Such search parties are not a required part of either the monitoring scheme specifically, or of the larger community forest management framework. They are also associated with some risk if the arrest turns violent. Despite this, they were usually undertaken with vigour by those involved.

Behind this emphasis on the monitoring scheme as a means of patrolling and policing the community forest lie several rationales. During interviews, VNRC members and some other village members said they found it crucial to enforce the rules and regulations of the community forest in everyday practice, or it would not be respected. They also acknowledged the importance of ensuring that user fee payment and fines were actually paid by forest users, as this provided the basic incomes

through which the entire VNRC and monitoring scheme was financed on a daily basis. However, both VNRC members and other village members expressed a further rationale on which much emphasis was placed, namely that the transect walks served as a way of protecting the Village Forest against forest users from other communities. This had both a practical and a symbolic dimension—in practical terms, the policing helped to physically deter (or apprehend) external forest users, while in more symbolic terms it served as a way of physically demarcating the Village Forest *vis-à-vis* external users.

One illustration of this is the Itagutwa Village Forest. As a result of heavy migration to neighbouring areas, the woodland forests around this village have been under extensive pressure in recent decades, as new settlers seek firewood, timber for charcoal and bushmeat. Past attempts by the head of Itagutwa village to claim the forest as belonging to his village have failed, as neighbouring communities refused to recognise Itagutwa's authority over the forest. However, with the gazettelement of the area as Itagutwa's 'Village Forest', the VNRC have been able to refer to a legally sanctioned right, and to engage in formal meetings and negotiations with neighbouring villages and their leaders. The transect walks provide a physical backing to this claim, by physically and symbolically 'marking off' the territory *vis-a-vis* other communities. As one woman from Itagutwa put it; "It shows them that this forest belongs to us". The Itagutwa VNRC have furthermore used the information collected through monitoring as an argument in their negotiations with the neighbouring villages, by claiming that they are the ones who know the forest and its condition best, and that they therefore are its best custodians.

Similar practices took place in other situations and other Village Forests in the area. For instance, in the woodland areas charcoal producers frequently arrive from other locations and stay in the forest while charcoal is produced, after which it is sold in Iringa town or further afield. Although these are subject to community taxation under the Village Forest Scheme, some external charcoal producers seek to evade these fees, or produce beyond their permits. In this context the monitoring is perceived by community members as a means of keeping external charcoal producers 'in check', partly by keeping track of signs of illegal production, but especially by apprehending and deterring illegal producers. A similar rationale was employed in connection to firewood collection, where many women said the monitoring was a means of avoiding competition from women in other villages—thereby also saving them time as firewood was more readily and exclusively available.

In some areas, even community members who themselves were involved in illegal activities used the monitoring as a strategic measure against external users. In the village of Mfyome, for instance, some local hunters recounted how they actually supported the monitoring scheme, although they themselves were at risk of being apprehended for their illegal hunting. As local residents in the village they were able to work out the routine of the monitoring patrols and thereby avoid them, whereas hunters from other villages did not have this information and were now more reluctant to hunt in the forest. They also explained that they

considered the monitoring scheme a protection against illegal tree cutting, thereby helping to conserve habitat and hence ensuring a sustained wildlife population⁸.

The monitoring system was thus employed by community members in the study villages as a means of territorial defence against forest and wildlife users from other communities. In this respect there are parallels to the communities described by Wily and Dewees (2001) in northern Tanzania, who organised themselves against encroachment of their forest resources, thereby providing some of the initial inspiration for the introduction of participatory forest management in Tanzania.

Significantly, the 'territorial' dimension of the monitoring system in our study area was not part of the initial concept and design, which focused on generating data and information on forest and wildlife trends. Yet through the actual practices of community members, it evolved into a central aspect of the everyday implementation of the monitoring system, thereby extending the scope of the system. For the District Forest Officers who had supported introduction of the monitoring system, this development was in some respects positive. Not only did it suggest a willingness of community members to take on an active role in protecting their forest resources against encroachment, it also provided a convenient means of ensuring regular patrolling of forests without the need to draw on the limited resources of government forestry staff.

Nevertheless, by expanding the scope of the monitoring system, community members were also removing certain aspects of the system beyond the reach of the forest officers and thereby the state. This is partly illustrated by the example described above, whereby some local hunters relied on the monitoring system to fend off hunters from other communities, while still continuing their own hunting despite this being illegal under state law. Yet while such behaviour is perhaps best explained as *ad hoc* opportunism, other practices in the monitoring system suggested a more direct and deliberate effort to move beyond the control of the state. This is discussed in the following section.

SEEKING BEYOND STATE AUTHORITY

The monthly monitoring reports to be delivered by VNRCs to the DFO and other Government authorities served two principle aims at the district level. Firstly, they provided data on the status and trends of natural resources to the DFO in a low-cost manner. And secondly, they contained the proposed management actions made by each village, for approval by the DFO. Ideally, this procedure provided a means for the external regulating agencies to supervise and monitor forest resource trends in the region, as well as to ensure that the management proposal made by VNRCs were in compliance with the overall forest law.

However, exactly because they are meant to contain information on the status and trends of forest resources, the reports are in principle also a very tangible documentation of the success or failure of communities as managers of the forest *vis-à-vis* the state. For community members, having to submit

the monitoring reports to the DFO therefore signified not only a bureaucratic burden, but also an attempt by government agencies to maintain control over the forest resources. During individual and focus group interviews, VNRC members and other villagers questioned the intentions behind the DFO's requirement for the monitoring information, perceiving it as a lack of faith in their forest management capabilities. Some community members even considered the data gathering as being purely for the benefit of the DFO, and preferred that the community monitoring staff should focus exclusively on enforcement. The need for DFO approval of management proposals was also brought into question. VNRC members made frequent reference to the delays in obtaining DFO approvals of management proposals (see also Topp-Jørgensen et al. 2005), and described the reporting to the DFO as an unnecessary burden or a direct attempt by the DFO to retain authority in Village Forests.

