

The International Workshop on Community-Based Natural Resource Management (CBNRM)

Washington D.C., United States, 10-14 May 1998

Workshop Report ^{1/}

Introduction

This workshop was organized because of the growing interest in community-based natural resource management (CBNRM) as a third alternative to ‘command and control’ and ‘market-based’ solutions to natural resource management (NRM). As Elinor Ostrom, a keynote speaker at the workshop, said, twenty years ago most policy-makers and practitioners would have regarded CBNRM as an oxymoron. Today, there is a growing consensus in favor of CBNRM, and enough experience to start to generalize from this experience in order to assist people who are interested in pursuing this approach.

CBNRM is an *approach* to managing renewable natural resources. Different people and occasions have, at different times, given rise to different understandings of the term and this approach to NRM and sustainable development. Thus, CBNRM has variously been described as, *inter alia*, a tool (or a set of tools), a checklist, a method, a means, a set of activities, a model, a process and an approach. This speaks to the breadth, adaptability and robustness of the CBNRM approach.

CBNRM encompasses a large amount of *experimentation* and *regional variation*. There is a large amount of experimentation going on worldwide in the area of local NRM, and the practitioners involved may or may not use the label ‘CBNRM.’ And when they do, chances are there are variations in interpretation. Such differences in understanding and terminology are caused by different factors, including culture, history and language. For example, there is an important linguistic issue involved. The term ‘CBNRM,’ as the whole CBNRM approach, developed largely in the English-speaking world. In French-speaking countries, specifically in West Africa, the term ‘gestion des terroirs’ is used. While the core of this term roughly corresponds to NRM, it also comprises different meanings than NRM. Many practitioners and policy-makers in these countries prefer to continue using this term rather than introducing a new one, and instead change the meaning of the term (an accepted French translation of CBNRM does in any case not exist). It follows that we should, at this point in time, be wary of efforts at defining CBNRM that goes beyond stating the general characteristics of the approach.

CBNRM is an *evolving agenda*. It is an evolving agenda in two distinct ways:

- *‘Doing’ CBNRM.* It is not possible to determine beforehand a detailed course of action at the local level. The starting point, as well as the hoped-for goal, will be known; while, in comparison, how to get there – and when – to a large extent will be unknowns. One will have general ideas of the various preconditions (often lying outside the sphere of influence and control), the means at disposal, and incentives and the constraints operating at various levels; and

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- *Developing the CBNRM Approach.* In a certain sense CBNRM is a moving target. This is partly because CBNRM is itself evolving, as a result of experimenting and learning through doing CBNRM. In this sense CBNRM contributes to developing the approach. It is also partly because the issues themselves change, with new stakeholders becoming involved, new problems becoming evident, and new ways of addressing them opening up. While the goal, namely sustainable management, is clear, the means employed to achieve this will change.

CBNRM involves much *learning by doing*. While the goals of CBNRM activities are likely to be similar, the means employed will often reflect cultural, local, historic and time-bound facts and issues. At any one juncture in the process there are choices to be made, as no situation is identical with any other situation. In this way, ‘doing’ CBNRM amounts to a process and strategy of learning by doing. By the same token, to the extent that CBNRM can be defined, it will likely continually be redefined.

Based on the participants’ experiences with the workshop, this report charts the course for how to approach and understand the issue of CBNRM and make it meaningful, as a personal experience and a development strategy.^{2/} The section Background discusses the problems and issues surrounding local (and not so local) NRM in developed and developing countries and in transition economies. It also presents the rationale for the workshop. The next three sections deal specifically with the workshop: The Workshop: Overview, The Workshop: Plenaries and Case Studies, and The Workshop: Regional Working Groups. The section Experiences draws some tentative and general conclusions, and presents elements of a framework for CBNRM. The final section, Challenges, points to some implications of this learning experience for further work, and outlines some potential next steps. The Annexes contain selected information about the workshop, abstracts of all the plenary presentations and case studies, and the output of the Regional Working Groups.

The CBNRM agenda contains some clearly identifiable and solid elements. These can be characterized as: (i) assumptions and values; and (ii) approaches or building blocks. The first refers to the general societal basis for a political and social engineering-based analysis of current problems, as well as definition of future goals. The second refers to a set of tools that can be applied to analyze the current situation, define the means needed to change the situation and reach the ascribed goal(s), as well as maintain the human and environmental system at this new equilibrium.

As part of the process of arriving at what CBNRM is, it is important to bear in mind the earlier reflections on CBNRM as being less a concrete and directly implementable agenda than an approach and a strategy, grounded in local culture and social organization, and adapted to the constraints and incentives presented by the modern nation-state. The following core aspects of CBNRM can be identified:

First, there is a *community* aspect of CBNRM. CBNRM starts with communities as a foundation, and it also ends with communities as a focus. In-between is a strategic process of identifying needs and local capacities, and involving and aligning stakeholders (both within and beyond the community). In this sense CBNRM can be understood as a *system* of NRM. The beginning of the process is, however, crucial:

The essential feature of CBNRM is *starting* with communities, taking them into confidence and having confidence in them. It engages their ideas, experience, values and capabilities on behalf of resource conservation objectives, at the same time it seeks ways for communities to become better remunerated and better served. It is prepared to accommodate local interests, needs and norms that are compatible with long-term preservation of ecosystems and their biological resources. There is a burden of proof on outsiders for proceeding contrary to these interests. (Uphoff, CBNRM workshop plenary presentation)

^{2/} This report is part of a dedicated workshop website, and should be read in conjunction with it (see Footnote 1 for URL). The website contains the complete proceedings of the workshop, and documents the process of organizing the workshop, including preparatory activities, the workshop itself, and follow-up activities (see Annex 1).

Second, there is *natural resource management* aspect of CBNRM. CBNRM addresses the management of locally available and renewable natural resources. More specifically, it focuses primarily on natural resources that are under some form of communal or collective management. Natural resources that are managed in this way, whether traditional or modern based, are often referred to as *common property resources* (CPRs).

Third, there is a *co-management* aspect of CBNRM. As a strategy CBNRM parallels – in social and policy terms – the parallel nestedness in the natural world, comprising organisms, species, associations and ecosystems, that is, CBNRM activities take place on different *levels*. This speaks to the importance of establishing relations *between* stakeholders that are located on different levels, based on comparative advantages. Furthermore, this underlines the argument that successful co-management must give parallel and strategic emphasis to both community-based groups (the horizontal axis) and to operational linkages (the vertical axis).

Background

Renewable Resources

The point of departure is renewable natural resources. A list of general categories of natural resources would include:

- Aquatic resources (freshwater and marine), including fish;
- Domesticated animals;
- Forests;
- Land and soils, including arable land and rangeland;
- Water, including surface water and groundwater;
- Watersheds, wetlands and coastal areas; and
- Wildlife.

People have utilized these resources since time immemorial. In the process many cultures have developed unique, structured and balanced ways of utilizing them, in which out-take of resources balances the ability of the environment to renew them, what we today refer to as sustainable management.

Livelihoods

Traditional and modern subsistence or livelihood practices, based upon these resources or derived from them, that provide economic livelihoods for local people, include:

- Agriculture, including rainfed and irrigated;
- Fishing;
- Gathering;
- Hunting;
- Pastoralism; and
- Tourism, including biodiversity conservation and ecotourism.

Causes for, and Implications of, Unsustainable Management Practices

The way in which we humans are managing renewable natural resources, on an aggregate and global level, are increasingly unsustainable. Our out-take of resources is increasing dramatically beyond their natural rate of regeneration. There are a number of reasons for this, among others the increasing human population as a prime driving force.

Likewise, unsustainable NRM practices have obvious implications, already evident in many places, including:

- Deforestation;
- Habitat destruction;
- Overfishing;
- Overhunting, including poaching;
- Soil erosion, including degradation and desertification;
- Species extinction; and
- Surface water and groundwater depletion.

Some Concerns

Unsustainable NRM practices give rise to various concerns as to the planet's ability to sustain life and provide for us in the future. Such concerns include:

- *Depreciation of Natural Capital.* Loss of current, as well as future, production is likely to make it more difficult to fight poverty, and may indeed lead to increased impoverishment;
- *Technological Uncertainty.* Increasingly, we are asking ourselves whether our long-held technological optimism is warranted. Will it always be possible to find technological substitutes for lost natural capital?; and
- *Irreversibility.* Some losses, like extinction of species, are irreversible. What are the long-term implications of this for maintaining healthy and productive ecosystems?

Management Alternatives

There are several generic management alternatives or approaches of renewable natural resources available. The approaches (sometimes referred to as models) are:

- *Public Sector Management.* State institutions, including ministries, departments or agencies of the bureaucracy, make and enforce decisions about resource use (sometimes referred to as 'command and control');
- *Private Sector Management.* Private individuals or companies with ownership rights make decisions about resource use within limits set by (state) law (sometimes referred to as 'market-based');
- *Local Community-Based Management.* Community institutions with *de jure* or *de facto* ownership or use rights determine and administer access and use; and
- *Open Access.* No one has *de facto* ownership of the resource in question. A resource under open access belongs to whomever is the first to exercise control over it.

These approaches to the management of CPRs exist within the context of the modern-day nation-state. In fact, some, such as public sector management, are a direct product of the nation-state rationale. In the case of centralized management, the management responsibilities are vested in actors that are removed from the resource itself. Open access results from the absence – or breakdown – of a management system whose purpose it is to introduce and enforce rules for use of a natural resource. In particular, open access often results if deliberate efforts to implement any of the other three management approaches are unsuccessful; or if there is no effort to manage a natural resource, that is, a *laissez faire* approach. The parallel existence of the first three management approaches (and their corresponding property rights regimes), has the effect of increased confusion, and the lack of clarity as to which approach is being used in any particular case is often not clear and leads to an ineffectiveness in resource management. The nation-state has, at various points in its efforts to modernize and develop so-called 'marginal' and 'backward' rural areas, turned to one of the two first generic approaches, together with a flurry of hybrid approaches.

During the modernization phase in many developing countries, but also in countries in transition, the traditional (and proven) local community-based management approaches were largely judged as unacceptable. Given a legal framework that took away from local people the *de jure* or *de facto* ownership or use rights to local renewable resources, these rights became largely defunct, and certainly ineffective. Neither public nor private sector management approaches have achieved their professed goals. Central governments have largely been proven ineffective, for a number of reasons, of managing anything on the local level. The private sector, with its prior emphasis on profit generation, and undue emphasis on the market as a societal and economic equalizer, has not paid attention to long-term consequences of natural resource use.

The lack of success with these management approaches explains the growing interest in CBNRM. Given the emphasis in CBNRM on institutions (the term 'institution' is used both in the sense of cultural rules and values, and in the sense of societal structures and organizations) and collective management, local community-based management approaches are at the center.

Collective Action

A key factor to understanding both the success of traditional livelihood practices, as well as the environmental (and human) catastrophe we increasingly are causing, lies in understanding the collective action aspect of human management of natural resources.

Collective action refers to concerted action by groups of people that share a common interest, perceive that interest and act to achieve it. Collective action is often based in specific local institutions (collective action can also operate on a national level), focused around specific issues, and uses a given set of tools or means in order to arrive at specific goals (that cannot be achieved individually), and/or to maintain a specific state.

Collective action can be understood as a basic human economic coordination mechanism where coordination is based on people jointly pursuing a *common interest*. Collective action is the coordination mechanism of the preferred management approach, namely local community-based management (other coordination mechanisms are hierarchy, corresponding to the public sector management approach; and markets, corresponding to the private sector management approach).

In the context of CBNRM, collective action refers to the joint management of, and responsibility for, specific natural resources. Collective action is organized by, and takes place in the context of, local institutions. It is a management system that has developed at the local level – in ecosystems, cultures and villages across the world – for management of renewable natural resources. Collective action is intrinsically connected with the idea of collective rights to natural resources, of *common property rights*. Such rights, or property, is not an object in itself, but represent a right to a *benefit stream* from the natural resource in question. Rights are not about relations between people and material things, but about relations between people. In this way collective action by the people who hold such rights enter.

