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**Dialogue of theory and empirical evidence:
A weighted decision and tenurial niche approach
to reviewing the operation of natural resource
policy in rural southern Africa**

by Alois Mandondo



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and
Programme for Land and Agrarian Studies**

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Abstract

Considerable research has been conducted on community-based natural resource management in rural southern Africa. Many interesting insights have accumulated from the literature on the research issues of earlier generations. The challenge is to break new ground by unravelling insights relevant to later generations. This study identifies the issue of scale in complex natural resource management systems as one of the more important among emerging issues in the sector. The study develops a theoretical framework implying trade-offs between deciding for others, deciding with others and deciding for oneself in the operation of natural resource policy. This weighted decision framework is used to critically interrogate the human ecology of land and resource use across a variety of tenorial niches in rural southern Africa. The study argues that in arriving at decisions regarding the operation of natural resource policy, the emphasis needs to shift from *what* should be done, to *how* it should be done. The study suggests that the 'how it should be done' of policy operation is a calibration problem. The calibration problem concerns itself with reconciling diverse preferences through the medium of decisions made for others, with others and for oneself. It is concluded that negotiation provides the most appropriate basis for calibration since it reconciles the contradictions within and among decisions made for others, with others and for oneself.

1 Introduction

A strong tradition of research on community-based natural resources management (CBNRM) has taken hold and is evolving in rural southern Africa. A rich body of knowledge traversing different genres of research traditions across a variety of issues has emerged, including for instance: indigenous knowledge systems (Matowanyika 1991); decentralisation (Murombedzi 1992; Ntsebeza 2004); local governance (Conyers 1999; Ntsebeza 2003) management of commons resources (Murphree 1991; Rihoy 1995); co-management of resources (Nhira & Matose 1995; Kapungwe 2000; Kayambazinthu 2000); economic and equity dimensions of natural resource management (Brown 1993; Hachileka et al. 1998) gender dimensions of natural resource management (Flintan 2001; Nemarundwe 2003); and land reform (Kepe & Cousins 2002; Turner et al. 2002). The diversity of issues, theoretical perspectives, scales, sectors and resources covered defies classification into neat typologies. But for purposes of this study I employ a generic genres and generations typology¹ to characterise cycles of research attention on the subject across time-scale.

Drawing mainly from moral and ethical traditions, the bulk of the initial literature appears to have been dominated by what may be termed a first-generation research focus, the central thrust of which was to de-marginalise the marginalised managers of natural resources² (Berkes & Farvar 1989; Bromley & Cernea 1989; Murphree 1990, 1991; Rihoy 1995). Although this pioneering genre of research shows leanings towards the realm of advocacy it played a very important role in overcoming the hitherto existing barriers by popularising and arguing the case for CBNRM. With the benefit of hindsight, such leanings appear understandable – the sheer magnitude of the extent to which communities were marginalised in partaking of the benefits accruing from the management of nature required a strong, if non-compromising, argument for alternatives.³

The notion of CBNRM as a moral and ethical argument against the marginalisation of communities from the benefits of nature management still needs to be vigorously pursued. But, over time, need arose for analytical approaches that look beyond de-marginalisation. Hence the emergence of a second-generation research cycle focusing on interactive dimensions of decentralisations at the grassroots and other levels. Borrowing mainly from the pragmatic and realist traditions, the incipient second-generation cycle has begun to ask essential questions about the political economy of such decentralisations, such as: Who is the community? How is community defined? Where does the locus of power lie and with what effect? Who benefits most and how? Interactive aspects of decentralisation have begun to receive attention from a variety of perspectives, including on the themes of ethnicity and social exclusion (Madzudzo 2002), gender and inclusiveness (Nabane 1997; Flintan 2001), power dynamics across scale (Hasler 1993), benefit sharing and equity structures and the ways in which these become distorted (Shackleton & Campbell 2001).

A third-generation research focus also appears to be emerging. Based mainly on complex systems theoretical frameworks (Gunderson & Holling 2001; Ruitenbeek & Cartier 2001), some aspects of this emerging genre of research emphasise the transformational aspects of decentralisation, which they seek to meld with an adaptive function (Reason & Torbett 2001). Approaches that seek to harness the transformational aspects of decentralisation with a view to delivering livelihood and other impacts are more commonly classified under action research (Reason & Bradbury 2003).

From a complex systems perspective the question of scale provides another important third-generational research issue that is gaining increasing currency, and it has been tackled from a range of perspectives. For instance, IIRR (2000) see ‘going to scale’ as ‘bringing more benefits to more people more quickly, more equitably and more lastingly’, a perspective that sees scale assuming an extension and dissemination character. However, Lovell et al. (2003) tackle scale largely from a completely different perspective of fitting the sum of parts into the whole – from both biophysical and social perspectives. Murphree (2000), in his article on boundaries and borders, sees scale as nuanced reconciliation of the top-down with the bottom-up in the operation of natural resource governance. In other words, Murphree’s model of scale considers the peculiarities of what exactly

should be reconciled. This study extends on this model by considering the diversity of arenas in which trade-offs should be crafted in the operation of natural resource policy. The study achieves this by borrowing from social psychological traditions (for example, Reason & Heron 1995) to develop a theoretical template that entails reconciling diverse preferences that get variously asserted through decisions made for others, decisions made with others and decisions made for oneself. The study then employs the template to critically analyse the operation of natural resource policy across a wide range of contexts in southern Africa. The wide diversity of contexts is analytically acknowledged through the use of Fortmann and Nhira's (1992) formulation of tenurial niches. The concept of tenurial niches recognises the biophysical and institutional heterogeneity of woodlands in communal and other settings.

In the next section, I consider theoretical perspectives that locate decisions made for others with those made with others and for oneself within a complex systems setting. I argue that reconciling preferences through the media of the above decision-making frameworks is an important dimension in the operation of natural resource policy. The following two sections apply the template in an analysis of the operation of natural resource policy in southern Africa at a range of scales, including the global, regional, national and sub-national. The final section draws the report together by situating the theory and empirical experiences within the context of issues raised in the introduction.

2 Theoretical perspectives on scale and reconciling of decisions

Scale, level, extent, resolution

Scale now increasingly lies at the heart of natural resource policy and practice (Farrington & Boyd 1997; Toh-Kyeong et al. 1998; Murphree 2000; Lovell et al. 2003). More than ever before, many practitioners now factor scale into various facets of their natural resource management initiatives. The rise of scale in natural resource policy and practice is evidenced by an ever-expanding vocabulary of associated derivatives – going to scale, up-scaling, down-scaling, scaling out, scaling up and out, and so on. The expanse of the emerging vocabulary presumably provides salutary inspiration to those at the frontiers of this new and evolving genre of research and development – hopefully providing insights on how things can be done better. But paradoxically, this repertoire of terms appears to be as much about celebrating newfound insights as it is about the frustrations of understanding scale as an otherwise fuzzy and complex concept.

