

**BEYOND THE LIMITS: ORGANISATIONAL
INNOVATION IN COLLABORATIVE ENVIRONMENTAL
GOVERNANCE - THE SOUTH AFRICAN EXPERIENCE**

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IN COLLABORATIVE ENVIRONMENTAL GOVERNANCE –
THE SOUTH AFRICAN EXPERIENCE

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Beyond the limits: Organisational innovation in collaborative environmental governance – the South African experience

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ABOUT THE AUTHOR



After extensive experience in environmental conservation in various scientific and management capacities between 1978 and 1988, Kobus Müller (now 54) joined the School of Public Management and Planning at Stellenbosch University as a lecturer in 1989. He was subsequently promoted to senior lecturer (1992), associate professor (1997) and full professor (2007). He holds the degrees BSc Agric (Nature Conservation, Zoology and Animal Physiology), BSc Agric Honours (Animal Physiology), an honours B degree in Public Administration, a master's degree in Public Administration (MPA) and a PhD in Public Administration, all from Stellenbosch University. To date he was involved in more than 50 completed research projects (including master's, doctoral and contract research) relating to his fields of expertise, which include environmental management, sustainable development, public organisation theory and organisational innovation. He has published widely and is the author/co-author of more than 30 articles, chapters in books and research papers/reports. His international exposure includes extended stays in Europe and the USA,

where he has undertaken research and taught seven courses as visiting professor. He is a member of the International Union for Conservation of Nature's Commission for Education and Communication and founder member of the World Conservation Learning Network. He also acts as the coordinator of the World Conservation Learning Network (Southern Africa) and is currently the director of the School of Public Management and Planning. He has been married to Marietjie for 30 years and they have three children, Jaco (29), Johann (28) and Marli (25). Kobus and Marietjie love nature and the outdoor life and spend most of their free time travelling around in their 20-year-old Kombi camper.

MEER OOR DIE OUTEUR

Ná uitgebreide ervaring in verskillende wetenskaplike en bestuursposisies in natuurbewaring tussen 1978 en 1988 het Kobus Müller (nou 54) in 1989 by die Skool vir Openbare Bestuur en Beplanning as lektor aangesluit. Hy is sedertdien tot senior lektor (1992), medeprofessor (1997) en professor (2007) bevorder. Hy het die grade BSc Agric (Natuurbewaring, Soölogie en Dierefisiologie), BSc Agric Honneurs (Dierefisiologie), Honneurs B in Publieke Administrasie, 'n meestersgraad in Publieke Administrasie (MPA) en 'n PhD in Publieke Administrasie aan die Universiteit Stellenbosch verwerf. Tot dusver was hy betrokke by meer as 50 voltooide navorsingsprojekte (insluitende meesters-, doktorale en kontraknavorsing) in sy veld van kundigheid, wat omgewingsbestuur, volhoubare ontwikkeling, openbare organisasiekunde en organisatoriese innovering insluit. Hy het al wyd gepubliseer en is die skrywer/medeskrywer van meer as 30 artikels, hoofstukke in boeke en navorsingsartikels/-verslae. Sy internasionale blootstelling sluit uitgebreide navorsingsbesoeke aan Europa en die VSA in waar hy benewens navorsing ook sewe nagraadse kursusse as besoekende professor aangebied het. Hy is 'n lid van die International Union for Conservation of Nature se Commission for Education and Communication en 'n stigterslid van die World Conservation Learning Network. Hy tree ook as die koördineerder van die World Conservation Learning Network (Southern Africa) op en is ook tans die direkteur van die Skool van Openbare Bestuur en Beplanning. Hy is reeds vir 30 jaar met Marietjie getroud en hulle het drie kinders, Jaco (29), Johann (28) en Marli (25). Kobus en Marietjie is lief vir die natuur en buitelewe en spandeer die meeste van hulle vrye tyd om in hulle 20 jaar oue Kombi-kampeerwa te reis.

BEYOND THE LIMITS: ORGANISATIONAL INNOVATION IN COLLABORATIVE ENVIRONMENTAL GOVERNANCE – THE SOUTH AFRICAN EXPERIENCE

The fragmented, incoherent and complex nature of modern society necessitated governments to find alternative ways and adopt new roles to cope with 'the limits to governance' which threaten to overwhelm public action. It is in this context that the trend towards decentralised units that are self-regulated and diverse, which can act locally and freed from much of the standardising constraints characteristic of hierarchical government, must be viewed and where managers act as brokers leveraging resources held by third parties in stead of controlling in-house resources. In the environmental field organisational innovation flourished and collaborative environmental management has become the leading paradigm for addressing complex environmental issues throughout the world. South Africa has followed international trends with new collaboratives emerging at regional or local level over the last decade. Based on differences in process and form, five examples have been selected to illustrate some of the South African experiences in organisational innovation and experimentation with new governance forms. The growing interest in collaboration has led to the development of assessment tools that could be applied to study the evolving models. An overview is given of what has been learned so far as well as the prospects and challenges for the future. These evolving models offer an exciting window of opportunity for social and organisational learning and can make an important contribution to innovation in management in South Africa.