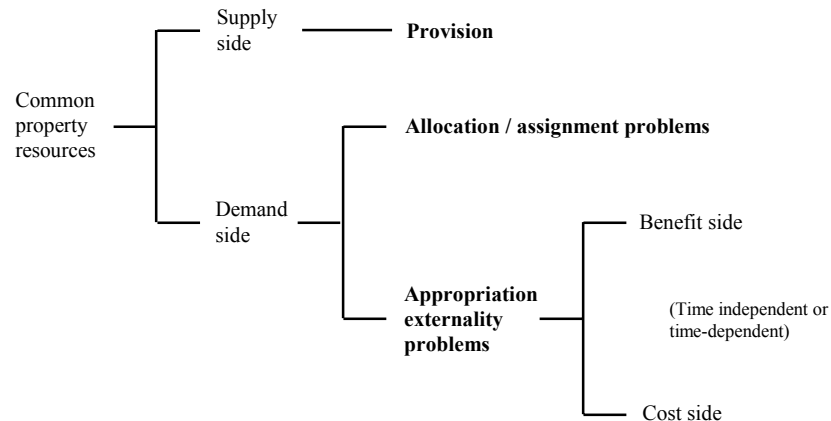
To better understand common property resource management and the problems inherent in collective action, it is helpful to take a step back, and up, from the local level, and look at the collective action rationale from the outside (see Figure 1).

Collective action is not always successful. To be successful, it needs to address certain dilemmas on both the supply and demand sides; or, alternatively, institutionalize solutions to these dilemmas.

Another way of addressing the problems with collective action is to talk about (local) institutions. Collective action has to be understood in conjunction with the institutions that structure and define it. The goal is to devise institutions that deal with both provision, allocation / assignment and appropriation externalities. Collective action problems can be analyzed from both the supply and demand side. On the supply side, there is the public goods problem

of investing in the common property resource. On the demand side there are, on the one hand, problems of allocating and assigning property rights, and, on the other hand, problems associated with appropriation externalities (for example, as more fishermen exploit a given resource, the cost for each fisherman increases and becomes a factor in determining whether to continue or not).

Figure 1: Challenges in Collective Action



A Fundamental Concern

To what extent are local communities able to work out answers to the above issues (see Figure 1)? Generally speaking, when local communities try to organize themselves to address these issues, they often run up against constraints beyond their power to influence, let alone control.

The breaking down of traditional common property management regimes is a global phenomenon that defined and structured the workshop. One point of departure was that central and public sector management systems for CPRs are not working, and that traditional management approaches are breaking down – or have already broken down – because of internal inconsistencies within each of these two systems. The workshop, in particular the Case Studies, addressed the shift from traditional management approaches to private or state management approaches or open access, the implications of this shift, how to address it, and how to prevent this process and/or find workable alternatives. A major finding of the workshop, as derived from both the Case Studies and the Regional Action Plans, is that traditional management approaches indeed are breaking down because of external forces.

The Case Studies demonstrated how traditional common property management regimes are breaking down for several reasons:

- Pressure on existing resources arising from economic ‘modernization’ and rapid population growth;
- Incursions by non-local interests, both domestic and international, public and private (for example, hydro-power plants, large-scale mechanized farming and national parks); and
- Failed attempts of centralized management.

Institutionalizing Natural Resource Management

The task confronting CBNRM is accordingly to institutionalize local NRM – with reference to both traditional and modern institutions – and to find ways of doing this in the face of the many obstacles and problems. Institutionalization of NRM covers some or all of the following: identifying and analyzing local institutions, reforming local institutions, creating new local institutions, legalizing local institutions with reference both to the local

and the nation-state level, and creating strategic alliances between different institutions, located on different levels, that have overlapping sets of goals. There are some important factors to consider in institutionalizing NRM (see Figure 2).

Figure 2: Natural Resources and User-Managers

		Natural resource is:	
		Known and predictable	Not well-known and unpredictable
User-managers are:	Identifiable and coherent group	Irrigation water management I	Coastal fisheries management II
	Lacking group identity and structure	III Forest management, Protected area management	IV Rangeland management, Watershed management

Here, specific characteristics of the natural resource (degree of predictability) and the user-managers (degree of group coherence) have been dichotomized. The general argument is that, for natural resources, increasing predictability is likely to make it easier to institutionalize CBNRM. Likewise, for user-managers, the extent to which an identifiable and coherent group exists, the easier the adoption of CBNRM. By way of illustrating the argument, six types of NRM have been inserted in the cells in Figure 2. Bearing in mind the simplified nature of this model, it would be easiest to institutionalize CBNRM activities and principles in the case of irrigation water management (cell I), with coastal fisheries (cell II) and forest and protected area management (cell III) in an intermediate position, and it would be most difficult in the case of rangeland and watershed management (cell IV).

The following factors also influence the degree to which CBNRM can be institutionalized, and how to do such institutionalization:

- The characteristics of the benefits resulting from CBNRM activities, including whether they are tangible or abstract;
- How soon benefits accrue: immediately or very soon, or after some or a long time;
- Where benefits accrue: locally or outside the local community; and
- Whether benefits accrue to, or are distributed to, the same persons that bear the cost of management, or to other persons.

The Workshop: Overview

The overall objective with the workshop was to give the participants (including Plenary and Case Study presenters), as well as the organizers and World Bank staff, an opportunity to learn more about how to institutionalize CBNRM effectively. From this overall objective followed more specific objectives:

- To facilitate a learning dialogue among participants from all over the world in relation to institutional reform with respect to CBNRM;
- To identify and promote awareness of key institutional issues with respect to CBNRM;

- To generate information and to learn about viable institutional options for CBNRM; and
- To enhance the capacity of existing communities, networks, stakeholder groups, and inter-national donors to bring about positive institutional reforms with respect to CBNRM.

The workshop's Themes were selected to operationalize and achieve these objectives through focusing on specific issues. Taken together, they formed an overall conceptual frame-work for how CBNRM was presented and analyzed at the workshop. While closely related, as well as overlapping, the Themes focused on issues that are distinct enough to warrant separate treatment. The Themes were:

1. *The Process of Establishing an Enabling Policy and Institutional Environment.* This process takes place at both the macro and micro levels, and fosters the emergence of community-based institutions and groups to manage natural resources locally. This includes the establishment or codification of well-defined property rights and responsibilities – whether state, individual, or collective – with respect to natural resources.
2. *The Participatory Process of Organizing Effective Community-Based Groups.* This process, which operates at the local level and scales up to the sub-national level, contributes to community-based institutions and groups more effectively managing their natural resources locally. It focuses on the role of catalytic organizations in building and facilitating local organizational capacity, effective community participation, and local control and authority over decisions and resources. Such catalytic organizations include sub-national and local governments and non-governmental organizations.
3. *Effective Operational Linkages Between the Public Sector, the Private Sector, and Community-Based Groups in the Management of Natural Resources.* Such linkages will, in a formal sense, be established between the government (located on national, sub-national or local levels) and community-based groups. Examples of the content of such linkages would be fiscal arrangements between governments and communities, institutional arrangements to make governments more client-responsive, and monitoring and evaluating the impacts of such institutional arrangements.
4. *Alternative Approaches to Conflict Management in the Use of Natural Resources.* Such approaches will address conflicts located on local, sub-national, national and international levels. Included are conflicts within and between communities, and between different competing users of a given natural resource (often located on different levels).

The Themes provided a structure to the overall workshop, including the Plenary Sessions (Plenaries) and the Case Studies, as follows: For each Theme, a Plenary Session (with one or two speakers) presented a framework for the set of Case Studies allocated to this Theme. The final major component was constituted by Regional Working Groups, made up of participants from the various regions of the world.

The Themes were selected because they were deemed to represent key aspects of the process of institutionalizing CBNRM. The Themes should be understood as useful tools and as heuristic devices, representing and modeling a reality that is much more complex. By the same token, while individual Case Studies as a rule address the Theme within which they are located, many address more than one Theme.

The Workshop: Plenaries and Case Studies

In addition to presenting overviews of each Theme, the Plenaries structured the Case Studies within each Theme, in the sense that the plenary presenters had access to advanced drafts of the Case Studies in 'their' Theme, and, to varying degrees, used these cases to build their own arguments, or otherwise make reference to them (see Annex 1 for overview of the Plenaries, and Annex 2 for abstracts of the Plenaries).

The Case Studies address a number of important natural resources and issues, focused around the particular Theme to which each Case Study was assigned, including:

- Biodiversity conservation: Jordan, Pakistan;
- Fisheries: Barbados, Ecuador, Philippines;
- Forestry: Brazil, The Gambia, India, Indonesia, Nepal, Thailand;
- Irrigation: India;
- Pastoralism: Burkina Faso, Sudan;
- Watershed management: Honduras, Laos, Tajikistan; and
- Wildlife: Russia, Tanzania and Zimbabwe.

In addition, many Case Studies address a host of other issues (see Annex 1 for overview of the Case Studies, and Annex 2 for abstracts of the Case Studies).

The Workshop: Regional Working Groups

An integral part of the workshop was to actively involve the participants in critiquing the workshop, and assessing the current status of CBNRM internationally. Towards this, all participants were invited to join one of several regionally based Working Groups. Given the geographic make-up of the participants, six regional Working Groups were established (see Annex 1 for overview of the Regional Working Groups). The Working Groups were formed on the first day of the workshop, and their rationale and importance were explained. At this time each Working Group appointed a chairperson, and the members of each group were encouraged to stay in touch throughout the workshop.

The Regional Working Groups met again on the last day of the workshop to prepare Regional Action Plans. The Regional Action Plans covered the following: (i) principal resource types; (ii) special regional context and characteristics; (iii) major messages; (iv) key policy issues; (v) strategies; (vi) actions; and (viii) recommendations (see Annex 3 for the Regional Action Plans).

Experiences

This section presents an overall and integrative argument, utilizing the various workshop products, that is, Plenaries, Case Studies and Regional Action Plans, and assesses the workshop. Primary attention will be given to the Regional Action Plans. The goal is to present a composite picture of CBNRM at this juncture that points the way to further experimenting and networking. Thus, what did we learn from this workshop? The major lessons to come out of the workshop as a learning experience will be discussed under the following headings: (i) problem diagnosis; (ii) key actors; (iii) key institutional reform strategies; (iv) guiding principles; (v) key areas requiring action; and (vi) sequencing the CBNRM process.

Problem Diagnosis

The workshop participants agreed, in large measure, with the pre-workshop diagnosis and framework, as formulated by the organizers. Thus, first, traditional common property management regimes are breaking down into private property regimes and/or open access regimes. This process is, at one and the same time, the most fundamental premise and rationale for the workshop, as well as its most important conclusion.

Second, local communities are not able to address and counter this by themselves alone. The Plenaries and, in particular, the Case Studies added a wealth of detail that

illuminates this increasing powerlessness of local communities acting purely by themselves. A common sentiment and argument is that local communities are ill prepared to address the onslaught of external forces in several important and interrelated ways. Chief among them are: (i) community members often lack the requisite skills (or human capital); (ii) the local culture often consists of ill-adapted and/or lacking institutions (or social capital); (iii) communities often do not have the resources to initiate needed actions and activities; and (iv) there is a disjuncture between local communities and the nation-state (as located on the local, regional and national levels) regarding involvement in the political process and allocation of resources. As a consequence, local communities and their members are largely alienated from the political and economic decision-making processes that determine their lives. They are not able to contribute in a constructive and meaningful way to helping themselves.

The issue at stake is the institutionalization of local resource management, that is, CBNRM. Over and above local factors that determine the difficulty of institutionalizing local CBNRM, including the nature of the resource and the nature of the user-managers, the key factor is seen to be the position of the encompassing nation-state, especially its approach to facilitating CBNRM.

Key Actors

A number of stakeholders must be involved in CBNRM activities. The following list of key categories of stakeholders are taken from the Region Action Plans:

1. *Catalytic Organizations (often NGOs)*
 - Advocate, facilitate, and (often) initiate and pilot change;
 - Help mobilize people and build capacity at the local level;
 - Provide political cover for politicians;
2. *Community Leaders*
 - Representative and active participants in the reform process;
 - Beyond consultation to collaboration and empowerment;
3. *Reform Managers*
 - At both the central and local levels;
 - Help mainstream successful pilots;
4. *Politicians and Senior Policy-Makers*
 - Provide political commitment; and
 - Validate consensus and confirm strategic direction.

Key Institutional Reform Strategies

This leads logically to a concern with the character of the relationship between local communities and the nation-state, and how to improve it, as seen from the point of view of both local communities and the nation-state. Focusing on strategies for reforming this relationship, local communities and nation-states have embarked upon formulating strategies that are, given the nature of these two stakeholder categories, different in terms of points of departure, rationale and means (but not in terms of goals). These strategies, as identified in the Regional Action Plans, are decentralization and co-management, respectively. The two strategies can be characterized as follows:

- *Decentralization.* Transfer of authority and responsibility for various government functions from higher to lower levels of government, as well as to communities and the commercial private sector, and
- *Co-management.* Local communities manage their local natural resources in collaboration with other stakeholders, including central government agencies, local governments, NGOs and the commercial private sector.