The fuzziness and complexity of scale notwithstanding, this study borrows heavily from the somewhat neat, if simplistic, definitions of scale and scale-related concepts presented in a review of scaling issues in the social sciences by Toh-Kyeong et al. (1998). The review article defines scale as the spatial, temporal, quantitative or analytical dimensions used by scientists to measure and study objects and processes. The authors argue that scaling issues encompass notions of both level and scale, since level refers to location along a dimension of scale, which may span from micro to macro in spatial terms, and from short to medium to long duration in temporal terms. In similar fashion all scales have *extent* and *resolution*, with the former referring to a calibrated dimension of scale. For instance, temporal extent may range from days to weeks, to years to decades and millennia, whilst spatial extent may span from millimetres to metres to kilometres. *Resolution* refers to fineness of measurement along a particular scale, ranging from fine to coarse, with *grain* being the finest unit of resolution.

Hierarchies and policy targeting

Scale assumes a more complex character in real life systems. This is not least because components of such systems get variously linked across levels of scale giving rise to hierarchies (Toh-Kyeong et al. 1998; Ruitenbeek & Cartier 2001). And in most real life hierarchies, including those in the natural resource management sector, components of lower levels of systems are combined into new units that have unitary functions and emergent properties – characteristics of larger units are not necessarily simple attributes of smaller units (Ruitenbeek & Cartier 2001). Such complex hierarchies are alternatively also referred to as panarchies, which consist of interconnected human and natural systems, whose components exhibit dynamic characteristics of adaptive cycles at a range of scales (Gunderson & Holling 2001; Ruitenbeek & Cartier 2001). In simple terms, the logic of adaptive cycles implicitly subsumes built-in failsafe⁴ mechanisms that, over time, enable nature to resolve the contradictions of the order and disorder⁵ inherent in it. Such logic therefore has a foreclosure effect – it implicitly makes a very strong case for the ‘do nothing’ scenario as a policy option in many natural resource management systems, most of which are panarchies. In more permissive perspective, it is a logic of restraint that recommends the deployment of active policy only in instances where it is best poised to be in the service of enhancing resilience and sustainability. In that sense, the essence of policy deployment in panarchies probably has less to do with its operation in sequel phases than with the substance of its intent and the precision of its targeting in preparatory stages. Well-targeted⁶ policies presumably deliver better impact in terms of resilience or sustainability because they stand a better chance of ‘pushing the right buttons’ (Ruitenbeek & Cartier 2001). More often than not, policy gets deployed in panarchies with reckless abandon, with little or no regard to its consequence on resilience and sustainability.

More realistically, improving resilience and sustainability cannot be guaranteed with certainty, regardless of whether policy is either well-targeted or sparingly or profusely deployed. This is not least because policy subsumes action, and thus constitutes an important driver of change (Ludwig et al. 1997; Trosper 1998). Policy therefore entails change and any change engenders the emergence of new transitions (McGrath & Moeliono 2004). And because the whole seldom accords with the sum of its parts in terms of system behaviour in panarchies, emergent transitions may have very little to do with the incipient variables for which policy change was initially targeted. Thus, the deployment of policy in natural resource management arenas often results in unintended consequences or unforeseen effects. These effects often hit back with a vengeance and are hence also alternatively referred to as revenge or ‘Ouroboros’ effects (Swenson 2002). Revenge effects of policy action are fittingly depicted by the Ouroboros symbol of a serpent devouring its own tail (Swenson 2002).

Panarchies and the calibration of policy decisions

The policy arena is essentially a decision-making arena, and reconciling multiple interests through policy decisions in complex systems settings is easier said than done. This is largely because, as centres of consciousness within the cosmos, human beings are both autonomous and linked in a generative web of dynamic communion with other humans and the rest of the world. In that sense, choices arrived at within such arenas will always encompass elements of deciding for others (*hierarchy*), deciding with others (*collaboration*) and deciding for oneself (*autonomy*) (Reason & Heron 1995). A profound tension exists between the need for hierarchy, collaboration and autonomy in societal decision-making processes. The contours of such tension are further confounded by the multiple and dynamic nature of actors in everyday natural resource management settings. Thus, decisions based on the logic of hierarchy or collaboration are usually only as secure and relevant as the extent to which those aspiring for autonomy respect and observe them, and vice versa (Frost & Mandondo 1999). Moreover, because of the fluidity of their interests and priorities, people’s affinities to decisions made by others, with others and for oneself often switch in ways that are at best complex and unpredictable. The question of co-ordinating policy decisions across scale therefore poses a real challenge to those aspiring to design policies for deployment in panarchies. We do not as yet have an instructive toolkit on how the above functions can be traded off, although sage advice emphasises balance. For instance, Reason and Heron (1995) offer the following perceptive insights with regards to balance of decision-making scales in complex systems policy arenas:

- authentic (parsimonious) *hierarchy* provides appropriate direction by those with greater vision, skill and experience
- *collaboration* roots the individual within a community of peers, offering basic support and the creative corrective feedback of other views and possibilities
- *autonomy* expresses the self-creating and self-transfiguring potential of the person.

The above aphorisms make the case for striking a balance, but they fail to define how such balance can be achieved. But *calibrating* policy balance in panarchies is no mean feat. Privileging top-down decisions of hierarchy through the bestowment of discretionary oversight in a few upper-level actors presumably provides a handy shortcut to the red tape associated with consultative decision-making frameworks (Ribot 2004). But if expediency and less red tape are the virtues of top-down decisions of hierarchy, then arbitrariness and opacity may be their vices, while the converse holds true for collaboration. Meanwhile, the notion of autonomy should not necessarily be seen as ‘splendid isolation’ since the imperatives of hierarchy also filter down and impinge on this level, and vice versa. Equally, the imperatives of collaboration may also filter into the operation of regimes of hierarchy, and vice versa. In fact, in its various shades, collaboration provides the mechanism for the reconciliation of diverse interests and preferences within and across various

levels of social and political organisation. But intuitively, each decision-making framework has zones of its own effectiveness, with the calibration dilemma being how to strike some measure of good fit.

The wide repertoire of terms associated with concept of scale is probably a revealing admission of the lack of good fit that arises from the usually less than meticulous calibration or targeting of natural resource policy. For instance, *scaling down* implicitly reveals an over-calibration problem, and it invokes the image of a dwarf's feet being fitted into a giant's shoes. Equally, the notion of *scaling up* appears to imply an under-targeting problem, and conjures the image of a dwarf's shoes being forcibly extended to fit a giant's feet. Both sides of the above metaphor portray an enormous measure of the futility that underlies why natural resource management initiatives that are out of phase with scale often yield less than anticipated impact. Expanding or downsizing the geographies of fit and impact in panarchies is seldom successful, not least because the whole is never equal to the sum of its parts in terms of system behaviour in such settings (Farrington & Boyd 1997). Neither do the parts become uniform repositories of the collective behaviour of the whole.

Variations in system behaviour at a range of scales thus constrain the extent to which the impacts of policy can be anticipated. And policies that are out of phase with scale predispose themselves and the natural and human systems in which they operate to even greater risk from the vagaries of unintended effects. Thus, the unintended effects of policies, like a serpent devouring its own tail, often bite back with a vengeance, resulting in policy failure. Such effects may also generate perverse incentives in the human ecology of resource use and management in arenas in which the policies operate, resulting in an array of pathologies considered in the next sub-section. The pervasiveness of bite-backs and perverse incentives in the operation of natural resource policy requires that vantage points be incorporated into the architecture and design of such policy. Such vantage points should ideally be equipped with anticipatory toolkits⁷ that help identify and resolve unintended effects in the operation of natural resource policy. In other words, policies should be deployed with circumspection since they have inherent propensities to generate unintended effects.

