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**COMMUNITY-BASED
NATURAL RESOURCE MANAGEMENT**

Technical Note 2007

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EXECUTIVE SUMMARY

This technical note gives a brief introduction to community-based natural resource management (CBNRM) and how this concept may be used as a development strategy. CBNRM has the triple objective of poverty reduction, natural resource conservation and good governance. The opportunity and challenge is to pursue these objectives simultaneously, as they are not, by default, mutually supportive. Lessons learnt from CBNRM will be useful when designing community-based climate adaptation strategies. Thus, this note is a contribution to an ongoing debate as well as a product of the long-standing experiences of Danida's environmental portfolio.

The note has been produced in cooperation with the Department for Forest, Landscape and Planning, Faculty of Life Sciences at the University of Copenhagen. Many practitioners have contributed through a fruitful peer review process. Dr. Thorsten Treue together with Iben Nathan have been the main contributors to the final note.

Involving local communities and securing the rights of poor and marginalised groups in sustainable management of natural resources is a central theme in international development assistance. The poverty-governance-environment link has been further highlighted in recent years through interventions aimed at building capacity for resilience (disaster preparedness) as well as adapting to climate change.

A successful implementation of CBNRM often requires changes at three different levels of society: 1) the national level, 2) the local level and the link between these, and 3) the intermediate level. At the national level, policies and the legislative framework normally needs adjustment and revision to establish an enabling environment that makes CBNRM attractive to local communities. At the intermediate level, it is important to promote the model of decentralised natural resource management that is most likely to work under the given political circumstances. In particular, this involves a choice between: (i) devolution of natural resource management authority to elected local governments, and (ii) deconcentration of line agencies, authorising district-level officers to delegate management authority to local communities. At the local level, it is crucial that CBNRM establishes significant economic incentives for managing and conserving the resource, which is closely related to clearly defined and officially supported tenure systems, as well as to revenue-sharing mechanisms. Furthermore, CBNRM should result in a coordination of resource use by numerous individuals, thus establishing an 'optimal' rate of production and consumption at the local level as well as for society at large.

In practical terms, it is the elaboration, implementation and experience-based revision of resource management plans at local levels that determine the actual performance of CBNRM on the ground. The poverty reduction rationale of CBNRM, as an alternative to open access resource use, is that the total resource value can be maintained or enhanced, and that the costs and benefits of management can be distributed equitably, so that all community members, within a reasonable time horizon, experience a net gain, or at least a zero loss. Resource conservation requires harvest not to exceed increment over the long term. This calls for reasonably accurate knowledge about the extent and growth of the resource, as well as reliable recording of harvest volumes. Even so, CBNRM could still fail at the local level if inefficient rule enforcement allows free-riders to over-harvest the resource, and/or if inequitable distribution of costs and benefits leads to a breakdown of management rules and subsequent over-harvesting or permanent marginalisation of certain groups. Therefore, the establishment and maintenance of good governance or "appropriate decision-making

arrangements” is the only feasible way to prevent the failure (or ensure the success) of CBNRM. Decision-making arrangements specify who decides what in relation to whom. Good governance at local level can be promoted through CBNRM legislation that establishes democratic conditions of collective choice, so that all members of a community (including women and other potentially vulnerable groups) get the opportunity to participate in defining: (i) the purpose of resource management, and (ii) the resulting management plan, including how it is enforced, and how products and benefits from the common resource are distributed. Furthermore, communities must hold authority to control free-riding by punishing defaulters, and community leaders must be downwards accountable to the people they represent.

It would be naïve to assume that, once initiated, CBNRM is a guaranteed self-sustaining success, which needs no monitoring or adjustment. Regular monitoring of CBNRM processes should be conducted to adjust associated policies, legislative framework and implementation strategies, so that failures may be corrected and positive effects enhanced. Monitoring the progress of planned CBNRM activities should be simple and embedded within existing official monitoring systems to ensure sustainability. However, assessment of the degree to which CBNRM is achieving its triple objective should probably be carried out by independent research centres, NGOs and university departments that are not directly engaged in the implementation as such.

CBNRM is not a stand-alone solution to poverty, resource degradation and bad governance. Rather it is a development process and constant power struggle. Thus, even after years of implementation, donors are still likely to have a mission in promoting CBNRM. Lessons learnt will feed into the new agenda of community-based adaptation to climate change. Donor support may be channelled as programme-based or as earmarked support for monitoring and research that deliver credible and easily accessible information. Checks and balances can be supported through civil society as well as the media. An informed public debate based on the results of sound monitoring is, in all likelihood, the key to the long-term success of CBNRM.

Acronyms

ASL	Local associations of small-scale extractors and loggers in Bolivia
CBNRM	Community-based natural resource management
CM	Co-management
Danida	Danish International Development Assistance
DIIS	Danish Institute for International Studies
FECOFUN	Federation of Community Forestry Users, Nepal
GO	Government organisation
GPP	Good Practice Paper (Danida)
IIED	International Institute for Environment and Development
IUCN	The World Conservation Union
MEMA	Danida-supported natural resource management project in Iringa Region, Tanzania
NGO	Non-governmental organisation
NRM	Natural resource management
PES	Payment for environmental services
PRSP	Poverty Reduction Strategy Paper
UFM	Forestry office at municipal level in Bolivia
UN	United Nations
WRI	World Resources Institute

1 Introduction and background

1.1 Purpose and target groups

The purpose of this technical note is to provide guidance for Danida support for programmes and components focusing on community-based natural resource management (CBNRM) as well as inspiration for efforts to promote community-based adaptation to climate change. This paper is one among several to be used during appraisals and reviews. The target group is Embassy staff and their partners in national and local governments, as well as other professionals involved in CBNRM in Danida programme countries. The paper focuses on national-level and bilateral support, including support through non-governmental organisations, and draws on CBNRM literature as well as experiences from Danida-supported components and past projects.

CBNRM is broad in scope and overlaps with a number of sectors. The reader is recommended to supplement this technical note with other Danida publications, including *GPP 2006: Environmental Sector Programming; NRM monitoring paper; as well as the forthcoming Governance Strategy, and Technical Note on Natural Resource Management and Indigenous Peoples' Rights*.

1.2 CBNRM within the international and Danish development agenda

Involvement of local communities and securing the rights of poor and marginalised groups in sustainable management of natural resources is a central theme in international development assistance. The poverty-governance-environment link has been further highlighted in recent years through interventions aimed at building capacity for resilience (disaster preparedness) as well as for adapting to climate change.

Danish and international development policy sets store on donor harmonisation, in this case through cooperation with other donors who agree that local communities, including indigenous peoples, have fundamental rights to participate meaningfully in managing the natural resources they depend on. The Strategy for Denmark's Environmental Assistance to Developing Countries explicitly identifies the need for strengthening CBNRM as a means to achieve sustainable development in terms of poverty reduction, improved equity, and resource conservation.

Danida finances numerous bilateral activities within the field of CBNRM through environmental assistance as well as support for natural resource management and agriculture in Africa, Asia and Latin America. In addition, Danida provides multilateral support for a large number of NGO projects and for UN agencies which promote and implement CBNRM activities. Moreover, Danida has funded international research institutions such as IUCN, IIED, WRI and universities, which contribute by developing the theoretical foundation for CBNRM and analysing it in practice. This has made an impact on concrete modes of action, moving CBNRM from the periphery into mainstream environmental and development assistance.

Danida acknowledges the value of multiple approaches to CBNRM. The choice of approach is naturally influenced by a number of factors, including country-specific considerations, sub-sector issues, interventions by other partners, etc. The common denominators for Danida-supported activities is that local communities' development needs are considered part of nature conservation, and that conservation and management of natural resources should adhere to principles of good governance, including community empowerment, social justice, gender equity and democratisation.

