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Communities As Resource Management Institutions

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COMMUNITIES AS RESOURCE MANAGEMENT INSTITUTIONS

Marshall W. Murphree

Why Do People Manage the Environment?

We cannot glibly assume that everyone, everywhere, has the same reasons for an interest in the environment. Different motives have different effects and policy. We have to understand who is interested in *what* concerning the environment.

Perhaps we can simplify the answer by suggesting that people seek to manage the environment for two reasons: first, because the management of natural resources improves the conditions of their livelihood. Second, because environmental degradation is perceived to be threatening, either to life-sustaining processes (e.g. through pollution or soil erosion) or to peoples' aesthetic values. These tow sets of reasons inter-relate, but the distinction between them is important, since the first tends to predominate in the developmentalist perspective while the second tends to be prominent in the conservationist stance.

To focus the discussion further, I make the following proposition: *People seek to manage the environment when the benefits of management are perceived to exceed its costs.* This is an important proposition since it introduces the issue of cost, which is a fundamental dimension of environmental management. People may want to manage the environment for better production, or to prevent the effects of its deterioration. The benefits they perceive may be short or long term. But they will only manage the environment if they consider the benefit to be worth the cost and if they have the means to meet these costs.

Natural Resource Management and Property Rights

The nature of the resource also has a bearing on management. Some resources, such as trees, are fixed to a given land base and can be privatised or remain in the commons with no intrinsic difficulties. Wild mammals, generally, are more mobile (or 'fugitive') and less amenable to privatisation, although this can be done through adequate fencing.

Fish are even more difficult to confine to defined spatial bases in large water bodies and difficult to privatise except through aquaculture. However it is not only the nature of the resource which determines whether it is common property, but also the resource regime in which it exists.

Generally, natural resources can be held under any one of four property rights regimes: Open-Access; Communal Property; Private Property; and State Property. These, formally, should determine who the managers are, but of course what is formal and what is actual may well be different. This is an analytic typology; in practice natural resources are rarely managed solely within any one of these types.

The 'open access' condition is one where resources are the property of no-one and are available to everyone. It is therefore not strictly a property rights regime at all, nor is it a management regime since people use, opportunistically, the resources, but do not manage them. A communal property regime is quite different, even though many scholars confuse the two. Here "use rights for the resource are controlled by an identifiable group and are not privately owned or managed by governments; there exist rules concerning who may use the resource, who is excluded from the resource and how the resource should be used" (Berkes and Farvar, 1988: 10). Thus it is a management regime, with rules on access to or exclusion from proprietorship of natural resources.

The relative merits of state or private property regimes have occupied centre stage in debates about natural resource management and have been embedded in, and mystified by, broader ideological controversies. Proponents of privatised natural resource management have suggested that market dynamics, coupled with long-term security of tenure, provide the best ingredients for sustainable utilization and efficient management. Proponents of state management usually rest their case on equity considerations or collective societal interest in common pool resources. Interestingly, these two perspectives, so different in their ideological pedigree, now find themselves in a new alliance orchestrated by state bureaucracies and international agencies and realized in *"regulatory policies, new legal frameworks, project financing, and direct administration"* (Korten, 1986).

Both private and state natural resource management regimes have their strengths and may be appropriate for given resources in given contexts. But both have their weaknesses, particularly if they are under-funded, large-scale and managerially distanced from the resources in question. In such circumstances the state, or the private owner, purports to be the manager but de facto use and management are in the hands of others - the people living with the resources concerned. Not only is this local management resource marginalized, it is also antagonized. Bromley and Cernea comment: "Unfortunately most state property regimes are examples of the state's reach exceeding its grasp.' Many states have taken on far more resource management authority than they can be expected to carry out effectively. More critically it sets the government against the peasant when, in fact, successful resource management requires the opposite" (Bromley and Cernea, 1989: 25).

But this can apply to the private property regimes as well. One variant of this approach is to be found in schemes currently being brokered in the United States and Europe to buy large tracts of South American rain forest to preserve them for global environmental reasons. An advertisement to raise funds for such a purchase recently appeared in a California paper replete with a photograph of a burning forest and the caption *"If you own it they can't burn it."* Anyone with developing country experience will be sceptical. Even if this is a ploy to pre-empt other local entrepreneurs from buying and destroying forest resources it is unlikely that a distanced, foreign owner will be able to exercise the management that the state has failed to provide because it has marginalized the management potential of local populations.

