

Assessing local resilience and getting roles right in collaborative forest management: Some current issues and a potential tool, with special reference to sub-Saharan Africa

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1999

Keywords: forestry, sustainable forestry, forest resources, forest management, tenure rights, land use, community based approach, sub-Saharan Africa.

Abstract

Based on several examples from West, Central and Eastern-Southern Africa, this paper discusses issues pertaining to the '4Rs' framework, an analytical framework which assesses local stakeholders' roles and resilience in relation to forest resource use and management via the balance/imbalance of their respective Rights, Responsibilities, Revenues/ Returns and Relationships (the '4Rs').

Rights over land and forests are at the heart of the debate, because the dualistic situation where formal and customary rules co-exist is often unsustainable. The policies aimed at improving tenure security have mostly failed and reinforced existing power structures, as they only address the spatial dimension of security, in contrast with the more social aspects of rights built in customary rules. Attempts such as formal titling of land on the one hand and codification and formalization of customary rules on the other hand, have not, so far, lived up to expectations. More recent experiments and proposals aimed at bridging the gap between customary and formal rules suggest that:

- significant efforts should be made in informing stakeholders - especially at the resource level - about their formal rights and duties;
- the current strategy, based on the distinction between private and public goods, should gradually shift to an approach based on locally derived rules (however recognized by the State), where rights would not be based on a fixed set of rules, but rather defined more on an ad-hoc basis, through a process of continued negotiation as ecological, social and economic conditions change;
- hence, legislation should adapt to the reality rather than the reverse;
- approaches should be progressive, selective and pragmatic.

With respect to responsibilities, this paper looks at the relationship between administrative decentralisation and local/decentralised forest management. It contends that, in sub-Saharan Africa, decentralisation has by and large failed because it has limited itself to a mere deconcentration of central authority towards its peripheral branches. Yet, several examples show successful local

initiatives in forest management. Hence, although decentralisation is likely to facilitate local development and natural resource management, it does not constitute a prerequisite, nor does it guarantee its success. The paper goes on to discuss factors for success in collaborative forest management between the governments, the private sector and local communities at three levels: resource, local governance and State.

The analysis of the third 'R', i.e. Revenues / Returns, begins by stressing the importance of the value of the resource - both monetary and non-monetary - in the development of collaborative forest management. Hence the need to incorporate behavioural and political factors in addition to economic ones in the analysis of stakeholders' returns and revenues. The paper then explores different types of incentives for the State, the private sector and local communities to move toward more sound management of forest resources.

As regards Relationships, this paper suggests that a good approach to analyse them is to focus on the degree and type of dependency between stakeholders. Several examples show that relationships usually are, at best, uneasy between the State and the other stakeholders. Hence the need to prioritise ways and means to overcome this situation and provide the conditions and incentives for the Forestry Department Staff to act more as an enabler of local development. Suggestions are made in that sense.

The following section briefly discusses the potential use of the '4Rs' framework in analysing situations and mapping out key issues whenever collaboration in the use and management of forest resources is envisaged. One example from Uganda illustrates some potential uses, but also that this framework needs further testing.

Several possible avenues to improve collaboration in a pluralistic institutional environment are then presented:

- Test the '4Rs' framework;
- Use the subsidiarity principle as guidance in achieving a balance of stakeholders' '4Rs';
- The whole process should be based on learning through experimentation, before practices materialise into policies;
- Given the above, governments should let innovative initiatives go and approaches should be pragmatic and progressive, acknowledging transition;
- Hence, time should be given for the learning process to take place.

The paper ends by mentioning some unresolved issues in collaborative forest management.

Evaluer la capacité d'adaptation locale et définir les rôles dans la gestion forestière participative : problèmes actuels et outil potentiel avec référence particulière à l'Afrique subsaharienne

Sommaire

Sur la base de plusieurs exemples pris en Afrique occidentale, centrale et orientale-australe, cet article examine les questions liées au cadre analytique des 4R qui évalue les rôles et la capacité d'adaptation des partenaires locaux vis-à-vis de l'utilisation et de la gestion des ressources forestières, à travers l'équilibre ou le déséquilibre de leurs règles, responsabilités, revenus/recettes et rapports respectifs.

Les **droits** sur la terre et les forêts sont au cœur du débat, car le dualisme dans lequel coexistent des règles officielles et des règles coutumières est souvent insoutenable. Les politiques visant d'améliorer la sécurité foncière ont, pour la plupart, échoué et renforcé les structures de pouvoir existantes, car elles n'abordent que la dimension spatiale de la sécurité, contrairement aux aspects sociaux des droits coutumiers. Les tentatives comme, d'une part, l'attribution de droits formels sur les terres et la codification et la formalisation des règles coutumières, d'autre part, n'ont pas, jusqu'à présent, donné les résultats escomptés. Des expériences et des propositions plus récentes destinées à atténuer les disparités entre les règles coutumières et officielles laissent entendre que :

- des efforts importants devraient être déployés pour informer les parties prenantes - en particulier au niveau de la ressource - sur leurs droits et devoirs formels;
- la stratégie actuelle, reposant sur la distinction entre biens privés et publics, devrait céder graduellement la place à une approche fondée sur des règles élaborées localement (tout en étant reconnues par l'Etat), où les droits ne dépendraient pas d'un ensemble de règles fixes, mais seraient définis davantage au coup par coup grâce à un processus de négociation permanente, suivant l'évolution des conditions écologiques, sociales et économiques;
- c'est donc la législation qui devrait s'adapter à la réalité, et non le contraire;
- les démarches devraient être progressives, sélectives et pragmatiques.

Quant aux **responsabilités**, cet article analyse la relation entre décentralisation administrative et gestion forestière locale/décentralisée. Il soutient que d'une façon générale, la décentralisation a échoué en Afrique subsaharienne parce qu'elle s'est limitée à une simple déconcentration de l'autorité centrale vers ses antennes périphériques. Pourtant, plusieurs exemples illustrent des initiatives locales d'aménagement forestier réussi. Par conséquent, la décentralisation peut faciliter le développement local et la gestion des ressources naturelles, mais elle ne constitue pas pour autant ni un préalable, ni une garantie de succès. L'article se penche ensuite sur les facteurs de succès de l'aménagement forestier en

collaboration entre le gouvernement, le secteur privé et les communautés locales à trois niveaux: les ressources, l'administration locale et l'Etat.

L'analyse du troisième 'R' (revenus/recettes) commence par l'importance de la valeur -- monétaire ou non -- des ressources dans le développement d'un aménagement participatif des forêts. D'où la nécessité d'ajouter aux facteurs économiques, les facteurs de comportement et de politique dans l'analyse des revenus et des gains des groupes d'intérêt. L'article analyse ensuite les différents types de mesures d'encouragement pour l'Etat, le secteur privé et les communautés locales, afin qu'ils s'orientent vers une gestion plus rationnelle des ressources forestières.

En ce qui concerne les **rapports**, l'article suggère qu'une bonne méthode d'analyse consiste à mettre l'accent sur le degré et le type de dépendance entre les partenaires. Plusieurs exemples montrent que les rapports sont généralement difficiles avec l'Etat. D'où la nécessité de trouver des voies et moyens prioritaires pour surmonter ce problème en fournissant les conditions et incitations nécessaires au personnel des départements des forêts pour favoriser le développement local. Des suggestions sont émises dans ce sens.

La section suivante passe brièvement en revue l'utilisation potentielle du cadre des '4R' dans l'analyse des situations et l'identification des problèmes principaux impliquant une collaboration dans l'utilisation et la gestion des ressources forestières. Un exemple pris en Ouganda illustre certaines utilisations possibles, mais montre également que ce cadre nécessite d'autres vérifications.

Il présente ensuite plusieurs voies possibles pour améliorer la collaboration dans un cadre institutionnel pluraliste :

- Tester le cadre des '4R';
- Utiliser le principe de subsidiarité pour équilibrer les '4R' des parties prenantes;
- Tout le processus devrait reposer sur l'acquisition des connaissances fondée sur l'expérimentation, avant que les pratiques ne donnent naissance à des politiques;
- Compte tenu de ce qui précède, les gouvernements devraient laisser venir les initiatives innovatrices et encourager les démarches pragmatiques et progressives, qui tiennent compte de la transition;
- Il s'ensuit qu'il faut laisser le temps au processus d'apprentissage de se dérouler.
- L'article s'achève en citant quelques questions d'aménagement forestier participatif restées sans réponse.

Collaborative Forest Management - Assessing Local Resilience and Getting Roles Right

There is a growing consensus amongst key forest decision-makers in Africa about what is needed to make the transition to a more sustainable forestry that will ensure the security of forest goods and services at household, national and global levels. This transition is likely to involve an iterative process of continuous improvement. The process would require action, not by governments alone, but also by the market and civil society as a whole.

This is likely to call for changes in stakeholders' roles in forest resource utilisation and management, which in turn will depend on local resilience to accommodate these changes. In an attempt to assess *local resilience* and give a more operational connotation to the concept of forest stakeholders' *roles*, one can define the latter by the respective *rights, responsibilities, revenues/returns* from the resource, and *relationships* (the '*4Rs*'). The use of the '*4Rs*' approach reveals interesting global trends in the roles of the primary stakeholders' involved in forest use and management. Indeed, it appears that there has often been an imbalance between the '*4Rs*' in sub-Saharan Africa, which affects local resilience to accommodate changes:

The State:

- has too many responsibilities relative to its means
- usually has ownership rights over forest resources
- often receives inadequate returns from forest resource use
- usually has an uneasy relationship with the local communities and the private sector which depend on local, often covert arrangements. Mutual distrust is common amongst these stakeholders.

The private sector:

- is given concession rights to exploit the forest
- is not responsible for the long-term objectives of the forest, i.e. those related to forest as a public good - although it has some means to manage the resource
- claims the level of returns is too low to finance sustainable forest management (SFM), other stakeholders believe it is high, especially when compared to the price paid for the right to exploit the resource
- often has opportunistic relationships with local communities

The local communities:

- usually have no or few formal responsibilities
- have no significant official rights besides user rights. Customary rights are often more important than formal rules

- need permits (in theory) to obtain tangible financial returns from the forest resources; such returns are usually small

This situation creates an imbalance in power relationships and conflicts of interests, which, in turn, make it difficult to achieve good relationships between stakeholders and clarity concerning their roles. As a result, what prevails is a *patchwork of local arrangements* and a *quasi open access to land and forest resources*.

This situation has negative effects on the sustainability of land and forest management, and the risk increases with increasing institutional pluralism. Collaborative mechanisms and negotiation fora must be developed so that the diversity and energy displayed by such institutional "chaos" leads to sustainable land use. Agreement on roles and strengthened local resilience are therefore necessary, and the use of the '4Rs' tool might help in teasing out issues and highlighting leverage points in relation to collaboration between stakeholders.

This paper will therefore be structured according to the 4Rs:

- Section two discusses current issues related to the rights to land and forest resources, and in particular some ways to bridge the gap between customary and formal rules;
- Section three examines stakeholders' responsibilities by addressing the issues of the relationships between formal decentralisation processes and local management of land and forests;
- In section four, we discuss the types of returns stakeholders may expect from forest resources, how to value them and the types of incentives towards SFM;
- Section five briefly discusses the types of relationships that may exist amongst the major stakeholders, i.e. the State, the private sector and local communities;
- Section six illustrates some possible uses of the '4Rs' tool in relation to land and forest situations in pluralistic environments with examples from Niger and Uganda.
- Finally, the last section of this paper draws some conclusions and cites some unresolved issues regarding collaborative forest management in a pluralistic institutional environment

2 Rights to land and forest resources: bridging the gap between customary and formal rules

In most African countries, control of forest land and assets by the State has been introduced by both colonial and independent governments, often at the expense of customary rules. In principle, this implies a shift from local authority (and therefore often traditional leadership structures) in Africa to national authority as guarantor of public interest. It therefore legitimates the government's role to control the use of the resources. However, state rules, often inspired by European

forestry codes, have revealed themselves as inappropriate to local realities, because they are:

- *too specific*, focusing on technical and cadastral aspects and overlooking the social and cultural dimension of natural resource use;
- *too exclusive*, being devised to exclude most individuals from the use of forest products;
- *too repressive*, hence not conducive to sound negotiation, let alone collaboration.

