



## Rethinking the decentralization and devolution of biodiversity conservation

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*Questioning prevalent assumptions about community management of forest resources.*

In the traditional approach to biodiversity conservation, local people and their economic activities were viewed as threats to the undisturbed functioning of natural ecosystems and were to be excluded from protected areas. However, it became evident that the social costs of exclusionary conservation projects were sometimes high, and that their success rate, even in biological terms, was disappointing. As a result, the classical approach has been replaced by integrated conservation and development projects (ICDPs) whose goal is to "enhance biodiversity conservation through approaches that attempt to address the needs, constraints and opportunities of local people" (Wells and Brandon, 1993) by involving local people as active partners.

The success rate of ICDPs is also discouraging. However, decentralization and devolution of management responsibilities continue to be so widely viewed as the only solution for maintaining ecosystems that it has become heresy to question them.

This article challenges the current thinking by examining several of the main assumptions on which devolution and populist approaches to biodiversity conservation and forest management are based. The focus is on forest and/or forest-margin dwellers and their livelihood strategies in tropical forests. Policy-makers, the private sector and other stakeholders, who frequently have a greater impact on forest resources and biodiversity (e.g. through industrial logging, large-scale forest conversion, road construction and mining), are not considered in the discussion because, first, their activities are easier to regulate -although rampant illegal logging and massive forest conversion to plantation crops in some countries indicate otherwise - and, second, their dependence on natural forests is not crucial for their livelihoods, meaning that they are able to adjust more easily to a new situation or the imposition of restrictions.

### CLASSICAL VERSUS PARTICIPATORY APPROACHES

The preservation of natural ecosystems has long been on the agenda of institutions concerned with biodiversity. Representative samples of ecoregions have been set aside and put under strict protection. This "northern" vision of an untouched wilderness has permeated global policies and politics for decades. The conventional approach to conserving biodiversity

requires the following (adapted from Biot *et al.*, 1995):

- the identification of biodiversity loss as serious, indicating that conservation is urgently needed;
- the design of projects in which, if exclusion is not an option, the cooperation of local communities is sought;
- the implementation of plans through a combination of encouragement, persuasion and subtle threats, and sometimes by more coercive powers.

Local people are viewed as "the target population" or "beneficiaries" and are frequently excluded from the areas considered important for biodiversity conservation. In the conventional approach, biodiversity is seen to be at its optimum in undisturbed natural areas. The national government is viewed as the guardian of biodiversity and has sovereignty and nominal control over the areas required for conservation (Panayotou and Glover, 1994). In reality, however, effective control rests with any of a number of forest users (or stakeholders) and particularly with the population that lives in and around the forests.

Conservation projects and programmes that fail to consider the interests of local residents, that undermine existing indigenous management systems or that restrict local authorities' decision-making in resource management have often been seen to intensify the loss of biodiversity. Furthermore, they raise highly contentious debates about national and local interests and can lead to open protests and conflicts; for example, in many protected areas in India, restrictions on access to resources, harassment by forestry officials, exposure of crops and livestock to ravage by wild animals and invasion by noisy tourists - now freely roaming the same areas where villagers have been banned - have led to resentment on the part of village communities (Kothari, 1997). Moreover, it appears neither politically feasible nor ethically justifiable to deny the use of natural resources to the poor and marginalized without providing them with alternative means of making a living or compensatory payments.

Recent consensus holds that local people do not pose a threat to biodiversity but rather are the victims of its loss and those most affected by forest degradation. When they have been implicated in forest destruction they are seen to have been obliged to overexploit resources because of inappropriate policies and legal systems. Hence, attention has shifted away from blaming rural people for deforestation and loss of biodiversity, and towards identifying the larger processes that are the primary cause of unsustainable land use practices and overexploitation of forest resources.

The recognition that the solutions to ecosystem management problems lie in social, cultural and economic systems stimulated the development of a new paradigm, which views local people as part of the solution and not as part of the problem. Thus, top-down exclusionary management has been replaced by forms of participation and devolution. According to this thinking, the conventional approach mainly failed because of a lack of coherence between interventions and local livelihood strategies and because of the exclusion of local people in project design, planning, implementation, monitoring and evaluation.

