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<cn>8.<ct>The politics of establishing catchment management agencies in South Africa: the case of the Breede−Overberg Catchment Management Agency

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<a>8.1INTRODUCTION

South Africa is a water-scarce country, a fact aggravated by climate change and international obligations to neighbouring countries with shared watercourses (Claassen 2010). Some of the political, social and economic pressures facing South Africa's decision makers in the water sector include having enough infrastructure to secure water during low rainfall periods and supply areas of high demand, growing enough food to supply the population, and meeting the water demands of energy, industry and mining (Claassen 2010). At present most of the country's water supply has already been allocated. The only remaining 'supply options' available are linked to reallocations between different water use sectors (De Lange 2010). An additional problem that aggravates South Africa's situation of water scarcity is the deteriorating water quality in the country's major river systems, water storage reservoirs and ground water resources, which results in social, economic and health risks to society (Ashton 2010). Particular problems include acid mine drainage, eutrophication and soil erosion.

In addition to the problems of water scarcity and water quality, the South African government also faces the challenge of redressing the backlog in water supply and sanitation that it has inherited from the apartheid government. The South African government started the process of developing and introducing a number of water reforms when it came to power in 1994, to address this backlog and manage South Africa's situation of water scarcity. In summary, the Water Services Act (Republic of South Africa 1997, Act No. 108) and the National Water Act (Republic of South Africa 1998, Act No. 36~~,~~), aim to redress the inequalities of historical racial and gender discrimination, link water management to economic development and poverty eradication, and to ensure the conservation of the ecological resource base for posterity (Schreiner et al. 2002).

The National Water Act is characterised by a number of key principles that set it apart from previous water legislation in South Africa (Funke et al. 2007). One of these principles is the focus on decentralisation, which emphasises public participation in water management-related decision-making processes, and also leans on the subsidiarity principle as enshrined in the South African Constitution (Republic of South Africa 1996, Act No. 108). This principle stipulates that those functions that can be more efficiently and effectively carried out by lower levels of government should be delegated to the lowest appropriate level (Funke et al. 2007).

The principle of decentralisation is particularly relevant for this chapter, as it is directly related to the catchment management agencies (CMAs), South Africa's equivalent to river basin organisations (RBOs). In October 1999 the South African government established 19 water management areas (WMAs), whose boundaries are along catchment divides, but do not coincide with administrative boundaries as defined by local government. At the time, the establishment of 19 CMAs was envisaged. The CMAs are meant to perform certain management functions (currently the responsibility of the regional offices of the Department of Water Affairs) with which they have been tasked, and are also required to cooperate and seek agreement on water-related matters amongst various stakeholders and interested parties. A CMA is governed by a governing board to ensure stakeholder representativeness and to prevent powerful parties with vested interests from exercising control over other parties. CMAs also have a mandate to develop catchment management strategies, which constitute a plan to realise the protection, use, development, conservation, management and control of water resources in their respective WMA (DWAF 2004a; Funke et al. 2007).

Unfortunately, since the National Water Act was promulgated in 1998, the implementation of South Africa's water legislation has been slow and problematic (Funke et al. 2007). These implementation problems also take the form of a serious backlog in setting up CMAs (Hattingh et al. 2004), as to date only two of the originally planned 19 CMAs have been established. These CMAs are the Inkomati CMA and the Breede−Overberg CMA (BOCMA) (DWA 2012).

In a recent development, the Department of Water Affairs made a decision to reduce the number of 19 planned CMAs to nine, as stated in its second National Water Resource Strategy (DWA 2012). This reduction of the number of CMAs is the result of a reconsideration of the management model and viability assessments related to water resources management, funding, capacity, skills and expertise in regulation and oversight, and an effort to improve integrated water systems management. The nine CMAs are: Limpopo, Olifants (Mpumalanga Province), Inkomati−Usuthu, Pongola−Umzimkulu, Vaal, Orange, Mzimvubu−Tsitsikamma, Breede−Gouritz and Berg−Olifants (Western Cape Province) (DWA 2012). While we have noted these most recent developments around CMA establishment in South Africa, the focus of this chapter is on BOCMA's establishment process and functioning to date.

The BOCMA case study was selected because it has not yet been extensively studied, particularly when compared to the Inkomati CMA. Therefore there is room for learning more about the dynamics behind the establishment and current functioning of this CMA. We used a mixed-method approach in conducting the

research for this chapter. We conducted a desktop study to identify and analyse literature that has been published on CMAs in general and BOCMA in particular. It appears that to date not many studies on BOCMA's establishment and functioning have been completed. To address this information gap, we also conducted semi-structured interviews with individuals who were either involved in the establishment of BOCMA or who are currently conducting research on the CMA. A one-day field trip to the Breede−Overberg area was also undertaken to allow us to get a sense of the circumstances and natural environmental realities that characterise some parts of the WMA.

In the next section we turn to a discussion of the Breede−Overberg WMA, followed by a brief history of the establishment of BOCMA. This is followed by a section on the institutional design of CMAs (8.3), with particular reference to BOCMA, in terms of the various rule types and types of RBOs as outlined in Chapter 1 of this book. In section 8.4, we discuss the politics and strategies involved in the introduction of the CMA concept into the National Water Act and the latest developments around CMAs in South Africa. We then reflect in section 8.5 on what can be surmised about BOCMA's democratic functioning and performance~~,~~ to date before concluding the chapter (section 8.6).