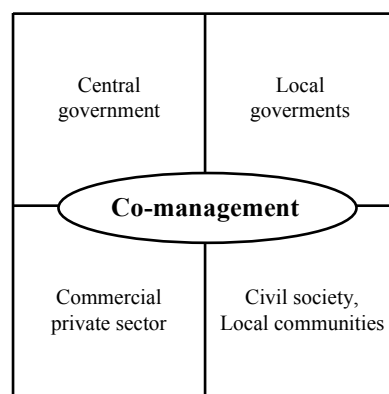
Special attention will here be given to co-management. An important reason for this is that this strategy was discussed in several Plenaries, Case Studies and Regional Action Plans. Co-management is one of several terms that more or less overlap. Other terms used include: ‘collaborative management’, ‘joint management’ and ‘shared management.’ Co-management will here be understood as a generic term that comprises a continuum of management arrangements, as exemplified by the following:

- Local communities exercise control and authority over decisions and resources in accordance with their comparative advantages;
- Local communities do not operate in isolation, but in collaboration with, and with support from, other actors, including local governments, central government agencies, NGOs, and the private sector;
- Central agencies engage local communities in larger resource management and conservation objectives, while at the same time seeking ways for them to become better remunerated; and
- Central agencies are prepared to accommodate local interests, needs, and norms that are compatible with larger resource management and conservation objectives.

Based on the above, the following broad definition of co-management is proposed: The sharing of responsibilities, rights and duties between the primary stakeholders, in particular local communities and the nation-state; a decentralized approach to decision-making that involves the local users in the decision-making process as equals with the nation-state.

Co-management amounts to an institutionalization of collective action. Collective action in the context of NRM refers to joint management of specific natural resources. The same applies to co-management, with the difference that the field of stakeholders is enlarged to include entities outside of, and above, the local community (see Figure 3).

Figure 3: Key Stakeholder Categories and Co-Management



It is interesting to observe that the two institutional reform strategies – decentralization and co-management – appear to have the same goals, while starting out differently and often employing different means. It is thus possible to understand them as two parallel processes that are mutually supportive of each other, and that should be able to meet ‘in the middle.’

Both strategies are based upon the premise of empowering local actors in the management of natural resources, starting from ‘below’ and ‘above,’ respectively. The strategies share a concern with the appropriate *scale* for action, as well as with creating linkages between the local level and the levels above (including the international level). In co-management the focus is not wholly on local communities, and in decentralization it is not solely on the local government. In the case of decentralization this will, of necessity, have to be paralleled by devising new integrative rationales and mechanisms, in order for the

devolved administrative and management system to stay together. Taken together, the two reform strategies do this through parallel top-down and bottom-up approaches. In this sense, co-management partly supports and partly presupposes decentralization, and vice versa. That is, both co-management and decentralization are inter-linked and depend on each other in order to succeed. From the point of view of CBNRM, decentralization corresponds to Theme 1 'Policy and Institutional Framework,' while co-management corresponds to Theme 3 'Operational Linkages.'

Guiding Principles

The Regional Action Plans identified a number of principles to guide the implementation of institutional reform strategies:

- *Conservation and Development.* These two objectives of natural resource management must be made compatible. The continuing and sustainable utilization of natural resources depends both upon their preservation and upon communities deriving economic benefits from their utilization,
- *Ecosystem Sustainability.* The sustainable management of local natural resources must be nested within and effectively linked with the sustainable management of the larger ecosystems of which they are a part;
- *Economic and Social Sustainability.* The management of local natural resources must be economically and socially sustainable over the long term, both technically and institutionally. Where the larger (national and world) communities derive spillover benefits, they should also contribute to the costs of the sustainable management of local natural resources,
- *Empowerment of Local Communities.* Local communities should have the power to make decisions with respect to the utilization and maintenance of local natural resources within an appropriate legal framework that recognizes the interest of all stakeholders,
- *The Facilitating Role of the Central Government Agencies.* Central government departments and agencies should be facilitators, catalysts, regulators, and advisers, rather than direct managers of local natural resources, and
- *Transparency and Accountability.* Public decisions and actions concerning the management of natural resources should be transparent. All actors should be accountable to those whom they serve – community leaders to their communities, and public officials (both politicians and civil servants) to the people at large.

Key Areas Requiring Action

The Regional Action Plans identified the following key areas that require action:

1. *Organizing Effective Community-Based Groups*
 - At the local level and scaling up to the regional level;
 - Process and catalytic organizations to play a key role;
2. *Working Out Operational Rules and Linkages*
 - Fiscal and other institutional arrangements;
 - Involve community-based groups, the public sector and the commercial private sector;
3. *Establishing Conflict Management Mechanisms*
 - Within and between communities;
 - Between competing users of a given resource;
4. *Codifying the Legal and Institutional Framework*
 - Well defined property rights and responsibilities, at both the macro and micro-levels, in which communities have ownership; and
 - Framework to foster the emergence of effective community-based organizations.

As will be apparent, the selected key areas correspond to the Themes, and should be understood as the participants' views on how to focus and operationalize each Theme.

Sequencing the CBNRM Process

As the Case Studies make clear, assigning them to specific Themes becomes limiting. Successful local CBNRM initiatives are those that approach the local problem on a broad front, and manage to integrate all Themes (while often keeping one in focus). Many of the Case Studies report on projects and activities that understand this. This underlines the fact that the Themes to a large extent should be understood as useful tools, as heuristic devices. The reality is much more complex, however. While assigning a specific rationale and purpose to a Theme, and study it as a separate phenomenon, it is equally important to see overlap and linkages between them.

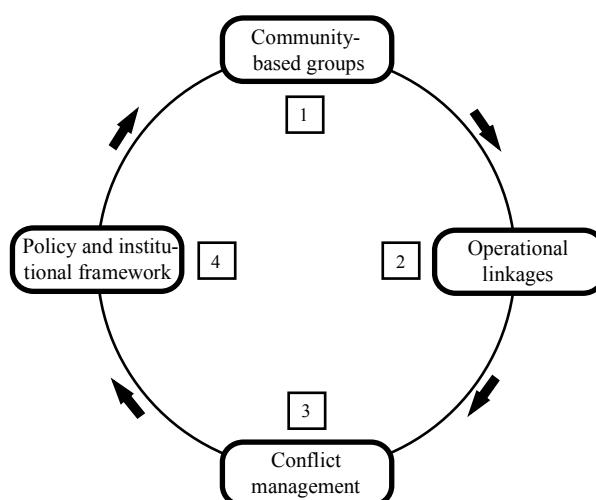
This speaks to the issue of *sequencing*, which addresses the relationship between Themes, with characteristics of causality between them. Sequencing is an approach to: (i) identifying the parts (which can be issues, or groups of stakeholders, or a combination) of an CBNRM strategy; (ii) determining how the parts are linked; and (iii) understanding how the actual implementation of a CBNRM strategy, involving the identified parts, works.

The workshop provided the organizers with a very fundamental lesson when it comes to sequencing. In the pre-workshop material, Theme 1 'Policy and Institutional Environment' was placed as the first Theme. The rationale was that an enabling policy and institutional environment was a necessary precondition for other actions and Themes. As the Case Studies brought out in convincing detail, however, while this may – ideally – be correct or preferable, the reality is that local communities often forge ahead with activities even when such an enabling macro-level framework often does not exist. The contrary argument, that a workable policy and institutional environment would – or could – only result from concerted action and pressure from the local level, that is, one cannot get the institutions rights without local involvement, was accordingly made. The driving forces behind this representation of CBNRM sequencing are decentralization and co-management (see Figure 4).

This representation links the various Themes in a serial, one-way relationship, and thus constitutes a circular process. Given the complexity and variability of actors, issues and relationships, in reality this sequencing process is much more complex, and it will include also two-way and parallel relationships, involving all Themes. Furthermore, while the workshop identified a separate Theme on Conflict Management, this is, in reality, a feature of all CBNRM activities. From the point of view of any actor, the point where they enter the CBNRM process will depend on who they are, on the one hand, and the specific set of human and social capital and incentives and goals that they bring to the task, on the other hand. This speaks to the importance of feedback, negative and/or positive, from the outcomes to guide further action and activities.

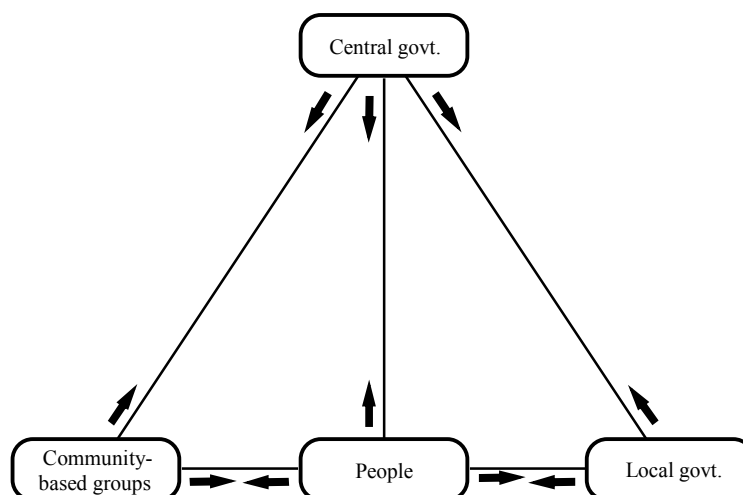
The idea of sequencing is, however, not limited to the relationship between the workshop Themes. Sequencing can, as has already been hinted, be understood as an approach to *modeling* CBNRM activities. Representing or modeling CBNRM activities depends on the aim of the exercise, what aspect of CBNRM one wants to emphasize, and/or one's point of view. Thus, in Figure 4 the attention is on the institutional dimensions of CBNRM. In this very general model of CBNRM, the emphasis is on institutional analysis and reform, on different actors or stakeholders being involved and working on different aspects of the process and contributing important elements based on their comparative advantages, and on building linkages between all actors.

Figure 4: Sequencing of CBNRM Themes



A model of CBNRM from the point of view of the nation-state, would emphasize the pivotal role of the state in defining and supporting CBNRM activities on the local level. From the point of view of a public sector manager, or the regular public sector / central government employee, this model corresponds with the reality they face, of key stakeholder categories within an overall framework of decentralization. The responsibilities of the public sector and the central government is clearly limited in this representation, while nonetheless being absolutely essential and pivotal to a success for the overall CBNRM agenda (see Figure 5).

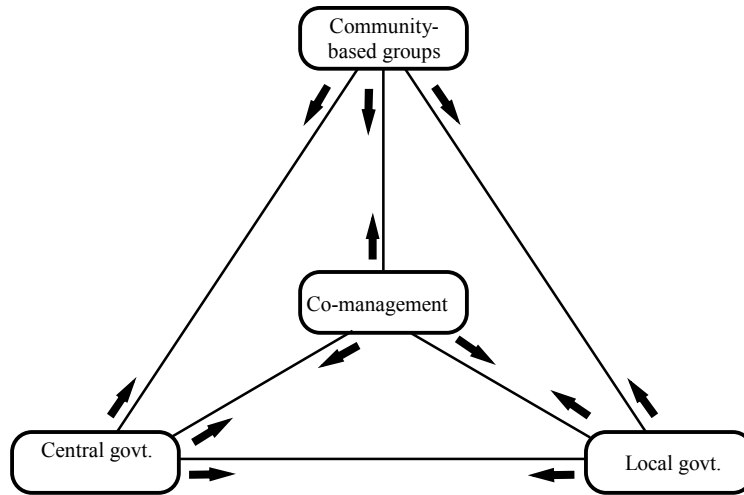
Figure 5: Modeling CBNRM, From the Point of View of the Central Government



A model of CBNRM, from the point of view of local people (including people engaged in NGOs / civil society and the private sector), directly engaged in CBNRM activities, would look very different (see Figure 6). In this model external inputs are necessary. Here labeled as empowerment, such inputs could be provided by, for example, the nation-state as part of an overall reform strategy, and could include decentralization. Note how the linkages between the parts of the model have been made more complex. In this model co-management plays a key role. In order to work out successful co-management it is

important to keep in mind that co-management requires attention to integration along both a horizontal axis (community-based groups) and a vertical axis (operational linkages).

Figure 6: Modeling CBNRM, From the Point of View of Local Stakeholders



These models aim to show that the actors, located in different stakeholder categories, that take part in CBNRM activities, bring different knowledge (in the form of human and social capital) and perspectives to the task of devising and implementing successful CBNRM processes. In doing so, they all face different challenges. Successful CBNRM strategies are dependent upon the collaborative work of all these individual actors.