One of the central tragedies in the history of Southern African land and natural resource management is that the debate on tenure has largely been restricted to a discussion of the relative merit of state or private property regimes. Policy has assumed two options, privatise or nationalize, ignoring the further option of a communal property regime.

In Zimbabwe, for instance, by 1961 approximately 50% of the total land surface had been alienated into private hands. The rest was state land - parks, wildlife and forestry lands or communal lands (37%). In these communal lands, where over 60% of the population live, a system of 'indirect rule' was in place and traditional leadership structures were supposed to play a role in land and resource management. But the ability of these traditional structures had been seriously eroded by their tenure status. They and their constituencies were on state land with usufructural rights only, they had no powers of exclusion and access to certain natural resources (e.g. wildlife) were denied to them. Thus the conditions for a genuine communal property rights regime were removed. Under these conditions, and with the state effectively unable to manage resource, resource use tended to acquire the characteristics of an 'open access' system. It is not surprising therefore that the communal lands have been the scene of some of the greatest environmental degradation in the country.

This policy myopia, which sees only privatisation or nationalization tenure options, has continued in the post-1980 independence era. Land reform programmes have taken a further 8% of total land surface out of private hands for the resettlement of communal land inhabitants, but these resettlement lands are state lands, and are occupied under tenure conditions which if anything are more restrictive to a genuine communal property rights regime than in communal lands.

The tragedy of this situation lies in two dimensions. Firstly, neither option will viably address those areas where most of the rural population lives and which are under the greatest environmental pressure. Management by the state has demonstrably been ineffective in both the colonial and post-colonial eras. Whole-scale privatisation is administratively cumbersome and would involve a fragmentation of management to levels where any possible benefits would be negated. Secondly, a focus on the two options ignores the potential for cost-effective collective local management enforced by informal social pressure and drawing on detailed local knowledge of ecological dynamics. Unless policy on tenure and natural resource management seriously considers the third option of communally-based resource management regimes, there is little reason, either from the historical record or from an analysis of the factors and dynamics involved, to be optimistic about the future of the environment.

Serious consideration of this option requires however far more than decentralized administration or current and trendy plans to 'involve' local people in planning, to encourage their 'participation' in project implementation and to increase the economic benefits to them arising from resources. However well intentioned, such plans generally fail to achieve their aims of sustainable natural resource management and utilization. 'Participation' and 'involvement' turn out to mean the co-option of local elites and leadership for derived programmes; 'decentralization' turns out to mean simply the addition

of another obstructive administrative layer to the bureaucratic hierarchy which governs natural resource management.

What is required is the establishment of communal property regimes by defined groups in defined areas and with rights of inclusion and exclusion. Such groups should have proprietorship of the natural resources concerned. 'Proprietorship' means a sanctioned use-right, including the right to decide whether to use the resources at all, the right to determine the mode and extent of their use, and the right to benefit fully from their exploitation in the way they choose.

The delegation of proprietorship over natural resources to communities involves the relinquishment of considerable authority and responsibility on the part of the state, although such relinquishment is never total any more than the privatisation of land holdings implies a total withdrawal of state authority over land. Relinquishment of authority runs however contrary to the bureaucratic impulse to retain authority centrally and the establishment of communal natural resource management regimes will require strong policy directives to overcome this tendency.

Managing a Natural Resource: From Analysis to Principles

To translate this general discussion of issues into a policy which is viable for communal property regimes of natural resource management we need to recognize the principles involved. These may vary according to the nature of the resource concerned.

• *Effective management of natural resources is best achieved by giving it focused value for those who live with them.*

This principle encapsulates the earlier proposition that: "people seek to manage the environment when the benefits of management are perceived to exceed it's costs" and the earlier discussion on formal and de facto management.

• Differential inputs must result in differential benefits.

This principle relates to the question, "value for whom?" The answer is "those who have the resource and pay for its existence." Natural resources assets are distributed unevenly in any national context; equally the cost of sustaining and managing these assets is unevenly distributed. Policy must ensure therefore that benefit is directly related to input.

