Community-Based Natural Resource Management:

A Bird's Eye View

(An Internship Report)

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For the Community-Based Natural Resource Management Program Initiative at the International Development Research Centre (IDRC)

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Foreword

An inquisitive mind can travel a long way. When Min-Dong Paul Lee joined IDRC as the 2002 intern of the Community-Based Natural Resources Management (CBNRM) program initiative, development research was very much a new field for him. From January to August 2002 Paul went on journey to find out more about this field, in particular delving into the theory and practice of community-based natural resource management.

Paul synthesizes the findings, thoughts and experiences of his journey –covering reading, conversing, and travelling to China- in this report. As such, the report is a personal account of the meaning of community-based natural resource management; of where it came from, of what it looks like in the field right now, of what it could be.

For the CBNRM program initiative team it has been a great pleasure having worked with Paul as intern.

We hope that readers enjoy his inquiry into CBNRM.

Ronnie Vernooy
September 2002
Ottawa

Preface

Community-Based Natural Resource Management (CBNRM) is like a lush and thriving forest. Like a forest, it did not just appear out of the blue. It took more than twenty years for CBNRM to mature and gain recognition. The earliest ideas sprouted in the late 60s, but it had to weather stormy arguments and trials for many years. After a long period of trials and consistent replanting of the idea by some, it finally matured as an established approach in the field of natural resource management.

Like a natural forest, CBNRM is very rich and diverse in its composition. Prior to CBNRM's wider acceptance, there had been a number of separate intellectual developments and innovations that paved the way for CBNRM. In that sense, CBNRM is not a wholly new approach, but an ingenious way of linking those divergent theoretical and empirical developments. Bridging ideas and creating coherence is precisely what CNBRM is good at. It creates a space where several different disciplines (from both social science and natural science) and development goals can come together and work in a mutually supportive way.

Secondly, like a forest, diversity and interdependence between all the elements is very important for healthy growth in CBNRM. There is no blueprint or a single universal goal in CBNRM. It can employ any number of different approaches to achieve multiple goals (e.g. sustainability, social justice, poverty alleviation, environmental health). However, these multiple elements do not compete with one another, but work in conjunction for the betterment of the community involved.

Finally, like a forest, CBNRM is dynamic and very adaptable. The CBNRM approach can be applied to a wide range of different resource types (forest, fisheries, watershed) and different environments (coastal, mountainous, arid). This also means that there are a number of different variations of CBNRM depending on the resource types and regions. Thus, CBNRM does not represent a single NRM method that can be replicated everywhere, but rather a mutable approach with many faces. Like a forest, it never stays totally static, but is always growing and adapting to the surrounding conditions.

Since CBNRM is such a robust mix of divergent and evolving approaches and goals, it is almost meaningless to write something and say, "this is CBNRM." In fact, it is even necessary to guard against such efforts to limit CBNRM's horizon by defining its parameters. This paper does not try to define or explain CBNRM in such manner. Rather, it is trying to take the readers on a hot-air-balloon ride and help them get a bird's eye view of the CBNRM forest. Recently, CBNRM has not suffered from lack of ideas, experiences or theories. They have been presented in great abundance, and amassed to create a huge forest of knowledge. A new comer to the forest can easily be baffled and get lost. The primary purpose of this paper is to provide some assistance to the new comers of the forest, so that they will not get completely lost in the variety of ideas, methods and tools. Secondly, this paper will also try to identify some underlying principles in CBNRM that remain relatively unchanged in the numerous varieties of CBNRM approaches. The field of CBNRM has grown to such an extent that any novice practitioner will have a fair amount of difficulty in acquiring adequate knowledge of the field. The urgency of the task at hand makes it even more difficult for practitioners to invest sufficient time to dig up case studies or theoretical papers and study them. This

paper cannot fully engage all the theoretical advances in CBNRM, but will try to identify at least the major ideas and introduce them, hoping that it will help new comers find their way. As for the main audience of this paper, I have the members of Farmer-Centred Research Network in China (FCRNC)[1] in mind. However, I also hope that any other new comer to the CBNRM forest will benefit from this brief publication.

In organizing the ideas, I used the 5 of the six basic questions Ronnie Vernooy has developed for the course on Participatory Monitoring and Evaluation (PM&E):

1. Why? (History of CBNRM)
2. For Whom? (Beneficiaries of CBNRM)
3. What? (Recurring Patterns in CBNRM)
4. Who? (Stakeholders of CBNRM)
5. How? (Good Practice in CBNRM)

Some questions will be used a bit differently to fit the purpose of this paper, but the basic structure of this paper will follow Ronnie's magic wheel of PM&E.

This paper is partly based on the experiences shared by the members of the Farmer-Centred Research Network in China. I will not be able to mention all of them by name, but I would like to thank all the members of the network and the secretariat team at the College of Rural Development (Beijing, China) for their hospitality and generous sharing of knowledge. I also want to thank the staff at the IDRC library who helped me find many hard-to-find documents and internet resources. Finally, I want to thank the Community-Based Natural Resource Management team at IDRC (International Development Research Centre) for their support and wisdom. I especially want to thank CBNRM's team leader, Stephen Tyler, for his consistent encouragements, and my mentor, Ronnie Vernooy, for his dedicated guidance throughout my internship at IDRC. Although I am heavily indebted to all of them in terms of knowledge, the views and errors presented in this paper are solely my own responsibility.

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[1] FCRNC is an informal research network in China consisting of national, provincial and local research institutes that promote and implement a community-based natural resource management approach. It is funded by the International Development Research Centre (IDRC) and supported by the Ford Foundation. During my internship at IDRC, I had an opportunity to visit some members of the network. This paper is based on my reflections and insights I gained during the trip.

Chapter 1

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Why?

(History of CBNRM)

Twenty years ago, most policy-makers and practitioners would have regarded Community-Based Natural Resource Management as an oxymoron. – Elinor Ostrom[2]

Today, the CBNRM approach is widely accepted and practised throughout the world. Many of the major international development organizations like the World Bank, USAID and IDRC adopted CBNRM as one of their core natural resource management (NRM) strategies. In several African countries such as Botswana, Burkina Faso and Mali, CBNRM has become the central theme of national policies on natural resource management. Even in the academic world, CBNRM is beginning to earn the recognition as "one of the most significant developments" in natural resource management thinking and practice.[3]

This widespread enthusiasm over CBNRM, however, is a fairly recent phenomenon. Just over three decades ago the majority of the academics and development practitioners firmly rejected the idea of *community-based* natural resource management.[4] They argued that local people could not be trusted with natural resources, because the self-interested local community members would want to overexploit any common resource to their own benefit, which would eventually lead to irreversible destruction of the resource base. This argument stems from two underlying popular assumptions at the time: (1) community-based resource management means allowing open access to local resources, and (2) individuals are not interested in promoting public good, but only in pursuing one's own gain (Adam Smith's theory of invisible hand).

This so-called "tragedy of the commons" argument persuaded many policy-makers to favour policies that promote either strong central management or complete privatization

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[2] Plenary session presentation at *The International Workshop on CBNRM, The World Bank, Washington D.C., 10-14 May, 1998.*

[3] J.P. Brosius and others, "Representing Communities: Histories and Politics of Community-Based Natural Resource Management," in *Society and Natural Resources*, Vol. 11, No. 2 (1998): 157-168.

[4] See *Cornell International Institute for Food, Agriculture and Development Annual Report*, 1999-2000, p. 104. Also see, p. 7.

of the resources. Local resource management strategies, which allegedly would further degrade natural resources, were rejected outright and only the other options were considered and implemented. Central management and privatization strategies continued to dominate for more than a decade. However, these strategies, which often had good intentions, did not produce expected results. The fragile environment of the earth became further degraded, and the abusive use of natural resources continued to escalate. The questions then are, why did these well-intentioned programs and expensive projects generate such poor results? What are the weaknesses of centrally managed NRM strategies? What went wrong with employing market mechanisms in NRM?

Problems with Central Management Strategies

1. *Unresponsiveness*: Centralized state planning means that most of the decisions that affect the lives of local people are made far away from the actual scene. Central planners are in no position to take local needs into consideration when they make decisions on behalf of the people. Moreover, it is very difficult to enforce the rules effectively from a distance. Therefore, local residents generally become more and more apathetic toward the policies and regulations, and simply behave as they see fit. For instance, in China, most of the farmers do not like the national policy of reducing farmlands and replacing them with forests. They do not want to give up their farmlands even if the government is willing to pay a good price for them, because reducing farmland was not what they decided on.

2. *Unbalanced Investment (Social inequity)*: In most developing countries, effective NRM is not the most important item on the government's list of development priorities. For instance, in China, the central government's development strategy clearly favoured urban areas for a long time. Most of the central government's attention and resources were concentrated on developing urban centres. While the urban coastal areas in the east were rapidly developing, rural areas in inner and western China were left far behind. Consequently, the income gap between cities and rural areas sharply increased, and the situation of poverty in rural areas became even worse over the years. The rural population was deprived of not only economic capital, but also human, social, political and cultural capital. Some rural communities do not even have basic necessities like clean water and food. In spite of such tragic situation, centrally managed strategies still focus mostly on preventing the local population from using the local natural resources without investing in improving their livelihoods.

3. *Destruction of Traditional NRM*: In rural communities, the environment is directly linked to people's livelihoods. People often depend on the environment to sustain their livelihood. Therefore, many communities have traditional mechanisms of managing and using their natural resources. However, the central management strategy takes away their long-held rights to protect and use the resources, and places them in the hands of distant bureaucrats. Since the locals then have no rights or ownership over the resources, they have no incentive to care for the environment. One villager in Ningxia province said that, for many years, people considered that the government-owned natural resources

are available on first-come-first-served basis. So, they fed their sheep competitively, accelerating environmental degradation in the region. Interestingly, open access feeling, which is exactly what policy makers wanted to prevent through central management, ended up being its final outcome.

4. *Inflexibility*: The strategy of focusing on central planning and management makes the already oversized bureaucracy even more cumbersome. Decision making processes take more and more time, and adaptation to changing local situations is almost impossible.

Problems with Privatization Strategy

1. *Reinforcement of Self-interest Behaviour*: The argument behind the promotion of privatization of natural resources is that if individuals understand and bear the cost of extraction of natural resources, they would behave more responsibly. What the proponents of privatization tend to ignore is that private enterprises are also self-interest groups whose primary objective is maximization of profit. Common interest or environmental ethics are not inherent characteristics of the market system. Consequently, profit is sought after at the expense of natural resources and environment. In one mountain village in central China, the privatization of a local coal mine quickly led to degradation of the surrounding environment. Mining companies came and built roads through forests without any environmental assessment, and began mining in an uncontrolled manner. Within a decade, the underground aquifers on the mountain were drained and sinkholes began to appear everywhere. A few years ago the government intervened and restricted the mining activities, but the damage was already done.