Challenges

Based partly on the various workshop products, and partly on the preceding section, this section points to some implications of this learning process for future work, and outlines some possible next steps.

The workshop's aim was to contribute to the two-fold learning and capacity building agenda of, on the one hand, doing CBNRM, and, on the other hand, developing the CBNRM approach. Based on a number of indices, it can safely be said that this goal was achieved. Stated more correctly: the goal *is* being achieved. This is so because CBNRM is a continuing agenda, and the dedicated workshop website, as part of the growing global CBNRM movement, has shown itself to be an important learning tool for many CBNRM practitioners around the world.

The workshop represented a joint effort by many people of presenting, discussing and advancing the CBNRM agenda. These people clearly share an emerging view of what CBNRM is all about. While sometimes CBNRM appears as a somewhat vague, unclear and amorphous agenda, this is, to a large extent, a result of the fact that we all work in diverse ecological settings, and otherwise are separated in one way or another, geographically, administratively, culturally, politically, by discipline, language and/or by subject matter. In spite of this diversity there is, however, unity. The participants in the workshop shared the conviction that the CBNRM agenda is based on a finite number of assumptions and value premises, a set of common building blocks or approaches, and a shared view of the outcome and goal with the overall exercise. In adapting this framework to the diversity of places, natural settings and people, we view the CBNRM approach to be of universal relevance,

across geographical, political and administrative boundaries, across cultural and ethnic boundaries, and across disciplines.

The workshop was organized within the context of the World Bank Institute's ongoing program of training and capacity building. It became an important event internationally for people working on CBNRM in various capacities, it led to an important venue for CBNRM practitioners to meet and learn from each other, and it provided an overall and comprehensive statement of where CBNRM is at. While the workshop was conceived as a separate event with no continuation or follow-up, it became clear to the organizers already during the preparatory phase that there was a striking demand and need for a continued and concerted action, through-out the world.

It has not been feasible for the World Bank Institute to continue the CBNRM networking among the participants, as well as the many others that showed an interest in the workshop. Thus, for example, the twenty Case Studies remain frozen in time, and no information on what has happened since is available (see Annex 2 for abstracts of the Case Studies). Likewise, the participants prepared detailed and far-reaching Regional Action Plans that also remain frozen in time (see Annex 3 for the Regional Action Plans). As detailed in the Regional Action Plans, the participants committed themselves to specific actions upon returning home. The Regional Action Plans also made specific recommendations to donors, and in particular to the World Bank. On both counts, a global CBNRM networking capability where such information can be submitted and shared does not yet exist (the participants agreed that creating such a global CBNRM networking capability should be given a high priority). More generally, the workshop organizers and participants would have benefited tremendously from an evaluation of the overall impact of the workshop, on the participants' work, on the situation for CBNRM in their countries, as well as on developing a global CBNRM agenda.

According to the participants, the challenges to come out of the workshop include (the following list is indicative of the many challenges only, the items listed are partly cross-cutting and overlapping, and are not prioritized):^{3/}

1. Conceptualize CBNRM as a learning and capacity-building activity;
2. Address issues connected with measurement and indicators;
3. Compensating local communities for reduction in out-take;
4. CBNRM is not limited to NRM, but comprises also management of people;
5. Rights of individuals or social groups, versus rights of communities;
6. Gender;
7. Scale up from smaller to larger projects, that is, spatially;
8. Increase the communication and networking capacities between key stakeholders, including local communities, donors, private sector and public sector, on the national, regional and international levels;
9. Research, including on (see also other items on the list): (i) timeline and evolution in the establishment of CBNRM activities; (ii) analysis/synthesis of various types of enabling conditions to establishment and continuation of activities; (iii) trend analysis of CBNRM uptake and its determinants; and (iv) measurement and projection of potential impacts from CBNRM;
10. Co-management as a model for interaction and collaboration between local communities, public sector and private sector;
11. Strike a balance between, on the one hand, the degree of cross-cultural and generic validity of CBNRM activities, and, on the other hand, the importance of regional and sub-regional variation in CBNRM;
12. Organize training in doing CBNRM, on the national and regional levels;
13. CBNRM will only succeed in being environmentally and socially sustainable to the extent that it manages to be truly inter-disciplinary in its approach;

^{3/} This list of challenges is adapted from the Regional Action Plans (see Annex 3; cf. also 'Key areas Requiring Action').

14. The importance of conflict management in enabling sustainable NRM; and
15. Identification of linkages and synergies between natural resources and other development sectors and issues, including democracy, economic development, governance, health, humanitarian relief, nutrition and population.

Based partly on the above list of challenges identified by the participants, the following four generic concerns and questions that the global CBNRM community needs to address in order to move the CBNRM agenda forward, are proposed:

1. What is our *experience* with support to CBNRM;
2. What *issues* have emerged from these experiences;
3. What *lessons* have we learned; and
4. How should the various stakeholders *position* themselves and *organize* to promote this agenda?

Internationally, increasing attention is given to the roles, functions, characteristics and performance of institutions for NRM – as located on various levels from the local level, via the sub-national and national levels, to the regional and global levels – in promoting sustainable development, poverty reduction and equitable access to resources. One important conclusion to come out of this work is that in many cases it is necessary to focus on institutional reform to further sustainable development. Given the need for such reforms, there is a corresponding need to learn more about existing institutions, how to do institutional reform and how to share such experiences, and also how to place such activities in an overall learning and training context.

Many bilateral and multilateral aid agencies, NGOs, civil society, and the public sector in developing and transition economies agree on this agenda. A consensus on the problems among many existing organizations for NRM, and the challenges ahead, is thus emerging. This consensus builds upon – and in turn furthers – a need to collaborate more, share information, and learn from each other, all within an increasingly networked and shared environment.

Annex 1: Overview of the Workshop

For detailed information on the workshop, including background, process, organization, objectives, themes, partners, sponsors, program, plenaries, case studies, working groups, participants (including institutional affiliation and contact information) and follow-up, please consult the workshop website (see Footnote 1 for URL).

Organizers

Main Organizer: The World Bank Institute (formerly the World Bank's Economic Development Institute).

Sponsors: World Bank Institute, Ford Foundation, International Development Research Centre, Rockefeller Brothers Fund.

Partners: Africa Resources Trust, Food and Agriculture Organization of the UN, International Association for the Study of Common Property, IUCN-The World Conservation Union, the World Bank's Common Property Resource Management Network (CPRNet).

Participants

There were around 250 participants, representing approximately 60 countries, located in all regions of the world. Both countries in the North and the South were represented. In terms of background, all key stakeholder categories were represented.

Plenaries

Contact information for the plenary presenters are available on the workshop website. Abstracts for all the Plenaries are available in Annex 2.

Ashby, Jacqueline A. "Alternative Approaches to Managing Conflict in the Use of Natural Resources" (slide document)

Groenfeldt, David. "Organizing Effective Community-Based Groups: Lessons from the Irrigation Sector" (slide document)

Hanna, Susan. "Co-Managing the Commons: Creating Effective Linkages Among Stakeholders: Lessons from Small-Scale Fisheries" (slide document, with Bonnie J. McCay); and "Co-Management in Small-Scale Fisheries: Creating Effective Links Among Stakeholders" (text document)

Lindsay, Jonathan M. "Designing Legal Space: Law as an Enabling Tool in Community-Based Management" (text document and slide document)

McCay, Bonnie J. "Co-Managing the Commons: Creating Effective Linkages Among Stakeholders: Lessons from Small-Scale Fisheries" (slide document, with Susan Hanna); and "Co-Managing the Commons" (text document)

Murombedzi, James C. "The Evolving Context of Community-Based Natural Resource Management in Sub-Saharan Africa in Historical Perspective" (text document)

Ostrom, Elinor. "How Communities Beat the Tragedy of the Commons" (slide document); and "Self-Governance and Forest Resources" (text document)

Shah, Anil. "Participatory Process of Organizing Effective Community Based Groups" (text document)

Uphoff, Norman. “Community-Based Natural Resource Management: Connecting Micro and Macro Processes, and People with their Environment” (text document)

Case Studies

Contact information for the Case Study presenters and authors are available on the workshop website. Abstracts for all the Case Studies are available in Annex 2.

Barbados. “Creating Conditions for Community-Based Small-Scale Fisheries Management in the Caribbean.” Author: Patrick McConney. Resource Types & Ecosystems: Fish, Marine resources, Coastal areas, Oceans. Key Terms: Community consultation, Conservation, Fisheries, Income generation, Private sector, Regional cooperation, Replication, Tourism.

Brazil. “Involving Civil Society: The Demonstration Projects Subprogram of the Pilot Program to Conserve the Brazilian Rainforest.” Author: Rinaldo César Mancin. Resource Types & Ecosystems: Forest, Wildlife, Land, Water. Key Terms: Biodiversity, Civil society, Community consultation, Conservation, Regional cooperation, Training.

Burkina Faso. “Towards a Platform for Development: Bringing Together Pastoralists and Agro-Pastoralists in the Kishi Beiga Area” (also in French). Authors: Matthias Banzhaf, Boureima Drabo, Herman Grell. Resource Types & Ecosystems: Pasture, Domesticated animals, Water. Key Terms: Community consultation, Conflict management, Land use management, Multi-ethnicity, Traditional leadership.

Ecuador. “Conflict Resolution as a Key Element for Conservation and Sustainable Resource Management With Local Participation: The Case of the Galápagos Islands” (also in Spanish). Author: Paola Oviedo. Resource Types & Ecosystems: Marine resources, Fish, Coastal areas. Key Terms: Biodiversity, Community consultation, Conflict management, Conservation, Fisheries, Income generation, Parks/Reserves, Private sector, Tourism, Training.

The Gambia. “Community Forest Ownership: Key to Sustainable Forest Resource Management. The Gambian Experience.” Authors: Foday Bojang, Dominique Reeb. Resource Types & Ecosystems: Forest. Key Terms: Community consultation, Conflict management, Conservation, Replication.

Honduras. “Copan: Collaboration for Identity, Equity and Sustainability.” Authors: Jacqueline Chenier, Steve Sherwood. Resource Types & Ecosystems: Land, Domesticated animals, Forest. Key Terms: Civil society, Community consultation, Conflict management, Land use management, Multi-ethnicity, Regional cooperation, Traditional knowledge, Traditional leadership, Training.

India (no. 1). “Complementarity of Institutions: A Prerequisite for the Success of Joint Forest Management. A Comparative Case of Four Villages in India.” Authors: Shashi Kant, Roshan Cooke. Resource Type & Ecosystem: Forest. Key Terms: Conservation, Forestry, Gender, Regional cooperation.

India (no. 2). “NGOs and Institutional Reforms: A Case Study of Irrigation Sector Reforms in Gujarat, India.” Author: Apoorva Oza. Resource Types & Ecosystems: Water, Land. Key Terms: Civil society, Environmental education, Extension, Irrigation, Replication.

