Creating public value through collaborative environmental governance[1]

K Müller
School of Public Leadership
Stellenbosch University

ABSTRACT

That collaborative management has become the central reality of public problem solving is nowhere better illustrated than in the field of environmental governance. Institutional innovations like collaborative environmental management or co-management have flourished and have 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. These innovations are necessitated by the need for governments to find alternative ways to add to public value 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 are freed from many of the standardising constraints characteristic of hierarchical government, must be viewed and in which public leaders act as brokers leveraging resources held by third parties instead of controlling in-house resources. It is generally accepted that co-management entails a process and ultimately consensus-building among all stakeholders as partners to develop relationships and knowledge which will enable them to generate sustainable solutions to new challenges. This article reflects on the question of whether the involvement of new actors in public decision-making improves the outcomes by creating shared responsibility, improving transparency, better targeting collaborative resource management to community needs and ultimately adding to the creation of public value. The challenges of public leadership in these processes will be highlighted as one of the critical key success factors in achieving these desired outcomes.

INTRODUCTION

Once considered an emerging trend, collaborative environmental management – sometimes called co-management – has become the leading paradigm for addressing complex environmental issues throughout the world. According to Conley and Moote (2003:372), collaboration is hailed as a way to reduce conflict among stakeholders, build social capital, allow environmental, social and economic issues to be addressed in tandem, and produce better decisions – all worthwhile pursuits potentially adding to the creation of public value.

South Africa has followed international trends over the last decade with new collaboratives emerging at regional or local level. In this article the evolution from a bureaucratic style of command and control to the collaborative styles of persuasion and negotiation will *firstly* be briefly described as a point of departure before focusing *secondly* on collaborative resource management or co-management as the leading paradigm in environmental governance. *Thirdly,* the emergence of collaboratives as novel innovative organisational forms of co-management organisations and governance systems and their associated leadership challenges are discussed, before turning towards collaborative environmental management in the South African context with some examples of collaborative systems which have evolved over the last decade. *Finally,* some reflections on the leadership challenges of collaboration and observations (and reservations) on the public value created are offered in conclusion.

FROM REGULATION TO COLLABORATION

The rapid changes which are threatening to overwhelm bureaucracy with its command and control attributes as we know it were predicted by Bennis (1967:238-242) over 40 years ago in his well-known essay *Organisations of the Future*. He predicted the decline of the bureaucracy, which would gradually be replaced by new organisational forms that will be formed and shaped to cope with the core problems of integration, distribution of power, collaboration, adaptation and revitalisation.

These new post-modern organisational forms should, according to Morgan (1993:282-283), emphasise aspects of the chaotic, paradoxical and transient nature of order and disorder, and require an approach that allows the theory and practice of organisation and public leadership to acquire a more fluid form in the emergence of self-organising collaborative structures. This notion of organisations developing self-organising abilities features prominently in the earlier writings of Morgan (1993), Snow, Miles and Coleman (1992), and Mecier

and McGowan (1996). But from where does this notion originate and what are the leadership and design implications for these organisational forms?

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 was towards a less segmented and mechanically constrained form of organisation, which set the stage for truly decentralised units, self-regulated and diverse, that can act locally and freed from many of the standardising constraints. 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 by small units which people can comprehend and directly manage by themselves (Mecier and McGowan, 1996: 469-472). The ecological choice favours small-scale, internally connected, less hierarchical and more autonomous or self-regulating forms of organisation (Mecier and McGowan, 1996:472-474).

As no single actor, public or private, has the knowledge and information required to solve public 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. The central reality of public problem solving for the foreseeable future will be its collaborative nature with a reliance on a wide array of third parties in addition to government to address public problems and pursue public purposes (Salamon 2002:8). It is therefore not surprising that the 1990s were hailed as the "Age of the Network" characterised by modes of governance that link actors in the public, private, community and voluntary sectors. The emergence and growth of these networks and multi-organisational partnerships reflect, according to authors such as Lowndes and Skelcher (1998:315) and O'Toole (1997:117), the complexity and intransigence of issues facing government with the pressure to deliver more with less; the search by public bodies for integration and a desire to address in innovative ways those issues that cross organisational boundaries.

CREATING PUBLIC VALUE THROUGH COLLABORATION

Many terms have been coined to describe multi-party natural resource management projects, programmes, or decision-making processes using participatory approaches, of which collaborative (natural) resources management (CNRM or sometimes just CRM) and co-management are the most prominent. Using collaborative natural resource management terminology, Margerum

(2008:487) notes that 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, goal and proposed actions; and *finally*, it requires a sustained commitment to problem solving.