2. *Over-reliance on Technology*: Some modernist proponents believe that the free competitive market place is the most efficient engine of resource conservation because it is the most explosive engine for intellectual and technological advance. Since technological advance depends heavily on the competitive free exchange of ideas, entrepreneurial activity, investments in capital and labour, and a profit mechanism,[5] NRM must also be left to the market to steer its course. As most are well aware, the market will only move toward where there is least friction. Except in some rare and creative cases like ecotourism, the market will not favour "conservation." If there is no market incentive, technological development will obviously not follow. Even if there is enough market incentive, technology will not solve all problems.

The tide began to turn around the mid-80s when people began to see some examples of clear failures of central management and privatization schemes. Some began to analyze the reasons behind the failed efforts, and re-evaluate their assumptions. What many people realized was that the most critical reason for failed efforts was the fact that local people are totally left out of the picture. The local communities' experience and potential in NRM were left almost completely untapped.

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[5] Jerry Taylor, "The Growing Abundance of Natural Resources" in David Boaz and Edward H. Crane eds., *Market Liberalism: A Paradigm for 21st Century*, (Washington: Cato Institute, 1993).

In the late 80s and 90s, we saw many development workers stepping back a few decades and re-considering traditional models of local resource management. Traditional NRM approaches are also ridden with problems like inequity and inefficiency. However, many development practitioners in the 80s thought that it was worth re-considering simply because the distant, central management approach had been so utterly inadequate. In searching for new options, they thought of local communities as the key. The question was how to maximize the local potential for effective management of natural resources without triggering negative side effects. The outcome of this brainstorming was the early form of CBNRM.
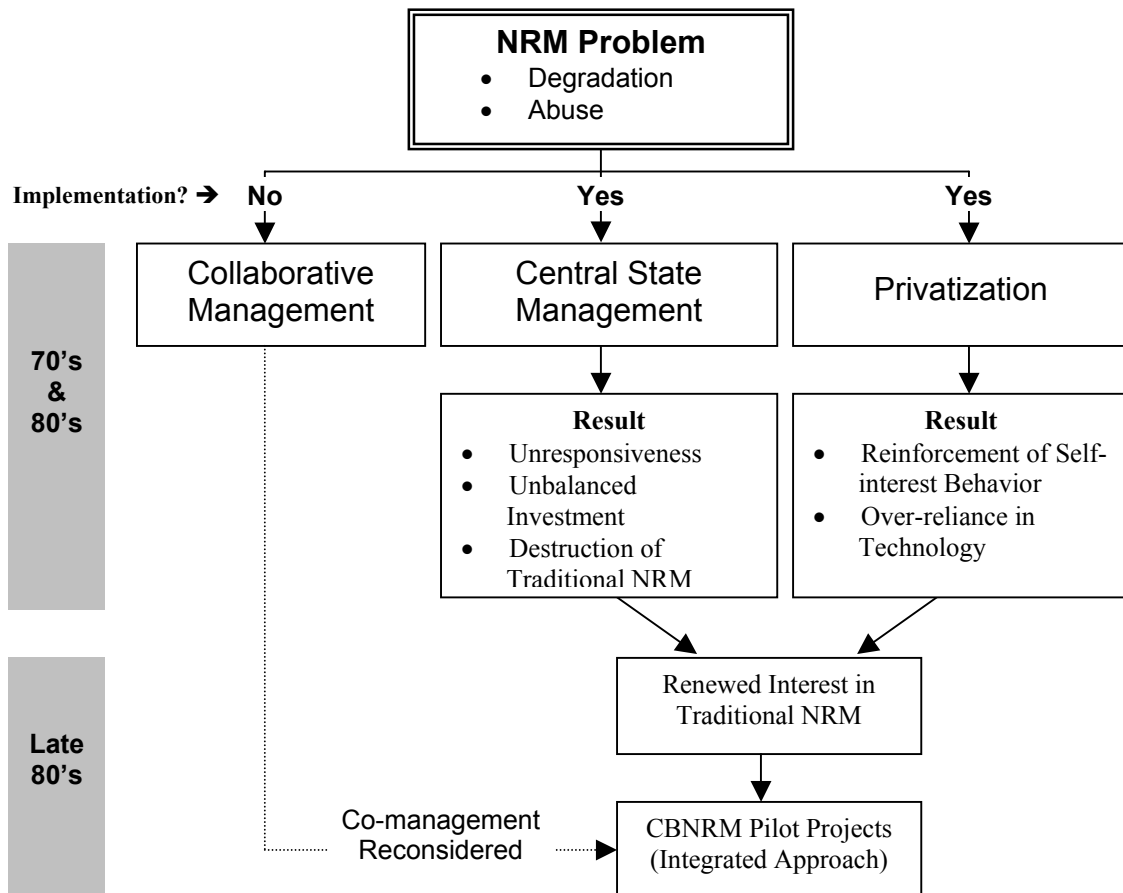

Diagram 1. History of CBNRM's Development

The CBNRM approach has certainly overcome some of the weaknesses of previous approaches. It begins with local communities and does not have a naïve attitude toward the market. It no longer treats the rural population as ignorant and self-interested individuals, but respects them as potential partners in effective NRM. However, that does not guarantee a successful outcome for every CBNRM plan implemented. As Melissa Leach and her colleagues write, "for all the emphasis given to community-based approaches within recent environment and development policy debates, results in practice have often been disappointing both from the perspectives of implementing agencies, and of certain sections of the 'communities' concerned."[6]

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[6] Melissa Leach, Robin Mearns and Ian Scoones, "Challenges to Community-Based Sustainable Development: Dynamics, Entitlement, Institutions," in *IDS Bulletin*, Vol. 28, No. 4 (1997): 4.

In a way, disappointments and mistakes are inevitable, because CBNRM is still a fairly new NRM approach. As any first generation of innovations, it is bound to experience setbacks and corrections. The good news is that most people who practice CBNRM are learning from their mistakes, and CBNRM itself is evolving through the process. CBNRM is certainly not free of loopholes or dangers, but many development practitioners today can clearly see that the added value and potential of CBNRM is worth the risk. There are many reasons why a number of development organizations and governments choose CBNRM. These are some of the main reasons:

1. It is an *organic* approach, because it is capable of learning from experience and correcting itself. It is not a perfect method, but a learning process that is constantly evolving.
2. It is *resilient* and can easily adapt to different cultural, social and political contexts.
3. It is an *integrated* approach that enables development workers to pursue several development goals (e.g., conservation, social justice and poverty alleviation) all at once. It also brings many different disciplines together, and benefits from a rich pool of knowledge.
4. It is an *empowering* approach. It enables the local people to take their social and economic destinies into their own hands.

Chapter 2

For Whom?

(Beneficiaries of CBNRM)

A community-based approach recognizes and reinforces the stakeholder role of people living in, on and around vulnerable natural resources, both for these people's sake and for that of future generations, for people living in the immediate area but also in the rest of the country and the rest of the world. – Norman Uphoff[7]

For whom is CBNRM implemented? The answer to this question may seem very simple. A vast majority of CBNRM's proponents would say that the local community must be the primary beneficiary of CBNRM. However, in practice, practitioners find that the answer is far more complicated than that. The local community is almost never the sole stakeholder in the natural resource in question. There are a number of divergent interests and stakeholders represented in CBNRM and they often compete for more attention. Consequently, CBNRM practitioners often find themselves taking up facilitators' role between different stakeholders.

The question is, then, if more attention needs to be given to the local community in the negotiation process. Should there be more immediate beneficiaries of CBNRM among all the stakeholders? This paper will argue that there should be more attention given to the local community's interest in the facilitative process. The local community's interest is important because,

(1)   CBNRM cannot be effectively carried out without the local community's support and;

(2)   The local community members often do not have the capacity to effectively bargain with governments or private enterprises on their own.

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[7] Norman Uphoff, *Community-Based Natural Resource Management: Connecting Micro and Macro Processes, and People with their Environments*, Plenary Presentation, International CBNRM Workshop, Washington D.C., 10-14 May, 1998, p. 4.

It is not to say that other stakeholders' interests are less important. As Norman Uphoff suggests, in a way, the whole world and even future generations are legitimate stakeholders in any of the earth's natural resources. However, the benefits of CBNRM should never bypass the local communities that live close to the natural resources, but should be channelled through them to the wider and distant communities as the following diagram illustrates. If the local communities cannot benefit from NRM, then they simply will not participate, as was the case in many centrally managed NRM programs.
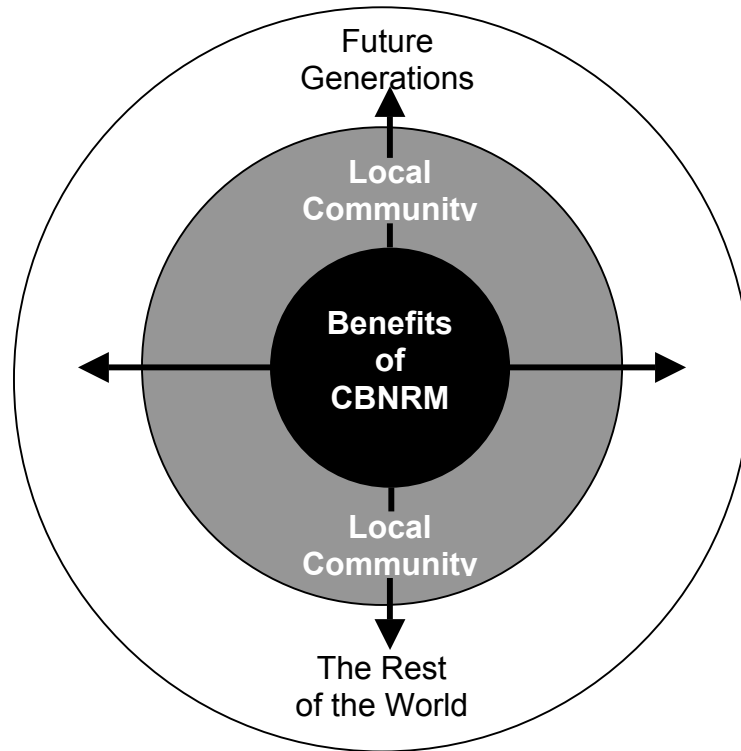
Future
Generations

Local
Community

Benefits
of
CBNRM

Local
Community

The Rest
of the World

Diagram 2. Benefits of CBNRM

A. NRM *with* Local Communities

In the past, governments and large NGOs approached NRM with a conservation focus. "Conservation" is indeed a noble objective, and in the long run, local communities probably will benefit from such efforts. However, many local communities face more immediate dilemmas like poverty, social injustice and lack of adequate infrastructure. They often depend on natural resources to meet their daily needs. Therefore, conservation in itself does not provide a strong incentive to the local communities to care for their natural resources. The local community members need more tangible benefits that will help make their livelihoods more sustainable. Unless they can clearly see the benefits from participating in NRM efforts, they will most likely not cooperate nor participate. If they are forced to participate, they will feel strong resentment and eventually become completely apathetic toward NRM.