1.3 What is CBNRM?

The concept of CBNRM is related to a variety of terms, including participatory, community, community-based, collaborative, joint and popular natural resource management. These concepts are often used interchangeably, but may also be used with the intention to emphasise specific characteristics of related approaches. Thus, the concept of CBNRM tends to be associated with approaches where the focal unit for joint natural resource management is the local community. Sometimes, it has also been applied to designate approaches where local communities play a central but not exclusive role in natural resource management (Rotha et al. 2005).

In practice, CBNRM is mostly about ways in which the state can share rights and responsibilities regarding natural resources with local communities. At one end of the scale is community participation in protecting, for instance, a national park, without actually involving them in park management. At the other end of the scale is a complete handover of ownership of land and natural resources from the state to communities. Between these two extremes are joint management models, where representatives of the state, acting within the terms of negotiated contracts, manage a state-owned natural resource (for example a lake or forest reserve) together with one or several communities.

Borrini-Feyerabend *et al.* (2004, 69) prefer using the term co-management, which they define as follows:

Co-Management (CM) of natural resources is used to describe a partnership by which two or more relevant social actors collectively negotiate, agree upon, guarantee and implement a fair share of management functions, benefits and responsibilities for a particular territory, area or set of natural resources

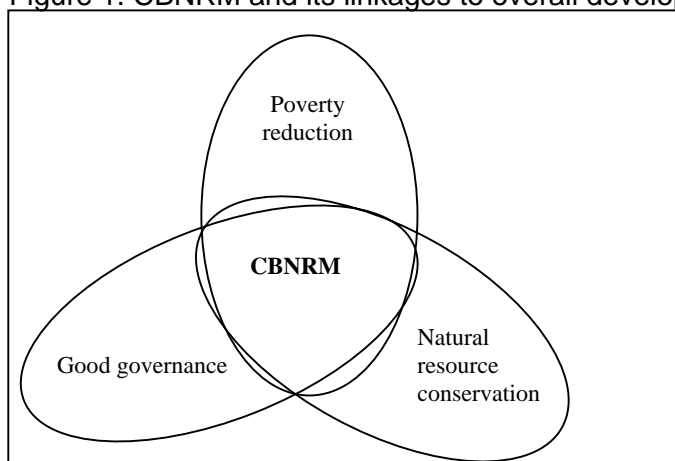
The advantage of this definition is that it covers different ways in which the planning and implementing authority over natural resources can be shared among various types of social actors, thus refraining from any a priori indication of which model is the most appropriate. **Accordingly, this paper uses the term CBNRM to designate all kinds of approaches to managing natural resources that fit the above definition of co-management.**

Some advocates of CBNRM have assumed communities to be small spatial units, with homogenous social structure and shared norms. In fact, this is rarely found in the real world. Communities are rather characterised by dynamic relations of: (i) multiple and somewhat conflicting interests, (ii) different actors attempting to influence decision-making, and (iii) internal as well as external institutions shaping decision-making processes (Agrawal and Gibson 1999). Depending on the actual relations within a particular group of people, their knowledge and the conditions according to which they can make decisions, local communities may sometimes, but not always, be the most 'appropriate' unit for natural resource management.

1.4 CBNRM for poverty reduction, resource conservation, and good governance

CBNRM can be considered a management strategy aiming to reduce poverty, conserve natural resources and promote good governance and decentralisation, in a single process. This is illustrated in fig. 1.

Figure 1. CBNRM and its linkages to overall development objectives



The close link between the three objectives of poverty reduction, resource conservation, and good governance is increasingly acknowledged by various international and national actors, including development practitioners as well as conservationists, and is reflected in many countries' development strategies.

The objective of poverty reduction is closely linked with natural resource conservation, because poor people in developing countries depend on natural resources for their livelihoods. It is therefore important to ensure sustainable management of these resources. Effective and equitable natural resource management and conservation, on the other hand, require genuine involvement by the social actors who depend on the resource. Involvement of poor people in natural resource management is often best achieved through decentralisation of authority over the resources, and this cannot be approached in isolation from the need to promote good governance.

In simple terms, *governance* means the process of decision-making and the process by which decisions are implemented (or not implemented). In recent years, requirements to the political and administrative system of being democratic, responsive, effective etc. have increasingly been conceptualised as important elements of good governance.

Decentralisation is often seen as an important means to foster and nurture the important elements of good governance in developing countries. Policy-makers and researchers recommend decentralised natural resource management for many reasons. Some of them are that: (i) local people are likely to identify and prioritise their environmental problems more accurately than centralised organisations, (ii) resource allocation is more efficient and transaction costs lower when decisions are taken locally, so that state expenditure on management can be reduced, while resource conservation is improved, (iii) local groups are more likely to respect decisions that they have participated in taking, (iv) monitoring of resource use is improved, and (v) marginalised groups gain greater influence on local policy.¹

The three objectives of poverty reduction, natural resource management and good governance are not always mutually supportive, and CBNRM is not always a realistic option. Depending on how it

¹ E.g. Chambers 1994, Grindle 1982, Hobley 1996, Larson 2003, Ribot 2004, Ribot 2002, Ribot, J. C. 2005, Rondinelli 1983, Sundar 2001

is pursued, conservation of natural resources can even be contrary to poverty reduction. A community may, for instance, have to reduce or completely stop their extraction of a particular natural resource in order to gain authority over it and to maintain its productive potential. This will have at least short-term negative impacts on households whose livelihoods rely mostly on products from this resource, unless they are compensated for their (short-term) loss. Likewise, in situations where strong political or commercial interests are against decentralised natural resource management, CBNRM may not (yet) be politically feasible.

In fact, there are still very few well-documented examples of CBNRM delivering on all three objectives. While the theoretical foundation for CBNRM is sound, successful fulfilment of its triple objective is likely to be a long-term process of changing and constantly adjusting balances of power at all levels of society. This requires political will as well as professional skill. Donor agencies like Danida can support this process at various levels.

1.5 Three different levels for CBNRM support

Progress towards the three CBNRM objectives requires significant and durable changes in the allocation of power in society. A variety of constraints at different levels in society must, therefore, be overcome to make CBNRM work in practice.

There are at least three levels of possible intervention: the national, the intermediate, and the local level. CBNRM initiatives are likely to be effective only if supported – or at least not impeded – by national decision-makers as well as national legislation and policies. This is a general experience, which is shared by many Danida-supported CBNRM programmes and projects. An example of a Danida-supported CBNRM project calling for a supportive national policy framework is given in Box 1.

