

**FINAL DRAFT**

**Principles and Criteria for Evaluating the  
Effectiveness of Community Institutions  
and Capacity for Managing Natural  
Resources at an Ecosystem Level**

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## TABLE OF CONTENTS

Purpose and Use of this Document.....	3
Origins and background to Community Based natural Resource Management.....	4
Conceptual Framework for Analyzing Community Resource management Interventions....	6
1 Economic Viability of Collective Management .....	12
2 Rights of Access and Exclusion.....	17
(a) Allocating Resources to Highest Value .....	17
(b) Defining Rights: Does the Property Rights Regime Internalize Benefits and Responsibilities Sufficiently to the Locality at Which de Facto Management Occurs?...	19
3 Organizational Legitimacy and Effectiveness .....	25
(a) The Loose-Tight Properties of Devolution.....	25
(b) Accountability .....	26
(c) Achieving Accountability in Practice.....	28
(d) Using the Constitution to Measure Organizational Legitimacy .....	29
(e) Effectiveness and Performance.....	30
4. Scaling Down and Scaling Out: Managing CBNRM at Ecosystem Levels .....	32
(a) Matching Institutional and Ecological Geographies: The Principles of Subsidiarity and Reciprocity .....	33
(b) Applying the Principles.....	34
(c) Intra-communal Resource Allocation .....	35
(d) Controlling Externalities.....	36
(e) Devolved Regulation .....	39
(f) Conformance, Responsibility and Compliance.....	41
(g) Reciprocity and Regime Scale Levels .....	41
5. Compliance Monitoring: Devolution and Conformance .....	45
6. Resource Valorization.....	46
7. Sustainability of Resource Management .....	48
8. The Enabling Environment.....	48
9. Technology Development and Capacity Building .....	49
(a) Building Capacities for Eco-level CBNRM .....	49
(b) Enabling Conditions for Capacity Building.....	49
(c) Target Categories for Capacity Building .....	50
(d) A Curriculum for Capacity Building .....	51
a. <i>Basic Informational Acquisition</i> .....	51
b. <i>Technical Data Acquisition</i> .....	52
c. <i>Organizational Skill Development</i> .....	53
d. <i>Appraisal and Adaptive Skills</i> .....	54
e. <i>Negotiating skills</i> .....	55
f. <i>Learning Transfer</i> .....	55
(e) Mechanisms and Effectiveness of Delivery.....	56
<b>References Cited.....</b>	<b>57</b>

## **PURPOSE AND USE OF THIS DOCUMENT**

The objective of this short study is to initiate a methodology for professionals to assess and improve practical institutional structures for participatory natural resource management at an ecosystem scale.

The report addresses, sequentially, the key hypotheses, principles or practices underlying community based natural resource management. Its length is a reflection of this disciplinary diversity. A framework is developed to fit these issues in a logical order, namely: economic viability and collective action, rights of access and exclusion, organization legitimacy and effectiveness, issues of scale and efficacy, compliance monitoring, resource valorization, the sustainability of resource management, enabling environment, and technology development and capacity building. Issues are dealt with concisely, and are supported by examples and explanations. These explanations are intended to overcome the ambiguity and communication difficulties associated with a subject that is as coded as community based natural resource management. The document is intended for use by professionals with sound knowledge of most of the different disciplines of scholarship needed for community-based management.

Project teams should consider each issue in turn when preparing their case studies paper. This document provides a conceptual discussion of CBNRM as a background to completing a short and a longer assessment formulation. Project teams are asked to use two assessment methodologies to explore methodological options. They should also provide suggestions for improving these. The first assessment uses a set of questions to answer in a report that should not exceed six pages or take two hours to complete. The second method explores the same issues but is more quantitative and visual. Case studies from Zimbabwe and Zambia are used to illustrate these methodologies (see annexes 2 and 4).

This work is targeted at development professionals. However, both authors, wary of extractive management practices, emphasize that the process will only become truly effective when such analyses are internalized by communities and become incorporated into continual and adaptive performance assessment and peer review.

We need to acknowledge the efforts of our fellow collaborators in this parallel initiative, and have drawn heavily on knowledge acquired in southern Africa. Some of our ideas have been honed and stimulated by a parallel regional process where WWF is coordinating a network of partners to develop an adaptively managed self-assessment process of communities to manage their resources.

The title of the terms of reference, “Building Community Institutions and Capacity for Managing Natural Resources at an Ecosystem Level (CICENRM)” requires an assessment of approaches for establishing and strengthening practical institutional structures and instruments for participatory environmental and natural resource management at an ecosystem scale. This highlights relations between local and central levels in implementing NRM at larger geographic scales. The focus is on methodologies that empower and enable local institutions to participate effectively in natural resource management policies and decisions, not just at the local level but at the larger scale which ultimately determines the viability and sustainability of their livelihoods. There is a strong emphasis on adaptive management.

## **ORIGINS AND BACKGROUND TO COMMUNITY BASED NATURAL RESOURCE MANAGEMENT**

The past two decades have been marked by a significant shift in policy discourse regarding the central locus of the management and use of natural resources in sub-Saharan Africa. While retaining a recognition of the role of the state, the emphasis has shifted away from state-centric modes of control to dispersed regimes of management involving local resource users, predominantly organised on communal principles.

Multiple reasons lie behind this policy shift. Among these are that it links conservation goals with the needs of the rural poor, corresponding to the policy commitment to sustainable development evidenced by the Bruntland Report (WCED 1987), the UN Conference on Environment and Development of 1992, and Agenda 21 (UN 1992). Dispersed communal regimes provide a conceptual framework within which the integration of conservation and development could be made to happen. The shift also coincided with reassessments of the modes of development delivery, turning away from the ‘top down,’ ‘technocratic’ and ‘blue print’ approaches of the 1970s towards ‘bottom up’ planning, ‘participation’ and ‘process approaches’ (Schumacher 1973, Korten 1980, Chambers 1983). Underlying these reassessments was the growing recognition that limited state resources precluded the effective delivery of management by the central bureaucracies to large areas of their rural constituencies and that the in-place, on-the-ground users of natural resources were the key stakeholders in delivering sustainability and development. Without their committed involvement no programme, however well funded, could succeed. Other influences supporting decentralized approaches have been neo-classical economics and liberal democratic theory (Moore 1993). The first emphasizes the importance of economic incentives and seeks space for ‘communities’ to enter the market. The second is supportive of the notion that the creation of localized regimes will add to “the vibrancy of associational life and thus deepen the democratization process itself” (Adams and Hulme 2001:17).

The convergence of these various strands of policy direction has led to the proliferation of a variety of programmes designed to increase local participation in natural resource management and development. Thus we have, for instance, Community Based Conservation (CBC), Community Conservation (CC), Integrated Conservation and Development Projects (ICDPs), Community Wildlife Management (CWM), Community Based Natural Resource Management (CBNRM), Co-Management (CM), Adaptive Co-Management (ACM) and Community Driven Development (CDD), all perceived as falling within a general family of related perspectives but each exhibiting differences of intent, emphasis and substance. The acronyms cited give us a clue as to provenance: communal approaches are largely grounded in the international project mode, in which acronyms have become a lexical imperative.

These titles to a degree also reflect the politico-historical and ecological backgrounds in which these approaches have been developed. As a very broad generalization, they arose in West and Central Africa in disparate ways, reflecting diverse ecological contexts – dryland areas supporting large populations but with a natural resource base with diffuse economic value and

more humid areas with resources of high economic values in the international market (Abbot *et al.* 2000). In East Africa their genesis was frequently associated with parks/people conflicts in economies heavily reliant on tourism (Barrow *et al.* 2000). In Southern Africa these approaches were strongly influenced by the demonstrated managerial success of devolution on alienated land (Jones and Murphree 2001).

Regional generalizations are not however particularly helpful since intra-regional variation is high. Far more important in the analysis of decentralized approaches are the distinctions which arise from the meaning and substance accorded by policy to “local participation.” Useful typologies have been developed on this issue suggesting a number of categories (Oakley 1991, Pimbert and Pretty 1994) but for the purpose of this paper we distinguish between those approaches where local participation is essentially additive and co-optive in the pursuit of larger state or project objectives and those which view participation in devolutionary terms – the transfer by the state to local regimes of the authority and responsibility sufficient to give them internal legitimacy and motivate sustainable use. A cumulating body of data and analysis suggests that many of the stalled attempts at decentralization are largely attributable to the first approach and that the all-too-few examples of “success” are associated with the second. Southern African decentralization policies<sup>1</sup> have in general taken the second approach (in concept if not always in practice) and for this reason the paper draws largely on the Southern African experience while recognizing that devolutionary examples can be found elsewhere in sub-Saharan Africa.

Our distinction between approaches configuring participation in an additive and co-optive mode and those linking participation with devolution in power and ownership shapes a conceptual conundrum for policy in dealing with the integration of large scale ecosystem management. Cooptive participation fits more comfortably with ecoregional planning but carries with it the danger that regional structures of management may constitute a superstructure without the essential foundation of effective local involvement and commitment. Robust localized regimes can provide this foundation but may inhibit integration at larger levels of management through parochialism and fragmentation. Does ‘scaling down’ preclude ‘scaling out’? This issue is the focus of CICENRM, and we examine its dimensions in this paper.

The paper proceeds by section in the following manner: Section 2 examines the conceptual framework for CBNRM in Southern Africa. Section 3 examines CBNRM principles and poses key questions as a framework against which to test a CBNRM programme. Section 4 deals with the issue of scale. Section 5 comments on building capacity for eco-level CBNRM and Section 6 provides a framework to assess the building of community institutions and capacities for managing natural resources at an ecosystem level.

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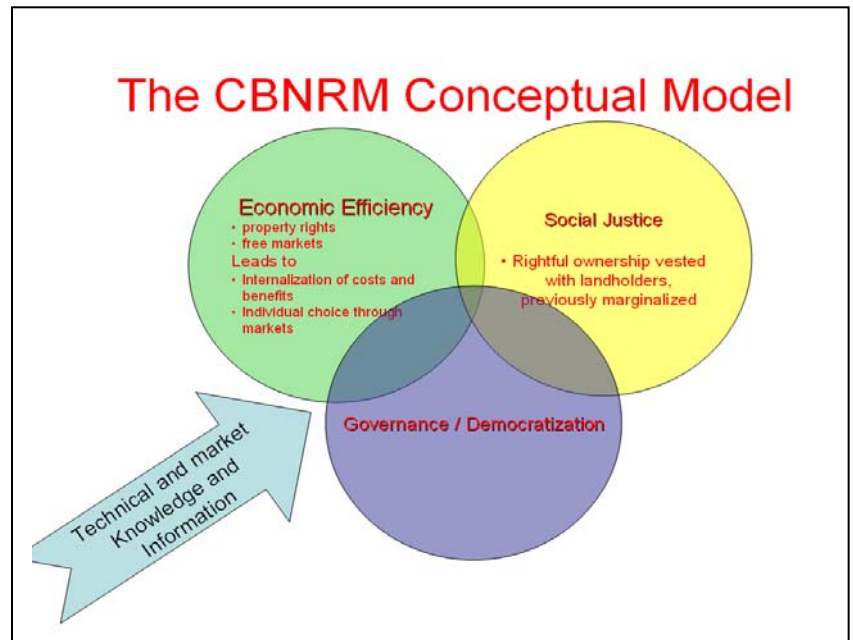
<sup>1</sup> Generally designated as CBNRM – Community Based Natural Resource Management.

## CONCEPTUAL FRAMEWORK FOR ANALYZING COMMUNITY RESOURCE MANAGEMENT INTERVENTIONS

The management of natural resources by communities commonly falls under the rubric community based natural resource management (CBNRM). CBNRM is an acronym that now encompasses such a diversity of views that it is often misleading and leads to miscommunication about principles. CBNRM has been used to include almost any programmes that link communities to the management of natural resources. Its application ranges from park-neighbour programmes, to transfrontier national parks or conservation areas, to agribusiness and livelihoods, to community empowerment and wildlife programmes. It is an acronym, therefore, that encodes so many meanings that it is virtually meaningless as shorthand for a set of organization and land management principles.

We are specifically interested in exploring issues related to building institutional mechanisms in community based and driven projects for improved planning and management of natural resources at the ecosystem level. These issues lie at the congruence of a number of disciplines (Figure 1): property rights and pricing theory; political and institutional economics; governance and organizational management; community and rural development; and conservation management itself. Each discipline frames its members' world view by its theory, its methodology, and its terminology. This disciplinary diversity provides simultaneously a

**FIGURE 1: THE DIVERSITY OF DISCIPLINES THAT EXPLAIN CBNRM**



richness of knowledge and a confusion of meaning (Hanna, Folke and Maler, 1996). This is an integrated and practical knowledge of a range of disciplines invaluable for understanding community based natural resource management. However, to go into each of these disciplines in any detail would make this a complex, even arduous, document<sup>1</sup>. Rather than presenting a comprehensive summary of these concepts, our approach is to present a set of principles that have evolved, and are defined and prioritized, by field experience. Our observation is that these principles, which should still be considered as emerging, bring a remarkable degree of congruency or reinforcement to this range of disciplines.

<sup>1</sup> There is obviously a lot of cross-over between these disciplines whichever way CBNRM is cut. For example, rights to resources are the basis of both economic efficiency and of social justice, while matters of scale permeate economics, politics and management theory.

The CBNRM movement is crossing a threshold. With the principles underlying CBNRM containing a lot for proponents of free markets, social equity or incentive-led conservation, there has been strong advocacy for its implementation since the 1990s. Programmes and investment is now in place. But if this advocacy is to be translated into real progress rather than transformed into skepticism, now is the time to replace good ideas with practical systems for management and control, in short to manage the process and to have the tools to do so. Having both been witness to the remarkable power of CBNRM properly initiated, and the enthusiasm, responsibility and commitment with which it has been taken up by rural people, and even many bureaucrats, both authors believe that if CBNRM is properly designed and implemented there is a high probability that it will succeed. We are aware of the political economic forces that may conspire against CBNRM and the empowerment of marginalized people. However, we are also aware that many failures can be rooted in improper design and implementation, with externally funded projects being particularly prone to misapplication of CBNRM concepts.

It is therefore with some sense of responsibility that we outline the beginnings of what may be a disciplined set of principles and controls for the management of CBNRM processes. Thus we turn from high flying principles to the much more rooted topic of organizational management. It is appropriate to start with two maxims.

*You cannot measure what you cannot describe.* With the principles of CBNRM still in an early stage of development (i.e. they have not yet been properly described), it is hardly surprising that the measurement of the effectiveness of community institutions and natural resource management is in its infancy. So, by implication, must be the management of community resource management because *you cannot manage what you cannot measure.*

It is for these reasons that this paper presents a conceptual description of CBNRM leading to suggestions of what is important and how to measure this performance. To our knowledge, this has not been done before in any comprehensive manner. Thus, we are at the beginning of an experiential process that we hope will lead to a better understanding of how CBNRM works, and perhaps even to the design of disciplined performance management systems and, later, certification criteria. Our personal concern is that a lot of money and effort is wasted implementing poorly designed CBNRM programmes and that this is giving a good concept a bad name. Our hope is that such performance management systems can be used to hold designers and implementers far more accountable for the success or under-performance of their interventions.

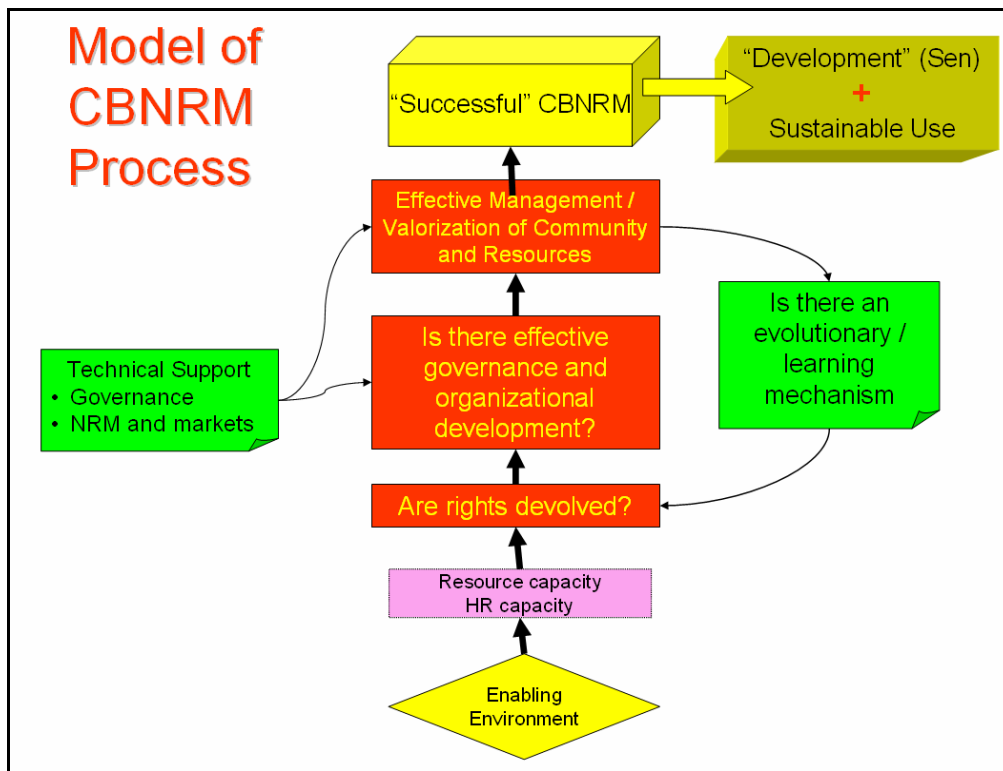
At a broad level, we suggest (annex 1) the use of a set of question that summarizes the status of a programme relative to emerging principles. This should be answered by project teams to assess to what extent their programme follows correct principles and is likely to work.