Indonesia. “Cattle, Cockatoos, Chameleons and Ninja Turtles: Seeking Sustainability in Forest Management and Conservation in Nusa Tenggara, Indonesia.” Authors: Larry

- Fisher, Ilya Moeliono, Stefan Wodicka. Resource Types & Ecosystems: Forest, Land. Key Terms: Conflict management, Conservation, Multi-ethnicity.
- Jordan*. “Making It Pay: Can Community-Based Biodiversity Conservation Programs Be Sustained Through Market Driven Income Generation Schemes?” Authors: Khaled Irani, Chris Johnson. Resource Types & Ecosystems: Domesticated animals, Land. Key Terms: Biodiversity, Conservation, Income generation, Marketing, Parks / Reserves, Private Sector, Tourism.
- Lao PDR*. “Community-Based Natural Resource Management and Watershed Resource Conflicts: A Case Study From Nam Ngum, Lao PDR.” Authors: Philip Hirsch, Khamla Phanvilay. Resource Types & Ecosystems: Water, Forest, Land, Fish. Key Terms: Community consultation, Conflict management, Forestry, Land use management, Multi-ethnicity.
- Nepal*. “Changing Forest Policies and Institutional Innovations: User Group Approach In Community Forestry in Nepal.” Author: Bharat Shrestha. Resource Types & Ecosystems: Forest, Hills, Mountains, Land, Water. Key Terms: Community consultation, Conflict management, Conservation, Extension, Forestry, Gender.
- Pakistan*. “Community-Based Natural Resource Management in Northern Pakistan.” Authors: Javed Ahmed, Shafqat Hussain. Resource Types & Ecosystems: Pasture, Forest, Wildlife, Land, Cold desert. Key Terms: Biodiversity, Community consultation, Conservation, Forestry, Tourism, Traditional leadership, Training, Wildlife management.
- Philippines*. “Participatory Coastal Development Planning in Bolinao, Northern Philippines: A Potent Tool For Conflict Resolution.” Authors: Liana Talaue-McManus, Alexis C. Yambao, Severino Salmo III, Porfirio Aliño. Resource Types & Ecosystems: Marine resources, Fish, Water, Coastal areas, Land. Key Terms: Civil society, Community consultation, Conflict management, Environmental education, Fisheries, Regional cooperation, Replication.
- Russia*. “The Establishment of a Private, Non-Commercial Protected Territory: The Case of Muraviovka Park of Sustainable Land Use in Amur Region, Russia.” Author: Sergei M. Smirenski. Resource Types & Ecosystems: Land, Water, Wildlife, Wetlands. Key Terms: Biodiversity, Conservation, Environmental education, Land use management, Parks/Reserves, Private sector, Replication.
- Sudan*. “Resource Access: A Major Cause of Armed Conflict In the Sudan. The Case of the Nuba Mountains.” Author: Mohamed Suliman. Resource Types & Ecosystems: Domesticated animals, Land, Wetlands. Key Terms: Conflict management, Multi-ethnicity.
- Tajikistan*. “Community Participation in Solving Land and Water Problems in the Runoff Formation Zone of the Aral Sea Basin.” Author: Sirodzhidin Aslov. Resource Types & Ecosystems: Water, Domesticated animals, Land. Key Terms: Community consultation, Land use management, Research, Training, Water resource management.
- Tanzania*. “Reconciling Human Interests With Conservation In the Selous Game Reserve.” Authors: Ireneus F. Ndunguru, Rudi Hahn. Resource Types & Ecosystems: Wildlife, Forest, Pasture, Wetlands. Key Terms: Conservation, Cooperatives, Income generation, Parks/Reserves, Replication, Tourism, Traditional knowledge, Training.
- Thailand*. “Community-Based Natural Resource Management From Villages to an Inter-Village Network: A Case Study in Pang Ma Pha District, Mae Hong Son Province, Northern Thailand.” Authors: Prasong Jantakad, Stephen Carson. Resource Types & Ecosystems: Forest, Land, Wildlife, Domesticated animals. Key Terms:

Community consultation, Conflict management, Forestry, Income generation, Land use management, Multi-ethnicity, Replication, Training.

Zimbabwe. “Local Participation as an Instrument For Natural Resources Management Under the Communal Areas Management Program for Indigenous Resources (CAMPFIRE) in Zimbabwe.” Author: Taparandava N. Maveneke. Resource Types & Ecosystems: Wildlife, Forest. Key Terms: Community consultation, Conflict management, Employment, Multi-sectoral, Regional cooperation, Traditional knowledge, Training.

Regional Working Groups

The Regional Action Plans prepared by the Regional Working Groups are available in Annex 3.

East Asia. Countries represented: Australia, Cambodia, China, Indonesia, Japan, Lao PDR, Micronesia, Philippines, Thailand, Vietnam. Other countries and/or organizations represented: Canada, United States.

Europe, Central Asia and the Middle East. Countries represented: Afghanistan, Albania, Jordan, Kyrgyz Republic, Poland, Romania, Russia, Tajikistan, Ukraine. Other countries and/or organizations represented: Italy, Norway, United States.

Latin America and the Caribbean. Countries represented: Brazil, Costa Rica, Dominican Republic, Guatemala, Haiti, Honduras, Mexico, Uruguay. Other countries and/or organizations represented: United States.

South Asia. Countries represented: India, Nepal, Pakistan, Sri Lanka, Yemen. Other countries and/or organizations represented: Canada, Japan, United States.

Sub-Saharan Africa (Anglophone). Countries represented: Ethiopia, The Gambia, Ghana, Malawi, Mozambique, Nigeria, South Africa, Swaziland, Tanzania, Zimbabwe. Other countries and/or organizations represented: Canada, SADC, United Kingdom, United States.

Sub-Saharan Africa (Francophone). Countries represented: Benin, Burkina Faso, Cote d’Ivoire, Madagascar, Mali, Senegal, Togo. Other countries and/or organizations represented: FAO, GTZ, IUCN, and government officials.

Annex 2: Abstracts of Plenaries and Case Studies

Lists of all Plenaries and Case Studies are available in Annex 1.

Overview Plenaries

Two plenaries were commissioned as overviews of CBNRM, and accordingly do not belong to a particular Theme:

Plenary (Uphoff). Presents a general overview of CBNRM, including its historical evolution and present conception. It presents key concepts, and provides arguments and tools with which to understand and analyze the case studies.

Interest in CBNRM derives from a combination of, on the one hand, frustration with the shortcomings of efforts to preserve natural resources that ignored the needs and interest of local communities, and, on the other hand, optimism because of encouraging experiences with community involvement. That NRM is 'community-based' means that it is nested, that larger systems are made up of smaller ones and would disappear without them, and conversely, that smaller systems depend on larger ones for their survival.

CBNRM faces two particular problems of aggregation. First, communities are, as a rule, not clearly bounded social or geographic units. Thus, aggregation of units of various levels becomes crucial, and CBNRM assumes that processes of resource inventory and appraisal, consensus building and conflict management can inform and empower communities to engage in collective action to utilize and sustain natural resource endowments. Second, natural resources themselves are quite heterogeneous.

The strategy of CBNRM is to start with communities as a focus and a foundation for assessing natural resource uses, potentials, problems, trends and opportunities, and for taking action to deal with adverse practices and dynamics. CBNRM assumes that local people understand and will support larger interests and principles of conservation, factoring these into their economic, social and cultural considerations about how natural resources should be managed.

On a macro level, there are two main reasons why CBNRM is of interest: protection of biodiversity and maintenance of ecosystems.

CBNRM is emerging as a third alternative, operating in a middle sector in between the two existing alternatives, that is, state sector and private sector institutions. Whereas the latter can be understood as, respectively, authoritarian and autonomous decision-making oriented, the middle sector emphasizes collective action. The pro et contra of various options for NRM based in the middle sector, including local government, community organizations, service organizations and business enterprises, are discussed.

The term 'community' in the context of CBNRM are discussed. Decision-making and action are recognized as taking place on several levels, of which three, namely 'locality', 'community/village', and 'group' (neighborhood) cover aspects of the term 'community'.

Regarding the historical development of NRM, specifically as oriented towards biodiversity protection, three stages are identified. The third stage, where local people are viewed as partners, has given rise to CBNRM.

The workshop Themes are discussed in some detail, and a number of questions are raised as a guidance in the understanding each Theme. Areas where knowledge need to be systematically accumulated, evaluated and disseminated are pointed out. Finally, a number of criteria for assessing the Case Studies are proposed.

Brief cases from Indonesia, Dominican Republic, Ghana, Honduras, Madagascar and Sri Lanka are discussed throughout.

Plenary (Ostrom). A theoretical approach to how natural resources become organized in self-governed common pool regimes is presented. The emphasis is on forest

resources, but forest resources share attributes with many other resource systems that make their governance and management in a sustainable, efficient and equitable way difficult.

A self-governed forest resource is one where the major appropriators are involved over time in making and adapting rules within collective-choice arenas regarding the inclusion or exclusion of participants, appropriation strategies, obligations of participants, monitoring and sanctioning, and conflict resolution. A number of factors that may occur in open access situations, resulting from an ineffective governance regime, are likely to lead to destruction or degradation of forest resources. The traditional theory of common pool resources, using relatively simple assumptions, is critiqued. This 'tragedy of the commons' argument convinced many that this theory captured the essence of the problem facing most common pool resources in the world. One result was large-scale nationalization of forest resources.

Recent data confirms the empirical validity of the conventional theory, while challenging its generalizability. Considerable consensus now exists that a number of attributes of resources and of appropriators are conducive to an increased likelihood that self-governing associations will form. In addition to the consensus concerning the theoretical variables conducive to self-organization, considerable agreement also exists about the characteristics of those self-governing systems that are robust in the sense that they survive for very long periods of time, utilizing the same basic rules for adapting to new situations over time.

It is possible to derive a series of design principles that characterize the configuration of rules used. There are, nonetheless, uncertainty about some issues surrounding self-governance, including the effects of size and heterogeneity.

Suggestions for further work on the conditions conducive to self-governance and design of more effective public policies – for researchers, policy makers and resource users – are outlined.

Community-Based Groups (Theme 2)

Plenary (Groenfeldt). The context and examples are taken from the irrigation sector. The point of departure is that governments cannot manage irrigation, while farmers can, which is why irrigation is a CBNRM issue. The CBNRM challenge, however, is changing, from a concern with organizing small groups of farmers at the lowest level of canal networks, to establishing user-managed corporate entities to manage large irrigation networks. Three key issues are discussed: (i) what are 'effective community-based groups;' (ii) why organize these groups; and (iii) how to organize them? It is argued, among others, that the organizing process is critical, but needs to be preceded by enabling policies. Good practices in CBNRM from India, Mexico, Philippines and Turkey are presented. Based on these cases, some lessons regarding the process (understood as management transfer) of organizing groups are presented.

Plenary (Shah). The presentation begins by outlining failures in NRM, mostly by governments. As a result, it is argued, governments in many parts of the world are now seeking to develop new partnerships with local communities. The first, and most important, issue is to build and support 'self-initiated community organizations.' Drawing largely on experiences from India, a series of issues and advice on organizing effective community-based groups are presented: (i) selection of development agency - capacity-building of NGOs; (ii) transforming bureaucratic systems; (iii) monitoring, learning and refinement; (iv) fostering self-reliance; (v) federations; and (vi) legislative route, participating route.

Case Study, Barbados (McConney). Fisheries management in the small island developing states (SIDS) of the eastern Caribbean which are part of the Caribbean Community, with an emphasis on Barbados, is presented. A 1995 study recommended an incremental approach to introduction of fisheries management, particularly because Barbados has no history of community-based fisheries management, unlike the other island states in the

region where the emphasis is on building upon existing foundations. It also suggested that community-based rather than occupational fisherfolk organizations were more appropriate for organizing collective action. The Fisheries Act of 1993 provided for the formulation and review of fisheries management plans for Barbados through consultative mechanisms like the Fisheries Advisory Committee. In addition, Fishery Working Groups with a broad participation are planned. Efforts are being made to establish linkages between fisherfolk organizations in the neighboring countries that share stocks of pelagic species. Social and economic considerations should be granted foremost consideration in developing a fisheries management concept, so as to be in line with the political reality of conservation programs in developing countries. Another important factor for success is the exchange of information between the managers/scientists and the fishing industry in order to bring about a sustainable community-based fisheries management effort. The success of this effort depends on the extent to which governments are willing to provide incentives to organizations rather than individuals in order to create and conserve social capital required for sustained collective action.

Case Study, India no. 2 (Oza). This case from the state of Gujarat presents changes in canal irrigation management and use through a collaborative NGO-GO initiative. An initial study tour to the Philippines initiated the process. The Participatory Irrigation Management (PIM) model used involved an extensive process of meetings with farmers, multi-level working groups, and large-scale awareness and training of state government officers. The importance of the demonstration effect in institutionalizing a new process of resource management and gaining acceptability is emphasized. The institutional system created should be self-sustaining and involve local actors but at the same time gain political acceptance from both regional and national levels. Finally, capacity building of the multiple levels of stakeholders is crucial for continuity of the program.

Case Study, Russia (Smirenski). The Muraviovka Park, a nature-protection area, is run by a private, non-commercial organization. The objective is to create a better environment for wildlife and to improve the quality of life for local people, through changes in land use practices. Towards this, the Park addresses issues like wildlife protection, environmental education and sustainable development in an integrated manner. The Park's programs have been instrumental in bringing about a major change in the attitude among the local population concerning sustainable agriculture and biodiversity conservation.

Case Study, Tajikistan (Aslov). The participatory planning process adopted by Central Asian States to address the problems caused by the disappearance of the Aral Sea is outlined. Among the aims are development of measures for comprehensive use of land and water resources, and improving the ecological conditions in the runoff formation zones of the Aral Sea Basin. Realizing that one of the causes of the Aral Sea crisis is lack of public involvement, a participatory approach of involving the local population was adopted. A group of scientists and specialists conducted seminars and training, and used survey methods to assess the priorities of the consulted stakeholder categories. The methods adopted and the priorities elicited by the respondents for further action are outlined.