Box 1. Example of a Danida-supported CBNRM project calling for a supportive policy framework

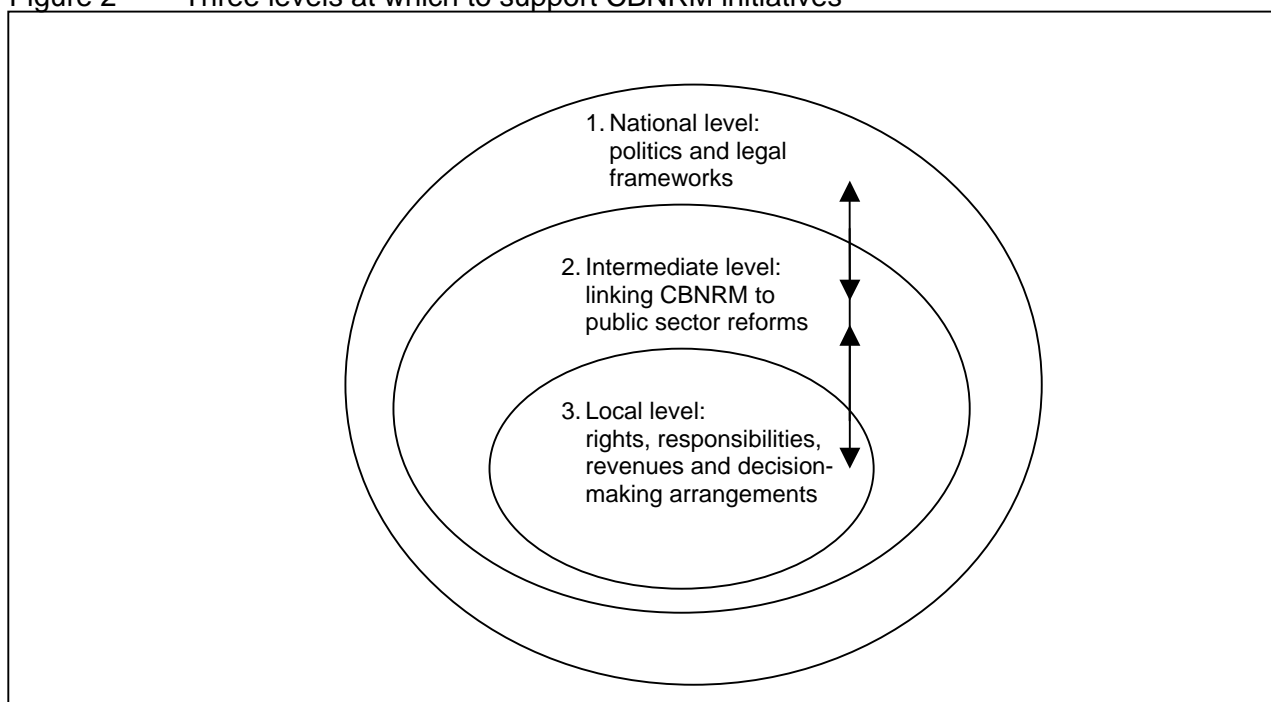
“The need for promoting a supportive policy framework for sustainable pastoralist livelihoods and reducing pastoralist poverty was reiterated during consultations throughout the study [of best practices and lessons learned from Phase 1 of Ereto in Tanzania] ... Yet currently, most policies are unfavourable to pastoralist livelihoods and are often based on myths and [false] preconceptions ... pastoralists are finding it increasingly difficult to respond to stresses such as drought or disease given the present policy context. Policies need to be developed, which provide an appropriate framework for pastoralist livelihoods ... “

Source: Kipuri N. and C. Sørensen (2005)

Moreover, CBNRM agreements are unlikely to be sustainable, unless they are linked with (decentralised) government structures, and they often rely on local institutions’ room for manoeuvre in the context of democracy. Obviously, communities must also be capable of and interested in managing nearby natural resources.

As illustrated in fig. 2, none of these three levels can be approached in isolation. National laws concerning CBNRM may, for instance, contain provisions on how CBNRM must be linked to decentralised government structures. Likewise, local CBNRM initiatives are always nested within higher levels of decentralised government as well as national policies and legislation.

Figure 2 Three levels at which to support CBNRM initiatives



This technical note addresses how support for CBNRM processes could be designed to optimally pursue the triple objective of poverty reduction, natural resource conservation, and good governance. The focus is on three different levels of project and programme support: 1) the national level, 2) the local level, and the link between them, and 3) the intermediate level. At the national level, the main issue is how to support policy processes and legal frameworks for CBNRM. At the intermediate level, the key concern is how to institutionalise CBNRM either through local governments under a devolution process or through deconcentration of line agencies, which delegate authority to local communities. At the local level, the principal question is how to organise the collaboration between social actors and their relationship to the natural resource (Fig. 2).

2. The national level

The following sections (2.1–3) address the questions of how to support the development of appropriate national CBNRM policies, how to support an enabling legal framework for CBNRM, and how to support nationwide implementation of CBNRM.

2.1 How to support the development of appropriate national CBNRM policies

It is important to support the development of CBNRM policies within relevant sectors, because they define the political visions according to which legal and administrative frameworks for CBNRM may be developed. One of the tricky issues in approaching the national level is that, for a number of reasons, central governments and line ministries may be hesitant to delegate power to local organisations (see Box 2). National-level decision-makers might fear losing revenues and, hence, personal and institutional benefits, but resistance may also reflect genuine concerns over lack of capacity and staff to implement institutional changes, or concerns that CBNRM may lead to social

tensions or environmental degradation, thus undermining political stability. Whatever the reasons, no or mere pro-forma decentralisation could be the unfortunate outcome, in which transfers of responsibilities are not complemented by genuine rights of local communities to benefit from managing natural resources. Decentralisation may also become restricted to resources that are heavily depleted or commercially unimportant.

Box 2. National interests against CBNRM in Cambodia

The Danida-supported programme “Communal management of land and natural resources in Cambodia” has the development objective of promoting sustainable natural resource management, including fair and equal access to land and natural resources for increased economic activities and poverty alleviation. Yet, an acknowledged main risk is the potential lack of political will from the central government to implement land reforms, without which local people would probably be barred from getting legal access to and control over land and natural resources. Furthermore, it is commonly known that influential individuals in Cambodia hold various concessions that cover large tracts of land.

Source: Danida 2004

Before deciding on a strategy for how to support the development of CBNRM policies, it is necessary to initiate analyses of the current political and environmental situation in relation to CBNRM, looking at: (i) the current political, legislative and administrative environment, (ii) documentation of the current problems in terms of resource degradation, and (iii) the potential socio-economic as well as environmental effects of implementing CBNRM (who loses and who gains in the short and long term?). Strategic environmental assessments may be useful supplementary tools.

The promotion of CBNRM should be related to overall development priorities and strategies expressed in PRSPs and national budgets. The degree to which CBNRM is included in such overall development plans also indicates how high it really ranks on the national list of priorities. Assuming that national development plans do consider CBNRM an important vehicle for pursuing overall development objectives, initial support could include national-level, participatory, policy debates on CBNRM. In this process, donor harmonisation is essential to prevent contradictory demands and to accumulate lessons learnt in an organised manner.

Recommendations:

- *Ensure/encourage donor harmonisation in relation to CBNRM within the framework of PRSP and other key strategies.*
- *Support analyses of: (a) current legislative frameworks, (b) institutional capacity for law enforcement, (c) administrative procedures, and (d) the resulting economic incentives for resource conservation among stakeholders at all levels.*
- *Support technical assessments of resource conditions, if these do not already exist.*
- *Align support with national priorities and/or systems, taking into consideration the conclusions of the above analyses.*
- *Analyse lessons learnt from pilot CBNRM interventions, if any, which have been supported by government (national and local), civil society and the private sector.*
- *Support and encourage civil society organisations, including business associations, to contribute to ongoing CBNRM activities.*
- *Support policy hearings of relevance to CBNRM.*

In case there is a need and willingness to further develop policies or adapt existing policies to revised macro frameworks:

- *Direct capacity development support towards drafting a CBNRM-related policy or adjustment of existing sector policies, so as to integrate CBNRM.*
- *Support and encourage public discussion forums among a wide array of stakeholders on policies related to CBNRM.*

2.2 How to support an enabling legal framework

It is important to be aware that land use and access to natural resources, including settlement of associated conflicts, are not always governed by official legislation alone, and that customary or traditional systems may supplement or be more or less in contravention of official law. Consequently, legal reforms aimed at promoting CBNRM should incorporate appropriate aspects of customary and traditional law. This should obviously include official recognition of communities as legal persons who can own/control land and natural resources, and could, inter alia, entail recognition of certain customary resource rights as well as traditional institutions of conflict resolution/management. However, close attention must be paid to the fact that customary/traditional institutions are not necessarily based on fair and democratic principles, so accessible avenues of appeal within the formal system of justice must be secured (see Box 3). For official legislation, it is useful to distinguish between nominal and functional law.