A more detailed set of assessment tools is also suggested to test these principles more rigorously and quantifiably (annex 3), and this should also be completed by project teams. This methodology is more quantitative and visual, the challenge being to judge the balance between being simple and quantitative, without being simplistic or providing data that is precise but

meaningless. Only by testing these are we likely to find the correct balance. Both assessments are intended for use by development professionals, or even academics<sup>2</sup>.

Community based natural resource management lies at the junction of property and market economics; governance, political and institutional economics; and organizational theory and management. Nonetheless, it is generally implemented by conservationists with the sustainable use of natural resources being an important goal or outcome. Each of these components is subject to considerable scholarly and technical debate. The purpose of this paper is to set forth a limited set of principles or questions to analyze community institutions and capacity for managing natural resources without being simplistic. We therefore endeavor to define a logical process for tackling what can quickly become a confusing set of principles and ideas. Figure 2 illustrates the causative linkages in a pragmatic model for implementing CBNRM. In short, effective organizations depend on rights, but once organizations are in place they can add value to, and manage resources sustainably. Establishing viable organizations depends on the enabling environment, and particularly on legal, natural resources and human resource issues. Their function is improved with technical support, and also by an evolutionary or learning process. If CBNRM works, it results in holistic development as described by Sen (1999) or the World Bank (undated).

**FIGURE 2: ILLUSTRATION OF THE CBNRM CAUSATIVE PROCESS**



<sup>2</sup> It is also worth noting that a network of many of the scholar practioners that initiated and championed CBNRM in the southern African region is currently working on a similar process. While this network is being managed by WWF-SARPO, and funded by NORAD, the process is owned by many partners. The intention is to develop mechanisms for self assessment and peer review, and the intention is do develop evaluative systems that can be managed by the communities themselves, as well as by government policy makers.



Figure 3 illustrates the logic used to define a framework for assessing CBNRM programmes. The starting point is the observation that collective action is only worthwhile if the net benefits of the value added through collective action exceeds the costs of this action.

Following this, the issue of rights invariably emerges as deterministic of outcome. Rights are important from several viewpoints. The economist sees property rights, and the principles of exclusion and exchange, as the foundation of the market economy. The sociologist is likely to focus on the power and distributional consequences of rights. Naturally, CBNRM is concerned with both of these issues (Figure 1).

The rights of exclusion and exchange are central to maximizing the production of value from rural landscapes. Negotiated reciprocity results in the pricing resources and therefore provides the mechanism for allocating rural resources to their highest value uses. Exclusion deals with the problem of over-use associated with the tragedy of the commons.

Property and rights theories also underpin issues of distributional equity: Who controls rural resources – the people living with them, or people in positions of power or authority? These organizational and power issues are critically important for determining how people are incentivized for husbanding and using their natural resources.

Managing natural resources at the level of the ecosystem requires a particular inspection of principles and best practice relating to control systems and scale. These concepts will be discussed in some detail, with an emphasis on the crucial and profound differences between scaling up and scaling down (see also Murphree, 2000). Control systems<sup>3</sup> consist, basically, of mechanisms for ensuring the integrity of management processes (i.e. conformance); internalizing the effects of externalities (e.g. environmental regulation), or for adapting the goals and process of management systems in the light of new experiences (i.e. learning).

The most common control systems are the hierarchies and regulations intended to cope with the imperfections and externalities of locally-based management. Unfortunately, these tend to static, bureaucratic and coercive, they often lack legitimacy, and are not able to deal with the massive changes in the relationships between economies, ecosystems and people. As soon as we accept that a control system is also a dynamic mechanism (i.e. an adaptive management process), and not only or even a static or bureaucratic concept to which ends it has often been captured, we recognize the importance of building a learning or evolutionary mechanism into the control systems. This leads to two questions:

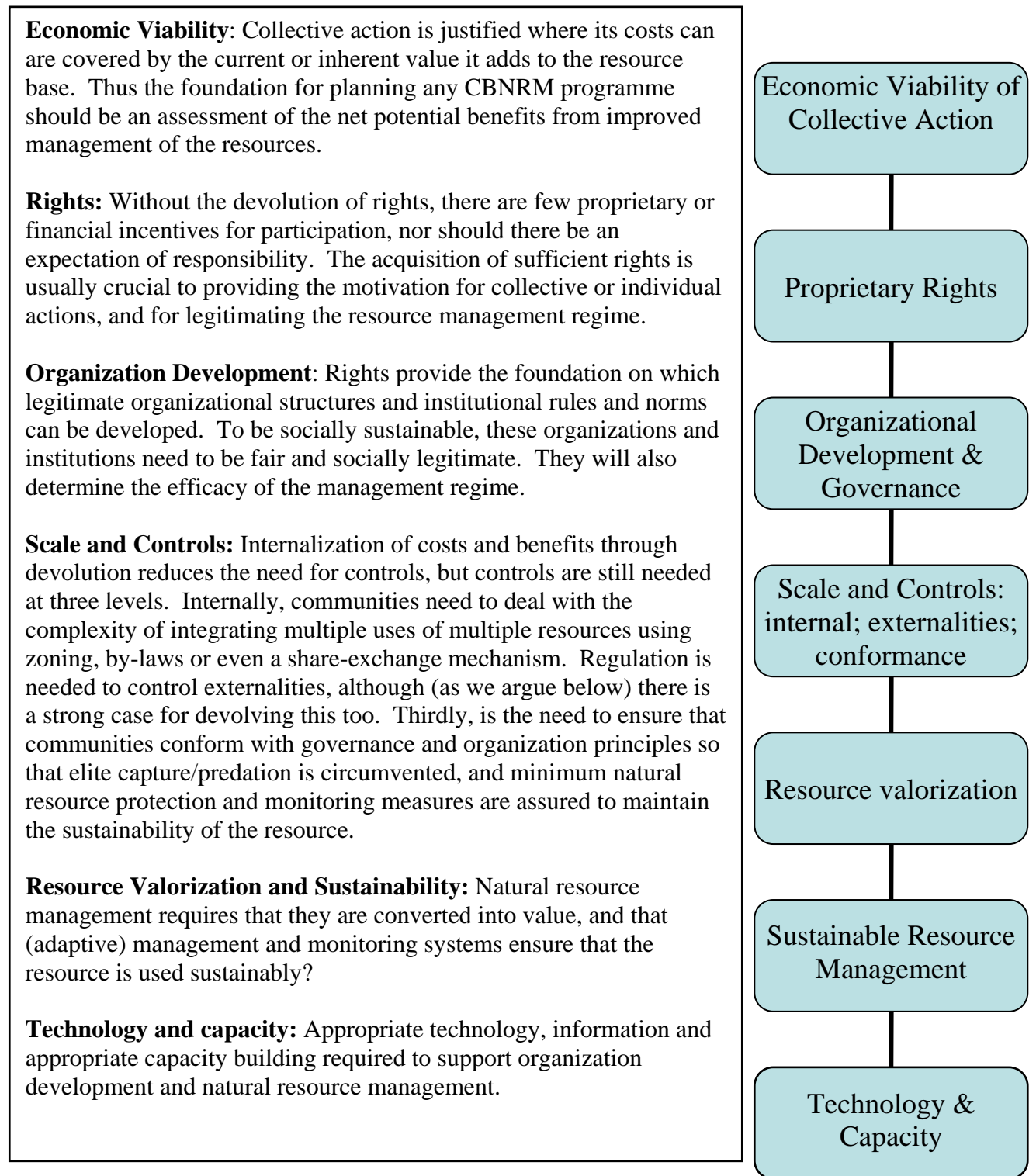
- *Is a system in place for controlling or regulating externalities<sup>4</sup>?*
- *Is a system for planning, monitoring and adaptation in place (i.e. an adaptive management process or learning/evolutionary mechanism)*

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<sup>3</sup> The control system of the business literature is analogous to the adaptive management process that is emerging in relation to environmental management. Both involve setting goals, task management, monitoring inputs and outputs, and evaluating whether goals are being achieved, as well as the iterative or adaptive/control processes linking these activities.

<sup>4</sup> In economics, an externality (or external factor) is a factor, for example, environmental damage, that results from the way something is produced but is not taken into account in establishing the market price of the goods or materials concerned.

**FIGURE 3: THE LOGIC USE TO DEFINE A CONCEPTUAL FRAMEWORK FOR EVALUATING CBNRM**



Sound frameworks of institutions, organizations, governance and rights provide the mechanisms within which communities can manage resources effectively. However, landholders still need techniques and information to be able to convert a resource into real benefits, as well as to manage it sustainably. Mechanisms for adding value to resources, and for managing them sustainably, require a further set of principles or practices.

The factors discussed above relate directly to the process of managing community institutions. This process takes place in a larger framework often referred to generically as the enabling environment within which the evolution of CBNRM is nursed. At a national level this includes important factors such as a political culture or legislation that values the rights of individuals and landholders, civil society including advocacy and legal redress, and the presence of technical agencies or individuals that can champion such programmes.

Capacity-building, a similarly catch-all concept, also falls within the realm of the enabling environment. There is a set of information, concepts, skills or techniques that communities will usually need to (a) organize themselves effectively and (b) manage their natural resources, as well as (c) for the monitoring of the performance or conformance of communities' governance and natural resource management. We need to ask if these concepts, skills and techniques are available. We also need to know if there is any capacity to provide these to communities, or to monitor conformance with principles or performance as a measure of progress.

The following sections take each of these component concepts in turn. They are described briefly, and ways of measuring them are suggested.

## 1 ECONOMIC VIABILITY OF COLLECTIVE MANAGEMENT

Before initiating or imposing CBNRM projects on communities is important to ask: *“Is the collective management of the resource economic viable?”* For collective action to be worthwhile and for it to be sustainable, the benefits arising from collective action should exceed the costs of maintaining community organizations and institutions<sup>5</sup>.

It is reasonable to provide external support to cover the transaction cost of establishing these institutions. But there are too many cases where the sustainability of collective action is assumed without careful analysis, and is initiated where only donor funding can sustain it. The rhetoric to diversify CBNRM away from wildlife in southern and East Africa is an example of new production systems being promoted in communities without first being confident about their technical or commercial viability<sup>6</sup>. Many of the production systems foisted on communities have serious questions as to their viability, and are often without private sector precedent – how many private landholders have profitable businesses that use indigenous timber, non-timber forest products, or low-end ecotourism? The failure to undertake a decent financial analysis is inexcusable. It results in investments that waste donor and community resources, and set unrealistic expectations in communities that are invariably dashed. Kiss (2004) would approve of the assertion that the entrepreneurial development of wild natural resources<sup>7</sup> is hardly the ideal entry level business for rural communities.

Financial viability<sup>8</sup> is critical to the sustainability of institutions. Therefore, any assessment of a community resource management regime must ask whether the resource is, or can be, viable. We suggest using an open ended question because of the many permutations that can contribute to the answer (Form 2 – annex 3) as shown in annex 4 (the example assessment of South Luangwa). This does not lower the expectations for a rigorous answer, but neither does it require economic complexity. A solid “back of the envelope” estimation is often sufficient<sup>9</sup>.

This is not to say that basic viability analyses are not fraught with difficulty. The markets for many of these resources are absent or undeveloped<sup>10</sup> so that market, cost and pricing information

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<sup>5</sup> The definition we use for CBNRM intuitively referred to high value resources. It was when we recognized the transaction costs of collective management that the rationale lying behind this intuition became clear.

<sup>6</sup> There is little evidence as yet to justify the large investments in community ecotourism by the USAID-funded projects in Kenya (CORE), Zimbabwe (NRMP) or Namibia (LIFE). See also Kiss (2004).

<sup>7</sup> Most of these resources have conventionally been managed centrally and excluded from private commercial use. With the exclusion of the private sector, products and markets have seldom been developed.

<sup>8</sup> The term “financial viability” refers not to finances but to whether the net financial and non-financial benefits at the level of the individual manager (be this an individual, community, or firm) are positive or not.

<sup>9</sup> Triangulating several sets of crude data is usually a better option than building a complicated financial model based on questionable or unrealistic assumptions. We can have confidence in the wildlife sector, for example, because in several countries private landholders are promoting this enterprise, and world markets for trophy hunting are buoyant. Promoting non-timber forest products is more risky as such precedent is missing.

<sup>10</sup> This is because the control of many of the resources with which CBNRM deals have been either highly centralized, especially for commercial uses, or access to them has been de facto open access. Without the entrepreneurial influence of market forces and the private sector, many wild resources are highly under valued. They remain as undifferentiated and undeveloped products, or are allocated to low value uses.

is rarely available<sup>11</sup>. When doing this analysis, consideration should be given to three reasons that wild resources are not valuable, and the consequences of this:

- The resource may have little or no inherent value. Basing a new management regime on such resources is unlikely to succeed.
- Resources have considerable potential value, but this has value never been developed. Reasons include open-access property regimes, over-centralization, and the exclusion of commercial uses or the private sector. Here the challenge is to identify and remove obstacles that prevent the inherent comparative advantage of wild resources being reflected in incentives, and in decisions that allocate scarce resources.
- Wild resources are disadvantaged relative to domestic commodities through what we may term differential “taxation” or regulation. Thus, a significant proportion of the value generated by wild resources is extracted for public use at local and central level through licenses, fees, the historical tendency to use benefits for public projects, and so on. It is usually far more difficult to obtain the authority to use wild resources because of the associated bureaucracy and regulation. Indirect effects also have significant impacts, such as the subsidization of rural livelihoods and agriculture (free schools, health care, fertilizer, marketing services), and rules and regulations that make trading wild products more difficult than domestic ones (e.g. veterinary regulations for moving meat or keeping wildlife; the bureaucratic process of getting permission to use wildlife or timber, etc.).

Wild resources are treated very differently from their domestic counter-parts, which is often why they are being replaced by them. Because this discrimination is so deeply embedded in our cultures, we need to be particularly vigilant to base analyses of wild natural resources on economic rationality, and particularly careful to avoid long-kept ideology. A useful question to keep in mind is: “is this how livestock or crops would be treated?”

The economic rationale for treating wildlife commodities differently from domestic ones is weak. Yet, there is an almost universal tendency for the state to centralize the management of wild resources that have commercial value, to capture much of this value for public uses, or remove the incentives for commercial value to be created. The bureaucratization of wild resources manifests itself in a set of rules and regulations that seriously reduce the ability of natural resources such as wildlife to compete for space with domestic resources such as crops or livestock. It is not a coincidence that many wild resources are replaced by domestic ones even when the inherent comparative advantage<sup>12</sup> suggests that wild resources should be a higher value land use option. The economic consequences of these distorted policy environments can be momentous (see Box 1).

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<sup>11</sup> For example, it is extremely difficult to find information relating to the prices of products from indigenous woodlands in central Africa, let alone develop a realistic business model or net margin analysis.

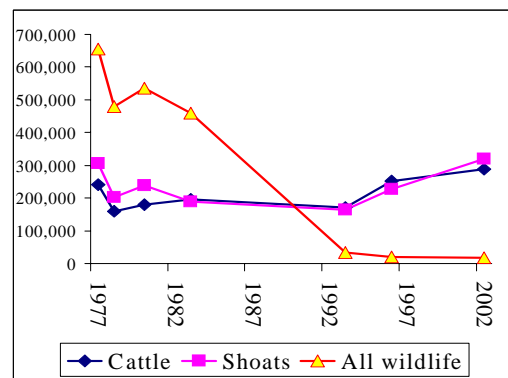
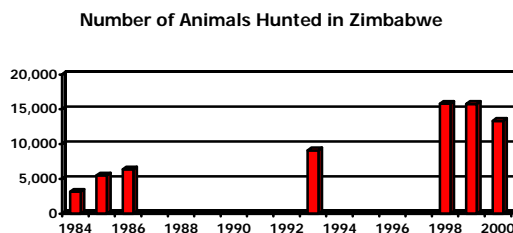
<sup>12</sup> The “inherent” comparative advantage refers to what the net relative value of the wild resource would be of all or most economic distortions were removed so that market prices approached social values.

