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**WILDLIFE IN SUSTAINABLE DEVELOPMENT :  
APPROACHES TO COMMUNITY PARTICIPATION**

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## Executive Summary

This paper identifies and analyses two key policy variables determining the success or failure of community participation approaches to wildlife use and management systems in Africa. In doing so, the analysis touches on a range of other relevant issues but maintains an emphasis on the core factors of incentives and entitlements. The focus is on the sustainable use of wildlife resources outside protected areas for African rural development.

After a brief introduction, Section 2 discusses an example of contemporary critiques of community participation approaches, which suggests that wildlife conservation and rural development are parallel processes which should not be conjoined. Using this example as a template for the analysis which follows, the paper argues that such critiques are flawed by the omission of attention to the issues of farmer incentives and collective management.

Section 3 commences with a model which includes these variables and argues that the "wildlife and sustainable development" issue is centrally one of farmer motivation, rights and organization under conditions requiring collective management of wildlife resources in defined commonages. This model throws up two key policy variables, objective and degrees of power and responsibility. These two variables are then applied, using a two-dimensional matrix, to an examination of various approaches to the subject. The paper argues that policies and programmes which have a developmental focus and confer strong authority and responsibility status on legally sanctioned communal natural resource regimes are most likely to produce "robust, cost effective and efficient, non-subsidized systems and institutions" for the use of wildlife in sustainable development.

Section 4 provides a ten-year case study of such an approach, showing process, accomplishments and constraints. Section 5 takes up a major implementational issue involved in the model, that of matching ecological and social topography. The paper ends with a retrospective summary, arguing that the prevailing paradigm of community approaches as "exchange of access for material consideration" needs to be changed to "conferment of access to stimulate production". It also suggests that for much of Sub-Saharan Africa this is the only viable approach to the use of wildlife in sustainable rural development.

# WILDLIFE IN SUSTAINABLE DEVELOPMENT: APPROACHES TO COMMUNITY PARTICIPATION

M.W. Murphree

## 1. INTRODUCTION

The purpose of this paper is to identify and analyse key variables determining the success or failure of community participation approaches to wildlife use and management systems in Africa. It derives its mandate for this focus from the background statement for this Policy Consultation, which suggests that success can be measured by "*robust cost effective and efficient, non-subsidized systems and institutions.*" The issues specified in this background statement for attention under the "community participation" theme are addressed, but not pedantically or exhaustively. A presentation of this length does not permit this, and these issues have already received extensive treatment in the precursor document for the consultation, Whose Eden? An Overview of Community Approaches to Wildlife Management. (IIED/ODA, 1994)<sup>1</sup>

Systems of efficient wildlife management and conservation do not necessarily, and in all cases, require community participation approaches. Participatory community approaches are no panacea for all wildlife conservation concerns. All approaches to community participation in wildlife management are not the same. Behind these simple and self-evident assertions lie fundamental distinctions which are all too often blurred in the current policy enthusiasm to link conservation and development objectives and which, when neglected, tend to result in overly-aggregated, misleading analyses. After outlining one example of this kind of scholarship, this paper identifies two critical policy variables which must be considered and tests their relevance against the record of a ten year case study. The paper also discusses the implementational issue of matching ecological and social topography, and concludes with summary comment.

## 2. CONTEMPORARY CRITIQUES OF COMMUNITY PARTICIPATION APPROACHES

The notion of incorporating the resources of community participation into the management and conservation of African wildlife, particularly in connection with state protected areas, is not new. Nor is the notion that this participation should contribute to the development of the communities involved. One has

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<sup>1</sup> Other substantial reviews include Western and Wright (1994), Wells, Brandon and Hannah (1992) and Rihoy (1995).

to examine the histories of the establishment of Maasai-Mara, Amboseli and the Ngorongoro Conservation Area to realize that these notions have in principle, if not in practice, a long pedigree. It was, however, only in the 1980's that a combination of a new "bottom-up" philosophy of rural development and a growing constituency of concerns for African wildlife conservation provided the basis for major aid allocations by donors to community participation approaches and gave them the status of quasi-orthodoxy in the strategies of major international conservation agencies. These approaches have spawned a number of designations in the development and conservation literature, their abbreviations taking on a typological life of their own. Thus we now have CBC (Community-based conservation; Western and Wright, 1994: 1), CBNRM (Community-based natural resource management; Rihoy, 1995: 1), ICDPs (Integrated conservation and development projects; Vells, Brandon and Hannah, 1992) and many others.

Now, in the second half of the 1990's, a growing skepticism of such approaches is developing. Such skepticism is healthy if it is sound, particularly if it helps to separate the wheat from the chaff in such ambiguous concepts as "community participation".

I present here an outline of this skepticism in two versions. The first is a "soft" version, provided to me by a donor representative at a recent cocktail party. *"We are supportive of community-based approaches to wildlife management,"* he said, *"but we have concerns and reservations."* In the conversation which followed the concerns expressed were that community participation approaches were: a) expensive, b) required long time frames, c) showed mixed or inconclusive results, and d) involved risk. *"What if communities mess up management and deplete their wildlife resources?"* he asked.

The second version is a much more vigorous, aggressive and academic attack on attempts to link rural development and wildlife conservation. I refer to the recent journal article by Barrett and Arcase in World Development, "Are Integrated-Conservation Development Projects (ICDPs) Sustainable? On the Conservation of Large Mammals in Sub-Saharan Africa." (Barrett and Arcase, 1995). While the burden of Barrett and Arcase's critique is on initiatives to link rural development and species conservation the article is also effectively an attack on community based approaches since their data are drawn almost exclusively from programmes or projects which claim to incorporate a community participation component.

The Barrett and Arcase article raises important issues which should be considered by policies seeking to link conservation and rural development, and often are not. It also contains, however, factual inaccuracies and misleading assumptions, and is permeated by the patronizing arrogance which professionals so often exhibit regarding the motivations and levels of competence which rural farmers invest in the management of their natural resource systems.