In one small village in Guizhou, China, the government decided to reforest one section of the village. This was a part of the province-wide strategy of preventing further soil

erosion. In the last 30 years, the province of Guizhou has experienced severe soil erosion from over-farming resulting in 13% rocky land. There is urgency from the province's perspective to reduce farmland and plant more trees. The newly planted trees in the village clearly meet the provincial objective of providing protection from further soil erosion. However, the local farmers are very dissatisfied with the forest, because it takes up precious farming space. They say that the trees should have been planted elsewhere and the government should have chosen trees that the community can benefit from. The farmers consider the forest as something that serves the interests of outsiders rather than the interests of communities. Since they feel strong resentment towards the forest, none of them are willing to manage and care for the forest.

For the local population, their natural environment is closely linked with their livelihood. Frequently, the environmental health is a key to their survival. Therefore, they have a naturally vested interest in maintaining the health of their surrounding environment. From the local perspective, conservation and sustainable livelihoods are not two separate issues, but integrated. They are like two sides of a coin. The Integrated Rural Development Center (IRDC) team in Guizhou, which has practiced CBNRM for many years, strongly believes in this integration of the two development goals. They say that good CBNRM is not just about effective natural resource management, but also about local livelihood improvement. They strongly believe that only when conservation and livelihood improvement goals are integrated, the local communities will participate enthusiastically.

An effective CBNRM approach always keeps the community's needs and potential in focus. It does not try to separate and compartmentalize the different development goals, but recognizes that they are all closely interconnected and mutually dependent. In other words, while not loosing the focus of long-term benefits of conservation and biodiversity, it is open to accommodating local needs and customs. It works with and through the local communities, not against them.

B. NRM *through* Local Capacity Building[8]

Another reason why it is necessary to emphasize local interest in CBNRM is because community members themselves often do not have the capacity to claim their own rights or voice their concerns. Moreover, government's or big donor organizations' agenda are often not in accordance with the local communities' agenda. Since CBNRM is inherently very complex and adaptable, it can be easily cloaked and used by governments and donor agencies to advance their own interests, such as quantifiable impacts and international/political recognition. Therefore, it is necessary for CBNRM practitioners to become aware of such dangers of misappropriation of CBNRM, and empower local communities to take an active role in managing their own natural resources. This task of empowering local communities, however, often takes a lot of time and energy, because many local communities seriously lack such capacity. Development organizations or researchers must commit sufficient time and resources for capacity building.

Capacity building entails empowering the local population to have a better understanding of their own situation vis-à-vis the outside world so that they can be in a

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[8] The meaning of capacity building will be discussed in greater detail in chapter 4.

better bargaining position. In many rural communities in China, many farmers still have never gone outside of their own administrative district. They have very limited understanding of national policies, market or new technology. Some communities also lack strong organizational and institutional capacity to effectively negotiate their rights and benefits with government and private enterprises. Their strength lies in empirical understanding of their resources and local socio-economic structures. One of the main objectives of CBNRM is to tap the richness of indigenous knowledge and harness it with other practical knowledge and skills.

C. Defining "Communities"

Having emphasized the importance of local community in CBNRM, it is important to define what exactly is "local community." In the early developmental stage of CBNRM, communities were often defined as a distinct social group in one geographical location that shares common cultural characteristics.[9] Many people now realize that this was a misleading assumption. A community is rarely a homogeneous entity that can be distinguished from presumed "outsiders." Even within a community, there are a number of different social groups based on gender, income level, age and ethnicity. Sometimes, communities are not even geographically "close" (for example, households or homesteads scattered in a watershed).

There are also a number of dynamics that constitute the social construction of communities. Sometimes, imagined communal identities like ethnic nationalism and religious affiliation can become more influential factors in making decisions than more concrete communal identities like geographical location. Consequently, there can be many internal conflicts even within a small community with a few dozen households.

Without ignoring the importance of recognizing the fluidity and diversity of communities, CBNRM practitioners still need to come up with a workable definition. After all, "community-based " is what makes CBNRM different from other NRM approaches.

CBNRM cannot be effectively implemented with a vague and abstract definition of communities who are the intended beneficiaries, users and managers of the natural resource in question. Therefore, an important part of CBNRM process is identifying and understanding the community that needs to be empowered to carry out the work of managing their natural resources. Sometimes, identifying the community that holds immediate stake in the natural resource in question can be fairly easy. However, for certain resource types like watersheds, different communities both upstream and downstream must be considered as legitimate stakeholder groups, and their differing interests must be respected. In this case, identifying local stakeholder groups can be very difficult. Participants in the International Workshop on CBNRM (Washington, 1998) have categorized different resource types based on the degree of difficulty of identifying local stakeholder groups.

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[9] IUCN/WWF/UNEP, *Caring for the Earth: a Strategy for Sustainable Living*, (Gland: IUCN/WWF/UNEP, 1991) as quoted in Melissa Leach, Robin Mearns and Ian Scoones, "Challenges to Community-Based Sustainable Development: Dynamics, Entitlement, Institutions," in *IDS Bulletin*, Vol. 28, No. 4 (1997): 4.

| Resource Types	Local Stakeholder Groups
• Irrigation water • Coastal fisheries	• Identifiable and coherent group
• Rangeland • Watershed	• Lacking group identity and structure

Table 1. Identifying local stakeholders

Whether it is difficult to identify local stakeholder groups or not, it is important to identify them and work with them. There is no single universally applicable methodology of identifying local stakeholder groups. Different cultures and geographical settings require different approaches of understanding the local communities. However, there are a few things to keep in mind for meaningful local stakeholder analysis in CBNRM.

1. ***Focus on people***: Community is not an administrative or geographical unit. Community is a group of people who share a variety of affinities with each other. Understanding about communities in CBNRM is about understanding these groups and the social dynamics at work between them.

2. ***Local Residents***: All the people whose life will be directly affected by the natural resource in question are legitimate stakeholders regardless of their social or economic standing. CBNRM cannot begin apart from the local residents. They must take the ownership and responsibility of their own resources.

3. ***Heterogeneity***: Some local communities can be fairly homogeneous, but these are exceptions rather than the norm. Most communities are very heterogeneous in terms of culture, ethnicity, age, gender and income level. In order to have adequate understanding of the social dynamics at work in the communities, development workers and researchers must work with the local residents, because they understand their own society best.

4. ***Realism***: Local communities are not ideal societies. They have their own internal conflicts and problems. Furthermore, they are not just victims of bad NRM by outsiders. More often, they also contribute to environmental degradation and resource abuse. Therefore, a realistic expectation is needed in working with local communities, and a great deal of facilitation is needed to proceed even within a fairly small local community with less than a hundred households. In spite of some unexpected challenges, it is important not to give up on the local people, but consistently work with them and empower them.

5. ***Locally Focused, but Globally Envisioned***: CBNRM must be locally embedded, but not locally limited. The benefits of CBNRM must be channelled through the local communities, but always toward the greater global and future community. Therefore, in CBNRM, local communities often need to be kept accountable by other stakeholders like governments, NGOs and international organizations.

For effective implementation of CBNRM, the local communities should receive the priority in terms of rights and benefits. However, there is one small caveat to this principle.

CBNRM is not a utilitarian approach that seeks effective management of the natural resource in question at any cost. The expected outcome is not just effectiveness or efficiency, but good governance, sustainable natural environment and capacity building. Sometimes, material benefits for the local communities cannot be immediately realized. Yet, through participating in CBNRM, local communities will learn to appreciate long-term benefits and to create more sustainable opportunities of benefiting from it.

Chapter 3

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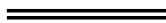
What?

(Recurring Patterns in CBNRM)

What is CBNRM? As mentioned in the introduction, it is almost impossible to meaningfully sum up CBNRM in one or two sentences. CBNRM is a culmination of many different development goals and approaches. Yet, various international organizations have their own way of introducing what CBNRM is in a nutshell. These definitions do not draw the complete picture of CBNRM, but they at least can help new comers to CBNRM to get a glimpse of what CBNRM is about.

Botswana CBNRM Support Program (IUCN)

CBNRM is both a conservation and rural development strategy, involving community mobilization and organisation, institutional development, comprehensive training, enterprise development, and monitoring of the natural resource base.[10]

CIIFAD (Cornell International Institute for Food, Agriculture and Development)

Community-based natural resource management (CBNRM) is a bottom-up approach to the integration of conservation and development.[11]

CBNRM Net (World Bank)

What is CBNRM? We can say something in response to this query with certainty. It came about, to a large extent, as the result of two types of processes. One process is a grassroots, bottom-up agenda, inspired by the goals of sustainable development and biodiversity conservation, gradually broadening and transforming itself to include also a social agenda, and becoming a broad social movement of sorts. The other process is a macro-level, top-down effort spear-headed by multilateral funding agencies, bilateral donors, and, above all, transnational NGOs and organizations devoted to practical work and research. The many actors, that is, stakeholders, and agendas that constitute these

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[10] http://www.cbnrm.bw/pages_sub_dir/Main.htm
[11] *Cornell International Institute for Food, Agriculture and Development Annual Report*, 1999-2000.

two processes are increasingly meeting, somewhere in the middle, aligning their experience, realizing that they have the same goals, and that they stand a greater chance of making a difference by joining hands, as well as their often different means and resources.[12]

USAID

CBNRM is the management of natural resources under a detailed plan developed and agreed to by all concerned stakeholders. The approach is community based in that the communities managing the resources have the legal rights, the local institutions, and the economic incentives to take substantial responsibility for sustained use of these resources. Under the natural resource management plan, communities become the primary implementers, assisted and monitored by technical services.[13]

IDRC (International Development Research Centre)

The CBNRM program deals with resource degradation and rural poverty by promoting research for development innovation to improve the productivity and sustainability of local resource use. These innovations can be technical, such as intensifying shifting cultivation or improving aquaculture. They can also be institutional or policy-focused. However, neither technology nor institutional changes nor policy reform alone is sufficient to address poverty because in many cases resulting benefits are captured by those who are already better off. Therefore, CBNRM addresses the interactions among the factors that influence natural resource access, use and management patterns. The participation and leadership of local people are essential in CBNRM's approach as innovations must be built on voluntary improvements to local knowledge and practice, rather than imposed from outside. It also requires recognition of the heterogeneity and multiple interests of different community members and outside resource users.[14]

Recurring Patterns in CBNRM

CBNRM is very complex in its composition like a forest, so it is not easy to capture the whole forest in one sweeping view. However, it is possible to recognize several recurring patterns that make up the forest of CBNRM. The above introductory definitions of CBNRM by various organizations sound somewhat different and complex, but there are some features/ideas that are repeated. These common features/ideas are what constitute the backbone of CBNRM. Although understanding these recurring patterns is a huge challenge in itself, but at least knowing what they are will be helpful to some new comers to the forest.