The tension between customary and formal rules over land rights has been further aggravated by the lack of means for the State to exert its statutory role. Too much control, without adequate means to enforce regulations ends up actually 'killing' control (Weber, 1995). As a result, local dwellers tend to resort to customary rules to manage natural resources. In reality, state and customary regulations co-exist, creating a confusing '*pluriform legal situation*' (Lekanne dit Deprez and Wiersum, 1993) and '*de facto open access*' to land and forests. This loose situation in terms of rights over land and its resources, further compounded by the inadequate wages paid to forestry sector staff, has often resulted in the *prevalence of covert arrangements between stakeholders at the local level*, e.g. replacement of official fines by bribes, or clientelism.

Several mechanisms are being tried to improve this situation. They are discussed in turn.

2.1 Some clarifications on the notion of tenure security

Tenure regimes are defined by Shepherd, Kiff and Robertson (1995) as '*socially defined rules for access to resources and rules for resource use that define people's rights and responsibilities in relation to resources*'. Due to their social character, tenure regimes vary over time and space, depending on social, economic and political arrangements, and are embedded in cultural backgrounds. They reflect power relationships between different stakeholders. Conversely, outside rural areas of Africa, tenure security is often equated only with ownership, hence control. These contradictory views have led to much misunderstanding and inefficiency in land and forest management.

Thus, it is important to clarify the concept of tenure security, as it is interpreted in different ways by different stakeholders. Government and international bodies usually associate tenure security with its spatial aspects; whereas the customary view relates it more to securing social relationships. Consequently, *any policy which attempts to increase tenure security in Africa should develop mechanisms that not only validate tenurial rights according to formal law, but also allow for social validation and clarification as to their socio-political implications* (Chauveau, 1996).

A growing body of evidence shows that *the relationship between tenure security and a more efficient and sustainable use of the resources is not always straightforward* (Dubois, 1994; Platteau, 1996). In fact, many observers agree that

usufruct or management rights may often be more important than ownership, so long as confidence in future access and mutual recognition of these rights exist. Indeed, granting rights to individuals or groups that lack the means and knowledge to manage and defend them is usually counterproductive.

2.2 The tree-land interface

The relation between tree and land tenure is usually complex, given that rights to trees can be multiple and separable from land. Hence, *there is, for example, no straightforward relationship between security on land and tree planting* (Bruce and Fortmann, cited in IIED/FD, 1996).

Fortmann (1985) defines *tree tenure* as '*a bundle of rights which may be held by different people at different times*'. She distinguishes four major categories of tree tenure rights:

- the right to *own* or *inherit*
- the right to *plant*
- the right to *use*
- the right of *disposal*

The right of disposal encompasses notably the rights for stakeholders - especially local communities - to decide that forest resources will not be commercialized. This right is often overlooked in the analysis of community forestry activities, despite its importance (Ribot, 1995).

Fortmann (1985) discerns three sets of factors that influence rights over trees:

- *The nature of the tree*: distinction is often based on the principle that '*labour creates rights*'.
- *The nature of the use*: the distinction is often made between *subsistence* and *commercial* uses.
- *The nature of the land tenure system*: tree and land tenure affect each other: where land tenure is *communal* and tree tenure is strong, the planter of a tree generally owns that tree. This very often characterises places where shifting cultivation is the main agricultural system; in contrast, where *private rights* to land are strong, rights to trees are more correlated to land rights. This favours landowners, at the expense of groups with weaker land rights, e.g. tenants, squatters, pledgees, mortgagees, and women. These groups have restricted rights due to the possibility of using tree planting to claim permanent rights on land.

In societies where women cannot own land, their rights to trees may be restricted. Thus, where tree planting establishes a claim on land, women are often forbidden to plant trees. In other instances, women's rights to trees may be related to residence and/or marriage.

Local arrangements can sometimes result in *multiple ownership of trees*. For example, Leach (1988, cited in Bruce, 1989) explains how in the Halfa Province of

Sudan, products of date trees are divided into three parts, 1/3 belonging to the person who planted them, 1/3 to the one who owns the land where they were planted and 1/3 to the individual who watered them. This system spreads the risk of entire loss of crop.

Tree tenure systems may change over time - "often in the direction of privatisation as tree resources become scarce or commercially valuable" (Millon, 1955, cited in Fortmann, 1985).

Hobley (1995) rightly stresses the importance of properly identifying *the users of tree resources and their respective rights*.

Colfer (1995) suggests six dimensions to use in assessing the links between people and forests, and along which stakeholders can be placed:

- proximity to the forest
- dependency
- local knowledge
- forest/culture integration
- power deficit (vis-à-vis other stakeholders in deciding on the use of forest resources).

She also proposes a simple scoring technique that helps differentiate those people who only benefit, or fail to benefit from the forest, from those who have the capacity to act on the forest (i.e. the actors).

A growing body of evidence shows that *where rights to harvest and sell tree products increase, farmers tend to plant more and harvest less than expected* (Mayers and Kotey, 1996). However, securing more rights for local farmers will probably often be resisted by local government and traditional authorities for some time. *Interim solutions*, aimed at increasing control rights rather than management rights, can be proposed, such as recently in Ghana (FD/IIED, 1994):

- farmers can decide whether or not, and when trees ought to be felled on their parcels of land;
- farmers can claim direct payment at the time of felling, and better compensation for felling damage;
- farmers are involved in the issuance of permits for the transportation of timber.

It is not only a question of change in tree tenure however, as argued by Scoones and Matose (1993, noted in Mayers and Kotey, 1996):

The incentives to manage resources, under any tenure setting, are centred on management and institutional capacities, appropriate enabling frameworks and co-management between local and central authorities. It is a question of institutions, and the structure within which they operate rather than the tenure and title themselves.

2.3 How to manage individualisation of tenure rights

Some major international development players have been taking the stance that the joint influence of demographic and market pressures will gradually evolve towards more individualisation, resulting in more formalisation of land rights. This trend is assumed to bring more security, better access to credit, higher prices for land, eventually leading to social peace, economic 'efficiency', political stability, and better management of natural resources.

However, systematic data to support such rationale are crucially lacking, and the World Bank itself admits that nearly all its rural titling schemes have achieved 'poor' results (The Economist, 1995). Research in several Anglophone and Francophone African countries (e.g. Uganda, Senegal, Somalia, Rwanda and Ghana) has found that indigenous land tenure systems are not as insecure as claimed (Bruce and Fortmann, 1993; Thébaud, 1995). In places where swidden-fallow agriculture prevails, registration may even bring more insecurity and inequity (Boserup, 1965). The impacts of registration in sub-Saharan Africa have been more recently critically assessed by Platteau (1996). His main findings are synthesised in Box 1.

Box 1: Impacts of land registration in sub-Saharan Africa

1. On security of tenure and litigation costs

Registration can create rather than reduce uncertainty and conflicts over land rights, because:

- The confusion that arises from the co-existence of two sets of legal rights often leads to the misuse of the law to the advantage of the most clever and powerful. Some other sections of the population - especially marginalised groups - that rely on customary law to claim rights to land, are often denied recognition of rights during the registration process.
- Costs of establishing and operating registration are often prohibitive, both for the claimant and the concerned state agency. Moreover, weak administrative capabilities entail very long delays in the completion of registration. As a result of these constraints, registration ends up being either permanently incomplete or obsolete upon its completion; thereby creating more uncertainties and conflicts.

2. On land sales and their effects on efficiency of use

Frequency of land sales has not increased thanks to titling, except at the beginning of the process, and under the manipulation by local elites. On the supply side of the land market, this is due to:

- interference of customary rules in the marketing mechanisms. Traditional control often persists, even when land is duly registered. This relates to the social role of land, as a primary factor of well-being, insurance and integration;
- the emotional attachment of most African people to their land, land sales occur generally under conditions of distress.

On the demand side, demand for land often arises from non-economic motives, such as:

- social and political advantage;
- a relatively safe investment and a good protection against inflation for people with regular incomes;
- a means to provide land to future generations of the family.

Under such circumstances, absentee ownership is frequent where land markets exist. Therefore, land sales can seldom be associated with more entrepreneurial use of the land.

3. On credit and investment

Opinions seem to converge on the fact that titling has negligible effects on smallholders' access to credit. On the supply side of the credit market, this stems from:

- the lack of reliability of titled land in the view of moneylenders, due to difficulties in foreclosing on it in case of default (see above the reasons why people purchase land), ineffective judicial system (this can be worsened by popular opposition, e.g. if titling and the consequent reshuffling are considered customarily illegitimate);
- the usual strategy of credit institutions, which are reluctant to handle small loans in order to cut administrative costs.

On the demand side of the credit market, there are several constraints to attractive investment that are not related to tenure:

- lack of access to technology, infrastructure, markets, all factors conducive to intensification of agriculture;
- taxation of visible wealth;
- jealousy on the part of the village elites and peers.

(Source: Platteau, 1996)

Platteau concludes that:

African land arrangements or practices have evolved in a significant way under pressure of changing circumstances, yet retain some basic features of erstwhile institutions, particularly with respect to modes of exchanging land: the notion of land as a (freely tradable) commodity remains deeply alien to most African people.

Nevertheless, a gradual increase in the demand for privatisation of land in Africa, particularly in the Sahel, has to be acknowledged. It originates mainly from urban-based civil servants and traders, and often concerns peri-urban areas. However, more and more farmers, especially in the Sahelian region, demand some sort of formalisation of land tenure, or as Mathieu (1996) puts it, "*a paper countersigned by the local administration authority.*" Land sales are currently occurring in several parts of Africa in the absence of official market mechanisms, such as around capitals in the Sahel, and often under severe conditions of distress, such as in Rwanda (André and Platteau, 1996). In most of these instances, however, informal land markets tend to favour the wealthier and more powerful. This inequitable land transaction requires government intervention, at national and/or sub-national levels, to ensure greater social equity in accessing land titles.

However, individualisation should not be seen as necessarily associated with titling, nor with the existence of formal mechanisms to alienate land. *Intermediate settlements* might be more appropriate, so long as they are recognised by the local administration. As regards *titling*, Lesotho, for example, has seen the development of a relatively cheap, alternative system of occupation permits, possibly convertible into formal lease rights (Lawry, 1993): for instance,

an entrepreneurial farmer purchases customary land rights from an existing holder. Both parties then approach the village chief and advise him of the agreement to transfer the customary right. A specific form is issued to endorse such a deal, and it is felt to provide sufficient security to the buyer. This type of indigenous allocation is perceived neither as inadequate nor as a disincentive to investment. Furthermore, it retains the social security role of indigenous systems.

In some instances, titling is associated with *negotiations* with local traditional authorities. One such example comes from Burkina Faso. Around Ouagadougou, titling of land broadly follows this sequence (Ouali, F, 1996, pers. comm.):

- acquisition of a temporary authorisation to invest on the land, provided by the local administration;
- official title on the land is subject to the approval of a land development plan by local traditional authorities, through a process of negotiation; and the physical proof of the investments made to improve the value of the land;
- the official title is renewable every five years, through a process that also depends on the level of investment and approval by local traditional authorities.

Renting (for instance in Lesotho and many irrigated perimeters in West Africa) and leasing are other types of land transactions that retain the flexibility of indigenous systems, without necessarily jeopardising tenure security.

As expressed by Hesseling and Ba (1994):

In any case it will be necessary to take account of the high cost of a privatised land tenure system (social cost for some social groups, financial costs); choose the right moment to introduce private ownership in a given area, i.e. taking account of changes under way; sometimes allow several systems to co-exist; and sometimes seek intermediate solutions.