Behind these perceptions lies a history of state control over forest resources in Tanzania since colonial times, and a tradition for protectionist and top-down management of forest and wildlife resources. Colonial and post-colonial forest management policies have traditionally emphasised revenue generation for the state, and included strong elements of social engineering through e.g. relocation of forest users and efforts to curb local forest use practices (Sunseri 2009). The protectionist approaches employed in the establishment of protected areas and biodiversity conservation measures in many forest areas during the 1980s and 1990s have further compounded community members' scepticism towards government forestry staff (Wily 2001; Brockington 2002; Goldman 2003; Igoe 2004; Nelson et al. 2007; Sunseri 2009). Moreover, while PFM is now becoming well-engrained as a key approach in the DFO, some government extension officers remain sceptical towards both PFM in general and participatory monitoring specifically. Many local forest users therefore remain wary of engaging in close cooperation with DFO staff.

At the same time, however, community members are well aware of the continued ultimate authority of the DFO and other state agencies in forest resource management, including the DFO's ability to revoke management proposals. This poses the DFO as a powerful authority whom communities cannot choose to merely ignore. In extension of this, part of the legitimacy and clout of VNRCs and their management recommendations stem precisely from the fact that they have been approved by a powerful authority such as the DFO. On the one hand, communities thus wish to become as autonomous in their forest management as possible, while on the other hand they are at least partly dependent on the DFO's support to PFM and the legitimacy and opportunities that this provides. As one VNRC member stated; "We have to work with them [...] but our goal is to be free of them".

The efforts of communities to navigate this two-sided relationship with the state in forest management are evident in the way the monitoring scheme has been internalised locally. The majority of VNRCs duly deliver the required monthly reports, including both monitoring information and

management proposals (Topp-Jørgensen et al. 2005). And yet at the same time, VNRCs have actively sought to gain greater autonomy in the monitoring and associated decision-making by seeking to move the everyday monitoring practices beyond the reach of the DFO. This can be seen both in the collection of data, in the analysis of these data and in the subsequent management actions taken by the VNRCs.

In terms of data collection, some VNRCs have devised additional data collection methods on their own account. For instance, in one village women are allowed to collect firewood in certain areas on the condition that they report back to the VNRC on any unusual wildlife and forest use observed in the area. In another village, a similar scheme reduces license fees for grazing in the forest, provided that cattle owners regularly report to the VNRC on the condition of forest grazing areas and the extent of illegal use. The DFO has not been informed of the introduction of these practices, and the information generated is typically not included in the formal reporting formats and reports prepared by the VNRC to the DFO. During interviews, VNRC members explained that since the monitoring scheme belonged to the community, they did not wish to provide information to the DFO beyond what was strictly required.

A similar approach was evident in terms of data analysis. In principle, VNRCs are required to compare monitoring data over time and reflect explicitly on trends and possible causes in the monthly monitoring reports. Yet most monthly reports from the villages provide only raw data, and are either very sparse on analytical reflections or omit them entirely. Closer investigation showed that VNRCs did in fact reflect on trends and causes, but chose to do so in their own way. Rather than conducting a numerical analysis of the data in the formal monitoring protocols, VNRC members orally debate the condition and trends of the forest at regular intervals. Significantly, individual perceptions were not accepted off-hand, but were instead subjected to debate among VNRC members and with a strong focus on practically generated experiences among all involved. In this process, the normally inferior status of monitoring staff in the VNRCs was inverted as their recounts and experiences from monitoring walks was given much weight. Likewise, those VNRC members who conducted 'perception interviews' with other community members played an important role in these discussions. Apart from this, several VNRCs also frequently carry out monthly, quarterly or bi-annual supervisory monitoring transect walks in addition to those required by the formal procedures. These typically consist of the entire VNRC and in some cases also members of other village committees. The intention is to validate the perceptions and information provided by the patrol guards, and to allow all VNRC members (and other village institutions where these are involved) to see and assess particular issues and areas for themselves.

This emphasis on orally communicated, experience-based data analysis reflects the traditional local epistemology of the area, in which knowledge and observations of forest and wildlife are debated and passed on orally. As such, it differs from the focus on written records and numerical data analysis

that is inherent in the monitoring scheme as initially designed. VNRC members were well aware of this difference, but deliberately selected their own way of conducting analysis. During interviews they expressed concerns that other types of analysis would leave them at the mercy of the DFO and other ‘outsiders’, who were more proficient in scientific data analysis than themselves. This was seen as a potential opportunity for data manipulation by the DFO, with no options for VNRCs to control the analysis or pose counter-arguments. Retaining the analytical process locally and away from the DFO was thus seen as a means of reducing the risk of external manipulation and interference by the state in the monitoring process.

A third and final aspect of the way in which communities have attempted to remove the monitoring process from external control relates to the decision-making into which the monitoring scheme feeds. Most major management actions prepared by the VNRCs are duly proposed in the monthly reports to the DFO as required (although as mentioned earlier, the analytical rationale behind these proposals is usually not provided). As previously discussed, such state approval is to some extent necessary in order to obtain the power of state backing that helps VNRCs establish authority, impose controversial rules, demand fees, etc.

However, during the everyday implementation and enforcement of these management actions VNRCs act very much at their own discretion, and in so doing frequently adapt formally approved rules and principles to the situation at hand. In one village, the monitoring patrols deliberately ‘overlooked’ particularly poor households that were engaged in illegal hunting and honey collection, while other better-off households were apprehended and fined. Rather than a reflection of personal favours, this was based on the notion that the poorest had a hard enough time as it was, as well as an assessment that any efforts to punish the weakest only risked bringing the VNRC into disfavour in the community. In another village, VNRC members were instructed by the DFO to pay particular attention to a certain area of forest, but chose instead to focus the monitoring on another area that they considered more critical in terms of securing Village Forest resources. When the local forest officer became aware of this he sought at first to oppose the VNRCs decision, but eventually gave up on the grounds that it would be impossible for him to check on a regular basis anyway.