Yet, devolution or the participatory approach in many cases does not appear to be more effective than the conventional approach. One reason may be that genuine participation is still the exception rather than the rule: most organizations merely pay lip service to the goal of involving local communities. But a closer look at the assumptions underlying devolution and participatory approaches suggests other failings.

## **CHALLENGING ASSUMPTIONS**

The concept of partnership in conservation is based on the following, often contested,

assumptions:

- local populations are interested and skilled in sustainable forest resource use and conservation;
- contemporary rural communities are homogeneous and stable;
- local, community-based tenurial, knowledge and management systems are uniquely suitable for forest conservation.

### **Degree of interest and skill in sustainable forest resource use and conservation**

The devolution of natural resource management and conservation activities is predicated on the assumption that local people have the necessary motivation and skills. Examples from the management of non-wood forest products (NWFPs), often held out as a pathway for the conservation of forests and natural ecosystems, challenge this assumption.

In the past, a number of social and environmental constraints held overharvesting of NWFPs and timber for local purposes in check. In low-use areas, most products are still used sustainably and traditional restrictions and regulations are heeded. However, empirical evidence suggests that few wild resources can sustain commercial exploitation, and trade will either result in local depletion or extinction, or initiate the domestication process (Wilkie and Godoy, 1996). Destructive harvesting practices are used in certain places for many NWFPs (e.g. ironwood, wild honey, sandalwood and fruits, mushrooms, rattan and bird nests), seriously reducing the abundance of particular species. The conventional NWFP sector may be less harmful to the resource than the newer commercial sector, but this issue is complex, particularly because there is no clear distinction between subsistence and commercial uses.

The traditional collectors suffer most from the intensification of harvests, which partly explains why they are usually more concerned about the threats to forests posed by intrusions from outsiders than about ecological sustainability *per se* (Utting, 1998). Traditional collectors are often poorly organized, if at all. Their ability to take collective action in managing common or wild resources, and in controlling access, is limited. At the same time, market expansion for many products has led to greater competition among collectors and traders.

Many traditional societies have sensibly manipulated natural forests, even if they have not been overly concerned about conservation. On the island of Borneo, for example, many Dayaks have been manipulating old growth and secondary forests for several hundred years to raise their productivity. Even though the Dayaks exploit their forest-fruit gardens actively, such forests have a species diversity and a vegetation structure resembling natural forests (Peters, 1996; de Jong, 1995). The impact of Dayak "forest agriculture" on forest cover - although not necessarily on plant composition and biodiversity - is minor as long as population densities remain low and no other stakeholders appear on the scene, but this is rarely the case and is becoming increasingly uncommon. Colfer and Soedjito (1996) point to an area that, until the early 1960s, was a lowland primary dipterocarp forest but, today, is covered by a significantly different forest affected by fires, extensive large-scale logging and small-scale agroforestry activities.

**[Destructive practices that are often traditionally used in harvesting non-wood products, including wild honey as shown here, can result in resource depletion](#)**

In other instances, for example in Mali (Haland, 1989), archaeological evidence suggests that, historically, resource management has been marked by cyclical periods of overexploitation, out-migration, environmental recovery and subsequent in-migration. Local groups therefore may not have developed the knowledge, skills and techniques for long-term sustainable

management in an increasingly confined environment where out-migration is no longer an option.

Local communities' interest in forest conservation depends at least to some degree on how much they are still part of the ecosystem and how much their management of resources directly affects their own survival. Cultural mechanisms that have been developed as adaptations to the forest environment over hundreds of years may be easily cast aside when trade and new technologies free people from traditional ecological constraints (McNeely *et al.*, 1995). Thus, traditional resource use patterns are only sustainable under specific circumstances, usually characterized by low population densities, land abundance, use of simple technologies and limited involvement in the market economy. On the other hand, even under such conditions people can be exceedingly wasteful of resources, although the magnitude may not be enough to have a significant impact (Alvard, 1993).