Most critically, however, the article fails to draw analytic distinctions which are fundamental for an understanding of the nexus between conservation and development. A detailed critique of the article is not possible in the scope of this paper<sup>2</sup>, but I summarize below aspects of the article which will be used as a template for the analysis which follows:

- a) Barrett and Arcase commence by aggregating initiatives to link conservation and development under the rubric "ICDPs".
- b) For the authors, the *"distinctive feature of ICDP's as conservation strategies is that rural residents are induced to surrender access to, or curtail illegal offtake of, native species and their habitats in exchange for alternative sources of income and sustenance"* or other compensation, services and infrastructure associated with *"an improved standard of living."* Central to ICDP's, say the authors, is *"the basic notion of an exchange of access for material consideration."* (p. 1074).
- c) Although this is not clearly specified, the article assumes passim that wildlife production comes primarily from "protected areas" which are controlled by the state and managed by state functionaries. This is part of the deal: *"rural residents" surrender access rights to wildlife and its habitats in exchange for other promised benefits.* The implication is that "protected areas" are ipso facto under state control.
- d) Barrett and Arcase are concerned that African wildlife resources are not capable of sustainably producing the promised benefits in this exchange. Among the promised benefits discussed is game meat from cropping harvests. For the benefit to be significant motivationally it must be constant, suggest the authors. But, for it to be sustainable, it must be variable since wildlife populations are unstable and subject to variations due to drought, disease or natural disaster. State (or project) *"managers"* must therefore *"be able to respond to changes in rainfall by increasing harvests following 'good years' and decreasing them following 'bad years'."* However, reductions in cropping following this formula are *"likely to be politically unpalatable in the ICDP context."* If political pressure limits a manager's ability to reduce harvests, *"a downward spiral in the size of the harvested population will result, because short-term over-exploitation will lead to lower future sustainable harvests, less local cooperation, and so on."* (p. 1075).
- e) The provision of game meat by ICDPs has another danger in the authors opinion, in that *"if ICDPs increase a rural population's dependence on game meat, these projects may fuel local demand for game and, in the event legal harvest distributions are curtailed for biological reasons (see*

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<sup>2</sup> In preparation by R.B. Martin and M.W. Murphree.

above), they may ultimately foster the activities they are designed to counter." (p. 1078).

Other modes of promised benefit from ICDPs discussed are cash benefits, through sales of game meat, wage employment or the sharing of ecotourism revenues. However, the authors point out the variability of the markets involved and the fact that revenues often are not returned to *"compensate locals for surrendering access to wildlife and habitats."* More fundamentally, they argue that *"for cash inducements to work rural inhabitants must be able to convert cash income into food."* This inserts them into the risks of a market economy where *"trading access to species for monetary compensation will expose rural residents to new risks associated with exchange entitlements. In that setting, price variability and quantity-rationing in rural food markets conspire to threaten household food security."* (p.1078).

The authors are also concerned about the possible impact of temporarily successful ICDPs. *"Improving local standards of living will probably contribute to higher rates of local population growth than would be observed in the absence of an ICDP that is successful in enhancing the well-being of local populations. This may occur especially rapidly in regions where living standards are depressed, and thus immigration into areas with enhancements is made more attractive."* (p. 1078).

ICDPs, it is suggested, *"exert substantial influence over the returns of alternative uses of rural inhabitants' time."* They suggest that the opportunity costs of time for many rural Africans is low, and that *"seasonally, if not permanently, any income-maximizing rural resident would be wise to set off for the nearest protected area, even in the face of risks of imprisonment or injury."* (p. 1079). This links to their concern about the inadequacy of law enforcement capacities among *"parks staff."* (p. 1081).

The authors are also concerned that ICDPs do not adequately address the cultural use of wildlife (pp. 1077-79) and about inadequately supportive national policies (p. 1090).

Having advanced these and other arguments the authors conclude that *"ICDPs must be regarded as no more than short-term palliative in a longer term struggle to refocus attention and resources on parallel processes of rural development, poverty alleviation and wildlife conservation."* (p. 1091). They suggest that it is *"biologically unsound to base human needs, which must be assumed to grow, on the harvest of wildlife populations that will not grow."* (p. 1091). Their prescription is for development projects to *"decouple human needs from the harvest of large mammals."* (p. 1077, also cf. pp. 1080, 1081).

One could examine these points serially, pointing out inter alia that the formula for determining cropping take-offs is managerially naive<sup>3</sup>, commenting on the condescension implied in the warnings about giving rural peoples a taste for meat or encouraging them to enter markets where they will be diddled, and noting the extraordinary omission of any discussion on the value-added dimensions of certain modes of wildlife productivity, such as safari hunting. To do so would, however, be to miss the main contextualizing issues. The fundamental conceptual framework from which the article springs is that conservation/development approaches are essentially conservation projects which "induce" significant neighbors of protected areas to cooperate in the conservation objectives of these areas. These neighbors are analyzed as a non-ownership reactive category, an undifferentiated blob variously referred to as "*rural residents*," "*local peoples*", "*human populations*," or simply as "*locals*." It is from this conceptual model that most of the analytic strengths and weaknesses of the Barrett and Arcase critique arise. To the extent that conservation/development policies are what Barrett and Arcase say they are, their critique has significant validity.

### 3. THE TWO KEY POLICY VARIABLES

Let us now, however, consider an alternative model of the conservation/development nexus, which I will describe in its polar contrasting form. Let us assume, firstly, that core national biodiversity and species conservation concerns are under state control in systems and at levels which the state can afford to effectively manage. Thus the first characteristic of the model is that the "wildlife and sustainable development" issue is not primarily about parks/people relationships, although it may have implications for these relationships. (See under 3.4 below).

Secondly, let us transform our ambiguous categories of "*rural residents*" and "*local peoples*" into small-scale farmers who, under prevailing tenure conditions in Sub-Saharan Africa, have individual usufruct rights to their arable land but who have group claims to the natural resources of a defined collective commonage. Whatever the legal status of these claims may be these farmers, by virtue of their location and their distance from the instruments of state coercion, are the de facto managers of wildlife in their respective commonages. And, like farmers everywhere, they will manage the wildlife resource through

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<sup>3</sup> Martin comments: 'The authors have obviously not managed wildlife under hands-on" conditions. It is not ideal to increase harvests following good years and decrease them following bad years. A bad year can be diagnosed at the end of the rainy season - well before animals start to die of poverty. The logical management action in a bad year is to remove a large proportion of the population leaving a small nucleus that will survive the drought without undue degradation of the environment. In a good year the manager has several options: he could keep the population low in anticipation of further droughts or he might allow it to build up hoping that the rains will be favourable for several years.' (Martin, personal communication)



calculations which consider the opportunity costs and benefits of land, labour and resource allocations, and the future benefits of the investment costs which are integral to sustainable use. The second characteristic of the model is thus that the "wildlife and sustainable development" issue is about farmer motivation, rights and organization under conditions requiring collective management of wildlife resources in defined commonages.

Thirdly, let us posit wildlife outside state protected areas as part of a bundle of "off-farm" resources capable of contributing, under the right conditions, to the economic well-being of farmers, reversing the causal direction implicit in many conservation/development approaches. The third characteristic of the model is thus that the "wildlife and sustainable development" issue is primarily about development, rather than conservation. It has a conservation component, but this is focussed on the sustainability of use, and regarded as a means rather than an end.