INTRODUCTION: THE CHANGING ROLE OF GOVERNMENT

In his well-known essay, *Organisations of the future*, written over 40 years ago, Warren Bennis predicted the decline of the bureaucracy, which will gradually be replaced by new organisational forms (Bennis, 1967:238–242). According to Bennis, the rapid changes that are threatening to overwhelm the bureaucracy as we know it will lead to the emergence of the organisations of the future, which will be formed and shaped to cope with the core problems of integration, distribution of power, collaboration, adaptation and revitalisation. With today's complex and diverse society, we witness that governments still find it increasingly difficult to perform their management functions effectively [Kooiman & Van der Vliet, 1995, as cited by Symes (1997:108)]. At the very time that an efficient, effective and well-coordinated government is perhaps most needed, it is ever more a quest rather than a reality: Governments can depend on the formal structure of the public sector to produce coordination even less than in the past. The nature of contemporary governments exacerbates their inherent coordination problems: the increasingly cross-cutting nature of issues (of which climate change and biodiversity loss are prime examples), the contribution of decentralisation trends

towards incoherence, the disaggregating of structures into multiple agencies and multiplying activities (Peters, 1998:295–296).

In similar vein, Carley and Christie (2000:141) argue that a main organisational constraint is the idea of 'limits to governance', which flow from limiting factors such as the tension between centralising and decentralising forces, the dynamic nature of the modern world with its endemic uncertainty and the 'fragmentation' in policy and institutional terms of our societies. Müller (2004:398) also argues that, if fragmentation is the problem, the quest for integration should be at the core of sustainable development and environmental management implementation issues. In dealing with the turbulent world, governments and public managers therefore have no choice but to be innovative in the design and development of effective systems for public service delivery. It is therefore not surprising that innovations are often priorities in sectors or niches where the accretion of structural complexity apparently threatens to overwhelm public performance. Fortunately (or unfortunately), innovations seem to thrive in situations that can be characterised by ambiguity, uncertainty, questioning, instability, risk, chance encounters, crises, openness, quest and challenge, most of which are not typical of public organisations and bureaucratic contexts.

THE EMERGENCE OF SELF-ORGANISING STRUCTURES

Morgan argues in his 1993 book *Imaginization: The Art of creative management* (1993:282–283), that the post-modern world-view emphasises aspects of the chaotic, paradoxical and transient nature of order and disorder and requires an approach that allows the theory and practice of organisation and management to acquire a more fluid form in the emergence of self-organising structures. This notion of organisations developing self-organising abilities features prominently in the writings of Morgan (1993), Snow, Miles and Coleman (1992), Mecier and McGowan (1996) and Müller (2001). But from where does this notion originate and what are the practical implications for the design of organisations?

In employing 'chaos' or non-equilibrium theory to explore organisational dynamics in public administration, Kiel (1989:544–547) argues that insights can be gained into those events when existing structures break down ('dissipate') and then regenerate novel forms of complexity. In these open systems in states of 'dynamic instability,' instances of chaotic and unpredictable behaviour (or symmetry breaks) serve as the essential feature of their evolution. The presence of self-organising properties leads to the development of new complexity while inhibiting the disorder. By applying ecological principles such as the principle of diversity, self-regulation, human scale and finality to organisations, Mecier and McGowan (1996:447) observed that the trend is towards a less segmented and mechanically constrained form of organisation, which sets the stage for truly decentralised units that are self-regulated and diverse, which can act locally and freed from much of the standardising constraints.

The generation of new levels of complexity does not, however, require the implementation of increasingly complicated managerial processes or operational systems (Kiel, 1989:548). The trend towards simplifying, unifying, making cycles shorter and bringing decision making closer to the organisational core also impacts on structure in the form of the belief that the appropriate response to complexity seems to be that of simplicity. In the process all kinds of barriers are becoming fuzzy and all kinds of distinctions are becoming blurred. Hence, one sees the empowerment of those who are involved in the actual doing in an organisation, the loss of hierarchy, flatter structures and the replacement of large bureaucratic organisations with small units that people can comprehend and directly manage by themselves (Mecier & McGowan, 1996:469–472). According to Mecier and McGowan (1996:472–474), the ecological

choice definitely favours small-scale, internally connected, less hierarchical and more autonomous or self-regulating forms of organisations.

COLLABORATIVE ENVIRONMENTAL GOVERNANCE

Due to their complexity, environmental issues are often described as 'wicked' and governments find it difficult to deal with them. Apart from the complexity itself, a lack of transdisciplinary problem definition and solving; the inherent weakness of public bureaucracies in dealing with rapid change; poor policy integration and the 'administrative trap', which describes the common mismatch between the nature of the environmental problems and the sectoral problem-solving structures; an over-reliance on institutional reform; and the failure to learn from experience in governmental organisations are all constraints in the quest for integration (Carley & Christie, 2000:143–154).

What is becoming increasingly certain, according to Cooper (1995:185), is that we are moving towards a hybrid state, in which most governments seek less command and control regulation, more decentralisation, reduction in the size of the public sector and increased use of market-based policy tools. At the same time, there are areas such as environmental management in which there are very definite limits to those trends such that government will continue to play a regulatory role, even if it employs economic incentives and other financial devices. Given concerns about climate change, biodiversity loss and nuclear waste, and increasing pressure on local communities to do something about their own environmental problems, public managers will continue to play an active role with regulation as one of its components. Given the changing context, the nature of regulation must change. We seem to be moving towards a future emphasising parallel systems management in which public managers must simultaneously manage within government, without government and across governments.