Human relationships with the landscape are dynamic and may change from generation to generation. Younger people who are alienated from traditional culture, oblivious to past natural resource management practices and impatient for development may be a threat to biodiversity conservation (Sekhran, 1996).

It is naïve to assume that there are always ways to improve local incomes without depleting biodiversity, that people are interested in conserving biodiversity and that they prefer to hang on to traditional practices and knowledge. Local people may desire to obtain material benefits and a better standard of living from community-based forest management, and this goal may not be consistent with sustainability.

### **The reality of contemporary local communities**

Inherent in the premise that local communities should be given a central role in reaching conservation objectives is the dilemma of defining and understanding "local community", "indigenous knowledge" and "traditional culture". The idea of a unified community is a social construction that is perhaps comforting to policy-makers and foreign donors, who base on it assumptions about local management of resources (Blaikie and Jeanrenaud, 1996). Advocacy for stronger legal rights and government recognition for community-based systems sometimes presents an idealized description of local communities (Li, 1996). They may be portrayed as custodial and non-materialistic in their attitudes to land and natural resources, when in fact local communities in the forests and at the forest margins are often anxious for development and increasingly affected by rapid marketization and modernization processes (Rigg, 1997). The idealized image is not only misleading, but defeats the purpose of constructive consensus building and frustrates those who view the empowerment of local communities as a precondition for successful biodiversity conservation.

### **[In Mali, resource management has been marked by cyclic periods of in-migration, overexploitation, out-migration and recovery](#)**

Although small groups such as neighbourhoods or extended families - which can be considered "interest groups" - may share resources and livelihoods, whole village communities in fact tend to be heterogeneous, factional and stratified. Villagers are often politically fractured and socially differentiated along gender, wealth, class, age or ethnic lines. Perceptions and definitions of biodiversity, as well as the implications of biodiversity loss and the costs of conserving biodiversity, are similarly differentiated. Furthermore, the divisions within a community are changeable; communities may present a unified front to a perceived threat from outside, or may be divided and redivided by internal struggles over land and resources. A hierarchical society can hinder the performance of participatory projects and grassroots development, as Rigg (1991) has shown in Thailand.

The most daunting problem is that the different interest groups subsumed in the category "community" interact with the local environment and its resources in different ways. These interactions are constantly changing and depend as much on the type of prevailing agro-ecosystem as on the local economy and influences of external forces.

### **Appropriateness of community-based tenure, knowledge and management systems**

Community-based tenurial systems are rarely acknowledged by national governments or logging operators in any meaningful way (Lynch, 1998). While changing forest ownership and the transfer of authority over forests to local communities are not viewed as a panacea to the problem of resource degradation, they are usually viewed as prerequisites for biodiversity conservation. Increased tenure security has been linked to sustainable farming practices (Lutz and Young, 1992) and is assumed also to apply to forest management. The assumption is that people are only willing to invest their scarce resources in conservation if they know that, ultimately, they will reap the benefits.

Much uncertainty remains regarding the implications of tenure change and devolution for resource conservation. In Bolivia, for example, both positive and negative examples are seen. Some local governments in indigenous areas patrol their areas to avoid encroachment from logging companies, ranchers or agricultural colonists, while others have suffered from petty corruption and sold their timber resources to logging companies with little concern for sustainable production. On balance, giving indigenous communities greater control over their natural resources by strengthening both their land tenure security and their local governments seems to have assisted resource conservation, although most groups are still more concerned with access to existing resources and short-term income than with long-term sustainable development (Kaimowitz *et al.*, 1998).