Case Study, Tanzania (Ndunguru & Hahn). Conservation and resource management efforts in the Selous Game Reserve are aimed at reconciling the interests of the local population with conservation goals. The process involves organizing community groups at village, district and central government levels for sharing of the benefits and costs of conservation. The main activities are assisting rehabilitation and management, and a program for sustaining wildlife utilization in the buffer zones in cooperation with local communities. Emphasis is placed on: (i) self-help projects aimed at confidence- and capacity-building of local villagers; (ii) ascertaining land tenure rights in the villages by undertaking village boundary demarcation, and providing technical assistance for creating integrated land-use plans; (iii) bringing about institutional changes at the village and district levels by creating several committees and empowering them to take resource management decisions, as well as providing an enabling environment for regional coordination; and (iv) giving local

communities legal access to the wildlife (for both hunting and protection) and the responsibility to use revenue earned judiciously. The fact that villages outside the scope of this project have adopted the program concepts indicates its acceptability to local people and its success in turning the wheel around. While the program still faces a lot of constraints, a strategic plan for policy implementation and continuous adaptive training of all levels of stakeholders will help to ensure continuity of this community-based wildlife utilization program.

Operational Linkages (Theme 3)

Plenary (Hanna). Recent trends in NRM are increasing specialization and centralization. This leads to top-down management approaches that has resulted in increasing ineffectiveness of the operational linkages in the institutional environment within which management occurs. This has, worldwide, lead to increasing interest in alternative institutional forms that shift the balance of authority away from the center towards the periphery and community-based approaches. Co-management, a broad array of management models that include community-based approaches, is understood as the sharing of authority and responsibility among all stakeholders – including governments and communities – and “a decentralized approach to decision-making that involves user groups as ... co-equal decision-makers with government.” Co-management in small-scale fisheries worldwide, emphasizing basic economic dynamics that underlie and influence the effectiveness of linkages between governments and communities is discussed. The following functions and elements of co-management are outlined: (i) back-ground conditions (property rights, uncertainty); (ii) co-management structure; (iii) transactions costs; and (iv) human capital. A number of brief cases analyze the importance of transaction costs and human capital in establishing effective co-management linkages.

Plenary (McCay). Based on experiences with modernized, industrialized fisheries in the North, the ongoing transition in NRM is described and examined, from a social and cultural point of view. The movement towards ‘ecosystem management’ involve utilitarian and land ethic values, adaptive management, bioregional governance, active and engaged local people, use of the resource users’ knowledge and experience, and a bottom-up and collaborative approach. Ecosystem management implies a broadening of the natural world at stake as well as a broadening of the relevant roles of stakeholders. Co-management is understood as distinct from community-based management because it explicitly recognizes that government agencies and NGOs often must be involved. Causes for the failure of communities in managing local resources are discussed. In conclusion, a series of questions are raised: (i) who has authority, power, knowledge and responsibility, and for what?; (ii) the process of agreeing on, implement-ing, enforcing and evaluating rules and regulations; (iii) allocation of resources; (iv) data collection and input into the management process; (v) data collection versus data analysis; (vi) monitoring, control and enforcement; (vii) habitat protection and enhancement; and (viii) policy development and planning.

Case Study, Brazil (Mancin). Describes a project initiated at the governmental level, and partly supporting initiatives in civil society organizations. Such joint efforts were considered necessary to bring about real changes in the social, economic and environmental conditions of the Amazon and the Atlantic Forest region. The Pilot Program to Conserve the Brazilian Rainforest includes the Demonstration Projects Subprogram (PD/A), the core idea of which was to reinforce, along with the government, the capability of civil society to develop feasible economic, ecological and socially sustainable solutions for the management, conservation and development of the Brazilian rain forest. The PD/A supports new production systems and new institutional cooperation arrangements, making them viable, and disseminating such experiences for further replication. The creation of a streamlined financial mechanism (for easy access by small organizations) and networks of environmental organizations for information dissemination and capacity building training of local

organizations were key to the viability and success of this approach. An important lesson was the need for strong guidance from PD/A to the grassroots organizations to make the transition from thinking about their own survival to serving as economic agents.

Case Study, Jordan (Irani & Johnson). Biodiversity conservation in protected areas is being promoted through the development of community-based and market driven income-generation and tourism programs. The project was implemented by the Royal Society for the Conservation of Nature (RSCN) with financial support from GEF. The project involved institutional capacity-building at the site level, with development of income generation activities for local people linked to the presence of the protected area; and, at the organizational levels, restructuring of the RSCN to provide technical and financial capacity for program management. The innovative aspect of the project is its emphasis on income generation as a principal institutional tool. An important lesson is that, besides just involving communities in decision-making, it is also necessary to provide them with tangible benefits (like employment), and with feasible alternatives to the practices being regulated (like goat-fattening schemes so as to reduce the number of goats and sheep). However, such bargains need to be based on a strong understanding of the local people and their dependence on the protected area. This should, in turn, be backed by the catalysts' ability to respond to such needs and at the same time ensure enforcement of the agreements arrived at.

Case Study, Pakistan (Ahmed & Hussain). A pilot project that aims at: (i) demonstrating how local institutions can manage wild species and habitats sustainably; and (ii) assessing the effectiveness of conserving biodiversity in addition to rural community development, is presented. Project activities are built around the social infrastructure developed by Aga Khan Rural Support Program (AKRSP), and is being implemented with the support of AKRSP. Technical expertise is provided by IUCN-The World Conservation Union, and funding comes from GEF. The process involved formation of village organizations at water-shed level, and helping them to develop and implement village development and resource conservation plans based on a set of agreed norms related to resource use and conservation. The process adopted for planning and implementation, capacity-building training conducted at both community and regional-national levels, the efforts made at empowering rural communities through creation of various committees at community and district levels, and the demonstration effects of the pilot project in the region is described. The approach used is argued as being different from conventional approaches by putting local people in the 'driving seat,' and transferring to them the control for conservation and sustainable use of natural resources, following necessary capacity building. As a result of this pilot, AKRSP has adopted biodiversity conservation as part of its development agenda. A project proposal has been submitted to GEF for funding. The full-scale project is expected to start in 1999.

Case Study, Philippines (Talaue-McManus, Yambao, Salmo III & Aliño). The project described, Community-Based Coastal Resources Management, plays a catalytic role in community mobilization and formation of local Peoples Organizations (POs), and in the formulation of the country's first participatory Coastal Development Plan (CDP). One of the objectives of the project was the creation of a CDP through the coordinated efforts of local POs, civil society and the local government. The project began with the creation of four POs that were later federated, and the transfer of appropriate knowledge and skills to them. This was followed by a multi-sectoral consultation on the CDP with the support of an Executive Order issued by the Municipality. A series of public consultations resulted in the final approval of a PO-initiated CDP. This is an example of active involvement of the local government's Executive and Legislative branches in institutionalizing the planning process. The CDP exercise provided the most effective venue for consensus building in articulating a development vision as well as formulating action plans to achieve it. The Plan has guided several other coastal municipalities in developing their own Plans. It is also being referred to by other government and non-government organizations working in coastal areas around the country and by countries in South East Asia.

Case Study, Zimbabwe (Maveneke). The Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) program aims to enhance sustainable utilization of renewable natural resources. The program began with wildlife management and now covers also forestry, eco-tourism and cultural resources. The special status bestowed upon Rural District Councils was a key policy measure taken towards decentralization of decision-making in NRM. CAMPFIRE committees were established at village, ward, district and national levels. The main principles are: (i) local decision-making in the utilization of natural resources; and (ii) income accruing from natural resources to local people is an incentive to conserve species. A key concept is that of establishing differential benefits, that is, those who meet the costs of living with natural resources must get some benefits too.

Conflict Management (Theme 4)

Plenary (Ashby). In discussing alternative approaches to conflict management, first, a framework is presented, structured around the following questions: (i) what are the important characteristics of NRM that affect conflict and cooperation?; (ii) what role do community-based organizations have in NRM?; (iii) what are the causes of conflict in community-based NRM?; and (iv) what catalyzes conflict resolution? Second, the experiences from the case studies in terms of the main features of the process of conflict resolution are presented. Third, a number of lessons learned, in terms of critical success factors, are outlined.

Case Study, Ecuador (Oviedo). The process of establishing the Galapagos Islands Marine Reserve is described. This ecosystem, recognized as a world 'landmark,' is protected by various national and international environmental legal instruments, and makes the efforts at striking a balance between conservation and sustainable use of natural resources all the more appropriate as well as complex. The establishment of both terrestrial and marine protected areas were preceded by severe conflicts with local people due to their absence of participation in decisions concerning their own livelihood. Growing external pressures from the private sector, combined with the disastrous effects of a national economic crisis, eventually led to unprecedented levels of confrontation that put at risk the implementation of necessary conservation measures. Following this, efforts were undertaken to involve local people, particularly fisherfolk. The chief outcome of the process is a legal and political reform expressed by way of preparation, negotiation and adoption of a Special Law for the Province of Galapagos. The repercussions of adopting conservation measures without taking into account the full range of stakeholders, including those that are weaker, is presented. For sustainable use of marine resources, participation and consent of all parties involved is essential, as is providing reasonable alternatives and compensation for the changes that might take place, in an equitable and transparent manner.

Case Study, Honduras (Chenier & Sherwood). The process of resolving conflicts over land tenure rights for the Chortis (indigenous farmers) is addressed. Following the Honduran ratification of ILO Convention 169, the government signed an agreement with CONICHH (the national Chorti organization) offering land to the Chortis. CONICHH involved NGOs, including Caritas, to provide technical and organizational recommendations about land use management. A series of workshops were conducted with the stakeholders involved in the conflict. Failure of the new government to abide by, and fulfill the promises of, the previous government is a potential source of violent conflict. By breaking up the larger conflict into smaller issues and resolving them one at a time, Caritas has been able to make headway in the existing volatile situation. The role of the collaborative efforts of CONICHH and Caritas, etc. in strengthening the capacity of local people, so as to provide the political will and ability required to solve conflicts and arrive at a consensus on several issues of disagreement, is analyzed. The importance of international attention, external material and moral support in assuring a 'level playing field' for the different stakeholders involved is asserted.

Case Study, Indonesia (Fisher, Moeliono & Wodicka). This case study draws on the experiences of the Nusa Tenggara Uplands Development Consortium, an inter-agency network which seeks to address key technical, institutional and policy issues related to poverty alleviation and environmental conservation in this region. The evolution of this network and the lessons learnt in mitigating conflicts and building collaborative approaches to forest management in eight priority conservation areas is presented. Key interventions aimed at enabling a multi-stakeholder forest management approach include: community organizing, coalition building, participatory research, training and capacity building. The forest management disputes in this area are classified into four main issues: legal, regulatory and procedural; policy and program implementation; economic and livelihood; and social and cultural factors. Based on this regional experience some general lessons for mitigating conflicts and building collaborative approaches to forest and conservation management are presented: (i) use of a regional, multi-site approach; (ii) adopt a multi-community, inter-agency and ecosystems based unit of analysis and decision making; and (iii) include 'communities of interest' of all stakeholders active in decision-making through, for example, participatory research efforts and public meetings.

Case Study, Lao PDR (Hirsch & Phanvilay). The institutional approaches adopted to deal with intensified resource use conflicts in a watershed are analyzed. It is suggested that resource use, intensification / change, competition and conflict must be examined in sequence, and that an understanding of this sequence is a pre-requisite to developing alternatives through cooperative solutions, whether community-based or otherwise. The unique feature of conflict management in this case is the multiple use of watershed resources for subsistence and commercial production in the context of rapid change. There is a difference in perception between national policy makers and local communities regarding the causes of the deteriorating resource base, which in turn gets reflected in the generalized approaches to watershed management that is usually adopted. An applied research project investigated the changing resource base, emerging conflicts and cooperative solutions to resource management within the watershed. The first phase explored the socio-economic conditions and resource management systems, and the second phase made more intensive studies and limited interventions in selected pilot areas. Based on this, project interventions were defined within the broad framework of the forest land allocation policy. Differing local circumstances required different measures, and were developed by the concerned local communities in consultation with local authorities.

Case Study, Sudan (Suliman). Traditional approaches to conflict management and resolution that invokes simple explanations like ethnicity, tribalism, culture and/or religion are critiqued. The causes of armed conflict, particularly from the perspective of the Nuba people, are analyzed. The argument that ecological degradation can act as a catalyst of violent conflicts is discussed. Most efforts of conflict resolution aim at tackling the causes of such natural resource degradation, which are mostly technical in nature (including, for example, soil conservation, reforestation and water management). However, in doing so economic and political issues are pushed aside. Using the history of armed conflict, it is shown how persistent inequities in resource allocation and access are brought about by more deep-rooted societal political and economic structures. In addition, the external introduction of mechanized farming led to encroachments on Nuba smallholder farming which further exacerbated the conflict. Some of the conflict resolution agreements arrived at did not last very long due to vested interests of different parties and the concerted efforts by the government in sabotaging them. While violent conflicts arise over material resources, when they extend over long periods of time, ethnic, cultural and religious affiliations transform into contestable material social resources, and they become the object of social strife.