The recurring patters are (1) grassroots participation (2) interdisciplinary approach (3) capacity building (4) sustainability (5) poverty alleviation

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[12] http://www.cbnrm.net/about/overview/introduction.html

[13] http://www.usaid.gov/procurement_bus_opp/procurement/announce/cbd/1010720-83426.27164.shtml

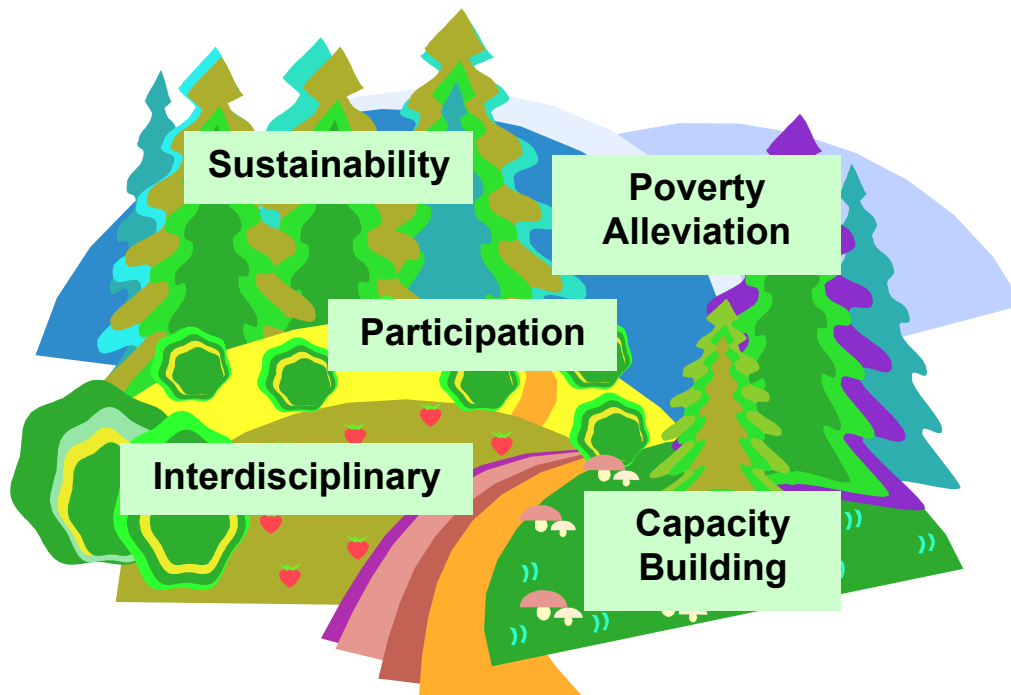[14] *IDRC CBNRM program initiative phase II prospectus*, 2000-2003.

Diagram 3. The Forest of CBNRM and its Recurring Patterns

(1) Grassroots Participation

CBNRM places a very strong emphasis on participation of local community members. Participation is what makes CBNRM truly "community-based." The concept of participation is neither new nor an innovation of CBNRM. It was already a popular concept, at least in rhetoric, in the development community as early as 1950s. Although many realize today that "participation" in the 60s and 70s was just another governments-manipulating-local-communities in disguise, most development programs involved some sort of community involvement in design. In this period, "participation" yielded very little practical results because of its intrinsic shortcomings. It was in the 80s when fresh thinking on "participation" was widely initiated. Since the early 1990s, the development community saw some fundamental shifts in understanding and implementing "participation." The word "participation" in NRM connotes not only involvement of local communities, but also their rightful ownership and leadership. Robert Chambers, one of the pioneers in participatory development, defines participatory development as "a growing family of approaches and methods to enable local (rural or urban) people to express, enhance, share and analyze their knowledge of life and conditions, to plan and to act."[15] In other words, local people are not just participants in a project planned and implemented by governments or international organizations, but rather equal partners in the whole decision-making process from initial planning to final evaluation.

Since the reformulation of the concept of "participation," most of the major international development organizations have been re-emphasizing and committing resources to promoting participatory development. This renewed understanding of

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[15] Robert Chambers, "Participatory Rural Appraisal (PRA): Analysis of Experience," in *World Development*, Vol. 22, No. 9 (1994): 1253.

participation is also at the heart of CBNRM. Participation is strongly emphasized in CBNRM for many reasons. One of the more prominent reasons is because true "participation" naturally translates into empowerment of the local participants. Robert Chambers has aptly articulated the link between participation and empowerment:

> Good Participatory Research Appraisal (PRA) is about empowering. It is linked with distinctive behaviours, attitudes and approaches. "We" are not teachers or transferors of technology, but instead convenors, catalysts, and facilitators. We have to unlearn, and put our knowledge, ideas and categories in second place. Our role is to enable others to do their own appraisal, analysis, presentations, planning and action, to own the outcome and to teach us, sharing their knowledge. The "others" may be local rural or urban people, women, men, children or old people, or members of an organization or group. They are often those who are weak, marginalized, vulnerable and voiceless. They then do many of the things we tend to think only we could do. "They can do it" means that we have confidence (trust) in their capabilities. We "hand over the stick" and facilitate their mapping, diagramming, listing, sorting, sequencing, counting, estimating, scoring, ranking, linking, analysing, planning, monitoring and evaluating. Many practitioners and trainers consider the term PRA should only be used for processes, which empower.[16]

Participation is also essential in CBNRM because CBNRM cannot be effectively carried out without local people's active support and their empirical knowledge of their environment and society. CBNRM begins with a strong belief that local people have the potential to make a difference. In that sense, CBNRM without local people's participation is no CBNRM at all.

(2) Interdisciplinary Approach

IDRC's CBNRM program initiative prospectus states that "multidisciplinarity is a minimum requirement fore research in this field." Most of the other organizations that practice CBNRM also strongly emphasize an interdisciplinary approach. Why is an interdisciplinary character so important in CBNRM? Most people do recognize that an interdisciplinary approach means heightened cost, time and risks, simply because multidisciplinarity is still an unfamiliar ground. Yet, why do many CBNRM practitioners want to venture in this uncharted territory?

a) *Inadequacy of a single-discipline approach in NRM*: Without a doubt, specialization in a single discipline has contributed to generating some astounding scientific achievements in the past. Specializing in one discipline enabled researchers to delve deeper into the questions they are addressing. However, advancement in single-discipline specialization also meant development of sophisticated and systematic abstraction of ideas and methods within the discipline. Researchers in a well-defined discipline often have already pre-constructed conceptual frameworks through which they see, analyze

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[16] Robert Chambers, *Relaxed and Participatory Appraisal: notes on practical approaches and methods for participants in PRA/PLA-related familiarisation workshops*, http://www.ids.ac.uk/ids/particip/research/pra/pranotes02.pdf

and evaluate the problems at hand. Instead of seeing the problem in its entirety, they often just extract information that is directly related to their conceptual framework. In other words, instead of dealing with the reality as it is, they often automatically shift into a highly organized and abstract plain. This abstraction of reality worked as a deterrent in adequately addressing multifarious issues in NRM as a whole.

b) ***Advantage of an interdisciplinary approach***: The most obvious advantage of an interdisciplinary approach is that it will not limit a researcher or development worker to an abstract and artificially systematic plain. It tries to see the reality as it is from many different angles, in all its complexity. Secondly, it also makes the interchange between the deep wells of knowledge in different disciplines easier. This interchange between disciplines will not only make every participant's understanding of the situation richer and deeper, but also will inspire new thinking on how to meet the challenges (triangulation process).

An interdisciplinary approach is certainly not the easy way out. There are a number of challenges to overcome. For instance, combining the knowledge from different disciplines does not happen naturally. Often, it requires a lot of reconfiguration of existing conceptual frameworks and negotiation between different disciplines. However, most CBNRM practitioners believe that the benefits of an interdisciplinary approach will greatly surpass the cost and risk.

(3) Capacity Building

The previous chapter already mentioned why capacity building is so important in CBNRM, and the following chapter will discuss what capacity building entails. Capacity building is a multi-directional process.

It is easy to misunderstand that capacity building is what government and NGOs do for the local communities. It is true that local communities often are the primary objects of capacity building, but capacity building, in fact, happens in all directions. Capacity building is not what "expert" northern development organizations do to help the "underdeveloped" southern organizations or communities. There should be no pedantic spirit inherent in capacity building. In fact, capacity building (at least in CBNRM) is quite the opposite. Learning and capacity building happen in all directions. In CBNRM, all the stakeholder groups are believed to have their own strengths and weaknesses–meaning that they all need capacity building in one way or another. Governments and international development organizations are not exceptions. Local governments often need the build capacity in institutionalizing CBNRM. They usually have little experience in reforming and legalizing local institutions. Even NGOs and international organizations learn from each experience and build their own capacity to better support local communities in the process. In that sense, one can safely say that the theme of capacity building runs through the entire process CBNRM, and applies to all stakeholders. No one group should engage in CBNRM with a sense of superiority just because it possesses more knowledge in some areas.