These attempts to reshape the monitoring scheme can be seen as part of a broader effort by communities to seek greater autonomy in forest management *vis-à-vis* the state. Such discrete resistance to state authority in forest management is not unknown in Tanzania. Sunseri (2009) describes how some communities in colonial Tanzania sought to counter state appropriation of forest resources through various forms of everyday resistance, such as moving boundary markers and dubbing forest plots as ‘sacred’ as an argument for retaining local control of them (see also Mulwafu 2011).

Significantly, however, community members in our study villages do not seek to entirely subvert the monitoring system,

but rather to appropriate and adapt it to their own advantage. This takes place through a pragmatic and discrete tweaking of the knowledge production and decision-making process of the monitoring system, which does not openly counter or ‘anger’ the state. This allows VNRCs to retain the monitoring system, and to draw on state backing while at the same time seeking greater independence from it. The benefits of this can be seen partly in the ability to secure territorial claims *vis-a-vis* other communities as described above. In addition, both the monitoring system and the associated state backing provide significant benefits to VNRC members internally within communities, as will be seen from the following.

MONITORING AS LEVERAGE FOR ‘CONSERVATION ELITES’

We have described above how communities apply the participatory monitoring scheme as a means of seeking greater control over forest resources in relation to other communities and the state. But to what extent does this also apply between different groups within individual communities? The original guidelines for the participatory monitoring scheme were developed by external experts, based on consultations with local communities. The guidelines emphasised the need for an inclusive process involving a broad cross-section of community members, including representation of women and minority groups.

The VNRCs studied had an average gender ratio among members of 57% men and 43% women. Some women in the VNRCs said during interviews that they were reluctant to speak freely during VNRC meetings as it was not common for women to speak up in public forums, or that they felt intimidated when in the presence of men with a high social status. This was also our own observation from participating in VNRC meetings.

In terms of well-being status, 16% of VNRC members were ranked in the wealthiest group, while 70% ranked in the middle group, and 14% in the poorest group. This was disproportionate to the general wealth distribution in the villages, with especially the middle group being over-represented, while the poorest group was significantly under-represented⁹. VNRC members were also better educated than the average village household. Members had typically attended 5-7 years in school, and no members had less than 3 years of schooling. However, 19% of community members in our broader household survey had not attended school at all. These were principally from the poorest strata. During qualitative interviews, members with no schooling typically said that this greatly reduced one’s options for becoming member of the VNRCs (or any other community organisation), since people would not vote for unschooled candidates.

It should be noted that the VNRCs tended to show better gender ratios and had more members from the lower socio-economic segments than the Village Development Committees and other community level committees. Nevertheless, the tendency towards over-representation of the middle and better-off segments of the village, as well as the

better-educated households members, was notable (see also Lund 2007b; Vyamana et al. 2008).

VNRC membership provides a number of individual benefits. Apart from basic allowances for participating in meetings and other similar activities, it also provides access to strategically important social and economic resources and 'gate-keeping' functions. Nielsen and Lund (2011) discuss examples of embezzlement and misuse of funds among leading VNRC members in some villages, and how the involved individuals have an interest in sustaining their source of income by making the VNRCs appear active through monitoring and other activities.

In addition to such rent-seeking benefits, we found that VNRCs also provide opportunities for local political leverage. Membership of a village organisation typically commands a degree of respect from other community members, and can help develop or consolidate a member's reputation as being experienced in community organisation matters. Most leading VNRC members thus straddled several village organisations. VNRC membership furthermore expands the social network of its members, who get to meet VNRC members from other villages, and take on a role of mediators between the community and government agencies.

The emerging significance of VNRCs as an opportunity for political leverage was well illustrated in one of the study villages, where the VNRC has become a platform for general political manifestation by its leading members, in direct competition with the Village Council. Members of the council in this village have accused the VNRC of seeking to unduly expand its authority into general village development, through its donation of funds to micro-development activities. VNRC members have countered by indirectly questioning the integrity and legitimacy of village council members, including informal allegations that some of these are involved in illegal charcoal production in the area. While not the cause of the conflict as such, the monitoring scheme has become a discursive reference point for both parties. Referring to the monitoring patrols and their emphasis on enforcement, village council members have criticised the VNRC for acting 'like policemen' against the interests of the broader community. Meanwhile, VNRC members refer to their monitoring information as the basis for their allegations against the village council. Such conflicts reflect how the VNRCs and the monitoring system is drawn into broader political conflicts between competing village factions.

The central role of VNRCs in PFM also provides its members with significant say in the management of a key productive resource in the area. This includes the ability partially to control and impose restrictions on other community members' forest use. We therefore examined whether VNRC members themselves represented particular types of forest users by looking at their own main uses of the forest. Of the 28 VNRC members in the four villages, 23 were farmers engaged in crop-production, whose forest use centred on collection of firewood, with supplementary collection of vegetables, fruits and honey, and in some cases grazing of livestock. Of the remaining five members, two were restaurant/shop owners,

two had their main income from charcoal production and pit sawing, and one was a pastoralist. Active hunters were not represented in VNRCs at all, as this activity is illegal, although some monitoring staff are former hunters.