How then might one start the process of reducing the state's direct intervention in environmental management? According to Symes (1997:110–112), the process of reducing the state's direct role has been dominated by three approaches: firstly the market economy approach (the privatisation of use rights and substitution of 'rule of law' by the discipline of the market); secondly co-management, involving a sharing of management between the state and responsible user group organisations by consensual decision making; and thirdly decentralisation of management through the re-

gionalisation of policy decisions to those located closest to the theatre of operations. Although the approaches are derived from distinctly different theoretical perspectives and championed by different disciplinary traditions, there are no fundamental reasons why privatisation, co-management and regionalisation should not be joined together in an integrated approach.

Collaborative environmental management, which, according to Margerum (2008:487), was once considered an emerging trend, has become the leading paradigm for addressing complex environmental issues throughout the world. The literature on collaboration highlights several common characteristics: firstly it involves a wide range of stakeholders; secondly it engages the participants in an intensive and creative process of consensus building; thirdly it works to achieve consensus on problems, goals and proposed actions; and finally it requires a sustained commitment to problem solving.

This shift towards decentralised cooperative management of natural resources coincided with the increasing use of the term 'governance' instead of 'government' internationally. This signified that the emphasis is on what Salamon (2002:8) argues is perhaps the central reality of public problem solving for the foreseeable future – namely its collaborative nature, its reliance on a wide array of third parties in addition to government to address public problems and pursue public purposes. According to Salamon (2002:1–2), the heart of this revolution has been a fundamental transformation not just in the scope and scale of government action, but in its basic forms.

A massive proliferation has occurred in the *tools* of public action, in the *instruments* or means used to address public problems. Instead of relying exclusively on government to solve public problems, a host of other actors is being mobilised as well, sometimes on their

own initiative, but often in complex partnerships with the state. As no single actor, public or private, has the knowledge and information required to solve resource problems, no single actor has sufficient action potential to dominate unilaterally in a particular governing model. The task of government, therefore, is to combine different groups of actors and to create different arrangements for dealing with management problems: some may involve public-private partnerships and co-responsibility.

Furthermore, the governance approach, according to Saglie (2006:12), looks beyond the formal structures and instead focuses on the actors participating both inside and outside the formal allocation of power. In this regard, the institutionalist framework is, in the opinion of Rydin, (2006:17), particularly useful for studying situations of governance where policy formulation and implementation involve a wide range of actors. It is against this background that the notion of co-management of natural resources has emerged in many countries around the world as the most promising institutional prospect for resolving resource conflicts and building partnerships in conservation and management between local actors and government authorities (Zachrisson 2004:3).

A useful typology of collaboratives was developed by Margerum (2008:489–500) by examining the institutional level at which they focus their activities. Firstly, at the operational or *action* level, collaboratives focus on direct action or 'on the ground' activities such as monitoring, education and restoration; secondly, at the *organisational* level, collaboratives focus on policies and programmes of particularly government organisations; and finally, at the policy level, collaboratives focus on government legislation, policies and rules. The different collaboratives tend to be associated with different contextual and functional characteristics summarised in Table I below:

Table I: Differences between collaboratives [summarised from Margerum (2008)]

Contextual characteristics	Action collaborative		Policy collaborative
<i>scale</i>	small >>>>>		<<<<< large
<i>population</i>	smaller >>>>>		<<<<< larger
<i>significance</i>	local significance >>>>>		<<<<< regional/national significance
<i>institutional setting</i>	simple >>>>>		<<<<< complex
<i>focus</i>	educational and restoration >>>>> efforts with individual landowners		<<<<< public decision making
Functional characteristics	Action collaborative	Organisational collaborative	Policy collaborative
<i>stakeholder participation</i>	stakeholders representing themselves rather than organisations	vary	composed mostly of stakeholders who represent organisations, interest groups, or are elected officials
<i>management arrangements</i>	similar for consensus building and implementation phases	vary	new legislation, policy and/or programmes, institutions
<i>implementation approach</i>	through direct action	change through organisations	change through policy

POINT OF DEPARTURE: NETWORK THEORY

According to Lowndes and Skelcher (1998:315), the emergence and growth of networks and multi-organisational partnerships reflect the *complexity* and intransigence of issues facing government with the pressure to deliver more with less (*resource dependency issues*); the search by public bodies for *integration* and a desire to address in *innovative ways* those issues that cross organisational boundaries.

In technical terms, networks are non-hierarchical social systems that constitute the basic social form that permits an inter-organisational coalition to develop. An action network, linking the public, private and voluntary sectors, should be flexible, open and capable of restructuring itself over time. Unlike the loose linkages in the more usual information-sharing networks, the action network is focused on the goals of its management and research tasks, and engages in regular, critical review of its progress towards these goals. A network may also be a common starting point for innovation because the need for innovation is often of key importance in sectors or niches where the accretion of structural complexity may threaten to overwhelm public performance (of which environmental management is a prime example) (O'Toole, 1997:117).