Prudence in the operation of natural resource policy is related to the precautionary principle (Ruitenbeek 1997), which argues for caution before things are done, or reversal if things are done and are not going according to plan. Some of the mechanisms through which policy can be reversed include constant adjustments through review, or complete overhauls through revocation (Coglianese & Nicolaidis 1996).⁸ The essence of these mechanisms in the operation of natural resource policy in southern Africa is the ambiguity of defining the appropriate scale of actors who should wield and exercise powers of policy revocation and reversal. More often than not, such powers reside in central nodes of authority whose authoritative reach falls way short of their implementational grasp (Murphree 1990). Sadly, actors manning such loci of authority generally appear averse to the alteration of such a *status quo* (Murphree 1990; Murombedzi 1992). And this obviously falls far short of according with best practice in natural resource management. In accordance with the principle of subsidiarity, best practice presumably occurs when the upper-level actors do not usurp the resourcefulness⁹ of ordinary people (Schilling 1995), for example, through over-centralisation. In line with Catholic social teaching, the moral is about protecting basic justice – and basic justice is protected when powers are placed as close to the citizens as possible, with upper-level actors undertaking only those roles that are beyond the scope of lower-level actors (Schilling 1995).

Generic pathologies of ill-phased calibration and targeting

The whole seldom accords with the sum of its parts in terms of policy impact in natural resource management arenas because decision making or preference formulation frameworks are either too domineering, or fail to build synergies with each other, or encroach into zones of each other's effectiveness. In practice, calibration permits autonomy in certain contexts, dictates collaboration in others, and sometimes, larger scales require hierarchy. I posit the following propositions about over-strays:

- The encroachment of autonomy into zones of collaboration results in institutional disjunction commonly referred to as the ‘tragedy of the commons’ (Hardin 1968). But, over time, the enormity of the tragedy presumably triggers the failsafe response of collective action in which institutions evolve to reconcile self-interest against the common good (see Berkes & Farvar 1989; Ostrom 1990).
- The encroachment of hierarchy into zones of collaboration causes the erosion or breakdown of collaboration institutions (see Campbell et al. 2001), or it may hit back through the Ouroboros effect. This is because collaborators often ‘vote with their feet’¹⁰ against the maligning hierarchy regimes, resulting in policy failure.
- The encroachment of collaboration into zones of autonomy often undermines the self-creating and self-transfiguring potential of the individual, and may thus curtail industry and enterprise.

In similar fashion, I also suggest the following propositions about excesses, which impinge on the structuring of power and the cost-effectiveness of decision making:

- Excessive hierarchy results in shades of despotism, which can either be centralised or decentralised (Mamdani 1996). Despotism may also be re-centralised in sub-national bodies that enjoy minor legal and administrative competence (Murombedzi 1992).
- Excessive collaboration often leads to stasis and gridlock in decision-making (Coglianese 2000).¹¹
- Excessive autonomy is likely to engender social chaos not far from a Hobbesian state of nature in which life is ‘short, brutish and nasty’. But such a state of nature presumably, in failsafe logic, provides the impetus for the evolution of institutions towards the common good.

Lastly, the following can be said about the ‘splendid isolation’ of exclusive arenas of policy operation:

- Exclusive autonomy constitutes a ‘splendid isolation’ in which enterprise and industry potentially thrive, but which often entrenches privilege. Over time, such privilege is only as secure as the extent to which there is equity in the broader political economy in which such splendid isolations exist.
- Exclusive collaboration probably exists only in the minds of those who want to shield ‘primitive’ tribal communities from the disruptive modernising encounter. Malinowski’s (1922, 1944) ‘noble savages in harmony with nature’ aptly portrays this thinking. Elsewhere, the culture and religions of such people are lauded as being ‘profoundly ecological’ (Schoffeleers 1978), whilst the ecosystems in which such people live are portrayed as being ‘ritually directed’ (Rappaport 1967). Such images of tribal organisation are probably only as real as the extent to which distance proves to be a barrier against the assimilation of such communities into broader national and global communities.
- Exclusive hierarchy represents the ‘splendid isolation’ of protected areas. In practice, the isolation of protected areas is only as splendid as the degree to which hierarchy laws that enforce such isolation provide a bulwark against tenurial and use pressure from surrounding peasant communities (Fortmann & Nhira 1992).

In this section I have reviewed some theoretical perspectives relating to the concept of scale in the operation of natural resource policy. In the next section, I apply the above framework to characterise critically the human ecology of land and resource use in southern Africa. I lay special emphasis on land and resources within a human ecological context of their use and decision-making. Thus, the report also encompasses aspects of land use and resource use, and extends to land-use and resource-use decision-making.

3 Implications of scale in the operation of global and regional natural resource policy in southern Africa

As argued earlier, collaboration often provides the *invisible wand*¹² that reconciles the collective interests of concern for others with the *invisible hand* of narrow preferences of concern for self. This section considers issues relating to the reconciliation of preferences in the operation of global and regional natural resource policies from a southern African perspective.

The operation of global natural resource policies in southern Africa

At the broadest scale of resolution, collaboration among national hierarchy regimes has created institutions that integrate shared international values and preferences among communities of nations. Such institutions find effect in global conventions and protocols. The Convention on Biological Diversity and the Convention to Combat Desertification are among those most pertinent for the southern Africa scenario (Chipeta, pers. comm.¹³). This is because the largely arid to semi-arid climatic conditions of the region are associated with an array of biological resources in a fragile environment in which the threat of desertification appears to loom large.

But international conventions and protocols are only as effective as the degree to which they articulate executable programmes of action that translate the shared visions into development action. Such programmes are seldom executed – either because the will does not exist, or where it does exist, because there are no resources for implementation. Thus, most protocols and conventions largely remain mere declarations of intent. The conventions on biological diversity and on desertification are often more cynically referred to as the ‘poor man’s conventions’.¹⁴ This signifies the limited extent to which such conventions are implemented in southern Africa, where pervasive poverty constrains the extent to which governments can juggle limited fiscal resources for development. Hence, such conventions are usually implemented through localised projects supported by benevolent donors in the North, rather than through thorough-going national programmes. The huge range of natural resource management initiatives that derived from international conventions in rural southern Africa is an acknowledgement of the impact that such conventions have had within the region.

But, paradoxically, the strength of the northern dollar often provides the lever through which the deep green ethos of a global (Western) environmental discourse and scientific culture encroaches into the formation of natural resource policy in rural southern Africa. Global (Western) hierarchy preferences articulated through international conventions often use the terms and conditions of these self-same conventions to argue the case for the perpetuation of exclusive collaboration in remote enclaves of southern Africa. For instance, biological diversity is invoked to justify the insulation of primordial forms of tribal order – the assumed repositories of an intrinsic ecological harmony – from the ‘disruptive’ thrust of national integration. The widely publicised case of the San of Botswana, whose cause for ‘splendid isolation’ is being forcefully championed by the London-based Survival International, probably provides the most telling example of the encroachment of global hierarchical values and preferences. Despite the best of its intentions, such international cultural and environmental advocacy cannot completely escape the stigma of eco-imperialism, to which it becomes but a subtle manifestation, particularly to the more radical and abrasive fringe of Africanist scholarship.¹⁵ Only time will tell, but the efficacy of such advocacy is likely to depend on the degree to which the global hierarchy reconciles itself with Botswana’s own national preferences of autonomy. This is not to imply, though, that all forms of donor support finding their way to southern Africa through the conduits of international conventions are malicious. As argued earlier, they do make a difference – having something done as opposed to nothing being done.