2.4 Community-based systems - building upon indigenous rules?

The main feature of community-based systems is that *"their legitimacy is drawn from the community in which they operate and not from the nation state in which they are located"* (Lynch, 1992). Such systems can encompass both private and public group types of tenure.

Given the weak enforcement of state regulations, recently more and more attention has been given to indigenous rules, as a possible alternative to regulating the use and management of natural resources in rural areas of Africa. Indigenous rules offer some potential *advantages* in the management of natural resources:

- They are based on social status and relationships, and are therefore likely to bring about a more effective and cost-effective control of local regulations, through peer pressure;

- They are locally designed, hence adapted to local contexts and familiar to local dwellers;
- Being based more on social criteria than space, they are more inclusive than formal regulations. They therefore display a flexibility that allows for the co-existence of multiple rights on the same resource, as well as for adaptability to change. This capacity to adapt should nonetheless not be romanticised. It actually varies according to the community concerned, and often needs outside support, especially when local resources are under strong exogenous pressures.
- Application of rules operates through the internalisation of well-known principles rooted in indigenous values. Hence conciliation rather than punishment usually sanctions conflicts (Traoré and Lo, 1996).

However some major *shortcomings* of indigenous rules should not be overlooked:

- They often neglect the interests of certain minorities and other socially weaker groups, e.g. herders, women;
- Being based on oral tradition and collective memory and seldom with transcription of proceedings, they may be challenged with time or as power structures and alliances evolve (Traoré and Lo, 1996);
- Indigenous rules often lack effectiveness when it comes to solving conflicts between stakeholders who do not share the same values, e.g. local dwellers and a logging company;
- They depend a lot on the preferences of the traditional leaders, who can sometimes not represent the interests of their constituencies;
- They are embedded in indigenous knowledge, which is not always conducive to sustainable use of resources, as indigenous beliefs consider availability of resources to depend more on irrational and divine factors than scientific factors (de Garine, 1996). As an important consequence, *the existence of indigenous rules does not guarantee sustainable use nor management of natural resources* (Baland and Platteau, 1996).

It is sometimes argued that *codification* of traditional rules would help their recognition at governmental level. However, this task seems almost insurmountable, given the complexity of these rules. The utility of such an exercise is also questionable, when the geographical scope of application of traditional rules is limited. Furthermore, in circumstances where customary rules have been codified, such as in the case of the Maliki law in northern Nigeria, they may need to be re-codified over time and due to local demand and pressures (Mortimore, 1996). Such a process can be seen as equivalent to absence of codification.

Formalisation, i.e. the enactment of legislation to recognise customary rules, is sometimes claimed as another possible mechanism to avoid dualistic tenure regimes. This would give a prominent role to the State in engineering the

orientation of customary systems, hence the possibility to offset some of their drawbacks.

However, it bears several disadvantages (Mortimore, 1996):

- The government assumes the right to define the goals; it is not a 'referee,' but rather a key player with respect to natural resource use
- The complexity and flexibility of customary rules, as well as their inclusive character, are almost certain to be overlooked.
- Organising tenure along 'modern' principles and using 'modern' tools (i.e. titles) is very expensive and time-consuming. The costs of maintaining the system should also be considered.

A more promising approach to build upon indigenous norms to regulate natural resource use might be to develop mechanisms that officially recognise some indigenous rules, but on an ad hoc basis, and taking into account the weaknesses mentioned above. Such an approach is currently being tried in Madagascar and is summarised in Box 2.

Changes that allow for some reconciliation between customary and formal law have been occurring in several other parts of Africa, for example:

- Shepherd, Kiff and Robertson (1995) cite the case of Ghana, where governments have exerted rights to trees, but the clan system, supervised by Stool Chiefs, has continued to control the allocation of rights to NTFPs and non-forested land. Moreover, stools also receive a share of the royalties from logging (Quan, cited in Shepherd Kiff and Robertson, 1995).
- In Botswana, "traditional chiefs have ceded their role of land allocation to land boards, units of the local government independent from both tribal authorities and elected district councils. At the same time, chiefs maintain a veto prerogative for land board allocation in their areas, as well as an overseer role regarding land use" (Dia, 1996).

The *dynamic character of current customary rules* is emphasised by Bruce (1993), who contends that nowadays, important customary rules often turn out to be only a generation old.

However, the adaptability of customary tenurial rules to different circumstances, though undeniable, is not evenly spread among local communities. It therefore often needs strengthening, with assistance from outside entities.

2.5 The role of the State - to what extent can and should it regulate rights over land and resources?

The difficulties for the State to exert its mandate as forest owner and manager beg the question of the extent to which it should intervene in the regulation of property rights to land and forests.

Based on emerging evidence from Pakistan, Nepal and the Philippines, Lynch (1992) suggests *limiting state intervention to the formal delineation of*

perimeters of community-based tenure systems, leaving the regulation of individual property rights to the communities themselves, at least insofar as tribal and indigenous people are concerned.

In Africa, a similar approach is being followed in Tanzania, where decisions on land allocation and broader decisions on land-use are made at village level. More restrictions used to apply to forest reserves, but recent changes in the Tanzanian forest policy seem to have addressed this anomaly (Shepherd, 1996).

Another example comes from the Imamba-Ivaka project in Madagascar and is described by Karsenty (1996b). The project obtained permission from the local administration to simplify the procedure associated with registration of communal land based on aerial photographs. The customary communal territory was then delineated and demarcated on the ground. The registration 'title' with legal value was then given to the traditional leader, who could in turn deliver 'internal titles' (without formal value) to user groups or individuals. This has resulted in a gradual reforestation of the area.

The efficiency of such an approach results from both its *application to local actors' specific needs*, and from the *combination of formal tools and locally tailored rules*. However, this approach does not discard the role of state forest officers as providers of advice in the management of forest resources. In such cases it is also important to establish mechanisms to guarantee the *legitimacy* of local decision-making bodies.

Box 2: Expanding the use of traditional rules to regulate the use and management of natural resources in Madagascar

In Madagascar, '*Dina*' are community-inspired by-laws which local decision-making bodies use for the benefit of the community. They date back to at least the 19th century. They concern family issues but also territorial and security matters, such as cattle rustling, bush fires, and use of certain trees.

'*Dina*' are always embedded in local values and beliefs, and once they are agreed upon by the traditional authorities, deterrents against their infringements can take various forms: fines, ritual sacrifices, and, in extreme cases, expulsion from the community. Traditional '*Dina*' normally ignore formal law, as do also most local dwellers.

Recently, there have been tentative moves to expand the use of local '*Dina*':

- in some instances, local '*Dina*' that have proven operational are being expanded to district, provincial, or even regional level. This process is cumbersome, since it requires the approval of all traditional leaders concerned, and in some cases the restoration of their authority via newly-built institutions;
- In other cases, the state and some NGOs (e.g. WWF) use the '*Dina*' principles to create new ones that suit their purposes. Traditional leaders are used as conduits to promote and enact such '*Dina*'. Thus far, such mechanisms have been notably used to regulate tree cutting, bush fires and shifting cultivation;
- more recently, '*Dina*' have been officially incorporated in the new government's strategy regarding the management of natural resources, which devolves many responsibilities and rights to local communities.

Indeed, the use of '*Dina*' has proved a very good tool to:

- *inform and train* natural resource users at the local level, as the acceptance of a 'Dina' involves thorough debates on the pros and cons of different practices, environmental values, etc.;
- *improve communication* between the State and local communities;
- control *the use of natural resources, being based on local values and initiated by local dwellers.*

(Source: Raharimalala, 1996 and Razanaka, 1996)

2.6 The right to know

At the forest resource level, a significant lack of information about stakeholders' formal rights prevails in many rural areas of sub-Saharan Africa. For many years, this neither concerned nor affected local communities, mainly because they only occasionally resorted to formal rules in their daily lives. Indeed, *farmers' behaviour in relation to tenure has been primarily guided by a complex set of mutual benefits rules.*

More recently, and in the wake of decentralisation, there has been a greater concern on the part of both the legislator and local communities that the latter should be more informed about their new rights and duties - the assumption being that they would become more involved in the management of natural resources. Different mechanisms have been tried to address this concern:

2.6.1 More participation of local communities in the debate

This was one of the major objectives of the national conference on desertification in Mali and the Rural Code in Niger at the beginning of the 1990s. The idea was that more public involvement in such matters would, among other things, help bridge the gap between formal rules - usually set from the top - and people's concerns. However, in these two cases, public debates were actually dominated by local elite groups, with little participation from farmers, herders, or fishermen (Hesseling and Ba, 1994).

2.6.2 Dissemination of formal rules to the local community level

This has been attempted in several ways in Francophone West Africa:

(i) *Judicial clinics*: in several countries of West Africa (e.g. Senegal, Mali and Niger) and, more recently, in Cameroon, judicial clinics (*cliniques juridiques*) have been set up. These consist of groups of 'paralegal experts' backed up by a group of lawyers, who organise consultations in villages and in local dialects. Thus far, most of these organisations have focused on family matters (marital issues, children's issues, etc.). However, more recently, some of them have agreed on the need to venture into issues related to natural resource management.

(ii) *Translation of all (or part of) legal texts*: in recent years, legal texts implying greater involvement of local communities in natural resource management have proliferated, both in Anglophone Africa (e.g. Ghana and Zimbabwe) and Francophone Africa (e.g. Niger, Cameroon and Senegal). Hence the need to

properly inform rural dwellers of their 'new' rights and responsibilities. This requires cost-effective mechanisms to provide timely, user-friendly, though not distorted information. Some examples on how such issues have been tackled in three African countries are presented in Box 3.

(iii) *Interpretation* of rules plays also a key role here, whatever the quality of the process of disseminating information. Therefore, this process alone does not suffice to warrant appropriate implementation of rules. It needs to be accompanied by the development of checks and balance mechanisms that will be discussed in section 3 of this paper.

(iv) *Land tenure monitoring centres ('Observatoires Fonciers' in French)*. In Mali, a land tenure monitoring centre has been recently set up. Its mandate includes (Gado, 1996):

- monitoring of changes in tenure and their effects on resource management;
- identification and interpretation of the features of the land tenure situation and explain the mechanisms at work;
- assistance to the implementation of practical measures aimed at solving conflicts over land;
- setting up of a database at the disposal of users (e.g. farmer organisations, NGOs, public authorities, etc.).

2.7 Asking the right questions in assessing tenure

Local situations are very diverse, suggesting many possible ways to overcome tenurial problems. Also, tenurial changes are time-consuming and expensive to implement. It is therefore crucial to properly assess the existing situation by asking the right questions. Some questions are suggested in Box 4.

2.8 Flexible frameworks - resource management rather than space management

There is a growing body of information that tends to favour a *flexible* approach to rights to land and natural resources: it argues that *rather than a fixed set of rules, rights should be defined on a more ad-hoc basis, through a process of continued negotiation as ecological, social and economic conditions change* (McLain and Sankare', 1993). This is notably in line with Karsenty's (1996a) idea of envisaging natural resource management in terms of the possible co-existence of different resource uses within the same area rather than just according to space, which is based on the exclusive notion of zones; for example *use, rather than geographical area is the first consideration*. Under formal law, it tends to be the other way around. In other words, *definition of clear rights - and duties - over the resource could prove more important than area ownership issues*, especially in the context of collaborative management.

The approach to tenure issues should therefore take into account not only rights but also modes of control of resources. Referring specifically to Africa, Le Roy, Karsenty and Bertrand (1996) suggest a very interesting way to classify tenurial

systems, which also combines formal and customary rules. They consider a matrix where the rows are composed of different modes of control over land and the columns consider different types of rights to the same piece of land, as illustrated in Table 1.

The need for flexibility is further compounded by the fact that the relative abundance of the resource at stake influences the preference which local users give to one or another tenure regime. As Campbell et al. (1996) argue:

The greatest motivation for increased resource tenure under population pressure is the desire to secure preferential access in circumstances of resource inequality. A community which has better than average common property resource endowments will have much to gain from an effective common property regime.