**BOX 1: ILLUSTRATION OF THE IMPACT OF POLICY ENVIRONMENTS ON NATURAL RESOURCES SUSTAINABILITY USING THE COMPARISON OF WILDLIFE POLICY IN KENYA AND SOUTHERN AFRICA**

Southern Africa has liberalized wildlife policy to encourage landholders to use wildlife profitably, including commercial consumptive uses. Wildlife produces significant revenues and employment in areas too hot, remote or unattractive for tourism. Landholders are restocking wildlife and deliberately displacing conventional agriculture in areas where it is not viable. The wildlife sector is growing at rates in excess of 5% annually (Bond, 2004). Economic studies (Child, 1988; Jansen et al, 2001) confirm that wildlife has an ecological and economic comparative advantage. Unfettered by policy and legislative constraints, market forces encourage landholders to shift their enterprise mixes strongly towards wildlife production.

Kenya, in marked contrast, is a good example of the powerful negative impact of the differential treatment of wild resources. Kenya has a far better wildlife resource than southern Africa, but this has declined 30-60% since the early 1970s whereas southern African population has doubled or quadrupled. In 1950, there was almost no wildlife left in South Africa. Today, there is more hunting on private land in South Africa than in the rest of Africa combined.

The policy failure in Kenya causes antagonism between wildlife and people, a politically charge demand for compensation for wildlife damage, and even for wildlife eradication – indeed, the data suggests that Kenya’s disenfranchised landholders have already taken wildlife eradication into their own hands. The difference lies not in the potential of the resource to create value. Wildlife is traded in a world market and its inherent potential in Kenya exceeds that in southern Africa. The difference is artificial, and is created by policies which determine how much value wildlife is allowed to create, and for whom. This is illustrated by the comparing the rapid growth in wildlife in Zimbabwe (Booth, 2002) with the relative trends of wildlife and livestock in the Tana River District in Kenya, where livestock has rapidly displaced wildlife (source: Department of Resource Survey and Remote Sensing reports).

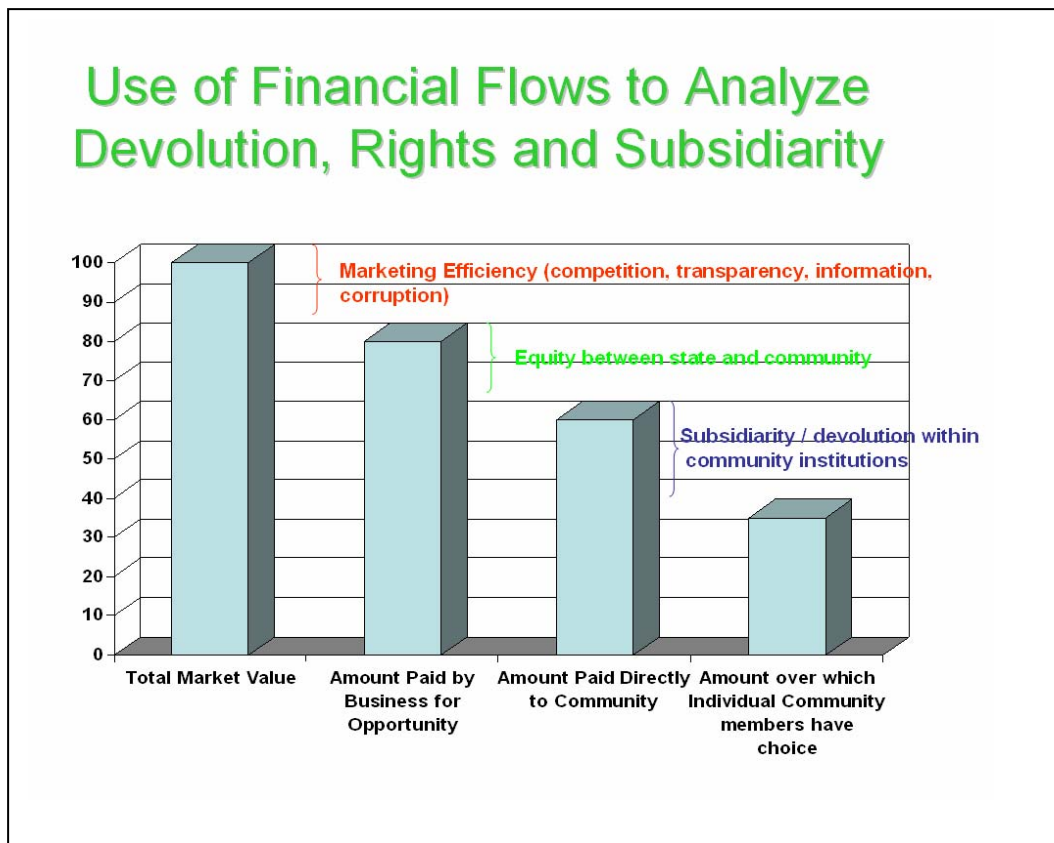


This suggest three important questions:

- ✓ First, does the policy environment allow the resource be allocated to uses of highest value, including commercial or consumptive uses?
- ✓ Second, can this value be captured by the landholders who bear the costs (or opportunity costs) of having the resource on their land?
- ✓ Thirdly, are natural resources competing on a level playing field with domestic resources in terms of differential taxation and bureaucratization?

We therefore need a methodology for assessing the attrition of private benefits compared to what individuals in a community could earn from their resources if free market conditions prevailed. Figure 4 compares (1) the market value of a resources with (2) the income earned from it as well as the quantity of benefits accruing to landholders as (3) public and (4) private benefits. This figure illustrates the attrition of private benefit at each level, and provides a useful, if sometimes rough, quantification of where the principle economic distortions or leakages lie and where in the system value is lost or transferred. It is a handy starting point for an assessment of policy (see Form 3, annex 3). The next step is to identify the causes of this loss of value. Factors include: uncompetitive marketing, lack of transparency and corruption in commercial negotiations, poor allocation of resources to best value, retention of revenues by central and local authorities or committees, and also ineptitude or corruption at these levels.

**FIGURE 4: USING FINANCIAL FLOWS TO ASSESS THE IMPACT OF POLICY DISTORTIONS ON THE VIABILITY OF WILD NATURAL RESOURCES**



Differential taxation is a problem that afflicts natural commodities, either through government extracting license fees (e.g. trophy fees or logging fees) or because at local level the income from the resource is used for public goods (e.g. schools, clinics, administration, etc.). This common problem serves to significantly under-value many of the natural resources around which CBNRM programmes are developed.

“Differential taxation” is of sufficient impact that it is worth evaluating separately. The most common examples are where a community is free to sell and retain all the proceeds from growing livestock or crops, but where their commercial use of natural resources is heavily prescribed and taxed. As noted, there is no economic logic for this differentiation but central and local governments usually extract fees from wildlife, forests and other commercially sold wildlife natural products; there would be an outcry if they imposed these same fees on domestic products. If communities are to be expected to develop the

economic potential of wild natural resources, these economic distortions need to be removed to allow natural resource commodities to compete equally. Figure 5 provides a template for measuring and illustrating differential taxation, and getting a rough approximation of the degree of differential taxation. It also provides a proxy measure of community empowerment in relation to specific natural resources. The question we are attempting to answer is (Form 2, Annex 3):

- ✓ *Is “taxation” of wildlife and natural resources similar to that of other agricultural commodities.* (i.e. there are no extra license fees, or retention of revenue by higher level bodies)

**FIGURE 5: TEMPLATE FOR ASSESSING DIFFERENTIAL TAXATION**

<b>Differential Taxation</b>			
<b>What percent of income is retained by Government (i.e. taxation) at different levels</b>			
<b>Commodity</b>	<b>Central Government</b>	<b>Local Government (District)</b>	<b>Community Government (Area, Ward, Conservancy, etc.)</b>
Hunting	<input type="text"/>	<input type="text"/>	<input type="text"/>
Tourism	<input type="text"/>	<input type="text"/>	<input type="text"/>
Natural Products	<input type="text"/>	<input type="text"/>	<input type="text"/>
Forestry	<input type="text"/>	<input type="text"/>	<input type="text"/>
Livestock	<input type="text"/>	<input type="text"/>	<input type="text"/>
Crops (.....)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Crops (.....)	<input type="text"/>	<input type="text"/>	<input type="text"/>



## 2 RIGHTS OF ACCESS AND EXCLUSION

People are connected to their natural environments through systems of property rights, and these sets of rights, rules and responsibilities (North, 1990) guide and control the way people use their environments (Hanna, Folke and Maler, 1996), often by shaping incentives (Alchian and Demsetz, 1972). Economic development and sustainable resource use ultimately depend on institutions that can protect and maintain the environment's carrying capacity and resilience (Arrow, et al, 1995). Where property rights can be well defined, decision makers take all consequences of their decisions into account. This is rarely the case with the natural environment. Because of assumptions that it is difficult to internalize consequences, and observations that even private owners overuse resources (not to mention the acquisitory incentive of the bureaucratic impulse), the management of many natural resources has been centralized in state agencies. We are now questioning whether this bureaucratization of natural resources is not an even more imperfect situation.

CBNRM is based on the theory that well defined property rights remove, to a significant if incomplete extent, the gap between private and social costs and benefits, and provide incentives to protect and invest in the productivity of the resource base. This is why CBNRM is essentially about devolving property rights, and privatizing resource management in the sense that rights are privately but collectively managed and limited at the level of the locality (i.e. private community management).

### (a) Allocating Resources to Highest Value

The efficiency of resource allocation is assumed to improve if the rights to use resources are internalized to individuals or communities who have the rights to allocate resources to the uses that create most benefit, the right to exclude others from taking these resources without paying, and the right to exchange resources to best advantage (i.e. a market). Internalizing costs and benefits as close as possible to the user reduces the gap between private and social costs and benefits. Bringing market prices to closely reflect the social comparative values of resources optimizes the allocation of resources. This combination theoretically aligns individual or community incentives most closely with those of society at large.

Well defined and enforced property rights provide the foundation for an effective free market economy. They establish the prices that guide resource allocation to the highest values uses in such economies. There is a strong correlation between property right and the growth and legitimacy of economies (De Soto, 2000).

A brief explanation of why property rights are fundamental to resource pricing, or what Adam Smith called the invisible hand, is provided. The delineation of rights of use and exclusion creates the necessity for exchange. This, people trade what they have for what they need. Central to the process of exchange is negotiation over relative values of resources. The outcome of these negotiations is what we commonly call

- ❑ Market and property economics provides a captivating theoretical description of the types of mechanisms that optimize the management of natural resources.
- ❑ However, this ignores or over-simplifies the dynamics of change and institutions.
- ❑ Moreover, pure capitalism suffers serious distributional weaknesses (and the transformation process is often plundered).

prices (which may be in cash or kind). Prices are vital for facilitating the exchange of goods in an optimal manner, and thereby for guiding the allocation of resources to the highest value uses. Such is the nature of voluntary exchange that, by definition, value is added through each transaction<sup>13</sup>.

By preventing outsiders from accessing resources without paying for them, the delineation of resources rights also closes out the problem of the tragedy of the commons, where the result of open access to resources is that they are under-valued and over-utilized. “Each man is locked into a system that compels him to increase his herd without limit – in a world that is limited” (Hardin, 1968).

There are two explanations for the failure of rural natural resource economies. First, that these are primitive, subsistence economies, where de facto open access results in over-use of resources (i.e. the tragedy of the commons) and the absence of exchange and economic specialization, prevents value being added to resources. Second, governments have, at least in legislation and intent, controlled virtually every aspect of the natural resource economy, including determining the levels and types of uses and the setting of administrative prices. This restricted trade regime, combined with subsidies, controls and arbitrarily set prices, results in a system rife with distortions (Stiglitz, 2000: 141).

#### **BOX 2: POLITICAL AND ECONOMIC LIBERALIZATION AND ZIMBABWE'S CAMPFIRE PROGRAMME**

An interesting historical observation is that Zimbabwe's CAMPFIRE programme was initially based on such free market economics, including a belief that long disenfranchised rural blacks had the right to participate freely in such an economy, and that in these rights to use and benefit from wildlife lay responsibility and the future of wildlife conservation. The engineers of Zimbabwe's CAMPFIRE programme were grappling with the economic contradiction that wildlife on private land was profitable and numbers increasing rapidly, while a superior wildlife resource on communal lands were being over-harvested without creating much value. In searched for a way to raise the economic productivity of rangelands and to control inefficiency and over-utilization, these enlightened bureaucrats were excited by the principles of delineation, exclusion and improved resource allocation. This became the conceptual logic behind the initial the formulation of Zimbabwe's CAMPFIRE programme (see Martin 1986, Child 1995 and Child and Child 1988 a, b). These proponents assumed that the efficient allocation of rural resources depended on the emergence of property rights and free markets, and Martin (1986) elucidated the concept of the management of resources by the “village company” including tradable shares. This anticipated many of the principles that emerged later, although even now practice has not approached this level of sophistication. The goals was to improve the allocation of resources through the internalization of costs and benefits, which coincided with the process of economic and political liberalization by allowing individuals rather than bureaucrats to drive choices through market exchange. In recent years, the importance of free market economics to CBNRM has been much less emphasized.

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<sup>13</sup> Sinden and Worrell (date) provide a far more detailed and lucid description of these principles.

Thus CBNRM is synonymous with the transformation of centralized / primitive natural resource economies into modern free market economies; from one where government controlled virtually every aspect of the resource economy to one where decisions are made by ordinary people through markets. Maintaining such an economy also requires a transformation of societies and of social and political structures, including systems of property rights, legal contract and justice, towards two ends: the adding of value through economic and allocatory efficiency; and the social equity and legitimacy necessary to sustain the social obligations and peace that the maintenance of such an economy requires. The market reformers transforming the post communist Soviet Union tried to take a shortcut to capitalism, creating a market economy without the underlying institutions, with the consequences of crony capitalism, plunging economies and social discontent that we see today (Stiglitz, 2000). The ideological belief in the power of property rights and markets ignored the importance of unsymmetrical power relationships, ignored the importance of institutional development and checks-and-balances, and did not allow time for a new institutional culture to evolve. The capture of resource by elites (e.g. aborted devolution), corruption and collapse in the legitimacy of resource regimes are also challenges faced by CBNRM, which is CBNRM is also about careful, rigorous, legitimate institutional development (see following section).

**BOX 3: A DEFINITION OF CBNRM**

In southern Africa, CBNRM is often defined as:

- ❑ the political-economic transfer of the rights to use (high-value) common property resources from the centre to communities, and
- ❑ the development of institutions and organizations to govern these rights and responsibilities
- ❑ CBNRM hinges on three key principles:
  - ❑ Economics and property rights – the internalization of costs and benefits (i.e. putting in place the conditions for the free market to operate) and the optimization of resource allocation through free individual choice and exchange
  - ❑ Social justice – those who bears the costs of wildlife/NR, should be the primary beneficiaries (i.e. putting in position the conditions that ensure that the free market operates with social justice not “capitalist exploitation”)
  - ❑ Sound organizational development and governance

**(b) Defining Rights: Does the Property Rights Regime Internalize Benefits and Responsibilities Sufficiently to the Locality at Which de Facto Management Occurs?**

We talk glibly about the importance of devolved rights. Devolved rights are certainly and profoundly necessary for any successful community natural resource management initiative. But what exactly do we mean by rights? Our approach is to list, intuitively, those rights that are

considered vital (Figure 6)<sup>14</sup>, and to hone these definitions by defining quantifiable indicators for measuring these rights (Form 4, Annex 3).

**FIGURE 6: A LIST OF USE RIGHTS THAT, IN PRACTICE DETERMINE THE EFFECTIVENESS OF COMMUNITY NATURAL RESOURCE MANAGEMENT RIGHTS THAT ARE IMPORTANT IN PRACTICE**

<b>USE RIGHTS THAT ARE IMPORTANT IN PRACTICE:</b>
<p>1. Can the resource be used to best value?</p> <ul style="list-style-type: none"><li>• The right to use the resource: how can it be used?; where and when can it be used?; who can use it?</li><li>• The right to allocate the resource to highest value uses, including commercial and/or consumptive uses (communities are often excluded from this right which is retained by government)</li><li>• The right of disposal / transfer / sale (i.e. commercial versus subsistence rights; and choice of business partners). This includes rights to use the resource through commercial contracts, and to choose and conclude partnerships, contracts or concessions with the private sector.</li><li>• The right to retain the benefits of self and commercial use. An important distinction is whether this right lies with the individuals who collectively make up the community (i.e. private benefit) or only with the community (i.e. public benefit), or with an agency acting on behalf of a community.</li><li>• Duration and security of tenure (which affects conservation and investment decisions)</li></ul>
<p>2. Management Authority:</p> <ul style="list-style-type: none"><li>• The right to manage the resource, including to set offtake levels, and choose natural resource / enterprise outcomes</li><li>• The right to negotiate and manage contracts</li></ul>
<p>3. Can others be excluded from using the resource?</p> <ul style="list-style-type: none"><li>• The right to exclude others from using the resource</li><li>• Effective mechanisms to control deviants (formal and informal by-laws and zones)</li><li>• Policing rights</li></ul>
<p>4. Right of compensation (in cases where rights - and therefore responsibility and ownership - are extracted by higher authority).</p>
<p>Important Issue: Who allocates use rights?</p>

As we have noted, property rights lie at the root of both market and political-institutional economics, and provide an important starting point for any analysis of CBNRM defined, as we

<sup>14</sup> Our starting point is a list of those rights that were identified as important by practioners implementing CBNRM programmes. This table reflects the experiences of some twenty leading southern African CBNRM practioners at the WWF SARPO regional workshop on establishing CBNRM performance criteria held in Pretoria in August 2004.

