



**NeWater**

# **D 1.3.6.b: PARTICIPATION IN TRANS- BOUNDARY WATER MANAGEMENT - FOSTERING ADAPTIVE CAPACITY?**

The Case of the Orange–Senqu Basin

Report of the NeWater project -  
New Approaches to Adaptive Water Management under Uncertainty

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Nicole Kranz  
Ecologic Institute

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## Executive Summary & Policy Brief

As part of the work package on transboundary regimes, this report addresses the role of public participation in transboundary river basins, as well as respective challenges and opportunities, focusing on the Orange-Senqu basin as a case in point.

Over the past two decades a gradual shift from more state-centric water management to more actor-based decision-making could be observed in water management– catchment councils and water users' associations are examples here. Nevertheless, further changes appear to be necessary in order to foster earth systems governance, and water governance for coping with global environmental change (Turton et al. 2007).

Accordingly, the concept of adaptive management as central management style to realise effective IWRM processes suggested by Pahl-Wostl and Sendzimir (2005) and Holling (1978) places a strong emphasis on the relevance of learning among all actors involved in water management. This emphasis has as function enabling the iterative refinement and improvement of management options, which will eventually lead to a higher resilience of socio-ecological systems to potentially disruptive change (Walters 1986).

While this proposes a considerable challenge in any water management context, the situation is more complex in transboundary water management regimes, due to the increased number of actors and interests, scale mismatches as well as aggravated capacity mismatches.

In reaction to these complexities, Karkkainen (2005) advocates the introduction of hybrid and highly adaptive management systems, which, rather than following the conventional dichotomy of state and non-state actors, take a more problem-oriented approach towards water resources management. In a critical reflection of the 'governance without governance' paradigm (Rosenau and Czempiel 1992), it is established that these new forms by no means exclude sovereign states' governments; rather, they form the backbone of these new modes of governance, as they should provide financial and technical as well as legal sufferance, in order to ensure the success of the new approaches. At the same time, non-state actors are becoming more and more important shaping these arrangements at multiple levels of the policy process, thus mandating a constant reconsideration and re-negotiation of existing agreements among sovereign nation states (Jansky et al. 2005).

Following an in-depth introduction of the theoretical foundations, the paper then takes a closer look at existing and emerging participative governance structures in the Orange-Senqu River Basin in Southern Africa. It shows what has been undertaken with regards to participatory approaches at the transboundary level in this basin, and assesses the activities implemented so far against the background of the available literature. The paper poses the question of which might be promising entry points for further efforts, as well as commendable avenues to follow, with view to increasing the adaptive capacity of this important river system; it also asks where major challenges might be encountered due to limitations encountered in the Southern African governance environment.

In the Orange-Senqu basin, public participation has been placed high on the agenda of the Commission, but also among the supportive donor community. An elaborate Roadmap has been drafted in order to direct stakeholder interaction over the years to come. The question that remains is what it takes to put this Roadmap into practice and how learning among all actors can be maintained and strengthened, also with view to fostering the adaptive capacity of the water management regime.

Considering the emerging challenges, the key issue seems to be that of capacity at ORASECOM to successfully tackle the daunting tasks of nurturing a sound and effective transnational stakeholder network in the years to come. The path commenced with the Roadmap, which clearly supports decision-finding among all stakeholders rather than decision-making, points into a promising direction; nevertheless, many questions still remain open regarding the implementation of such an ambitious approach and the direction it will take.



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## 1 Introduction

Water management in transboundary river basins is often a highly complex and contested matter, due to a variety of reasons. First, asymmetries in terms of power positions between different riparian states exist and are played out at the transboundary level. Second, issues leading to conflicts with regards to water management occurring on local levels are aggravated at higher levels, as here relevant actors are faced with increased uncertainties regarding management options and water management strategies.

These uncertainties derive to a large extent from the main challenges in water management - water pollution and scarcity - irrespective of the level at which they occur. It has been shown over the past years that these problems are by no means static, but occur in inherently complex and dynamic systems, which are increasingly driven by global environmental change, not only influencing water resources management, but rather the earth system as a whole. Important drivers in this context include climate change and population dynamics, as well as economic factors.

While Integrated Water Resources Management (IWRM) has been established as the leading management paradigm for addressing these challenges in water resources management, the success and effectiveness of IWRM is highly contingent on the adaptive capacity of the system itself as well as the implementation of adaptive management practices.