2.9 The social and political nature of tenure - envisaging different options

Many observers agree that *tenure matters should be perceived and apprehended as social and political issues*. Tenure actually concerns rights between different individuals and/or bodies over natural resources.

Eventually, it all boils down to *power relations*. This explains why, more often than not, tenure regimes have not been designed to enable a more efficient management of natural resources, but rather to reinforce existing power structures.

Treating tenure issues outside their institutional and political contexts will not have a significant impact because it will not challenge stakeholders' willingness to change existing power structures. In addition, situations are very diverse and often complex, calling for *creativity* and *flexible approaches*. On the face of it, it is important to develop interim measures and test them over time through *a trial-and-error process*. A range of possible solutions should always be assessed. Although it should not be used as a blueprint, Table 2 attempts to provide some guidance on possible tenure options. It is important to note that these options are not mutually exclusive.

Box 3: Some examples of translation mechanisms used to disseminate legal texts at the local level.

In Niger, the New Rural Code has been translated in several local languages and disseminated at the local level. However, there have been many complaints about the quality of the translations, which often seem to distort the original version. This weakness probably stems from the lack of involvement of lawyers, and the lack of feedback-checking mechanisms.

In Cameroon, regulations pertaining to communal forests have been translated in a local language, in the context of the rural development side of the API / Dimako Project. The original text, written in French, was first translated by a high-school graduate into the local dialect. The translated text was then translated back to French. This feedback-checking mechanism revealed several misinterpretations, which could thereby be corrected. This process has avoided distortions and has greatly enhanced the quality of the final product (Alain Pénelon, 1996, pers comm.).

In Senegal, the Law Department of the University of Saint Louis has been collaborating for some ten years with ARED - an NGO specialised in literacy training - on the dissemination of legal texts at village level. The process involves several steps (Samba Traore, 1996, pers comm.):

- Step 1: choice of topic according to its pertinence to and receptivity by local communities
- Step 2: selection of significant texts pertaining to the topic and documentary analysis of the topic
- Step 3: lawyers simplify the original texts in a way that can be understood by illiterate or poorly-educated individuals
- Step 4: The simplified text is submitted to French speaking non-specialists who are asked to explain what they have understood. This step checks whether the content of the legislation has been respected in the simplification process
- Step 5: The simplified text is then translated into a local dialect and disseminated by ARED specialists.

Thus far, the process has been completed for the Constitution of Senegal (translated in 3 languages) and the National Domain Law (translated in one local dialect). The translation of the New Forestry Code is in preparation.

Box 4: Questions to ask when assessing tenure systems

Security of tenure: What does it mean for local stakeholders? Is titling necessary? To what extent do flexible arrangements provide enough confidence in/security over existing land rights ?

For whom? Should it concern native inhabitants, migrants, farmers, herders, etc.? Is there a need for a proper stakeholder analysis at this stage

Of what kind? Ownership or use rights? For how long? Transferable or not? What investments on land should legitimise security of tenure?

How to guarantee it? Referring to legislation? Government recognition of local rules? A combination of both? Who should be made accountable?

Is 'common knowledge' about the local tenure system correct? Need to assess what should be considered outdated, due to continuous adaptation of local rules, especially in rapidly changing contexts.

Who is constrained (in addition to what is the constraint)? This will determine the seriousness of the constraint and the appropriateness of strategies to deal with it.

Is this tenure constraint a bottleneck? Comparison with other constraints are necessary, in order to prioritise action in both an efficient and cost-effective way.

What purpose or purposes are served by the feature of the tenure system that is in question? The apparent constraint may be an enabling factor in another context. The feature may be part of a risk-avoidance strategy. There is a need to evaluate the trade-offs involved in the removal of the constraint.

How static is the constraint? It may resolve itself over time. Changes may already be happening.

Is there a non-tenorial solution to the problem? The problem may actually relate more to policy or project constraints, than to tenure.

Finally, are there opportunities posed by the structure of the system and its institutions, of which policy-makers could take advantage in planning change?

(Source: Adapted from Bruce, 1993 and Hesseling and Ba, 1994)

Table 1: Possible relationships between people and land in Africa

(C refers to customary types of rules, F to formal types of rules)

Types of Rights	Access	Access Extraction	Access Extraction Management	Access Extraction Management Exclusion	Access Extraction Management Exclusion Alienation
Modes of management control	F	C	C	C	F
Public: F Common to all					
External: C common to several groups					
External-Internal: C common to two groups					
Internal: C Common to one group					
Private: F by one individual					

(Source: Le Roy, Karsenty and Bertrand, 1996 - translation by the author of this paper)

As a result of this *participatory learning approach to implementing tenure reforms, legislation should adapt to realities rather than the reverse*, or, as argued by Hesselings and Ba (1994), "rather than laws that *stipulate* a specific form of land tenure, laws should be drawn so as to *allow* for the search of a whole range of possible solutions."

Such an approach requires legal policies to shift from a public/private dichotomy to a *more locally based strategy* to regulate rights over natural resources. This does not question the notion of property. It incorporates it in a framework which takes into account sustainability and specific uses of resources by different groups. This would lead to a gradual shift (Karsenty, 1996b): *from*

law tools project participation
towards

*general legal principles negotiation definition of long term objectives
common choice of instruments and setting up of local management authorities
evolution and adaptation of the law*

This new sequence of steps is being tried in Madagascar. It places participation and the choice of instruments after reaching an agreement on long-term objectives.

It also requires *mediators*. In Burkina Faso, an adaptation of the current '*Tribunaux Départementaux de Concertation*' could be attempted, in order for such bodies to play a mediating role between all local stakeholders. In Madagascar, a project attempting to create a body of environmental mediators started in 1996 (Weber, 1996).

3 Rules and Institutions at Local Level - What Factors Matter?

3.1 Links between decentralisation and local forest management

Decentralisation is often seen as the cure-all for local management of environmental resources. Main reasons include micro-level ownership and decision-making. However, decentralisation may not be very cost-effective in addressing some broad economic and environmental issues, such as externalities. Moreover, experience shows that *decentralisation does not constitute a prerequisite, nor a guarantee for sound development and environmental management* (Dubois, 1997b). There are examples of good local development where administrative decentralisation has actually failed. Such examples are presented in Boxes 5 and 6 in the case of Tanzania and Niger.

Table 2: Possible tenure options, applicability, enhancing conditions, and some suggestions for action by the State

Possible tenure situation	When is it most applicable ?	Enhancing conditions	Role of the State
Titling	On farm land Where indigenous norms are weak or have been eroded	Possibility for several systems to co-exist Take into account the high costs of titling Sometimes, search for intermediate solutions Take account of changes under way	Enable a gradual and flexible transition Regulate the real estate market in order to halt land speculation and protect the most vulnerable social groups Create simple, clear-cut procedures Establish simple, relevant criteria to prioritise allottees Design registration systems suited to local conditions

Table 2: continued

Possible tenure situation	When is it most applicable ?	Enhancing conditions	Role of the State
'Joint' management	<p>On public / state land</p> <p>On collective property</p> <p>Where resources are managed under local management rules</p>	<p>Existence of a decision-making authority, recognised and respected at the local level, whether pre-existing or new</p> <p>The presence of mediators, capable of leading negotiations</p>	<p>Work out mechanisms for transfer of power</p> <p>Seek out the appropriate level of transfer, through consultation with local communities</p> <p>Act as facilitator, fostering constructive dialogue</p> <p>Act as mediator in case of conflict between local communities and other stakeholders</p> <p>Lay down simple procedures for recognising arrangements that have been agreed upon</p> <p>Ensure that rules of joint management do not have negative effects on groups not represented in the management structure (e.g. pastoralists, neighbouring villages)</p>
Community-based management	<p>On public group land</p> <p>On private group land</p>	<p>Long term tenure security to natural resources for local community</p> <p>Formal recognition of community-based rights, responsibilities and management schemes</p> <p>Mechanisms aimed at supporting community empowerment</p> <p>Local checks and balance mechanisms that ensure equitable distribution of benefits and accountability of decision making bodies</p> <p>An institutional environment that enables rules to be set by practices and reshaped as needs arise</p>	<p>Work out a legislation that:</p> <ul style="list-style-type: none"> - is flexible enough to facilitate the adaptation of local tenure practices to changes - takes into account the diversity of land tenure situations at the local level <p>Introduce fairly simple procedures for official recognition of rights derived from local practices</p> <p>Provide incentives for equitable access to natural resources</p> <p>Promote a democratic forum at the local level</p> <p>Promote research aimed at identifying strong and weak points in the evolution of local land tenure practices</p>

(Adapted from Hesselings and Ba, 1994)

Box 5: Local forest management in the Duru-Haitemba and Mgori miombo woodlands

Up until 1994, these woodlands were under government control and management. Their condition has been steadily degrading, due to farming encroachment, grazing, hunting and charcoal-making by local dwellers, and timber extraction mainly by outsiders.

In the case of Duru-Haitemba, plans to establish a forest reserve prompted local inhabitants from five villages to deliberately 'take as fast as possible as much as they could' from the forest, further increasing forest decline and not auguring for effective reservation of the area.

Hence, local authorities informally agreed with project staff that the gazettement process would be suspended subject to demonstration that local communities could halt forest degradation. This implied that local communities would be responsible for daily management and control of the forest.

This launched a very dynamic process by the villagers, including:

- Drawing of simple but effective management plans, which actually and interestingly comprise mainly rules concerning the use of the resources, and the modalities of fining perpetrators. Also notable is the fact that any use considered damaging was banned even if it provided income to some local groups (e.g. charcoal burning, tree felling). Plans were refined and validated during village assemblies.
- Setting up of Village Forest Committees (VFC) as parallel decision making bodies to the official village councils. The composition of the VFCs rapidly shifted from village leaders to ordinary villagers, because of past mismanagement of funds and the consequent need for greater accountability.
- Selection of Village Forest Guards (VFG) in charge of protecting the village forests from abuses by outsiders as well as insiders. This has resulted in a task force of more than 100 guards, whereas the government had previously appointed only two forest rangers.
- Later, village plans and rules were rephrased as by-laws which were formally approved by the district authorities, providing the necessary legal back-up to informally derived regulatory instruments. This and the entitlement of village land has turned communities into legal owners and managers of what they call their forest reserves.
- Assistance from local foresters and other outside advisers in the whole process was limited to ad hoc need, as in the case of legal matters and resolution of inter-village boundary disputes.

Since the outset of the process, degradation of the forest has significantly receded, at no cost to the government.

On the other hand, communities have gained power through ownership, increased responsibility and also access to benefits from the resource. Finally, local foresters have been liberated from their coercive role and the failure of not achieving forest protection, thus allowing to better provide technical assistance.

The initiative developed in Duru-Haitemba has convinced many of its 'correctness' in terms of efficiency in achieving conservation and sustainable development. In 1995, a similar dynamic process was launched by local communities in the Mgori forest, with similar outcomes.

One major pitfall to avoid is to try to impose this type of process elsewhere, forgetting that one major factor of its current success lies in the fact that it has been locally initiated, without outside pressures, nor the use of blueprint schemes. The main role of the government has been to 'let it go'.

(Source: Wily, L., 1996)

Box 6: The Rural Markets in Niger

Studies carried out in the 80s concluded that the existing system of marketing of woodfuel in Niger - based on government control through the delivery of permits - was archaic, uncontrolled and mainly benefiting the merchant-transporters. Hence, work on the reform of the system was promoted by donors, culminating in 1992 with the enactment of a law which radically changed the organisation of the woodfuel sector in the areas covered by the project, providing for:

- Creation of Rural Markets (RM), subject to the existence of Local Management Structures (LMS) composed only by representatives who have usufruct rights in the area. They represent different user groups in the village (woodcutters, farmers, herders; women have not been included). In practice LMS are created at the village level. The choice of villages is made by the forestry service, according to production potential. LMS manage the RMs and supply them with woodfuel.
- Three types of markets: 'controlled' markets, supplied by delineated and managed production zones; 'oriented' markets, supplied by delineated but non-managed areas; 'uncontrolled' markets, tolerated during a transitory period.
- The transfer of taxes from collection to transport level. Rural markets charge less than other areas, as an incentive for the traders to purchase where production is organised by villagers. Tax revenues are to be divided between the Public Treasury, the LMS and the Local Municipality. The more 'controlled' the market, the more revenues are allocated to the LMS. Tax recovery within RM has amounted to almost 100 % (Ribot, 1995a).
- Annual quotas determined by committees composed by one representative of the LMS, two staff from the forestry service and one staff from the municipality.