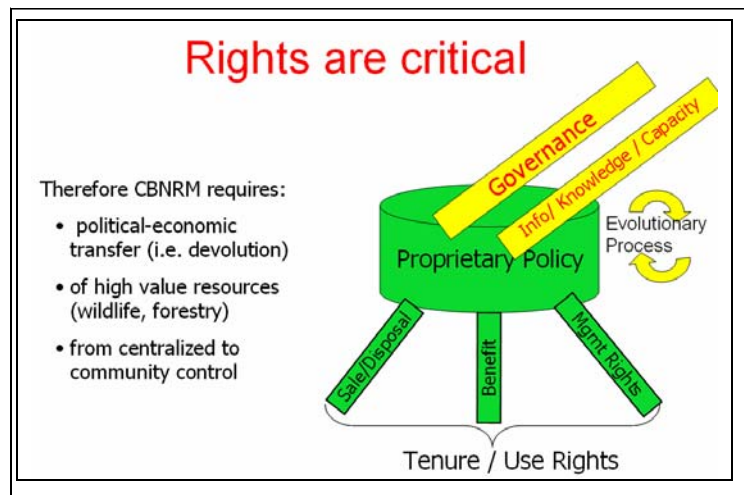
have above, to be fundamentally about the political economics of rural natural resources. As the illustration of the three legged pot suggests (Figure 7), rights are the foundation and starting point for CBNRM programmes. There are several kinds of rights, all of which need to be somewhat in place for programmes to be effective. In shorthand, these are symbolized by the rights to keep benefits, the rights to allocate and/or sell resources to best advantage, and the authority to manage these resources. Hence the following question:

- ✓ *Is the unit of production (e.g. community) empowered with the right to benefit; the right to allocate/sell the resource to best advantage; and the authority to manage the resources to the ends that they desire, including rights of exclusion?*

The importance of incentivization, which Murphree (2000) describes as the fulcrum of responsibility, requires clarification of what exactly we mean by the right to benefit. Two issues are critical:

- ✓ What proportion of the benefits get to the landholders who actually produce the resource?
- ✓ Are benefits treated as public or a private assets?

FIGURE 7: THE "THREE LEGS" OF DEVOLVED RIGHTS



**(c) Revenue Sharing**

We hear the term “revenue sharing” so often that we are almost immune to analyzing exactly what it means. While sounding benign, if not generous, it is far from that. Revenue sharing is usually a euphemism for extracting resources from the poorest of the poor. It has the additional and pernicious conservation and economic consequences that it distorts rural economies, and also disadvantages wild or natural commodities relative to domestic ones (see argument about differential taxation presented above). As an elder from the Mahenye community in southern Zimbabwe put it during negotiations over the principle of who rightfully benefits from wild resources, he was more than happy if all twenty wards in the district shared the wildlife revenues that emanated only from his ward; but the quid pro quo was that the same principles should apply to all production in the district – including cotton, tobacco, livestock and maize! If people growing crops of livestock don’t need to share their proceeds with the larger community or nation, why should people growing wildlife or forests?

An important quantitative measure of rights, therefore, is the proportion of net benefits that actually gets to the community, or more specifically to individuals within the community. This has already been discussed in relation to Figure 4 which describes the attrition of benefits between national and individual levels of management.

#### **(d) Public versus Private Benefit**

The right to benefit needs to be further dissected as it does not draw out the crucial distinction between public and private benefit. Even if the same amount of benefits gets to a community, the way these benefits are then managed makes a great deal of difference to the level and perception of benefit. For instance, thus the way money is managed in community is often more important than the amount of money reaching that community.

Factors that under-value benefits are where decisions are made only by the elite, where projects are poorly chosen or implemented, where a large proportion of the benefits are used in unproductive ways such as excessive meetings and sitting allowances, and where there is corruption or misappropriation.

Benefits, and the perception of benefit, is maximized where each member receives a private (e.g. cash) dividend from the management of a collective resource, and where collective use of benefits is decided and controlled through community consensus. The cash distribution process described by Child et al (1997) provides an example of how this is achieved in practice. Processes whereby the benefits are, first and foremost, controlled by individuals within a community have two sets of benefits. They maximize the creation of value. In a similar manner to a competitive market place, the community chooses how to allocate benefits among competing uses such as community projects, household uses, or management activities, and this reflects what the community values most. Secondly, the process of allocating and managing these benefits can provide a highly effective vehicle for building organizational capital, e.g. learning about democratic process, project planning and management, financial management and accountability, efficient administration, and the like.

The bottom line is that where individuals have the right to retain all the benefits at household level (often in the form of a cash dividend) and need to be convinced to give some of their private benefits up for collective projects, not only are good choices made, but community members control their finances and therefore have a means of holding their leaders to account. Hence the importance of the following question (see Form 4, Annex 3):

✓ *Do individuals within the community have the full choice of how to use the benefits / revenues from the resource including the option of cash dividends*

In theoretical terms, we are determining whether the benefits are perceived as private or public benefits. Private benefits tend to create a far higher perception of value, whereas public benefits are often subject to the problems of elite capture, bureaucratization and corruption introduced above. Emphasizing private control of benefits, however, does not preclude public works or investments. The trick lies in ensuring that benefits are controlled privately, but that mechanisms for collective investment in public activities are in place<sup>15</sup>.

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✓ <sup>15</sup>The mechanism used in some southern African community wildlife programmes (see Dalal Clayton and Child, 2003) is to apportion and disburse the full share of wildlife revenues to each individual (i.e. household cash dividends) and to then immediately recover a contribution for projects as agreed collectively by all members of the community.

This implies that there are two goals: incentivizing people to manage wildlife, and constructing public infrastructure. This is another of those profound but subtle distinctions that are too often glossed over despite their substantial import. Even officials whose primary objective is to conserve wildlife, for instance, tend to promote the use of wildlife benefits to build public structures. This misses the point since, for the reasons explained above, it devalues wildlife in the eyes of the very people they are trying to encourage to conserve the wildlife resource. Logically, both the economist and the ecologist should promote private benefits: the ecologist because this is the best way for incentivising the sustainable management of natural resources; the economist because this is the best way to grow the local economy, and therefore to be able to sustain public infrastructure and services in the longer term. People from budget-funded institutions (and these are the people usually involved in rural development), however, tend to favour the development of public facilities without regard to their sustainability or the sustainability of the rural economy needed to support them.

Figure 8 provides a format for assessing the status of use rights. It also quantifies the strength of these rights by assessing the attrition of incentives to the local level. We suggest five questions:

- Does the community have the right to use the resource in question, and under what conditions (how, when, where, who)?
- Does the community have the right to retain all the benefits from this use?
- Does the community have the right to allocate and/or sell the resources to the highest value uses, including uses that are commercial and/or consumptive?
- Does the community have the right (authority) to manage the resource, control deviants within the community (e.g. through by-laws, zoning and sanctions) and to exclude others from using the resource?
- Does the community have the right to negotiate, sign and manage contracts?

**FIGURE 8: FORMAT FOR ASSESSING USE RIGHTS AND THE ATTRITION OF LOCAL INCENTIVE BY POLICY FAILURE**

<b>ASSESSMENT OF USE RIGHTS</b>								
	<b>Devolution of Use Rights</b>					<b>Income Attrition Rates Due to Policy (Rights) Failure</b>		
Type of Resource	Does the community have the right to use the resource - how, when, where, who?	Does the community have the right to retain all benefits?	Does the community have the right to allocate and/or sell the resource to highest value uses (e.g., commercial and/or	Does the community have the right to manage the resource, control deviants and exclude others from using the resource?	Does the community have the right to negotiate, sign and manage contracts?	Potential Income	Gross income	Income retained by community (individuals)

Resource 1								
Resource 2								
Resource 3								
Resource 4								
Resource 5								
Etc								
TOTAL								

This table (Figure 8) is the basis of Form 4 (Annex 3), together with the questions (see above) regarding (1) devolution of rights and (2) whether communities have full choice including household cash dividends.

To add a temporal dimension, a third question regarding the duration, tenure and reliability of these rights is added. Faith in rights and their duration is a critical factor in whether or not communities perceive them to be legitimate and sufficient basis to invest in institutions, organization and behavioral changes.



### 3 ORGANIZATIONAL LEGITIMACY AND EFFECTIVENESS

#### (a) The Loose-Tight Properties of Devolution

When we discussed the importance of exclusion, exchange and rights for the profitable and sustainable management of resources by landholders, we suggested that the failure to develop successful resource governance was caused by weaknesses in change processes and the institutions and organizations arising from them. Problems like elite capture<sup>16</sup>, corruption and inefficiency undermine legitimacy and cause the of resource management regimes. These challenges certainly face CBNRM, which is why careful and rigorous institutional development is so important. Elite capture (in parallel with the oligarchs of post-Soviet Russia) and the challenge of “management by committee” or endless meetings reflect the recurring issues of organizational legitimacy and effectiveness.

Devolution and community based management are powerful concepts, but they are not a soft approach. Management texts laud the effectiveness, and how much human energy can be released, by giving people the motivation and authority to make decisions for themselves (e.g. through flattened hierarchies and self managed teams). However, they also stress that this is a highly rigorous process that builds on personal discipline and requires tough performance criteria. Peters and Waterman (1982) capture coined the term “loose-tight” to capture these properties of successful management systems. Loose in that “the monkeys are allowed to run the zoo”, but tight in that managers are held to a few key and inalienable performance requirements.

There is often too much lassitude associated with the process of devolution. Devolution is not simply giving rights to the poor or disenfranchised, walking away from the system, and expecting all to be well. It is a rigorous that carefully aligns incentives, rights and responsibilities. Paradoxical, and even heretical, as it may appear to a process of liberalization, devolution requires rigorous and disciplined adherence to set of conformance criteria. These should be designed to create transparency and accountability, to protect the weak from elite capture and predation, and to ensure that resources are monitored, protected and managed sustainably. Such conformance criteria add discipline and robustness required of a devolutionary process. The crux is to identify the absolute minimum number of key controls – for, if there are too many controls, we lose control (Drucker, 1973) – and to monitor them and strictly insist that they are followed. Insistence on democratic process and financial accountability are important requirements. Conformance criteria are discussed in section 5.

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<sup>16</sup> Is this not the very phenomena that gives “capitalism” its bad name? Free market economics is a powerful mechanism for the greatest good for the greatest number, assuming that starting conditions are reasonably equitable. But this is the nub: of starting conditions are not reasonably equitable, the capitalist system seems to spin rapidly towards two poles – the rich versus the poor – and it is here that its legitimacy becomes questionable.

#### **BOX 4: THE PARALLELS BETWEEN CBNRM AND MODERN MANAGEMENT THEORY**

CBNRM has remarkable parallels with organizational theory, where a confidence in strategic planning and command-and-control systems, which has many parallels with top-down, reductionist bureau-scientific management, is giving way to approaches based on devolution, self-managed teams and performance discipline. This reflects an increasingly inclusionary (democratic) world view, and a shift in perceptions from one where people are seen as basically lazy and therefore need to be controlled if they are to be productive, to a recognition that people are self-motivate (albeit, under the right conditions)<sup>1</sup>.

Since CBNRM is about organizational development, we suggest some key texts. Micklethwait & Wooldridge (1997) provide an excellent overview of the evolution of management theory. Peter Drucker's (1973) chapters on budget funded institutions are particularly relevant to conservation organizations. Peters and Waterman's (1982) seminal book provides an excellent analysis of the factors that make organizations work. Hersey and Blanchard (1988) introduce useful theory on the behaviour of humans and organizations, while Handy (1994) gives a useful and readable analysis of devolution and subsidiarity.

" Shelly once claimed that poets are the unacknowledged legislators of mankind; Today that honour belongs to management theorists. Names such as Drucker and Peters may not have the same ring as Wordsworth or Keats; yet whatever we look, management theorists are laying down the law, reshaping institutions, refashioning our language and, above all, reorganising people's lives." Micklethwait & Wooldridge (1997).

#### **(b) Accountability**

CBNRM is fundamentally about institutions<sup>17</sup>, and about transferring rights, and the rightful ownership<sup>18</sup>, of resources to the people who live with these resources and affect what happens to them<sup>19</sup>. For Murphree (2000), the core reason for this position:

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<sup>17</sup> As Child (forthcoming) notes: "CBNRM can be viewed primarily as conservation, using economic benefits to encourage communities to husband wildlife. It can be viewed primarily as a development programme, using wildlife sustainably to fund rural development at household and community level. While both are true, this author prefers to define CBNRM as an institutional or organizational development programme, whereby wildlife is used to economically empower grassroots communities with the money flowing through communities providing the catalyst for them to organize themselves around democratic and managerial principles. Only organized and reasonable equitable communities are likely to conserve or develop."

<sup>18</sup> Deciding what is "rightful" is a politically laden choice. We take an instrumentalist approach that supports both economic efficiency and social legitimacy: thus, those who bear the primary costs of living with wildlife should also be the primary beneficiaries. Where this coincides with marginalized people, as it so often does, then this is a happy coincidence.

<sup>19</sup> There are often, but not always, marginalized and disenfranchised rural communities long excluded from legal management and benefit

“lies in the alignment of authority, responsibility and incentive. Incentive is the fulcrum for responsibility, the motivation for environmental investments and controls, and requires a clear perception of the links between management inputs and output benefits. Authority and responsibility should be linked. When they are de-linked and assigned to different institutional actors both are eroded. Authority without responsibility becomes meaningless or obstructive; responsibility without authority lacks the necessary components for its efficient exercise. Large jurisdictions tend to lack or obscure these linkages. They claim authority but their authoritative reach exceeds their implementational grasp and they are forced to assign responsibility “downward,” thus breaking the conjunction. Similarly the extended bureaucratic processes which they are forced to employ obscures and sometimes distorts conjunctions between input and output. Small jurisdictions are better placed to sharply delineate and operationalise these essential linkages. Authority and responsibility can either be merged under one institutional actor or tightly articulated between the limited range of actors involved. The relationships between investment and return are likely to be more immediate and apparent.”

In short, Murphree argues for a situation where every action is reciprocated by a reaction, which is another way of defining accountability.

Unfortunately, this intellectual analysis of CBNRM has not really been translated into practical mechanisms for implementation so that the institutions that have arisen to manage CBNRM remain remarkably crude. These are invariably based on committees but constitutions, procedures and practices often fail to incorporate principles of democracy, and accountability; mechanisms for performance effectiveness are often rudimentary; and more often than not projects mis-manage issues of scale and inclusivity and work with elite groups that ‘represent’ communities rather than through a highly participatory and democratic process at village level. These weaknesses are all to do with the fundamental issue of accountability.

Given the powerful and asymmetric political economic forces at play, the creation of devolved and accountable institutions is often a challenging task. It is made more challenging because of the absence of principles and data to substantiate or guide devolved institutional and organizational development. This leaves the committed champion woefully short of ammunition to bring to bear against the considerable forces vested in the centralized status quo<sup>20</sup>. Profound, but determinative, subtleties are emerging: for instance the differences between participatory and representational democracy and between upwards and downwards accountability (Box 5); the difference between private and public benefits; mechanisms of accountability and transparency; and issues of scale and constituency legitimacy.

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<sup>20</sup> This is not to say that a technical presentation of the requirements for an outcome towards the greatest good for the greatest number is always, or even usually, effective ammunition. As the ancient wisdom goes: “there is none so blind as those they do not wish to see”.

## BOX 5: TYPES AND COMPONENTS OF ACCOUNTABILITY

### Accountability

Accountability works in two directions - upwards and downwards. The key to legitimacy and effectiveness is usually downward accountability to the community. However, devolution requires adherence to certain principles, hence the need for "compliance" or upward accountability. Key areas of compliance are:

- Governance (transparency, equity, accountability, democracy)
- Financial management
- NRM (targets and effort)

At the local level we need to look at accountability in terms of:

- Organizational/ / institutional arrangements (e.g. constitutions, rules, etc.), i.e. is the organization accountable to its members?
- Performance against organizational, financial and technical targets, i.e. performance accountability.

### (c) Achieving Accountability in Practice

The neglect of institutional management is illustrated by the relative availability of training materials. In southern Africa, for example, there are excellent manuals on a variety of aspects of wildlife and natural resource management<sup>21</sup>, and an excellent system of community based natural resource monitoring and management is also developing<sup>22</sup>, but the same cannot be said for institutional development. Indeed, although institutions are the hub around which this natural resource management turns, there are relatively few analyses or practical tools to support institutional development.