The operation of regional natural resource policies in southern Africa

At a slightly lower scale of resolution, regional policies have evolved as institutional mechanisms for nations to address the trans-boundary and spill-over effects of resource use and management. Such policies have been most prominent in the water, fisheries and wildlife sectors. This is because the fugitive properties of these resources defy the confines of national territory or administrative units. For instance, regional co-operation among countries of the Zambezi Basin has given rise to the Zambezi River Authority. Equally, The University of the Witwatersrand's Centre for Water in the Environment hosts the Mozambique-South Africa Rivers Research Programme as a bilateral initiative to reconcile the spill-over impacts of rivers that originate in South Africa and traverse the Kruger National Park into Mozambique. The current cohort of the CASS-PLAAS research programme¹⁶ also features researchers looking at similar issues of scale across a variety of settings. Kokwe and Kokwe's (in draft) work centres on a Zambian headwater wetland (*dambo*) in which human activities in adjacent uplands renders the *dambo* prone to seasonal drying. Malasha (in draft) and Njaya (in draft) consider related issues from the perspective of artisanal fishery in the inland lake settings of Lakes Kariba (between Zimbabwe and Zambia), and Chiuta (between Malawi and Mozambique), respectively. Meanwhile, Chikozho (in draft) considers prospects for reforms in the water management sector by examining the case of a major river system in South Africa.

All the above initiatives envisage reconciling spill-over impacts through policy intervention. The policy of reconciling spill-over impacts arising from the lateral flow of water resources ideally rests on five conceptual response pillars: (1) modifying the incentives for land users whose land-use practices affect the lateral flows; (2) mitigating the effects of lateral flows by enhancing filters¹⁷ in the landscape; (3) shielding off external stakeholders from the effects of the lateral flows; (4) compensating those who are impacted negatively; or (5) doing nothing if the potential benefit is outweighed by the transaction costs of the response (excerpted verbatim from Swallow et al. 2001). As argued earlier, while these words of wisdom are perceptive, they are non-instructive inasmuch as they identify *what* should be done without defining *who* should do it. More instructive insights should ideally provide pointers on whether each and every one of the above pillars of policy action is best secured through decisions made for others, or those made with others, or those made for oneself, or through trade-offs – that also need to be clearly identified. Without being overly prescriptive, the work of Njaya and Malasha indicates that co-management in artisanal fishing in both lakes was a sequel response to preceding scenarios in which resource-use relations were essentially open access. Extreme open access denotes overdoses of excessive autonomy in which everyone uses resources as they please. In line with the earlier logic of the 'short life of nasty and brutish effects', these systems evolved from open access into co-management regimes, implying that excessive autonomy ultimately proved unsustainable.¹⁸ The notion of evolution here encompasses the idea of necessity or demand as a key driver of change.

Trans-frontier parks are another emergent phenomenon of natural resource policy in southern Africa. Such parks use wildlife as an entry point to consolidating people, their cultures and their environments and economies beyond the confines of national boundaries. The centrality of wildlife in trans-frontier wildlife management ventures basically answers to an ecology theorem of biodiversity conservation that views expanded habitat as being synonymous with greater diversity, with the later being seen as good (a highly value-laden term).¹⁹ Other aspects of the goodness of wildlife diversity presumably relate to its higher economic value in comparison with other natural resources, and hence its location at the centre of grandiose regional integration agendas. But the extent to which such plans foster genuine integration depends on the degree to which their equity structures prove to be a bond for cementing diverse interests across a range of scales. More often than not, such structures get distorted through bureaucratic rent capture (Murombedzi 1992) and elite capture (Oyono 2004), and these phenomena can be opportunistic or systemic. Systemic rent-capture by bureaucrats signifies 'over-targeting'. It often manifests itself through legal regimes of hierarchy that bestow discretionary oversight of natural resource policy on levels that are remote

from the citizens affected (Murombedzi 1992), and epitomises how differential power results in differential appropriations.

Well-meaning legal regimes of hierarchy can also be manipulated to entrench differential appropriation, or elite capture in its more systemic forms. This potentially plays out through indigenisation and affirmative action policies that present powerful networks of elite actors with the tools with which to appropriate rents and benefits at the expense of the ordinary citizenry. In the case of Zimbabwe, the heat and opacity of radical land reform has provided the mask behind which the narrow interests of appropriative entrepreneurs play out against the interests of the poor, even in trans-frontier zones (Chaumba et al. 2003). And because of its enormous potential in terms of ecotourism and the safari hunting industries, the much-vaunted Great Limpopo Trans-Frontier Park cannot necessarily be considered ascetic to the speculative gaze of nefarious investors, some of whom may exploit the good intentions of affirmative action to entrench their own interests. The Great Limpopo Trans-frontier Park brings together South Africa, Mozambique and Zimbabwe in the management of wildlife resources occurring in the Kruger National Park, the Limpopo National Park and the Gonarezhou National Park respectively. Ironically, some segments of the rural poor face forcible displacement from their homelands to make way for the implementation of the grandiose plan. In that sense, such communities stand to suffer a 'double expropriation'²⁰ that combines the shock of initial displacement from land, with a lingering affliction of impaired access to benefits accruing from nature management. The pronouncement by the Zimbabwean government that safari hunting leases in such areas are tenable only over 25-year periods²¹ presumably provides review and revoke (sunset) provisions that will potentially foster equity along the temporal scale, assuming it effectively allows new players to come in. The next section employs the weighted decision-making framework to characterise the operation of natural resource policy at much lower levels of resolution, including the national and sub-national.

4 A tenurial niche approach to the operation of national resource management polices of southern Africa

Fortmann and Nhira's (1992) tenurial niche formulation combines a biophysical dimension of spatial variations in resource status with an institutional dimension of what is feasible in terms of management within each niche. This section employs the same formulation to analyse the interaction of policy decisions across the following: resources in protected areas; resources in communal areas; and resources on private land.

Resources in protected areas: Splendid isolations of hierarchy preferences?

Protected areas constitute a central feature of the human ecology of southern Africa with, on average, no less than 10% of the total landmasses of all countries within the region having been set aside as national parks and protected forests (Murphree & Cumming 1991). Traditionally, the main form of management in protected areas is exclusion management that is enforced by the various countries' national forestry and wildlife agencies. But the hierarchy laws that enforce such exclusions do not render the protected areas entirely free of tenurial and use pressure from other actors. For instance, most protected areas are surrounded by peasant communities, or share boundaries with them. Peasant communities in places adjacent to protected areas often settle on the protected lands or use resources from them, despite the overbearing effect of the national hierarchy laws. States in southern Africa invariably lack the resources and capacity to enforce such laws. Peasant communities use resources in protected areas for a variety of reasons, including the relative abundance and nearness of resources within the protected areas, and to stake historical and ancestral claims to the protected areas (Vermeulen 1994). Autonomy preference regimes also insert themselves into such zones, often through the intervening agency of scheming politicians, who reportedly incite peasants to occupy the land, but move in to assert their own appropriative interests when peasants 'liberate' such lands (see Catholic Commission for Peace and Justice 1992; Nhira et al. 1998).²² Thus, even if national hierarchy laws privilege national agency authorities over the benefits of nature, in practice such structurally differentiated power does not remain uncontested as other actors also variously assert their own individual or collective appropriative interests.