Between 1992 and 1995, some 85 RMs were created, covering an area of about 352,000.00 hectares. In 1995, their supply amounted to some 15% of the need of the city of Niamey. The implementation of new markets has been increasing at a steady pace. Interestingly, most RMs belong to the 'oriented' markets category.

The launching of a National Information Campaign aimed at rural populations, merchant-transporters and urban consumers was considered a prerequisite to the launching of activities, as a means to reduce the distrust and incredulity of rural dwellers towards the official discourse promoted by the 1992 Law.

Despite remarkable achievements, the Energie II project has faced some problems and has been criticised by several observers, mainly concerning:

- an overemphasis on woodfuel, at the expense of other categories of forest resources;
- the exclusion of women from the LMS;
- the slowness of the process of registration of LMS and RMs. Actually, the process is being privatised, with consulting firms and NGOs assisting the local forestry service in the follow-up process.
- the merchant-transporters lobby putting pressure on the government to overturn the 1992 law and resume the old situation of uncontrolled trade of woodfuel. This has been resisted by the government.

Due to the success of the project in Niger, a similar project has recently been launched in Mali.

(Sources: Ribot, 1995; Sidikou, 1995; Madon, 1995)

What has failed in Africa is not decentralisation but rather a particular form of it, i.e. deconcentration. All too often problems encountered at central level are simply transferred to the peripheral levels of administration. In addition, administrative bodies, be they central or decentralised, enjoy little respect and confidence by lay-people. For instance, recently in Uganda, forest management has reverted from district to central level, as a result of poor management on the part of the district-level authorities (John Hudson, pers. comm.).

Decentralisation will have a facilitative role in good local forest management only if it means *true devolution of authority* from a larger to a smaller jurisdiction, and substantial autonomy of work - in particular financial - for the latter.

3.2 Micro-macro level issues: rules and institutions

Strategies and modalities to improve the quality of local development and forest management can be broadly contemplated at three levels: resource, local governance and State.

3.2.1. The resource level

Community involvement in the management of resources, it requires real *power* and *rights*, the necessary *competence*; *economic interest*; and the *wish* to play this responsible role, which to a great extent depends on the previous three factors.

Performance in terms of *active participation* is often poor in state or donor-driven initiatives. One likely reason is the time, manpower and financial means it requires, which often tend to offset potential long-term advantages of participation.

Hobley (1995) has attempted to develop some criteria to assess the likely effectiveness of local institutions and organisations involved with local natural resource management, based on previous work by Ostrom and Wade. Box 7 is adapted from her findings.

Local people's participation alone does not suffice to induce sustainable management. It needs to be accompanied by *adequate representation* in decision-making bodies and *empowerment*. Both are necessary to ensure local communities enough bargaining power in the negotiation over resources and the establishment of partnerships.

Rules and proper institutions related to small forest entrepreneurs are usually lacking at the resource level in sub-Saharan Africa, and these operate more often than not in complete, though acknowledged illegality. However, there are cases where such activities are somewhat controlled and/or legalised:

- In some instances, it happens through informal arrangements between individuals: for example, in some areas of Zambia, shifting cultivators have verbal contracts with charcoal burners, whereby the latter help the former in clearing the land and benefit from the felled trees (Makano, Sichinga and Simwanda, 1997).

- In other instances, it is the community which exerts a regulatory role, such as in the case of rural markets in Niger discussed above.
- In the Ivory Coast, many technical tasks have been subcontracted to local entrepreneurs and/or forest co-operatives by SODEFOR, the parastatal body in charge of forest management, thereby generating significant off-farm income at the local level (Ibo, 1997).
- A very interesting example of a local association of small private operators created without any outside assistance concerns the Masindi Pitsawyers and Wood Users Association (MPWUA) in Uganda and is described in Box 14.

Box 7 : Criteria to assess the likelihood of success of local organisations and institutions

1. Clearly defined boundaries

Individuals or households with rights to use resources and the boundaries of the resource itself are clearly defined.

2. The technology

The higher the cost of an exclusion technology (e.g. fencing), the better the chances of success, however only if local stakeholders are the ones shouldering these expenses (author addition).

3. Congruence between appropriation (use) and provision rules and local conditions

4. Relationships between resources and user groups

Location: success is likely to be enhanced by overlapping between the location of the common-pool resources and the residence of the users.

Users' demands: the more vital the resource, the greater the chances of success

Users' knowledge: the more their knowledge of sustainable yields, the greater the chances of success.

5. User groups

Size: the smaller, the better. Some authors suggest that a user group has a greater chance to collapse when it is comprised of more than 30-40 members.

Boundaries: the more clearly defined the boundaries of the group, the greater the chances of success.

Relative power of sub-groups: the more powerful the beneficiaries from retaining the commons, the better the chances of success.

Existing arrangements for discussion of common problems: the better developed these are, the better the chances of success.

Extent to which users are bound by mutual obligations: The more these obligations relate to social reputation the better the chances of success.

Punishments against rule-breaking: the more users already have joint rules and graduated sanctions, the greater the chances of success.

Consensus about who are the users: this must be negotiated at the onset of the creation of the user group.

6. Collective-choice arrangements

Box 7 continued

Most individuals affected by operational rules can participate in modifying these rules.

7. Monitoring

Monitors, who actively audit resource conditions and user behaviour are accountable to the users and may be users themselves.

8. Conflict resolution mechanisms

Users and their officials have rapid access to low-cost, local arenas to resolve conflict among users or between users and other stakeholders.

9. Minimal recognition of rights to organise

The rights of users to devise their own institutions are not challenged by external governmental authorities.

10. Nested enterprises

Appropriation, provision, monitoring, conflict resolution, and governance activities are organised in multiple layers of nested enterprises (possibly linked with other democratically-based political institutions).

(Source: Hobley, 1995)

3.2.2 The local governance level

Devolution of authority must satisfy a certain number of principles if it is to induce tangible development at the local level. These include:

(i) Legitimacy of local institutions. In many current situations, local institutions are only recognised at the

national level if they serve the interest of central governments. Formalisation of self-governance bodies notably prevents their suspension by central authorities for any futile pretext. Decision-making structures, be they formal or informal, should be accepted and legitimised so long as *they achieve good results* in sustainable local development and conservation.

(ii) Sufficient autonomy to undertake development activities and modify local rules and institution. Without this autonomy, self-governing bodies are unlikely to attract two major ingredients for local development, i.e. *local political leadership* and *local public interest*. This in turn will only happen if locally elected bodies have the third fundamental ingredient for good governance: *sufficient resources* (notably financial) to govern. In a transition phase, these can come from higher levels as long as mechanisms are in place to progressively bring about self-financing. However, there is often a risk that local elites use increased autonomy for their own interest. One possible way to reduce such risk is *to provide autonomy in an incremental fashion, linking it to performance* (Olowu, 1990).

(iii) Greater accountability of self-governing institutions. Accountability should concern two levels: civil servants towards decision-making bodies and these towards citizens. Checks and balance mechanisms have to be developed that guarantee a consensus on the distribution of profits emanating from local use of

resources. The State has also an important role to play in that matter. However, where government's ability to regulate local affairs is weak, other mechanisms are likely to assist in promoting accountability. Some of these include:

- training on functional literacy, in order to increase access to information, hence more informed participation in debates;
- control mechanisms based on peer pressure and need for several signatures as regards monetary operations;
- transparency for reviewing and authorising contracts and verifying expenditures; better representation of local interests.

(iv) The extension of citizen's possibility of recourse against arbitrary allocation of resources. Where such mechanisms exist, their cumbersome character often limits their use by local people. This is often a deliberate intention on the part of local elites and governments.

(v) Level of decision-making. It should be *the highest level where stakeholders know each other sufficiently, and are therefore enough tied to one another to be able to control each other in a cost-effective way.* One can also add the criterion that defines the level where *the relationships between efforts and outcomes are highest* (Olowu, 1990).

In practical terms, three interrelated crucial factors need to be considered: representation, ability to regulate and cost-effectiveness.

Representation

As argued by Ribot (1997b), representation is crucial for it addresses the issue of *to whom* should control over resources and benefits be devolved. Absence of adequate community representation makes participation pointless, as there is no possibility for the community as a whole to interact with other stakeholders.

Finding the right mode of representation is still the object of much debate and experimentation. More and more evidence suggests that, thus far in Africa elected bodies are not necessarily representative of local stakeholders' interests, in particular in the absence of independent candidates at the polls. Likewise, local leaders are not a guarantee of good representation. Indeed, in most cases, local traditional chiefs are elected by household heads, who are mostly male and do not represent more than 20 % percent of the population. What seems more important is *trustworthiness*, and local mechanisms to achieve it are sometimes observed:

- the establishment of parallel structures to the formal ones, where important decisions are actually taken. These can be formal, like the former Resistance Councils in Uganda, or informal and more culturally entrenched, as in Tanzania and many places in Francophone West Africa;
- the creation of sub-committees, as to separate management from advisory functions (e.g. in some 'Gestion de Terroir' projects);
- the appointment of ordinary, 'honourable citizens' who command respect (e.g. in the case of the District Conciliation Courts in Burkina Faso or in the

Village Forest Committees in the Duru Haitemba and Mgori woodlands in Tanzania - see Box 5);

- the presence of independent candidates in elected bodies. This can go to the extreme position of refusing political militants to the polls, as in the case of Burkina Faso, Uganda and Ghana.

Technicians should not have the majority of seats in local decision making bodies, in order to avoid technical matters to dominate the debates. There is still a debate on the pros and cons of decisions being taken by committees, representing one or several villages, as compared to general assemblies, where everyone can listen and make their opinions known.

Ability to regulate

The existence of plural-rule systems at the local level hampers regulation of natural resource use. Under such circumstances, regulation can only be achieved on an ad-hoc basis, leading to new '*local laws*'; which are neither written in state regulations, nor issued from normative structures. Their adaptation to local contexts might be offset by their dependence on the balance of power at the time in point, hence their passing character. When resources are under pressure, such a situation is not particularly conducive to their sound and fair use, in the absence of a set of legal guiding principles accepted by all stakeholders.

Project structures have not proven very efficient in the regulation of natural resource use, due to the simultaneous existence of several rules and, in some cases, the significant power of traditional chiefs. New regulatory bodies are often put in place at a fast pace, either on political grounds (e.g. the regional councils in Senegal), or to comply with administrative requirements, or under donor pressure, as a condition to achieve tangible results and counteract environmental degradation. However, whatever the level, haste in setting up regulatory bodies often equates to 'putting the horse before the cart' and results in:

- more benefits to local elites;
- competition with other decision-making bodies;
- dismay and further distrust on the part of rural populations (i.e. the new bodies doing 'business as usual ' because made up of the same individuals as already existing entities);
- lack of efficiency, in particular due to the neglect of cultural features and the consequent low-absorptive capacity of local stakeholders.

Cost-effectiveness

Cost-effectiveness is often used as an argument against over-decentralisation and to justify that local governing bodies should not be put in place at the village level. On the other hand, it is acknowledged that the representative quality of governing bodies tends to increase with closeness to local people. One way of looking at this issue is to seek ways to meet and/or reduce the transaction costs of governance at the village level. Some of these ways might include:

- *simplification of the procedures* and conditionalities associated with local management of natural resources. For instance, land use management plans could be replaced by locally-decided sets of norms and rules, as in the case of Duru Haitemba and Mgori woodlands in Tanzania.;
- *local generation of income*, as in many 'Gestion de Terroirs' projects and in the case of the Rural Markets in Niger. However, in most cases, replenishment of such funds is still dependent on donor support. Moreover, local mechanisms to avoid unfair distribution of benefits are a condition for sustainability of such initiatives.