Nominal resource law specifically addresses the particular resource (water, range lands, forests, coastal areas, etc.) and includes topics such as:

- Management objectives (provision of products and services).
- Classifications (protection or production) and associated tenure as well as management systems (public, private or community-based) for the resource.
- Monitoring and assessment of the resource.

Functional resource law refers to laws and regulations that are not directly concerned with, but nevertheless influence, the management of a particular resource. This covers a wide variety of laws, including the Constitution: general environmental protection law, such as water conservation and prevention of bushfire acts; nature protection legislation (protection of species and geographical areas); laws establishing quotas, taxation and subsidies influencing the profitability as well as distributional effects of resource management, processing and trade; local government law; law of associations; cooperative law; corporate law; foundation law; registration law; property law; land law; contract law; administration of justice law, and so on.

A particular type of functional resource law concerns indigenous peoples, whose political rights are often pursued through legal recognition of their collective rights to territories that represent or form part of their ancestral lands. Indigenous peoples' land rights are central in Danish support for natural resources management, among other places in Bolivia and Nicaragua. Evidence from Nicaragua suggests that the process is leading to improved livelihoods as well as resource conservation. This theme will be further analysed in a forthcoming "Danida Technical Note on Indigenous Peoples' Rights and Natural Resource Management".

However, the mere establishment of local communities as officially recognised proprietors or owners does not guarantee conservation of the resource. Nor does it ensure good governance or

poverty reduction. Achieving these objectives may still require that rights over areas and resources are made contingent on minimum standards for resource management, and that credible decision-making and benefit-sharing arrangements are formally established within the communities. Moreover, fair terms of trade, allowing for reasonable producer prices of products made from natural resources, are often critical to making ‘sustainable’ resource management financially worthwhile.

Box 3. Characteristics of a CBNRM-enabling legal framework

A CBNRM-enabling legal framework should:

- Establish or confirm the legality of common resource ownership.
- Ensure that nominal resource law is not in conflict with or overly dependent on other legislation.
- Ensure that peoples’ rights to benefits from CBNRM are secure and cannot be taken away arbitrarily and without proper compensation.
- Allow for practical implementation of nominal resource law across a variety of cultural and resource endowment settings.
- Ensure that economic benefits for resource-managing communities are not unduly eroded by laws governing the trade and taxation of products accruing from CBNRM.

Source: based on Lindsay (1998), which provides further details of a CBNRM-enabling legal framework

Recommendations:

A CBNRM-enabling legal framework may be promoted through:

- *Support for and facilitation of consultative processes to assess current legislative frameworks for natural resource management (modern as well as customary law)*
- *Support for the development of technical capacity to draft adequate legislative frameworks.*

2.3 How to support implementation of CBNRM

Generally, the motivation for promoting CBNRM stems from national-level environmental as well as developmental concerns, and official legislation usually applies across a nation. Hence, it often becomes a priority to support CBNRM in as large an area as possible, preferably nationwide. In practice, this requires co-ordination and possibly re-orientation of many public sector institutions and donors, but also prioritisation of efforts. Moreover, rural communities need to be made aware of the new opportunities that CBNRM represents, and how these may be realised in practice.

Irrespective of political prioritisation and geographical coverage, implementing CBNRM is a dynamic process. Therefore, from the outset, it is important to assess and monitor *actual* processes and outcomes against the *official objectives* of a CBNRM-related policy, thus allowing for timely and well-informed adjustments. This assessment should not be confined to expert evaluations but draw on a wider public debate, which calls for critical media coverage. As and when CBNRM takes root in society, this establishes new stake- and *right-holder* groups (resource-managing groups of various kinds) with many common interests, but often without a structure to champion these interests at higher levels. Accordingly, support for civil society associations that represent, and hold the capacity to articulate, the interests of, for instance, user groups, could serve to mitigate marginalisation and to consolidate new rights of poor and less powerful groups.

Recommendations for implementation of CBNRM:

- *Support organisational change and results-oriented capacity change in government agencies in order to enhance their capacity to provide CBNRM-specific technical and monitoring services.*
- *Support transfer of adequate resources to local service providers that are directly involved in making CBNRM happen on the ground.*
- *Support capacity development of government organisations (national as well as local), thus assisting in establishing gender-specific monitoring mechanisms that allow for an assessment of actual achievements of CBNRM compared to the stated policy objectives.*
- *Support civil-society organisations (federations of user groups) that represent and are capable of voicing the interests of resource-managing communities in national-level policy arenas.*
- *Support initiatives to involve the private sector in sustainable CBNRM.*
- *Encourage campaigns informing the public about CBNRM, including how and through which organisations assistance to establish CBNRM regimes may be pursued.*
- *Support the media in featuring stories and analyses informing the wider public about CBNRM, its prospects and actual outcomes.*

3 How to support CBNRM through decentralisation

Many CBNRM experiments have been spatially and temporarily limited, and have taken place under close surveillance, political protection and financial support of international donors and NGO projects. In order to move on from these experiments, it is important to find ways of changing CBNRM approaches from ad hoc and experimental mobilisation and inclusion techniques to more institutionalised, more easily replicated, and potentially more sustainable forms of management (Ribot 2002). Such institutionalisation almost always implies that CBNRM initiatives are linked up with decentralised government structures.

In recent decades, many developing countries have embarked on decentralisation reforms in relation to natural resource management. These reforms have usually taken shape either as devolution, i.e. a transfer of authorities to local government, who may again delegate authority to various kinds of user groups, or as deconcentration of line agencies combined with delegation to local communities. Box 4 contains examples of different models for decentralised natural resource management applied in different countries.

Box 4. Different models for decentralised natural resources, the cases of Cambodia, Nepal, Bolivia and Tanzania

In Bolivia and Tanzania, ownership, management rights and responsibilities of managing certain natural resources are handed over to elected local governments in a process of *devolution*. In Tanzania, other models are also applied, including Joint Forest Management (JFM) schemes, where parts of government-owned forest reserves are managed jointly by local branches of government (*deconcentrated units*) and local communities in accordance with negotiated management agreements (*partial delegation*). In Cambodia, decentralisation of forest management has mainly taken the shape of *deconcentration*, where control over natural resources has mainly been handed over to local branches of the forest administration. In Nepal, *deconcentration* within the Department of Forests authorises district forest officers to *delegate* management of forest resources to self-forming local forest user groups, which are created specifically for this purpose, and are independent of local governments.

Sources: Agrawal (2001) and Nathan et al. (2006)

3.1 CBNRM and devolution

Scholars and policy-makers increasingly argue for integration of CBNRM in local government, because democratisation and natural resource management can be mutually reinforcing through devolution, and because devolution provides a strong institutional basis for CBNRM. The rationale is that good governance, poverty reduction and natural resource conservation are likely outcomes of giving downwards accountable (elected) local government wide discretionary powers over natural resources. Moreover, natural resources are, contrary to sectors like health, education and infrastructure, sources rather than sinks of public revenue (Ribot 2002).

Box 5 Local government as CBNR manager, the case of Bolivia in the 1990s

In 1994, the Popular Participation Act significantly increased the powers and financial means of Bolivia's local governments. The decentralisation of forest management was partly a consequence of this overall dynamic, but also responded to historical demands of populations from forested regions.