Over time, regimes of exclusion have, by and large, proved untenable. Thus collaboration has emerged – in its various shades – as the mechanism of choice for reconciling the contradictions between decisions made for others with those made with others and for oneself in protected landscapes of southern Africa. Spatial variations in resource endowment across the region determine the nature of resources that have entered the co-management arena. In Malawi, for instance, village natural resource management committees provide the vehicle through which peasant communities surrounding state forests co-manage the forests in conjunction with the Forestry Department (Kayambazinthu 2000). In Zimbabwe's Mafungautsi State Forest Reserve, variously constituted resource management committees provide the basis on which the Forestry Commission manages the forest in conjunction with local peasant communities (Mapedza & Mandondo 2002). In the case of Zambia, game management areas – constituted in communal areas adjacent to national parks – have been the main vehicles through which the Department of National Parks and Wildlife Services has incorporated peasant communities in the management of wildlife resources. Mumbwa Game Management Area, adjacent to the Kafue National Park, is one of the many initiatives in which Zambia's peasant communities have variously benefited from shared management of wildlife resources under the Administrative Design for Game Management Areas Programme (Admade) (Kapungwe 2000). The collaborative management lingo commonly refers to areas where most of the above peasant communities lie adjacent to protected areas as buffer zones (see, for example, Bromley 1994; Salafsky 1994).

It is undeniable that some co-management initiatives have had significant livelihood and other impacts in areas in which they operate. But for a variety of reasons, some initiatives fail dismally in

delivering the magnitude of impact expected, particularly along its more tangible livelihood dimensions. This is because, by default or design, many such initiatives often operate out of phase with the salience²³ of resources on which peasant livelihoods really hinge. For instance, Zimbabwe's Mafungautsi collaborative management case relies mainly on a limited set of non-timber forest products, such as broom grass, as entry points to introducing the shared management regimes. But valuation studies conducted in Mafungautsi and other protected forests appear to suggest that peasant communities adjacent to such forests value land and grazing resources in the forests more than the minor forest products the co-management initiatives tend to focus on (Gwaai Working Group 1997). The hidden logic is that the extraction of such minor forest products impacts less on the ecological integrity of the protected areas (Mapedza & Mandondo 2002). In that sense, co-management arrangements cannot easily escape the stigma of buffer institutions that protect resources from undesirable regimes of use and so on – such arrangements are only as effective as co-equal partnerships prove to be relevant to the livelihoods of the target communities.²⁴

The buffering effect of co-management arrangements is also likely to depend on the extent to which they meet the assumptions of co-equal partnerships in which all parties have equal power at the negotiating table (Matzke 1993). Sadly, existing power relations are skewed, as parties that represent majority interests in most co-management initiatives seldom enjoy a co-equal partnership status. The overweening dominance of national wildlife and forestry agencies in co-management arenas has been reported across a variety of cases in southern Africa, including in the operation of Zambia's game management areas (Kapungwe 2000), in Malawi's village natural resource management committees (Kayambazinthu 2000) and Zimbabwe's resource management committees (Mandondo & Mapedza 2003). Such dominance invariably serves to undermine the commitment of the ordinary people for whom such bodies ostensibly provide conduits for a collective voice. Both of the above problems relating to the operation of policy in protected areas signify failure to reconcile hierarchy preferences with other intervening preferences, as is evidenced by continued intrusions into the protected areas.

When placed within the context of broader national political economies of imbalances in the distribution of land – such as in Namibia, South Africa and Zimbabwe – co-management arrangements may carry the additional stigma of delaying tactics and diversionary pursuits that potentially divert attention away from fundamentally more important empowerment pathways, including land reform. Such a verdict appears even more pertinent when the net and per capita benefits of such initiatives are factored into the comparative accounts of the broader rural economy that is largely remittance-driven (Campbell et al. 2002), and in which livestock presents the main medium of household accumulation (Murombedzi 2001). To radical Africanist scholarship, land reform therefore presents the main pathway for re-uniting hitherto marginalised indigenous communities with their agrarian and environmental heritage. The more abrasive inclinations of such scholarship may view co-management initiatives as fire-fighting measures designed to secure environmental values by extinguishing the backlash of peasant land and resource re-appropriation claims.²⁵ More realistically, the ease with which such a backlash can be extinguished will depend on the extent to which national hierarchy preferences discount environmental values against the livelihood imperatives of the buffer zone communities, with the balance of emergent outcomes still standing contestable by a variety of other actors.

For example, coarse-grain radical land reform in Zimbabwe has episodically had the effect of discounting environmental values of protected areas against the livelihood imperatives of peasant communities in surrounding buffer zones. Chaumba et al. (2003) recorded tacit official approval of land grabs in the Gonarezhou National Park of Zimbabwe's south-east Lowveld. But the transience of such outcomes is signified by the immediacy with which national agency custodians of such resources make haste to reclaim lost territory,²⁶ usually as soon as political temperatures start cooling down (Chaumba et al. 2003). In contrast, the South African experience appears to reflect a more cautious and finer-grained character, in which indigenous communities are united with their

environmental and agrarian heritage through restitutions that are mediated through formal courts of law (Steenkemp & Urh 2000). One such successful claim has attempted a delicate balance between environmental needs and livelihood imperatives by an *ex-situ* extension of restitution privileges of a 25 000ha portion of the Kruger National Park to a displaced segment of the South African peasantry, the Makuleke community (Steenkemp & Urh 2000). In this case the community benefits *ex-situ* through revenues accruing from ecotourism and wildlife-based leases of such land. That is, they are not literally re-united with their environmental heritage in the physical sense of re-occupation of lost territory, but in a more symbolic sense as owners and recipients of the accruing environmental rents. This is not to suggest that relations in South African buffer zones are necessarily always more egalitarian or free from rent capture by elite networks. To the contrary, Cocks (2000) describes how urban-based entrepreneurs have secured privileged access to scrub-biome resources, including medicinal plants, in South Africa's Great Fish River Reserve complex. This happens within a setting in which residents' associations that are inclined to the ruling party of that country have emerged as the *de facto* local custodians and managers of the resource at the expense of traditional and other institutions.

Protected areas could also be affected by the spectre of land reform and affirmative action in Namibia, where there are also glaring imbalances in the distribution of land. Such a scenario probably applies less to Zambia and Mozambique because of their relatively high land resource/human population density ratios, and Malawi where the reverse sets a limit to which fulsome land redistribution is feasible. In the following sub-section I focus on balancing preferences within the context of the human ecology of Southern Africa's communal lands.