The fact that crop-producing farmers are predominant in VNRCs compares well with their relative majority in the villages. Pastoralists are however underrepresented by just a single representative across the two woodland villages, and the fact that hunting is illegal means that active hunters are marginalised in terms of formal VNRC representation and decision-making. In several cases the VNRCs have shown a distinct tendency to disregard or even oppose the interest of minority groups in forest management. For example, in the village of Mfyome the VNRC has proposed that an entire sub-village is resettled. Households in the sub-village are particularly heavily dependent on forest resources, including illegal hunting, and are viewed by some VNRC members as being 'primitive' and 'destructive' to the forest. In making these allegations, the VNRC has referred to information obtained through the monitoring scheme on the community's forest use. The sub-village has so far resisted the proposal by threatening to seek independent administrative status, as well as soliciting support from local and external patrons and authorities outside the forest sector. However the issue remains unresolved, and the VNRC has opposed the construction of a new school in the area (see also Lund and Treue 2008).

Similar hard-line approaches have been taken by other VNRCs. In the montane villages, VNRCs have employed threats of excessive punishment in an attempt to establish authority, such as spreading the incorrect rumour that illegal forest users risk up to 30 years imprisonment if caught during monitoring patrols (see also Nielsen and Treue 2012). In the woodland areas where farmers and pastoralists frequently compete for access to resources, some VNRC members have called for heavy restrictions on pastoralists' grazing in Village Forests, claiming that they are 'invading' community forests. As support for these claims, VNRC members have referred to monitoring information showing declines in forest resources, even if this information does not specifically link the observed decline to the forest use of pastoralists. In some instances such requests have been dismissed, while in other cases they have led VNRCs to disallow grazing of pastoralists' cattle in some areas, with little or no dialogue with the pastoralists themselves.

Such instances illustrate how the monitoring scheme is applied by some VNRCs to help legitimise a rather autocratic conservation approach that is somewhat different from the inclusive and participatory principles initially envisaged. These tendencies are also evident in other aspects of the monitoring process. While the broader community can provide input to data collection and take part in debates at village assemblies, the actual analysis of data and associated decision-making was conducted almost exclusively by VNRC members. Major decisions proposed by the VNRC are usually presented at village assemblies, but community members are usually not provided with the information on which the analysis and management decisions are based, and

debates tend to be dominated by leading village members as per custom. Moreover, households living far from the village centre (which often includes the poorest and most intensive forest users) frequently do not attend Village Assemblies. This echoes what appears to be a general tendency of asymmetric distribution of knowledge and information about participatory forest management in communities in Tanzania (Robinson and Maganga 2009).

During our qualitative interviews, some community members pointed out that VNRC members benefitted from monopolising monitoring data, since it provided them with knowledge of other community members' resource use that could be used strategically for personal gain. In the montane villages, monitoring patrols have in a few cases demanded a bribe from illegal forest users, in return for not reporting them. We were not able to establish other examples of this, and it is questionable whether such practices are widespread. However, as one community member pointed out, the very risk of it happening meant that one had to treat VNRC members with a certain respect.

The responses of community members to these autocratic tendencies in VNRCs vary.

In cases where specific forest user groups have had use rights curtailed without prior consultation and negotiation, they have usually responded negatively, and also tended to express the most critical views of the VNRCs and the monitoring scheme during interviews (see also Nielsen and Meilby *In prep.*). The majority of respondents, however, continued to support the notion of the VNRCs and the monitoring scheme, even if they recognised and disagreed with the hard-line approach. During our interviews, they would typically explain that the advantages of community management and monitoring outweighed whatever mistakes the VNRCs made, and that the most important issue was to ensure and maintain community access to the forest. In extension of this, some respondents stated that it was better to deal with 'difficult' VNRC members of their own kind, than having to deal with government agencies.

Such reasoning suggests a pragmatic approach, whereby the advantages of securing community control of forest resources are given primacy, even if this involves dealing with the authoritarian tendencies of those who represent the interests of the community *vis-à-vis* other communities and the state. It further reflects that VNRC members are first and foremost local elites and thereby need to maintain a certain degree of local legitimacy and responsiveness to other community members. One example of this is when VNRC members turn a blind eye on the illegal forest use activities of the poorest households, as mentioned earlier. The need to maintain a degree of legitimacy towards the wider community thus creates certain limits on how far one can go in exploiting the benefits of VNRC membership. Nevertheless, there is some irony in noting how the autocratic approaches of VNRCs echo the state-led authoritarian approaches that participatory conservation schemes claim to be a reaction against.

DISCUSSION AND CONCLUSION

As mentioned at the outset of this article, academic studies of participatory schemes have often pointed out how such approaches can easily become a means of co-opting local communities into taking on external agendas (Kothari 2001). From such a perspective, one might have expected the participatory monitoring scheme in Iringa to develop into an externally controlled instrument of co-optation *à la* Foucault's "Panopticon", whereby communities monitor and discipline their own resource use for the benefit of the state. In extension of this, one might have predicted a short life-span for the scheme, as communities turned their backs on yet another conservation initiative driven by outsiders' agendas.

Instead, our findings show how communities in the area have actively engaged the monitoring scheme as part of their efforts to collectively and individually assert control over forest resources *vis-à-vis* the state, other communities and other community members.

This suggests that we need a more nuanced understanding of local actor responses to protected area management (Sodikoff 2007; Ravnborg 2009). The case discussed here thus highlights three issues that require increased attention in analysis and practice, namely; 1) how we understand the actions, interests and incentives of local actors in participatory conservation; 2) how issues of elite capture may be understood and addressed; and 3) how inclusive and participatory conservation measures should be approached and implemented.

Expanding the notions of benefits and incentives

Research and practice on participatory approaches to protected area management and associated resources have often focused on the importance of providing direct financial incentives for local communities, either as compensation for lost resource access or as various forms of Payment for Environmental Services (Frost and Bond 2008). While such benefits will often be highly significant to community members, the case discussed here suggests a need to also recognise the importance attached by community members to other more indirect social and political benefits. In Iringa, this is illustrated by the ways in which a participatory monitoring system comes to provide both individuals and communities with a means to seek greater territorial control over forest resources *vis-à-vis* the state and other actors.