• There must be a positive correlation between quality of management and the magnitude of benefit.

The differential input requiring differential benefit involves not only the assets and costs mentioned above, it also incorporates management costs, both quantitative and qualitative.

A fundamental policy objective is to provide the motivation for good management, thus policy should ensure that good management 'pays'.

• *The* unit of proprietorship should be the unit of production, management and benefit.

Institutionally this is the only structure which can efficiently combine the principles mentioned earlier. Proprietorship (which answers the question "who decides?") cannot be separated from production, management and benefit and is a fundamental component in a communal resource regime. The management prerogatives and responsibilities implied in proprietorship need not conflict with any larger structures of management activity. Such structures are necessary because of the nature of natural resources, but should be primarily coordinative and regulatory.

• The unit of proprietorship should be as small as practicable, within ecological and socio-political constraints.

From a social dynamics perspective scale is an important consideration; large-scale structures tend to be ineffective, increasing the potential for inefficiency, corruption and the evasion of responsibility. Conversely, a communal resource management regime is enhanced if it is small enough (in membership size) for all members to be in occasional face-to-face contact, enforce conformity to rules through peer pressure and has a long-standing collective identity.

Managing a Natural Resource: Wildlife Policy and Practice in Zimbabwe's Communal Lands

This section describes an attempt to put the principles outlined above into policy and practice, using the Zimbabwean experience in wildlife utilization as an example.

The growth of the wildlife industry in Zimbabwe had its impetus in the 1975 Parks and Wild Life Act which conferred proprietorship of wildlife resources on the "owners or occupiers of alienated land." These owners or occupiers are designated `appropriate authorities' for wildlife on their land, with rights to decide on whether to use wildlife, the mode of this use and to benefit fully from the revenues of this use. The positive impact of the 1975 Act on both the state of wildlife populations on commercial farm land and the national economy is readily apparent. In the last 15 years Zimbabwe has developed a game ranching industry second to none in Africa and which contributes significantly to the national economy. The conferment of wildlife proprietorship on land owners has also demonstrated that wildlife can be a highly competitive and environmentally sound form of land use, evidenced by the large number of ranchers who have turned from exclusive livestock regimes to mixed wildlife/livestock or exclusive wildlife modes of utilizing their land. It should be noted that principles discussed in the previous section are all incorporated in the position provided for land owners under the Act, and that the growth of

wildlife industry in Zimbabwe can largely be attributed to the fact that policy and legislation incorporates these principles.

Enacted during the pre-independence era the 1975 Parks and Wildlife Act was targeted at the "owners and occupiers of alienated land." It was clearly radically discriminatory since it benefitted large-scale land owners and occupiers almost all of them white, and did not provide the same opportunity to the black occupiers of communal land. Much of this land, particularly that in the drier areas, held valuable populations of wildlife and high potential for the incorporation of wildlife into productive forms of land use. Government (through the Department of National Parks and Wild Life Management) remained the controlling authority for wildlife in communal lands, policy being that revenues accrued by government from safari hunting in communal lands were to be returned to district councils for community projects in producer areas through an extended chain of bureaucratic procedures.

The result was an almost total failure to receive community support for wildlife-related activities. Procedural complexity and bureaucratic inertia resulted in a situation where only a portion of revenues generated were returned to producer districts and far less of this was returned to producer communities. That revenue which did survive the attrition of this process was seen by local inhabitants not as a product of their management but rather as a hand-out from government, the magnitude of which was attributable not to their husbandry of the resource but rather the strength of their complaints about the inconveniences of wildlife. The links between production and benefit, input and outcomes, was neither direct nor clear.

The CAMPFIRE Programme

Recognizing that its policy on wildlife was having positive effects on private lands but not in communal lands, Government since Independence has approached the problem by further legal change and the introduction of the CAMPFIRE (Communal Areas Management Programme for Indigenous Resources) Programme. Amendments to the Act made provision for the Minister to designate district councils as the appropriate authority for wildlife on lands under their responsibility, granting them the rights and responsibilities accorded to the owners or occupiers of alienated land, under such conditions as might be appropriate. The CAMPFIRE Programme sought to use this legislative change to put in place the principles outlined above. The programme started with pilot schemes in the conferment of appropriate authority status on two district councils, Guruve and Nyaminyami. Initial success was followed by the inclusion of other district councils; by January 1991 twelve district councils had achieved appropriate authority status. Wildlife revenues accruing to district councils now exceeds Z\$600,000 per annum in some instances, providing an increase in direct revenues for these councils by a factor of four. From a district council perspective the programme is a great success, and the councils concerned have formed themselves into a national association of CAMPFIRE district councils to lobby for their interests at the political centre.