<a>8.2THE BREEDE−OVERBERG CATCHMENT MANAGEMENT AGENCY

<b>8.2.1Overview of the Breede−Overberg Water Management Area

The Breede−Overberg WMA stretches over an area of 19 789 square kilometres (km^2); the Breede area covers 12 600 km^2 and the Overberg area covers 7189 km^2. The Breede River Valley is bordered by the Franschhoek and Du Toit's Mountains in the West, the Hex River Mountains in the North, the Langeberg Mountains in the East and the Indian Ocean in the South. Other WMAs bordering the Breede−Overberg WMA are the Berg, Olifants/Doorn and Gouritz WMAs. In the mountain areas the rainfall of the WMA is highest at around 3000 millimetres per annum (mm/a) compared to the central and north-eastern regions where rainfall is as low as 250 mm/a. Occasional snowfalls are not uncommon. The average annual evaporation ranges from 1200 mm in the south to 1700 mm in the north. The mean annual run-off for the Breede−Overberg is 2462 million cubic metres per year (mm^3/yr) (DWAF 2004a; BOCMA 2011; Nel et al. 2011).

<Figure 8.1 about here>

The estimated size of the population of the WMA is around 500 000 people, with two-thirds residing in towns and villages. In 2004 the Department of Water Affairs and Forestry (which changed its name to the Department of Water Affairs in 2009) noted that demographic projections indicate population growth in the coastal areas only, with a decline in the inland areas. The department therefore envisaged the total population of the WMA to remain constant (DWAF 2004b). Two district municipalities and seven local municipalities are located in the area. The district municipalities are the Cape Winelands and the Overberg District Municipalities. A small portion of the Eden District Municipality also falls within the WMA. The local municipalities are Witzenberg, Breede Valley and Langeberg to the north, Theewaterskloof and Overstrand in the south-west, and Cape Agulhas and Swellendam in the south-east (BOCMA 2011).

The major economic sectors in the WMA are agriculture and coastal tourism, which make the economic base of the area quite water-dependent. Agriculture is dominated by wheat cultivation. Other crops that are cultivated include orchard crops, vineyard crops of wine and table grapes, citrus and lucerne. Forestry is practiced in the high-rainfall mountainous areas, situated entirely in the Palmiet River and Upper Riviersonderend River Catchments. The allocation of water to agriculture and coastal tourism has a direct bearing on the economic growth paths of these sectors and on the natural ecosystems that support tourism. There are indications that the catchment's water resources are stressed and that aquatic ecosystem health is deteriorating. According to the Department of Water Affairs, intensive irrigation takes place in the Breede and Riviersonderend Valleys and Palmiet River Catchment. These are also the areas where economic activities are concentrated (BOCMA 2011).

<b>**8.2.2Establishment of Breede−Overberg Catchment Management Agency**

BOCMA was established in 2005 under the National Water Act (BOCMA 2011) and the BOCMA Governing Board was established two years later.[7] Prior to the establishment of the CMA and the development of its catchment management strategy, the Western Cape Regional Office of the Department of Water Affairs and Forestry was fully responsible for the management of the catchment's water resources through the WMA's internal strategic perspective (DWAF 2004a). According to McConkey et al. (2005), the establishment of BOCMA was the result of deliberate negotiations between various stakeholders, assisted by the Western Cape Regional Office of the Department of Water Affairs and Forestry. The main conduit for this stakeholder process was the BOCMA Reference Group, which consisted of representatives from various sectors.[8]

A number of actors were involved in the CMA's establishment process. The most notable actor was the Department of Water Affairs and Forestry at national and regional level. Others were also involved, specifically as part of the BOCMA Reference Group. Pegasys Strategy and Development, a consultancy, also played a key role in terms of facilitating stakeholder engagement throughout the BOCMA establishment process.[4] BOCMA (2009) notes that the first step in the development of the catchment management strategy that was released in February 2011 was the identification of stakeholders and previously disadvantaged groups (for example, emerging farmers[5]). In May 2010, a networking meeting was held with all governmental authorities: provincial and semi-government departments, local and district municipalities and water user associations. This was to ascertain how their planning priorities would influence BOCMA's planning processes. The meeting was facilitated by Pegasys Strategy and Development (BOCMA 2010).

<a>8.3INSTITUTIONAL DESIGN

<b>8.3.1Introduction

This book makes use of five types of rules in its analysis of different institutional arrangements and, based on these rule types, also discusses different RBO types. This section deals with institutional design by first classifying CMAs and BOCMA in terms of these different rule types, and then proceeding to discuss them according to different RBO types.

<b>8.3.2Rule Types

The rule types referred to in this book are authority rules, aggregation rules, boundary rules, information rules and pay-off rules (see Huitema and Meijerink, Chapter 1, this volume). In the case of CMAs in general and BOCMA in particular, Table 8.1 summarises the rules that have become evident in CMA establishment and functioning.

<Table 8.1 about here>

<c>Authority rules

CMAs are statutory bodies established in terms of the National Water Act and are able to develop their catchment management strategy. Democratic control is also exercised through the governing board, which is representative of all stakeholders and their interests in the WMA for which the CMA is responsible. It is in this regard that BOCMA plays a coordination governance function where it coordinates the actions of relevant stakeholders, including various actions along the governance value chain, such as financially sustaining the CMA, distributing benefits and dispute resolution. This coordination takes place on a horizontal, cross-sectoral level. Regarding the influence that other actors have on the functioning of CMAs, reference can be made to the Minister of Water and Environmental Affairs' key role in CMA establishment. The minister also appoints the governing board and can remove board members for good reason, while the CMA oversees its institutional functioning (DWAF n.d.). In this respect the minister plays a rule-making, construction of collective entities, coordination, monitoring and enforcement governance function as well as an initial financing governance function.