This model provides us with a significantly different conceptual frame for the analysis of wildlife conservation/development initiatives than the framework and assumptions either implicit or overt in much of the literature on the subject. Two key predictive policy variables emerge by which we can anticipate the efficacy and efficiency of systems attempting to link wildlife conservation and sustainable development. These are: a) objective, and b) degrees of power and responsibility.

### **3.1 Objective**

The term "objective" is a loose one which can be given different definitions. It has a number of synonyms in general usage, and we tend to use the terms "goal," "purpose," "aim" and "objective" interchangeably. In the world of organizational management and project planning these are sometimes ranked hierarchically in formulas of log-frame analysis. But I will be simplistic and use the word "objective" here to denote the core motivational direction behind policy, planning and action. This core motivational direction is itself usually determined by a number of subjective preferences and instrumental considerations.

As ambiguous and complex as it may be, the objective variable is critical for systems attempting to link conservation and development. This arises from the fact that such attempts almost invariably link together significant social actors whose objectives are essentially different. The institutionalization of conservation as a discrete set of concerns and actions is a product of governments, interest groups and scholarship. This provenance tilts wildlife management objectives towards species and habitat protection, government control and abstract policy. The rural farmers mentioned earlier rarely articulate conservation as a discrete set of concerns. Conservation for them is an investment factor in the sustainable use of their resources, the objective being the maintenance or improvement of their livelihoods or, put more loosely, "development".

When these two objectives intersect within the farmers' domain there is dissonance, which is likely to result in enduring conflict since both objectives and their constituencies have strengths to support their respective goals. The result is that neither objective is achieved. There is no wildlife conservation and there is no development.

The model put forward above suggests that as a strategic approach to resolve this impasse, the development objectives of farmers should be made paramount. In doing so, the conservation objective may, under the right circumstances, also be furthered. The success of programmes linking conservation and development objectives is likely to be consonant with the degree to which they place emphasis on development.

### 3.2 Authority and Responsibility

The location of authority and responsibility is the other critical variable by which we can predict the efficiency of a system attempting to link wildlife use and sustainable development. For the purposes of this paper "authority and responsibility" is used as a phrase to cover rights of secure, long-term access to land and resources, their benefits, and the duties associated with these rights. A number of related terms dissect these rights, including "ownership," "property," "propriatorship" and "tenure".

These concepts have a number of dimensions which cannot be discussed in detail here. For our topic the most important points to note are that:

- a) These rights, or authority, have a number of derivations. They can be conferred by the state, by tradition or in-place institutional dynamics. Their strengths will be determined by particular combinations of legal, political and socio-economic factors.
- b) These rights, or "ownership," are rarely, if ever, absolute. Their strengths are determined by their time frames and the conditionalities attached to them. The longer their sanctioned duration, their "tenure," the stronger they will be. The fewer the conditionalities attached to them, the stronger they will be. As Alchian says, the strength of ownership *"can be defined by the extent to which the owner's decision to use the resource actually determines its use."* (Alchian, 1987: 1031).
- c) Authority over land and natural resources can be sub-divided into different authority regimes presiding over land and specific natural resources. In much of Sub-Saharan Africa, this is typically the case through the vertical compartmentalization of government administration into land, agriculture, forestry, fish and wildlife agencies (Child, 1995 a; Murphree, 1995 a).

- d) Authority and responsibility are conceptually linked. When they are de-linked and assigned to different institutional actors both are eroded. Authority without responsibility becomes meaningless or obstructive; responsibility without authority lacks the necessary instrumental and motivational components for its efficient exercise.

At a first-order level of distinction, most contemporary societies divide this bundle of authority and responsibility over land and natural resources into state and non-state regimes. And, for instance, in most societies of Western Europe and North America these non-state authority and responsibility regimes are largely (but not exclusively) private regimes legitimated by titles or leases granted to a body corporate, whether this be a single individual or a corporate group of persons. This dichotomy does not, of course, eliminate conflict between state and non-state authorities, but it does have the advantage of making the linkage between authority and responsibility tighter and giving relatively sharp definition to the institutional actors involved.

In most of Sub-Saharan Africa this form of private non-state regime does not exist. Farmers live on land and use resources which the state legally claims as its own. Demographic, ecological and cultural factors militate against their attainment as individuals of body corporate status<sup>4</sup> and few opportunities exist for them to collectively attain this status. Their authority and responsibilities regarding land and natural resources are ambiguous and weakly linked, and their lack of strong tenure is a disincentive to conservation investments. They are thus locked into the amorphous categories of "rural residents," "local peoples" and "human populations" of the Barrett and Arcase text, or the "communities" of my topic. Such conditions are a recipe for the failure of initiatives to link wildlife conservation and rural development concerns.

A change in these conditions must, therefore, be a fundamental dimension of any policy which aims to sustainably use wildlife for rural development in Africa. This change, for the demographic, ecological and cultural factors mentioned, cannot in most contexts be a division and alienation of existing and largely traditionally legitimated commonages to individuals. It can, however, be a de jure alienation of these commonages of land and resources by the state to groups of farmers who, through politico-cultural and socio-economic legitimations collectively act as their current de facto users and managers.

This, in effect, would be to enable farmers to form state-legitimated strong communal regimes for their common pool resources. The impact would be, in terms of our topic, to transform "community participation" into communal property regimes with authority and responsibility for the sustainable use of

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<sup>4</sup> Kenya is one country with a declared policy of individualizing land entitlement, with a mixed record of results. For a discussion of the constraints involved in such a policy, see Murphree and Cumming, 1993.

wildlife, and its habitat, as a means to their development objectives. A number of formulas, essentially similar, have been produced to profile what such communal property regimes require. Among these are Berkes (1989: 10), Murphree (1983: 6-7) and Ostrom (1990: 90). Whose Eden?, p. 49, provides an adaptation of Ostrom's "design principles" and this paper does not go into details. For the analysis here it is sufficient to note that it is essential for such regimes to have:

- a) Strong ownership rights, i.e. "*the rights of possession, use and disposal of worth.*" (Harper, 1974:15). This links cost and benefit, authority and responsibility.
- b) Strong tenure rights, i.e. the long-term security of ownership which motivates the investments in the future essential for sustainable use.
- c) Effective institutional structures for internal management and control, membership determinations and relationships with external agencies and neighbors.