Policy and Institutional Environment (Theme 1)

Plenary (Lindsay). The role of state law and legal institutions in creating an enabling environment for CBNRM is explored. Some community-based management systems have operated with no formal legal underpinning, and perhaps even in direct contradiction to what is written on the law books or administered in the courts. These are, however, increasingly rare exceptions. Natural resources are the focus of increasing conflict around the world. Where community-based management efforts are subject to challenge from outside or within, the formal legal environment, for better or worse, becomes increasingly relevant. Nevertheless, in many national legal systems, the status of much community-based management remains uncertain and insecure, and a threat to its sustainability. Successful community-based management requires legal regimes that allow local community-based institutions to define, preside over and redefine the rules of resource use. Designing such legal regimes requires careful attention to the need for certainty and flexibility. Certainty is required in defining the limits of state power, and the rights, responsibilities and remedies of local groups with respect to the state and 'outsiders.' Flexibility is essential to ensure that community-based efforts reflect local conditions, cultural values and institutional choices. While important law-reform efforts are underway in many parts of the world, and some encouraging new laws have appeared in recent years, many of these still fall short both in terms of providing real protection to community-based management, and in terms providing sufficient 'legal space' within which local people can make real choices. Based upon an examination of emerging practice around the world, some general design principles are offered with respect to a number of issues, including: (i) land and resource tenure; (ii) defining the objectives of management and other planning matters; (iii) recognition of local entities and institutional structures; (iv) definition of boundaries; (v) the security of rights; (vi) enforcement; and (vii) the relationship between different government agencies.

Plenary (Murombedzi). With reference to sub-Saharan Africa, the various phases in the history of NRM are outlined. Knowledge of this history is important in order to understand the evolution of different approaches to NRM, the current status of NRM, as well as to assess the extent to which the goal of conservation by the people will be attainable. Present-day approaches to CBNRM need to be assessed against this background. Two parallel and interwoven sets of phases are recognized: (i) pre-colonial, colonial and post-colonial; and (ii) conservation against people, conservation for people, conservation with people and conservation by people. A key issue in CBNRM in Africa is tenure reform which, following political ideologies, comes in different flavors of a 'replacement' type of tenure reform. Neither of these has succeeded in attaining the stated goals, because institutional innovation would have to rely to a greater extent on lower levels of traditional hierarchy in order to be successful. A number of conditions for successful tenure reform are presented.

Case Study, Burkina Faso (Banzhaf, Drabo & Grell). The project discussed was implemented in a limited pilot area using the 'Gestion des terroir' (village lands management) approach, which is both flexible and participatory and takes account of realities in the field and various policies and strategies. Following an initial failure, the project revised its approach and operating strategy in favor of an interactive process of communication with all ethnic and subsistence groups (agro-pastoralists and pastoralists) and areas, and developed local potential for consultation among the groups. Using a local traditional organizational structure to regulate access to resources on a seasonal basis, the project facilitated the establishment of a Consultative Unit linking different groups. This provided the project recognition; and it established improved channels of communication between the project implementors, other technical and financial partners active in the area and the local people. It also provided a platform of expression, thereby successfully resolving latent conflicts between different groups. At the same time an inter-active approach for self-evaluation of the

unit allowed the project to move forward and achieve a level of vitality and thereby enhance long-term sustainability of the institution.

Case Study, The Gambia (Bojang & Reeb). Changes in traditional forest management practices of the Forest Department are described. These changes aim to address the large-scale deforestation and destruction of forest resources, and the realization of the need for community involvement in their protection and maintenance. With external support, the Forest Department introduced community forestry. The institutional changes included creation of Forest Committees at the village level that are responsible, along with the Forest Department, for developing and implementing Community Forest Management Agreements, and for taking revenue management and conflict management decisions. The latter activity involves the traditional chiefs. While technical assistance is provided by the Forest Department, communities use traditional culture and social organization as a basis for organizing members into various task forces. A key lesson is that communities should be granted permanent ownership rights over the demarcated forest resources that they protect, on the condition that resources are managed sustainably. Absence of financial incentives for undertaking these tasks instilled a sense of ownership and responsibility in the communities. Government approval of the new Gambian Forest Policy, and its consequent legislative approval, provided a much needed legal standing to this innovative approach, now being implemented countrywide.

Case Study, India no. 1 (Kant & Cooke). Based on analysis of a Joint Forest Management (JFM) program, it is argued that informal institutions need to be involved in the overall institutional design in order to achieve sustainability. Some of the factors cited as being responsible for initiating successful village level institutions include: (i) the extent of interest and involvement of the Forest Department; (ii) the degree of ethnic homogeneity of the villages; (iii) the traditional way of life of the ethnic groups and their dependence on forests; and (iv) the scarcity of forest resources. Continuation of these institutions require complementarity of informal and formal institutions and between formal institutions, whereas lack of such complementarity can create conflicts, reducing the efficiency and efficacy of the institutions. Other factors, like transparency of institutions, accountability of change agents, equitable distribution and uncertainties of the program, should be dealt with in the early stages of JFM program implementation to ensure long term sustainability.

Case Study, Nepal (Shrestha). Initially a summary of the situation of traditional and indigenous forest management systems prior to the nationalization of forests is presented. The Forest Act and associated rules and regulations are reviewed and their implications presented. While some efforts at reversing the trend of deforestation were made through participatory land development and plantation programs, questions were raised related to the equity, accountability and sustainability of these institutional arrangements. The Master Plan for the forestry sector gave directions to revise the Forest Act and its related legislation in favor of user group management, not only of the forests but also for general development of the villages. This process provided legitimacy to the changes brought about in the forestry sector. Issues that need clarification in order to achieve long term success of this approach include: (i) clear identification of users through forest boundary demarcation; (ii) effective vertical and horizontal linkages to strengthen local institutions; and (iii) further dissemination of information about forest policy changes, roles and rights of local communities.

Case Study, Thailand (Jantakad & Carson). Following a reclassification of highlands, conflicts arose over the use of land, resource boundaries between villages and sub-districts and extraction of forest produce, leading to large scale illegal trade. The Forestry Sector Master Plan, which focused on increasing peoples' participation in forest management, changed things. The community-based land-use planning and local watershed management is described. This approach is a 'participatory development approach' involving both local people and the public sector. The key factor is strengthening the capabilities of communities to manage their own affairs. In this respect the Pang Ma Pha Hilltribe Network

Organization, where neighboring villages came together to develop and agree on guidelines to harvest and manage bamboo shoots for sale, provide a forum for exchange of knowledge and experiences, and for finding solutions to problems encountered, was of key importance. The network is growing in geographic coverage, and issues like land use and boundary conflicts, forest encroachment and animal raising are being included. Activities include providing technical expertise to villagers, help framing rules and regulations, and identification of forest areas in each village where forest products could be collected; all with the aim of developing a sustainable forest product collection system. With recognition from, in particular, the regional public sector, the network is now representing local people in public sector coordination of local conservation and development activities. The success has led to its replication in other areas.

Annex 3: Regional Action Plans

The Regional Working Groups prepared Regional Action Plans. These covered the following areas: (i) principal resource types; (ii) special regional context and characteristics; (iii) major messages; (iv) key policy issues; (v) strategies; (vi) actions; and (viii) recommendations. Salient aspects of the Regional Action Plans are presented below, organized into the various areas they were organized in.

Principal Resource Types

The Regional Working Groups were asked to identify the principal resource types in their region. The resource types are (listed in the order given):

- *East Asia*. [no information provided];
- *Europe, Central Asia and the Middle East*. [no information provided];
- *Latin America and the Caribbean*. Forests, fisheries, watersheds, coastal areas, protected areas;
- *South Asia*. Forests, soils, water;
- *Sub-Saharan Africa (Anglophone)*. Wildlife, forests/woodlands, marine and freshwater fisheries, soils, land, water, minerals, communities, rangeland; and
- *Sub-Saharan Africa (Francophone)*. (A) West Africa (Sudano-Sahelian and forested regions): agriculture, pastoralism, forestry, mining; and (B) Madagascar: agriculture, forestry, fishing, ecotourism, mining.

Special Regional Context and Characteristics

The Regional Working Groups were asked to identify special regional contexts and characteristics in their region. The regional contexts and characteristics are (listed in the order given):

- *East Asia*. CBNRM requires the participation of all stakeholders in the development of policy and the empowerment of communities to act as collective managers of their natural resources for sustainable development, in partnership with the support of various stakeholders in and outside of their communities [Comment: the group prepared this response under the heading: 'General statement'];
- *Europe, Central Asia and the Middle East*. (i) Economic and political transition; (ii) limited and highly degraded natural resources; (iii) immature environmental policies, institutions and legislation; and (iv) limited public and local communities' involvement in NRM (policy and decision-making process). Nevertheless, increasing democratization leads to favorable conditions for local initiatives and community involvement, and empowerment of NGOs;
- *Latin America and the Caribbean*. [no information provided];
- *South Asia*. (i) High population density; (ii) highly degraded natural resources; (iii) unstable political environment; (iv) weak democratic institutions; and (v) non-complementary sectoral policies;
- *Sub-Saharan Africa (Anglophone)*. [no information provided]; and
- *Sub-Saharan Africa (Francophone)*. (A) West Africa: (i) desertification causing migrations from the Sudano-Sahelian zones to the Atlantic Coast; and (ii) economic integration in Western Africa; and (B) Madagascar: (i) member of the Indian Ocean Commission; and (ii) key geographic position and unique global biodiversity.

Major Messages

The Regional Working Groups were asked to identify the major messages they wanted to give the CBNRM community in terms of how they assessed the situation in their region. The major messages are (listed in the order given):

- *East Asia.* (i) A community of interest as management unit that is focused geographically, but not constrained geographically; (ii) this community of interest must be developed as an integrated management unit through consensus-building and other democratic processes, primarily for the benefit of the local common good; (iii) essential to build and strengthen vertical and horizontal linkages with strong government commitment; (iv) CBNRM necessitates a process of adaptive learning by multiple stakeholders that involves development of a contextual understanding of socio-economic and biophysical conditions that govern management of natural resources; and (v) ownership and control of natural resources should be transferred to local levels via a facilitating and responsive process;
- *Europe, Central Asia and the Middle East.* (i) Further democratization and decentralization is a necessary precondition for CBNRM; (ii) CBNRM requires appropriate institutions and clearly defined property rights in order to be effective; (iii) effective working partnerships need to be developed between communities and national and local governments in the management of natural resources; and (iv) increase understanding of communities and governments of CBNRM for the sustainable use of natural resources;
- *Latin America and the Caribbean.* (i) Design strategies to strengthen communities in CBNRM; (ii) the State and the entrepreneurial sector to recognize the protagonistic role of communities for NRM; (iii) the participation of all stakeholders is a key issue in successful CBNRM initiatives; and (iv) promote a policy and legal framework for CBNRM, in which the broad and organized participation of all involved sectors is assured;
- *South Asia.* (i) CBNRM involves more than just incentives that emphasize individual and material aspects. It also depends on shared values (democratic, cultural, ecological, economic and social) and commitment to equity issues (including age, caste, class and gender); (ii) natural resources are complex systems. Simple demand-driven approaches are not tenable. There is a role for external catalysts to raise awareness and empower communities to prioritize NRM activities and demand their rights to manage local resources; and (iii) CBNRM should build upon indigenous knowledge and institutions. It should also add value to them and seek to mainstream them;
- *Sub-Saharan Africa (Anglophone).* CBNRM is critically important for achieving sustainable rural development and conservation of biodiversity; and
- *Sub-Saharan Africa (Francophone).* (i) Improving CBNRM requires an effective decentralization of decision-making powers; (ii) the success of CBNRM is linked to the profit made by the majority of the actors in the community; and (iii) CBNRM requires an appropriate institutional, legal and financial framework.