Similarly Heikkila and Gerlak (2005:583) define collaborative resource management as involving a group of diverse stakeholders, including resource users and government agencies, working together to resolve shared dilemmas. According to Carlsson and Berkes (2005:70), co-management systems should be understood as governance structures which may be composed of a rich variety of actors coupled to one another by a significant number of relations involving the state, local resource users, commercial actors, NGOs, and a whole range of other public and private actors. They argue that most instances of collaborative or joint management of natural resources are more complex and sophisticated that might be concluded from the mainstream image of co-management defined as sharing power and responsibility between the government and local resource users.

According to Carlsson and Berkes (2005:67), the definitions and conceptualisations of co-management in the literature have some common underpinnings: *firstly*, they explicitly associate the concept of co-management with natural resources management; *secondly*, they regard co-management as some kind of partnership between public and private actors; and *thirdly*, they stress that co-management is not a fixed state but a process that takes place along a continuum. Similarly Borrini-Feyerabend *et al.* (2004:69) describe co-management of natural resources as a partnership by which two or more relevant social actors collectively negotiate, agree upon, guarantee and implement a fair share of management functions, benefits and responsibilities for a particular territory, area or set of natural resources.

For the purposes of this discussion the two terms are considered to be synonyms and will be used interchangeably to refer to multi-party environmental governance systems working together towards shared problem solving.

THE EMERGENCE OF COLLABORATIVES

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) and Carley and Cristie (2000:175-176) 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.

Co-management organisations may be of different types and span different levels of authority and responsibility and include decision-making bodies, advisory bodies, mixed bodies and executive bodies (Borrini-Feyerabend *et al.* (2004:279). Co-management organisations can also be distinguished on the basis of the scale on which they operate to improve natural resource management and local livelihoods. According to Borrini-Feyerabend *et al.* (2004:288-289), the three most important levels of operation appear to be the local level; the district or regional level; and the national or international level. The functions of co-management organisations at the local level usually relate to analysing situations, appraising different types of interventions, making strategic decisions, developing plans and agreements, implementing, monitoring and evaluating activities and adjusting them on the basis of lessons learned. Co-management organisations at regional, national and international levels, on the other hand, are more concerned with enabling conditions, scaling up concerns and institutional learning. The authority and terms of reference may be specified in legislation or in participatory management agreements, and members may be paid or voluntary (Borrini-Feyerabend *et al.* 2004:280).

A similar typology of collaboratives was developed by Margerum (2008:498-500) 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 government organisations in particular, 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 1 below.

LEADERSHIP CHALLENGES OF COLLABORATION

According to Salamon (2002:16), unlike traditional public administration, the "new governance" approach shifts the emphasis from management skills and the control of large public organisations to enablement skills, the skills required to engage partners arrayed horizontally in networks, and to the skills required to bring multiple stakeholders together for a common end in a situation of interdependence. In this regard Salamon (2002:608) points out that indirect government puts a premium on three skills: *firstly,* activation skills – the ability

Table 1: Differences between Collaboratives (summarised from Margerum (2008))

Contextual Characteristics	Action Collaborative		Policy Collaborative
scale	small >>>>>>		<<<<<< large
population	small >>>>>>		<<<<<< larger
significance	local significance >>>>>>		<<<<<< regional/national significance
institutional setting	simple >>>>>>		<<<<<< complex
focus	educational and restoration efforts >>>>> with individual landowners >>>>>		<<<<<< public decision making

Functional Characteristics	Action Collaborative	Organisational Collaborative	Policy Collaborative
stakeholder participation	stakeholders representing themselves rather than organisations	vary	composed mostly of stakeholders who represent organisations, interest groups, or are elected officials
management arrangements	similar for consensus buildings and implementation phases	vary	new legislation, policy and/or programmes, institutions
implementation approach	through direct action	change through organisations	change through policy

to mobilise and activate the complex partnerships that public action increasingly requires; *secondly*, orchestration skills, that is the ability to blend the partners involved in complex public action into effectively functioning systems rather than warring fiefdoms; and *thirdly*, modulation skills, that is the ability to find the right combination of incentives and disincentives to elicit the necessary cooperation among the interdependent players of a complex network without providing windfall benefits to one or another actor for doing what they would have done anyway. At operational level this requires capability in the functions

of goal setting, negotiation, communication, financial management and bridge building (Salamon 2002:608).