Assessing the adaptive capacity of transboundary systems, one would argue that the ability of such complex systems to effectively adapt to changing conditions is constrained due to the following factors:

- aggregate and diverse water management problems,
- multitude of different actors at various governance levels, representing a wide range of stakes to be considered for IWRM,
- lack of trust among riparian countries,
- limited information regarding water status and possible management options.

A solution that addresses at least in part these water management challenges has been the formation of transboundary water management institutions, most of them river basin commissions, which in the best case create a forum for the interaction of representatives from all riparian countries at the transboundary level. Especially in the developing world, however, these river basin commissions are under-capacitated and severely dependent on support of the donor community.

In this context, the question arises of to which extent the broad participation of non-state actors could have a positive impact on policy outcomes in terms of increased adaptive capacity and resilience of water resources management systems at the transboundary level.

This paper takes a closer look at existing and emerging participative governance structures in the Orange-Senqu River Basin in Southern Africa. It shows what has been undertaken with regards to participatory approaches at the transboundary level in this basin, and assesses the activities implemented so far against the background of the available literature. The paper poses the question of which might be promising entry points for further efforts, as well as commendable avenues to follow, with view to increasing the adaptive capacity of this important river system; it also asks where major challenges might be encountered due to limitations encountered in the Southern African governance environment.



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The paper is structured as follows. After an introduction of the main concepts necessary for understanding public participation in transboundary river basins, an outline is provided of the most recent developments and the current status regarding participatory approaches in the Southern African region, and more specifically in the Orange-Senqu basin. This outline is followed by a first assessment of opportunities and risks inherent to these approaches.

The paper is based on observations and results collected during interviews with water management officials and other stakeholders in South Africa, Botswana, Lesotho and Namibia in December 2006. This analysis contributes to research conducted on ‘New approaches to adaptive water management under uncertainties’ in the framework of the NeWater project<sup>1</sup>, while aiming to link up this discourse to research conducted at the Collaborative Research Centre on ‘Governance in Areas of Limited Statehood’<sup>2</sup> and ‘New Modes of Governance’. While this connection has been established by several scholars before (e.g. Karkkainen 2005, Conca 2007), this paper aims to make an original contribution by investigating the ramifications of these underlying processes on river basin management in the context of a nascent institutional structure at the international level.

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<sup>1</sup> NeWater – New Approaches to Adaptive Water Management under Uncertainty, Integrated Project in the EU 6th framework programme, contract No.: 511179 (GOCE), Priority 6.3 Global Change and Ecosystems, Project Duration: 01.01.2005 - 31.12.2008, [www.newwater.info](http://www.newwater.info).

<sup>2</sup> Collaborative Research Center 700: Governance in Areas of Limited Statehood, supported by the German Research Foundation DFG, [www.sfb-governance.de](http://www.sfb-governance.de).



## 2 Main Concepts

### 2.1 Participation in Water Management

In addressing the role of participation in water management, I will briefly outline the main paradigms in this policy field as they have emerged over the past years - supported by the global discourse on sustainable development -, and to the extent that they are relevant to understanding the role of non-state actors in international river basin management.

In the past 25 years, the approach of IWRM has gained in significance as the leading paradigm for the management of water resources, and it has been accepted as the main frame of reference by a wide range of water management scholars.

Initially promoted by the Global Water Partnership (GWP-TAC 2000) through the World Water Forum (WWC 2000), the concept advocates - in the light of looming water crises - the departure from a supply-driven and infrastructure based approach towards a fundamentally different water management strategy, which reflects the complex structures and interactions in water management.

In a nutshell, IWRM can be defined as ‘co-ordinated development and management of water, land, and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems’ (GWP-TAC 2000).

In addressing these physical aspects of water management, the IWRM concept highlights the adaptation of governance systems as necessary for realising this management goal. More specifically, enabling water governance systems (GWP-TAC 2004):

- take into consideration the linkage between macro-economic policies and water development, management and use,
- provide for a cross-sectoral integration in policy-development, i.e. among different water uses: human uses, industry, agriculture, natural reserve,
- achieve the integration of decisions made at the local and river basin level with broader national objectives,
- provide access to water planning and management to a wide range of stakeholders, giving particular attention to those with limited capacities to participate.