Several recent innovations have built on institutional and policy foundations designed to tap actors and resources considerably beyond the capacity of the individual administrative agency. The ability to exploit the full range of public-private arrangements, intergovernmental initiatives, third-sector and voluntary organisations, and various forms of consortia and alliances is becoming increasingly popular in current waves of governmental innovation. The network context, therefore, appears to be crucial for the implementation of innovations. Nelson and Weschler (1998:565) agree that networks or partnerships hold the most promising institutional prospect for integrated environmental management because no single actor, public or private, has the knowledge and information required to solve resource problems.

Lowndes and Skelcher (1998:318) make a distinction between networks as an organisational form and networks as a mode of governance. They argue that co-ordination can be a product of three alternative 'governing modes', namely *hierarchy* (the imposition of an authoritative integrating and supervisory structure), *markets* (contractual relationships driven by the 'invisible hand' of self-interest of the participants) and

networks (voluntary relationships based on the view that actors are able to identify complementary interest).

TOOLS FOR LEARNING

The importance attached by leading organisational theorists to experimentation as essential to the development of self-designing systems is, according to Kiel (1989: 548), strikingly similar to the change mechanisms indicative of self-organising dissipative structures. To create experimentation or learning-oriented organisations, one should evolve visions that invite continuous questioning; one should foster values that can open the organisation to new insights and encourage staff to develop understandings that generate capacities for learning and continuous self-organisation and an ability to deal with crises and opportunity in a positive manner (Morgan, 1993:13). According to Carley and Christie (1992:177–178), the concept of organisations as learning systems is a valuable contribution of organisation theory to innovation in management.

According to Margerum (2008:494–495), the common theory base across all types of collaboratives relates to the literature on consensus building, conflict resolution, group dynamics and facilitation. However, other aspects of the collaboratives vary, particularly during the implementation phase when participants are trying to translate consensus into results. The theoretical underpinnings of action collaboratives are found in literature on social capital and civil society, whereas with organisational collaboratives theory relating to inter-organisational coordination, networks, transaction costs and public participation provide important insights. Policy collaboratives, on the other hand, have a strong theoretical basis in literature on policy negotiation, advocacy coalitions, mediation and collaborative plan making.

These new forms of cooperative management of natural resources, and in particular the role of networks and partnerships, have led to a new and growing general interest in evaluating cooperation and collaboration (Saglie, 2006:14). As the governance approach looks beyond the formal structures and instead focuses on the participating actors, the institutionalist framework is, according to Rydin (2006:17), particularly useful for studying situations of governance where policy formulation and implementation involve a wide range of actors.

However, analysing and assessing networks and partnerships with their range of structural possibilities and the different elements held together by ties of authority, exchange relations and/or common interest-based coalitions could pose a major challenge. In these

organisational networks the degree of influence, as exercised by a wide range of actors, is relatively difficult to document, predict and model. In other words, the complexity and uncertainty so central to network structures could make analyses and comparison very difficult, if not impossible. In order to address this challenge, a tool to identify, describe and compare the characteris-

tics of collaboratives in a systematic manner, an assessment framework was developed by Müller (2007a) (see Table 2 below), drawing primarily on the work of Peters (1998:295–311), Nelson and Weschler (1998:565–576), the Organisation for Economic Co-operation and Development (OECD) Policy Brief (2002) and Margerum and Born (2000:5–21).

Table 2: Framework for the assessment of environmental governance structures
(adapted from Müller, 2007a)

Criteria	Description
Scope	The set of concerns that is addressed through the coordination arrangements, no matter whether they are environmental policies or management activities
Position	The stakeholders and role-players that are involved in the coordination activities and their roles in the setting (e.g. agency, user group, coordinator)
Boundary	How specific individuals and stakeholders enter or leave those positions (e.g. whether by means of appointment, nomination or election)
Authority	The coordination activities (i.e. information exchange or conflict resolution) in which position holders can or cannot participate, as well as the constraints on autonomy and/or individual action and the basis of power (e.g. legislation, plan, administrative policy or informal agreement)
Information and knowledge management	The kinds, forms, timing and processes of information exchange among the different position holders (e.g. shared database, monthly meetings or electronic networks)
Decision making	The position holders' procedure for making collective decisions and resolving conflicts (e.g. by means of general consensus or voting procedures)
Pluriformity	The extent to which the networks are integrated, in so far as this will influence their likelihood of producing effective coordination (such as their level of integration, determining whether they can be treated as a single organisation, or need to be treated as semi-autonomous organisations)
Interdependence	The extent of interdependence between the different entities making up the network, in so far as this influences styles of interaction and relationships (e.g. loosely coupled or closely interconnected), which in turn influences their likelihood of producing effective coordination
Formality	The level of formality, in so far as this influences their likelihood of producing effective coordination
Instruments	The nature of the instruments used (i.e. planning, formal regulations or contracts) as this influences their likelihood of producing effective coordination
Leadership	The presence of clear government commitment and leadership at the highest level effectively communicated to the various sectors of government machinery and across levels of government
Institutional readiness	The degree to which jurisdictions are aware of, and primed for, engaging each other in collaborative governance of the different entities in terms of <ul style="list-style-type: none"> ■ the level of citizen and community interest and involvement; ■ the availability of existing institutions and organisations for regional governance; ■ the degree of practical experience in formal and informal cross-sectional coordination and cooperation; and ■ the amount of knowledge and appreciation of the missions, goals and objectives of the other participants.
Redundancy	This occurs where overlap is an outcome of cooperative arrangements with two or more organisations performing the same task
Incoherence	This arises where the cooperative arrangements are characterised by policies with the same clients, who have different goals and requirements
Lacunae	These are marked by a failure of the cooperative arrangements, because of the absence of any organisation performing a necessary task