Resources in communal lands

In terms of magnitude of human populations, communal areas of southern Africa are by far the most important, with such lands being home to the majority of the people in almost all countries within the region. For instance, close to 70% of the people in countries like Zimbabwe and Namibia live in communal areas (Jones & Murphree 2001). Communal land populations are, nevertheless, significantly lower in South Africa because of its higher degree of urbanisation. But paradoxically, despite their dominance in terms of human numbers, communal areas are the least economically developed, in per capita terms. The underdeveloped state of southern Africa's communal areas is rooted in issues of governance, and mainly arises from a political history of colonial neglect and the privileging of racially-based preferences.

Colonial neglect of African reserves was largely the result of a fiscal apartheid in public sector capital investment policies (Wekwete 1990). The bulk of the social and physical infrastructure was located in European areas to support a fledging capitalist economy, which was further supported with much official subsidy and preferential marketing policies (Murphree & Cumming 1991; McGregor 1991). Under-investment in the African reserves reinforced the under-development of the peasant sector, which remained a source of cheap labour for the emerging capitalist economy.²⁷ Over time the peasant sector was also weakened by the downstream effects of a communal tenure system under conditions of high population growth – including lack of collateral, subdivision into smaller and smaller holdings, low productivity and declining surpluses, and very low propensities to save and invest (Phimister 1988; McGregor 1991; Dore 1993). Such neglect left a deeper imprint in those countries where the colonial experience lingered longer – like Zimbabwe, Namibia and South Africa (Mamdani 1996).

The distinction between European citizens and African subjects thus provided the power divide along which race-based privileges were entrenched through the colonial experience (Mamdani 1996). European citizens enjoyed the benefits of direct rule, including a system guaranteeing free enterprise, recourse to justice, electoral privileges and a system of governance based on the separation of powers. Whilst Europeans enjoyed the privileges of a citizen status, African subjects were consigned to the realm of the customary. The distinguishing features of the customary

included submission to regimes of tribal authority that operated under the tight administrative oversight of European native commissioners, under a system of indirect rule. Such regimes of tribal authority are often characterised as having been ‘clenched fists’, a formulation that portrays the extent to which they combined the arbitrariness of fused legislative, executive and judiciary roles within the persons of hereditarily appointed tribal chiefs and headmen.²⁸ Such an administrative clenched fist is alternatively also referred to as a ‘decentralised despotism’ (Mamdani 1996). In the area of the environment in southern Africa, decentralised despotism has manifested itself through hierarchy laws that arrogate land and nature to the state whilst denying or restricting customary rights (Scoones & Matose 1993; Colchester 2004).²⁹ Customary leaders were functionaries of colonial administrations who helped enforce these overdoses of hierarchy preferences in a system that was more akin to a decentralised environmental despotism (Scoones & Matose 1993).

The enormity of the above disparities has seen deracialisation and democratisation agendas carry emancipatory appeal in post-independence southern Africa. For instance, in the area of the environment, such an agenda has sought to deracialise access to resources by extending the benefits of resource conservation to people living directly with the resources. The wildlife sector provided pioneering experiences, and will be considered at greater length than other sectors in this article. This is not least because the experiences more concretely signify how the operation of regimes of hierarchy has, over time, evolved to incorporate alternate preferences of autonomy and collaboration of the hitherto marginalised peasant sector.

The origins of monopolies of hierarchy regimes in the wildlife management sector coincide with the incipient phases of the colonial period. For instance, the notion of the ‘King’s game’ earlier defined the wildlife as (British) empire resources, under the tutelary custodianship of tributary administrations in the colonies (Murombedzi 1992). Tutelary custodianship transformed into state custodianship as empire colon administrations evolved into the nation states of southern Africa. Initially, mining, and subsequently agriculture, provided the basis for fledging capitalist economies within these young nation states. Subsequently, diversification policies sought to strengthen such economies by casting them across a range of other sectors, including wildlife.

In Zimbabwe and Namibia, the entry of wildlife into the economy was enabled by amendments to existing wildlife laws of hierarchy in the 1960s and 1970s (Jones & Murphree 2001). Such amendments incorporated provisions that extended the benefits of wildlife custodianship to European owners of private land, resulting in a boom in both wildlife populations and related enterprise (Murphree & Cumming 1991). But such laws remained largely silent about communal areas, thus discriminating against them, excluding them from being able to partake in the benefits of the boom. The post-independence governments of southern Africa sought to deracialise colonial wildlife policies by extending the benefits of wildlife use to the peasantry, particularly in communal areas lying close to protected areas. But the peculiar nature of the communal areas, particularly in terms of low land resource/human population ratios, could only permit privileging through the conferment of collective custodianship titles. Thus, the operation of wildlife policy in communal areas is weighted towards the pole of deciding with others, although decisions made for others and for oneself also do filter in and impinge on how decisions are made.

Deracialisation agendas within the areas of the environment continue to be pursued with firm resolve in southern Africa, but to what extent is such an agenda delivering along the democratisation dimension? The democratising effect of affirmative natural resource policies depends on a variety of factors including the locus and nature of units in which the privileges of collective custodianship are retired. It also depends on the manner and extent to which intervening preferences of hierarchy and autonomy get reconciled against collaboration preferences within the collectives concerned.

The locus of collective custodianship over wildlife resources in the communal areas of southern Africa is a topical issue in the literature on democratisation of the sector. In general, the bestowment

of such privileges on district structures has served to enhance bureaucratic rent capture (Murombedzi 1992). Bureaucratic rent capture usually manifests itself through equity and benefit distribution structures that favour the districts at the expense of ordinary citizens (Shackleton & Campbell 2001). For instance, in Zambia, where agency bureaucrats still wield more power than peasant representatives in the operation of game management areas (GMAs), the proportion of benefits that accrue to communities in economic terms is often as low as 35% (Hachileka et al. 1998). A similar scenario occurs in Malawi where agency bureaucrats enjoy greater discretionary power in the operation of village natural resource management committees (VNRMCs) – for instance, in the Chimaliro area, the community reportedly gets only 30% of the accruing benefits (Kayambazinthu 2000). In Zimbabwe, collective custodianship over wildlife resources in communal areas is termed ‘appropriate authority’, and it is held by the rural district councils in which the communities in wildlife-rich areas reside. In general, wildlife revenue accruing to peasants from the operation of Zimbabwe’s Campfire programme frequently comes too little or too late, or both.³⁰ Authorities responsible for wildlife resources in the country have sought to address such inequalities by proclaiming a guideline that require at least 50% of the accruing revenues to be retained by communities, but the proclamation is usually quietly ignored. The same authorities have also endeavoured to enforce better equity in the operation of Campfire by threatening to revoke appropriate authority status from offending districts, but also with little effect (Jones & Murphree 2001). Better equity structures have generally emerged in countries like Namibia and Botswana, where all the revenue accrues to bodies that are constituted along corporate lines at the community level (Jones & Mosimane 2000; Rozeinmeijer & van de Jagt 2000).