Key Policy Issues

The Regional Working Groups were asked to identify the key policy issues they wanted to give to the CBNRM community in terms of how they assessed the situation in their region. The key policy issues are (listed in the order given):

- *East Asia.* (i) Clear delineation of responsibilities, rights and accountability at all governance levels with mechanisms for flexible adaptation; and (ii) recognition of rights and responsibilities through a democratic process;
- *Europe, Central Asia and the Middle East.* (i) Recognition of the rights of people to utilize natural resources for their livelihood in the context of environmental conservation

and sustainable development; (ii) empowerment of individuals and communities to play an active role in policy and decision-making and in the management of natural resources; (iii) increase government transparency and accountability to the public; (iv) develop and strengthen the institutional framework for CBNRM, including public, civil and private sectors; (v) develop and upgrade legislation to provide a framework for community-based actions, including freedom of information and property rights; and (vi) increase awareness of the concept, principles and practice of CBNRM at the level of both policy-makers and the public;

- *Latin America and the Caribbean.* (i) Strengthen the intermediate level organizations to act as promoters of CBNRM; (ii) clarify the multiple relationships between the state, the entrepreneurial sector and the community sector; (iii) facilitation and education at the community level; (iv) resolve fundamental contradictions between current policies in relation to NRM; and (v) increase information (access, analysis and quality) in order to make better decisions at the policy level;
- *South Asia.* (i) CBNRM requires an initial investment in building social capital that addresses, for example, gender and equity. This requires appropriate attention to social catalyzing, organizing and mobilization aspects; (ii) policies inevitably evolve, however, policy formulation and implementation must build trust by involving stakeholders; (iii) need over-arching policy framework that integrates sectoral concerns and incorporates approaches to community management and development; and (iv) need to balance environmental protection goals with economic development and sustainable resource utilization;
- *Sub-Saharan Africa (Anglophone).* (i) Tenure; (ii) enabling framework (institutional, legal and policy); (iii) human capital development; (iv) financing; and (v) sustaining ecosystems; and
- *Sub-Saharan Africa (Francophone).* (i) Reconcile conservation with the development of natural resources; (ii) ensure that the present decentralization process favors CBNRM; and (iii) ensure an institutional, judicial, legislative and regulatory framework which is appropriate for CBNRM.

Strategies

The Regional Working Groups were asked to identify strategies that addressed the key policy issues identified earlier. The strategies are (listed in the order given):

- *East Asia.* (i) Development of new awareness, attitudes, trust and skills of all stakeholders; (ii) creation of fora to address different problem domains and to facilitate adaptive learning; (iii) devolve natural resource ownership and control to local governance; (iv) develop collaborative approaches to resource planning and management; and (v) build capacity of local resources management institutions;
- *Europe, Central Asia and the Middle East.* (A) Recognizing the Rights of People: (i) develop and upgrade legislation to provide a framework for community-based actions, including freedom of information and property rights; (ii) review and amend legislation to recognize the rights of resource user groups and access to information; and (iii) develop a secure land tenure system; (B) Transparency and Accountability: (i) review and professionalize public sector organization to be more receptive to CBNRM and to favor partnerships with communities; (ii) increase media coverage and develop 'open meeting' laws; and (iii) capacity-building for government and community institutions; and (C) Awareness Raising: (i) inform and educate the civil population of their rights and possibilities for CBNRM; and (ii) develop national awareness programs on issues of sustainable natural resource use;
- *Latin America and the Caribbean.* (A) Enabling Policy and Institutional Environment: (i) the policies and legal framework must be developed through participatory means; (ii) communities need training, information and knowledge; and (ii) political and institutional

reform preconditions for CBNRM; (B) Organizing Effective Community-Based Groups: (i) individual communities should coordinate work on democratic forms of CBNRM at the local level; (ii) organizations that include representation of the state, the commercial private sector, NGOs and communities are needed; (iii) training public sector agencies for CBNRM; (iv) educational programs that develop democratic organizations and actions at the community CBNRM level; and (v) better integration of sectoral policies to facilitate CBNRM; and (C) Effective Operational Linkages: (i) decentralization; (ii) create a common arena for negotiation; (iii) build consensus regarding general policies between different levels and sectors; and (iv) governments should create partnerships to promote local organization, implement and apply policies, and monitor the results and impacts of policies;

- *South Asia*. (i) Training in strengthening the capacity of agencies (including donors, governments and NGOs) for empowerment; (ii) there needs to be a recognition that communities have latent capacity which is best strengthened through the implementation of CBNRM activities (learning by doing); (iii) this requires identifying, recognizing and strengthening local cultural values and institutions; (iv) policies must be simple and made transparent through information dissemination campaigns; (v) identify common CBNRM principles and apply them to different sectors, for example, irrigation, forestry, soil and water conservation; and (vi) financial and economic incentives need to be used to balance environmental protection goals with resource utilization needs;
- *Sub-Saharan Africa (Anglophone)*. (A) Tenure: (i) acquire local definitions of community, tenure and user rights, with special attention to women's rights; (ii) identify constraints and conflicts within and across communities; (iii) recognize mobile resources and tenurial issues related to these; and (iv) define rights; (B) Enabling Framework: (i) aim towards a devolutionary process; (ii) aim towards self-sustaining financial and social systems; (iii) promote and reinforce other forms of resource valuation; and (iv) institutionalize conflict management; (C) Human Capital Development: (i) strengthen local authorities and rights holders; (ii) provide opportunities to use training and decision-making powers; (iii) special emphasis on marginalized groups, especially women; (iv) legal recognition for local management authorities (committees); (v) integration of indigenous knowledge; and (vi) facilitation of exchange; (D) Financing: (i) attract private sector investment that promotes CBNRM; (ii) targeted credit reforms, tax and fiscal incentives; (iii) transparent processes for concessions and tendering; (iv) joint venture frameworks, promote small enterprises; (v) clear equity structures; (vi) eliminate perverse incentives against CBNRM; (vii) equitable and transparent mechanisms for distributions of benefits; and (viii) define innovative and creative financing mechanisms; and (E) Sustaining Ecosystems: (i) adoption of adaptive management strategies; (ii) integrate indigenous knowledge of ecosystems with other knowledge systems; (iii) cross-sectoral and trans-boundary approaches; (iv) participatory planning; and (v) promotion of non-exploitative approaches, such as eco-tourism; and
- *Sub-Saharan Africa (Francophone)*. (A) Conservation and Development: (i) income-generating activities; (ii) policy incentives that favor CBNRM; (iii) value natural resources; and (iv) integrate development and the environment; (B) Decentralization: (i) identification of stakeholders: establish roles, responsibilities and rights; (ii) strengthen capacities and recognition of local knowledge; and (iii) financial mechanisms at the local level; and (C) Legislative: (i) participatory approach; (ii) effective demand by the populations; and (iii) institutional arrangements for dialogue between stakeholders.

Actions

The Regional Working Groups were asked to identify actions, directed at the workshop participants, and to be implemented upon returning home. The actions are (listed in the order given):

- *East Asia.* (i) Appropriate (culturally appropriate and accessible) training for all stakeholders, including policy makers, implementors and community members, especially marginalized groups; (ii) political commitment to support CBNRM; and (iii) exchange of information and experiences (not a one-way flow), including fora for exchange between stakeholders to determine information needs, meet those needs, analyze and interpret information and make appropriate adjustments to management strategies;
- *Europe, Central Asia and the Middle East.* (i) Lobby decision-makers for legislative and institutional changes; (ii) organize national/sub-national workshops on CBNRM; (iii) disseminate workshop lessons and materials in respective countries through media and networking; and (iv) initiate or develop community-based groups in own neighborhood;
- *Latin America and the Caribbean.* (i) Strengthen technical and organizational capacity at the local level; (ii) improve flow of technical information on the state of the resources, management tools, and tendencies of the resource quality to local actors; (iii) contribute to the creation of fora for dialogue – both policy development and monitoring of progress – that include all levels of actors; and (iv) contribute to capacity-building of actors who will participate in the above fora;
- *South Asia.* (i) Reading workshop Plenaries and Case Studies; (ii) organize a follow-up regional workshop to widen awareness and broaden the support base for design and implementation of CBNRM policies and programs; and (iii) follow-up with recommendations to the World Bank;
- *Sub-Saharan Africa (Anglophone).* [no information provided]; and
- *Sub-Saharan Africa (Francophone).* (i) Raise awareness of decision-makers; (ii) facilitate exchange of experiences at the sub-regional, regional, and international levels; and (iii) information, education and communication campaigns.

Recommendations

The Regional Working Groups were asked to identify recommendations directed at: (i) governments and other public agencies; and (ii) the World Bank and other donors. The recommendations are (listed in the order given):

- *East Asia.* (A) Governments and Other Public Agencies: (i) funding flows to be flexible, beginning small and increasing; (ii) focus on creating an environment for collaborative processes and not on ‘creating structures;’ (iii) ensure that institutional structures and collaborations are not vulnerable to co-optation and bureaucratization; and (iv) optimize resources outside of governments and communities, for example, media and research institutions; and (B) World Bank and Other Donors: (i) reflect on the role of donor agencies in supporting CBNRM; (ii) intra-agency coordination; and (iii) conduct regional follow-up workshops;
- *Europe, Central Asia and the Middle East.* (A) Governments and Other Public Agencies: (i) enact legislative changes and endorse appropriate conventions; (ii) integrate CBNRM into government policies and practices; and (iii) support public campaigns in CBNRM; and (B) World Bank and Other Donors: (i) provide technical and financial support for CBNRM initiatives, including training, monitoring, research and implementation; (ii) support pilot projects in CBNRM; (iii) make CBNRM a priority in project portfolios; and (iv) facilitate policy dialogue, information exchange and networking;
- *Latin America and the Caribbean.* (A) Governments and Other Public Agencies: (i) channel financial and technical resources to communities in a decentralized manner, giving control of decision-making and money to local levels; (ii) review the policy and legal framework, and redesign policies, donor and World Bank programs in light of inputs from all levels of stakeholders; and (iii) governments and donor agencies should support programs and projects over the long term that respond to the needs and interests of communities; and (B) World Bank and Other Donors: (i) World Bank should

strengthen institutions of investigation, and learn to generate information needed by communities and other actors; (ii) World Bank should strengthen organizations that provide training and technical assistance to communities and stakeholders, and those that do research; (iii) World Bank and other donors should create a database accessible to all levels of organizations about their programs; (iv) World Bank and other donors should help strengthen the social science orientation of government agencies; and (v) World Bank should support locally generated initiatives and proposals for CBNRM, not just government ones.

- *South Asia.* (A) Governments and Other Public Agencies: (i) governments have a responsibility to promote transparent and participatory policy development and project formulation; (ii) consultation with stakeholders should occur at multiple levels; (iii) there should be sufficient provision in CBNRM to strengthen social capital; and (iv) develop appropriate mechanisms (including working groups at multiple levels) and incentives (including disbursement rules) to encourage participatory monitoring; and (B) World Bank and Other Donors: (i) incorporate CBNRM in Country Assistance Strategies (not just a rural development focus); (ii) conditionalities for project implementation must be consistent with CBNRM strategies; (iii) project formulation and sector work should be participatory and involve stakeholders through multi-level consultation; (iv) disbursement of project funds tied to adequate participatory monitoring of social, environment and economic impacts; (v) promote cross-learning between donors, governments and the World Bank; and (vi) implement the World Bank's existing decentralized fiscal arrangements and procedures that give fiscal authority to communities and allow for community cost-sharing for NRM activities;
- *Sub-Saharan Africa (Anglophone).* (A) Governments and Other Public Agencies must: (i) demonstrate genuine and long-term commitment to CBNRM in terms of financing, greater allocation of public resources and parity with agriculture; (ii) create and implement an enabling policy, institutional, and legal environment that aims at a process of devolving rights to communities and local governments; (iii) define and assign clear and unambiguous rights to communities; (iv) recognize that CBNRM requires working on several levels in a global context; (v) invest substantially in human capital development; and (vi) improve coordination and collaborative strategies both inter- and intra-regionally, and (B) World Bank and Other Donors should: (i) demonstrate commitment to the approach; (ii) lengthen the incubation period for CBNRM activities; (iii) assign greater proportion of resources to these activities, including training; (iv) re-examine effectiveness and current policies; (v) re-examine regional and national priorities, and ensure demand-driven responses; (vi) demonstrate greater flexibility, including support to the private sector; (vii) encourage national governments to commit to CBNRM; (viii) improve coordination and harmonization; and (ix) set up performance indicators to review the World Bank's response to the workshop; and
- *Sub-Saharan Africa (Francophone).* (A) Governments and Other Public Agencies: take effective measures to ensure CBNRM; and (B) World Bank and Other Donors: (i) ensure synergy and coherence in donors' activities, (ii) flexibility in the identification and duration of CBNRM projects; and (iii) help governments to give effective responsibility for NRM to communities.