SOME SOUTH AFRICAN EXPERIENCES IN ORGANISATIONAL INNOVATION

The complexity and magnitude of today's challenges for natural resource management require not only a common focus, but also cooperation among many different sectors to make the best of resources and expertise. The current rethinking under way throughout the world on how to cope with public problems has been paralleled in South Africa with fundamental changes to the form and function of the state after the establishment of constitutional democracy in 1994. The restructuring of the public sector and the transformation of the institutional landscape was characterised by increasing use of the term 'governance' instead of 'government' internationally.

In South Africa, like elsewhere, the fragmentation and lack of coordination among the various executing agencies represent a significant hurdle and a barrier to successful implementation. Following the successful democratisation of South Africa in 1994, the transformation agenda of the new government created an imperative as well as willingness to consider and experiment with alternative service-delivery mechanisms for public action. The combined approach of government decentralisation and a devolution of responsibility for natural resources to local communities was generally informed by an approach advocated by the United Nations 1992 Rio Earth Summit (Müller, 2007b:45). The transformation agenda of the new government also created a window of opportunity to consider and experiment with alternative service-delivery mechanisms for public action. It was also clear that there was a unique opportunity to align and mobilise the variety of approaches and capabilities of the executing agencies towards achieving the vision of integrated and cooperative environmental governance created by the 1996 Constitution of South Africa.

An environmental clause (section 24) in the Bill of Rights of the South African Constitution, 1996, explicitly recognises the fact that all decisions must have a sound environmental basis, making integrated environmental management a constitutionally entrenched imperative. Responsibility for the natural environment is recognised by the South African Constitution as being concurrently national and provincial. However, as integrated environmental management cuts across all three spheres of government, legislation governing these functions may either prescribe concurrent obligations, or may be assigned to one specific sphere. It is

clear that the institutional framework created in this way is not necessarily harmonised as a whole, while the legislative system is not necessarily integrated, which in turn may open the door to potential inconsistencies and duplication in the execution of environmental management functions. The problem of coordination is addressed in the Constitution by promoting participatory, cooperative governance (Chapter 3) and further operationalised by the Intergovernmental Relations Framework Act, 2005, by providing for the formal establishment of national, provincial and municipal inter-governmental structures and mechanisms such as implementation protocols to facilitate coordination and policy implementation between organs of the state. The need for integrated environmental management and the importance of cooperative governance in the environmental sector, community participation in decision making on the management of natural resources as well as benefit sharing are well institutionalised in other framework and sectoral policies and legislation.

To illustrate some of the South African experiences in organisational innovation and experimentation with novel environmental governance models, five examples based on differences in process and form have been selected out of the variety of collaboratives which have emerged between 1995 and 2003:

WORKING FOR WATER (WfW)

The name of the programme captures its focus on job creation by protecting water resources threatened by invasive alien plants. It has received international acclaim since it was launched in 1995 with over one million hectares of land cleared of invasive alien plants while providing training and employment opportunities for more than 20 000 people in the first eight years since inception. WfW is a multi-departmental governmental initiative jointly owned by the departments of Water Affairs and Forestry (DWAF), Environmental Affairs and Tourism (DEAT), and Agriculture (DoA) and governed by a Working for Water Board of twelve ministers. The day-to-day management is carried out by an executive committee (representative of seven national departments) on behalf of a management committee representing the key partners. The programme is executed through partnerships with implementing agencies that are being funded (budget of R442 million in 2003/4) to implement more than 300 WfW projects countrywide on a contractual basis utilising emerging contractors (Müller, 2007b:49–50).

BIOSPHERE RESERVES: KOGELBERG

The Kogelberg Biosphere Reserve (KBR) of more than 100 000 hectares near Cape Town, first of South Africa's four biosphere reserves, was established as a biodiversity hotspot in 1998 when international conservation status was awarded by UNESCO. The KBR is managed by a non-profit company steered by a board of eight directors, appointed after a public nomination process. The directors have been allocated individual portfolios and are advised by a standing technical committee. The board is supported by a full-time coordinator. The role of the coordinator is to facilitate the implementation of a strategic management plan through liaison with stakeholders (the four local authorities are the primary implementing entities, apart from the provincial conservation agency) (Müller, 2007b:50-51).

CAPE ACTION FOR PEOPLE AND THE ENVIRONMENT (C.A.P.E.)