While stakeholder engagement is firmly enshrined in the National Water Act and the Breede−Overberg catchment management strategy, BOCMA is nonetheless governed by a stringent hierarchy. The highest-ranking decision maker is the Minister of Water and Environmental Affairs, who takes the most challenging and important decisions, such as appointing the CMA board or approving the catchment management strategy. After the minister, it is the board of directors that is tasked with making important decisions, which must be in line with the stipulations contained in the National Water Act (for example, equity considerations, stakeholder participation, and so on) and the decisions of the Ministry of Water and Environmental Affairs.

Here it is important to reflect on a particularly important point as far as the autonomous functioning of CMAs in South Africa is concerned. As stated above, the power to appoint the CMA's board rests with the Minister of Water and Environmental Affairs. While one could argue that this extent of power in the minister's hands negates the CMA's autonomous functioning; a counter-argument can be made for the importance of ensuring a reasonable degree of representivity at the CMA board level. This is especially important given the diversity of stakeholders in many WMAs, and the differing degrees of education, capacity, power and so on between for example marginalised water users and established commercial farmers.[6] BOCMA's governing board has representation from many corners, and it includes the following groups: emerging farmers, the Western Cape Provincial Government, civil society, industry and business, commercial agriculture, conservation, poor and rural settlements, and emerging farmers (BOCMA 2013).

Brown (2011) substantiates the need for strong government intervention when appointing a CMA board, and argues that given the particularities of the South African context, it may make sense to reassess and in fact strengthen the role of the state in participatory water resources management altogether. In addition Brown (2011:

180) challenges the widely held assumption that 'the higher the level of power devolved to participatory institutions at the local level', 'the greater the outcomes in terms of efficiency and social equity'. The danger exists that strong stakeholder participation may reinforce rather than reduce inequalities in the case of asymmetrical power structures. To tie in with the point above, a laissez-faire approach by the Department of Water Affairs and Forestry could have resulted in a lack of representivity on the board of the two existing CMAs, with the power in the hands of the empowered stakeholder groups at the expense of their marginalised counterparts.

In addition to, and perhaps over and above, representivity, it is increasingly being recognised that it is also vital for a board to have the skills and capacity to function effectively. These considerations are likely to become increasingly prominent in the CMA board establishment process. BOCMA's governing board has a range of competencies including a water resource manager, water resource planner, catchment management coordinator, water allocation reform officer, water use manager, water use specialist, water use officer, licensing clerk, participation and stakeholder engagement manager, water liaison officer, data manager, water data officer and data capturer. While the board has appointed people to fill these positions, and is reportedly doing well to date in terms of operational decision making, it remains to be seen how well and to what effect these positions will be utilised, especially when challenges present themselves (BOCMA 2013). Since these competencies are linked closely with BOCMA's performance as an organisation and since it is still a fledgling organisation that has had a slow start, it is perhaps too early to reflect on this point, and more research into the matter is required.

<c>Aggregation rules

In terms of aggregation rules individual views are accommodated in the public participation phase when catchment forums are formed in the run-up to developing a proposal to establish a CMA. The main purpose of this phase is to ensure that a trusting and constructive relationship is developed between all stakeholders and interest groups, and to find a common vision. While the CMA proposal is being developed, stakeholders may feel that a formal committee, representative of all stakeholders, may be required to guide the CMA establishment process. This would take the form of a catchment steering committee. Once the CMA is established, the minister, responding to the advice of an advisory committee, appoints the governing board, which must represent all stakeholders (including current and potential user groups) and the interests they have in the WMA (DWAF n.d.).

In terms of BOCMA's establishment process two separate stakeholder engagement processes took place: one in the Overberg area and one in the Breede River Basin. These differed slightly from the process foreseen by the government but still fulfilled the purposes of stakeholder consultation and public participation. In the Overberg area information sharing on CMAs and the process of developing a CMA proposal for the WMA formally commenced in 1999. A series of public meetings was held in 1999 and 2000 to inform the public about the CMA establishment process, and to identify individuals, stakeholders and interested and affected parties willing to serve on six catchment steering committees (one for each geographic region in the Overberg area). In June 2000 membership of the Overberg Stakeholder Committee was finalised. The first two meetings of the Overberg Stakeholder Committee were held before the BOCMA Reference Group was formed, which was to take forward the CMA proposal development process. A further round of six public meetings was held in November 2001 before the CMA proposal was finalised. The Overberg Stakeholder Committee was disbanded after the CMA proposal was first submitted in April 2002. Most of the six steering committees are however continuing with their meetings and have also changed their names to catchment forums to fit the terminology used in the National Water Act (DWAF 2004a).

Public participation in the Breede River Basin was closely tied to the Breede River Basin Study that started in 1999 and was completed in June 2002. The Study was conducted by Ninham Shand Consulting Services, MBB Consulting Engineers and Jakoet & Associates on behalf of the Directorate: National Water Resource Planning of the Department of Water Affairs and Forestry. The Study finally published in October 2003 (DWAF 2003). ~~with a~~A formal public participation process ran~~unning~~ for the duration of the study. - The purpose of this public participation process was for the project team to get as much input from stakeholders as possible and to be able to share their findings with the public. The study and the CMA development process were closely linked. This link involved using the Stakeholder Committee of the Breede River Basin Study, which was formed in 2000, as a key component of the BOCMA Reference Group together with the Overberg Stakeholder Committee. Particular attention was paid to the inclusion of previously disadvantaged groups on the Stakeholder Committee of the Breede River Basin Study (DWAF 2004a).

The Breede River Basin Study and the Overberg Stakeholder Committees met for the first time on 15 November 2000 as the Breede WMA Stakeholders Forum. This meeting served for the committees to reach final agreement on the CMA proposal development process and to give preliminary inputs on the water resources of the Breede−Overberg WMA and current management arrangements. An agreement was reached that a smaller committee, the BOCMA Reference Group, would take the CMA proposal development process forward, working closely with the Department of Water Affairs and Forestry and the support team (DWAF 2004a).