This should not be taken as a suggestion that economic benefits are somehow of lesser significance. On the contrary, the social and symbolic benefits sought by households are typically a means of securing longer-term control and rights over important productive resources and thereby economic capital (Bebbington 2000). What is important is thus to appreciate the composite and multi-layered nature of community members' incentives for engaging in participatory conservation interventions. Rather than thinking solely in terms of short-term financial benefits, local actors may also or instead be driven by more long-term and indirect incentives such as

ensuring food security and enhancing territorial control over resources (Wily 2001; Wollenberg et al. 2001; Langton et al. 2005; Hvalkof 2008).

Policy makers and implementing authorities need to take this into account when developing conservation and development interventions. This is important in relation to ongoing community-based forest and wildlife management schemes in Africa and elsewhere. It is also significant in the development of global incentives-based schemes such as those currently under development in relation to REDD+ (Zahabu and Jambiya 2007; Burgess et al. 2010; Danielsen et al. 2011).

Addressing the issue of local ‘conservation elites’

There has recently been increasing reference to the issue of ‘elite capture’ in community based approaches within conservation and more generally (Tai 2007; Labonne and Chasse 2009; Lund and Saito-Jensen 2013). Nevertheless, the actual nature of such elites and the ways in which other community members perceive and relate to them remains poorly understood in the context of conservation.

The development of the VNRCs and their monitoring scheme in Iringa indicates how participatory conservation interventions may contribute to the development of what could be termed ‘conservation elites’ within communities. Participatory monitoring schemes do not necessarily lead to such situations, but where systems of information collection and management are monopolised and made exclusive by community elites, they risk becoming powerful platforms for autocratic decision-making and control over key productive resources.

However, our study also suggests that it is important to avoid making simplistic statements about the nature of such ‘elite capture’ in participatory conservation. While some VNRCs in Iringa were indeed dominated by existing elites, others served as platforms for other community members to challenge the authority of existing elites and their institutional platforms. Moreover, part of the status of community conservation organisations comes exactly from their ability to represent the community in forest management, and as discussed above a certain degree of legitimacy must therefore be maintained in this respect. Community conservation organisations such as the VNRCs thus operate in the complex political terrain typical of many local institutions in natural resource management (Lund 2007a). In so doing, their members may seek to satisfy both collective interests of territorial claim over forest resources while at the same time profiting individually, thus displaying a mix of individual and collective interests that defies simplistic efforts at classifying their motives as either ‘good’ or ‘bad’.

This does not, of course, imply that the interests of the poorest and marginalised groups are automatically represented by local conservation elites. Greater attention is thus needed to the particular interests of such groups in devolved and participatory protected areas management¹⁰. Significantly, this must build on and enhance the strategies already applied by

the poor in seeking to influence protected area management (or their prioritisation of other activities considered more important), rather than imposing preconceived modalities for ‘making’ the poorest participate.

From blueprint participation to political negotiation

There is nothing new about the use of local knowledge production as a means of social and political empowerment. On the contrary, this is a basic notion in much participation thinking, and is evident in numerous participatory approaches and technologies, including in natural resource management (Brosius et al. 2005; Rijsoort and Jinfeng 2005; Fortmann 2008).

What is interesting to note in the case of Iringa, however, is how such participatory technologies themselves are tweaked, innovated and re-interpreted in daily practice, and how they are thereby brought beyond the reach of both the government authorities and the conservation and development experts who initiated the scheme. The actions of local community members in this respect can be seen as a means of avoiding the co-optive aspects of participation, whereby actors are ‘participated’ to become self-disciplining and self-surveilling subjects.

Such efforts clearly have their limits, and it would be wrong to suggest that community members are able to reshape the monitoring scheme and its outcomes entirely at will. At the end of the day, the state retains the ultimate power to cancel the monitoring scheme and revoke the status of Village Forests. It should also be noted that many Village Forests are of relatively lesser economic value to the Tanzanian government than the state controlled forests and national parks. For instance, in areas where wildlife revenues are high, state imposition and clamp-down has tended to be more vigorous than in the participatory forest schemes discussed here (Brockington 2002; Goldman 2003, 2011; Nelson et al. 2007, Meroka and Haller 2008). In other words, the available space for communities to reshape conservation interventions—whether participatory or not—is always to some extent dependent on the surrounding political and economic interests and structures (Ribot et al. 2008).

Community members are of course fully aware of this, as evident in the two-pronged strategy of the communities discussed here, in which they seek to maintain good ties with DFO officers while at the same time imposing their own discrete changes to the monitoring system. In so doing, they illustrate not only how communities may exploit the limited reach of a state in the everyday implementation of conservation efforts, but also the extent to which community members consider it worthwhile to make the effort in the first place, despite the challenges and risks involved.

From a normative empowerment perspective, this is positive in several ways. For one thing, it displays in abundance the much sought after local ‘ownership’ in conservation and development interventions. It furthermore shows how apparently mundane mechanisms such as a monitoring scheme can be exploited by communities as supplementary platforms for pursuing and consolidating community forest rights.

These are outcomes which go some way beyond the original community benefits envisaged by the external initiators of the monitoring scheme.

Significantly, the lessons from Iringa are not only relevant for the more instrumentalist schemes for community participation in conservation, but also for co-management schemes where communities are engaged as actual 'partners'. In this respect, it seems particularly critical to avoid simplistic notions of communities as unified parties whose strategies and interests *vis-à-vis* conservation can be predetermined and aligned with state interests in once-and-for-all management plans and 'joint visions'. Instead, a more flexible approach is needed which provides space for communities to appropriate and innovate conservation interventions within co-management arrangements. As such, our findings from Iringa echo the calls for adaptive management approaches in conservation (Berkes 2003, Colfer 2005, Stringer et al. 2006, Williams 2011). This includes accepting the uncertainty of outcomes, and allowing for greater flexibility and plurality in the development and implementation of management practices.