The quality of the academic debate about participation, democracy, accountability and equity, now needs to be translated into practical organizational development and management methodologies that incorporate these principles. Thus, a constitution translates theoretical principles about rights and democracy into the rules by which a community can govern itself. Devolved rights, transparency, accountability, democracy are achieved through transparent double-entry booking keeping, general meetings that are conducted properly, sound voting procedures, effective use of budgets and variance analyses as tools for planning and control, systematic project planning and control, action minutes, and the inculcation of a culture of performance reporting.

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<sup>21</sup> See the quality series of manuals produced by WWF Southern African Regional Programme. Incidentally, the participatory manner in which these manuals were produced (including locally produced manuals and posters), and their subsequent value in consolidating institutional memory in communities, is an experience worthy of being written up as a case of best practice.

<sup>22</sup> The "Event Book System" developed by the WWF LIFE programme and partners in Namibia's CBNRM programme is another example of best practice. It moves well beyond participatory rural appraisal, and places the tools for adaptive management in the hands of communities.

We need some simple tools for measuring governance and organization development, which include the legitimacy of the organizations and institutions (i.e. accountability and participation), and their ability to get things done (i.e. effectiveness and efficiency). This suggests two questions:

- ✓ *Are community organizations directly accountable and legitimate to their constituency (i.e. membership)*
- ✓ *Are community organizations effective and efficient?*

#### **(d) Using the Constitution to Measure Organizational Legitimacy**

Having taken the position that resources are better managed when rights and responsibilities are devolved and internalized at local level, we need to define the conditions whereby these local organizations are legitimate, and thence effective. Organization legitimacy requires mechanisms that ensure that members decide what their organization does and control its financial and technical performance against these instructions. The euphemism “governance” usually relates failure in organizational legitimacy, including the amount of corruption, elite predation or capture, etc. The point is to avoid re-creating authoritative hierarchy even at local level, but to involve people fully in the collective process of managing their resources. Therefore what we need to know is: Does the general community give instructions to any elected committee? Does it receive regular and accurate reports on financial variance and technical or resource management performance? And can the general community ensure corrective actions are taken or sanction mismanagement?

The purpose of a community’s constitution (Figure 9) is to define the membership, and to lay out the rules of operation. A good starting point to assess organizational legitimacy is to evaluate the intention and implementation of community’s formative document or constitution. Does this incorporate the principle that the process is owned, decided and controlled by the constituency or membership (and not vice versa)? Are their mechanism and structures that ensure that the organization’s performance and leadership is decided by and accountable to the membership? Does it have the authority to sanction deviants and control resource allocation? Figure 8 lists some of the key issues that should be included in an effective constitution. To test a community organization in practice, we assess both the intent and implementation of its constitution (see Form 5, Annex 3). To this form we add a general question about accountability, and several about scale, the subject to which, after a brief comment on organizational effectiveness, we now turn.

**FIGURE 9: COMPONENTS TO LOOK FOR IN A AN EFFECTIVE COMMUNITY CONSTITUTION FOR A PARTICIPATORY DEMOCRATIC ORGANIZATION**

**Constitution (measures intention of rules)**

- Defines membership (rules / definition) and geographic responsibility
- Outlines procedures for developing and/or amending the constitution (usually by consensus)
- Defines rights
  - states that benefits legitimately belong to each member of the community, and that they have the choice to allocate them including members' (cash) dividends;
  - entrenches subsidiarity including clauses that state that the membership is entitled to instruct any implementing committee (e.g. choice of use of benefits as captured by the annual budget) and is entitled to regular reporting on financial and technical performance (e.g. quarterly financial variance analysis)
- Accountability, defines
  - who makes decisions and who implements them (subsidiarity),
  - reporting requirements on financial, technical and natural resource matters (e.g. requires quarterly general meetings and sets minimum contents of these meetings - presentation of accounts, status of projects, etc.:
  - Sanctions
- Clarifies management structures, functions and responsibilities
- Describes mechanisms for designation and control of leadership - electoral process (annual), sanctions on leadership, extra-ordinary general meetings, powers of limitation
- Includes powers of zoning and control such as by-laws, land use zones, responsibility for setting and allocating quotas, etc.)

It is useful to test community awareness / knowledge about constitution using individual questionnaires or focus groups

**(e) Effectiveness and Performance**

Effectiveness and efficiency relate to an organization's ability to make effective plans, to implement these plans, to take the necessary corrective action, and to achieve this while using resources efficiently. It is more related to task management than organizational legitimacy. To assess if a community organization is likely to be effective, several indicators are useful (Form 6, Annex 3). These include the presence or absence of basic systems for organizational management such as annual general meetings, bank accounts, annual budgets and workplans, cashbooks, variance analysis, and minute books. More detailed evaluation of the effectiveness and efficiency of a community organization requires technical or financial variance analyses. This is better incorporated as part of an adaptive management process than included in the evaluation of a community institution.

## BOX 6: A NOTE ON THE SEQUENCING OF INSTITUTIONAL EVOLUTION

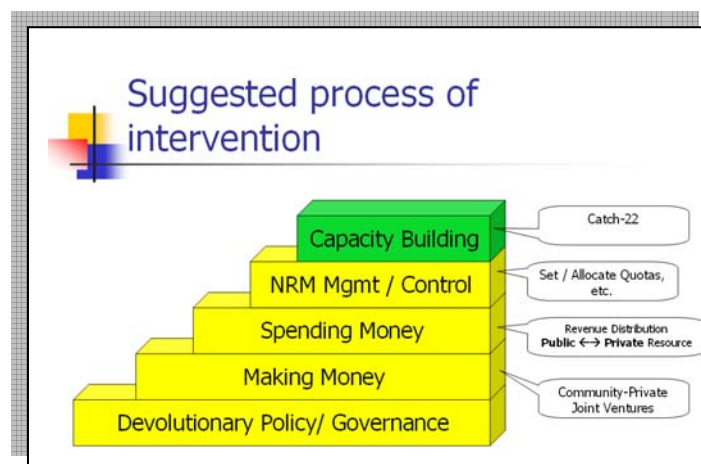
The hypothesis underlying behind CBNRM is that centralized, bureaucratized, sectoral, hierarchical, top-down management of most renewable natural resources simply does not work – it is beyond the implementational grasp of government agencies or bureaucracies. The alternative is to devolved rights so that people living with resources have the rights and incentives to manage them sustainably. At this level resource management is usually highly integrated because people simply do not think in a hierarchical or sectoral manner.

This introduces the importance of sequencing. Do we hold out rights at the reward for improved management capacity and responsibility? Or are rights the basis for institutional, organizational and managerial evolution.

There is limited evidence that the incrementalist approach towards the uptake of rights and responsibilities works. For instance, in the CBNRM data from both Namibia and Botswana, trajectories in participation, benefit, organizational development, and commercial growth were not positive for a number of years after these programmes were initiated. They only took off following key legislative or policy opportunities that devolved use rights or benefits to communities (see Child, forthcoming). This supports the contention that **“clearly defined rights and responsibilities should be recognized as the basis for institutional evolution rather than being held out as its reward”** (Murphree, 2000).

The practical implications of this argument are to take the big leap of devolving full authority, but to link this to a commitment to specific organizational principles. Thus, communities receive the rights to manage and benefit from a resource, provided they conform to these principles. The prime responsibility of implementing agencies is to monitor conformance. Capacity building is then linked directly to legitimate performance weaknesses. Sanctions are applied when conformance failure is a result of deliberate mis-management.

There is also a practical logic to implementational sequencing. Once rights are in place, it is important to convert resources into real, and often tangible, benefits “making money”. The flow of these benefits is a powerful tool for organizing a community. It also provides the incentives for natural resource management and control. With both organization and incentives in place, capacity building is more effective.



#### **4. SCALING DOWN AND SCALING OUT: MANAGING CBNRM AT ECOSYSTEM LEVELS**

Sections 2 and 3 above have laid out the conceptual framework and principles of CBNRM, which are embedded in the imperative to match dispersed regime profiles with the institutional tendency towards stakeholder differentiation - the association of specific places and resources with units of proprietorship whose constituents are the primary stakeholders. Frequently these units are referred to as "communities" or "the local", although both of these terms have their definitional ambiguities. More important than the terms are the factors which may create this differentiation: common history, ethnic and kinship ties, residence or propinquity, dependence on and investment in the resource base and direct cause-and-effect linkages between action and response. However these factors combine (and we must recognize that they combine dynamically) the result is a sense of collective proprietorship over a defined commonage, which is distinct from the larger "public domain."

These institutional regimes are social artifacts which have evolved with little attention to ecosystem considerations. As a result institutional geographies bear little resemblance to the idealized regime mapping that ecosystem considerations would dictate. What, on ecological criteria, should be unitary regimes of management are cross-cut by institutional boundaries embedded in socio-political history. *It is this mis-match between institutional and ecological landscapes that constitutes a fundamental policy challenge for environmental management.*

Two basic policy stances present themselves as possible responses to this challenge. One is to "scale-up" institutional management through hierarchical systems of jurisdiction, concentrating it in regime nodes more closely corresponding to ecological inter-connectivity. This approach carries with it a strong bureaucratic logic and it is not surprising that it constitutes a powerful contemporary policy direction. The second approach is to accept the institutional imperatives which have led to a diverse and dispersed regime landscape and seek congruence in ecosystem management by "scaling out," that is by linking these regimes through systems of functional collaboration. In effect the first, "scaling up" stance seeks institutional alignment through appropriation; the second, "scaling out" stance seeks this through aggregation.

Both stances have their problems. "Scaling up" inflates bureaucratic and transactional requirements, and limited resources may restrict the reach of this approach. This in turn may lead to a disjunction between authority and responsibility, which is institutionally fatal. Finally and fundamentally, being appropriative, "scaling up" has problems with legitimacy, and runs the serious risk of creating management superstructures which lack the essential foundation of constituency support. "Scaling out" has its own problem, since this may result in fragmented and discontinuous ecosystem management. Dispersed regimes need coordination and collaboration which manages diversity, controls conflict and exploits potential synergies.



**(a) Matching Institutional and Ecological Geographies: The Principles of Subsidiarity and Reciprocity**

Matching institutional and ecological geographies is thus the conceptual conundrum mentioned in the introduction: how to produce an integrative system congruent with ecosystem management imperatives while retaining the dynamic of devolved proprietorship. No policy is likely to completely eliminate mismatches in institutional and ecological geography but there is the potential for policy re-direction that can produce a greater congruence between the two. We suggest two underlying principles which can usefully guide this redirection: subsidiarity and reciprocity.

a) *Subsidiarity*. The concept of subsidiarity has gained currency in recent literature on organizational theory (Handy 1994), development theory (Martinussen 1997) and in international political debate. It is in fact a principle of the Maastricht Treaty of the European Union (Major 2003). Simply put, the principle suggests that in any hierarchical organization if a function can be carried out at a lower level in the system then it should be carried out at this lower level. More aphoristically Child calls this "leaving the power as close to the action as possible" (Child 2003: 11).

Subsidiarity underlines the arguments which have been advanced for the devolution of environmental governance to dispersed and localized small-scale regimes. On the grounds of institutional efficiency there are cogent reasons for doing so. Generally, the smaller a regime is the more effective and efficient it will be. Costs and benefits are more easily internalized. Increases in scale complicate communication and decision-making, and beyond certain levels regimes must bureaucratize with attendant transaction costs. Compliance inducement shifts from low-cost modes of moral and peer pressure to high cost methods of policing and formal coercion. Beyond this, since these regimes are more likely to be responsive to local agendas their internal legitimacy tends to be higher than those perceived as exogenous and imposed.

Subsidiarity is not, however, a principle which gives unqualified endorsement to a blanket, across-the board policy of devolution in environmental protection. There is an important qualification in its definition: devolution in functions to lower levels should occur only if these levels are able to carry out these functions<sup>23</sup>. This ability, in turn, is determined by the nature of the resources concerned and the competencies of the levels involved. The subsidiarity principle may thus be as much an argument for "scaling up" as "scaling out", depending on circumstances. I will return to what these circumstances are below when we discuss the application of this principle.

b) *Reciprocity*. Reciprocity, the exchange of goods, services, status and responsibility for mutual benefit, is a fundamental aspect of social interaction. Often it is unobtrusive, hidden beneath normative expectations which are taken as "given", but are in fact reciprocal relationships which have evolved to deal with variations in resource endowments, household capital, seasonal cycles and intermittent demand. The rural African landscape is replete with

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<sup>23</sup> However, the important principle is that of the upwards delegation of functions as and when the need for collective action at a higher level is required. The extraction of functions by higher levels from lower levels in a hierarchy would countermand the principle of subsidiarity.

examples of the periodic use by localities of resources in other localities such as water points, grazing and the fruits of the veld (Nemarundwe 2003). This has been used as a critique of the “hard” boundary aspect of devolved regime approaches: “There is no match between organizational boundaries (be they traditional or modern administrative ones) and biophysical ones...Boundaries are porous [and] it is very difficult to see how boundaries can become more clearly defined” (Sayer and Campbell 2004: 139). While the point about difficulties in boundary formation is well taken, the critique misses the larger point. What is described as porosity is in fact an example of informal, though institutionalised, reciprocity.

In advocating reciprocity as a principle to guide our search for linkages in the institutional and ecological landscape we are however using the term here in a more explicit, contractual sense. For the purposes of this presentation the principle of reciprocity is represented by negotiated agreements between two or more defined parties in which specifically designated sets of assets are exchanged for other reciprocally complementary sets of assets for purposes considered to be mutually beneficial. The assets concerned may be material (i.e. land, resources, labour, skills) or social (i.e. authority and responsibility). The implications of this definition are discussed in the following sub-section.

#### **(b) Applying the Principles**

We have suggested two principles, subsidiarity and reciprocity, as guides for policy to integrate CBNRM with larger ecosystem management. In examining their implications and application we emphasize that both principles deal with responsibilities and rights, which must be linked. The principle of subsidiarity relates, however, particularly to responsibility, i.e. the organization of systems of control; the principle of reciprocity relates particularly to rights, i.e. systems of incentive.

##### *a) Subsidiarity*

While the devolution of rights to a local level should internalize many of the costs and benefits of resource decisions, there is nevertheless a requirement for control systems at least three levels:

- Intra-communal systems for controlling levels of use and tradeoffs between alternative uses such informal consensus on use, by-laws, zones, or even, for example, grazing shares. These requirements emanate from the general complexity of managing private resources in a commons situation (e.g. grazing livestock) including multiple users, and competition between both users and alternative uses (e.g. livestock versus wildlife versus arable).
- Mechanisms to control externalities where management within the community has wider consequences beyond the locality (geographical and temporal)
- Conformance to principles of sound organizational management and governance, and of sustainable natural resource management. This ensures the integrity of the system that is internalizing management decisions.

**(c) Intra-communal Resource Allocation**

The development of intra-communal allocatory systems is a complex, but vital, issue, but one which is only likely to evolve following the devolution of rights and the emergence of local land and resource tenure. Mechanisms are necessary to control the allocation of scarce resources amongst users and to alternative uses. For a single resource, this is relatively easy to achieve, with the usual mechanism being an annual quota and its allocation amongst uses. Thus a quota of animals may be allocated to subsistence meat production, local or international hunting, or live capture and sale.

However, systems for managing the tradeoffs between alternative resources are more complex (Box 7), area specific, and difficult to assess. They include such mechanisms as grazing shares to be apportioned to members and between alternative uses; charges on use of wood; by-laws regulating when and how resources can be used; land use zones and the like. We therefore include a specific question on the allocation of single resources (Form 7, Annex 3) as well as space for a general comment on whether systems to monitor inter-resource tradeoffs are in place.

- ✓ *Are intra-communal systems for controlling levels of use and trade-offs between alternative uses in place?* (e.g. quotas and allocation, grazing shares to be apportioned to members and between alternative uses; charges on use of wood; by-laws; zones)

**BOX 7: EXAMPLES OF INTRA-COMMUNAL SYSTEMS FOR CONTROLLING TRADEOFFS**

The importance of systems to manage trade-offs was discussed in the early CAMPFIRE documents (Martin, 1986). At least one attempt was made to implement such systems, in this case a system whereby each member of a community had ten grazing shares, and could choose whether to use these for wildlife dividends or to graze their own livestock. This was unsuccessful. Perhaps the concepts were introduced to communities before they were ready for them, but perhaps the skewed ownership of livestock meant those in power would be the losers.

Similarly, an effort was made to charge all people in Mfuwe Village Action Group in Zambia's Luangwa Valley for the firewood they used. The use of firewood was accelerating, with commercial use for brewing and baking using large amounts of firewood. The intention of charging for firewood was to put a cost on use. By sharing the revenue collected equally amongst all members at month end, heavy users would compensate light users for their disproportionate (and commercial) use of the firewood commonage. There was resistance to these measures by the community. Perhaps the biggest factor was mistrust of the community organization. An unlikable chief regularly interfered in the affairs and finances of this organization, and the community was wary that their money would be a further temptation and would be misappropriated.