After BOCMA's proposal had been submitted to the Department of Water Affairs and Forestry, a waiting period ensued. During this time the BOCMA Reference Group interacted with the Advisory Committee regarding the composition of the governing board that was still to be appointed. Meanwhile capacity building of water resource committees and forums continued (McConkey et al. 2005).

Currently decision-making within the BOCMA takes place by means of democratic agreement, cooperation and open discussions in meetings (Page 2012). Generally the CMA board tries to reach consensus on the decisions it takes.[9] This prevents a situation where strong board representatives are able to overwhelm weaker ones. Egalitarianism is the rationale behind this practice.

<c>Boundary rules

In terms of boundary rules, CMAs are inclusive in that provision is made for stakeholders to participate in catchment forums, catchment steering committees and represented on the governing board (DWAF n.d.), as explained in more detail above. During the CMA proposal drafting process all CMAs are required to have a reference group to inform the proposal. This reference group would typically consist of 150 to 200 stakeholders, the aim being to represent as many sectors as possible, from conservation and environmental organisations to ratepayers' associations and forestry and service providers in the WMA. This large group is then split up into smaller groups, each of which has an opportunity to give inputs into the CMA proposal. For BOCMA this process was quite well run and representative.[10] The reference group included representatives from provincial government, local government, the agricultural sector, non-governmental organisations and environmental interest groups. The CMA proposal process was split up into different phases, and the reference group was consulted for each phase. This intensive stakeholder consultation process was very inclusive, but also took very long: nine years in total (DWAF 2004b).[11]

In the South African context, however, inclusivity is not only about rules that are stipulated on paper or being included in a particular committee or board, but much more about the agency of different stakeholders to influence decision making and institutional processes, such as CMA establishment. So, for instance, an established commercial farmer will likely have considerably more power, in the form of resources, experience and clout, to influence decision making and institutional processes than an emerging farmer, who may have very limited resources and experience at their disposal. Said differently, an emerging farmer can be represented or included in an organisational structure, but will not necessarily have the same power as a commercial farmer.

In addition, the geographical delineation of BOCMA goes back to the development of the National Water Act in the latter half of the 1990s. According to Page (2012), the following factors were important in determining the boundaries of a WMA: watercourse catchment boundaries, social and economic development patterns, efficiency considerations and communal interests within the area in question. Two particularly important considerations were the natural hydrological boundaries and the potential for achieving the CMA's financial viability in the medium to long term (Page 2012). At the time it was Minister Kader Asmal who oversaw the National Water Act drafting process and, together with the Department of Water Affairs and Forestry, was responsible for the delimitation of the country's WMAs (McConkey et al. 2005). The rationale behind this process was to arrive at a situation where water resources would be developed for the greater good of society through both integrated water resources management and sustainability.[12] With regard to the establishment of the WMAs and the CMAs it is possible that the government at the time was trying to adopt prominent concepts, noticeably integrated water resources management and sustainability, without taking into consideration the potential difficulties of practically implementing these concepts.

<c>Information rules

In terms of information rules, a key document containing important knowledge about the strategy and functioning of a CMA is the catchment management strategy that it is required to be progressively developed and implemented. A catchment management strategy must 'set principles for allocating water to existing and prospective users, take into account all matters in terms of the protection, use, development, conservation, management and control of water resources, be in harmony with the National Water Resources Strategy and be reviewed every five years' (DWAF n.d.: 18). In terms of gathering inputs into this strategy, this has to happen in consultation with stakeholders in the WMA and go through a public consultation process (DWAF n.d.). It therefore appears that the experiential knowledge of stakeholders is valued highly in the official language and functioning of CMAs. CMAs, once established, are also expected to communicate relevant information to other actors in the catchment.

An actor that stands out as having had a particularly strong influence on BOCMA's catchment management strategy is the scientific community, particularly individuals from engineering, hydrology and soil sciences ~~backgrounds~~ that are former employees of the Department of Water Affairs and are now independent consultants. This influence is evident in the fact that the scientific community was involved in the design of CMAs at the national government level in the late 1990s, and has since then also produced a substantial volume of research reports on how CMAs should function and be managed in terms of the National Water Act,

equitability (pro-poor governance approaches), integrated water resources management and the notion of sustainability (see Meissner et al. 2013). The scientific community has also identified a host of challenges that CMAs are likely to face in the run-up to their establishment and functioning thereafter. These include human, technical and financial capacity requirements (Pegram et al. 2006). In this regard, the CMA process, including that of BOCMA, is still quite technocratic, with knowledge from the environmental sciences and engineering being highly valued. The majority of knowledge regarding the establishment and running of CMAs is produced by natural scientists (Meissner et al. 2013~~n.d.~~). This means that the knowledge is likely to take the form of technocratic thinking that will, in turn, influence the establishment and operational processes of CMAs.

In terms of its current functioning and operations, it has taken a while for BOCMA to receive delegated functions and duties from the Department of Water Affairs and therefore the development of the operational process has been a bit slow. At the moment, there is a focus on getting a better grip on the hydrology within the WMA and to know exactly how much water is being used. There is also a focus on establishing water user associations and on cooperating with local government around water resource protection. There are currently two stakeholder forums, one for the Breede and one for the Overberg, but it is not clear how much they are being used.[13] It is therefore perhaps a bit too early to comment on exactly which information rules BOCMA has in place.