(vi) *Training and information*. A recent review of several community-based initiatives in Ghana (Mayers and Kotey, 1996) confirms other evidence that provision of training is not necessarily a prerequisite for successful initiatives in local management to start. Assistance can be provided on an ad-hoc basis, as needs arise and as part of a partnership process.

The potential of local institutions for natural resource management can be greatly enhanced by the quality of *information* they receive. Government agencies and NGOs have a crucial role to play in that respect. *Transparency* seems fundamental, as it constitutes a key feature in the building of *trust* between stakeholders. Quality and quantity of information to be conveyed, as well as its cost, are also important issues to consider.

Training should concern not only technical, but also managerial and planning matters. Material relevant to training are best conveyed in an '*action context*', i.e. around concrete issues and activities. Private organisations, such as NGOs or local consulting firms, have a vital role to play in that respect.

3.2.3 The role of the State

Given the usually poor track record of African government forestry policies, it is becoming evident that a good option to improve them would be to learn from existing experiments of locally-initiated forest management rather than from hypotheses. Indeed, local communities have some comparative advantages in that respect (Baland and Platteau, 1996):

- Local communities are *well-informed about local ecological conditions*, although they sometimes misapprehend the causes of more recent and quicker environmental changes;
- They are well *aware of local technical, economic and social conditions* as well as *cultural values*. Hence they are in a good position to devise management systems well-adapted to their needs, if not always to purely conservationist purposes;
- Being relatively small, local communities *can easily adjust their local rules* of use to changing circumstances, however depending on the nature and magnitude of pressure the change places on the resources and their livelihoods (e.g. externalities such as pollution are difficult to cope with);

- They usually have very *cost-effective mechanisms to solve* intra-community and interpersonal *conflicts*;
- *Self-monitoring* by the resource-users themselves often proves much more efficient and cheap than centralised control, as long as the former are convinced of its necessity.

Given these features, the state should have a facilitative role concerning local initiatives in local forest management, and be willing to 'let go' (Wily, 1996), even if it does not comply with formal rules.

However, complete handing-over to local communities is also not the panacea for sustainable management, especially when natural resources are under strong exogenous pressure.

In addition to the facilitation of local experiments, the State has other important roles to play. These are synthesised in Box 8 (drawn from Baland and Platteau, 1996).

Box 8: Possible Role of the State in local forest management

Assistance and guidance because it can more efficiently monitor external effects of resource use and design efficiency-improving policies. Main areas concerned include:

- perception of environmental changes;
- convincing local groups that remedies to environmental stress exist;
- dissemination of information on environmentally sound techniques;
- administrative steps to legitimise local groups' claims on natural resources This assistance should be provided on a partnership, rather than a coercive way.

On the other hand, Weber (1996) argues that more technical support should not be contingent to the negotiation process, but should rather come after it and/or only upon request of the local stakeholders;

Provision of economic incentives to motivate resource users to adopt more conservation-oriented practices. This is especially true where communities struggle to meet their basic needs and/or are at powerful outside interests' mercy;

Provision of clarifications on group territorial rights and a legal framework which enables user groups to be officially recognised, including their rights and benefits;

Protection against broad-level forces (e.g. pollution) and/or other economic sectors, due to the better - potential - ability of the state to deal with externalities;

Provision of formal conflict-resolution rules whenever locally derived rules do not suffice. This might especially be the case when conflicts surge between different communities and/or with broader-based stakeholders;

Financial assistance in monitoring, in case costly techniques are required;

Provision of information between the state and local groups but also between groups, as it helps learning from other, locally-based experiences.

(Source: Baland and Platteau, 1996)

4 Returns from forest resources - How do they influence collaborative management?

Returns constitute an important element of choice among different options to use the forest. They must be sufficiently important to motivate stakeholders to embark on the tedious process of collaborative forest management and in order to offset the - sometimes high - transaction costs associated with this strategy.

Benefits stakeholders can obtain from forest resources can be both monetary and non-monetary. They are actually influenced by three types of factors:

- *values* given to forest resources by the different actors;
- *tangible incentives* that influence the way these resources are managed; and
- the *institutional and legal framework* that regulates access to these benefits.

These three factors underpin some key issues related to returns:

- Imbalance between increased responsibilities to local communities and their limited access to benefits, thus often turning the new responsibilities into burdens;
- Need to create mechanisms aimed at generating funds at local level, in order to finance the activities local actors are made responsible for;
- These mechanisms should incorporate checks and balances that reduce the risk of embezzlement of benefits by local elites; and
- There is a lack of tangible incentives to promote co-management, let alone sustainable management.

4.1 Value of forest resources

In a review of methodology and applications concerning the economic evaluation of tropical forest land use options, IIED (1994) argues that this evaluation must encompass both production / market and non-market benefits. Indeed, it distinguishes between different types of values:

- *direct use* values, such as for consumption or sale;
- *indirect use* values, such as environmental functions;
- *non-use* values, such as cultural, religious and existence values.

Most studies concentrate on the direct use values because of the difficulties in quantitatively estimating non-marketed values. However, such a bias can be misleading and there is a need to carry out a differentiated analysis. Non-economic methodologies such as Participatory Rural Appraisal (PRA) can usefully complement economic valuation methods. They can also help capture inter-annual and inter-seasonal variations of values of forest products. This complementarity has been shown, for instance, in the valuation of wild products through several case studies (IIED, 1995b). It is illustrated in Table 3, which also lists the questions

to be answered when assessing the value of forest resources (adapted from IIED, 1995b).

Table 3: Summary of methodological complementarities and questions to be answered in valuing forest resources

Questions to be answered	PRA	Economics
What resources are there, and where are they ?	Participatory mapping; transects, interviews; mobility maps	Resource inventory; quantification of stocks, differential by cost and/or quality factor
When are they used/ available?	Seasonal calendars; historical timelines, and maps; product flow diagrams	Household surveys; market surveys
Who uses them ?	Wealth ranking; social maps	Consumption surveys
How are they controlled ?	Tenure maps; Venn diagrams	Analysis of market concentration
What are they worth - marketed values ?	Household interviews; mobility maps	Household analysis
What are they worth - indirect use and non-use values ?	Role plays; ranking and scoring matrices; daily and seasonal labour and activity calendars	Production function approach; cost-based valuation; survey-based valuation
How sustainable is the resource use?	Historical maps and transects; interviews with community elders; matrix ranking for abundance	Optimal control modelling; cost-benefit analysis of alternative land use options

(Source: IIED, 1995b)

The high value of the resource can be a major factor of success of natural resource management initiatives that try to involve local users. This has for instance been shown for wildlife management, i.e. in the CAMPFIRE Project. In a review of several CAMPFIRE sites, Bond (cited in Campbell et al., 1996) found that the most successful ones, i.e. the ones with high revenue generation and timely distribution of revenue to households and projects, were also the ones with large amounts of wildlife, high species richness and low livestock and human populations. In this case, a high ratio of wildlife density to human population density explains in great part the success of the management scheme.

But high value of forest products can also make things more difficult when it comes to participation in benefits. In some instances, the higher the value of the resource, the less easily power-sharing is accepted by the most powerful stakeholder(s). This can be illustrated by the fact that, in most African countries, ownership of timber producing trees is in the hands of the government; and that experiences of collaborative management are more advanced in the Sahelian and miombo regions than in Central Africa, where monetary value of forest is highest. High stakes also tend to attract outside speculators, as can be illustrated by the proportion of foreign interests involved in timber exploitation in Central Africa. This inevitably increases the external pressures on local stakeholders, and even sometimes governments, while reducing their ability to control the use of the resource. Collaborative management can also be very difficult to achieve at the other end of forest value spectrum, i.e. when resources are so degraded that the return on investment makes it unappealing to embark on joint forest activities. Sharing of benefits - and responsibilities and rights - might perhaps have more chances to succeed at the 'meso-level' of forest value, starting with agreements on NTFPs where timber value is high, and with income activities alternative to forest products in degraded areas. The risk with such an approach is that local communities might never be authorised to gain access to more highly priced products, such as timber.

4.2 Incentives and Returns for the State

Economic instruments are normally used in the forestry sector to account for the depletion of the resources, and hence control its use. These can include (Crossley et al., 1996):

- *Increasing rent capture*, through a blend of instruments such as stumpage fees, land and afforestation taxes, license fees, export taxes, etc.;
- *Resource user fees*, e.g. entrance fees to national parks;
- *Environmental charges*: a fixed fee/levy on total revenue from forestry concessions to pay for environmental services 'used' - such as water, biodiversity, etc.;
- *Environmental performance bonds*: Concessionaires are required to pay a substantial deposit into a government-run fund which is returned if the forest meets a specified quality once the operator concession term ends;
- *License/concession auctions*: auctioning of forest licenses to the highest bidders. this instrument creates healthy - and most often lacking - lacking competition and transparency in awarding concessions.

Public policies influence forest management through their effect on the incentives for attaining:

- a *privately efficient* harvest level, whereby a timber concessionaire seeks to maximise the future value of timber production;
- a *socially efficient* harvest level, which expands the definition of economic efficiency beyond the private level by accounting for non-timber values.

Barbier et al. (1992) argue that:

...many domestic policies do not even begin to approximate the appropriate incentives required to achieve a *privately* efficient level, much less a *socially* efficient one. More often than not, investment and institutional policies for forestry actually work to *create* the conditions for short-term harvesting by private concessionaires, and, in some instances, even *subsidise* harvesting at privately inefficient levels.

A great deal of attention has been paid to the failure of governments, particularly in developing countries, to capture forest rents. Gillis (1992, cited in IIED, 1995a) reckons that in countries with a weak administrative structure and poor information, there is a *potential for a ten-fold increase in rent capture* through forest fees.

Governments are also often accused of under-charging for the rights to log publicly-owned forests. Logging permits are sold very cheaply, at prices of less than 10 US\$/hectare, against a true market value of several hundred dollars per hectare (Mansley, 1996). This often results in (Barbier et al., 1992):

- Old-growth forest being depleted too rapidly;
- Forest land being used for agricultural purposes;
- Inadequate investment in second-growth forests;
- Installation of inefficient processing facilities; and
- Inefficient decisions on log and lumber trade.

In addition, low costs of logging rights make it cheaper to invest in the acquisition more concessions than, for example, to implement reforestation activities.

Internal incentives used by the State to regulate the use of forest products, and more particularly timber, can be of supply-side or demand-side. These are defined by Richards (1995) as follows:

- *demand side incentives* refer to instruments which aim at reducing the demand for forest products by lowering market incentives, i.e. forest fees and trade restrictions;
- *supply side incentives* refer to control or regulation of the supply to the concessionaires, e.g. annual allowable cut, girth size limits, etc.

Due to the poor success of regulatory instruments in achieving good forest management in the South, and more particularly in Africa, more attention has been paid recently to demand-side incentives. However, demand-side incentives should be high enough to have an impact. This would also avoid 'signal failure', in which the signal that the resource is abundant is sent, thereby encouraging waste (IIED/FD, 1996). It is often easy for demand-side incentives to be weak and contradictory.

One example of good demand-side incentive relates to the Rural Markets in Niger. In this case, a differentiated fuelwood tax structure favours production and trade

where the resource is less depleted and more sustainably managed. While bringing threatened forests under better management, these taxes have increased the revenues for local and central governments, and also for local populations.

Another example relates to log export bans. There is increasing agreement that they do not tend to send appropriate signals, and because the distortions set up may produce counterproductive effects (Barbier et al., 1992).

By contrast, supply-side measures seem less ambiguous. Richards (1995) contends that:

Supply side control would appear to be a surer approach to the achievement of environmental objectives, while demand side should seek to complement control but be oriented more towards revenue raising and distributional issues; from the conservation side they should be perhaps be viewed more as a fine tuning mechanism.