(4) Sustainability

With the launching of the first Earth Summit in Rio de Janeiro, 1992, "sustainability" has become the core principle in all environmental and development discussions and practices. CBNRM has also wholeheartedly embraced and integrated this principle. There are a number of definitions on what sustainability is today, but many development practitioners still turn to the original formulation stated in the UN World Commission on Environment and Development report titled *Our Common Future* (1987): "Development is sustainable when it meets the needs of the present without compromising the ability of future generations to meet theirs."[17]

CBNRM places especially emphasis on sustainability, because the primary stakeholders (i.e., local communities) depend on sustainability of their natural environments for survival. Many local community members in Ningxia, China, now understand the importance of sustainability. For the last two decades, they have seen their environment and precious resources deteriorate due to unsustainable use. Most of their grasslands turned into semi-deserts and farming has become more difficult. In general, degraded natural environment meant much more difficult life for the residents. Therefore, with the help of Ningxia Southern Uplands Development Center, some villages began to develop innovative NRM plans. In one village development plan, the members of the village were willing to sacrifice their own profitability and rights over their resources and give the nature a chance to regenerate itself, so that their children will be able to inherit a healthier environment.

CBNRM is not an intervention strategy that seeks an immediate and quantifiable result through short-term injection of resources. It realizes that technological interventions alone will not achieve sustainable development. That is why it focuses on the local people, not just on the resources. It believes that the local people are the key agents in sustainable management of their natural surrounding, because sustainability is achieved not just through improving the natural resource base but also through practicing good stewardship over the resources.

Good stewardship over resources, however, needs to be supported by sustainability of the local economy, society and culture. After all, if the livelihood of local communities is not sustainable, the local residents simply will not be able to pay attention to achieving sustainability of their environments. Therefore, CBNRM also invests enormous effort to develop the social, economic and cultural sustainability of local communities. As the graph illustrates, sustainability of natural resources is directly related to the sustainability of livelihoods. For effective CBNRM, it is imperative to devote conscious effort in maintaining the balance between the sustainability of resources and the sustainability of livelihoods.
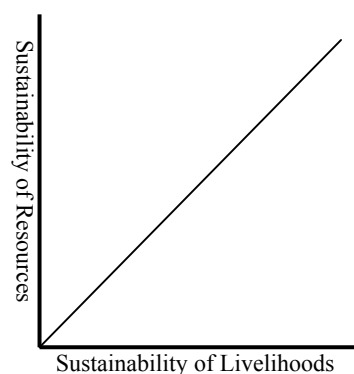

Diagram 4. Relationship between Sustainability of Resources & Livelihoods

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[17] http://www.un.org/documents/ga/res/42/ares42-186.htm

(5) Poverty Alleviation

As mentioned in chapter 2, the ultimate goal of CBNRM is not conservation per se, but sustainable management of natural resources by improving livelihoods in poor rural communities who are the primary stakeholders and users of the resources.

Recently, a number of a fresh understandings of poverty have been articulated.[18] The scope of this paper does not allow discussion of this new development, but it is important to mention that poverty is not just about economic deprivation. Many rural people are poor not simply because they do not have enough money, but also because they are deprived of other social, political and cultural assets and entitlements that will enable them to overcome poverty. The vast majority of them do not even have adequate health or educational services, and have very little political power. As a consequence, they are easily coerced and taken advantage of by some outsiders who come with malevolent intentions.

CBNRM hopes to address the issue of poverty from a more holistic perspective. Increasing agricultural productivity through technological innovation is a very important part of a poverty alleviation strategy. However, CBNRM also wants to help local communities to improve their ability in organizing themselves, understanding their situation, interacting with the market and negotiating with the government. Most of the rural population only focuses on its physical and monetary assets for poverty alleviation. Increasing their assets will certainly make their life more secure. However, in order to overcome poverty, they also must increase their social and political capacity, and reclaim the rights and services that they are entitled to have. Thus, CBNRM seeks holistic improvement of the rural population's livelihood so that they will become less vulnerable to unexpected changes.

What CBNRM Is About

These five patterns occur again and again in all good CBNRM practices. Together, they constitute the key building blocks of CBNRM. It is not possible to define CBNRM in a few sentences, but at least, it is possible to explain what CBNRM is about. CBNRM is about (1) grassroots participation, (2) interdisciplinary approach, (3) capacity building, (4) sustainability, and (5) poverty alleviation. What is interesting is that all of these five recurring patterns are about people, not the natural resource itself. It is because CBNRM is achieved for the people, by the people and with the people. In that sense, CBNRM is primarily about people.

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[18] Paul Shaffer, "New Thinking on Poverty Dynamics: Implications for Policy," a paper presented to the Poverty Reduction Working Group, CIDA, 2000. http://home.istar.ca/~prc/ShafferPaper_Draft2.PDF.
See also, Anthony Bebbington, "Capitals and Capabilities: A Framework for Analyzing Peasant Viability, Rural Livelihoods and Poverty," in *World Development*, Vol. 27, No. 12 (1999): 2021-2044.

Chapter 4

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Who?

(Stakeholders of CBNRM)

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.[19] – Norman Uphoff

Who should implement CBNRM? The simple answer to this question would be "stakeholders." However, just stating that "stakeholders" implement CNBMR does not mean much. It is still necessary to answer some other key questions to understand the stakeholder dynamics in CBNRM. Who are the stakeholders? What are their roles? How do they work together?

Who are the Stakeholders?

Before discussing who the stakeholders are, it is necessary to define the meaning of "stakeholder." Due to the nature of natural resources, a narrow definition of "stakeholder" can become a source of conflicts in itself. Therefore, a broad definition of stakeholder will be more useful. A recent UNED publication defines stakeholders as "those who have an interest in a particular decision, either as individuals or representatives of a group. This includes people who influence the decision, or can influence it, as well as those affected by it."[20] In CBNRM, a variety of different stakeholder groups can be identified depending on the resource type and social context. However, generally the stakeholders groups can fall into three categories: public, private and community-based stakeholders.

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[19] Norman Uphoff, 1998, pp. 5-6.
[20] Minu Hemmati, *Multi-Stakeholder Processes for Governance and Sustainability - Beyond Deadlock and Conflict*, (London: Earthscan, 2002). http://www.earthsummit2002.org/msp/book/chap1.pdf

Stakeholder Category	Examples
Public	Central government, Local government, Related ministries in central, provincial or local government
Private	Private enterprises (local or distant)
Community	Community groups, NGOs working on behalf of the local community

Table 2. Stakeholder Categories

Effective implementation of CBNRM depends heavily on adequate stakeholder analysis and representation. Often, a few powerful groups tend to dominate in NRM-related decision-making processes. For instance, in the conventional central management scheme, poor community groups are rarely represented or consulted. Consequently, the decisions made in centrally managed NRM programs often further marginalize the poor. In order to prevent dominance of powerful groups and marginalization of minority groups, CBNRM needs to define the roles of each stakeholder group. In group dynamics, ambiguity of roles can create a room for manipulation and domination by stronger groups, making it difficult to maintain the balance of power between different groups. Clear role definition can prevent some of that.

In the above stakeholder categories, international organizations of researchers are not identified or categorized, because they are usually not immediate stakeholders and their roles often change in different stages of CBNRM. At the beginning, they play the role of initiator and catalyst, but as CBNRM matures, they become more of a non-stakeholding facilitator and co-researcher working closely with the community.[21]

What are the Stakeholders' Roles?

Community Stakeholders

In chapter 2, communities are identified as the primary beneficiaries of CBNRM. They are also the primary implementers and managers of the natural resource in question. As the key stakeholder, they should be involved in all major decision-making process. They not only do the actual work of managing the natural resources, but also participate in the whole process of CBNRM from problem definition and planning to final evaluation. It is absolutely critical that local communities participate in decision-making process at least for three reasons.

1) **Awareness**: Unless the local communities fully understand the vulnerability of their natural resources, they will not commit their time and resources to manage them. Therefore, it is important to begin CBNRM with the local communities' involvement from the problem definition stage. The community members must reflect together if the present status of their natural resources is sustainable, and what improvements need to be made. Their awareness of the situation and problems is a critical element in gaining their support.

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[21] Nicole Motteux, Tony Minns, Etienne Nel and Kate Rowntree, "Empowerment for Development: Taking Participatory Appraisal Further in Rural South Africa," in *Development in Practice*, Vol. 9, No. 3 (1999): 261-273.

2) **Ownership**: In order to fully empower the local communities and gain their support, they must have a sense of ownership over the resources. Their involvement or even leadership in key decision-making processes is, essential in giving them the sense of ownership. Besides, their involvement in every stage will help decisions to be more relevant to the local context, and have a better chance of being fully implemented.

3) **Indigenous Knowledge**: CBNRM places strong emphasis on local knowledge. Often, local communities have much better understanding of their environment, and have ingenious ways of using the resources in a sustainable way. Their involvement in the decision-making process will bring this rich knowledge to the table.

The local communities are the central agents in CBNRM. In mature CBNRM, they should become the leaders, managers and implementers of CBNRM. However, in order to effectively manage the natural resources in question, most communities would need external help to begin with. Successful implementation of CBNRM often requires reforming local, provincial and national policies on natural resources. Communities also need support in organization and gathering information. Therefore, governments, private enterprises and research/development organizations have very important roles to play at the beginning.

Public Stakeholders

Because there have been so many negative experiences with heavy government involvement in NRM, some development workers have demanded governments to completely withdraw from practical NRM. Despite past mistakes, government is still a very important stakeholder representing the national, provincial or municipal public. A laissez-faire approach cannot yield the most effective result, because communities often need the government's help in terms of legal support and enforcement. To what extent should the government be involved will be different from case to case, depending on the government's capacity, resource type and culture. However, there are some fundamental supports that should come from the government.

1) **Legal support**: The government must provide legal support to the communities. It must clarify communities' rights over the resources unambiguously. Because of different constitutional framework in each country, some communities may not be able to fully own the resources. Yet, they should be given at least the rights to exercise full control over the resources.

2) **Policy framework**: The government should also provide a policy framework that can make institutionalization of CBNRM easier. Sometimes, communities have to wait months and even years to get an approval from government for new NRM regulations or different land registrations. It is important that governments work with communities to facilitate the process of institutionalizing CBNRM innovations.

3) **Enforcement**: CBNRM will undoubtedly produce new institutions and regulations, but communities are usually not in a position to enforce the rules agreed upon locally. Simple management mechanisms can and should be

instituted and enforced locally. However, if major violations occur and the community institutions cannot adequately deal with them, CBNRM may face a crisis. In many societies, only governments have the full authority to institutionalize and enforce new rules.

Private Stakeholders

The private stakeholders should never be the most influential stakeholders in CBNRM, except in rare cases like ecotourism (even then, community and public stakeholders should closely monitor their decision-making process). Private stakeholders' main objective is generating profits and this objective will always be the driving force behind their decisions. However, if they are part of stakeholder groups, their expertise in certain areas can be very helpful.