C.A.P.E. could be described as a network formally established in 2001 to implement a strategic plan developed in response to the threat to the Cape Floristic Region, which has been identified as one of the world's 'hottest' hotspots of biodiversity. C.A.P.E. was institutionalised through a Memorandum of Understanding (MoU) signed between stakeholders from national and provincial government, municipalities, and research and conservation NGOs. Its governance structure consists of the C.A.P.E. Coordination Committee (CCC), representing national ministers and members of executive councils with the overall function to coordinate the long-term implementation of the C.A.P.E. Strategy, supported by a coordination mechanism, the C.A.P.E. Coordination Unit (CCU), hosted by the South African National Biodiversity Institute (SANBI). The C.A.P.E. Implementation Committee, which represents the 21 government departments, municipalities, statutory bodies and accredited non-governmental partner organisations, carry out the vision of C.A.P.E. The development of the C.A.P.E. Strategy was made possible with an initial grant from the Global Environment Facility (GEF) in 1998 and C.A.P.E. has since mobilised project funding (US\$3 million) through the Critical Ecosystem Partnership Fund (CEPF), leveraging extensive agency co-financing and partnership arrangements (Müller, 2007b:51-52).

WORKING ON FIRE (WoF)

WoF is a public-private partnership between government and the commercial forestry sector established in 2003 to create an efficient and effective nationally coordinated fire fighting network by pooling and sharing resources. WoF operates as a section 21 non-profit company in partnership with other fire fighting agencies, including conservation agencies, district and local municipalities and the forestry industry through a nationwide system of fire bases where fire fighting crew are stationed. Operations are coordinated by dispatch and coordinating centres in each of the eight fire-prone regions of the country, reporting to a national coordinator linked to the National Disaster Management Centre. WoF is funded on a 'user pays' basis, except where the fire has spread and property and life of the general public are threatened, in which case it is funded by public money through the National Disaster Management Fund (Müller, 2007b:52-53).

CATCHMENT MANAGEMENT AGENCIES (CMAs)

A CMA is the primary water resource management catchment-based institution to be established (the first CMA was established in 2005) in each of the 19 water management areas to facilitate decentralised decision making based on a participatory approach to water resources management through the involvement of stakeholders and mandated by law. The CMA is a legal entity, headed by a governing board, which must be representative of all the relevant stakeholders in its particular CMA. A CMA can choose the organisational model ranging from various hybrids of decentralised/networking/outsourced to centralised in-house arrangements most appropriate to its area and will be funded largely through the collection of water-use charges (Müller, 2007b:54-55).

The assessment framework (Table 2 above) tool was applied to map the characteristics of the cooperative governance systems in two selected case studies to judge its potential usefulness in facilitating both organisational and social learning.

The case studies were the *Olifants-Doorn Catchment Management Agency* and the *Kogelberg Biosphere Reserve*. The evaluation is primarily a qualitative judgment based on the literature reviewed¹ and interviews with key individuals involved in both systems to fill some gaps to determine the usefulness of the framework. The findings are summarised in Table 3 below.

¹ The *Proposal for the Establishment of the Olifants-Doorn Catchment Management Agency (DWAF 2005)* and the *Draft Strategic Management Framework (SMF) for the Kogelberg Biosphere Reserve (2006)* are the primary source documents for the two case studies, respectively.

Table 3: Comparison between the *Olifants-Doorn Catchment Management Agency* and the *Kogelberg Biosphere Reserve* (Müller, 2008)

Criteria	CMA	Biosphere
Scope	Specific legislative mandate, confined to water resources management	Broad UNESCO guidelines, KBR vision and mission
Position	Representativeness of stakeholders and mandated by law and regulated by government	Issue of unrepresentativity because of greater role ambiguity and fluidness of stakeholders
Boundary	Nominated by stakeholders, appointed by minister/governing board/water management institution	First board chosen by ManCom after public nomination process: future board of directors elected by members after public nomination process, open membership?
Authority	Exercised in terms of legislation, delegated/assigned functions or contractual arrangement	KBR decisions implemented by implementing partner institutions formalised through MoUs and service-level agreements (SLAs)
Information	Communication strategy during multi-stakeholder process (MSP) included newsletters, pamphlets, meetings/workshops, newspaper articles and radio. Information shared through catchment forums and other water management institutions; basic management support systems and geographical information system (GIS) to be developed	A knowledge management system and a 'one-stop' database for the KBR proposed in a strategic management framework (SMF) as well as communication, education and outreach strategies to raise awareness of KBR; SMF develop through a process of stakeholder consultation
Decision Making	Sufficient consensus during establishment process	Majority of votes of those present?
Pluriformity	Decentralised network model tightly coupled by specific delegated or outsourced functions by the CMA	A loosely coupled network of autonomous organisations could be tightened up through SMF, MOUs and SLAs
Interdependence	Low if particular water user associations (WUAs) and catchment committee are delegated/assigned/contracted (for) particular functions?	High if the effectiveness of management depends on the voluntary cooperation and buy-in of a few executing authorities
Formality	High	Low
Instruments Incentives	Legislative power, water resources strategy, contracts, levies; catchment management strategy to be developed as one of initial functions	Provincial planning frameworks, SMF, MOUs, SLAs, incentives, future enabling provincial legislation?
Leadership	Strategic by DWAF through vision and policy for water resource management (WRM); at catchment level through initiation and facilitation of MSP; capacity-building programmes to enable meaningful participation in integrated water resource management issues	KBR failed to build effective partnerships between KBR stakeholders; absence of a strategic plan, lack of funding, and inadequate administrative and technical support; interest group (KOBIO) has assumed leadership role
Institutional readiness	High: stakeholder participation, some existing institutions but new CMAs have to be established, some practical experience, and knowledge and appreciation of other participants' missions developed during MSP	Low: complex legal framework, the overlapping jurisdictions between various statutory authorities, the poor delivery capacity of local government, and a politically unstable climate
Redundancy	Low because networked entities will have specific delegated or outsourced functions?	High: overlapping legal mandates between government agencies in KBR; relationships with other new legally mandated co-management structures
Incoherence	Low: process nationally driven, national and local, water resources strategies, mandate confined to water resources	Possible: operational relationships between KBR and other new legally mandated co-management structures as well as existing government agencies
Lacunae	Low	Probability high: unfunded mandates constrain implementation through existing agencies, lack of capacity and resources limit contracting out

WHAT HAVE WE LEARNED SO FAR?