The 1996 Forestry Act granted municipal governments the right to manage up to 20% of the public forests through allocation of timber rights to small-scale extractors and loggers (organised in local associations known as ASLs), and gave indigenous communities exclusive control over the forest resources in their territories. Municipal governments were also granted 25% of the fees associated with permits for logging and forest clearing within their jurisdiction. Each municipal government was required to establish a forestry office (UFM) in order to maintain rights to funds and authority over forest resources. These offices are primarily responsible for facilitating the legal formation of ASLs, negotiating timber rights within the municipal forest areas and providing technical assistance to the ASLs' forest management plans. The local governments also share numerous oversight responsibilities with the central government, such as inspecting concessions, sawmills and the implementation of management plans.

The central government maintains full authority over the remaining 80% of forests. Furthermore, the central government must give final approval of the local organisations' requests for forest concessions as well as their management plans within municipal forest areas. The process of delimiting municipal lands as well as approving ASLs has been slow and bureaucratic. The central government defines all regulations, laws and norms for forest use and management, including sanctions. Accordingly, local governments largely see themselves as implementing central government policies.

Local governments have, nonetheless, undertaken important forestry initiatives. Almost all of the most forested municipalities have formed municipal forestry units. Some UFM's have played an important role in supporting local actors, particularly peasants and ASLs, in their efforts to obtain permits and to develop management plans, though the latter have usually required outside donor support to win final approval. Particularly where these local actors are well organised and influential, UFM's have negotiated the modification of some central government regulations that would have delayed or impeded ASLs' access to forest resources. Local governments have also been fairly vigilant in controlling illegal clearing (though less so in controlling illegal logging), at least in part because they have an economic interest in these being lawful and, hence, subject to official fee payments.

Several municipalities created UFM's with their own funding, in part because of genuine interest in the forestry sector, and in part because they believed these offices would attract donor funding. Projects have provided key support where funds have been insufficient to carry out UFM mandates and to establish necessary technical skills. Municipal governments have played a greater role in forestry, where local demands for timber and new cropland are high, where conflicts have forced them to intervene and where forest fees have provided significant economic benefits.

Source: Larson (2003)

While, in theory, there are obvious advantages of integrating CBNRM into democratic local government systems, this is not always feasible in practice. Firstly, the capacity and status of local government varies from one place and one level to another. For instance, in Cambodia, locally elected village councils have been introduced only recently, while they have existed in Bangladesh and Tanzania for decades. Secondly, even if elected local governments are well-established, they may give little priority to natural resource management in comparison to, for instance, health, education and infrastructure. This seems to be the case for some district and village governments in Tanzania and Cambodia. Thirdly, local government elections might exclude nomination of

independent candidates, thus confining voters' choice to candidates who are upwards accountable to their political parties rather than downwards accountable to the people who elect them. Fourthly, mechanisms for holding local government politicians accountable may not have been established or fully developed. Under such 'adverse' circumstances, integrating CBNRM into local government systems is unlikely to be successful unless significant efforts are made to develop the general capacity and downwards accountability of local governments. Sizable economic benefits/incentives for local governments combined with a vibrant civil society that can hold local governments accountable would also enhance the chances of successful CBNRM through devolution.

3.2 CBNRM as deconcentration in combination with delegation

There are also positive experiences of CBNRM implemented as *deconcentration* in combination with *delegation* of natural resources. This implies that deconcentrated units, e.g. district offices of relevant line ministries, are legally empowered to delegate authority to local user groups that are independent of local governments and created specifically for this purpose. Box 6 summarises how this is the case for community forestry in Nepal.

Box 6. Community forestry through deconcentration and delegation in Nepal

Since 1993, the Department of Forests' district offices in Nepal have been authorised to 'hand over' management authority over demarcated areas within state forests (community forests) to self-formed local user groups. The 1993 Forest Act even specifies that district and regional boundaries should not influence the declaration of community forests or the composition of user groups, so that community forests can, and indeed sometimes do, extend across two or more districts. This model has been criticised for not being as democratic as devolution, but it has proven successful in terms of forest conservation and to some degree poverty alleviation. Over time, and with donor support, forest user groups have formed a national body, FECOFUN, that has become an important political actor, effectively communicating general concerns and interests of forest user groups in the country. Thus, democratisation of natural resource management has actually been promoted, at least at the national level. Yet, in terms of promoting local-level democracy and poverty reduction, the self-forming nature of forest user groups has obvious weaknesses, because it may result in some local as well as non-local, seasonal forest users being excluded from decision-making and benefit-sharing, simply because they are not members and cannot demand admission. Low-caste people, herders from northern Nepal following a century-old tradition of moving their stock south during winter, and semi-nomadic indigenous peoples like the Raute and the Chepang, have lost access to forest areas because they were not included in forest user groups.

Source: Treue and Nathan, personal observations 1998-2007

3.3. The choice of institutional setup

The choice of institutional setup for supporting CBNRM should be guided by the administrative systems that national governments have decided to put in place for different natural resources. In situations where jurisdiction over a natural resource is poorly defined and a general devolution process is already being implemented, or when the resource is already under local government jurisdiction, the appropriate institutional choice for support is likely to be *devolution*. Conversely, if the natural resource is under the domain of a politically strong line ministry, devolution might be politically infeasible, which leaves *deconcentration/delegation* as the most realistic model for actual promotion of CBNRM. Moreover, deconcentration/delegation need not be the final result. It could rather be considered a (pragmatic) first step towards devolution of natural resource management. Whether the legitimate interests of, say, pastoralists and indigenous peoples, who are local minorities or traditionally roam/move through large areas, are served better through devolution or deconcentration/delegation of natural resources is an open question, since both models are primarily based on geographically rather than interest-defined communities. Whichever institutional setup is chosen, special provisions will probably be needed to accommodate the interests of minorities,

seasonal and occasional resource users as well as public authorities with direct or indirect stakes in the natural resource.

Recommendations for support for institutionalisation of CBNRM:

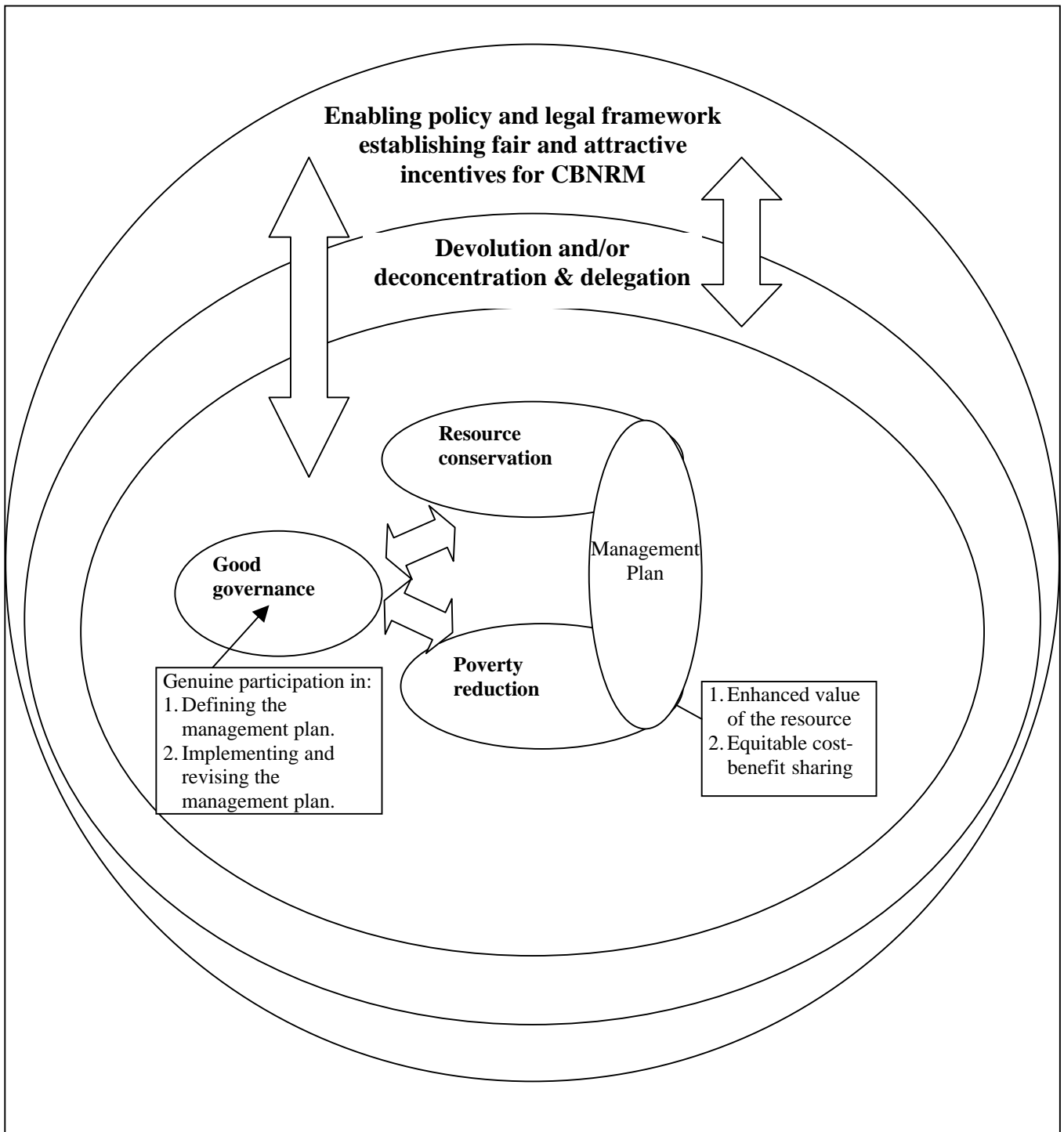
- *Encourage a thorough assessment of the pros and cons of institutionalising CBNRM through devolution or deconcentration in combination with delegation of authority.*
- *Encourage monitoring of outcomes and stakeholder discussions of the chosen institutional set-up to consolidate and enhance democratic decision-making processes.*
- *Support processes that seek to identify and protect the legitimate interests of minorities, seasonal and occasional resource users.*
- *Support capacity development and financial assistance for the chosen institutional set-up to ensure sufficient capacity to promote and facilitate CBNRM on the ground.*

4 How to support CBNRM at the local level

It is the cumulative outcomes at local levels that determine the national-level success or failure of CBNRM. Accordingly, CBNRM must establish significant economic incentives at the community level for managing and conserving the resource, which is closely related to clearly defined and officially supported tenure systems as well as revenue-sharing mechanisms. Furthermore, CBNRM should coordinate resource use among numerous individuals to establish an ‘optimal’ rate of production and consumption at the local level as well as for society at large.

The rationale of CBNRM as a development strategy is that, by means of policy and legal frameworks as well as administrative support, the state may establish attractive and fair economic incentives for communities to manage natural resources, whereby resource conservation, poverty reduction and good governance will be promoted at community level. Good governance at the local level is seen both as a means to achieve resource conservation and poverty reduction as well as an objective in itself. In practical terms, it is the elaboration, implementation and experience-based revision of resource management plans at local levels that determine the actual performance of CBNRM on the ground. Furthermore, the results and experiences of implementing CBNRM at community level should be used to adjust and revise the policy and legal frameworks, including the choice of administrative setup. This relationship between the national and local level of CBNRM is illustrated in figure 3.

Figure 3 CBNRM embedded in the institutional set-up and national context



4.1 Providing economic incentives and ownership at community level

Economic incentives for people to protect and invest in a particular natural resource are closely associated with their enforceable rights, as well as the terms of trade prevailing for resulting product flows. Owners and proprietors have the strongest incentives to invest in and maintain a resource,

because they hold the right of excluding others from capturing the benefits of their investments. This incentive is even stronger if owners and proprietors can pass on these rights to their heirs. Claimants hold stronger investment incentives than authorised and unauthorised users, but the propensity of these three categories to invest in the resource is likely to be rather small, because their use of it depends on the goodwill of others (owners or proprietors).

The different types of decision-making power and associated investment incentives are shown in Table 3. The table illustrates that owners have the most rights, and hence the greatest economic incentive to invest in the natural resource, whereas authorised and unauthorised users have the least rights, and hence the least incentives.

Table 3: Rights and associated positions *)

Rights	Access and withdrawal	Management	Exclusion	Alienation
Position				
Unauthorised user				
Authorised user	X			
Claimant	X	X		
Proprietor	X	X	X	
Owner	X	X	X	X

Source: Based on Schlager and Ostrom (1992)

*) Access right is the right to enter a defined physical property (a lake, a forest, a spring, etc.). Withdrawal right is the right to obtain the products of a resource (catch fish, appropriate water, collect forest products, etc.). Management right is the right to regulate internal use patterns and transform the resource by making improvements, e.g. a group of fishers that collectively devise a zoning plan that limits various types of fishing to distinct areas and time periods. Exclusion right is the right to determine who have access right and how that right may be transferred, e.g. a forest user group that limits access to 'their' forest for firewood collection to female members above a certain age. Alienation right is the right to sell or lease either or both the rights of management and exclusion, e.g. a fisher who leases out his right to a put up nets on a particular location for the fishing season.

Community control over a substantive portion of the values generated by managing the resource also forms a crucial part of the economic incentives established through CBNRM. Accordingly, these should not be undermined by undue restrictions on trade or excessive taxation of CBNRM products. Payments to communities from society at large for environmental services accruing from CBNRM (watershed maintenance, coastline protection, maintenance of bio-diversity, etc.) could also form a relevant part of the economic incentive structure, especially in cases where national and international environmental concerns result in tight limitations of product extraction (see forthcoming DIIS study on PES).

Recommendations:

Support for CBNRM should promote:

- *The establishment of de jure exclusion rights for resource-managing communities. This may include strengthening the capacity of governments to assist communities in exercising these rights vis-à-vis 'outsiders', so that communities become de jure as well as de facto owners, or at least proprietors of the resource they are intended to manage.*
- *An official definition of resource-managing communities that either includes legitimate occasional users (e.g. pastoralists) or limits the rights of permanent users to exclude certain occasional users.*
- *The rights of resource-managing communities to collect and retain substantive economic benefits accruing from products and services to which the management gives rise.*

4.2 How to promote poverty reduction

The economic rationale behind CBNRM, as an alternative to open access resource use, is that the total resource value² can be maintained or enhanced, and that the costs³ and benefits⁴ of management can be distributed equitably, so that all community members, within a reasonable time horizon, experience a net gain, or at least a zero loss. However, if the point of departure for CBNRM is not a situation of, de facto, open access but rather that a natural resource is controlled by few actors, it may, of course, be impossible to redistribute costs and benefits under CBNRM without some people (e.g. feudal landlords) experiencing a net loss.

As mentioned, it is crucial that governments establish fair and attractive economic conditions for CBNRM. In addition, the natural resource to come under community-based management should preferably not be at such a point of deterioration that organising its use brings few or no net advantages to community members. However, advantages should not be assessed in financial terms only. Safe seasonal access to land and water can be fundamental for sustaining livelihood practices, for instance in drylands.