#### (d) Controlling Externalities

This paper has, so far, looked at how to build effective institutions for managing natural resources at the local level, with the insight that these are the essential building blocks for higher level institutions.

##### ✓ *Are mechanisms in place to control externalities*<sup>24</sup>?

We now examine the circumstances which may require the presence of such higher level systems, their costs, and, if justified the manner of their formation and the form that they should take.

We have already implied that, in a perfect world, where costs and benefits cannot be internalized at the local (community, individual) level controls should be delegated upwards in conformance with the principle of subsidiarity. However, before embarking on a technical argument about this we need to ask, first, what are the characteristics of a resource that require a higher level of control and, second, what is the best way to exert this control.

Economically speaking, higher levels of controls are required to control externalities, or effects not internalized at local level. The level of control is linked, at least theoretically, to the degree of fugitiveness of the resource. Thus a resource that is fugitive in time or space at a regional scale (e.g. a river) needs regional level controls, while one that is not fugitive can be managed privately.

Natural resources are assumed to be fugitive, and are therefore associated with a high level of regulation. There are two reasons at least while this may not be optimal.

First, when applying regulations an assumption is made that regulations are costless, can be applied effectively, are applied with perfect knowledge or foresight of their effects – the bureaucrat knows what is good for everyone – while the opportunity costs of such regulations are seldom considered.

Secondly, fears of externalities are generally exaggerated, and controls are applied in far more cases than necessary. For example, wildlife officials invariably impose controls on all species, when the majority are relatively sedentary, and only a few are genuinely fugitive in nature<sup>25</sup>.

***Indeed, what natural resources really need to be managed at a level above that of a village commonage?*** The answer is very few where rights of access and exclusion are clearly

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<sup>24</sup> As defined in footnote 4.

<sup>25</sup> Even with elephants which are perhaps the most mobile of all mammals (leaving aside transhumant populations and wildebeest migrations which are the dramatic exception rather than the rule), field experience in CAMPFIRE suggested that many externalities were negotiated informally and locally. Thus, when the CAMPFIRE principles required “money to be returned to the producer community in which an animal was shot” but expanding elephant populations were marauding beyond prime community hunting areas, professional hunters were encouraged to shoot elephants on the margins so that even people with low wildlife populations could benefit from the programme.

delineated at this level. Indeed, most of the externalities are likely to be positive. It is other issues, perhaps arising out of resource management, where scaling up may be necessary<sup>26</sup>.

**BOX 8: CONTROLLING EXTERNALITIES: EXPANDING JURISDICTIONS BY AGGREGATION OR APPROPRIATION?**

There are two basic alternatives to controlling externalities. First, to manage resources centrally, and allocate responsibilities for resource management down the hierarchy in a piece-by-piece and licensed manner. Alternatively, to devolve the rights to all resources to small jurisdictions, and to hope that delegation for the control of externalities to higher levels occurs. Small jurisdictions are better placed to sharply delineate and operationalise essential linkages between input and output, but have the problem of jurisdictional atomization and maintaining congruence across spatial, functional and ecological scale. Murphree (2000) suggests that scalar considerations may be better achieved by expanding the reach of jurisdictions by aggregation rather than through expropriation. Nevertheless “Big Government” dominates contemporary policy direction, with the consequence that mechanisms for controlling externalities are usually in the form of top-down hierarchies. The system is often locked into this state because of the state’s appropriate interest in local resources and its reluctance to legitimize local jurisdictions in ways that diminish the state’s ability to control or claim the benefits of these resources.

That conventional arrangements result in such poor control of natural resources at local level despite all the requisite rules, regulations and powers being in place, implicates serious capacity constraints and transactional costs, and suggests that the practicality of conventional arrangements needs careful scrutiny. The formative results of devolved resource management in southern African, for instance, implies that there is an alternative approach. The sequencing by which local and hierarchical control is applied is emerging as critical. As Murphree suggests, it is preferable “to expand the reach of jurisdictions by aggregation rather than through expropriation”. To use a catchy phrase – first scale down, before scaling back up (and only scale up through voluntary upward delegation of responsibilities in accordance with the principles of subsidiarity).

Source: Murphree (2000) provides a full treatment of this issue.

Examples include veterinary controls, the coordination of law enforcement patrols, or negotiation of concessions for timber, hunting and tourism. At larger scales they may include planning and implementational needs for regional or transboundary development. Where ecological conditions create long range annual migrations and transhumant pastoralism scaling out may also be an imperative. These needs and imperatives must be accommodated, but cost and efficiency considerations must inform the content of scaling out (i.e. what needs larger scale management) and the modes in which it is done.

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<sup>26</sup> Here, care must be taken not to scale up all rights. The majority of the rights should still remain at local level, and all that should be passed up is a responsibility for coordination. Thus, village monitors should still be employed and accountable to their village, even if a committee representing several villages will coordinate their patrolling.

We have already suggested that higher level bureaucratic controls may be impose high costs (and opportunity costs) for which the bureaucrats are not accountable. Additionally, and as seriously, the tendency to usurp or extract controls upwards creates a misalignment of the scale at which resource effects are controlled, and that at which they are best internalized – in essence, the result is that resources are controlled by people who are out of touch with the resources. Also, as control moves upwards there is a strong tendency to take a simplistic, sectorial approach to natural resource management, so that the ability to manage complexity is lost.

In short, there are considerable dangers inherent in the process of scaling out natural resource management, although this may well go against the perceptions of the techno-scientific-bureaucratic elite.

In terms of assessing a CBNRM programme, our purpose now is to present a simple tool for assessing if the level at which a resource is managed is reflective of its fugitiveness (Figure 10). Following this, we will present a suggestion for what may be a more robust, legitimate and effective control system.

**FIGURE 10: PROTOCOL FOR ASSESSING ALIGNMENT BETWEEN THE FUGITIVENESS OF NATURAL RESOURCES AND THE LEVEL AT WHICH CONTROL IS EXERCISED**

Assessment of Congruency between Fugitiveness of Natural Resource/s and Level at which Control is Exerted			
Name of resource/s: <input type="text"/>			
What is the level at which you believe the majority (80-90%) of the impacts of management are captured, i.e. degree of fugitiveness of the resource			At what level is control over the resource presently exerted?
One hectare	<input type="checkbox"/>	Individual	<input type="checkbox"/>
One hectare	<input type="checkbox"/>	Household	<input type="checkbox"/>
1 km <sup>2</sup>	<input type="checkbox"/>	Village	<input type="checkbox"/>
10 km <sup>2</sup>	<input type="checkbox"/>	Area (group of villages)	<input type="checkbox"/>
100 km <sup>2</sup>	<input type="checkbox"/>	District	<input type="checkbox"/>
1000 km <sup>2</sup>	<input type="checkbox"/>	District	<input type="checkbox"/>
10000 km <sup>2</sup>	<input type="checkbox"/>		<input type="checkbox"/>
100000 km <sup>2</sup>	<input type="checkbox"/>	Nation	<input type="checkbox"/>

The reviewer should judge at which level externalities are likely to be controlled either in terms of geographic size (km<sup>2</sup>) or jurisdictional units (individual to nation). This is compared to the level at which control is exerted to assess how well control is aligned with the characteristic fugitiveness of the resources (Form 8, Annex 3). It may be necessary to disaggregate a resource, for example treating highly territorial bushbuck separately from elephants.

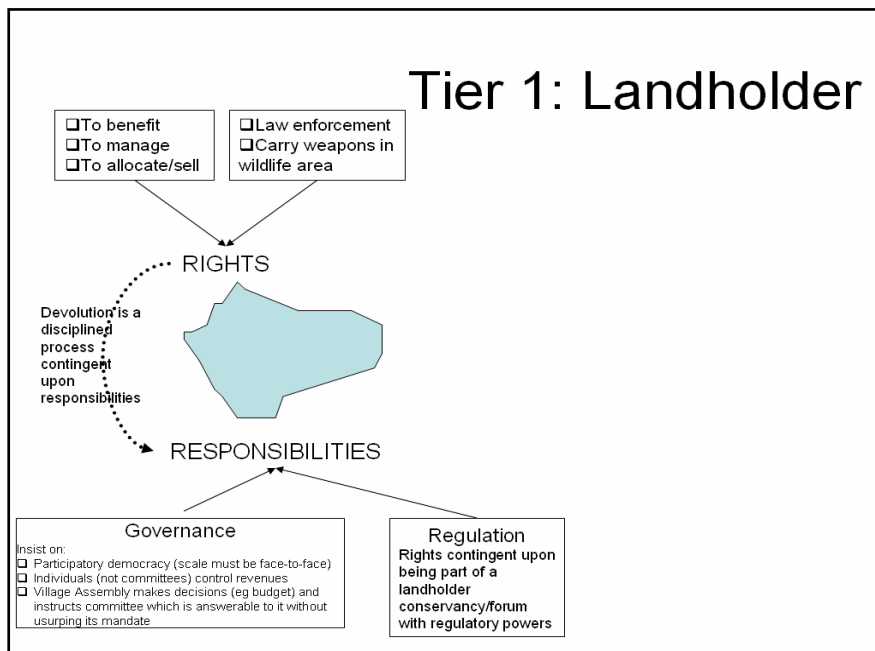
In terms of regulation, the conventional mechanism of placing control in the hands of a central governmental agency has not worked well, and is particularly suspect where these agencies are neither properly equipped nor accountable, i.e. the situation for most of the cases we address. This record, and the table above, suggests that when it is necessary scaling up should only be to levels corresponding to functional requirements, in accordance with the subsidiarity principle.

**(e) Devolved Regulation**

We turn now to the mechanism of regulation. The starting point is that, rather than the two levels of control normally assumed (i.e. the landholder/community or the state) there is actually a third, neglected, but important level of control – the community of landholders (or communities).

The first level is the landholder (Figure 11), be this an individual or a commonage. The theory goes that if rights are devolved, and provided governance is sound, the impacts of resource management will be internalized, and there is a much higher probability of resources being managed profitably and sustainably.

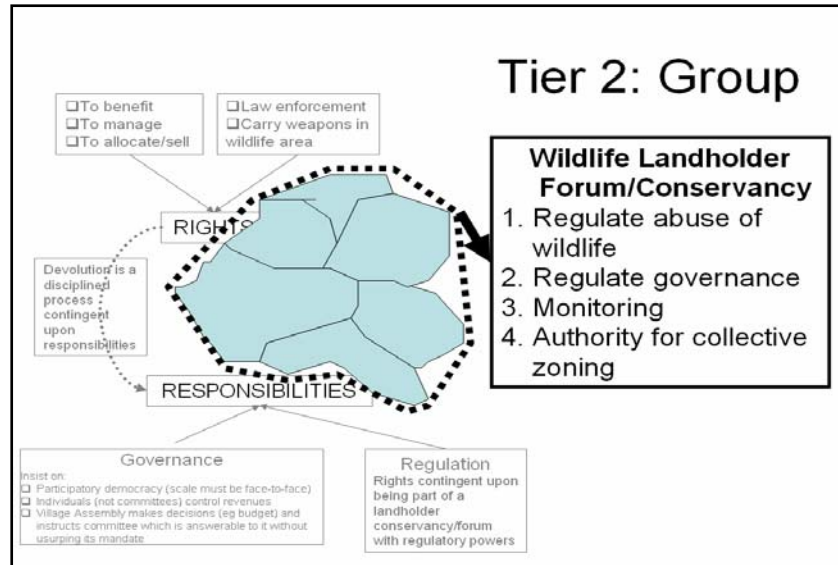
**FIGURE 11: INTERNALIZING RIGHTS AND RESPONSIBILITIES WITH THE LANDHOLDER**



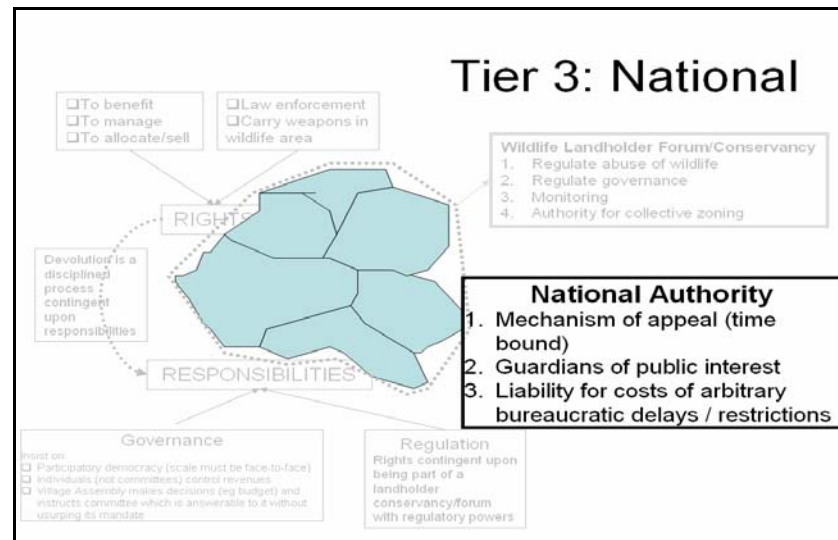
However, to deal with externalities or miscreants, regulation is required. There is nothing new in this. What is new is the suggestion that the primary level of regulation and control should be through the community of landholders (Figure 12). Thus, the power to regulate use and abuse can be delegated to the community of landholders. This was the essence of Zimbabwe’s Natural Resources Act, and the combination of local knowledge and peer pressure proved to be extremely effective at controlling over-grazing, soil erosion, tree cutting, or abuses of wildlife. In this case, communities of landholders were defined voluntarily but then obtained statutory authority (i.e. Intensive Conservation Areas). Another approach is to delegate rights to landholders but conditionally on the formation of such regulatory communities.

Central government still plays an important role as the mechanism for arbitration and as the ultimate authority, stepping in in the (rare) cases where such mechanisms fail (Figure 13). Note that there is a case for making national agencies (and international institutions for that matter) liable for the costs of arbitrary restrictions or delays<sup>27</sup>.

**FIGURE 12: DEVOLVED REGULATION BY THE COMMUNITY OF LANDHOLDERS**



**FIGURE 13: THE REGULATORY ROLE OF NATIONAL AUTHORITIES**



<sup>27</sup> Definitionally, the ability to exert control is an important characteristic of ownership, and liability is tied to ownership. Thus, should a wildlife agency prevent management of wildlife at local level, it could legally find itself liable for damages caused or costs incurred, including loss of life, crops or even use of forage. This is rarely challenged in court, but in one case where it was, it resulted in significant alterations to legal definition of wildlife ownership from a resource owned by the state to one owned *res nullius*, i.e. by no-body but with use right resting with the landholder. This case is described by Child G. (1995).



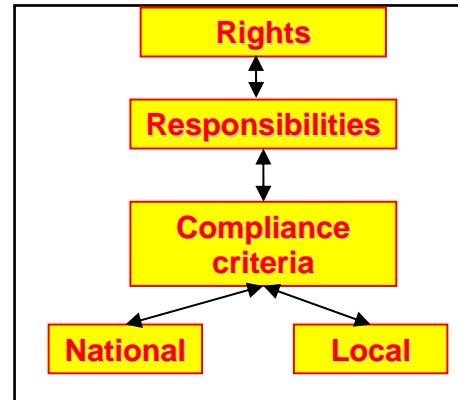
## (f) Conformance, Responsibility and Compliance

Associated with the devolution of rights of ACCESS and EXCLUSION, are responsibilities. Our starting point is that these responsibilities equate to compliance criteria. This leads to two comments.

First, compliance acts in two directions: to national level and to local constituency (figure 14).

Second, if rights are devolved and organizational principles are followed, all things being equal, the resources should be managed sustainably. However, all things are not equal, and especially in the experimental stage of devolution, there may well be a requirement for the monitoring of resource sustainability. The argument against this is that it again disadvantages natural resources against the domesticated agricultural commodities with which they are ultimately competing.

FIGURE 14: UPWARD AND DOWNWARD COMPLIANCE



- ✓ *Are mechanisms in place to ensure compliance with the principles of devolved natural resource management?*

Nevertheless, the implication is that the focus of compliance monitoring should be on organization management which is causative, yet usually neglected (perhaps because CBNRM practitioners are usually ecologists). The supposition is that CBNRM will work (Form 9, Annex 3):

- ✓ If principles of organizational development and governance are followed (e.g. participation, financial accountability, and especially prevention of elite capture or predation)
- ✓ If rights, and the incentives arising from them, result in the uptake of responsibility (as reflected in the management and monitoring of natural resources).

## (g) Reciprocity and Regime Scale Levels

The uptake of responsibility mentioned above rests critically on authority, the right of dispersed regimes to plan, experiment and accept the benefits of their management. This provides the incentive to incur the costs of efficient management and collaborate in higher level collaboration when it is perceived to be of functional benefit. Thus it is important that their participation be by demand-driven aggregation rather than through expropriation. The principle of reciprocity provides the key as to how this can be achieved. Aggregation is effected by delegated authority to higher level coordinative structures for purposes considered to be reciprocally beneficial.