There is therefore a need to seek the right balance between the two types of incentives. This also means the right balance between government and market-driven instruments, and, so far, evidence in that respect is scanty.

4.3 Incentives for the corporate sector

Over the last decade, public funds to finance sustainable development - and sustainable forestry in particular - have steadily shrunk and been gradually replaced by private funds. These two trends are predicted to continue. Hence, forestry can currently be seen as a market opportunity. However, most private flows into the forestry sector have concerned conventional forest operations, and have more often than not contributed to the global forestry crisis (Crossley et al., 1996; Mansley, 1996).

Possible elements of a strategy for SFM in private sectors operations have been suggested by several practitioners, and are synthesised in Box 9.

Box 9: Possible elements of a strategy for SFM in private sector operations for sub-Saharan Africa

- Logging concessions replaced by management concessions;
- Management plans include detailed social and environmental prescriptions;
- Length and size of concessions commensurate with sustained supply of appropriate local processing facilities;
- Sale of concessions by tender or auction;
- Criteria and Indicators set by a committee of stakeholders. This has recently started to occur in the context of certification of working groups in Cameroon, Ghana, and Gabon;
- Independent inspection of concessions; National certification systems of SFM;
- Performance guarantee bonds; and
- Voluntary codes of conduct.

(Source: Kemp, 1997)

The first element of the proposed strategy leads us to the key and very contentious issue of the extent to which the corporate sector can afford the costs of measures likely to achieve, if not SFM, at least less unsustainable management. IFIA (Interafrican Forest Industries Association) contends that *support from international agencies is required for corporations to move toward better management*. Box 10 provides an interesting example from Ghana of such support by the private sector, which includes the producer and the traders.

Box 10: An example of donor support to the private sector initiative towards SFM in Ghana

DANIDA (the Danish bilateral aid agency) has been involved in the Gwira Baso Project, aimed at improving forest management in a threatened forest-reserve area. The project supports a well-established Danish timber trading company by making strong links with one of its principal suppliers in Ghana, a wholly Ghanaian-owned company. DANIDA's involvement is for only the first two years of the project. It assists by:

- establishing project management, a steering committee, and links to local authorities;
- funding a socio-economic, a stock and a land-use survey, followed by the production of land-use plans and yield maps;
- developing plans for and then delivering extension services to farmers; and finally
- carrying out an education campaign among the local population about better natural resource management.

Several features of this project are noteworthy:

- It was initiated by a private company wishing to ensure its long-term commercial interests and realising that this requires sustainable management of its forest resources;
- It establishes strong links between the producer and the trader, hence more security, a factor likely to encourage long-term investments;
- Public money is only used over a transition period, to overcome obstacles to change towards SFM;
- The project has potential to serve as an example and to be replicated elsewhere.

(Source: Crossley et al., 1996)

Others, like Crossley et al. (1996), argue that *what seems to be missing is not so much capital, but rather incentives to attract potential investors* into sustainable forestry. More attention is therefore being paid to ways to involve private capital in more environmentally sound and socially acceptable activities, without jeopardising financial gains.

Private investors have usually been reluctant to invest in sustainable forestry in developing countries because within the current institutional contexts, these investments do not bring as high financial returns as forest extraction. Aside from the distortions caused by economic instruments discussed in the previous section, another reason for this situation lies in the poor education of financial investors on sustainable forestry (Crossley et al., 1996; Mansley, 1996). This tends to magnify the perceived risks of such ventures in the eyes of the potential investors. Drawing on this rationale, Crossley et al. (1996) argue for the development of financing mechanisms adapted to the specificities of sustainable forestry, in particular the

long-term character of the investment and the existence of multiple claims on forest goods and services. The same authors suggest a framework for understanding the necessary conditions for private capital to flow to sustainable forestry. This framework is summarised in Box 11:

Box 11: A proposed framework to develop incentives for investment in SFM by the private sector

Engaging and educating capital markets. In order to overcome the information gap on the opportunities for investment in SFM through market analysis, the study of business performance and financial returns of sustainable forestry.

Mitigating the sector and emerging market risks. Sector risks relate to the fact that sustainable forestry is an emerging sector for investments, whereas market risks result from the location of many of the most promising investments in developing countries where business and capital markets infrastructures are not well established, and where factors such as tenure, transportation hazards, currency risks, etc., tend to magnify this risk.

Funding the incremental costs of internalising environmental externalities. Practices that internalise environmental externalities will add incremental costs at the beginning of the process, but will no longer be considered extra costs once the practices become standard operations. Approaches to address these challenges usually centre around subsidising or offsetting these incremental costs during the transition phase, including: forest certification and timber labelling, use of public funds to conduct valuation of externalities (e.g. biodiversity), and using public money to finance the incorporation of new knowledge and practices related to sustainable forestry into 'conventional enterprises.'

Funding incremental expenses of moving capital to a new investment area. These extra costs relate to the following types of activities:

- paying for searching out the most promising investment opportunities;
- paying for business and forestry expertise for project and investment preparation;
- paying for incremental management costs, because investments into sustainable forestry require more research and analysis than more mature conventional forestry practices.

Such costs can be shouldered - at least partially and in the early stages - by public and concessional funds.

(Source: Crossley et al., 1996)

A crucial problem relates to the *lack of reward* private operators usually obtain for good practice in forest management. This is where market-based instruments such as *certification* can come into play, however as long as they do not confine themselves to the wealthier entrepreneurs, but also allow small operators to benefit. A recent EC initiative has been promoting certification schemes in Central and West Africa, with Cameroon, Ghana and Gabon leading the way as pilot countries. Notwithstanding the potential direct effects of certification, so far the most tangible impact of this mechanism in these countries is indirect: national working groups involving representatives of all major stakeholders have been set up in 1996-1997 and are debating on issues that actually go beyond certification and encompass all sorts of matters related to forest management. This discussion

forum is a remarkable achievement in itself, in as much as such an opportunity for communication had in the past only been wishful thinking.

4.4 Incentives for local communities

Referring to forests as common property resources, Arnold (1997) argues that the increasing integration of forest products into the market economy tends to lessen the range of products which are commercialised. As a consequence, one observes a gradual shift in the origin of these products, i.e. from natural forests to planted trees on farms (Arnold and Dewees, 1995).

Aside from non-direct and consumption values, there is ample evidence that sharing of benefits is a strong incentive to good management of the resource. Hence the importance *to access control of market conditions*, in addition to more secured rights to the resource. As Ribot (1997b) puts it, "direct control over forests renders little profit. It is through control over markets that profits accrue."

Marketing conditions therefore exert a significant influence on the impact of such incentives. For instance, referring to tree planting, Arnold and Dewees (1995) have found that removing impediments to access to markets for tree products could often be more effective than providing subsidies for tree planting. Campbell and Byron (1996) note that literature on forest product markets is scarce, uneven in its coverage (e.g. much on woodfuel, little on edible insects), and too often limited to classification of products. They also tend to focus on the resource side rather than the user side. Recently, some attempts have been made to reverse the course. As a first step towards a more analytical approach to marketing of forest products, these authors have used a multivariate technique to explore variation in product type according to criteria based both on the resource and the user, including time of harvesting (opportunistic/non-opportunistic), ecological impact of harvesting, economic value of the products, and source of the products. Some of their findings are illustrated in Figure 1.

(Figure not available)

Note: distances between products represent the differences between the products, in terms of the 12 variables used in the analysis, e.g. inferior/superior good (in economic terms), gender, opportunistic/non-opportunistic markets. Only a few of those variables are shown.

On the other hand, in an already mentioned recent study, IIED (1995b) has investigated, through local-level valuation, the importance of wild plants and animal resources to agricultural systems and rural livelihoods. As shown in Table 3, the methodology used combined economic instruments and PRA tools.

These types of studies, which combine economic and behavioural approaches, definitely help us gain a better understanding of (Campbell et al., 1996):

- the temporal dimensions of markets and marketing channels;
- the contribution of forest products to livelihood strategies and gender differentiation;

- their impact on local institutional arrangements; and
- their impact on forest structure and functions.

This knowledge would also help local communities to *better negotiate their rights to access, use and trade forest products*.

A complementary approach is commodity-chain analysis, which is comprised of the following steps (Ribot, 1997a):

- identification of the actors involved, from the extraction to the retail level;
- evaluation of income and profit at and within each level of the commodity chain;
- evaluation of the distribution of income and profit within each group along the chain; and
- the use of the distribution of benefits to trace the mechanisms by which access to benefits is maintained and controlled.

This last step gives a *political dimension* to the analysis of local economy, a crucial indicator of what factors actually control the access to the resource *and* to the market.

Commercialisation of resources also bring about important challenges. An important issue concerns distribution of benefits amongst households, with the risk that the most powerful - local elites or outsiders - reap the most benefits. Referring more specifically to common property resources, McElwee (1994, cited in Arnold, 1997) identified a series of factors which potentially may affect the proper management of the asset. These are synthesised in Box 12.

Box 12: Commercialisation pressures on common property systems

- If a commodity has high value, incentives for appropriating the commodity and not co-operating are correspondingly high, and simple rules are unlikely to be workable.
- Enforcement of rules is likely to be complicated by high-value items, especially if the item is wanted by elites. Bribes and coercion to escape enforcement are more likely when high values bring in cash.
- Many organisations may not be flexible enough to adapt to rapid changes induced by commercialisation. There may be neither current rules on commercial products nor past rules to learn from.
- High-value resources and commercialised products create incentives for outsiders and the state to appropriate the land and dispute legal claims.
- Legitimacy of resource use is contested by regional, national, or international organisations who see their interests at stake in the use of a resource or commodity.

(Source: McElwee, 1994, cited in Arnold, 1997)

5 Relationships

5.1 What types of relationships?

Daniels and Walker (1997) refer to what they call the Progress Triangle (described in Figure 2) as a helper to handle collaboration processes in pluralistic environments.

Figure 2: The Progress Triangle

(Figure not available)

Substance

Procedure Relationship

(Source: Daniels and Walker, 1997)

These authors contend that the arguments concerning collaboration deal with substance (the three other 'Rs', for example) and procedures, but it is the quality of relationships between stakeholders that determines progress in respect to collaboration or conflict resolution.

Managing pluralism in forest resource management obviously depends a lot on the quality of the relationships between the main stakeholders. Given the imbalances in the '4Rs' discussed at the beginning of this paper as well as the often divergent interests present, relationships are all too often characterised by *mutual distrust*, and therefore not very conducive to constructive partnership as far as sustainable management is concerned.

There are, however, cases of more positive relationships, such as the ones between the private sector and villagers described in Box 13.

Box 13: The South African Industry/Outgrower alliance as a potential for SFM

In South Africa, a promising alliance is shaping up between the forest industry and a large network of private tree-growers. Industrial forest management is overseen by a regulatory authority, comprised of experts as well as representatives from NGOs, the local community and government. This authority is responsible for:

- inviting tenders;
- setting guidelines;
- auditing performance; and
- charging penalties for poor performance.

Under this scheme, the South African Pulp and Paper Industry (SAPPI) guarantees 7,600.00 private tree-growers a market for wood, while also providing training, seedlings and other technical and financial support.

This scheme allows for significant local community and private sector involvement in forest management, thereby offering an alternative to government-controlled forestry models. However the scheme has only been made possible given the political willingness of the government to let this kind of partnership go.

(Source: WCFSD, 1997)

Another example, this time of good relationships between foresters and small private operators, concerns the Masindi Pitsawyers and Wood Users Association in Uganda, as illustrated in Box 14.

Box 14: The case of the Masindi Pitsawyers and Wood Users Association (MPWUA) in Uganda

MPWUA was created and legalised in 1994. It requested a concession in a local forest reserve, in exchange for helping in the control of illegal activities. Its membership currently exceeds one hundred pitsawyers.

The MPWUA has developed interesting by-laws, some of which are aimed at preserving the resource capital. For instance, each pitsawyer cannot have more than four saws. Moreover, the MPWUA - in addition to the local District Forestry Office - has a say in the issuance of sawing permits.