Over the past two decades a gradual shift from more state-centric water management to more actor-based decision-making could be observed in some instances – catchment councils and water users’ associations are examples here. Nevertheless, further changes appear to be necessary in order to foster earth systems governance, and water governance for coping with global environmental change (Turton et al. 2007).

Pahl-Wostl and Sendzimir (2005) suggest the concept of adaptive management as central management style to realise effective IWRM processes (Holling 1978). Adaptive management places a strong emphasis on the relevance of learning among all actors involved in water management. This emphasis has as function enabling the iterative refinement and improvement of management options, which will eventually lead to a higher resilience of socio-ecological systems to potentially disruptive change (Walters 1986).

The rationale for adaptive management and adaptive learning is strengthened by the fact of the inherent and continual lack of sufficient information as basis for management decisions in natural resource management. It is this high level of uncertainty that requires policy



interventions to be treated as provisional, generating new learning opportunities. These will gradually, through continual monitoring, lead to the adaptation of policy approaches and eventually to a transition to policies which generate more adaptive water management approaches in the response to global environmental change (Pahl-Wostl 2007).

In applying their trialogue model<sup>3</sup> of governance to IWRM, Turton et al (2007) describe the relationship between government and society as ‘an unwritten, hydro-social contract, incorporating the norms and values of society that structure the relationships between key stakeholders’. They point to the interfaces between these different actors as important loci where dialogue and learning take place and where common values are developed, which then in turn affect the resilience and robustness of the water system under management.

In approaching the rather abstract concept of learning in the context of water management, it is useful to briefly reiterate the effects of public participation on the outcome of water management policies, and thus eventually on the adaptive capacity of water management systems. Assuming that participation can take place in the form of many different engagements, including public consultations by competent authorities, but also through co-operative decision-making (Rowe and Frewer 2005), several scholars suggest that participation will have an effect on policy formulation as well as on their implementation. Following this argument, Fritsch and Newig (2007) investigate whether participation has an effect on compliance and thus the effectiveness of implementation.

The arguments on improved decision-making through public participation mostly refer to the role of the knowledge and information brought to the process by the different stakeholders, and which might not have been available to policy-makers and authorities in the first place. Stakeholders can make a considerable contribution to the monitoring and evaluation procedures, which are key to identifying water management challenges, thus reducing uncertainties inherent to management processes in natural resource management. Stakeholders are often involved with data management and collection at various water management levels and thus hold in-depth knowledge about certain water management issues. The degree to which this knowledge can be coordinated and combined can be instrumental for the success of water resource management at any level (Timmerman and Langaas 2004).

The relevance of participation for water policy implementation, and thus for policy effectiveness, depends on the involvement of those (potentially) affected by any decisions in the decision-making process. It is expected that informed stakeholders who have been given opportunity to have their concerns heard and thus to contribute to a consensus, will be more likely to comply with policy measures and or facilitate implementation and compliance of other actors (Beierle and Cayford 2002).

Furthermore, the effect of trust-building through participation is not to be underestimated. This is the element that eventually enables long-term collaboration, learning and thus the development of truly sustainable solutions for water management issues (Beierle and Cayford 2002).

Furthermore, the success of participative approaches is highly dependent on the design of the participatory process as such, as well as on context factors. There has been a proliferation of

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<sup>3</sup> Inspired by a comment of Prof. Malin Falkenmark of SIWI, Turton et al. 2007 developed a trialogue model in order to capture the interfaces between different actor groups pertinent for adaptive water management. They argue that government, society and science need to engage in a mutual dialogue in order to facilitate a transition to more adaptive water management.



scientific literature (e.g. Rowe and Frewer 2005), as well as of numerous rather normative guidelines, on the ‘how to’ of participatory processes (cf. the HarmoniCOP handbook<sup>4</sup> for the European context). Frequently mentioned criteria for successful participatory processes include:

- the fair representation of all relevant stakeholder groups,
- equal access to information and open modes of communication,
- transparent process design and joint determination of process rules,
- neutral convenor and impartiality of the moderator (adapted from Fritsch and Newig 2007).

With view to the context factors, particularly the power relations among different actors appear to be of crucial importance. It has been shown in many different contexts that dominant, influential, and financially strong actors are more active and exert more leverage in participative processes than those with limited resources and capacities. In the case of water management, where many different interests converge, very often power asymmetries exist between strong and well-organised lobbies (i.e. industry/agriculture) and under-capacitated, unorganized domestic water users (i.e. disadvantaged communities). As a consequence, there have been cases in which participative processes allowed for strong users to push through their interests vis-à-vis other stakeholders to a greater extent than would have been possible under more authoritative approaches.