It might be worthwhile revisiting the theoretical underpinnings of collaboratives to identify some pointers as to the leadership style and skills which might be required to create public value in these complex settings. According to Margerum (2008), the common theory base across all types of colloboratives relates to the literature on consensus building, conflict resolution, group dynamics and facilitation. However, other aspects of the colloboratives vary, particularly during the implementation phase, when participants are trying to translate consensus into results. The theoretical underpinnings of action colloboratives are found in the literature on social capital and civil society, whereas for organisational colloboratives the theory relating to inter-organisational coordination, networks, transaction costs and public participation provides important insights. Policy colloboratives, on the other hand, have a strong theoretical basis in the literature on policy negotiation, advocacy coalitions, mediation and collaborative planning.

While stressing the continued need for an active public role, collaboration acknowledges that command and control is not the appropriate leadership approach in the world of network relationships that is increasingly coming to prevail. Given the pervasive interdependence that characterises such networks, no entity, including the state, is in a position to enforce its will on the others over the long run (Salamon 2002:15). Under these circumstances negotiation and persuasion replace command and control as the desired leadership approach. Public leaders must inspire and mobilise around a shared vision and must learn how to create incentives for the outcomes they desire from actors over whom they have only imperfect control. Therefore it seems reasonable to conclude that collaborative leadership requires strong strategic thinking skills combined with process skills such as advocacy, mobilisation, facilitation, consensus seeking, persuasion, coalition building, negotiation, mediation, conflict resolution, coordination, integration and social entrepreneurship.

COLLABORATIVE RESOURCE MANAGEMENT IN SOUTH AFRICA

The complexity of the macro-organisational architecture, with institutions in the constitutionally created three separate spheres of government with distinct and overlapping environmental governance responsibilities which have emerged in post-1994 South Africa, has created a context within which collaborative environmental governance systems could emerge. Chapter 3 of the Constitution tries to address the potential for fragmentation and lack of co-

ordination among the various executing agencies by promoting participatory, cooperative governance. In the environmental sector community participation in decision making in the management of natural resources as well as benefit sharing was further institutionalised in framework and other sectoral policies and legislation.

An openness to consider and experiment with alternative governance mechanisms combined with an approach of government decentralisation and a devolution of the responsibility for natural resources to local communities also contributed to a generally facilitating environment in the late 1990s for collaboratives to emerge. Working for Water, one of the government's flagship programmes, was the first to be initiated in 1995. The establishment of the first biosphere reserve dates back only to 1998, while the first of the water catchment management agencies was created only recently, 5 to 8 years since it was legislatively mandated in 1998. Some other initiatives such as Cape Action for People and the Environment (C.A.P.E.) and Working on Fire were only initiated in 2000 and 2003 respectively. There are also others such as CoastCare, LandCare and Working for Wetlands modelled on the initial successes of the examples cited above. To illustrate some of the South African experiences in organisational innovation for co-management, examples have been selected to provide a closer look at the variety of institutional arrangements which have emerged based on differences in process and form (Müller 2009:84).

The first of South Africa's six biosphere reserves (the Kogelberg Biosphere Reserve) was awarded international conservation status by the United Nations Educational, Scientific and Conservation Organisation (UNESCO) in December 1998 after an 8-year-long process of establishment. Kogelberg was followed by the Cape West Coast (2000), the Waterberg reserve and the Kruger to Canyons reserve (2001), the Cape Winelands (2007) and Vhembe (2009). The aim of biosphere reserves is to promote sustainability by linking conservation and development. They are typically zoned into core, buffer and transition areas, each fulfilling the various functions of conservation, development and research. The stakeholders involved in a biosphere reserve typically operationalise their partnership by establishing either a public trust or a not-for-profit company (Section 21 company) as the governance structure (Müller 2009:85-86).

The primary water resource management catchment-based institution to be established in each of the 19 water-management areas is the Catchment Management Agencies (CMAs) (the first was established in 2005) to facilitate decentralised public decision-making based on a participatory approach to water resources management through the involvement of stakeholders and role-players as mandated by *National Water Act*, 1996 (Act 96 of 1998). The CMA is a legal entity, headed by a governing board, which must be representative of all the relevant stakeholders in its particular WMA. 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 2009:89-90).