The leap from "community participation" to strong communal property regimes is not an easy one. Powerful interests conspire to block it. For some politicians, bureaucrats and their private sector allies it is seen as a loss of power and privilege in a zero-sum game between centre and periphery. For some conservationists it is seen as a surrender of wildlife technology to the vagaries of cost/benefit decisions by unsophisticated peasants. But, if this analysis is right, it is the only approach which can effectively insert wildlife resources sustainably into African rural development. The degree to which policies accept this thus becomes a critical predictive variable in the success or failure of systems which seek to link the two.

### 3.3 Classifying and Evaluating Approaches

Having identified and discussed these two policy variables we are now in a position to classify specific policies, programmes and projects and measure them for predictive purposes. This analysis does so diagrammatically, representing the two variables as axes on a two-dimensional graph.

(Figure 1.1)

The first thing to note is that the two axes each represent a spectrum of possible locations in respect to the variable concerned. Secondly, we should note that extreme polar positions on either axis are unlikely. The variables we are examining rarely, if ever, appear in this manner. Thus no specific instance is likely to be located at the extreme corners of our diagram. The closest one might get to the latter situation might be in a strict nature reserve (Category I in the IUCN classification of protected areas, reproduced in Whose Eden?, p.10) managed by a well run and well endowed state conservation agency, free from

any external threat. But, even here, the IUCN descriptive text indicates some developmental characteristics, so this instance would have to be shifted to the right of the bottom left hand corner. Most state protected areas are less secure in their authority status and management capacities than the profile I have described, and are likely to be scattered along this axis across its range. Depending on their national developmental components and impact, they will also find different locations on the horizontal axis as well.

(Figure 1.2)

But, for the present, we are not discussing state protected areas but non-state regimes of wildlife management, whether legally sanctioned or not. Those with strong authority and responsibility will have legal status and means. These private, individual (single person or corporate) enterprises may be biased towards conservation or development objectives, and will be located across a spectrum in the bottom half of our diagram.

(Figure 1.3)

It is, however, with communal management approaches that this paper is primarily concerned. These, as this text argues, are unlikely to have high authority and responsibility status. They are thus unlikely to appear in the bottom half of our diagram. Most will cluster in the upper left quadrant since most have been driven by external conservation objectives. There are exceptions. At the conservation end of the horizontal axis the sacred groves of tradition<sup>5</sup>, while without legal sanction, may have powerful cultural resources providing de facto authority and responsibility, placing them in the lower left-hand quadrant. Some "utilizationist" approaches in the "co-management" mode can be placed in the upper right hand quadrant. And in design and principle a few examples purport to confer legal status to communal regimes of wildlife management and use, and thus can be placed in the lower right hand quadrant. However, using the examples provided by Whose Eden?, the tendency is for most approaches to locate in the upper left hand quadrant.

(Figure 1.4)

The above reference to design and principle draws us to a distinction which must be factored in our use of the diagram. This is the difference between design and result. The CAMPFIRE Programme, for instance, in principle seeks to locate wildlife management in state sanctioned communal regimes. Current Zimbabwean legislation, however, places this management under rural district councils, and the Programme depends on these councils to devolve their

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<sup>5</sup> cf. Whose Eden, p. 95.

authority and responsibility to communal regimes. In practice, however, councils have responded in various ways, leading to a spread of de facto placement of communal regimes along our vertical axis.

(Figure 1.5)

This discrepancy between policy and practice should alert us, *inter alia* and analytically, to two points. Firstly, our analysis, particularly of large projects and programmes, needs to be fine-grained and disaggregative. Secondly, such programmes are dynamic. Synchronic analysis is not adequate; longitudinal research methodologies are required to detect direction and understand process.

(Figure 1.6)

The final variant of our diagram takes up the prescriptive lesson to be drawn from its predecessors. Most conservation and development programmes and projects, in their profile of objective and degree of community authority and responsibility, are in the upper left hand quadrant. These are the approaches which provide the stereotypic model on which the Barrett and Arcase critique is based. In terms of the analysis of this paper, this location is a predictor of failure. The alternative model proposed at the beginning of this section suggests that approaches which fall into the lower right hand quadrant provide the best institutional and motivational conditions for success. To achieve this success, policies, programmes and projects should seek to move their approaches in this direction. If we give compass bearings to our diagram the description is simple: "move south-east".

#### 4.4 Linking Conservation and Development Objectives

Would such a shift imply the abandonment of "conventional" conservation objectives? In some ways, yes. It does imply the abandonment of futile attempts to maintain large wildlife populations, particularly of large mammal species, on land outside state protected areas which is ecologically and economically more suited to other forms of production under competitive marketing and tax structures. In so doing, the shift is asking no more of Africa than what has happened in North America and Europe. (Although we should note that such land constitutes far less a proportion of total land surface in Africa than in Europe and North America). It also implies the surrender of the "development to promote conservation" paradigm implicit in many programme and project purposes for the more holistic approach of conservation as an investment for sustainable use made by African farmers.

Paradoxically, however, the shift in the longer term can further conventional conservation objectives. Firstly, it provides an economic incentive to allocate appropriate land to wildlife production, thus expanding its range. Conventional conservationist approaches in most of Sub-Saharan Africa have failed to halt the

decline in wildlife range, the major cause of wildlife population declines on the Continent. Zimbabwe, which has been pursuing the shift in a series of intermittent and partial policy steps since the late 1960's, shows an opposite trend.

(Figure 2)

Secondly, "going south-east" can create a better institutional context for "parks-people" relationships, that persistent concern of conventional conservationist approaches. This is because it creates neighbors for state protected areas who have legally defined authority and responsibility, and mutual economic and managerial interests. Conflicts over priorities, boundary maintenance and cooperation in mutual interest can thus be negotiated between authorities of symmetrical status in an open and structured manner. Again I use a Zimbabwean example. In Zimbabwe there has been little history of conflict between national parks and their neighbors on private ranches and farms. Among the reasons for this are that under Zimbabwean wildlife legislation, proximity to parks is economically valuable to their neighbors, and that conflict can be resolved since neighbors can negotiate as recognized, legal proprietors. Conflict has in the past been endemic between parks and their communal land neighbors. The conditions mentioned above have not generally pertained. More recently, where the CAMPFIRE programme has succeeded in providing proprietorial status for communal land farmers approximating that of commercial ranchers, relationships have vastly improved.

"Going south-east" can thus enhance the conditions for incentive compatibility between conventional conservation objectives and the interests of African farmers. According to Bromley,

*"Incentive compatibility is established when local inhabitants acquire an economic interest in the long-run viability of an ecosystem that is important to people situated elsewhere.... Such ecosystems represent benefit streams for both parties; those in the industrialized North who seek to preserve biodiversity and those who must make a living amid this genetic resource."* (Bromley, 1994: 429-430).