A further important factor is the complexity of the issues at stake. Complicated technical issues might be difficult to understand for some actors, thus creating asymmetries with regards to available information and eventually the capacity to participate. The design of a participatory process needs to take this into consideration and aim to bridge such divergences through capacity-building measures.

Finally, the inherent motivation of affected stakeholders to actually engage in participative processes also needs to be considered. In many cases, stakeholders do not perceive an issue as a problem and thus do not see the necessity to become active and participate. In combination with limited capacities on the part of some stakeholders, this might lead to a complete exclusion of some groups from participative processes.

Observations and analyses with regards to process design and context suggest that it is not possible to follow a blueprint approach for IWRM in general, nor for the involvement of stakeholders in particular. Rather, individual approaches are mandated and public participation needs to be tailored to the specific context. This in turn is only possible if integrative assessments of the water resources situation and the socio-ecological interactions are undertaken as the basis for all further management decisions, including the design of participatory processes (Rotmans and van Asselt 2002).

In concluding this section on the role of participation for IWRM, it should be noted that the actual impact of participation on policy output and implementation effectiveness (and thus eventually outcome), i.e. the advancement of adaptive and sustainable water management, has only been investigated to a very limited extent (Fritsch and Newig 2007). There is emerging evidence that participation might not lead to the desired improvement regarding effectiveness and outcome in all cases. Thus, careful attention needs to be paid to the modes and impacts of participation in a specific water management context. It appears to be instrumental to determine to what extent the call for more participation is catering to normative ‘good governance’ paradigm, and where, on the other hand, it is serving as an

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<sup>4</sup> Ridder D, E Mostert, H A Wolters 2005: Learning together to manage together, Improving Participation in Water Management, Osnabrueck.



instrument to actually induce change and contribute to enhance the adaptive capacity of water resource management systems.

## 2.2 Participation in Transboundary River Basins

In the previous section I have outlined the main arguments for participative approaches in adaptive and integrated water resources management as a sub-set of modern earth systems governance. In turning to transboundary basins, the notion of agency beyond the state gains an additional dimension: in transcending the boundaries of nation states and following naturally set delineations of catchments, one moves beyond the area of exclusive influence of sovereign states, thus challenging the conventionally accepted state-centric, fixed-rule regulatory approach for governing environmental resources (Holling and Meffe 1995). Karkkainen (2005) points out two dimensions of misfits in transboundary water management, which again point to the necessity of aiming for the participation of non-state actors in the management of these resources.

First, he investigates different aspects of *scale mismatches*, i.e. instances where political boundaries simply do not reflect hydro-geographical boundaries, such as in transboundary river basins. It should be noted, however, that such scale misfits occur whenever conventional political jurisdictions, i.e. sovereign states and their standard political subdivisions, are not aligned with the boundaries of the natural resource to be managed. This not only holds true for large basins, but also for sub- and even smaller units, which respond to different legislative, political and also cultural contexts (Young 2002).

Second, capacity mismatches relate to the sheer magnitude of the task of managing highly complex and interlinked socio-ecological systems (Holling, Berkes and Folke 1998), and the limited capacity of the state in addressing complex environmental problems. Conventional approaches often lack appropriate incentive structures and consist of piecemeal and fragmented regulation, with no attention paid to synergies among environmental stressors and other components, such as social and economic factors (Holling and Meffe 1995). In addition, such approaches have appeared to be slow and rigid, not flexible and adaptive, and often neglect the fact that there are no standard approaches to ecosystem management (Holling, Berkes and Folke 1998).

Based on these observations, Karkkainen (2005) advocates the introduction of hybrid and highly adaptive management systems, which, rather than following the conventional dichotomy of state and non-state actors, take a more problem-oriented approach towards water resources management. In a critical reflection of the ‘governance without governance’ paradigm (Rosenau and Czempiel 1992), it established that these new forms by no means exclude sovereign states’ governments; rather, they form the backbone of these new modes of governance, as they should provide financial and technical as well as legal sufferance, in order to ensure the success of the new approaches. At the same time, non-state actors are becoming more and more important shaping these arrangements at multiple levels of the policy process, thus mandating a constant reconsideration and re-negotiation of existing agreements among sovereign nation states (Jansky et al. 2005).