A collaborative network known as the Cape Action for People and the Environment (C.A.P.E.) was formally established in 2001 to implement a strategic plan developed in response to the threat to the Cape Floristic Region – one of the worlds "hottest" hotspots of biodiversity. C.A.P.E. was institutionalised through a Memorandum of Understanding signed between stakeholders from government, research and conservation NGOs. Its governance structure consists of the C.A.P.E Co-ordination Committee, representing national ministers and members of executive councils with the overall function to co-ordinate the long-term implementation of the C.A.P.E. Strategy supported by a co-ordination mechanism, and the C.A.P.E. Co-ordination Unit hosted by the South African National Biodiversity Institute. The C.A.P.E. Implementation Committee, which represents the 21 government departments, municipalities, statutory bodies and accredited non-governmental partner organisations, carries out the vision of C.A.P.E. (Müller 2009:86-87).

An innovative collaborative in the organisational form of a public-private partnership between government and the commercial forestry sector going under the name of Working on Fire (WoF) was established in 2003 to create an efficient and effective nationally co-ordinated fire-fighting network by pooling and sharing of resources. WoF operates as a Section 21 not-for-profit company in partnerships with other fire-fighting agencies, including conservation agencies, municipalities and the forestry industry through a nationwide system of fire bases where fire-fighting crews are stationed. Operations coordinated by dispatch and co-ordinating centres in each of the eight fire-prone regions of the country report to a National Co-ordinator linked to the National Disaster Management Centre (Müller 2009:87-88).

And finally, the LandCare programme is an example of a community-based natural resource management initiative championed by the national Department of Agriculture and facilitated through the provincial departments of agriculture. The goal of the LandCare Programme is to develop and implement integrated approaches to natural resource management in South Africa by encouraging community groups, provincial and local governments to responsibly manage and conserve the land, vegetation, water and biological diversity in their local area while simultaneously improving the livelihoods of communities. On a project-by-project basis the institutional arrangements can take various forms from informal committees to more formal partnership arrangements such as a not-for-profit company or trust (South Africa 2010: National Department of Agriculture. [Online]).

DOES COLLABORATION ADD TO THE CREATION OF PUBLIC VALUE?[2]

To answer the question of whether collaboration adds or creates public value one would have to compare reality to a set of criteria. The point is made by Conley and Moote (2003:375) that the selection and weighing of criteria are normative in nature as the criteria relevant to a given evaluation will always vary according to the reasons for the evaluation, the values and perspectives of the evaluator, and the context and characteristics of the collaborative effort being evaluated. Typical evaluation criteria could include *process* criteria (e.g. shared vision, inclusive participation, consensus-based decision-making), *environmental outcome* criteria (e.g. improved habitat or water quality, biological diversity preserved) and *socioeconomic outcome* criteria (e.g. building of relationships and trust, gaining of knowledge and understanding, improved capacity for dispute resolution, changes to or creation of new institutions).

Based on documentary evidence and interviews with individuals involved in facilitating and managing different types of collaboratives in the Western Cape, the following observations on the upside can be offered:

- In terms of environmental outcomes it can be argued that the emergence of the various forms of collaboratives such as biosphere reserves, water management agencies and LandCare programmes have added public value compared to the situation before their establishment. For example, in the case of the Cape West Biosphere Reserve, 5000 ha of land are under better conservation management while an additional 2200 ha stand to be added (Du Toit pers. com. 2010). Similarly a LandCare-facilitated initiative in the Southern Cape (Agulhas Biodiversity Initiative) led to the establishment of a Special Management Area in the Nuwejaars wetland area, a wetland system of high conservation value previously characterised by conflict between the land owners and conservation agencies (Steyn pers.com. 2010).

- The collaboratives have been successful in leveraging new funding: the Cape West Coast Biosphere secured funding of more than R6 million from 10 different funders/stakeholders, of which more than half was from international sources since its inception (Du Toit pers. com. 2010), the Nuwejaars Special Management Area obtained funding in the order of 1.8 million euro from the European Union in 2008 (Steyn pers. com. 2010), while C.A.P.E. has mobilised project funding (US$3million) through the Critical Ecosystem Partnership Fund (CEPF) as well as leveraging extensive agency co-financing and partnership arrangements; Working on Fire is funded on a 'user pays' basis, except where the fire has spread and the property and lives of the general public are threatened; once fully developed, the Water Catchment Agencies will be funded largely through the collection of water-use charges.