In spite of the demonstrated success of CAMPFIRE in devolving proprietorship of wildlife resources from central government to district councils a fundamental discrepancy remains between the law (the statutory delegation of proprietorship) and the principle (combining production, management, authority and benefit). The Act delegates proprietorship and the responsibility which goes with it to district councils. But they are not the producers or on-the-ground managers of wildlife; these are producer communities within council areas, which differ from one another in resource endowment, quality of management and production. Thus we do not yet have the formal combination of production, management, authority and benefit necessary for an effective community based regime of resource management. Under such conditions, councils have a tendency to retain authority, management and benefit, relegating to producer communities the function of production. There are several reasons for this, including the bureaucratic impulse to retain authority, the necessity for councils to raise revenues and the fact that councils do not trust local communities to make the right decisions.

Some councils have, however, grasped the importance of the principles involved and have taken steps further to delegate proprietorship to local levels. Two success stories are now briefly related to demonstrate the dynamics of successful implementation of decentralized natural resource management. They are the stories of how two small communities in Zimbabwe have developed as "institutions for resource management."

Communities as Institutions for Resource Management: Two Success Stories

Kanyurira Community

The first is the story of the Kanyurira community, a ward in the Zambezi Valley falling under the jurisdiction of the Guruve District Council. The ward is geographically large (400 square kilometres) but small in human population, with only 60 households (482 people) being present in 1988. The area is rich in wildlife and for many years has been exploited by professional safari hunters. But before the introduction of the CAMPFIRE programme revenues from this exploitation were channelled to Central Treasury, local people only benefiting from wildlife through non-sanctioned hunting and snaring. Attitudes towards wildlife were almost completely negative; it was a hazard to life and crops should be eliminated. The community's aspirations were centred on gaining more goods and services from government - a school, a clinic and better roads to market their one cash crop, cotton. Its strategy was to encourage new settlers, who would be placed on the perimeter of settlement (thus taking the brunt of wildlife damage to crops) and giving the community greater leverage in its requests to government.

In December 1988 the district council, using revenues from safari hunting in the previous year, built a school for the community. Although this was not a full delegation of proprietorship, being more in the nature of a hand-out, its impact on community attitudes was significant. Wildlife was now seen as having significant economic value, to be nurtured rather than eliminated. *"We see now,"* said one elder, *"that these buffalo are our*

cattle." Furthermore the event revived a proprietorial attitude towards the ward's natural resources which had long lain dormant. A wildlife committee was formed, which soon moved into land use planning. Twenty square kilometres were set aside for fields and settlement, to be surrounded by an electric fence. The rest of the ward was to be set aside for wildlife, harvested sustainably through safari hunting and patrolled by game scouts from the community.

In February 1990 the district council distributed 1989 revenues from the safari operation which covered the area including Kanyurira, using the site of animals taken on quota as the basis of distribution. On this basis Kanyurira received by far the largest share - Z\$47,000. This revenue was allocated to a fund for the clinic, the purchase of the school furniture and a dividend to each household of Z\$200, equivalent to an additional 56% of annual gross income from cotton, the community's main cash crop. The impact of the household dividend was profound. Internally the community had to make searching decisions as to who constituted households; externally the community examined much more critically any applications for membership by aspiring immigrants. The importance of rules of inclusion and exclusion had become clear. Issues relating to modes of marketing in the modern context were also more sharply delineated in community thinking.