1) **Market information**: Private stakeholders usually understand the market better than any other stakeholder group. They know the routes through which locally produced goods can be sold, and understand the pricing mechanism. Their marketing skills are also much better than local community members'. Therefore, their primary role should be connecting local communities to the market.

2) **Efficiency**: Efficiency should never take precedence over other more important issues like sustainability and empowerment. Yet, if efficiency can be increased without sacrificing the other objectives, there will be much to learn from private stakeholders.

How do the Stakeholders Work Together?

Co-management

In the last ten years, there has been an increasing amount of research carried out on the topic of co-management.[22] Co-management is generally defined as "a situation in which two or more social actors negotiate, define and guarantee amongst themselves a fair sharing of the management functions, entitlements and responsibilities for a given territory, area or set of natural resources."[23] The fundamental principle in co-management is that all the stakeholders work together to achieve an agreed-upon objective. The process will often become complicated by conflicts of interest and seesawing of power, but they will be resolved through negotiations. The participants at

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[22] G. Borrini-Feyerabend, M. T. Farvar, J. C. Nguinguiri, & V. A. Ndangang, *Co-management of Natural Resources: Organising, Negotiating and Learning-by-Doing.* (Heidelberg, GTZ and IUCN, 2000).
Bonnie J. McCay, *Co-Managing the Commons*, Plenary Presentation, International CBNRM Workshop, Washington, May 1998.
Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action*, (New York: Cambridge University Press, 1990).
Evelyn Pinkerton ed., *Co-operative Management of Local Fisheries: New Directions for Improved Management and Community Development*, (Vancouver: University of British Columbia Press, 1989).
R.S.Pomeroy ed., *Community Management and Common Property of Coastal Fisheries in Asia and the Pacific: Concepts, Methods and Experiences.* (Manila: ICLARM, 1993).
[23] G. Borrini-Feyerabend et al, 2000, p.1.

the International CBNRM Workshop in Washington (1998) came up with the following model of co-management seen from the point of view of local stakeholders.[24]
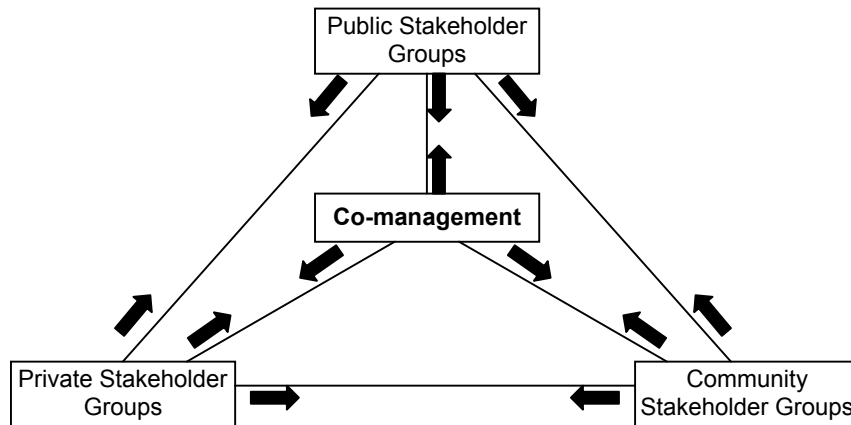

Diagram 5. Modeling CBRNM, From the Point of View of Local Stakeholders

The above model depicts an ideal case of co-management. In reality, the power and interests are not so well balanced. The representative groups will contend for more benefits, power and influence as the next diagram illustrates.
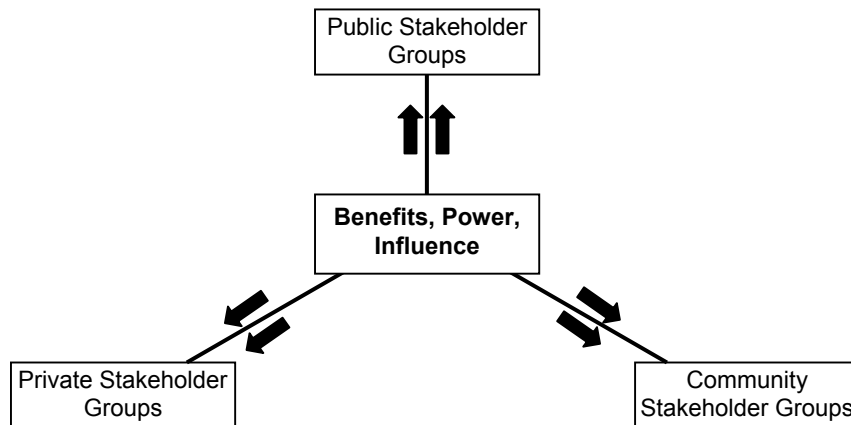

Diagram 6. Power Struggles in Co-management

Empowering management

In a way, the term "co-management" may be misleading, because it implies that every stakeholder participates in managing the natural resource collaboratively with evenly distributed responsibilities and entitlements. All the stakeholders need to be represented in CBNRM, but the intended outcome is not every stakeholder working in equilibrium of power and responsibilities. The most important principle in CBNRM is empowering local communities, so that they can manage their own resources effectively with the

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[24] The International Workshop on Community-Based Natural Resource Management, *Workshop Report*, Washington D.C., 10-14 May 1998.

help of other stakeholders. External stakeholders keep the community accountable, and provide support and expertise, but do not heavily engage in the management throughout the process. If communities would constantly depend on heavy involvement of other stakeholders in making decisions, the NRM strategy would hardly be sustainable in the long run. Therefore, in CBNRM, "empowering management" may be a more appropriate expression.
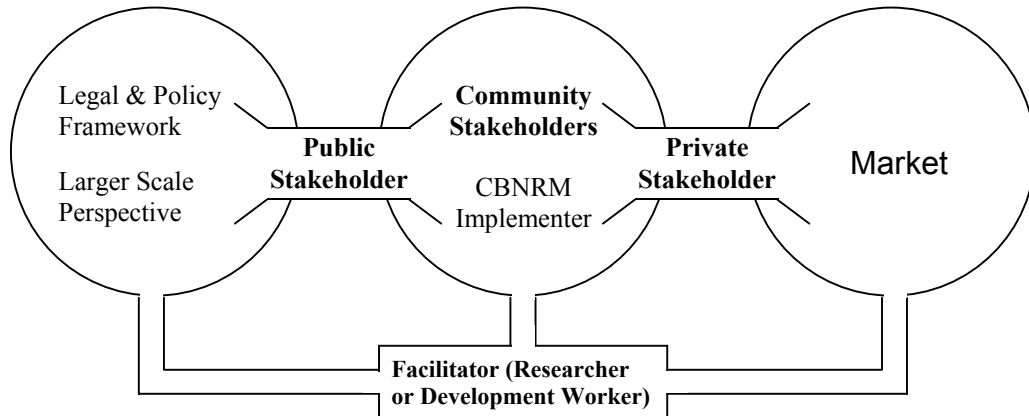

Diagram 7. Empowering Management Model (Decision-making Process)

The above management model illustrates how CBNRM can be designed to more effectively empower the local stakeholders. The diagram highlights:

- Community stakeholders are the primary implementers of CBNRM, and they should become the eventual leaders in CBNRM.

- Other stakeholders do not make the decision for the community stakeholders. Their role is to bridge the community with the outside world such as the market (private stakeholders), and legal & policy framework and larger scale perspective (public stakeholders).

- Other stakeholders inform and guide the decision-making process. Decisions should be made by the local stakeholders, but public and private stakeholders help (not dominate) the decision making process.

- They provide support such as delivering policy reform and enforcement (public stakeholders) and marketing (private stakeholders).

- Facilitation is needed to prevent marginalization of communities between two powerful stakeholder groups. The facilitator's role should be taken up by someone who does not have an immediate stake in the natural resource in question. Frequently, NGOs or researchers play this role.

The empowering management strategy does not assign all the functions and responsibilities to the local community. Local communities often do not have the capacity to carry out all the responsibilities and functions. What empowering management stresses is the community's place and voice in all decision-making

processes, and their eventual capacity building. They hold the most important stake in the natural resource in question. It is only rightful that they should be empowered to make the decisions that will directly affect their livelihood. Therefore, in mature CBNRM, governments and development organization do not control the resources. Communities will develop their own institutions to govern the resource base. CBNRM also believes that an NRM strategy will become most sustainable when the local communities take up the responsibility of managing their local resources.

Chapter 5

How?

(Good Practice in CBNRM)

How does one implement CBNRM? First of all, it is important to note that there is no single "perfect" blueprint for implementing CBNRM, that can guarantee success. This may sound discouraging to anyone who wants to try out CBNRM for the first time. Yet, the fact that there is no pre-designed package of CBNRM that can be applied to all situations is what makes CBNRM so effective. CBNRM is very much attuned to the real world in that it will adjust itself to accommodate to the reality instead of trying to make the reality fit in with its conceptual framework.

It does not mean, however, that CBNRM is completely an *ad hoc* approach with no operational principles. Rather, what it means is that CBNRM pays relatively less attention to procedures or methodology, and pays more attention to outcomes. The question then is: what kind of outcome is expected in CBNRM? What defines good practice in CBNRM?

Good Practice in CBNRM

- Greening of over 10,000 hectares of semi-desert land
- Doubling average family income in two years
- Establishing community environmental protection agreements
- Solving water shortage problems

These are truly marvellous results that came out of CBNRM projects in Ningxia, China. Are these the expected outcomes of CBNRM? Are these results that define good practice? The answer is "yes," but the list is far from complete. These results illustrate only one side of CBNRM. CBNRM is certainly about effective natural resource management, but is also about empowering people. In a way, the empowerment side of outcome may even be more significant. What is empowerment? How does one identify and measure empowerment outcomes?

A recent publication by IDRC's evaluation unit defines outcomes as "changes in the behaviour, relationships, activities, or actions of the people, groups, and organizations with whom a program works directly."[25] Defining outcomes as "changes in the behaviour" is significant, because it places the central focus on the people and believes that people are the central agents in making a difference in their environment. This sounds like common sense, but in fact, it is a revolutionary concept in development, which has been driven by immediate and measurable results for so many years. Placing people at the centre means that they become the priority in development. Sometimes, by sheer caprice of Mother Nature, a CBNRM project may not yield the expected environmental results. However, if people are empowered to learn from the experience and plan better, a CBNRM project can be said to be successful.