- The organisational form and governance arrangement in the form of a public trust or a not-for-profit company can sometimes work to the advantage of a collaborative as international funders are more inclined to provide funding to non-governmental organisations as well as by-passing the perceived bureaucratic constraints of working through government agencies (Du Toit pers. com. 2010).
- The apolitical stance of collaborative non-governmental governance structures such as the not-for-profit company, as in the case of the Cape West Coast Biosphere Reserve, was beneficial in fostering co-operative governance in situations where the city and province were governed by different political parties (Du Toit pers. com. 2010).
- The multi-stakeholder processes initiated to establish Catchment Management Agencies in the water management areas serve as good examples of adding public value by paying careful attention to process criteria, taking the examples of water management areas in the Western Cape (Gouritz, Breede and Olifants-Doorn) as illustrations: the processes were allowed to progress at a pace which is politically and culturally sustainable, given local conditions, with timeframes of 5 to 8 years; care was taken to make the process inclusive of all stakeholders, with participation through forums and reference groups and the building of consensus over the real nature and extent of the problem at hand, and consensus on, and commitment to, the means of resolution was emphasised (Enright. pers. com. 2010, Müller 2009:89-90).
- The gaining of knowledge and understanding by the participants in multi-stakeholder processes was another positive outcome: for example, the processes were informed by the Department of Water Affairs building the capacity of the participants in integrated water resource management through the sharing of information, workshops and training (Enright pers. com. 2010).
- One can also argue that the water sector with its inherent conflict potential over scarce resources, and the building of relationships and trust between stakeholders should lead to improved capacity for implementation and dispute resolution over the longer term.
- An innovative feature of initiatives such as Working on Fire, Working for Water and LandCare is their underlying socioeconomic and developmental focus on people by improving livelihoods, providing poverty relief and skills development by making employment opportunities available: the training of mostly previously unemployed recruits, with a special emphasis on those who are most marginalised, is multifaceted, based on a philosophy which seeks to provide recruits with sustainable life skills which they can deploy for their own use as emerging contractors after having exited the programme (Muller 2009:84-90).

On the downside, the following reservations should be noted.

- Leadership plays a critical role: at the strategic level where government can play the role in formulating the vision for sustainable natural resource management, as well as at the tactical and operational levels, where champions are needed to mobilise for and facilitate collaboration. An example of this is the contrast between success in outcomes of multi-stakeholder processes achieved in different regions. The soft underbelly of collaboratives could be those cases where success is totally dependent on the personalities of founders and the constant nudging of champions (Du Toit pers. com. 2010, Enright. pers. com. 2010).

- The capacity of civil society organisations and individuals to engage government and determine the outcomes of collaborative efforts. This could possibly explain the apparent success of collaboratives in the Western Cape Province: individuals and private landowners are the drivers of the Cape West Coast Biosphere initiative and the existence of well-developed and organised irrigation institutions when multi-stakeholder processes were initiated in the water management areas ensured active participation (Du Toit pers. com. 2010, Enright pers. com. 2010).

- The case of the Kogelberg Biosphere Reserve provides an interesting case for the purposes of organisational learning: the leadership of the Kogelberg Biosphere Reserve failed to build effective partnerships between stakeholders, which opened up the space for interest groups like KOBIO to 'capture' or assume leadership roles. By 2004 this Section 21 company 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 (Muller 2008:97).

SUMMARY AND CONCLUSION

Although collaborative environmental governance or co-management is a fairly recent innovation in South Africa, it has been embraced with considerable enthusiasm as illustrated by the proliferation and diversity of institutional arrangements which have emerged. As co-management requires a process and ultimately consensus building among all stakeholders as partners to build relationships and knowledge which will enable them to develop sustainable solutions to new challenges, the question is whether the involvement of new actors in decision making has improved the outcomes and ultimately created public value.

On face value, one could argue that considerable value has been created in terms of environmental, process and socioeconomic outcomes. The examples

that have been cited include more land under better conservation management than before; the leveraging of funding from both national and international sources; the flexible organisational forms and apolitical stance facilitated cooperation between stakeholders less hampered by bureaucratic and political constraints; inclusive multi-stakeholder processes with information sharing and knowledge and building trust and consensus over extended periods of time; and capacity building and job creation.

The leadership challenges associated with these collaboratives requires a shift of emphasis from management skills and the control of large public organisations to the development of enablement skills, the skills required to act as a broker leveraging resources held by third parties, to engage partners arrayed horizontally in networks, and to bring multiple stakeholders together for a common end in a situation of interdependence. The self-regulated and diverse collaboratives, which act locally and are free from many of the standardising bureaucratic constraints, must be held together by the organisational culture and a common vision of where the organisation is going. Therefore, collaborative leadership requires a strategic vision while activating, orchestrating and modulating the co-management processes to achieve the desired collaborative outcomes.