To work, however, this compatibility must start with the incentives of the farmers who decide on the destiny of wildlife outside state protected areas. Putting the farmers first is, in brief, the formula for successfully linking wildlife conservation and sustainable rural development in Africa.

#### 4. A CASE STUDY IN RELATIVE AND CONDITIONAL SUCCESS: MASOKA

I now turn to a concrete example of a group of farmers who have "gone south-east". One must be cautious with case studies, since each represents a unique combination of ecological, social and policy components. Thus this example is

not put forward as a polyvalent model but as a demonstration that, under the right conditions, local empowerment focussed on farmer needs can enhance both the status of wildlife resources and rural development objectives. My example is Kanyurira Ward, a 400 sq. km. area and its farmer population in the Dande Communal Land of the Guruve District.<sup>6</sup> "Kanyurira Ward" is the government administrative designation for this sub-unit of the Guruve Rural District Council, which has 24 such wards, each with designated and mapped boundaries. Kanyurira is the name of the sub-chief, but the area is locally and commonly called Masoka, from the name of spirit medium Nemasoka, who represents the ancestral spirit "owners" of the land. In local perspectives, these land spirits have a much larger territory than the ward boundaries of the Council map, and includes parts of the neighboring Doma and Chewore Safari Areas under state control.<sup>7</sup>

The people of Masoka are residentially clustered along a six kilometre stretch of the Angwa River which flows through the ward. In 1988 the settlement was made up of 60 households, with a total population of 482 people.<sup>8</sup> Household subsistence came from dry-land cultivation of grains, winter cultivation of riverain lands for maize and vegetables, and some remittances from the export of male labour. There was one cash crop, cotton, grown by 73% of households. For most households net revenue from this source was small since the remote location posed formidable transport and marketing problems. Owing to the presence of tsetse fly, no cattle and only a few goats were present. Some of the population's protein requirements came from poultry, and a larger proportion from game meat, legally "poached" and yielding about 40 kg. per person per annum.<sup>9</sup> The benefits of this harvest were, however, balanced in farmers minds against its costs. Nearly every household experienced regular crop raiding by wildlife, the principal species involved being elephant, buffalo, wildpig and baboons/monkeys. These costs extended to personal jeopardy. Fourteen households (23.3%) reported incidents of injury or death due to

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<sup>6</sup> Brief descriptions of Kanyurira's experience in the CAMPFIRE Programme also appear in Murphree (1983: 9-10) and Metcalfe (1994: 179-181). A book-length monograph on Kanyurira is in preparation.

<sup>7</sup> This is a highly compressed statement on the ecopolitical and ecoreligious dimensions of land and resources in Masoka which are highly relevant but cannot be addressed here.

<sup>8</sup> The Centre for Applied Social Sciences at the University of Zimbabwe has been conducting research in Masoka for over 10 years. 1988 statistics are from Cutshall (1989).

<sup>9</sup> This estimate is based on Murindagomo's study of the neighboring ward, Chisunga, which exhibits similar conditions (Murindagomo, 1988: 82). Clearly the people of Chisunga and Masoka needed no ICDP project to give them a "taste for meat".



wildlife in the previous three years, three of these being deaths (Cutshall 1989: 28-31).

Modern infrastructural services were almost completely absent. Prior to 1988 there was no school, and the few children whose parents wanted them to have schooling had to walk 30 km. through the bush to the nearest primary school at Angwa Bridge on Sundays, sleeping in grass shelters and cooking for themselves during the week and returning home on Fridays. No clinic existed, and the sick had to make the same journey to the clinic at Angwa Bridge.

Since Masoka was a wildlife rich area there was a hunting safari camp in the ward. The professional hunter, operating under a concession issued by the Department of National Parks and Wild Life Management (DNPWLM) in Harare, would occasionally provide transport for the seriously ill. He also provided work for 5 males in the settlement.

In retrospect, we can see how 1988 was a pivotal year in determining the directions which the farmers of Masoka would take with their wildlife. Three events were of particular significance. The first was the erection of a two-roomed school in January 1988 by the District Council, using wildlife revenues made available to it by the Department of National Parks and Wild Life Management through Project WINDFALL (cf. *Whose Eden?*, p. 79). Researchers from the Centre for Applied Social Sciences at the University of Zimbabwe (CASS) and the WWF Multispecies Animal Production Systems Project in Harare (WWF) had been suggesting to the people of Masoka previously that their wildlife had far higher values than their local off-takes represented. The erection of the school had a significant impact on the farmers' view of this message. *"We see now that you are right,"* they said, *"these buffalo are worth money to us."*

But ambivalence remained, spurred by the second major event of 1988. This was the clearance of tsetse fly by aerial spraying under the EEC's Zambezi Valley tsetse control programme (cf. Derman, 1990; Derman and Murombedzi, 1994). This opened the way for the introduction of cattle and the encouragement of new settlement by immigrants, who were already flooding into eastern wards of Dande. People were not blind to the fact that cattle and immigrants would over time diminish their wildlife resources, but on balance were in favour of encouraging immigrants to settle in the ward. Three reasons were put forward. Immigrants would be allocated lands on the periphery of the settlement and thus take the brunt of crop damage by wildlife. Secondly, there was plenty of land. Thirdly, more people would mean a better case for Masoka when it appealed to the Council for school, clinic, transport and other facilities (Cutshall, 1989: 21-23). This last reason is revealing; the farmers of Masoka were still strategizing in the extractive dependency mode created by colonialism

and still characteristic of centre-periphery relationships in much of rural Sub-Saharan Africa.<sup>10</sup>

The third event was a Government decision in October 1988, followed by a series of debates leading to a wildlife revenue distribution in Masoka in March 1989. In October 1988, the Minister of Environment and Tourism proclaimed the Guruve District Council an "Appropriate Authority" for wildlife in the area under the CAMPFIRE Programme, giving Council the same legal authority over and responsibility for wildlife as that held by commercial farmers and ranchers (cf. Whose Eden? : 92-95). This meant that all 1988 revenues from safari hunting in Guruve Council lands went directly to Council.

In the Council debates which ensued two issues were paramount. Firstly, should Council appropriate all these revenues and use them in all wards? The ward councillors from wards with no wildlife were not surprisingly in favour of this approach, arguing for "equity." Fortunately for Masoka the Council, with the insightful leadership of a Council Chairman, District Executive Officer and District Administrator, adopted the principle that "*differential inputs must result in differential benefits.*" (Murphree, 1993: 6). The decision was taken that wildlife revenues, less Council levies and administrative costs, should be returned to wards in proportion to the safari hunting take-offs (under district-wide quotas) which had been provided by these wards. As a result, Masoka received the "lion's share" of 1988 hunting revenues distributed to the wards, Z\$47,000.