Transboundary river basins could also be considered as case studies of limited scope<sup>5</sup> for complex ‘earth systems’, which are subject to global environmental change, and thus require new forms of governance. International river basins display typical characteristics, such as persistent analytical and normative uncertainties, possible (sudden) changes in system behaviour, and varied forms of dependencies, i.e. inter-generational, functional, cross-sectoral and most distinctively spatial dependencies. For this reason, Biermann (2007)

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<sup>5</sup> Biermann’s approach mainly relates to global environmental governance. Transboundary river basins could be considered as subsystems of an international environmental governance regime.



advocates that appropriate governance systems should be guided by principles such as credibility, stability, adaptiveness and inclusiveness.

In establishing these governance principles, Biermann also points to the relevance of institutional mechanisms which are ‘trustworthy, stable and adaptive’, non-discriminatory, universally accepted by all nations, and guaranteeing effective vertical interaction of ‘governance systems’ across scales. Gooch (2007) argues that institutions, in the form of organisational structures (i.e. formal institutions) or norms and values (i.e. informal institutions), are of central importance due to their determining the way different actors interact. With regards to transboundary water governance, the last years have seen the creation of a significant number of such formal institutions, e.g. in the context of inter-state diplomacy, as well as the emergence of informal processes of institution-building, e.g. transnational actor networks, that seek to address the respective challenges.

In the area of sovereign diplomacy, international basin committees or river basin commissions have been established in many water systems. From a legal perspective, cooperation on transboundary water resources can be considered as treaty arrangements, in which sovereign states undertake mutual, more or less legally binding contractual obligations to exercise their sovereign authority, with the aim of controlling specific kinds of environmentally harmful behaviour on the part of their contractual partners (Karkkainen 2005). In the context of transboundary water management, international conventions, most prominently the 1997 UN Convention on the Law of the Non-Navigational Uses of Internationally Shared Watercourses (United Nations 1997)<sup>6</sup> prescribe how such arrangements should ideally be constructed. However, these guidelines are rather general and have a mainly declaratory character. Many countries have for example not ratified the UN Convention and are thus rather hesitant regarding the application of the guidelines. In other cases, willingness to implement is severely hampered by capacity-deficits. Conca et al. (2003), in a comparative study among some 60 river basins, have also detected a selective adoption of the principles of the convention at the river basin level. While such institutions are faced by exactly those challenges inherent to transboundary water management (i.e. territoriality beyond sovereignty, destabilised knowledge frameworks as well as hybrid authorities (Conca 2006)), the question that arises relates to the actual functions such organisations can and actually should be performing in the specific context of each river basin.

Nakayama (2003) summarizes several roles that institutions in river basin management should take, including the provision of a common arena for member states to meet and discuss water management issues, the promotion of information sharing among the various countries, and the joint production of information<sup>7</sup>. The development of coordinated water-resources development and management schemes is considered one of the core activities of international river basin institutions, also with regards to attempting to secure assistance from donor countries and development aid agencies. The extent to which river basin organisations can help avoid, mitigate and resolve potential conflicts among member states is debatable (Nakayama 2003).

Furthermore, Jansky et al. (2005) assign a long-term role to international basin organizations in promoting public participation. Possible modes of stakeholder engagement which would allow for contributing to policy formulation at the international level include NGO

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<sup>6</sup> See section 3 for a more detailed description of such arrangements in the Southern African context.

<sup>7</sup> See also Timmerman and Langaas (2004) for the European context and van Ginkel (2005).



membership of national delegations to committee meeting and observership status, as well as hearings on policy issues and planning processes, which are open to all stakeholders (Bruch 2005).

While this illustrates and confirms the relevance of participative approaches in attaining IWRM or even in the transition towards adaptive management (Raadgever et al. 2008), it also points to the issue of capacity for accomplishing this challenging and sometimes daunting task. State capacity, particularly in African states, is often limited, which is due to a variety of reasons that range from limited resources to a lack of political will. At the level of international institutions, these capacity limitations are often aggravated due to a lack of commitment of the individual governments, but also again insufficient resources vis-à-vis the tasks to be tackled.