If people have few or no realistic alternatives but to continue ecologically non-sustainable utilisation, CBNRM must include external technical and financial help to support resource improvement and local livelihoods. If, in contrast, a resource is, de facto, utilised far below its productive capacity, local people might not bother to establish CBNRM, because the costs of doing so would outweigh the benefits. This could, however, change rapidly if, e.g. a bridge is built and powerful external agents suddenly gain access. In such (foreseeable) cases, information campaigns, local capacity building, agitation by civil society organisations and protection by the state are likely to be crucial prerequisites for establishing CBNRM before the resource is raided.

Recommendations

Poverty reduction and economic development under CBNRM can be promoted through support for:

- *Development and actual implementation of nominal and functional resource legislation that establishes clear ownership of products as well as fair marketing conditions, so that technically sound and socially equitable local-level resource management is not undermined by excessive taxation and/or rent-seeking officials.*
- *Technical and financial assistance to improve degraded resources, while strengthening local livelihoods. Assistance in marketing products may also help to make CBNRM economically feasible/attractive for local communities.*
- *Enhancing the awareness and capacity of remote communities to engage in CBNRM, once it becomes a rational strategy for them to protect resources they depend on and may use for economic development.*

4.3 How to support resource conservation

Resource conservation requires the harvest not to exceed increment over the long term. This calls for reasonably accurate knowledge about the extent and growth of the resource, as well as reliable recording of harvest volumes.

² This includes 'use values' (commercial and subsistence products) and 'non-use values' (environmental services, biodiversity conservation, cultural, religious and aesthetic values).

³ Costs include cash, labour and opportunities foregone.

⁴ Benefits are the flow of use and non-use values (cf. above).

Since many communities do not command the technical skills to estimate allowable harvest levels of a given resource, guidance and support from external agents (GOs and/or NGOs) may be needed, provided that these do hold the necessary knowledge and skills, which is not always the case. However, top-down-defined requirements to resource management planning at community level entails the risk of re-centralising control over the resource, if this makes local communities overly dependent on external agents in fulfilling technical criteria officially justified through environmental concerns⁵. The reason is that nominal resource law and regulations, which provide the legal foundation for CBNRM, often specify technical standards that management plans must live up to before communities can be officially recognised as resource-managing proprietors or owners. However, less scientific and more experience-based harvest regulation systems may, in fact, be sufficient to ensure resource sustainability (Box 7 provides an example of locally-based/participatory forest monitoring in Tanzania). Direct observation of a forest or pasture over time is, for example, likely to provide local people with enough information to know whether the resource is improving or degrading. Likewise, monitoring of the average catch as well as the size and species composition of fish from a lake might be enough for local fishermen to know whether they are over-fishing the general stock or particular species.

Box 7. Participatory eco-system monitoring in Tanzania

A Danida-supported project has facilitated the establishment of Participatory Forest Management in 23 Tanzanian villages. Building on existing village government structures, a participatory monitoring scheme was established according to which all the 23 Village Natural Resource Committees (VNRC) compile monthly records of forest patrols, income, expenditure, meetings and problems encountered. These records are subsequently summarised into a simple monthly summary sheet and forwarded to the district authorities for review and possible action. In addition to forwarding the summary records to higher level authorities, a key aspect of the scheme is that the records are used during routine VNRC meetings, which stimulate discussions on resource management (revision of management strategies, allowable annual harvest, patrol frequency, rule enforcement and collection of revenue). An important principle of the scheme has been to ensure that information gathered at village level has direct use value for the forest managers themselves – rather than generating data only for higher level stakeholders. This has to a large degree ensured that local incentives were created and maintained for the continuation of the monitoring system beyond the life of the project.

Source: Topp-Jørgensen et al. 2005.

Recommendations

Resource conservation under CBNRM can be promoted through support for the development of:

- *Criteria, procedures and guidelines for sound resource management planning, while avoiding technical requirements that make users overly dependent on external agents. Technical requirements more sophisticated than those that official agencies, which manage similar resources, must live up to are rarely essential or justifiable.*
- *Technical capacity that will enable user groups to demarcate ‘their’ resource and estimate allowable harvest levels.*
- *Applied techniques for estimation of allowable harvest levels that reflect the value of the resource and support broad participation and inclusion of local actors.*
- *Systems that allow communities to adjust harvesting levels according to their own resource assessments. This could be based on direct observations (is a forest or grassland lush or degrading?) or indirect observations (is the average size and annual catch of fish going up or down?).*

⁵ Ribot (2002) refers to this as using technical-sounding arguments to keep decisions central

- *An improved understanding by government and NGO technical staff of environmental dynamics (through training and educational activities), as this will provide the broader “enabling” environment for the realisation of the above recommendations.*

4.4 How to promote good governance including equity

An enabling policy and legislative framework combined with adequate measures to estimate allowable harvest levels do not guarantee success. CBNRM could still fail at the local level due to: (1) inefficient rule enforcement, allowing free-riders to over-harvest and/or (2) inequitable distribution of costs and benefits, leading to a break-down of management rules and subsequent over-harvesting or permanent marginalisation of certain groups.

Establishment and maintenance of good governance or “appropriate decision-making arrangements” is the only feasible way to prevent the failure (or ensure the success) of CBNRM at the local level. Decision-making arrangements specify who decides what in relation to whom. These arrangements may be divided into: (i) the management plan that regulates the use of the resource, and (ii) rules that establish “conditions of collective choice” within the group most immediately involved in managing the resource. The management plan is, in other words, nested within conditions of collective choice.

The management plan defines which products may be extracted by whom, when, how and in what quantities. These rules should be guided by the productive capacity of the resource and by equity considerations to establish a fair distribution of costs and benefits among the community members. Management plans are developed by local management bodies in accordance with certain conditions of collective choice, through which the *purpose* of management is defined (which products and services should and should not be generated). Moreover, the capacity of the group to make a collective decision binding on all relevant individuals is an important aspect of conditions of collective choice.

However, the presence of agreed rules does not guarantee a particular behaviour of individuals, and if there are too many free-riders, or a lack of assurance that others are not free-riders, nobody are, in the long run, likely to follow otherwise agreed rules. Governments can promote “appropriate decision-making arrangements” (good governance) at the local level through nominal resource legislation. This should establish democratic conditions of collective choice, so that all members of a community (including women and other potentially vulnerable groups) get the opportunity to participate in defining: (i) the purpose of resource management and (ii) the resulting management, plan including how it is enforced and how products and benefits from the common resource are distributed. Communities must also hold authority to control free-riding by punishing defaulters.

The decision-making arrangements should, as far as possible, prevent elite capture as well as majority rule, and secure that locally elected management committees are made downwards accountable to the community members they represent. In practice, this may be promoted through legislative requirements of regular management committee elections, frequent general (village) assemblies, frequent oral public reporting of activities, income and expenditures by the committee (allowing illiterate people to digest the information), and unlimited access to accounts and records for all community members. In addition, it must be possible to depose management committees through democratic processes (votes of no confidence) between regular elections.

Sometimes, men and women; pastoralists and farmers, etc. within a defined community do not give equal priority to all kinds of products that a given resource may deliver, and this can be a source of conflict, including marginalisation of the weakest parties. Nominal CBNRM legislation may, however, alleviate such problems by providing for the establishment of interest-based resource-managing sub-communities, e.g. women's groups, which hold exclusion rights vis-à-vis the larger community of which they are a part. Information campaigns and active on-the-ground promotion by, for instance, NGOs and official authorities would help to make such option a reality (see Boxes 8 and 9). Outright protection of minorities against locally established majority rule systems should also be guaranteed by the state. This may be pursued through the establishment of accessible avenues of complaint, combined with the right of the state to re-centralise resource management if CBNRM results in marginalisation of certain groups.