The second issue was what Masoka should do with this Z\$47,000, and who should make the decision. Again, there was an element in these debates which argued that Council should make the decision and that the money should be used for community infrastructure. There were paternalistic and instrumental components to this argument. The people of Masoka were really too unsophisticated to make decisions on such a large amount of money, they would squander it on beer and self-indulgence. And, if Council made the allocation and built, for instance, another two classrooms for the school it would be seen, by Government and the people, as fulfilling its development responsibilities. Fortunately again for Masoka, and with the enlightened guidance of the leadership mentioned earlier, Council resolved to give the entire Z\$47,000 to Masoka and let its people decide what to do with it. Their decision was to declare a wildlife dividend of Z\$200 to each household (now numbering 64) and use the balance to improve their school.

At a ceremony in Masoka in March, 1989, representatives of each household stepped forward and received \$200 in cash. The impact was profound. For all households, but particularly for the poorer ones including those headed by

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<sup>10</sup> Up to this point, the Masoka story in some respects conforms to the Barrett-Arcase paradigm. WINDFALL was very much like their ICDPs: farmer stratagems somewhat as those they attribute to "locals."

widows, the amount involved was substantial, equivalent to an additional 56% on average gross income from cotton. More subjectively, but no less importantly, perceptions of their wildlife resource were changing. *"We see now,"* said the Chief, *"that these buffalo are our cattle. We are going to farm them."* The resource was valuable and it was theirs to use sustainably.

If the buffalo (and other wildlife) were theirs, how should the resource be managed? CASS and WWF researchers suggested to the Masoka farmers that they needed to do some land use planning, only to be told that they already had a plan *"in their heads."* Their plan allocated an 18 km<sup>2</sup> area around the settlement for residential and cropping purposes to be surrounded by an electric fence to keep out buffalo and elephant. The plan was submitted to the Council for approval, assertively. Their councillor was charged with presenting the proposal to Council with the following words: *Tell them that these are our animals and these are our plans. We will not accept any changes imposed by others."*

The plan was approved and the fence built during 1989, with funds accessed by WWF.<sup>11</sup> The one technological intervention in the Masoka case study, the impact of the fence was significant in a number of dimensions. Firstly, it worked in its explicit objective. Crop raiding within the fence has become insignificant.<sup>12</sup> No deaths, and only two injuries, due to wildlife have occurred since its erection. Institutionally, the fence accelerated organizational development for collective resource management since the fence had to be monitored and maintained, which Masoka's wildlife committee does by employing (from wildlife revenues) four uniformed fence minders. Finally, its subjective and attitudinal impact has been profound. Wildlife, for the farmers of Masoka, is no longer an uncontrollable and amorphous asset. It is an asset which can be controlled and managed for sustainable benefit. It has, in effect, been semi-domesticated and taken on some of the characteristics of livestock.<sup>13</sup> Sometime after the erection of the fence I asked the Masoka farmers if the fence was working. *"Marvelously,"* was the reply. *"Only we have some buffalo inside the fence at the moment which were driven in by lions."* *"How many?"* I asked. *"Six: two bulls, two cows and two calves. But no problem, we will drop a section of the fence and drive them out."* They

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<sup>11</sup> The fence cost Z\$70,000, labour being provided by Masoka farmers. This \$70,000 and funding for initial 2 year maintenance has been the only direct external project input into Masoka's programme.

<sup>12</sup> Some cropping of riverain alluvium takes place outside the fence, in areas impossible to include within the fence because of seasonal flooding. Masoka's view is that farmers using these areas do so at their own risk, and without any collective liability being accepted.

<sup>13</sup> Arguably, the best way of ensuring the survival of a species. Bos taurus appears on no one's "red book." The "domestication" of the ostrich (Struthio camelus) and the Nile crocodile (Crocodilus niloticus) are more recent examples.

were, in fact, living up to their resolve. They were farming their buffalo and, like any good farmer with his livestock, they were beginning to see buffalo in terms of number, sex and age. And also like good farmers, they are today looking after the habitat of their wildlife "livestock". Today, Masoka's 400 km<sup>2</sup> are under a fire control regime. A wildlife water point development plan has been initiated. There are no snares, species numbers have increased and Masoka is entering the live-sale market with the sale of roan antelope.

The development of local collective management of wildlife production is, however, only half of the picture. Equally important is people management: the management of internal conflict and deviance; the management of external relations; the management of market conditions; and fiscal management and revenue allocations. In each of these aspects, the Masoka case study provides a wealth of data which cannot be fully analyzed here, but I will comment on certain aspects of Masoka's management regime germane to this paper:

- a) Locus of decision making. In Masoka the focal point for most, although not all, of this management is the Wildlife Committee, which in practice is merged with the Ward Development Committee, Government's officially designated unit for local development planning. Typically in Zimbabwe these Ward Development Committees are weak, since they have no fiscal resources of their own and act primarily as conduits to articulate ward aspirations and requests to district councils. Masoka's relative and conditional *proprietorship* of resources and revenues has meant that its Wildlife Committee has significant finance and powers. Membership on the Committee is thus important and the subject of intra-ward political manoeuvring, drawing on "traditional" and "modern" elective legitimations. Membership has changed considerably over time, the composition of the Committee reflecting an organic evolution in response to the demands for administrative and negotiatory skills while maintaining its responsiveness to local consensus. That the Committee is representative is in little doubt. The latest survey on this issue shows that 81% of the households were satisfied with the decisions of Committee.<sup>14</sup> Equally important is that the decisions of the Committee are primarily responsive to its own local constituency. The Committee has had "light touch" facilitative guidance from the District Council and NGO agencies, but decisions remain firmly under its control.
- b) Poaching. Masoka has developed bye-laws which regulate all use of the commonage and which apply not only to terrestrial wildlife but to fish and woodland resources as well. They have never read Ostrom's "design principles" (Whose Eden?, p. 49) but they have "graduated sanctions" which are progressively applied. One household has been expelled after having been found guilty of setting veld fires three times. But the most

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<sup>14</sup> The specific question yielding this statistic was whether the decisions of the Wildlife Committee were in the interests of both men and women. (Nabane, 1996: 85)

effective instrument bringing compliance is the peer pressure of a tightly knit, social grouping. Poaching is no longer seen as individual and entrepreneurial defiance of state regulations; it is now theft from the community and one's neighbors since it reduces the size of household dividends.