The way in which communities get involved in wildlife management impinges on aspects of membership. Wildlife and other natural resource management schemes operating in communal areas of Southern Africa reflect various models of membership. Zimbabwe’s Campfire scheme defines communities on the basis of political administrative units in which people living in wildlife-rich areas reside – that model of membership equates with *membership by decree*. The extent to which the model applies depends on how it resolves the fluidity of boundaries and resource-use relations typical of communal systems (Lynam et al. 1996). Decrees usually generate irrelevant outcomes although they carry the promise of shorter red tape. Having learnt from the Zimbabwean experience, Namibia’s conservancy programme was based on a model that emphasises *self-identification and coalescence of interest* through the medium of community deliberation. The longer red tape associated with the travails of citizen inclusion in such deliberative decision-making frameworks makes progress painfully slow (Jones 2001). South Africa’s Fish River case appears to entail *membership by civic agency*, in which some issue of concern spurred residents into a partnership of civic association and civic advocacy (Cocks 2000).

Another distinguishing feature of Malawi’s VNRMCs and Zambia’s GMAs is the dominance of customary leaders, particularly chiefs. Some NGOs have used customary leaders as the initial core around which they built community natural resource management bodies, as reported by Chahweta and Mandondo (in draft) in a woodland management case in Zimbabwe’s north-eastern district of Mutoko. Building on existing customary forms carries notions of continuity and is more akin to *membership by cultural affiliation*, but the customary leaders often turn out to be the conduits along which elite capture of benefits is entrenched in the communal areas of southern Africa, as reported in a micro-credit scheme from south-central Zimbabwe (Mutamba et al. 2000). The nefarious activities often signify the opacity associated with the bestowment of broad discretionary powers in a few individuals. And in their quest for enhancing transparency, representation and accountability, NGOs often sponsor the crafting of new institutions that incorporate marginalised groups, including women and the youth. This appears to accord with *membership deriving from neo-liberal ideals*. In practice, these categories are not mutually exclusive, but each category has its upsides and downsides, with the challenge being to strike a balance. For instance, Jones (2002) reports an internal review process in conservancies of Namibia’s Caprivi region in which communities sought

to overcome the logjam of customary resistance by variously co-opting the leaders onto conservancy committees. In that sense, the move extinguished autonomy preferences for common good interests. But conversely, in Zambia there are moves towards reducing the wide discretionary oversight enjoyed by chiefs in the operation of GMAs. Both examples depict the pendulum effects that often occur when preferences are poorly reconciled. The foregoing paragraphs of this subsection have attempted a critical characterisation of policy operation at the inter-communal area level. The next paragraph attempts a much finer-grained analysis of the use of non-mobile resources within an intra-communal area scenario

Almost all land laws in southern Africa define communal lands as state lands, and variously delegate the administration of such lands to local governments and state agencies. Most peasant communities enjoy usufruct rights to such land and its resources. In practice, these overarching frameworks of central rights structures exist side by side with informal customary rights regimes that are usually presided over by local traditional leaders, including chiefs, headmen and village heads. At the communal interface the two rights structures work out into a tenure system that usually accords peasants *de facto* traditional freehold rights to arable and residential plots, beyond which there are woodland and other commons. Resources are usually accessed from the commons under various forms of collective and non-collective relations. Such a tenure system impinges on the loci of decision-making in natural resource management policy. Decisions pertaining to the *de facto* private arable and residential plots are more in tune with preferences of autonomy, although, as earlier argued, the imperatives of hierarchy and collaboration also filter down and impinge on these levels. A transition from private to communal entitlements presumably denotes an institutional point of inflexion at which preferences of autonomy give way to imperatives of collaboration. This point of inflexion often marks the divide along which donor-funded projects intervene on communal settings. Usually those inclined towards the pole of autonomy envision promoting individual industry and enterprise within the *de facto* household entitlements, whilst those inclined towards the pole of collaboration envisage mitigating the stray of autonomy preferences into the commons.

Resources on private land: A not so splendid isolation?

As mentioned earlier, private lands were created through colonial land alienation policies that entailed the displacement of African tribes to make way for an emerging capitalist economy. Prospects for economic opportunity had hitherto drawn many a European to southern Africa. Declining prospects in the mining sector enhanced colonial land alienation through diversification policies that saw agriculture as another avenue to economic opportunity. Agricultural diversification combined individual industry and enterprise with the support of expanded official subsidy to help give rise to the region's agro-industrial complexes, particularly in South Africa and Zimbabwe. Over time, diversification expanded to other areas including forestry and fisheries. The denial of such subsidy to the black peasantry in low agricultural potential areas of the region was one manifestation of discriminatory policies. At a broad scale such policies operated through the earlier mentioned fiscal apartheid in public sector capital investment policies. As mentioned earlier too, such imbalances were as pronounced as the degree to which colonialism found tenure within the region, with Zimbabwe, South Africa and Namibia having been the most impacted upon by a legacy of racial privilege.

Such a legacy is being boldly confronted by nationalist movement governments that ascended to power through armed and other forms of struggle against such forms of privilege. Indigenisation and affirmative action policies are being deployed to extend the benefits of economic opportunity to the black African majority. Among such policies, land reform is the most topical and controversial. But the consequence of such reforms depends on the pathways adopted. Parceling out private land to big and powerful black entrepreneurs, as in Zimbabwe's Model A2 schemes, essentially constitutes an intra-class transfer of entitlements, from rich white to rich black. It entails land

transfer without tenure reform, or the replacement of autonomy preferences with selfsame preferences. The model appears to have been inspired by a logic inclined towards the pole of *maintaining productivity*. But low land/human population ratios naturally set a limit to which model A2 type land reform is feasible, a dilemma for which the Model A1 schemes appear to be an answer. The model entails parceling out private land to communal farmers. A1 schemes entail tenure reform and are more akin to replacing autonomy preferences with collaboration regimes, particularly from a natural resource management perspective. Thus the model appears to have been inspired by a logic inclined towards the pole of *decongesting communal lands*. Although each scheme has its own polar logic, such logics are not necessarily mutually exclusive.

Since the scope of this study was regional in outlook, I feel obliged to extend the analysis to incorporate perspectives from South Africa, as an example of another country where the land reform agenda appears central to emerging visions of empowerment and development. In the interests of brevity I have abbreviated comparisons between some experiences emerging from the two countries:

- If processes of reform were largely expedited through short-cycle, fast-track processes that ‘sort themselves out’ in Zimbabwe, then in South Africa they occur through long cycles of legal restitution that get mediated in formal courts of law. To some sections of scholarship, the unfolding drama of things ‘sorting themselves out’ signify an ‘authoritarian nationalism of selective citizenship and distortions of democracy’ (Raftopoulos 2003), which plays out through violence, vandalism and murder. To some it marks the ‘end of modernity’ (Worby 2003). For Africanist scholarship, the onerous travails of legal restitution in South Africa’s courts signify a groundswell of impatience with processes of land reform in that country (Kepe & Cousins 2002).
- If courts provide an onerous means of first resort to addressing pre-restitution land grievances in South Africa, then in Zimbabwe the courts provide a fast but pre-emptive means of last resort to post-fast track land grievances since the verdicts often get indefinitely suspended. To radical African scholars the onerous nature of South African land restitution, though signifying presence of the rule of law, represents justice delayed (Kepe & Cousins 2002). But to neo-liberal scholarship, judicial dilly-dallying with verdicts in the courts of Zimbabwe represents justice denied, and signifies an absence of the rule of law.
- Thus, if the policy in Zimbabwe is ‘take first and talk later’, then in South Africa it is ‘talk first and take later’.