The main incentives for the creation of this association are:

- financial (secured revenue): as legally processed wood will not be seized and is therefore sure to bring income;
- environmental: assisting the forestry service in counteracting illegal pitsawing and other wood uses, thereby contributing to the sustainability of their source of income;
- social: good relationships with and recognition by local population and the forest department staff;
- technical: as a group, it is easier to justify and finance training (on forest management, waste recovery, for example) and other types of assistance: In 1995, it funded stock-mapping of its concession by the forest department staff and it plans to help in the opening and maintenance of local roads in their concession.

The MPWUA activities also brings advantages to the Forest Department:

- they assist in the control of illegal activities;
- they have increased the collection of taxes from pitsawing and other wood uses.
- MPWUA provides financial assistance to foresters tasks.

The MPWUA has some plans for the future:

- in the short term: improvement of waste recovery. The MPWUA has already launched some research projects with the assistance of the Forest Department and the Forest Research Institute.
- in the long term: replenishment of the concession stock through reforestation. The MPWUA has established its own nursery, allowing for the planting of some 17,000 seedlings of high quality timber in 1996. 29,000 seedlings are currently ready for transplanting.

Other ways to reduce the pressure on the forest asset would be to provide local communities with income opportunities from non-forest products, such as bee-keeping, and to reduce the need for farm land, by promoting small livestock such as pigs. All this requires training, which is requested by MPWUA, as well as further assistance:

- to modernise their equipment, through the provision of portable sawmills, for example;
- be trained and acquire information of wood use techniques and forest management techniques; through provision of information, organisation of study tours, etc.

(Source: MPWUA Chairman, pers. comm.)

Managing pluralism and preparing effective collaboration requires, at the first stage, an understanding of the nature of relationships. GTZ (1996) suggests categorising the relationships amongst actors as follows:

- service;
- legal/contractual;
- market (determined by demand and supply of goods and services);
- information exchange;
- interpersonal;
- power

These types of relationships are not mutually exclusive. Special attention should be paid to the nature of the power-type relationship. Three key questions must be answered (GTZ, 1996):

- On what basis is power built?
- How does power affect the relationship?
- When and how do power relations change?

Regarding the first question, it relates often to some type of *dependency*. On that basis, the economic (e.g. financial dependency), social (e.g. hierarchical dependency, expertise) and emotional (e.g. personal dependency due to nepotism, cronyism, etc.) dimensions of the relationship must be assessed to determine the source of power.

In practice, a frequent type of dependency relates to the extension of credit. Indeed, middlemen often constitute the only accessible credit 'system', where locally-rooted systems have not developed. Credit is extended against the commitment to sell the products to the money-lender only. This results in a significant concentration of power at this level of the commodity chain, as the same individuals control the local market through credit and as buyers of the products. This is often a very effective and indirect way for outsiders, who employ the middlemen, to exert significant pressure on the local economy and/or to block changes in local control over resources and markets when the existing situation suits them.

With respect to the second question, power can affect the relationship in three ways: physically, materially or in terms of social status. Actually, in many instances the mere potential to exert power suffices to make power relationships work. The third question helps understand how to best induce changes in an attempt to rectify the imbalance in stakeholders' '4Rs'.

Attempts to create *fora for dialogue* are emerging in parts of Africa. For instance, the 1995 New Forestry Code in Mali allows for the creation of local conventions between stakeholders locally involved in the use of forest resources. The first conventions have just been signed (Hilhorstand and Coulibaly, 1997). One early lesson is that although such conventions have the potential to stimulate better

management and solve conflicts, their establishment is a tedious and time-consuming process.

One of the key limiting factors to improving relationships in forest management lies in the difficulty for forestry staff to change their attitude towards local communities. Even if the staff genuinely wishes to change, it has difficulties due to lack of time, and often a negative perception on the part of local people, given past experience. These incentives to motivate changes in foresters' attitudes are examined in turn.

5.2 Incentives for Forestry Department Staff

A common situation for forestry staff working at sub-national levels in many African countries can be characterised as follows:

- inadequate pay, often partly reliant on commissions on fines and permits (e.g. in Mali);
- lack of promotional avenues based on extension work;
- heavy workload, especially in comparison to available means. Where the private sector or projects operate, the forestry staff often dependent on them for basic necessities such as transportation, communication, sometimes even stationary;
- lack of monitoring of work at the central level, often associated with a mutual ignorance and / or cover-up of what is happening at one's hierarchical level;
- assessment of performance based on tangible targets, e.g. number of permits delivered, number of individuals fined, nurseries established, trees planted, etc.;
- forest officers are perceived as 'para-military' forces, who are entitled to be armed and to legally fine people ;
- women are quasi-absent from local forestry staff;
- local level staff are often considered important revenue collectors by the central level authorities.

In the absence of checks and balance mechanisms, local, covert arrangements - including rent seeking and bribery - often prevail between the forest officers and the other stakeholders, namely the private operators and local dwellers. Such arrangements actually often satisfy everybody: the forest agents can complement their otherwise meager revenues, the local dwellers pay covertly what is usually less than the official fine; the private operator gets authorisation without necessarily complying with requirements. Sometimes, this leads to abuses and, more often than not, creates distrust among the involved parties. As a general rule, these arrangements do not promote sound stewardship of forest resources. They are also not very conducive to collaborative management.

Under such circumstances, the key question becomes: *What incentives could motivate the local forest officers to change their ways of work and behaviour?* It is gradually admitted that training alone cannot achieve great results. One has to tackle the issue from *many sides* and *allow for time* for deep changes to occur, as these matters concern changes of mentalities and power structures. Possible incentives for foresters less as controllers and *more as enablers* might include:

- Linking the assessment of staff performance to the extent to which their work answers local people's preoccupations and needs. This could imply the involvement of local populations in the assessment process, in a true spirit of partnership, as forestry staff currently assesses villager's performance.
- In the wake of decentralisation, source part of the funds necessary to pay forest officers from the collection of revenue from forest resources by village committees. This would reduce the dependency of staff income on their law-enforcement duties (fines, permits, etc.), hence allowing for the suspension of commissions on these operations.

These measures would likely turn forest officers *more into partners rather than controllers of local forest management*, while providing more local level capacity to monitor and reward their acts without necessarily hampering their status, their prestige, or their pay. Such measures should be first tried as pilot schemes. However, whatever efforts are developed in that direction at local level are unlikely to be sustainable without a commitment from the top level management to more participatory ways of work and more satisfactory relationships between foresters and villagers. Again, *sufficient time is needed* for these commitments to develop and materialise into real support to the local level staff.

6 Using the '4Rs' tool in local management of land and forests

The issues tackled by the '4Rs' tool are not at all new. Discussions and reports on stakeholders' rights, responsibilities, and returns and - to a lesser extent - relationships - abound in academic and development practitioner circles. However, these features are most often treated separately and not in a systematic way. The '4Rs' tool attempts to overcome these shortcomings, which could provide a potentially simple but insightful way to analyse the imbalances in stakeholders' roles.

Over the last two years, this tool has been tested by IIED and its partners to understand stakeholders' roles and assess local resilience in the context of a DANIDA-supported project on 'Capacity Development for Sustainable Forestry in Africa'. As it was deemed necessary to first determine what stakeholders roles should be before assessing their respective capacity needs, the '4Rs' tool has been used to better understand these roles in six countries, representing a range of biotopes, language blocks and institutional settings. This test has been carried out through a collaborative effort between IIED and local working groups in each of these countries.

As this paper illustrates, one early use of the '4Rs' relates to the broad analysis of crucial issues to achieve better collaboration at the local level.

At the national level, this approach is being tested under different circumstances and within different fora.

7 Concluding Remarks and Unresolved Issues

The procedure for laying down rules and establishing institutions is complex. 'Top-down' approaches alone have usually been ineffective in achieving such tasks. On the other hand, reliance on only the local communities is also proving problematic, especially under circumstances of significant pressure on the resources at stake.

In the case of Africa, this inefficacy has resulted in a *patchwork of local arrangements* to cope with realities ironically; this might be seen as a kind of application of the subsidiarity principle! However, in this case, the subsidiarity principle was not wanted, but was rather applied out of the weakness of governments in playing their conventional regulating role, which itself is inconsistent with the subsidiarity principle. Hence, the result is a '*laissez-faire*' situation with *the quasi open access status of land and forest resources*.

This state of affairs is characterised by an imbalance in stakeholders' respective rights, responsibilities and returns from the forest as well as mutual distrust. Under such circumstances, pluralism is difficult to manage in a sound way and constructive and fair collaboration is difficult to achieve. This paper shows possible avenues that might help improve this situation in Africa and possibly elsewhere:

- The '*4Rs*' framework is an easily grasped, insightful tool which has the potential to assist in the diagnosis of local constraints to partnerships. What is important is not to analyse the 'Rs' separately, but rather their balance within and between stakeholders. Indeed, as this paper shows, more responsibilities without more rights to the resource and more benefits results in a burden. Moreover, more security over the resource does not guarantee more benefits if not accompanied by more access to market mechanisms.
- By systematically analysing the balance in the '*4Rs*', the tool has the potential to map out the crucial issues of power and control in a simple and insightful way. It can be used for many different purposes:
- at different stages of the project cycle, but especially in the design, monitoring and evaluation;
- in the context of policy assessments;
- to start a dialogue between private operators (e.g. forest concessionaires), forest workers and local villagers concerning, for instance, the use of logged areas to grow agricultural products;
- to complement PRA approaches; for example, linking situational analysis and planning stages, and to move gradually from participation towards a negotiation process involving local stakeholders.

- Because it links field-level activities to policy processes, it may help in overcoming the '*strategy of disregard*' (Hartley and Hunter, 1997) applied by many administrative authorities towards project-led initiatives. It actually ties local development to local and national political processes. As such, it is however likely to be a tedious process, and at this stage it definitely needs further testing.
- The *subsidiarity principle* should guide policies, so long as it does not result from a '*laissez-faire*' attitude, but rather from a consensual decision amongst stakeholders, and within a set of guiding principles set up by the national authority. The key questions to answer *are what powers to devolve* to stakeholders and *to whom should these be devolved* in the case of local communities (Ribot, 1997b). The first question relates to the balance of the '4Rs'; the second to the issue of representation.
- Given the widespread imbalance in stakeholders' roles and mutual lack of confidence, collaborative management - as a manner to manage pluralism - will require a *lot of learning through experimentation* before it can materialise into policies.
- In that context, governments should *let innovative initiatives go* on a pilot basis, even if they do not comply with existing rules. In other words and following Bird (1997), it should allow for the *creation of 'room to operate'*.
- Approaches should be characterised by a *problem-solving spirit*. In other words, they should be *pragmatic* and *progressive*, acknowledging *transition*.
- Given these features, managing pluralism may imply a certain degree of societal transformation, including changes in existing power structures. Hence, local stakeholders and donors should '*give time to time*' for the learning process to take place. Time may actually be the single most important resource in managing pluralism in relation to forest and land resources. As a Malian proverb says 'The problem is important. So let's take our time to solve it'.

Nevertheless, these concluding remarks still leaves us with some burning and/or unresolved issues:

- What type of forest is implied by increasing collaboration (e.g. does it mean big/small enterprises, plantations/natural forests, etc.)?
- Should regulations precede or follow practice?
- What can the state do in practice to facilitate the management of pluralism at the local level, without jeopardising its 'referee' role, nor its national mandate?
- How can the risk of the emergence of new feudalisms at local level (i.e. local elites reaping off the benefits from forest resources) be avoided or reduced?

- In that line, what incentives must be developed to motivate the mighty to negotiate their role and status?
- Can we afford to 'give time to time' to manage pluralism in a sustainable way? If not, then what mechanisms can be used to speed up the process without jeopardising it?

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Notes to readers

This article was published IN: Proceedings of an International Workshop, Pluralism and Sustainable Forestry and Rural Development. Food and Agriculture Organization of the United Nations, Rome. 9-12 December, 1997.

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