<c>Pay-off rules

In terms of pay-off rules CMAs have certain inherent powers, that is, 'the powers of a natural person of full capacity', and can therefore open a bank account, enter into contracts and borrow money. A CMA can be funded or recover costs from water use charges made in its WMA in terms of the pricing strategy for water use charges set by the Minister of Water and Environmental Affairs, ~~from money~~ from any other lawful sources (for example, grants, loans), or from money appropriated by Parliament (DWAF n.d.).

In terms of BOCMA it appears that some of the CMA's funding comes from water management charges levied on water users, and that this is supplemented by funding from the Department of Water Affairs as initial 'seed' funding. There has also been some international funding provided by the Dutch Unie van Waterschappen (Page 2012). This funding has however been limited and there is a need for the CMA to become more financially independent in order to implement its catchment management strategy.

In terms of the question 'Who benefits and for what?' (Strange 1996), or how benefits and costs are to be distributed within the WMA, this is not yet clear in the case of BOCMA. An assumption can be made that strong and well-resourced actors (for example, government, scientists and consultants, agriculture and tourism) are likely to receive most of the benefits. This indicates that the National Water Act has not yet achieved its objectives of socio-economic development and redress, as those who continue to benefit from its implementation are already powerful actors, while poor and marginalised actors continue to be disadvantaged.

<b>8.3.3River Basin Organisation Types

Here follow some reflections on where CMAs fit into the typology of RBOs that was presented by Huitema and Meijerink in Chapter 1 of this volume, and also, specifically, where BOCMA fits.

CMAs fall somewhere between the different types of RBOs presented in this book. Given the authority rules that characterise them, as discussed above, CMAs are in some respects quite autonomous. However they also show characteristics of agencies in that they can only be created through the minister's approval to perform water resource management at the regional or catchment level, and the minister controls the appointment of the board. This arrangement could potentially affect the independence of CMA board members. In addition, the initial functions of a CMA mostly centre on coordinating the activities of water users, promoting community participation, advising the Department of Water Affairs and coordinating the implementation of its catchment management strategy with the water services development plans of water services authorities. The additional powers and duties around water resources management that it may obtain from the Department of Water Affairs are likely to be delegated (carried out on behalf of the minister) at first, and only assigned (full transfer of duty to the CMA) once the CMA has demonstrated its ability to carry out the relevant power or duty (DWAF n.d.). BOCMA is progressing towards this institutional arrangement with the Western Cape regional office of the Department of Water Affairs still overseeing management of the WMA.[14]

In addition to having autonomous RBO and agency RBO characteristics, the coordination-focused functions of a CMA tie in with the description of coordinating RBOs. A CMA also has some partnership characteristics in that it can be established on the initiative of the community and stakeholders concerned, and is therefore also accountable to them. Similarly, a CMA board can be seen as a partnership between various water user groups (DWAF n.d.), as is evident in BOCMA's catchment management strategy (BOCMA 2011).

In terms of the move from 19 to nine larger consolidated CMAs as per the second edition of the National Water Resource Strategy, it appears that CMAs in South Africa may, at least in the short to medium term, be moving further away from autonomy status and increasingly towards agency status. The strategy states that the Department of Water Affairs will assist CMAs in building capacity to manage a range of functions that

ultimately are to be delegated to them. These functions include, amongst others, water use authorisation, water resources protection, water quality management and water resources planning. The Department of Water Affairs will also be considerably more involved in CMA establishment, with 'a dedicated high-level team' to drive the establishment and operationalisation of the nine CMAs by 2016. This high-level team will also communicate to affected water sector institutions and other stakeholders regarding CMA establishment and the devolution of powers and functions (DWA 2012). In addition, our research suggests that private consultants will continue to play an important part in assisting the Department of Water Affairs and CMAs with the CMA establishment process and the drafting of catchment management strategies. The Department of Water Affairs' increased involvement in CMA establishment and functioning may be due to the fact that it is trying to take back control over the process of CMA establishment, which has been lagging behind considerably.

<a>8.4POLITICS

When CMAs were first introduced into the discussions around the National Water Act there were both propagators and resistors. A key driving force behind the process was the then Minister of Water Affairs, Kadar Asmal, who was very strongly in favour of decentralising certain water management responsibilities to the lowest possible level and promoting high levels of public participation. As mentioned earlier this ties in closely with the South African Constitution's subsidiarity principle, which implies that those functions that can be carried out more effectively and efficiently at lower levels of government should be delegated to the lowest appropriate level (Funke et al. 2007). Also, as discussed earlier, concepts such as integrated water resources management and sustainability (compare Jaspers and Gupta, Chapter 2, this volume) were a key influence on the National Water Act and related CMA development process.

At the same time, however, there were resistors to this process. These were individuals in the Department of Water Affairs and Forestry who were resistant to change in general and to the idea of CMAs in particular. Suddenly these technocrats were faced with new and at the time revolutionary ideas (for example, those of integrated water resources management and subsidiarity), which were very different from the department's day-to-day technical operations which they were familiar with. There were also resistors outside the Department of Water Affairs and Forestry, especially systems modellers, who up until then had benefited from the use of their models as part of the department's centralised system of water resources management. These modellers resisted demands for the integration of existing models to support the new decentralised system of water resources management. Instead the modellers competed against each other, each promoting their own model for use by future CMAs.[15] These propagator and resistor dynamics are in line with the argument that reform processes are likely to be contested by certain actors, while others try hard to push them through (Kemerink et al. 2011).