- c) Immigration. After the 1989 dividend ceremony attitudes towards immigration began to shift rapidly. Wildlife was valuable, and the more habitat it had available the greater its numbers and value would be. Wild land thus became more valuable, it had to be used parsimoniously and made available only for the "children" of Masoka. With Masoka's economic success, many of these "children" returned and by 1995 there were 123 households on the dividend list. This listing, this membership in the communal regime, is a valuable economic asset. It is conferred carefully, since the farmers of Masoka can do their arithmetic and know that the size of the denominator will influence the size of a household dividend in any given year. Barrett and Arcase's fear of encouraging immigration through success is, in this case, misplaced since their paradigm leaves no place for the organized collective interest that Masoka's communal regime supplies.
- d) Managing market relations. The farmers of Masoka have enthusiastically entered the market for wildlife resources. Their "taste" for subsistence usage of these resources has been, in their calculations, displaced by the realization that the safari market provides components which make the value of an impala sold to the operator far higher than its meat value. In 1990 the District Council, in an effort to "sell" the CAMPFIRE Programme throughout Dande, instituted a cropping programme to provide wards with a limited amount of fresh meat. When the cropping team came to Masoka it was told to leave. Farmers there would prefer to have the safari price of an impala which would buy ten goats, the team was informed.

Masoka still does not have control of the hunting concession lease, which under current legislation is still in the hands of the Council. This places them, in terms of the authority and responsibility variable, somewhat "north" of the CAMPFIRE principle as shown in Figure 1.6. But they are on a sharp learning curve regarding the details of their market,<sup>15</sup> and exercise their authority to the extent permitted. They employ out of their wildlife revenues four game scouts who monitor all safari hunts. The

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<sup>15</sup> Two years ago, in a wildlife committee meeting at Masoka, I was asked for the current exchange rate between the Zimbabwean and US dollars. When asked why they wished to know, the reply was that they knew that the operator's contract had been signed the year before in Zimbabwe dollars. "But," they said, "we know that the operator receives money from his clients in US\$ and that these now buy more Zimbabwe dollars. Where has the extra money gone?"

records of the operator and District Council are carefully checked against their own. A healthy realization has developed among both the farmers and the operator that success for both depends on mutual cooperation.

- e) Allocation of wildlife revenues. Wildlife revenue allocations by the farmers of Masoka for the years 1990-1994 are indicated in Table 1 below. The Table aggregates the 10-15 line items of Masoka's budget prepared annually into the three categories of resource management, household dividends/food relief and community projects. The "household dividends/food relief" category includes direct cash payments to households, and in some years funds used collectively to purchase grain for distribution to households.

**Table 1: Masoka Wildlife Revenues and Budget Allocations, 1990-1994 (Z\$)**

YEAR	REVENUES (After deduction of council levies)	BUDGET ALLOCATIONS		
		Resource Management	Household dividends/ drought relief	Community Projects
1990	78 170	10 260 (13%)	25 200 (32%)	42 710 (55%)
1991	89 293	7 798 (8%)	69 677 (78%)	11 818 (13%)
1992	276 745	44 279 (16%)	10 640 (4%)	221 826 (80%)
1993	459 891	65 599 (14%)	127 000 (28%)	267 292 (59%)
1994	639 290	138 290 (22%)	165 000 (26%)	336 000 (52%)

The following points can be drawn from these statistics:

- \* The value of their off-farm wildlife resource is significant, and escalating annually as market values spiral and their resource management improves. By entering an export-orientated and foreign exchange generating market, these farmers are capitalizing on the comparative international advantages that their large mammal populations provide.
- \* This exploitation of an "off-farm" natural resource is highly significant for the household economies involved. Per household

cash revenues from wildlife are now more than double the average household income from their other cash crop, cotton.

- \* The farmers of Masoka are reinvesting a significant proportion of their wildlife revenues in the management of the revenue.
- \* Contra the arguments of Barrett and Arcase, by entering the wildlife market these farmers are reducing their vulnerability to the vagaries of drought and growing conditions. Note that 1991 revenues were allocated at nearly 80% for household dividends and drought relief, owing to an almost complete crop failure in the 1990-1991 growing season. By contrast, 1993 and 1994 revenues were used primarily for the development of local infrastructure. In other words, they are shrewdly using their wildlife revenues flexibly, in good crop years for collective development, in years of crop failure as food security. Their preference, when conditions permit, is to tilt revenue allocations towards collective infrastructure and today Masoka has a six-roomed school and a new Z\$350,000 clinic, all planned and paid for by themselves. Not one penny of government or donor aid has gone into these buildings, and Masoka's sense of self-accomplishment is perhaps as important an output as the services these buildings provide. They are, in effect, lifting themselves out of the "extractive dependency" syndrome mentioned earlier. This is an essential element in any programme aimed at sustainability.

The Masoka case study is, as the title of this section suggests, one of relative and conditional success in linking sustainable wildlife use and rural development through local empowerment. Relative, since Masoka's empowerment has not yet reached the stage of legally backed proprietorship. Conditional, in that Masoka's empowerment remains dependent on the Guruve Council's continued devolution of de facto authority and responsibility to the ward. But, relative and conditional as it may be, Masoka's success shows that it is possible to link conservation with sustainable development through regimes of communal resource use and management under the right conditions. These conditions may not be found everywhere, but they can certainly be found, or created, in a far larger range of contexts than government and donor policy establishments appear to be aware.

## 5. MATCHING ECOLOGICAL AND SOCIAL TOPOGRAPHY

Up to this point I have managed to write a paper on "Approaches to community participation" without attempting to define "community." This has been deliberate. Anthropological and sociological literature is replete with attempts to

do so,<sup>16</sup> but the term remains loose and its definitions so multiform as to render the word analytically meaningless as a general concept. What this analysis has done, in effect, is to discard the term and suggest that what we are really looking for are units of social topography providing the conditions for collective or "communal" regimes of managing common property. The second characteristic of the model put forward in Section 3 makes this clear: we are looking at "farmer motivation, rights and organization under conditions requiring collective management of wildlife resources in defined commonages."

The viable profile for such units is far clearer in scholarship than our various definitions of community. Some of its characteristics have been mentioned on page nine. But, in addition to these, we need to note certain underlying assumptions that they involve regarding social topography. One is that there must be clearly defined authority and responsibility boundary definitions over land and resources. Another is that cooperation and compliance within the unit depend primarily on peer pressure, implying in turn a tightly knit interactive social unit spatially located to permit this.<sup>17</sup>

When we attempt to apply this profile to the use and management of free-ranging large mammal populations we may encounter social, ecological or market conditions which make the application difficult. Firstly, demand/resource considerations require that a relatively small human population constituting the proprietorial unit commands a relatively large wildlife range to provide the economic incentives discussed. In other words, low human population densities are likely to be a predictor of economic success. This is shown clearly in Bond's analysis of the relationship between population density and ward revenues in the CAMPFIRE Programme (cf. Figure 3). Concomitantly, low population densities may result in a spatial dispersion of human settlement, militating against the tightly knit interactive social unit that the institutions of collective proprietorship require. In Masoka this is not the case, but does apply in other contexts.