The sensitivity of the tool was illustrated by the clarity with which the nature of the two collaboratives selected for application has been captured. The establishment of the CMA is directed from the centre by means of a well-designed and tightly managed process of stakeholder consultation, mandated and regulated by law and confined to water resources management. The governance structure consists of a representative board with formal appointment procedures, and its authority and functions are formally exercised in terms of legislation. The CMA is a new institution, but it may delegate or outsource functions utilising a network model. Leadership is provided at strategic level by DWAF's water resource management vision and policy and at catchment level through a multi-stakeholder process that achieved high participation, empowerment and buy-in. With a high degree of institutional readiness, major problems of overlap, policy incoherence or major gaps are not foreseen.

The KBR, on the other hand, can be characterised as a loosely-coupled self-organising system, in which citizen and interest-group involvement played a major role in its establishment, with the facilitation of, and support by, the provincial and national governments. Its scope is defined within the broad UNESCO guidelines and the KBR's own vision and mission statements, but it is currently without a specific legal basis. Its governance structure has evolved from a management committee to a non-profit company (KBR), and, although the first board of directors was appointed after a public nomination process, future membership and processes are unclear. The representativity of the board is also widely questioned. The KBRC sees itself as a small, cost-effective 'linking-pin' entity, the decisions of which are implemented by a network of loosely-coupled autonomous partner institutions through MOUs and SLAs. The leadership of the KBRC failed to build effective partnerships between KBR stakeholders, which opened up the space for interest groups (KOBIO) to 'capture' or assume leadership roles. By 2004 the KBRC was, for all practical purposes, considered to be an operational failure and had to be revived at the end of 2004 by the establishment of a technical advisory committee to support the board. The degree of institutional readiness for collaboration could be described as problematic: a complex legal framework with overlapping jurisdictions and unfunded mandates between various statutory authorities and other new legally mandated co-management structures, the lack of capacity and resources limiting contracting out, the poor delivery capacity of local government and a politically unstable climate.

It seems reasonable to conclude that the assessment tool proved useful, at least at the initial 'mapping' step of any attempt towards evaluating cooperative systems. The tool may also point to the specific informal dimensions beyond the formal, which need to be investigated to obtain an adequate explanation of the dynamics and outcomes. We may, for example, be interested in how the relationships of trust, reciprocity and mutuality, or the leadership role of key individuals, both potential key success factors in the two case studies – captured in the concept of social capital – may be helpful in explaining the effectiveness of the institutional arrangements for natural resource management. These norms, values, routines and everyday working practices (or 'cultural dimensions' in the language of social capital) whereby the actors involved behave and construct their roles are beyond the reach of the assessment tool and will have to be revealed through interviews, document analysis and non-participant observation of the working of the collaborative. We know that not one set of institutional arrangements can solve all types of collective problems; to be effective, institutions should be designed in ways that satisfy particular types of problems. There is a growing body of evidence that suggests that social capital could have an enormous effect on natural resource management and even the effectiveness and functioning of governments. These emerging governance structures could therefore be an exciting window of opportunity for social and organisational learning at this point in time in South Africa's development, given the country's context and history.

PROSPECTS AND CHALLENGES

At a glance the following features of the collaborative systems evolving in South Africa can be noted to serve as pointers to guide future research (Müller, 2007b:55–57):

- *Bottom-up or top-down, directed or self-organising?*
Some of these emerging institutions are directed from the centre by means of a well-designed and tightly managed process of stakeholder consultation and capacity building (e.g. the National DWAF in the CMA process), while others (e.g. the KBR) can be better described as a bottom-up self-organising process, in which citizen and interest-group involvement played a major role in the establishment of the reserve, with facilitation and support by the provincial and national governments.
- *New or existing institutions?*
In some cases the implementation is done through the utilisation of existing public and private institutions as

well as NGOs as the implementing agencies (e.g. WfW, C.A.P.E.), while in other cases new institutions are created (e.g. CMAs) and some fall in between (e.g. WoF, biospheres).

■ *Coordination instruments?*

The nature of the coordination instruments used by the different models varies from informal understandings, management planning and incentives (e.g. biospheres), MoUs and contracts (e.g. WoF, C.A.P.E., WfW) to legally mandated strategies, regulations and proclamations (e.g. CMAs).

■ *Loosely or tightly coupled?*

Some systems on the one side of the spectrum are loosely coupled (e.g. biospheres, C.A.P.E.), while some on the other side are tightly coupled (e.g. WfW, CMAs) and others are in between (e.g. WoF).