The BOCMA establishment process ran relatively smoothly[16] as intensive stakeholder engagement took place in the Overberg area and Breede River Basin, and the National Water Act's guidelines on how the CMA process should be constituted were closely adhered to. The complexities of this process are difficult to establish, and may have found expression in the deliberations of the BOCMA Reference Group. Although one would want to assume that the CMA establishment process was conducted in a fully democratic environment (where every stakeholder's voice was heard and everybody's interest was taken into consideration), it is likely that different groups had different levels of power at various points in time, which is the result of a mixture of hard and soft power. Here it is relevant to refer to Nye (2004: 6), who states that '[s]oft power is a staple of daily democratic politics. The ability to establish preferences tends to be associated with intangible assets such as attractive personality, culture, political values and institutions, and the policies that are seen as legitimate or having moral authority.' To the untrained eye stakeholder engagement might look like a dynamically and democratically inclusive process, but in fact it can still be quite command-and-control driven and/or dominated by certain powerful actors at the expense of more marginalised actors. How this plays out in BOCMA and the WMA in future is an area that needs to be researched further.

The latest nine WMAs are, like their 19 predecessors, designed to take into consideration river catchment and aquifer boundaries, the future financial viability of the CMA (based on the WMA's economic realities), stakeholder participation and equity. What differs from the original process of identifying WMAs is that the Department of Water Affairs has had to reconsider the CMA management model as a whole, given the limited success it has had to date. The Department of Water Affairs has therefore focused particularly on the availability and allocation of funding, capacity, skills and expertise in WMAs. The rationale behind reducing the number of WMAs has been to combine weaker WMAs with those that have the capacity to manage water resources optimally from the Department of Water Affairs's point of view. In addition the Department of Water Affairs argues that combining CMAs will result in improved distribution of scarce technical skills between institutions, stronger revenue streams, shorter CMA establishment processes and more direct cooperation and coordination at regional, provincial and international levels (DWA 2012). In other words geographical considerations and pragmatism have influenced the Department of Water Affairs' thinking here, based on the very limited success of the CMA process to date.[17] This new development indicates a move away from ideological considerations to

more pragmatic considerations in an attempt to address some of the many problems that have been hampering the CMA development process.

<a>8.5PERFORMANCE

In the case of ~~the~~ BOCMA it is important to note that while this CMA became operational in 2007, its draft catchment management strategy was only released in February 2011 (Page 2012) and has not been approved by the minister. It may therefore be too early to make definite statements about how democratic its functioning is. Nonetheless some preliminary observations can be made. These observations link closely to the institutional design of the organisation discussed in section 8.3.

BOCMA's governing board seems to be doing well in terms of operational decision making, but has not really had any challenging decisions to make as the Department of Water Affairs has not yet delegated many functions to it yet.[18] As stated earlier the board has a good mix of different representatives and skills, and it remains to be seen how these individuals fare when having to carry out important decisions related to realising the vision and objectives of the CMA.

The vision of ~~the~~ BOCMA, as also represented in its catchment management strategy, is in line with the democratic ethos of the South African Constitution and focuses on how this CMA can make a positive and meaningful change to the broader social context within which it is situated. Some of the main components of this vision are inclusion and stakeholder participation, as well as mediation between human and environmental priorities in an effort to ensure the availability of good-quality water and to assist in poverty alleviation. This translates into the need to support social redress and economic development while also maintaining the functioning of the vitally important aquatic ecosystems in the Breede−Overberg area. The vision is to be operationalised by means of devolving decision making to the lowest possible level for the benefit of all water users in the catchment. In addition there is a particular focus on the South African context, which centres on addressing water resources reform (aimed at redressing historical inequalities in water access and use) (BOCMA 2011; Page 2012).

The three vision statements that underpin BOCMA's catchment management strategy reflect the need to maintain the balance between resource development and protection and are in keeping with the vision statement of the National Water Act itself. These vision statements are:

<nl>1.'protecting our rivers, groundwater, wetlands and estuaries in a healthy and functioning state for nature, people and the economy';
2.'sharing our available water equitably and efficiently to maintain existing activities, support new development and ensure redress, while adapting to a changing climate and world';
3.'cooperating to jointly nurture, take responsibility and comply, so that our water resources are well managed, under the leadership of a strong WMA' (BOCMA 2011: iii)<list>

These three vision statements form the strategic areas of focus for the CMA and will be given effect through supporting measures, objectives and actions. Despite the challenges facing the WMA the catchment management strategy makes mention of the opportunities that a holistic and proactive approach to water resources planning and management brings with it. These opportunities include: 'a focus on representivity where all demographic groups are involved in the transformation process, participatory decentralisation where decision making reflects local understanding and needs, cooperative management between sector participants and using water as a catalyst for growth and development' (BOCMA 2011: ii–iii).

From the CMA and its vision statements it becomes clear that the plan is to have stakeholder participation play a key role in the CMA's management of the WMA. The catchment management strategy notes that stakeholders need to be engaged in an appropriate manner and that 'overengagement' should be avoided as this could lead to stakeholder fatigue and a less robust process of engagement (BOCMA 2011). This is based on scientific research that warns that there is not yet a comprehensive and functional approach to public engagement in South Africa (Pollard and Du Toit 2005). Implicitly contained within BOCMA's purpose are empathy (through the involvement of stakeholders), prior knowledge engagement (through consultation) and patience (when dealing with diverging views from various stakeholders) (BOCMA 2011). As discussed earlier the process of producing BOCMA's catchment management strategy necessitated considerable consultation with a broad and diverse range of stakeholders, in line with BOCMA's vision of playing a central role in the coordination of water resource matters in national, provincial and local government and in consultation with a variety of partners and stakeholders (Page 2012).