This does not imply that communities should not be held accountable or responsible for their actions in conservation terms. Protected areas typically contain biological and ecosystem values of wider regional, national and global significance that need to be accommodated. In many cases, such values can be managed fully and sustainably by local communities. In other situations, circumstances may require that management responsibilities and decision-making needs to be shared by different local and non-local stakeholders, with mutual obligations and responsibilities. Regardless of the necessary arrangements, the key factor is to approach and engage communities as capable political agents in their own right.

ACKNOWLEDGEMENTS

The authors would like to thank our colleagues in the wider Monitoring Matters network for inspiration and dialogue; the Danish Ministry of Foreign Affairs for funding the research programme of which this study formed part; and John F. Massao and Jens Friis Lund for their help. The constructive comments from three anonymous reviewers were also much appreciated.

NOTES

1. See Borrini-Feyerabend (2001) for the evolving role of communities in conservation, and Borrini-Feyerabend et al. (2007) for details on co-management approaches.
2. For this debate, see Topp-Jørgensen et al. (2005); Holck (2008); Danielsen et al. (2010); Danielsen et al. (2011); Nielsen and Lund (2012).
3. This was confirmed in interviews with hunters and other villagers, and witnessed by ourselves. See also Nielsen (2011) and Nielsen and Treue (2012) for details on hunting the montane villages).
4. The study found that transect walks, perception interviews and VNRC meetings to discuss monitoring data were carried out regularly in most of the 23 villages studied, that 80% of the required monthly monitoring reports had been produced and that VNRCs had made 181 proposals for forest management actions based on the monitoring scheme.

5. This did not mean that respondents saw no negative impacts from the monitoring scheme, but that their overall assessment was positive.
6. The remaining expenses were allocated as taxes to the District (5%) or other purposes. See Lund (2007).
7. The remaining households mentioned other purposes such as controlling forest fires, or did not know what to respond.
8. This approach appears to have been particularly prominent among hunters in the woodlands. Hunters in the montane villages tended to have rather more negative attitudes towards the scheme (Nielsen and Meilby In prep).
9. The average distribution across wealth groups for all households in the four villages was 14%, 52% and 34% for wealthy, poor and very poor households respectively.
10. For example, see Child (2006) on governance monitoring in Namibia's community conservancies.

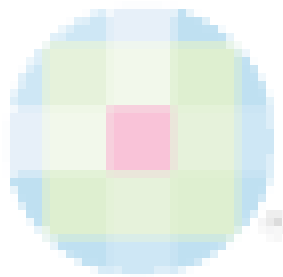
REFERENCES

- Agrawal, A. 2005. Environmentalism, community, intimate government, and the making of environmental subjects in Kumaon, India. *Current Anthropology* 46(2): 161–190.
- Bebbington, A. 2000. Re-encountering development: livelihood transitions and place transformations in the Andes. *Annals of the Association of American Geographers* 90(3): 495–520.
- Berkes, F. 2003. Rethinking community-based conservation. *Conservation Biology* 18(3): 621–630.
- Blomley, T., K. Pfliegner, J. Isango, E. Zahabu, A. Ahrends, and N. Burgess. 2008. Seeing the wood for the trees: an assessment of the impact of participatory forest management on forest condition in Tanzania. *Oryx* 42(3): 380–391.
- Borrini-Feyerabend, G. 2001. Co-management partnerships: a challenging approach for integrated conservation and development programmes. In: *Conservation and development: new insights and lessons learnt* (eds. Agersnap, H. and M. Funder). Copenhagen: Environment and Development Network.
- Borrini-Feyerabend, G., M. Pimbert, T. Farvar, and A. Kothari. 2007. *Sharing power: a global guide to collaborative management of natural resources*. London: Earthscan.
- Brockington, D. 2002. *Fortress conservation: the preservation of the Mkomazi Game Reserve, Tanzania*. Bloomington: University of Indiana Press.
- Brosius, J., A. Tsing, and C. Zerner. (eds.). 2005. *Communities and conservation: histories and politics of community-based natural resource management*. Walnut Creek, CA: AltaMira Press.
- Burgess, N., B. Bahane, T. Clairs, F. Danielsen, S. Dalsgaard, M. Funder, et al. 2010. Getting ready for REDD+ in Tanzania: a case study of progress and challenges. *Oryx* 44(3): 339–351.
- Child, B. 2006. *Developing adaptive performance monitoring for economics and governance of community based natural resource management institutions*. Unpublished manuscript. University of Florida, USA.
- Cleaver, F. 2012. *Development through brickolage: rethinking institutions for natural resource management*. London: Routledge.
- Colfer, C.J.P. 2005. *The complex forest: communities, uncertainty and adaptive collaborative management*. Bogor: RFF Press and CIFOR.
- Cornwall, A. and V. Coelho (eds.). 2007. *Spaces for change: the politics of participation in new democratic arenas*. London: Zed Books.
- Danielsen, F., N. Burgess, and A. Balmford. 2005. Monitoring matters: examining the potential of locally-based approaches. *Biodiversity and Conservation* 14: 2507–2542.
- Danielsen, F., N. Burgess, A. Balmford, P.F. Donald, M. Funder, J.P.G. Jones, P. Alviola, et al. 2009. Local participation in natural resource monitoring: a characterization of approaches. *Conservation Biology* 23(1): 31–42.
- Danielsen, F., N. Burgess, M. Funder, T. Blomley, J. Brashares, A. Akida, A. Jensen, et al. 2010. Taking stock of nature in species-rich but economically poor areas: an emerging discipline of locally-based