[In Bolivia, giving indigenous communities greater control over their natural resources has assisted resource conservation - in the photo, maintaining trees planted to improve soil quality, prevent erosion and screen crops](#)

Although necessary, tenure security is not a sufficient condition for sustainable forest management and conserving biodiversity. Many communities plan for their perceived immediate needs rather than for their future welfare necessities, ignoring or not understanding the medium- to long-term social, economic and environmental consequences of their current land use practices. In Papua New Guinea, for example, many forest-edge communities have been campaigning for years to attract extractive development and mining to their communally held areas and are opting to sell harvest rights to timber companies (McCallum and Sekhran, 1996). The reasons include the desire for rent capture, consolidation of power and the perception that this constitutes "development". Conservation, because it yields future, diffuse and often intangible benefits, some of which have no direct monetary value, tends to be undervalued in this context and is seen to conflict with community aspirations.

Resource and property rights are changing with the transformation of agrarian societies and livelihood strategies as well as the influx of migrants. For example, in parts of Kalimantan, several of the forests managed by Dayak families but communally shared for many products are being rapidly privatized (Peluso and Padoch, 1996). In particular, where roads are diminishing the relative isolation of formerly remote areas and markets for land are developing, it is not uncommon to find parcels of forest that, *de jure*, belong to the state but, *de facto*, are traded in the market. The interest in communally held resources or common property is thus diminishing.

The relationship between devolving responsibility and community-based tenure, on the one hand, and biodiversity conservation, on the other, defies broad generalizations. However, if biodiversity conservation requires some management, the contested issue of land tenure

should figure in the discussion of viable options - but it should not be viewed as the solution for all of the problems.

## CONCLUSIONS

Identifying the human consumers of natural resources requires consideration of all socio-economic and political groups. The needs and interests of other stakeholders frequently contradict those of the direct users. There is a need to recognize the stratified nature of many rural societies. While they may have been traditionally egalitarian and non-hierarchical (although this seems unlikely), internal divisions are emerging because of marketing, modernization and the "commodification" of the natural resources.

An important point is that those interested in biodiversity conservation must ignore or consciously abandon those areas where communities have already made choices that are likely to cause a long-term conflict with the imperatives for conservation. The solution to forest loss is not in finding additional economic incentives for the rural poor and in devolving more and more responsibilities, but in generating more attractive alternatives elsewhere, although, in certain low-population areas, livelihood enhancement may be a better option (Brown, 1998). Conservation projects can aim to mitigate conflicts of interest between rural people's ability to earn a living and the conservation of areas of high ecological value by focusing on alternative income sources and education programmes. However, some conflicts will persist, and the need to protect forest areas through policing and enforcement will often be inescapable (Ferraro and Kramer, 1997).

Finally, the results of devolving management responsibilities have been disappointing because the linkages between socio-economic development for local residents, the needed behavioural response to reduce the pressure on the remaining forest resources and adjustment of use intensities are not well established. In large part, the inability to establish these linkages results from a lack of understanding of livelihood strategies at the forest margin and their relationship with the forest resource. In addition, limited knowledge of household behaviour makes it difficult to predict the effects of many interventions.

The potential connection between the interest of resource users in devolution and the objectives of biodiversity conservation depends on numerous variables, including population density, the arrival of technological innovations (e.g. chainsaws) and improved access to infrastructure, including education and markets. These are good indications of the extent of market penetration and modernization within a community. Technological and economic integration tends to contribute to the stratification of communities, which makes the introduction of community-based conservation and the devolution of forest management a considerable challenge. Education and modernization can lead to a rapid disappearance of local knowledge. Working with traditional leaders and older community members to revitalize traditional management systems may be inappropriate and futile, particularly when younger people's involvement in sustainable activities may ultimately be more important.

It is essential to look at community-based management with a critical eye. Completely community-centred approaches to biodiversity conservation may be just as unsatisfactory as completely government-centred approaches. The best solutions for the future are likely to be found in partnerships and dynamic interactions among different stakeholders.

Most important for the development of conservation strategies is to challenge the received wisdom about forest dependence, stakeholder involvement, community cohesion and the interest, skills and management systems of local people in biodiversity conservation and forest management. This is just as crucial as reconsidering the conservation-development orthodoxies that have historically influenced project designs and are also leaving their mark on today's devolution, decentralization and privatization policies.

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