The district council had, as one aspect of its utilization strategy, instituted a cropping scheme to provide meat to villages in the safari area, believing that the way to people's minds was through their stomachs. Kanyurira rejected this scheme for its area; they recognized that the value of an impala sold to a safari client was far higher than that sold for meat to local inhabitants. The importance of good management for maintaining the resource was also heightened in local perceptions. Poaching by community members was virtually eliminated during 1990. The snaring of an animal was no longer tolerated as individual and entrepreneurial defiance of state regulation, it was now theft from the community and from one's neighbours since it would reduce the amount of household dividends. The importance of preserving habitat became clearer; in 1990 for the first time in many years destructive late dry-season bush fires did not occur.

At the same time the community has become increasingly aggressive in its claims for full proprietorship. When it had developed its land use plan the community had charged its councillor and wildlife committee chairman with the task of taking the plan to the council for approval with these words: *"Tell them that these are our animals and these are our plans. We will not accept any changes imposed by others."* The community also is demanding a full and detailed accounting from the council and safari operator of species take-offs and revenues generated. This has been accompanied by a realization that the community itself will have to improve its own wildlife monitoring and financial record keeping. Thus the importance of accountability - of council to community and community leadership to community membership -has been stressed.

Beit Bridge Community

Kanyurira is an example of a community developing its resource management in an exploratory and evolutionary way and in a context where the district council, while

committed to the CAMPFIRE programme, has been cautious and sometimes inconsistent in delegating its authority. The second example is of the Chikwarakwara community in the Beitbridge council area, where the council, on receiving appropriate authority status in January 1991, determined to immediately and fully implement CAMPFIRE principles. Using accumulated safari hunting revenues for the 1990 and previous seasons (Z\$96,000), council decided on an allocation according to production by producer communities which resulted in a payment to Chikwarakwara of Z\$60,000, where most of the safari hunting had occurred.

The introduction of the CAMPFIRE programme in Beitbridge was recent and without the evolutionary development which occurred in Guruve. The value of this case study primarily lies in its demonstration of how in a compressed time-frame of three months, between January and March 1991, a district council and a community worked through and put in place the institutional framework necessary to implement the CAMPFIRE principles. The case study is particularly instructive in demonstrating the competence of a district council and a local community to create an 'everyone benefits' situation in the use of common property assets while retaining the principle of differential input/differential benefit. Council benefited, since it retained an 11.7% levy (Z\$11,235) agreed to by all parties. The safari industry benefited since a programme was being put in place which would ensure that the wildlife resource on which it depended would be maintained. Government benefited since its acquisition of taxes and hard currency from the safari industry would similarly be maintained. The Chikwarakwara community benefited because it was now receiving real value for its wildlife resources in proportion to the inputs involved and other communities benefited through the stimulus to similarly develop their wildlife resources.

The Chikwarakwara example is however most interesting in its illustration of decisions made within the community regarding the use of wildlife revenues. As in Kanyurira, these revenues forced answers to a prior question - who were the members of the community? Criteria for membership (by household) having been decided, 149 households were listed and the determination made that each household would be credited with \$400. The community then debated over several sessions the relative merits of using this money for collective community projects, or for individual household revenue. The result was a compromise, as wise decisions often are. Households were to receive individual dividends; if wildlife was to be a major form of economic activity in the community this was necessary for the livelihood of its people. But certain collective community concerns also demanded attention. These were identified as a grinding mill, a school project, and the fact that community members were in arrears in payment for the school building funds. The grinding mill, being a new community project, demanded a new institution. Who would manage it? A committee was formed, it being agreed that the mill would be operated as a community business with all the community members owning shares in it.

These decisions were given immediate, clear and ostensible effect at a community meeting held in March 1991. The impact of this meeting is best summarized in verbatim quotes from speeches made at the ceremony. From the district administrator we have these words: *"We have not realized our richness. We have not seen where our advantages lie. We are learning and you here are leading the way. It is our wild animals who are our resources. I*

used to come here and be told wildlife was a problem. Poaching was kept under the blanket. Now we are here to celebrate wildlife and bring everything into the open for everyone's benefit." Councillor Nhare said the following: "This money comes to you from your wildlife. It is your money. The decision is yours. You cannot wait for government. You can develop your own community according to how you decide."

These brief descriptions of the Kanyurira and Chikwarakwara case studies do not do justice to the full range of issues involved. They do not discuss the details of implementation or adequately stress the importance of close collaboration between government, communities, private sector enterprise and NGO actors. Neither have they stressed the variety of problems which are generated by change and success. But they do illustrate that the principles behind CAMPFIRE are sound, and that communities, given the opportunity to do so, can develop as effective institutions for natural resource management.