The problem is that placing the central focus on people makes it difficult to predict and plan outcomes. Trying to measure the outcomes poses even greater challenges. Changes in people's behaviour are not something that can be induced or coerced. Empowerment cannot be artificially conjured up. It arises naturally through the entire process of CBNRM, and no one can really claim credit for making it happen.[26]

Although it is not possible to artificially generate empowerment, it is possible to predict where empowerment will happen and make a conscious efforts to improve the context in which empowerment can happen. This is where CBNRM focuses.

Empowerment Puzzle

Good CBNRM practice should have at least some empowerment happening in four areas: Relationship, Knowledge, Society and Governance. The key is not to loose focus on any one of these areas because they are all integral parts of the whole empowerment picture. These four areas works like four interlocking pieces of a picture puzzle. Individually, they may seem unrelated, but when all the pieces are put together, a beautiful picture of "empowerment" emerges.
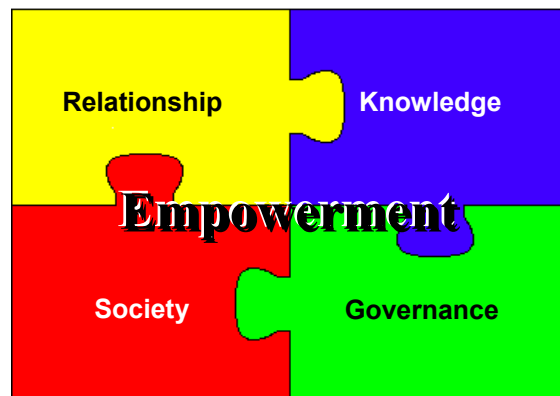
Diagram 8. The Empowerment Puzzle

These four areas of empowerment used in this paper are very broad and general categories. In order to make the categories more meaningful and useful, it is necessary to carefully consider how they can be conditioned to facilitate empowerment process. For instance, from a CBNRM practitioner's perspective, what can be done in the area of governance in order to pave the way for empowerment to occur? The following sections will grapple with this question in greater detail.

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[25] Sarah Earl, Fred Carden and Terry Smutylo, *Outcome Mapping: Building Learning and Reflection into Development Programs*, (Ottawa: IDRC, 2001), p.1.

[26] *Ibid.*, pp. 5-10.

Relationship

"Relationship" may sound as an irrelevant issue in NRM. What does relationship have to do with development and NRM? Yet, it is not an exaggeration to say relationship building is like foundation laying in CBNRM. Without establishing a good relationship among all stakeholders, the CBNRM process is bound to become superficial. Many experienced practitioners in participatory research warn against using the word "participation" without much substance. What does it mean to practice participation with substance? Participation with substance begins with a healthy working relationship among different stakeholders.

The question is, then, how does a CBNRM practitioner create an environment where relationship can be fostered? As mentioned previously, relationships cannot be forced to develop. A genuine relationship always begins naturally. However, it is possible to make the social environment more conducive to building relationships. The following are some suggestions that can be implemented in a CBNRM process.

1. **Recognition**: Initiators and implementers of CBNRM must recognize the centrality of relationship building in CBNRM and make personal commitments in getting to know the people in person. They must realize that relationship building is an integral part of CBNRM process (not an extra element), and commit both resources and time for relationship building activities with the local people.

2. **Trust**: Relationship building process begins with uncompromising trust in the local people's potential. Putting trust in the local people's abilities and potential is like making an emotional and relational investment in them. Without this initial investment, there will be no meaningful outcomes in terms of relationship. Sometimes, this investment can be a high-risk investment, but it often brings surprising results. Having spoken to a number of CBNRM practitioners, Norman Uphoff and his co-authors write, "we can say that a major source of their (successful CBNRM practitioners') effectiveness has been their conviction and consistency regarding the potentials of rural people."[27]

3. **Emphasis**: The importance of relationship building and trust must be emphasized from early meetings and throughout the CBNRM process. Every participant needs to understand that this is a critical element in CBNRM, because CBNRM is fundamentally about empowering people.

4. **Disagreements**: As mentioned before, CBNRM is not about achieving perfect harmony among all stakeholders. In human society, disagreements are only natural. What is important is that people should be able to speak what is in their heart without fearing repercussions. Therefore, CBNRM practitioners must create an environment where it is safe to express objections and disagreements. Very often, dealing with disagreements early in the process can prevent more serious conflict of interests later.

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[27] Norman Uphoff, Milton J. Esman and Anirudh Krishna, *Reasons for success: learning from instructive experiences in rural development*, (West Hartford: Kumarian Press, 1998), 50.

5. **Spontaneity**: Planning for implementation is very important. However, rigid and inflexible planning can suffocate spontaneous creativity of local participants. Participants should not feel bound by rules or plans, but feel free to interact and improvise together.

6. **Shared Vision**: It is often surprising to see what shared vision can do to a group of people. Sharing one vision can bring various radically different individuals together and produce marvellous results. In order for local communities to share the CBNRM vision, they must participate in the envisioning process together with all the other stakeholders.

7. **Attitude**: Local people also have their own worldview and cultural perspective. Sometimes, how external researchers or development workers behave can seriously deter local people's willingness to work together in partnership. It is important to respect the local culture and the people's habits. Because of project cycles and deadlines, CBNRM practitioners may be under the pressure to rush the project and demand participants to produce quick results. However, most of the rural people are not used to deadlines or project cycles. They work in their own pace. Getting things done is certainly important, but respecting local peoples' lifestyle is also very important. Sometimes, CBNRM practitioners have to struggle to find the balance between relationship and progress.

8. **Communication**: A good communication channel is often the key in effective relationship building. All the stakeholders need to understand where things are going and who is doing what. The information has to be shared on regular basis. What development practitioners often don't realize is that most communities already have their own communication channels. Therefore, instead of introducing totally new communication strategy to the community, they can simple utilize the existing communication channels in the community.

9. **Fun**: Good relationship is often built through a group of people having fun together. CBNRM is not about just assigning work to different stakeholders. Many CBNRM strategies involve playing games with community members or putting on plays to communicate messages. There are important messages that are contained in the games and plays, but what is also very important is the synergies that are produced in the act of a community having fun.

Knowledge

Empowering the local community members in the area of knowledge is another significant part of CBNRM. In the past, northern researchers have often appropriated and monopolized "knowledge." They come to local communities in the name of research or development, and extract information from local community members. Once all the necessary information is collected, they go away to analyze and publish the results. The communities who actually gathered and produced the knowledge in raw form is not recognized or empowered through the process. In fact, the opposite is true. Most southern rural communities are often further disempowered and marginalized by becoming someone else's research subjects.

CBNRM tries to reverse the outcome, and empower local communities. In order to reverse the outcome, it is absolutely critical to reform the entire process of knowledge gathering, analysis and dissemination. This section will try to deal with what conditions need to be met in order for the reform in knowledge process to happen.

1. **Definition of Knowledge**: In modern scientific context, "knowledge" is defined very narrowly. It only represents the kind of knowledge that is extracted through observation and analysis, and systematically arranged to fit in with certain conceptual frameworks. In an innovative research, Peter Park identifies other forms of knowledge and put them into three different categories.[28]

	Representational	Reflective	Relational
Meaning	Knowledge gained through observation and analysis	Knowledge gained through reflection	Knowledge gained through relationship
Content	Explanation, Understanding	Values, Beliefs	Personal relationships
Result/Use	Enable people to adjust, modify and ultimately control reality	Instils conviction in the knower, and commits him or her to action	Building communities
Important Values	Fruitfulness, accuracy, consistency, implicity, scope	Autonomy, responsibility	Caring, sincerity, trust

Table 3. Forms of Knowledge

In a research setting, it is easy to concentrate just on representational knowledge and look down on reflective and relational knowledge. In CBNRM, however, all three forms of knowledge are equally valid and valuable. As Ronnie Vernooy and Karen McAllister write, "a combination of popular, local or indigenous knowledge and scientific knowledge is important in order to improve natural resource management decisions at the community level."[29] Most indigenous knowledge is not neatly packaged "representational" knowledge, but often contains accumulated wisdom of many preceding generations.

2. **Partnership**: Local people should never be treated as just subjects of research, or informants. CBNRM strongly believes that local people are partners in research and NRM. Partnership in research means that they also participate in the whole process of knowledge gathering, analysis and dissemination. They must be given the rights to own and use the knowledge they helped to produce. One way of facilitating the use of knowledge is Participatory Monitoring and Evaluation (PM&E). In PM&E, the participating community naturally becomes "not only the date gatherer, but also the analysts and the data archivists. They collect, analyse, act upon and 'own' their data. As a plus, they also use the

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[28] Adapted from Peter Park, "People, Knowledge, and Change in Participatory Research," in *Management Learning*, Vol. 30, No. 2 (1999): 141-157.

[29] Ronnie Vernooy and Karen McAllister, *Action and Reflection: A Guide for Monitoring and Evaluating Participatory Research*, (Ottawa: IDRC, 1999).

internal learning system to reinforce program values, to celebrate achievements and to chronicle their path of struggle and development."[30]

3. **Transparency**: The entire knowledge generation process must be transparent. Everyone must have equal access to information and understand what is happening in CBNRM. Transparency requires frequent information sharing and effective communication channels. This is one area CBNRM practitioners need to consider from early on. Even all the financial transactions should be made transparent before the whole community. Transparency can also help building trust among all stakeholders.

Society

Social change is considered to be one of the most basic characteristics of any participatory process.[31] It sounds a bit presumptuous to say that CBNRM aims for social change in participating communities. However, it is important to note that researchers or development practitioners do not direct or command the change. Rather, they work as catalysts who motivate people to initiate and direct changes. The local people themselves should have direct control over the changes happening in their own society. What CBNRM can do is to provide tools that facilitate locally initiated changes. What kind of tools can CBNRM provide?

1. **Local Organizations**: CBNRM supports and strengthens local organizations. If there are no existing local organizations, CBNRM practitioners need to help the local communities organize themselves. The key is that the organization has to be culturally appropriate. If CBNRM introduces a completely new organization to a community, it would require tremendous amount of time and energy to build its capacity. Even then, the local people may not fully appreciate it. Therefore, if a traditional form of organization already exists in the local community, CBNRM should build on it. Local organizations are extremely important in CBNRM, because it is the best way to encourage interaction and communication between community members. Without some form of organization, it is extremely difficult to address NRM issues corporately. Moreover, without strong local organizations, local communities will never become fully self-sufficient in terms of NRM capacity, and development organizations or researchers will have a difficult time planning their exit strategies. There are also other accompanying benefits of having local organizations like building community solidarity and pride. Once local organizations are established, they must be given sufficient decision-making power in all aspects. CBNRM practitioners need to consistently work with and through the local organizations and build their capacity.