In the concluding section, the discussion ties together all the foregoing theoretical and empirical issues within the context of issues outlined in the introduction.

5 Discussion

The question of scale is one amongst existing and emerging issues relating to CBNRM management in rural southern Africa. But it is not an entirely new concept, since it has already started receiving attention from a range of perspectives – to which there is need to add new insights. This study has contributed such insights by tackling scale – reconciling diverse preferences that intervene on the natural resource policy arena by decisions alternately made for others, with others and for oneself.

Throughout this paper I have implicitly and explicitly argued that negotiation provides the key to reconciling preferences within and between decision domains intervening on the operation of natural resource policy. This is because negotiation as a tool for reconciliation encompasses more nuanced evolutionary pathways in which need becomes a key driver of institutional change, as is alluded to in the Lakes Chiuta and Kariba artisanal fishing cases discussed earlier. The logic of prudence and reversibility in the operation of natural resource policy, which I considered above, was borne out by the many cases of community-level bodies whose composition and roles had to be reviewed often because: some important players had been left out; or the broad discretionary oversight given to some actors was being abused; or emergent outcomes were not egalitarian (Section 4.1), and so on. In all of these cases such re-negotiation was more emergent than the promoters of the project facilitated it. I therefore argue for the deployment of robust institutional infrastructures for monitoring and evaluation in instances where natural resource policy gets implemented through the agency of facilitated collaboration. Such monitoring and evaluation infrastructure should not be viewed as an unnecessary burden since it provides the minimum premium for corrective responses if existing arrangements fail to deliver of intended goals or when Ouroboros effects occur, particularly where splendid isolations seek to entrench themselves (Section 4).

I have also outlined general problems that result from inappropriate calibration and targeting of natural resource policies, which I presented through the theoretical exposé presented in Section 2. Various aspects of these maladies are supported through empirical reflections that are resonant throughout Section 3, for example, encroachments of international hierarchy preferences into the operation of the southern Africa natural resource management arena through the media of international conventions; elite rent capture in buffer zones as an intrusion of appropriative autonomy preferences into zones of collaboration; and the operation of command and control colonial regulations as decentralized despotisms (Section 4), and so on. The underlying argument in all these cases is that all these represent maladies of calibration. I conclude by reiterating that negotiation, in its various shades, holds the key to reconciling the diverse preferences that may intervene on the natural resource policy arena through the media of decisions made for others, with others and for oneself.

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Endnotes

- ¹ Like all typologies, the weakness of this schema is that it compartmentalises phenomena that are interlinked and thus not mutually exclusive.
- ² Decentralisations are usually seen as vehicles for delivering on the de-marginalisation agendas.
- ³ ‘*Alternatives*’ is, coincidentally the name of a journal that popularises ideas that challenge received wisdoms, and promotes alternative ways of looking at things.
- ⁴ In complex systems parlance such systems retain resilience and sustainability by reconciling variability and diversity with persistence and stability (Ruitenbeek & Cartier 2001). For a more comprehensive treatment of these terms see Ludwig et al. (1997), who define stability as the tendency of a system to return to a position of equilibrium when disturbed, and resilience as the amount of disturbance that a system can sustain before a change in its structure and function occurs.
- ⁵ The ‘order and disorder’ clause is a term deriving from chaos theory and used by Reason and Torbett (2001) to argue that systems are at their best in terms of adaptiveness and resilience just at the edge of chaos in which there is a balance between nascent order and chaos.
- ⁶ The theme of scale and policy as a sequencing and targeting problem is resonant throughout this article.
- ⁷ Institutional components of the toolkit could contain a mechanism for monitoring and evaluation and arrangements that allow for review and revision.
- ⁸ Coglianesse and Nicolaidis (1996) also refer to regular and scheduled revocability arrangements, which allow for power to revert to another level on the tolling of specific dates. They call such arrangements ‘sunset provisions’.
- ⁹ ‘Resource’ is a compound formulation in this case, and it encompasses aspects of skills, know-how, capacity and material resources to deliver on given roles.
- ¹⁰ The ‘voting with their feet’ formulation is used by Nhira et al. (1998) to depict situations whereby people resist maligning policies by simply ignoring such policies. Elsewhere, such forms of resistance are referred to as ‘the weapons of the weak’ (Scott 1985).
- ¹¹ Coglianesse advances this somewhat obvious observation in an article appropriately titled ‘Is consensus the appropriate basis of regulatory policy?’
- ¹² In their seminal work on adaptive co-management Ruitenbeek and Cartier (2001) ask whether the key driver of social action in relation to the environment is the invisible hand of hand of self-interest or the invisible wand of concern for others.
- ¹³ Mafa Chipeta, now with the United Nations Food and Agriculture Organization, was formerly the Deputy Director-General of the Center for International Forestry Research.
- ¹⁴ This is a Mafa Chipeta formulation.
- ¹⁵ For abrasive analyses and insights see, for example, Franz Fanon’s (1978) *The wretched of the earth*.
- ¹⁶ The Centre for Applied Social Sciences, University of Zimbabwe/ Programme for Land and Agrarian Studies, University of the Western Cape programme which commissioned this paper and a number of others (www.cassplaas.org).
- ¹⁷ These can be likened to impact sequestration mechanisms.
- ¹⁸ Implicit in the notion of evolution is promise of emergent collaboration.
- ¹⁹ Vincent (1991) traces the origins of the value assumptions of this essentially ecological concept and its transformation into the operation of natural resource management policy. I am most grateful to Gordon Matzke for introducing me to this way of looking at the issue in 1992.
- ²⁰ Double expropriation is a Murphree and Cumming (1991) formulation that signifies double dispossession.
- ²¹ As opposed to long-duration fast-track land reform entitlements, in which review revoke periods are mooted at a whopping 99 years!
- ²² Examples provided in both references come from western Zimbabwe where politicians are reported to incite local people to invade protected areas, thus providing cover for them to move in to assert *de facto* grazing rights within state forests. Extensive livestock rearing is a major land-use option in this part of the country.
- ²³ Ostrom (1990) terms salience as the extent of dependence of people on resources, and identifies it as one among a set of principles that probably underlie enduring collective action.
- ²⁴ The ‘target community’ formulation is another favourite cliché from the lexicon of participatory management approaches.

²⁵ The use of the term backlash in this context signifies the Ouroboros effect of peasant re-appropriation of the benefits of nature.

²⁶ Paradoxically, this often occurs this time around with the overt support of the self-same actors who would have rendered tacit approval in the first instance.

²⁷ 'Native' or 'African' reserves was the official designation of communal areas during the colonial period in southern Africa. The term was often interchangeably used with 'tribal areas' or 'tribal reserves'. In South Africa, where policies of racial segregation were more pronounced, such areas were also derogatively referred to as 'bantustans', literally and symbolically meaning the homelands of the bantus (for a more perceptive expose see Mamdani 1996).

²⁸ This is another Mahmood Mamdani formulation.

²⁹ The combined effect produces the earlier-mentioned Murphree and Cumming 'double expropriation'.

³⁰ Campfire is an acronym for the Communal Areas Management Programme for Indigenous Resources. It is premised on the concept of wards as 'producer communities' or the basic units of social organisation through which communities in wildlife-rich areas can be empowered to use and manage the resources.