Secondly, the exploitation of wildlife resources in such high-value modes as safari hunting requires large concession units which may not correspond with the social scale requirements for effective localized collective management. Even in the Masoka case their revenues derive from a hunting concession which includes other wards.

Turner, in an analysis of four proto-conservancies being developed in Namibia's Conservancy Programme, makes observations which highlight this "lack of fit" between social and ecological topography. In two of his case studies *"it is clear that the unit of 'proprietorship' - all the people under respective traditional authorities - would not correspond with the much smaller social and spatial*

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<sup>16</sup> In the Zimbabwean CAMPFIRE context see Hasler, 1993.

<sup>17</sup> cf. Murphree, 1993: 7.



*fit of production, management and benefit.*" In the other two, *"the overlap between the proprietary or social interest unit and the production and management unit is easier to identify, but only on a much larger geographical scale."* (Turner, 1996: 32).

For many contexts this mismatch between social and ecological topography poses a major implementational problem for the model which this paper advocates. As Turner comments, *"It is from this imperfect fit of places and people that most of the operational difficulties of the conservancy concept will arise."* (Turner, 1996: iv). That it exists in such contexts is not, however, a negation of the model. It is rather a challenge to research and planning to accommodate these factors in specific, on-the-ground social and ecological realities. In many cases the solution is likely to be found in "nested" systems of enterprise involving co-management with other stakeholders, including other proprietorial units and coalesce traditional and government structures. (cf. Ostrom, 1990: 90). If these coalesce structures avoid claims of proprietorship and perform their proper facilitative and coordinative roles, such systems can work. Devoivement of authority and responsibility does not imply the withdrawal of government involvement or localized autarky. What it does imply is the conferment of strong and enduring rights to units best placed to exercise them and a government commitment to provide the enabling policy and coordinative environment required for these rights to be translated into sustainable and productive systems of wildlife use.

## 6. CONCLUSION

In summary, I return to where I started, with the "cocktail critique" of community participation approaches (p.2). Using the analysis of this paper, let us re-examine the concerns and reservations expressed.

### 6.1 "These approaches show mixed or inconclusive results."

Yes, they do. In part this is for definitional reasons. Our use of the terms "community" and "participation" are so loose and amorphous that the concept is applied to a wide range of approaches, the results of which are inevitably mixed. More fundamentally, however, the problem lies in the fact that most of these approaches are conventionally conservationist in objective and cooptive rather than empowering in their allocation of authority and responsibility.

Without claiming that it addresses all contexts of biodiversity concern or "community participation" possibilities, this analysis suggests that the most viable way of achieving *"robust cost effective and efficient, non-subsidized systems and institutions"* linking wildlife with sustainable development in most of Sub-Saharan Africa is through the devolution of authority and responsibility over wildlife to localized proprietorial regimes. In this model, "community" becomes a communal property regime with state and social legitimation for strong access and control rights. "Participation" becomes the collective

organization of member farmers' incentives for current use and investment in future benefit. Barrett and Arcese's formulation of ICDPs as having "*the basic notion of an exchange of access for material consideration*" is radically revised in this model, which has the basic notion of conferment of access to stimulate sustainable production.

## **6.2 "These approaches require long time frames."**

Again, they do. In the case of many of the cooptive, conservationist approaches for which we have examples, this lies in their failure to decisively resolve the issues of authority, responsibility and farmer motivation. The alternative approach put forward here also requires a long time frame, not because farmers are slow to responsibly respond to authority status, but because the model requires a tenurial revolution which faces the obstacles of political, legal and bureaucratic inertia. To remove this inertia sound research strategically articulated to impact on central government political and planning processes is required. This research must have national legitimacy and be reinforced by potent, organised constituency demand from farmers themselves (Murphree, 1995 b). Such a process is necessarily protracted and calls for "uncommon flexibility, sensitivity and long term commitment by external agencies." (Turner, 1996: 40).

## **6.3 "They are expensive."**

Yes and no. Yes, in the sense that the political, legal and bureaucratic obstacles mentioned above require extended research and advocacy to convince policy makers that they need to be changed, and protracted facilitation to adapt devolution to the on-the-ground social and ecological topographies discussed in Section 5. No, in that direct fiscal inputs to local development can be low, as the Masoka case study shows. No, in that if a critical mass of successful local empowerment examples is achieved replication can be lateral, farmers themselves acting as the main extension agents.

## **6.4 "They involve risk to the wildlife resource base."**

Of course they do. Any devolution of authority and responsibility involves a gamble on the competence and integrity of those who receive it. But any consideration of risk must consider alternatives. What are the alternatives? Africa cannot afford to expand its protected areas system at necessary levels of efficient management and political acceptability. For wildlife outside protected areas, the status quo will not work. Putative state proprietorship is impotent in the face of farmer land allocations where wildlife is valueless to them and wildlife ranges are shrinking. Furthermore, the status quo effectively removes wildlife from the repertoire of resources available for rural development. Barrett and Arcese's injunction to "decouple human needs from the harvest of large mammals" is, in fact, a prescription diminishing capacities to meet the first and a formula to accelerate unsustainable harvests of the second.

alternatives thus involve greater risks than devolution. Indeed they bear more the character of negative certainty than risk. In a recently published book, Graham Child reaches the same conclusion. His theme is the same as mine, and he states it better than I can:

*"... if wildlife is permitted to contribute meaningfully to their welfare, people will not be able to afford to lose it in their battle for survival. If wildlife does not contribute significantly to their well-being, people will not be able to afford to preserve it, except as a tourist curiosity in a few protected areas." (Child, 1995: 235).*

The scenario of wildlife as a tourist attraction in a few protected areas may satisfy some conventional conservationists. But in this Consultation we are focussed on wildlife as a resource for sustainable development. For this objective, in many areas of rural Sub-Saharan Africa, there is no viable alternative to systems which devolve the authority and responsibility to use wildlife sustainably to communal regimes with strong proprietary rights. For those interested in a development objective, this is the central message of this analysis. For those with a conservation objective, the message is that the relinquishment rather than the retention of spurious control is the means to attain it.

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