NOTES

1   This article is based on research supported by the National Research Foundation and is a partly adapted version of a paper delivered at the 12th International Winelands Conference on *Public Leadership for Added Citizen Value*, Stellenbosch, 15 -19 March 2010.

2   The observations in this section are based on personal interviews with Janette du Toit (Programme Manager: Cape West Coast Biosphere Reserve) on 19 January 2010, Willie Enright (consultant and previously working for the Department of Water Affairs) on 20 January 2010 and Francis Steyn (Landcare Manager, Department of Agriculture, Western Cape on 21 January 2010.

REFERENCES

Bennis, W. 1967. Organizations of the Future. In Sharfritz, J.M., Hyde A.C., and Parkes, S.A.J. (eds.) 2004. *Classics of Public Administration*. 5th Edition. Bellmont, CA: Thompson Wadsworth.

Borrini-Feyerabend, G., Pimbert, M., Farvar, M.T., Kothari, A. and Renard, Y. 2004. *Sharing Power – Learning by doing in co-management of natural resources throughout the world*. Tehran: IIEED and IUCN/CEESP/CMWG, Cenasta.

Carley, M. and Christie, I. 1992. *Managing Sustainable Development*. London: Earthscan.

Carlsson, L. and Berkes, F. 2005. Co-management: Concepts and methodological implications. *Journal of Environmental Management*. 75:65–76.

Conley, A. and Moote, M.A. 2003. Evaluating Collaborative Natural Resource Management. *Society and Natural Resources.* 16:371–386.

Du Toit, J. 2010. [Personal communication]. January 19.

Enright, W. 2010. [Personal communication]. January 20.

Heikkila, T. and Gerlak, A.K. 2005. The Formation of Large-scale Collaborative Resource Management Institutions: Clarifying the Roles of Stakeholders, Science, and Institutions. *The Policy Studies Journal.* 33(4):583–612.

Lowndes, V. and Skelcher, C. 1998. The Dynamics of Multi-Organisational Partnerships: An Analysis of Changing Modes of Governance. *Public Administration.* Summer 1998. 76:313–333.

Magerum, R.D. 2008. A Typology of Collaboration Efforts in Environmental Management. *Environmental Management.* 41(4):487–500.

Mecier, J. and McGowan, R.P. 1996. The Greening of Organizations. *Administration & Society.* February 1996. 27(4):459–482.

Morgan, G. 1993. *Imaginization – the Art of Creative Management.* Newbury Park: Sage.

Müller, K. 2008. Assessing cooperative environmental governance systems: the cases of the Kogelberg Biosphere Reserve and the Olifants-Doorn Catchment management Agency. *Politeia.* 27(1):86–104.

Müller, K. 2009. Environmental Governance in South Africa In Strydom, H.A. and King, N.D. (eds.) 2009. *Environmental Management in South Africa.* 2nd Edition. Cape Town: Juta, Cape Town.

Nelson, L.S. and Weschler, L.F. 1998. Institutional Readiness for Integrated Watershed Management: The Case of the Maumee River. *The Social Science Journal.* 35(5):565–576.

O'Toole, L.J. Jr. 1997. Implementing Public Innovations in Network Settings. *Administration and Society* 29(2): 115–138.

Salamon, L.M. 2002. The New Governance and the Tools of Public Action An Introduction. In Salamon L.M. (ed.) 2002. *The Tools of Government – A Guide to the New Governance.* New York: Oxford University Press.

Snow, C.C, Miles, R.E. and Coleman, H.J. 1992. Managing 21st Century Network Organisations. *Organizational Dynamics.* Winter 1992. 20(3):5–21.

South Africa, 2010. *National Department of Agriculture* [Online]. Available: http://www.nda.agric.za/docs/landcarepage/guidelines2000big21.htm (18 February /2010).

Steyn, F. 2010. [Personal communication]. January 20.

AUTHOR'S CONTACT DETAILS

Prof Kobus Müller
School of Public Leadership
University of Stelleboch
Private Bag X1
Matieland,

STELLENBOSCH
7602
Tel: 021 808 2195
Fax: 021 808 2085
E-mail: Kobus.Muller@spl.sun.ac.za