Despite the extensive and overall successful efforts to include as many stakeholders as possible in the CMA establishment and catchment management strategy processes, stakeholder engagement has nonetheless reportedly been slow and somewhat irregular (Page, 2012). This is likely to have been due to the challenges inherent in involving hundreds of stakeholders. It is assumed that once clear aims have been set and challenges have been identified, it will be possible to decide which other stakeholders should be appointed to the board (in

addition to the ones already on it) (Page 2012), and how to better make use of the already existing forums to further involve stakeholders in the functioning of the catchment.

Another challenge with regard to stakeholder consultation is that it is impossible for the CMA to consult every stakeholder on the ground. Stakeholder consultation is also a very time consuming ~~intensive~~ process that can slow down the CMA establishment process. This was the case for both the Inkomati CMA and BOCMA. It appears that future CMA establishment processes (including the ~~possible~~ proposed merger of existing WMAs into larger WMAs and CMAs) will be conducted by means of more streamlined processes that focus primarily on efficiency and only draw in stakeholders where needed.[19]

Another key element of BOCMA's catchment management strategy is strategic adaptive management,[20] a local variant of adaptive management. In terms of strategic adaptive management, the catchment management strategy states that 'cooperative and adaptive management will provide the resilience needed to sustain the economy [of the Breede−Overberg WMA], support livelihoods and maintain and improve the WMA's rich environmental heritage' (BOCMA 2011: 96). In addition, integrated water resources management and adaptive ~~and cooperative~~ management are seen as the underlying theories~~paradigms~~ for the manifestation of a cooperative environment laying the foundation for sustainable development (BOCMA 2011). This narrative indicates that adaptive management is the foundation on which cooperation within the WMA and between BOCMA and other stakeholders will rest. Future research could be conducted to investigate the claim that adaptive management will result in the needed resilience to sustain the WMA's economy.

Apart from BOCMA's focus on stakeholder engagement and strategic adaptive management, a set of values is supposed to underpin the decisions and actions of the board members and employees. These values are: integrity, respect, reliability, accountability, trust, dignity, confidentiality, honesty, approachability, fairness, transparency, equity and passion (BOCMA 2013). A value that is particularly important, given the CMA's focus on stakeholder participation, is accountability. BOCMA is accountable to both its stakeholders and the minister. However the accountability link to the minister seems to be better developed than the link to the stakeholders. Regular reports are given to the minister, but the forums which the CMA governing board members should use to report to the water users in the WMA are not yet as active and effective as the CMA envisages them to be. In an effort to support the emerging farmers in the CMA, who probably do not have the same skills, knowledge, resources and experience as many commercial farmers do, the chief executive officer of BOCMA has started going on regular 'meet and greet' outings in the catchment where he liaises with these individuals. These 'meet and greet' outings are linked to various programmes in the catchment that are targeted at involving emerging farmers. For instance, there is an initiative to involve some of these individuals in the eradication of alien vegetation, such as Port Jackson and blue gum trees, which is a particular problem in the catchment. Emerging farmers are also receiving information on how to become more productive. For instance, they are learning about how to cultivate different soil types.[21] It seems that the chief executive officer is going above and beyond what is expected of him by taking a proactive stance regarding awareness raising and support to emerging farmers.

As a final reflection on democratic functioning there appears to be a mix of elite and consensus decision-making as the Minister of Water and Environmental Affairs is instrumental in establishing the CMA and appointing its governing board, yet board decisions are taken in terms of consensus decision making. As stated previously, such a decision-making mix is essential in the South Africa context given that in any given catchment stakeholders are very unevenly capacitated. At the same time, however, it is crucial that the board has an even spread of skills and capacity so that it can carry out its functions effectively and manage the catchment in a way that is beneficial to all stakeholders.

While BOCMA has prioritised and continues to prioritise stakeholder engagement, there is~~have been~~ criticism~~s~~ against extensive stakeholder involvement, as this can slow down CMA and catchment management strategy processes. As ~~already~~ mentioned earlier, there is now a move towards reducing the numbers of stakeholders when establishing CMAs and instead only drawing in stakeholders where and when necessary. While this development may speed up the CMA establishment process countrywide, it may have negative consequences for more marginalised stakeholders to participate in the CMA process and to ensure that their interests are represented. There will have to be a particular focus on ensuring that those that are consulted represent the views and needs of their constituency.

<a>8.6CONCLUSION

As is evident from the discussion above, the establishment of CMAs in general, and BOCMA in particular, is quite a top-down and bureaucratic process, largely under the control of the Department of Water Affairs. In addition the CMA process in South Africa seems to have been and continues to be strongly influenced by scientists from the environmental sciences and engineering. This influence has ensured that the CMA process is still a largely technocratic one (that is, informed by the natural sciences), and perhaps overshadows the potentially valuable role that other disciplines could play in advising the Department of Water Affairs and others on how CMAs could be run. However BOCMA reportedly has a well-functioning board and has pulled in stakeholders in all important stakeholder relevant processes to date. This was especially the case when the

establishment process started in 1999. Particular windows of opportunity for stakeholder engagement were the Overberg area and Breede River Basin Study stakeholder engagement processes. An important question is how stakeholder engagement will continue to develop in the WMA, particularly given the proposed move to making stakeholder engagement processes more streamlined in future, and only consulting stakeholders if and when necessary. This is likely to become apparent if the establishment of the proposed new nine CMAs goes ahead.