Reciprocal aggregation has certain implications in application: Being a negotiated agreement, the reciprocity is voluntary for the parties concerned. Secondly, being voluntary, within the context of the agreement power is symmetrical even if in broader contexts the power of the parties involved is highly differentiated. Mutual vetoes apply. No party is forced into the agreement,

and any may withdraw from it as an ultimate sanction.<sup>28</sup> Thirdly, the agreement is multipurpose. Each party considers the benefits to its own objectives to equal or exceed the costs involved; the reciprocation brings these multiple objectives into collective action. It is, to use one dictionary definition, "the multiplier that gives unity". Finally, reciprocation connotes an on-going process of action and response, an iterative progression in which complementary responsibilities are continuously subject to assessment and review. It creates dynamic relationships which push adaptation over time.

The analysis of this section suggests that the scaling up of control systems should occur only when there are good functional reasons to do so (Forms 7 and 8, Annex 3). Ecosystem approaches to natural resource management are the flavours of the first decade of the twenty-first century (Sayer and Campbell 2004: 4) but they suffer from the definitional ambiguities of the term and attempts to put them in place should not rest on conformity or abstract and generalized objectives. Larger scales of integrative management should be demand-driven in response to specific requirements.

✓ *Is scaling up functionally imperative?*

The analysis also suggests that, when up-scaling is required, it should be done only to levels corresponding to the control functions required.

✓ *Do regime scale levels correspond with functional requirements?*

Finally, the analysis suggests that higher level coordinated units of control and management should be put in place through delegated aggregation and not through the expropriation of authority.

✓ *Is upscaling based on negotiated reciprocity?*

At a practical level, scale is critical in determining institutional and organizational legitimacy, participation and performance. There is evidence to suggest that situations where the whole community meets face-to-face to make a decision (participatory democracy), and where they instruct and hold elected officials to account (downward accountability) are profoundly more effective than situations where a few people are elected to represent a large community (representational democracy) or where, consequently, the checks-and-balances may have to be imposed from outside the community (upward accountability). A key question, therefore, is (form 7, Annex 3):

✓ *Are producer communities small enough to allow members to participate face-to-face in a regular manner?*

A rule of thumb is that the entire community should be able to meet effectively in a single forum. While specific research is necessary to validate this rule of thumb, it appears that in rural Africa

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<sup>28</sup> Formal withdrawal should of course be avoided and should be constrained by the conditions of the agreement. Its possibility should however be recognized. In the absence of this recognition withdrawal could nevertheless occur through non-compliance and lack of participation.

up to 200 people can meet and participate effectively in public meetings. Larger meetings often degenerate. This suggests that a “community” should not exceed 200 households (or even adult members). It also suggests that, geographically, the meeting place should be within walking distance of all members.

The principle of subsidiarity states that all functions should be conducted at the lowest appropriate level, and that only the lowest level should choose when and how to delegate these responsibilities upward to higher bodies.

There are generally two sets of functions that can be carried out by community organizations in relation to natural resource management and benefit. Doing functions include the allocation and distribution of revenues, construction of projects, employment of natural resource guards, and so on. Coordination functions are required where the scale of some of these operations exceed the jurisdiction of the locality, and may include such activities at the construction of a secondary school or clinic, or the management of resource patrolling. This differentiation is seldom made, with the result that functions are allocated inappropriately to different levels. The optimal situation is to allocate all doing functions to the level of the participatory democracy. Coordination functions should be delegated upwards to committees that may represent a number of these localities (i.e. representational democracy). This also implies that the majority of benefits and revenues (say 90% or more) should also be managed at the doing level.

Because of the practical importance of aligning functions to the appropriate level of governance, we suggest adding the following general questions (Form 7, Annex 3):

- ✓ ***Are functions conducted at the lowest level?*** (e.g. in the village “under a tree”), and if not is there a compelling reason why not?
- ✓ ***Are higher-level units responsible for coordination (rather than management) and accountable to the community (and not vice versa)?***

Scale, and the dynamic whereby information is power, often means that the relationships between higher levels and the community are far from participatory, and may often become one of hierarchy and subservience. Problems of accountability and communication between higher level committees and the people they are supposed to represent are all too common.

Damagingly, there is a tendency for projects and donors to work at this level. Therefore we repeat the question (Form 7, Annex 3):

- ✓ ***Are community corporate bodies directly accountable to their constituency?***

Useful is making a general assessment of accountability is the level at which decisions are made the size (more than 200 households makes meeting difficult) and geographic area of the community (people cannot usually walk more than 10km to a public meeting) and, quantitatively, the proportion of people actually making or observing decisions (Figure 15).

**FIGURE 15: FORMAT FOR ASSESSING IF DECISIONS ARE MADE AT LEVELS INCORPORATING CONSTITUENCY ACCOUNTABILITY**

<b>HOW MANY PEOPLE DECIDED ON ... ALLOCATION OF ANNUAL BENEFITS (i.e. BUDGET) ... ACCEPTABILITY OF QUARTERLY FINANCIAL TECHNICAL VARIANCE REPORTS ... OFFTAKE QUOTAS ... ALLOCATION OF QUOTAS TO USES ... SALES OF PRODUCTS...</b>		
	Voting	Present
Local People	<input type="text"/>	<input type="text"/>
Committee Members (Locality)	<input type="text"/>	<input type="text"/>
Committee Members (Representational level)	<input type="text"/>	<input type="text"/>
District Officials	<input type="text"/>	<input type="text"/>
National Officials	<input type="text"/>	<input type="text"/>
NGOs	<input type="text"/>	<input type="text"/>
Private Sector	<input type="text"/>	<input type="text"/>
<b>Total Number of Households and Adults in the Community</b>	<input type="text"/>	

Key functions often include:

- Who decides how the budget will be used?
- To who is a financial variance analysis presented for approval (i.e. an assessment of how implementation compares to intention)?
- To whom is the technical variance analysis for approval (e.g. record of progress on implementing micro projects) presented?
- Who sets the quotas, and allocates offtake to various competing uses?
- Who negotiates the sale of products and choice of buyers / business partners?

## 5. COMPLIANCE MONITORING: DEVOLUTION AND CONFORMANCE

We reserve a short and separate section for conformance monitoring because this is critical to programme success, and to demonstrate just how short and simple this should be kept (form 9, Annex 3). The majority of the conformance criteria relate to institutional function rather than to natural resource management per se (Box 9). There is a temptation to overdo the requirements for natural resource monitoring, but all that is required is a basic level of monitoring of the status and trends of resources and their use, and of resource protection effort and effectiveness (see below). Even this might be excessive, but experience in some southern African communities suggests that simple monitoring systems empower communities, improve their resource management, and that they enjoy and have pride in what can be a stimulating activity.

### BOX 9: AN EXAMPLE OF CONFORMANCE CRITERIA THAT MIGHT APPLY TO A COMMUNITY WILDLIFE PROGRAMME

1. The budget must be agreed by the whole community
2. A financial and technical (e.g. project implementation) variance analysis should be carefully presented to, and accepted by, the whole community at least four times a year
3. These variance analyses should be audited at least twice a year, with this audit report also being presented to the community
4. The community should have a bank account, and its double entry cash book and accompanying records should be audited. All financial problems should be resolved before cash dividends are released
5. The committee should face re-election annually
6. The community should undertake an agreed number of patrol days each month
7. Monitoring of patrolling should ensure that the catch-effort ratio of poaching incidence per patrol days remains below a pre-determined threshold
8. The number of animals seen on patrol (per day or block covered) should be monitored

Box 10 provides an example of performance criteria used in a CBNRM programme in Zambia's Luangwa Valley. Para-professionals were required to assess the performance of each of 45 Village Action Groups. Although the hunting outfitter paid directly into the community bank account, they could only access this money once their performance was certified.

### BOX 10: AN EXAMPLE OF CONFORMANCE CRITERIA USED IN A CBNRM PROGRAMME IN ZAMBIA'S LUANGWA VALLEY

#### Certification of VAG performance and approval of release of funds

I hereby confirm the following:

- ✓ This VAG held at least four general meetings during the year at which matters were openly and transparently discussed and which were well attended. *(If not, and you are convinced that there are legitimate reasons for this, please note these reasons below).*
- ✓ That the financial accounts of this VAG are accurate, follow the budget, and that no money has been misused, or if misuse has occurred acceptable corrective action has been taken. *(Before approving this, you should be (a) be convinced that adequate and responsible corrective action has been taken and (b) the problem and actions should be summarised below).*
- ✓ That the finances and other matters of this VAG were properly presented and approved by the community at the AGM.
- ✓ That a membership list was updated and approved by the general community.
- ✓ That elections were freely and fairly held and that a newly approved committee is now in place to receive the wildlife income.
- ✓ That projects and activities were properly presented for the community to choose.
- ✓ That the choice of projects and approval of the budget was done by the community in a general meeting and was not forced on them.

.....  
Approved Name Title

## 6. RESOURCE VALORIZATION<sup>29</sup>

We now turn to more technical issues related to the creation of benefits and sustainable management of natural resources. Following the logic that incentives are the fulcrum of responsibility, we start first with the creation of value from natural resources, and the perception of this value. This stepwise process is illustrated for, for example, the CAMPFIRE programme (Box 7). We have already addressed viability and attrition of value by factors external to the community (Form 3, Annex 3):

- ✓ *What proportion of the total (inherent) market value of the resource is captured by the community as private benefits? Are these benefits significant?*

In practice, the efficacy of marketing usually has a significant impact on the viability of a CBNRM programme and can often be corrected by managers, hence the question (Form 10, Annex 3):

- ✓ *Is all marketing of natural resources open, competitive and done by the community itself?*

This checks the competitive integrity of any sales, as open and competitive marketing can substantially increase the value of natural resources, especially where it replaced a system of administrative pricing. It is useful to enquire as to the method used for selling the resource (administratively; lottery; tender; interview; auction), as well as the number of offers considered (an indicator of competition). Comparing the bid accepted with the top price offered, or for an estimate of the free market value of the resource where this is difficult to ascertain, indicates the integrity of the marketing process. There are, nevertheless, a few cases where taking a lower financial offer is justified<sup>30</sup>.

Marketing plays an important role in empowerment. It promotes learning about the management of the resource. It also requires the purchaser to deal directly with the community rather than with central agencies. Assessing whether the community has voting or observer status in marketing negotiations is therefore informative.

- ✓ *Is the link between production and benefit transparent and immediate?*

Strengthening links between production and benefit and making them transparent significantly raises the perceived value of the resource, and closes doors to corruption and leakage. A best case scenario might be where a safari operator reads out the list of animals shot and hands over a

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<sup>29</sup> “Valorization” is less clumsy than “adding value” and is used here as shorthand though this is not strictly accurate (i.e. to set and maintain the price of a commodity at an artificially high level through government action).

Beneficiation is also clumsy and poor at communicating the concept.

<sup>30</sup> Note, however, that rural communities selling hunting usually weigh prices above most other variable including the integrity of the operator, non-cash benefits, etc. Andee Davison (pers. comms.) suggests that price counts for 80% of the writing in selling tourism joint ventures in Namibia, while in Zimbabwe’s CAMPFIRE programme there were few instances when a lower financial offer trumped a higher one. Indeed, in the rare cases where lower offers were even considered, there were invariably rumours of outfitter providing free ploughing or other benefits to committee members.

cheques or a bundle of cash with respect to each animal or client. The situation where a government agency collects revenues and several years later a cheque is made out to a community, but is not accompanied by any record of the quantities and sales that it relates to, is approaching a worst case scenario. Long, or indirect, value chains are also problematic. A common example is park-neighbour programmes where social infrastructure is provided as a 'reward' for living near wildlife, but the community invariably fails to make the linkage between conservation and infrastructure. To assess the immediacy and transparency of these linkages ask:

- Is the use of resources and the benefits derived from them accurately recorded?
- Are these records available to the community?
- Are the benefits paid directly to the community (i.e. without passing through an intermediary)?
- If benefits are managed by an intermediary, assess records, transparency, length of delays in returning benefits, and leakages.

The strength and nature of the partnership between the community and the private sector is often important to the success of community natural resource initiatives. Ideal contracts are fair deals developed through direct, if facilitated or brokered, negotiation. The incorporation of CBNRM principles into legal contracts provides security to both partners, and is particularly important where the commitment of central agencies to the principles is weak or might change. A good example is the contract deal between Zimbabwe Sun Hotels and the Mahenye community in southern Zimbabwe which specified payment of 12% of hotel turnover, and that these revenues should stay in the community to avoid extraction by the District Council. These arguments are encapsulated in the following questions (Form 10, Annex 3):

- ✓ *Is there a direct link between the contracting partner and the community?*
- ✓ *Are the principles of legal entitlement built into arrangements for commercial contracts?* (i.e. does the contract between a business and a community include the CBNRM principles discussed above?)

Commercial contracts that include what we have called the CBNRM principles are particularly important where confidence in bureaucratic integrity is lacking. They protect both the community and the partner, and serve as a further means of making use rights robust. The principles of legal entitlement should be built into commercial contracts, including principles that relate to perception of benefit and, preferably also those concerning governance and organizational development.

## **7. SUSTAINABILITY OF RESOURCE MANAGEMENT**

For our purposes it is sufficient to assess whether systems are in place to monitor natural resource status, use and threats, and too much to expect an assessment to include real data and trends describing natural resources. We suggest three questions (Form 11, Annex 3):

- ✓ *Is there a simple management system in place to monitor the status and trends of the resources, and in broad terms what are these trends?*
- ✓ *Is there a simple system in place to monitor the number and quality of offtake/use, and in broad terms what are these trends?*

Examples of monitoring (tracking) the amount of resources used and quality trends include such metrics as trophy quality for safari hunting or tree diameter for timber sales. Catch-effort ratios are a valuable refinement.

Given the principle that participation builds commitment, the level at which monitoring takes place is also critical, and should also be indicated. For the collective management of common property natural resources, assess whether monitoring is undertaken at the level of the village (i.e. participatory democracy with everyone involved), the multi-village area (i.e. representational democracy with only elected representatives involved), or by district or national officials.

- ✓ *Have the primary threats to the resource been identified, and are they being managed?*

Where the primary threat to a resource is illegal use, there are usually two main issues. Is the amount of effort to protect the resource adequate (e.g. level of ground coverage)? And is the catch-effort ratio for illegal offenses below a level that can sustain the resource base? These are also useful conformance criteria to measure the uptake of responsibility. For example, devolution of rights to use wildlife requires reporting of performance in terms effort and effectiveness -- the number of patrol days undertaken (i.e. ground coverage), and the catch-effort ratio of illegal poaching activities (e.g. illegal incidents per patrol day).

## **8. THE ENABLING ENVIRONMENT**

This is a broad area to assess (Form 11, Annex 3). Important is the legislative basis for devolution, as well as the political culture and desire to implement or resist devolution. In this regard, the strength of civil society and access to justice through courts are invaluable. So is an enlightened and liberalizing administration. Although skills and techniques can be purchased, programmes are seldom sustainable unless these skills are present locally, or there is a ten to twenty year strategy to develop them. Basic asset ratios, such as per capita value of natural resources, determine the economic viability of CBNRM programmes.



## 9. TECHNOLOGY DEVELOPMENT AND CAPACITY BUILDING

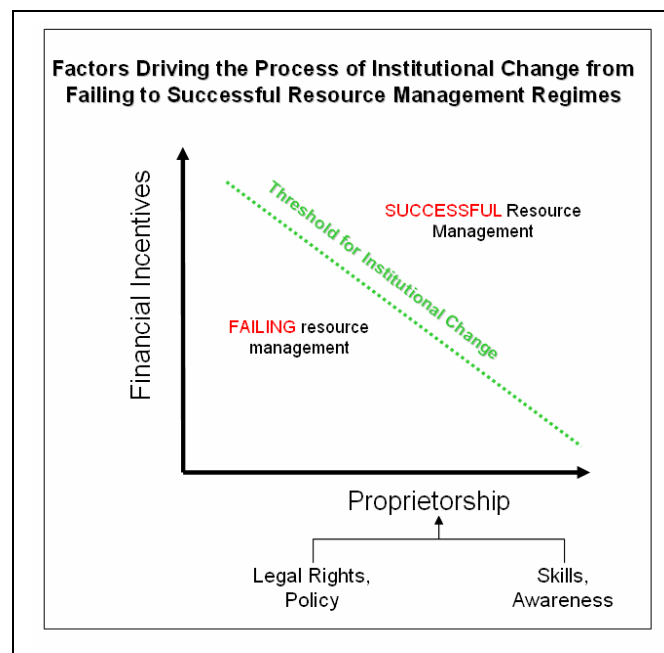
### (a) Building Capacities for Eco-level CBNRM

“Capacity building” figures prominently in the agenda of contemporary development discourse and is usually designed in terms of teaching, or the impartation of the knowledge or skills required to carry out the objectives of specific programmes or policies. We take a different stance. Capacity building rests fundamentally of experiential learning, to which teaching can contribute. Through experiential learning people gain better insight into the opportunities and constraints of their condition and gain “response-ability,” the capacity to make informed judgments regarding alternatives and their consequences. For eco-level CBNRM this translates into clearer understanding of ecological and economic inter-connectivity, of the benefits and costs of larger scale collaboration, and of the processes involved in this collaboration.