Communal Resource Management: Some Concluding Observations

This paper has argued that resource management is a complex affair and that the nature of the resource involved, the nature of the tenure system concerned and the motivational dynamics which operate create different dynamics which must be considered when considering institutions of management. There is no single formula for all these equations. The discussion has primarily been concerned with the management of common property resources in communal conditions. This can be summarized under three headings:

Communal Contexts and Communal Resource Management Regimes

For most of the rural populations of southern Africa the communal context is the context of life and will be so for the foreseeable future. People live on state land, not private land, and in conditions where the state is incapable of sustainable resource management and local inhabitants have neither the motivation nor the authority to sustainably manage resources themselves. The mischief arises from a fundamental misconception which equates the communal context with the communal property regime. The communal contexts created by colonialism are not communal property regimes, since they have been stripped of the necessary entitlements required. The evidence is that communities can become effective institutions for sustainable resource management, but only if they are granted genuine proprietorship, that is, the right to use resources, determine the mode of usage, benefit fully from their use, determine the distribution of such benefits and determine rules of access. Any policy which excludes these components will frustrate the goal of making communities effective institutions for resource management.

Resource Management and Resource Use

Resource use without resource management is non-sustainable. But equally any attempt to establish resource management without resource use is likely to be futile. A first principle stated in this paper was that "people seek to manage the environment when the benefits of management are perceived to exceed its costs." We can carry this further and suggest that in modern rural Africa, even in its remotest areas, benefit is most often seen in the peoples' thought as revenue, cash income convertible into the various goods and services that communities and individuals want or need. Benefit is if course not only this, but much development thinking seems to assume that what rural peoples need and want is restricted to subsistence maintenance. Contrast this with the succinct definition given by a villager in Kanyurira. "Development," he said, "means money." This is a more accurate description of rural African perceptions of development. Not only does it properly reflect the pervasive reach of the "cash economy", it also puts benefit in the form of revenue which can be flexibly used according to peoples' own priorities, and which forces them to build their own institutions of fiscal management which articulate within the larger economies of which they are a part. Cash, as they say, is the most effective development extension agent.

There is a strategic lesson to this. If we are concerned to promote communally based environmental management, chances of success are enhanced when a common property resource of high financial value is available and project focus is initially on the sustainable exploitation of that resource. In Zimbabwe this resource has been wildlife, a resource of high and escalating value, exploitable in environmentally benign ways and requiring relatively low capital inputs. As Child puts it, *"Real and immediate benefits, graphically illustrated by cash, cement the relationship between wildlife and economic development. These incentives are crucial to encourage communities to cultivate their wildlife resources"* (Child and Peterson, 1991: 41). Initial and dramatic results in revenue generation of this kind then have an incremental effect on the quality of the community's management of other, less lucrative, natural resources. If people receive revenue from wildlife, they will also start to manage their woodland and their soils, as the Kanyurira case study demonstrates. Ecological holism is not a new concept for rural African peoples, it is simply a concept that their circumstances have not allowed them to apply.

Resource Management and Institution Building

Communities under the right circumstances, can be effective institutions for resource management. The obverse is also true. The management of common property resources can act as a powerful catalyst for communal institutional development in modern rural African conditions. This is particularly the case if the potential resources concerned have significant revenue-generating potential and are thus central to community development aspirations. For too long 'community development' has been conceptualised in Africa as an extension to local levels of central government institutions. The examples of Kanyurira and Chikwarakwara are examples of something different; a demand-driven institution building, the demand being local economic interest and the necessity of creating institutional structures to manage common property and balance individual and collective interest. As Peterson states, "CAMPFIRE is not just a wildlife programme, it is not even

just an economic development programme based on wildlife. Ultimately it is a people and institution development programme based on the sustainable production of wildlife" (Child and Peterson, 1991; 86-87).

Thus resource management and local institutional development are mutually reinforcive. The topic of this paper is centrally relevant to environmental concerns. It is equally relevant to governance in rural Africa. If this is realised, the crucial links between ecology and politics, between environment and development, stand a better chance of being incorporated into policies that work.

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