In conclusion it is interesting that some water resource professionals question whether South Africa should have CMAs at all. For instance Anderson[22] states that while it makes sense to define WMAs according to hydrological boundaries and involve as many stakeholders as possible within a WMA, it has nonetheless been very difficult to establish CMAs in South Africa, especially when considering the lag time between stakeholder engagement and final establishment. Other issues that have made CMA establishment difficult, especially in the case of the Inkomati CMA, have been a water-stressed situation; diversity in stakeholders' resources, knowledge, experience and skills; and extreme socio-economic disparities (Brown 2011). Some of these problems also feature in the Breede−Overberg WMA, though to a lesser extent than in the Inkomati WMA. These difficulties in the CMA establishment process have contributed to only two CMAs having been established in 14 years, and have led to the Department of Water Affairs reducing the number of CMAs from 19 to nine. With the considerable water governance challenges facing South Africa, and the Department of Water Affairs struggling to get many of the fundamentals in place (for example, water licences), it might be relevant to question whether all the resources that have been spent on the CMA process have made this process worthwhile. This question is particularly pertinent given the many inherent challenges the country faces − such as the inequalities between stakeholders in a WMA − which play out in efforts to establish CMAs and can render the process such a complex one.

Brown (2011) writes about her research focusing on the establishment of the Inkomati CMA and the transformation of existing irrigation boards into water user associations in the Inkomati WMA. She concludes that there may be substantial weaknesses in the participatory governance model, and that such approaches, if not sufficiently controlled by government interventions, may in fact reinforce inequitable outcomes. Based on the findings of her work, Brown (2011) argues that something of a 'cultural revolution' of how different stakeholder groupings in South Africa perceive each other's needs is required before a level of comprehensive and effective stakeholder participation can take place. However, seeing as such a revolution may take many years, and given the very slow progress in CMA establishment to date, Brown (2011: 183) poses a controversial question: 'If the end goal of water reforms was redress, would it have been a more effective solution for a government with such an overwhelming majority to have pursued a direct state-led redress agenda whilst supporting empowerment programmes to expedite the cultural revolution, rather than participatory governance?'

The case of BOCMA is not as controversial as that of the Inkomati CMA, and the process of participatory governance, though a lengthy one, ran more smoothly than in the Inkomati. Brown's point about the need for a cultural revolution is also pertinent to the BOCMA case, however, as it is imperative to promote equality among stakeholders, not only in terms of representivity, but also in terms of their ability to influence organisational processes.

On a final note, and with reference to CMAs in general, with the move towards an even more centralised approach to CMAs and with the Department of Water Affairs being very clear about the need to fast-track the CMA establishment process, it will be interesting to see how CMAs develop in future. To what extent will they embody and realise the principles of integrated water resources management and stakeholder involvement, and to what extent and to what effect will they increasingly be managed by the government?

<a>NOTES

1.Personal communication, Derek Weston, Pegasys Consulting, 12 September 2012.
2.Personal communication, Derek Weston, Pegasys Consulting, 12 September 2012.
3.Personal communication, Derek Weston, Pegasys Consulting, 12 September 2012.
4.Personal communication, Derek Weston, Pegasys Consulting, 12 September 2012.
5.In the South African context, 'emerging farmer' is a relatively new term commonly used to describe previously underprivileged farmers who are determined to enter the commercial farming space (Jari 2009). These underprivileged farmers typically belong to the 'black' and 'coloured' (South Africans of mixed race) population groups and qualify to lease or own redistributed land, and to access financial and other support from the South African government.
6.Personal Communication, Aileen Anderson, Crossflow Consulting, 7 September 2012.
7.Personal communication, Derek Weston, Pegasys Consulting, 12 September 2012.
8.Personal communication, Derek Weston, Pegasys Consulting, 12 September 2012.
9.Personal communication, Derek Weston, Pegasys Consulting, 12 September 2012.
10.Personal communication, Derek Weston, Pegasys Consulting, 12 September 2012.
11.Personal communication, Derek Weston, Pegasys Consulting, 12 September 2012.
12.Personal communication, Tally Palmer, Director of the Unilever Centre for Environmental Water Quality and the Institute for Water Research, Rhodes University, South Africa, 12 September 2012.
13.Personal communication, Derek Weston, Pegasys Consulting, 12 September 2012.
14.Personal communication, Derek Weston, Pegasys Consulting, 12 September 2012.
15.Personal Communication, Mark Dent, Department of Geography, University of KwaZulu-Natal, 3 September 2012.
16.This process differed from the Inkomati CMA establishment process, which was fraught with a number of difficulties. For instance, Brown and Woodhouse (2004: 34) note that: 'The time that has elapsed and seeming lack of progress in actually establishing the [Inkomati]

CMA is of concern to many of the stakeholders, and it is recognised by [the Department of Water Affairs and Forestry's] Institutional Oversight Directorate … that initially it was "too optimistic" in believing that the [National Water] Act could be implemented quickly'.
17.Personal communication, Derek Weston, Pegasys Consulting, 12 September 2012.
18.Personal communication, Derek Weston, Pegasys Consulting, 12 September 2012.
19.Personal communication, Derek Weston, Pegasys Consulting, 12 September 2012.
20.Adaptive management is seen as quite appropriate for the management of CMAs as it is a departure from the outmoded command-and-control management style (Denison and Karar 2010). Rogers et al. (2000) and Roux et al. (2009) advocate the use of strategic adaptive management. Strategic adaptive management has two phases. The first is adaptive planning: the establishment of a learning vision in a participative manner and the development of a common understanding of the CMA context as well as operating principles for a number of learning ideals. These ideals include a common future focus, social knowledge sharing, empathy, learning by doing, prior knowledge engagement, patience, experimentation, positive persistence, transdisciplinarity, adaptability and synergism. The adaptive decision-making phase should involve the development of a detailed management plan that realises the specific learning objectives and needs to be monitored regularly, at various levels and through structured reflection (Roux et al. 2009).
21.Personal communication, Phakhamani Buthelezi, chief executive officer of BOCMA, 28 September 2012.
22.Personal Communication, Aileen Anderson, Crossflow Consulting, 7 September 2012.

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