2. **Human Resources**: CBNRM often needs to provide training in various aspects from farming technology to institutional reform. The word "training" has to be used with some caution. In the past, lots of resources were wasted on training programs that yielded very little result. External experts coming in and lecturing the people how to do development in one or two days is not the most effective

[30] Helzi Noponen, "Participatory Monitoring and Evaluation – A Prototype Internal Learning System for Livelihood and Micro-Credit Programs," in Community Development Journal, Vol. 32, No. 1 (1997): 31.
[31] Randy Stoecker, "Are academics irrelevant?" in *American Behavioural Scientist*, Vol. 42, No. 5, (1999).

way of offering training. Many of those external expert driven training programs have utterly failed. One of the more obvious reasons for such failure is because external experts do not understand the local context. They rarely understand the local culture, soil quality, indigenous crops/trees or climate. Furthermore, local people also get turned off by the attitudes of some external experts. More effective training is participatory and interactive training that respects local culture. If there are local trainers available, it is usually better to invite them. In Yuanbao village near Guiyang, farmers invited an experienced farmer from a neighbouring village to provide training on how to raise a new type of fruit tree (yangmei). This farmer-to-farmer training has been very effective.

3. **Envisioning Process**: The local organizations must take the leadership in the envisioning process. It is important that they map out how CBNRM will be implemented. They may need substantial assistance at the beginning, but their voice and concern should be given the priority. Eventually, they should take the leadership and ownership of the process. The envisioning process can be one the most important tools in initiating social changes. Social changes often require a workable vision that people feel very strongly about. Envisioning process gives local participants a chance to reflect on their past mistakes and present situation. During the process, they often find dissatisfactory elements in their social organizations as well as NRM aspects. Therefore, envisioning process with all the local stakeholder groups can be an effective way of bringing changes in the society. One of the problems that some CNBMR practitioners face is the fact that many rural residents cannot read and they are not very eloquent in debates. In such situations, using pictorial tools can help capture and articulate the embryonic wisdom in the group. Furthermore, images can generate greater enthusiasm and hope that words cannot capture. In a small village in western Ningxia, the villagers came together and drew a pictorial situation analysis map based on their understanding of the status quo. Then, they drew another map depicting the changes they want to see in next 3 years. This became the basis of their NRM and development strategy. Since they envisioned and drew the plan, they are committed to carrying it out.

4. **Empowering the Marginalized**: Throughout the CBNRM process, practitioners should make conscious effort to give voice to the marginalized and allow them to fully participate. Local communities often have their own power structures, which may or may not be just and fair. CBNRM should work with traditional local social structures, but it is also important to encourage democratic decision-making process where even the marginalized can be represented. For instance, in many rural societies, women and poor families are not adequately given opportunities to voice their concerns or contribute in the village development process.

Governance

"CBNRM is providing communities with an opportunity for accountable leadership and representative local institutions, training in

new skills combined with old, and legal recognition of their user and management rights over natural resources."[32]

The most effective way of learning something is learning by doing. Thus, the most effective way of empowering the local communities in the area of governance is, naturally, giving them the power to govern and come up with institutional innovations themselves.

Devolution is widely talked about in recent NRM debates. Many countries have already initiated devolution processes. However, most of the devolution strategies do not come all the way down to the community level. They normally stop at local government level. CBNRM argues that devolution needs to go further and invest the local community organizations with significant decision-making power. However, CBNRM does not simply preach "devolution of responsibility to communities. Devolution is a result of discussions and negotiations, seeking agreement on terms and conditions that are not unilaterally determined and whose fulfillment is jointly reviewed and assessed. How well can such arrangements serve both conservation and development goals? How widely is CBNRM feasible, and with what costs and what risks of failure? These are questions to be answered empirically."[33]

Devolution needs to happen, but it has to be carefully guided. A devolution strategy should not simply adopt the traditional hierarchical power structure, and give the village leader or a few influential families all the power. Distribution of power should be based on functions in CBNRM. This requires a comprehensive understanding of the social structure and dynamics in the community. Therefore, devolution should not be considered lightly. It can be carried out only after many consultations and careful study of the social dynamics.

Devolution should also be carried out not just in terms of symbolic power, but in actual terms. Newly appointed groups, leaders or managers should also be able to exercise some control over resources. In Guizhou, the Integrated Rural Development Centre (IRDC) team began an innovative research in devolution of power. They have identified and organized several village level organizations, and began to experiment the devolution process. They want to give the local organizations lots of decision-making power including decisions regarding how the development money should be spent. The local government and research team's role is to keep the community organizations accountable. In stakeholder meetings, all the stakeholder representatives come together to decide on procedures and guidelines of how to use the resources. The research is still in its early stage, but there were already signs of significant empowerment and capacity building happening in local organizations.

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[32] http://www.cbnrm.bw/pages_sub_dir/Second.htm
[33] Norman Uphoff, *Community-Based Natural Resource Management: Connecting Micro and Macro Processes, and People with their Environments*, Plenary Presentation, International CBNRM Workshop, Washington D.C., 10-14 May, 1998, p. 18.

Conclusion

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So What?

(CBNRM in Action)

Having presented CBNRM in all its complexity, trying to sum it up in a nice concluding remark would be self-defeating. Having seen the CBNRM forest from up in the air, one clear lesson is that CBNRM is a holistic approach.

A well-known Chinese proverb says, "Give a man a fish and you feed him for a day. Teach a man to fish and you feed him for a lifetime." CBNRM goes even further. It not only teaches a person how to fish, but also teaches the person how to make the tools for fishing. It also studies the river/ocean together with the person to see if it is sustainable to continue fishing. It even discusses how to best cook the fish. Eventually, the goal is to fully empower the person so that he/she can go teach others.

One of the greatest challenges in CBNRM is scaling up. Because CBNRM is so complex and site-specific, mass reproduction of the method is virtually impossible. Instead, CBNRM focuses on each community and on fully empowering the community. Consequently, scaling up in CBNRM is not about mass replication based on a "perfect" model, but training communities to become teachers in CBNRM. Its vision is organic growth, not mechanical expansion. The ultimate goal in CBNRM is seeing "each community become a biological growth node for exponential and rapid expansion with infrastructure for enabling environment, sustainability and standards for equity."[34]

In that sense, the Farmer-Centred Research Network in China (FCRNC) has much potential to bring significant changes in China's NRM field. Their strategy of promoting and implementing CBNRM through some of the key national, provincial and local research institutions is very promising. Today, CBNRM is becoming more and more relevant in the Chinese context, because the issues in rural development in China are "not solely about production, trade and competitiveness in the agricultural sector, but also involves local governance, political structures and the peasants' relationship to

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[34] Carl E. Talor, "Scaling Up Social Development," in *LEISA Magazine*, October, 2001, pp. 14-17.

land."[35] The network has been very successful in promoting CBNRM. It is now at the initial stages of implementing CBNRM, but still faces a number of challenges to overcome.

1. **Chinese Research Context**: As in any academic research environment, there is strong pressure to produce tangible or publishable results for some researchers in the network. However, participatory research methodology is not considered a legitimate research methodology in China yet. In such an environment, it is easy to carry out research-as-usual under the disguise of "CBNRM." What needs to be emphasized here is that CBNRM research can also yield scientific and publishable result. What distinguishes research in CBNRM from conventional research is the process.

    a. Instead of researchers entering local communities with pre-defined research question and agenda based on his/her own background, CBNRM researchers work with the community to define research question and process.
    b. Instead of doing research in isolated laboratories, CBNRM researchers carry out the research in the field with the community members. This full-scale participatory research has at least two advantages: 1) the results are immediately applicable, and 2) people are empowered through the process. As a Chinese proverb says, CBNRM catches "two birds with one stone."
    c. Instead of only a handful of researchers doing the research, CBNRM engages the whole community to participate in research. As they say, two heads are better than one. Communal research can yield many surprising results.

2. **Self-Capacity**: In order to adequately implement CBNRM, member institutes must also invest in building self-capacity. Most of the institutes have good capacity in carrying out conventional research, but they have little experience in participatory research. As this paper illustrated, what is required for CBNRM in terms of capacity can be very different from what is required for conventional research. The following questions adapted from an ISNAR-led project report can assist identifying what type of capacity building is necessary.[36]

    a. What are the key abilities or capacities that need to be developed in research and development organizations?
    b. By what process(es) does organizational capacity development take place?
    c. How can external agents/agencies contribute to organization capacity development?
    d. How should organizational capacity development efforts be evaluated?

3. **Empirical Understanding**: Most of the network members now have very good theoretical understanding of CBNRM. However, theoretical knowledge does not automatically translate into successful practice. In order to begin

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[35] Pangcheung Sze, "Bleak Outlook for Small Farmers," in *China Development Brief*, Vol. 5, No. 1 (2002): 41-43.

[36] Douglas Horton ed., *Learning About Capacity Development Through Evaluation: Perspectives and Observations from a Collaborative Network of National and International Organizations and Donor Agencies*, (The Hague: ISNAR/CTA, 2002).

implementing CBNRM, theoretical understanding needs to be supported by empirical understanding. The best way of gaining empirical understanding is through practice. However, just directly jumping into practice altogether raises the risk of failures. One way of diminishing the risk is by learning from others who have gone down the path ahead of them. For instance, organizing extended small-scale cross visits to already mature CBNRM research sites can help members to gain the much needed empirical understanding of CBNRM in action.

4. **Evaluative Thinking**: Not too many researchers or development practitioners truly appreciate evaluation. One of the more obvious reasons for not appreciating evaluation is because many evaluative reports in the past have not been very useful. There are a number of examples of evaluations done for the sake of evaluation. Evaluation *can* yield very practical results, if evaluation is integrated into the planning stage. Good evaluation not only requires integrated evaluation process from early on, but also embedded evaluative thinking in one's mindset. Evaluative thinking "includes a willingness to do reality testing, to ask the question: how do we know what we *think* we know. To use data to inform decisions – not to make data the only basis of decisions – but to bring data to bear on decisions. Evaluative thinking is not just limited to evaluation projects, it's not even just limited to formal evaluation. It's an analytical way of thinking that infuses everything that goes on."[37] Integrating evaluative thinking and evaluative process in the network's planning and management can increase the FCRN network's effectiveness even more.

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[37] From IDRC's interview with Michael Q. Patton.
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