■ *The role of 'linking-pin' organisations:*

For example, coordination units of C.A.P.E., WfW, WoF.

■ *Who provides leadership, level of commitment?*

The presence of clear government commitment and leadership at the highest level effectively communicated to the various sectors of government machinery and across levels of government (e.g. WfW is governed by a Working for Water Board of twelve ministers), leadership provided by the private sector through a contracted agreement (e.g. WoF) compared to local leadership (e.g. elected board or trustees of biospheres), or legally mandated governance structure (e.g. governing board of CMAs).

■ *Implementing agents?*

Some initiatives are implemented primarily by a government institution as the lead coordinating agency utilising mainly state institutions in other spheres of government as implementing agents (e.g. WfW), whereas an initiative like WoF is run by the private sector on a contractual basis, and others, like C.A.P.E., use organisations from all sectors to manage and implement their strategy.

■ *Who championed the process?*

The establishment of biosphere reserves was primarily championed by the local community (KOBIO – a coalition of interest groups in the case of KBR) with the support and facilitation of provincial government, while national government is the lead agent for the water management areas (WMAs); and in others (for example, C.A.P.E.) the scientific community (universities, research institutions, government agencies), NGOs (e.g. World Wide Fund for Nature or WWF) and government all collaborated collectively.

■ *Who owns the initiative?*

Among the initiatives, WfW is multi-departmentally owned (WfW is jointly owned by DWAF, DEAT and DoA), the process towards establishing CMAs are owned by a single national department (DWAF), while others are collectively owned (e.g. C.A.P.E., biospheres, WoF).

■ *Stakeholders and time-frames:*

Where there is an imperative for extensive consultation with and involvement of stakeholders to ensure successful implementation, the processes leading up to the establishment of some of these structures can take quite long (eight years in the case of the first biosphere reserve and seven years in the case of the first CMA), but where the process is championed and/or implemented primarily by government or the private sector (as management agent), it gets off the ground considerably faster.

■ *Organisational failure as learning opportunity:*

Although the jury is still out on the success of most of the models, a first case of organisational 'failure' has already occurred (KBR) – the upside is that it has demonstrated some potential of having the structural ability to reorganise itself and, despite numerous setbacks, to remuster its forces. We might just learn more about what make governance systems successful from the initial failure than from the 'clinically' neat and well-managed CMA process.

■ *Focus on people:*

An innovative feature of initiatives such as WfW and WoF is its underlying socio-economic and developmental focus on improving livelihoods, poverty relief and skills development by providing employment opportunities.

■ *Representativeness and inclusiveness:*

The emphasis is placed on representativeness and inclusiveness, some explicitly mandated by law, such as the WMAs, others in the spirit of the Constitution (equity, participation, empowerment, capacity building).

■ *Overlap, incoherence, participation fatigue:*

Because of the proliferation of initiatives, a situation where the same role players could be drawn into different collaboratives, which at worst are characterised by policies which have different goals and requirements, or at a minimum can lead to participation 'fatigue', where stakeholders are expected to be involved in different structures (e.g. WfW, biospheres, C.A.P.E., CMA and WoF could all theoretically lay claim to the cooperation and participation of the same group of stakeholders).

THE WAY FORWARD

The changing role of government and the transfer of power from a few to many, made possible by the information explosion, has brought with it significant changes in both management styles and organisational structures. The role of management changed from controlling in-house-held resources to that of brokers operating across teams creating and assembling resources controlled by outside parties and creating capacity for learning, which become a pre-eminent organisational function. The trend as far as organisational structures are concerned is towards a less segmented and mechanically constrained form of organisation, which sets the stage for truly decentralised units, self-regulated and diverse, that can act locally and freed from much of the standardising constraints. These organisations are held together by organisational culture, a common vision of where the organisation is going.

It is not surprising that the environmental arena with all its complexity, ambiguity and uncertainty became a node for organisational innovation, experimentation and learning. The emergence of collaborative environmental management structures as decentralised sets of formal and informal agreements among diverse stakeholders in the form of networks and partnerships has become the leading paradigm for addressing complex environmental issues throughout the world. The notion of collaboratives includes a range of structural possibilities with the different elements held together by authority ties, exchange relations, and/or common-interest-based coalitions. In these collaboratives, influ-

ence, as exercised across a wide range, is relatively difficult to document, predict and model and this complexity and uncertainty could make analyses and comparison very difficult, if not impossible.

South Africa has followed international trends with new collaborative or cooperative environmental governance systems emerging at regional or local level over the last decade. A new and growing interest in evaluating cooperation and collaboration has led to the development of assessment tools that could be applied to study the evolving models. These structures offer an exciting window of opportunity for social and organisational learning and make a contribution to innovation in management in South Africa.

CONCLUSION

Finally, although it is clear that the organisational dimension is a critical factor in integrated environmental management, there is no single blueprint or model for achieving coordination that will suffice for all problems and contexts. More likely, the approach(es) and governance mode(s) or combinations thereof will have to (a) fit the type of problem; (b) work within the constraints and opportunities offered by the existing organisational landscape/capacity; and (c) take the local political, social, economic and cultural context into consideration and adapt and innovate within that space. There are – unfortunately – no simple answers. We should stop looking for the magical ingredient and instead focus on getting the mix right!

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