- monitoring. In: *Taking stock of nature* (ed. Lawrence, A.). Pp. 88–112. UK: Cambridge University Press.
- Danielsen, F., M. Skutsch, N.D. Burgess, P.M. Jensen, H. Andrianandrasana, B. Karky, R. Lewis, et al. 2011. At the heart of REDD: a role for local people in monitoring forests? *Conservation Letters* 4: 158–167.
- Danielsen, F., P.M. Jensen, N.D. Burgess, R. Altamirano, P.A. Alviola, H. Andrianandrasana, J.S. Brashares; A. C. Burton, I. Coronado, N. Corpuz, M. Enghoff, J. Fjelds , M. Funder, S. Holt, H. H bertz, A.E. Jensen, R. Lewis, J. Massao, M.M. Mendoza, Y. Ngaga, C.B. Pippet, M.K. Poulsen, R.M. Rueda, M.K. Sam, T. Skielboe, M. S rensen, R. Young. In press. A Multi-Country Assessment of Tropical Resource Monitoring by Local Communities. Bioscience, in press.
- Dinesen, L., T. Lehberg, M.C. Rahner, and J. Fjelds . 2001. Conservation priorities for the forests of the Udzungwa Mountains, Tanzania. *Biological Conservation* 99: 223–236.
- Escobar, A. 1998. Whose knowledge, whose nature? Biodiversity, conservation, and the political ecology of social movements. *Journal of Political Ecology* 5(1): 53–80.
- Fortmann, L. (ed.). 2008. *Participatory research in conservation and rural livelihoods: doing science together*. London: Wiley-Blackwell.
- Foucault, M. 1995. *Discipline and punish: the birth of the prison*. London: Vintage Books.
- Frost, P. and I. Bond. 2008. The CAMPFIRE programme in Zimbabwe: payments for wildlife services. *Ecological Economics* 65(4): 776–787.
- Funder, M. 2010. The social shaping of participatory spaces: evidence from community development in southern Thailand. *Journal of Development Studies* (46) 10: 1708–1728.
- Giddens, A. 1984. *The constitution of society*. Cambridge: Polity Press.
- Goldman, M. 2003. Partitioned nature, privileged knowledge: community-based conservation in Tanzania. *Development and Change* 34(5): 833–862.
- Goldman, M. 2011. Strangers in their own land: Maasai and wildlife conservation in northern Tanzania. *Conservation and Society* 9(1): 65–79.
- Grandin, B. 1988. *Wealth ranking in smallholder communities: a field manual*. London: Intermediate Technology Development Group.
- Holck, M.H. 2008. Participatory forest monitoring: an assessment of the accuracy of simple cost-effective methods. *Biodiversity Conservation* 17: 2023–2036.
- Holmes, G. 2007. Protection, politics and protest: understanding resistance to conservation. *Conservation and Society* 5(2): 184–201.
- Hvalkof, S. 2006. Progress of the victims: political ecology in the Peruvian Amazon. In: *Reimagining political ecology* (eds. Biersack, A. and J.B. Greenberg). Pp. 195–232. Durham: Duke University Press.
- Igoe, J. 2004. *Conservation and globalization: a study of national parks and indigenous communities from East Africa to South Dakota*. Denver, CO: University of Colorado.
- International Institute for Environment and Development (IIED). 1992. Applications of wealth ranking. *Participatory Learning and Action* 15: 1–77. London: IIED.
- Juul, K. and C. Lund. 2002. *Negotiating property in Africa*. London: Heinemann.
- Kvale, S. 1997. *Interviews*. London: Sage Publications.
- Kothari, U. 2001. Power, knowledge and social control in rural development. In: *Participation: the new tyranny?* (eds. Cooke, B. and U. Kothari). Pp. 139–152. London: Zed Books.
- Labonne, J. and R.S. Chase. 2009. Who is at the wheel when communities drive development? Evidence from the Philippines. *World Development* 37(1): 219–231.
- Langton, M., Rhea, Z.M., and L. Plamer. 2005. Community-oriented protected areas for indigenous peoples and local communities. *Journal of Political Ecology* 12: 23–50.
- Long, N. 2001. *Development sociology: actor perspectives*. London: Routledge.
- Lund, C. 2007a. Twilight institutions: public authority and local politics in Africa. *Development and Change* 37(4): 685–705.
- Lund, J.F. 2007b. Is small beautiful? Village level taxation of natural resources in Tanzania. *Public Administration and Development* 27: 307–318.
- Lund, J.F. and M. Saito-Jensen 2013. Revisiting the issue of elite capture of participatory initiatives. *World Development* 46(6): 104–112.
- Lund, J.F. and T. Treue. 2008. Are we getting there? Evidence of decentralized forest management from the Tanzanian miombo woodlands. *World Development* 36(12): 2780–2800.
- McShane, T.O. and M.P. Wells (eds.). 2004. *Getting biodiversity projects to work: towards more effective conservation and development*. New York, NY: Columbia University Press.
- Meroka P. and T. Haller. 2008. Government wildlife, unfulfilled promises and business: lessons from participatory conservation in the Selous Game Reserve, Tanzania. In: *People, protected areas and global change* (eds. Galvin M. and T. Haller). Pp. 177–219. Bern: University of Bern.
- Mulwafu, W. 2011. *Conservation song: a history of peasant-state relations and the environment in Malawi*. London: White Horse Press.
- Nelson, F., R. Nshala, and W.A. Rodgers. 2007. The evolution and reform of Tanzanian wildlife management. *Conservation and Society* 5(2): 232–261.
- Nielsen, M.R. 2006. Importance, cause and effect of bushmeat hunting in the Udzungwa Mountains, Tanzania: implications for community based wildlife management. *Biological Conservation* 128: 509–516.
- Nielsen, M.R. 2011. Improving the conservation status of the Udzungwa Mountains, Tanzania? The effect of joint forest management on bushmeat hunting in the Kilombero Nature Reserve. *Conservation and Society* 9(2): 106–118.
- Nielsen, M.R. and T. Treue. 2012. Hunting for the benefits of joint forest management in the Eastern Afromontane Biodiversity Hotspot: effects on bushmeat hunters and wildlife in the Udzungwa Mountains. *World Development* 40(6): 1224–1239.
- Nielsen, M.R. and J.F. Lund. 2012. Seeing white elephants? The production and communication of information in a locally-based monitoring system in Tanzania. *Conservation and Society* 10(1): 1–14.
- Nielsen, M.R. and H. Meilby. In prep. Hunting for compliance in joint forest management: the case of bushmeat hunting in the Udzungwa Mountains, Tanzania.
- Nuijten, M. 2005. Power in practice: a force field approach to natural resource management. *The Journal of Transdisciplinary Environmental Studies* 4(2): 1–14.
- Poulsen, M.K., J. Massao, N. Burgess, and E. Topp-J rgensen. 2007. Community based monitoring of PFM in Tanzania: initial experiences and lessons learned. *The Arc Journal* 21: 31–33.
- Ravnborg, H.M. 2009. Organizing to protect: protecting landscapes and livelihoods in the Nicaraguan hillsides. *Conservation and Society* 6(4): 283–292.
- Ribot, J., A. Chatreb, and T. Lankinad. 2008. Institutional choice and recognition in the formation and consolidation of local democracy. *Conservation and Society* 6(1): 1–11.
- Rijsoort J.V. and Z. Jinfeng. 2005. Participatory resource monitoring as a means for promoting social change in Yunnan, China. *Biodiversity and Conservation* 14: 2543–2573.
- Robinson, E.J.Z. and F. Maganga. 2009. The implications of improved communications for participatory forest management in Tanzania. *African Journal of Ecology* 47 (Suppl. 1): 171–178.
- Scott, J.C. 1990. *Domination and the arts of resistance*. New Haven, CT: Yale University Press.
- Selfa T. and J. Endter-Wada. 2008. The politics of community-based conservation in natural resource management: a focus for international comparative analysis. *Environment and Planning (A)* 40(4): 948–965.
- Sodikoff, R. 2007. An exceptional strike: a micro-history of ‘people versus park’ in Madagascar. *Journal of Political Ecology* 14: 10–33.