### (b) Enabling Conditions for Capacity Building

Any programme aimed at developing eco-level CBNRM capacity must consider the degree to which an enabling environment for its emergence exists. This is determined by both exogenous and endogenous variables. Exogenous variables include the enabling legislative environment for communal experimentation and “the challenges to nascent community-based organizations that arise from macro-economic performance” (Bond 2001:240). Endogenous variables include population growth, social and economic stratification, leadership and the capital assets of communities. Five capital assets are commonly identified, physical, financial, social, natural and human,<sup>31</sup> but for the purposes of this section we single out for special attention natural resource capital and social capital. Natural resource endowments are emphasized since they are unevenly distributed and constitute important bargaining chips in negotiations leading to larger collaborative systems. Any larger ecosystem or regional regime which erodes this social capital will eventually self-destruct since it removes the foundation on which it must build.

FIGURE 16: ILLUSTRATION OF BOND'S MODEL OF INSTITUTIONAL EVOLUTION



<sup>31</sup> Cf. Sayer and Campbell 2004: 215 – 221. For further discussion see Chambers and Conway (1992), Bebbington (1999), Carney (1998), Dasgupta and Maler (2001), and Pearce *et al.* (1996).

Taken together however natural resource endowments and social capital provide a further component in an enabling environment for capacity building, which is incentive.<sup>32</sup> For people to involve themselves in eco-level capacity building they must be motivated to do so. Differential resource endowments provide the rationale for the trade-offs (reciprocation) involved in larger scale collaboration; social capital provides the confidence that the costs involved will not exceed the benefits of doing so (form 13, Annex 3).

✓ *Is the capacity building programme demand driven by resource manager incentives?*

As Bond (pers. comms.) suggests, the transformation of resource management regimes depends on the incentives to change the status quo. Incentives comprise some combination of tangible benefits and the sense of proprietorship. These factors are interactive. Financial or tangible incentives are often dependent on rights, while the sense of proprietorship depends on legislation and policy, and on landholder's awareness and ability to take advantage of these laws. In people long disenfranchised, the importance of a control over the allocation of a few dollars is often under-estimated.

**(c) Target Categories for Capacity Building**

Capacity building programmes also need to have clear definitions of their targets. Often in CBNRM the main target is local leadership. Local elites are prime-movers and principal intercalary conduits for CBNRM and their capacities are clearly an important focus. However an exclusive focus on leadership may have dysfunctional results. The training of leaders in the techniques and idiom of CBNRM may drive a wedge between them and their constituencies, aligning them with external agents and creating intra-communal communication barriers, often compounded when the "business" of CBNRM is conducted in English rather than the vernacular. Experiential learning demands a broader palette, in which all members of the collective are involved. This suggests that capacity building should be directed not only at leadership, but at followership as well.

A third important target for capacity building is frequently ignored. This is the community of external agents who intrude on CBNRM processes at local (and higher) levels. It is comprised of line ministry extension agents, local government bureaucrats, researchers and scientific advisors. Their technical capacities may be adequate, but their capacities for facilitation are usually, if not uniformly, very low. 'Designer development' and 'technology transfer' have characterized their perspectives. This creates a role profile antithetical to that required by CBNRM which treats all management as experiential learning.<sup>33</sup> This redefinition of the role of science and technology (invited rather than imposed, directed rather than directive, facilitative rather than manipulative) suggests that external agents are themselves appropriate targets for capacity building in the facilitative stances and skills required (Form 13, Annex 3).

✓ *Are the capacity building programmes adequately focused on the most important target groups?*

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<sup>32</sup> Our terms of reference rightly comment that incentives for ecosystem level planning constitute the basics of any model.

<sup>33</sup> This approach to science resonates with systemic approaches to complexity (Holling 1993), integrated environmental management (Lee 1993), rural development (Sayer and Campbell 2004) and the emerging "sustainability science" (Swart *et al* 2004).

The substantial provision of training by middle level professionals is a characteristic of the project cycle and has value. However, the “dripping tap approach” whereby high level professionals with the holistic ability build long term professional and personal relationships with communities is irreplaceable, if rare.

#### **(d) A Curriculum for Capacity Building**

Our discussion above suggests that capacity building programmes for CBNRM (at local and larger scales) face a formidable challenge. Enabling conditions may not always be in place. Expanding the targets of capacity building from leadership to include followership and external agents is likely to extend time frames and greatly increase the scope and detail of programme inputs. Faced with these probabilities the temptation is to revert to a teaching mode and confine the target to leadership.

While acknowledging the costs and complexities of experiential learning, we suggest that they should not inhibit the application of this approach and that the agenda of capacity building can be reduced to a relatively straightforward set of objectives and activities. The first step in this reduction is to recognize that programmes for capacity building cannot be all-embracing and should prioritize the essential. Sayer and Campbell comment that “the skill or professionalism of integrated natural resource management lies in making judgements on what to integrate” (Sayer and Campbell 2004:21). This applies equally to the management capacities required.

We suggest that the criteria for making such judgements should include the following:

- o What capacities are responsive to immediate need?
- o What capacities have the probability of yielding benefits within reasonable time frames?
- o What capacities are relevant and assimilable at different scale levels and target categories?
- o What capacities have incremental value, i.e. the potential to diffuse capacity independently and organically?

Using these criteria to focus the agenda, one can propose the following components for a capacity building curriculum:

##### ***a. Basic Informational Acquisition***

The possession of relevant basic information is the foundation for capacity building, but a succession of CBNRM case studies show that this is abysmally absent in many instances. In these instances people do not know the specifics of their resource base, they do not know the economic values realized from the marketing of these resources, they cannot track the financial records of their collective enterprises and they lack information on their legally-determined rights or the details of contractual agreements they sustain with external entrepreneurs.

The prime reason for this informational obscurity is that available data typically have to pass through two filters before reaching CBNRM constituencies. The first filter is comprised of programme executives and (in imperfectly devolved regimes) higher level authorities who selectively release only data which reflect favourably on their performance and mask appropriations from communal earnings. The second filter is one of language and record. Information, when reported, is presented in a language (usually English) and idioms which is often poorly understood. Removal of the first filter is primarily a matter of hierarchical system change with downward accountability made the norm. Removal of the second filter lies squarely in the realm of capacity building. Information should be made available in the vernacular, particularly at local levels, and be made a matter of written record, widely circulated. Capacity building starts here in this straightforward, if sometimes tedious, manner. Bond (pers. comms.) for example, demonstrated the value of technical manuals produced through a process involving much testing at field level (see also Child, et al, 2003), of home made manuals particular to a community, and of simple home-produced posters for disseminating information such as natural resource prices.

✓ *Is basic and essential information available in transparent, recorded form?*

#### *b. Technical Data Acquisition*

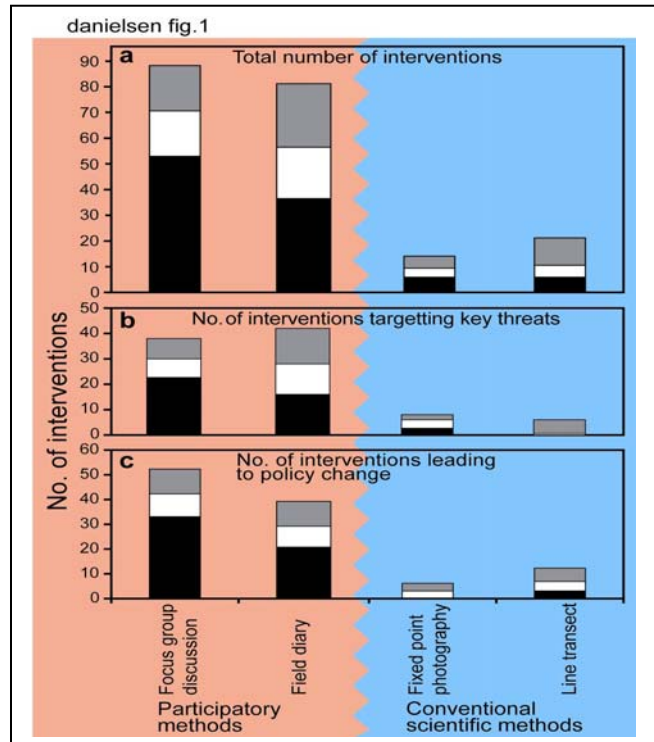
The acquisition of relevant technical data and techniques can come about in two ways: through the importation of this data via the services of external facilitators or through the generation of this data endogenously through the collaboration of professional science and local experimentation. Much relevant technical data is beyond the reach of local people – findings of experiments elsewhere, larger ecological and economic interconnectivities, systemic analyses using sophisticated modeling techniques.<sup>34</sup> Localized regimes need this kind of information if they are to participate knowledgeably in larger scale collaboration and science has an obligation to impart it. The mode of importation is however critical. If this data is presented as imposed wisdom it is likely to be rejected; if it is presented as information relevant to alternative choices and consequences it is much more likely to be received. Thus facilitative capacity building for this category of actors should be included in the curriculum – the dripping tap approach mentioned earlier.

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<sup>34</sup> The use of information management tools such as geographical information systems (GIS) is an example.

Endogenously derived technical data and skills arise from the “home ground” of experiential learning, the context where scientists and resource users collaborate in experimentation. For this learning to take place, however, it must be perceived as functional for needs at the level concerned, and rest on techniques which are applicable under local conditions. A good example is found in the different methodologies used to determine species status as a basis for setting safari off takes on a sustainable basis in Zimbabwe. (Taylor 2001). All levels of management (national, council, local) accept the objective of sustainability and thus the functionality of the exercise. Methodological preferences differ however. Conventional conservation science is biased towards high-tech methods (aerial surveys); local management prefers trend analysis in trophy quality through data which they can and do capture. The WWF/CAMPFIRE capacity building programme on this topic described by Taylor has developed an integrated methodology triangulating aerial census data, trophy quality trends, ground count trends, client (safari operator) estimates and wildlife ecologist analyses. It is an excellent example of the points we have made: functional importance, acquisition of technical data techniques and complimentary collaboration between professional and civil science. Funder and Poulson (2004) presented data from the Phillipines to show that the number of management interventions arising from science was directly related to the level of participation in this science, while WWF’s quota setting programme indicate that methods that involve participation and triangulation are both robust and scientific.

**FIGURE 17: A COMPARISON OF MANAGEMENT INTERVENTIONS ARISING FROM PARTICIPATORY OR CONVENTIONAL SCIENTIFIC METHODS IN THE PHILIPPINES**



✓ *Does technical data acquisition include facilitative professional inputs and learning driven by functionality, locally applicable techniques and joint experimentation by professional and local civil science?*

**c. Organizational Skill Development**

Communities have long histories of organizing themselves in subsistence economies through customary normative institutions. The degree to which these are effective is thus at any point in time dependant on a number of factors including legitimacy, leadership and social capital. CBNRM, particularly in its market functions, imposes on these communities the necessity of developing a degree of bureaucratization in their local governance, i.e. the separation of functions and the delegation of responsibility. Local capacities to affect this shift need sensitive

facilitation which draws on experience from elsewhere but which focuses on local perceived needs.

Key characteristics of this shift are delegation and accountability. Thus mechanisms must be in place for the appointment and replacement of leadership (constitutions) and assessments of performance (achievement of goals, effective controls over natural resource and financial assets). They apply equally to local regimes and to delegated regimes which expand CBNRM in response to larger landscape and ecosystem management imperatives. The mechanisms and structures involved should be as straightforward as possible. They should be transparent, being a matter of written record in an idiom comprehensible to their constituencies (cf. our remarks above on essential information flows). Finally it should be noted that delegation and accountability require that capacity building for organization skills be directed not only at leadership but at followership as well.

✓ *Are mechanisms for delegation and accountability clear, transparent and disseminated?*

#### *d. Appraisal and Adaptive Skills*

Performance assessment has been mentioned in the sub-section above as a component in organizational constituent accountability. Our text has also emphasized the importance of building experiential learning mechanisms into control systems. Thus the objectives of appraisal taken here differ from those of conventional monitoring and evaluation (M and E) programmes. Rather than being a mechanism to measure compliance with predetermined project activities and outputs (upward accountability) appraisal becomes a critical step in an adaptive management process of learning and innovation.

This process is sequential, involving the following phases: scenario modelling<sup>TM</sup> scenario planning<sup>TM</sup> implementation (experimentation)<sup>TM</sup> analysis/assessment<sup>TM</sup> adaptation<sup>TM</sup> iteration.

A brief elaboration of these components follows:

- *Scenario modelling*. An exercise in which communities collectively construct their preferred vision of the future in their localities for specified time frames, based *inter alia* on their projected needs (both material and cultural), their resources, their modes of production, their institutions and their extra-local relationships.
- *Scenario planning*. Scenario modelling must, however, include not only “visioning” and aspirations, it must incorporate a consideration of constraints and alternatives and it must include an agenda for action. At this point scenario modelling becomes scenario planning, which importantly must include consideration of cost and the assignment of responsibilities. Aspiration (the model) is modulated by feasibility (the plan).
- *Implementation*. This is, in effect, experimentation with the plan. It should be noted that communities often do their own scenario planning. What has so often been lacking is the

explicit freedom to experiment and carry this planning forward in systematized assessment and adoption.

- *Analysis/assessment.* Through periodic reviews, the attainment of goals is assessed. If progress is not satisfactory, the reasons are examined: a failure of design or implementation? Unanticipated factors?
- *Adaptation.* Assessment leads to change in the model, the plan or modes of implementation. What needs to be changed? How? A revised action plan for the next period is negotiated.
- *Iteration.* The steps outlined above constitute a cycle, which if institutionalized in local planning and control systems should be reiterated indefinitely.

The process outlined above is consistent with our definition of capacity building as experiential learning. Although phrased in terms of a local focus it constitutes an approach which can be applied to larger coordinative regimes of planning and control.

✓ *Does capacity building address needs for planning, monitoring and adaptation?*

#### *e. Negotiating skills*

While negotiating skills might be placed as a sub-set of organizational capacity we single them out for the agenda because of their importance for market-led CBNRM and our emphasis on negotiated reciprocity in larger systems of control.

Effective negotiation depends on an understanding of legal context, contractual drafting, tender procedures and of the industry and its markets. This is specialized arena of knowledge in which communities are likely to need external facilitation, and this facilitation needs to incorporate appropriate industry knowledge and databases. Southern African CBNRM development shows numerous examples of excellent commercial and legal facilitation and the need for this kind of service is likely to continue. But a general understanding of the drafting and procedural dimensions of negotiation needs to be grasped at local regime levels and is an important aspect of capacity enhancement.

Effective negotiation also depends on an understanding of the motivation of other parties. This understanding may uncover synergies lying beneath competition. Perhaps counter-intuitively, negotiations with private sector parties sometimes reveal coincidences of interest which can be served by complementary assets brought to the bargaining table (Murphree 2001).

✓ *Does capacity building address the needs for procedural knowledge, motivational understandings and sector-specific operational and market knowledge to support negotiation?*

#### *f. Learning Transfer*

The transfer of knowledge arising from experiential learning in one context to others cannot be ignored in any programme of capacity building. This should not however be left solely to

conventional methods of communication, i.e. circulated reports, inter-communal leadership meetings and facilitator analyses. In learning transfer the messenger is as important as the message, and this implies face-to-face communication between local managers unmodulated by third parties. The orchestration and encouragement of this kind of learning transfer should be an aspect of capacity building initiatives.

✓ *Does capacity building adequately address the full spectrum of learning transfer modes?*

One could easily add further items to the six we have discussed for a curriculum of capacity building. Comprehensiveness is however not as important as viability and it is better in capacity building to have programmes which prioritize immediate need and incremental potential than to design programmes which get bogged down in compendious detail. As designers of programmes we ourselves need to gain the capacity to know where to stop!

**(e) Mechanisms and Effectiveness of Delivery**

Donor supported programmes emphasize capacity building, which is usually provided by what are termed CBNRM support agencies. Capacity-building is often driven by pre-conceived notions of what communities need, or by the specialization of the support agencies that are funded. It is a supply driven process, where priorities are set by fiat rather than demand. Two improvements are desirable. First, to link capacity building directly to gaps in performance by assessing (preferably self-assessment) the performance of a CBNRM programme against criteria defining objectives. Second, to provide communities with the purchasing power to acquire capacity for themselves (i.e. a voucher system). Noting the importance of knowing where to stop in a field so open-ended as capacity-building, a practical strategy might be to target capacity-building primarily at conformance failure. If the flow of benefits is linked to conformance, this provides a powerful incentive to acquire capacity.



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