Box 8. Media coverage and dedicated officials' promotion of women's forest use groups in Nepal

An important part of the Danida-supported Community and Private Forestry programme in Nepal was a weekly radio programme broadcast across the country. Here, information on the processes of establishing a forest user group was disseminated together with reports from radio journalists' visit to different forest user groups. In addition to being accessible to illiterate people, information reached the entire country, as practically all villages have at least a couple of battery-driven receivers.

This radio programme inspired the formation of a successful women's forest user group in Mugu district, which is one of Nepal's poorest and most remote, accessible only by foot and helicopter, with only one public telephone connection to the outside world (via satellite). The women had heard about community forestry over the radio, and on this basis approached the local forest ranger, who facilitated the legal establishment of their user group and demarcation of the community forest. The women's forest user group was created in accordance with divine advice received by one of the leading women in the local Shiva Temple.

After a few years of management, the women had significantly improved winter fodder production for cattle and buffalos from lopping natural oak stands, thus maintaining a high production of milk, which is the most important local source of animal protein. Firewood was no longer in short supply, and they had even begun to employ their husbands for the heavy physical labour of cutting pine timber and pulling this to the village for construction and sale along the main trail of the area.

Source: Treue, personal observation 2000.

Box 9. Pilot CBNRM project promoting women's rights in Tanzania

Through Danish support for natural resource management projects (MEMA) in Iringa Region, Tanzania, positive results were achieved for some of the women. This was related to women's, de facto, although not uncontested, land rights in that area. MEMA supported tree planting activities on such land with two purposes. Firstly, women's land rights were consolidated by planting perennial crops, and secondly, the tree crop guaranteed the women a cash income as well as subsistence products.

Source: Odgaard 2005.

Recommendations

Good governance including equity under CBNRM can be promoted through support for legal provisions/requirements for, and practical establishment of:

- *Local-level decision-making arrangements, which are flexible and democratic.*
- *Decision-making arrangements with procedures for monitoring both users and managers. In relation to users, the procedures should discourage free-riding and ensure effective but fair punishment of defaulters. In relation to managers, procedures should ensure transparency, downwards accountability and responsiveness.*
- *Interest-based sub-communities, e.g. women groups, which hold exclusion rights vis-à-vis the larger community of which they are a part.*

5 How to monitor and sustain CBNRM

To which extent is CBNRM being implemented as officially planned, and does the concept deliver on its triple objective? This can only be answered through regular monitoring. In general, there are two sources of information: 1) the media, including interest organisations' agitations, and 2) structured collection of information. Both are important and, ideally, they should be used to adjust the policy, legislative framework and implementation strategies in order to correct failures and sustain and enhance positive effects of CBNRM.

Structured data collection on the progress of implementation should provide reliable quantitative information on: (i) the work carried out to implement CBNRM on the ground, (ii) the area under CBNRM, and (iii) the number of communities as well as households officially involved in CBNRM. More qualitative data on implementation progress should include successes, failures and areas in need of improvement. These systems should be simple and embedded within existing official monitoring systems to ensure sustainability. Monitoring systems applying to one specific intervention only (i.e. a project or a component) should be avoided. Instead, national indicator systems should be used, or, if new monitoring systems are developed, these should be able to feed into national systems (cf. Box 7).

Assessing the degree to which CBNRM is achieving its stated objectives of poverty reduction, resource conservation and governance calls for a different approach, and should probably be carried out by organisations that are not directly engaged in the implementation as such. These could be independent research centres, NGOs and university departments capable of undertaking such studies.

The effects of CBNRM in terms of poverty alleviation and equity can be assessed through interviews with random samples of communities. The purpose should be to document the overall value flow from a given resource under CBNRM, including how costs and benefits are distributed among households within the resource-managing communities. The distribution of costs and benefits between communities and the rest of society may be assessed by looking at profit margins in the value chain for CBNRM products. This will indicate whether officially intended and/or unofficial market interventions as well as market conditions result in producer prices that support or undermine the economic rationale for CBNRM. Interpretation of the collected data should take demographic and general economic developments into account.

The effects of CBNRM on resource conservation can be assessed through interviews with random samples of communities as well as simple, participatory technical inventories carried out with certain time intervals. The former would provide a general picture of how people perceive the development of the resource that they are managing, while the latter would yield a quantitative and qualitative picture of changes in the bio-physical resources and resource use. In both types of inventories, it is important that the resource development in areas under CBNRM can be clearly distinguished from similar areas that are not under CBNRM. Preferably, the effect of CBNRM on areas that are not under CBNRM should be included, because the use of resources in these areas might change as well.

The effects of CBNRM on governance at the local level can be assessed through interviews with households in random samples of communities and analysis of community records, management plan revisions as well as accounts. The purpose should be to document the development in decision-making processes and resulting cost-benefit sharing. This includes a documentation of stakeholders'

positions in order to evaluate whether certain elites have captured most benefits, and whether certain groups are becoming increasingly marginalised, e.g. as a result of de facto majority rule.

The effects of CBNRM on governance at the district and national level can be assessed through analysis of policies, laws, directives, administrative procedures, progress reports and accounts. The objective is to document whether governments (local and national) are: (i) consolidating CBNRM or rather re-centralising resource management through directives or amendments to nominal and functional resource legislation, (ii) promoting or delaying implementation of CBNRM on the ground, and (iii) actually spending resources on promoting CBNRM. Moreover, the effects of CBNRM on governance are indicated by: (i) the existence, number of members and activities of CBNRM interest organisations, (ii) CBNRM-related policy debates in the media, and (iii) the number of CBNRM-related court cases, particularly those where communities or their interest organisations attempt to hold higher administrative levels accountable.

Recommendations

Proper implementation, further development and consolidation of CBNRM through appropriate monitoring may be promoted through:

- *Support for the establishment of continuous simple ‘progress-of-implementation’ monitoring systems that are embedded within or may easily feed into existing national monitoring systems.*
- *Support for the harmonisation of monitoring procedures of various organisations and agencies.*
- *Support for participatory resource monitoring and its use in local management planning as well as in reporting to higher administrative levels.*
- *Support for regular independent activities of applied research that assess the immediate and long-term effects of CBNRM on poverty reduction, resource conservation and good governance.*

Ideal monitoring of CBNRM would be a formidable and probably prohibitively expensive task. Nevertheless, it would be naïve to assume that, once initiated, CBNRM is a guaranteed self-sustaining success, which needs no monitoring or adjustment. An informed public debate based on the results of sound monitoring is, in all likelihood, the key to the long-term success of CBNRM at all levels of society. The short-term effects of CBNRM should, however, not be over-interpreted. In most countries where CBNRM is implemented nation-wide, this represents a complete paradigm shift within particular sectors, and a number of things are bound to go wrong during the first years. Some undesirable effects, such as inequitable benefit sharing at the local level, might be self-corrective over time, when people begin to exercise their democratic rights, but this need not always be so, in which case intervention by the state would be required.

6. Conclusion

CBNRM is not a stand-alone solution to secure poverty reduction, resource conservation and good governance, and whether other resource management systems would be better will always be subject to context analysis and political debate. Accordingly, CBNRM is rather a development process and constant power struggle. Thus, even after years of implementation, donors are still likely to have a mission in promoting CBNRM as part of national programmes. Lessons learnt are important for the new agenda of community-based adaptation to climate change. Donor assistance

may take the form of programme-based assistance or as earmarked support for monitoring and research that deliver credible and easily accessible information. Checks and balances can be supported through civil society as well as the media. Finally, the private sector plays a key and potentially beneficial role in the harvest, transport and marketing of CBNRM products. Thus, dialogue partners should include representatives from the public sector (and not only environmental authorities), civil society (women and men), private sector as well as financial institutions.

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