- Stringer, L.C., A.J. Dougill, E. Fraser, K. Hubacek, C. Prell, and M.S. Reed. 2006. Unpacking “participation” in the adaptive management of social-ecological systems. *Ecology and Society* 11(2): 39.
- Stuart-Hill G., R. Diggle, B. Munali, J. Tagg, and D. Ward. 2005. The event book system: a community-based natural resource monitoring system from Namibia. *Biodiversity and Conservation* 14: 2611–2631.
- Sunseri, T. 2009. *Wielding the axe: state forestry and social conflict in Tanzania, 1820-2000*. Athens, OH: Ohio University Press.
- Tai, H.S. 2007. Development through conservation: an institutional analysis of indigenous community-based conservation in Taiwan. *World Development* 35: 1186–1203.
- Topp-Jørgensen E., M.K. Poulsen, J.F. Lund, and J.F. Massao. 2005. Community-based monitoring of natural resource use and forest quality in montane forests and miombo woodlands of Tanzania. *Biodiversity and Conservation* 14: 2653–2677.
- United Nations Framework Convention on Climate Change (UNFCCC). 2010. Decision 2/CP. 15, Copenhagen Accord. UNFCCC, Bonn, Germany. <http://unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf#page=11>. Accessed on February 15, 2012.
- Vyamana, V.G., A.B. Chonya, F.V. Sasu, F. Rilagonya, F.N. Gwassa, S. Kivamba, I. Mpressa, et al. 2008. Participatory forest management in the Eastern Arc Mountain area of Tanzania: who is benefiting? In: *Governing shared resources: connecting local experience to global challenges*. Conference of the international association for the study of commons. Cheltenham England. July 14–18, 2008.
- West, P. 2006. *Conservation is our government now: the politics of ecology in Papua New Guinea*. Durham, NC: Duke University Press.
- Williams, B.K. 2011. Adaptive management of natural resources: framework and issues. *Journal of Environmental Management* 92: 1346–1353.
- Wily, L.A. 2001. Forest management and democracy in East and southern Africa: lessons from Tanzania. *IIED Gatekeeper Series* No. SA95.
- Wily, L.A. and P.A. Dewees. 2001. From users to custodians: changing relations between people and the state in forest management in Tanzania. World Bank Policy Research Paper No. 2569. Washington, DC: World Bank.
- Wollenberg, E., A.A. Nawir, A. Uluk, and H. Pramono. 2001. *Income is not enough: the effect of economic incentives on forest product conservation*. Bogor: Center for International Forest Research.
- World Bank. 2008. *Forests sourcebook: practical guidance for sustaining forests in development cooperation*. Washington, DC: World Bank.
- Zahabu, E. and G. Jambiya. 2007. Community based forest management and carbon payments: real possibilities for poverty reduction? *The Arc Journal* 21: 25–27.

Received: June 2010; Accepted: July 2012



New features on the journal's website

Optimized content for mobile and hand-held devices

HTML pages have been optimized for mobile and other hand-held devices (such as iPad, Kindle, iPod) for faster browsing speed.

Click on **[Mobile Full text]** from Table of Contents page.

This is simple HTML version for faster download on mobiles (if viewed on desktop, it will be automatically redirected to full HTML version)

E-Pub for hand-held devices

EPUB is an open e-book standard recommended by The International Digital Publishing Forum which is designed for reflowable content i.e. the text display can be optimized for a particular display device.

Click on **[EPub]** from Table of Contents page.

There are various e-Pub readers such as for Windows: Digital Editions, OS X: Calibre/Bookworm, iPhone/iPod Touch/iPad: Stanza, and Linux: Calibre/Bookworm.

E-Book for desktop

One can also see the entire issue as printed here in a ‘flip book’ version on desktops.

Links are available from Current Issue as well as Archives pages.

Click on  View as eBook