In addressing the issue of actually implementing participative approaches and/or these new modes of governance at the transboundary level in a river basin management regime, one is faced with a number of questions and challenges, which will be briefly outlined in the following section.

In terms of challenges, the amount of different cultures and historical backgrounds, problem perceptions and mind-frames that have to be dealt with is not only larger due to the variety of actors to be involved under the IWRM paradigm, but also owing to the fact that these vary across countries and/or regions (Jansky et al. 2005). These differences might not be easy to overcome; however, at the same time they might also give rise to considerable tension among various stakeholders and lead to insurmountable barriers, rendering inclusive governance impossible. The question that emerges in this context relates to the role of the moderator in such cases, and whether state authorities or basin commissions can actually play such a role.

This role however, might to some extent be hampered by differing and sometimes even conflicting legislation in policy fields pertinent to water resources management (i.e. agriculture, industry, land management, and property rights, to only name a few). In addition, differences at the management level might hamper participative efforts; in the same way, differences in the priority of environmental policies could have a detrimental effect.

Thirdly, the management and exchange of information across borders, which is considered as an important pre-condition for effective participation, is not taking place in many river basins across the world. Information is incomplete, being withheld, or not easily available to all stakeholders, leaving those with a lack of information in a powerless position.

From the perspective of process design, the following questions could be posed in attempting to better grasp the dimension and characteristics of participative governance in international river basins. The following list reflects the set of issues typically addressed in analyzing, but also in designing participative processes, as briefly addressed in the previous section. However, they need to be newly considered under the conditions of transboundary river basins.

- Who designs, initiates and drives the participative process?
  - o Who is the convenor?
  - o Does the state/river basin commission have the authority and capacity to manage the process?
  - o What type of participation is chosen (consultation, co-decision-making, contribution to the formulation or rather to the implementation of policies)?



- Who are the stakeholders that actually have a stake in water governance in the respective river basin?
  - o What roles do environmental NGOs, independent scientists, industry groups (and individual firms!), sub-national governments, and ordinary citizen play?
  - o What are the explicit and implicit power structures, norms and values among these actors? How are these determined by historic developments?
  - o What are the basics for ensuring successful participation in terms of resources, but also information and communicative skills?
  
- How are different scales as well as issue areas interlinked?
  - o How is the transboundary level linked to the local levels in water resources management?
  - o What role do transnational policy networks play?
  - o How does information circulate here? Through which channels do non-state actors act and interact?
  - o What are appropriate platforms and how inclusive are they?

After a brief introduction on transboundary water management in the Southern African region, this set of questions will be applied to the Orange-Senqu basin in a first rough assessment.

### **3 Transboundary Water Management in Southern African Basins**

The previous section introduced the main concepts for understanding the role of participation in transboundary water resource management. But what is the context for transboundary water management in the Southern African region?

There are eleven shared watercourses in Southern Africa, occupying about 70 percent of the land area. While there are a number of reasons for potential conflicts among riparian countries, cooperation among neighboring states sharing watercourses is relatively well developed (Kidd and Quinn 2005).

Over the past years, several technical water commissions or similar institutions have been created in a number of Southern African basins, in order to provide a forum for regional collaboration on certain water issues, in some cases with a limited, in others with a broader management scope. In addition, Heyns (2003) points out the potential of such joint bodies in the Southern African context, particularly with regards to promoting understanding and mutual trust between the different parties. This is of importance in a region where international relations between countries have been strained or non-existent. As for other functions these commissions should perform, these are largely inspired by the international discourse on international river basin management described above. They include the collection of reliable information as a basis for sound strategic planning at the transboundary level, as well as the development of mechanisms and the provision of a platform for the involvement of non-state actors.

Transboundary water governance in Southern Africa is to a considerable extent influenced by the international discourse on shared resources, and thus receptive to the international policy instruments that have emerged over the past ten years.



The 1995 SADC<sup>8</sup> Protocol on Shared Watercourses, which was modified in 2000 in view of the UN Convention on the Law of the Non-Navigational Uses of Shared Watercourses of 1997<sup>9</sup>, is instrumental to transboundary river basin management in the SADC region. It seeks to promote and facilitate sustainable development of water resources through the establishment of shared watercourse agreements and institutions, as well as enshrining the principles of reasonable use and environmentally sound development of the resource. It also recognises the principles of unity and coherence of each shared watercourse. Signatory states “shall exchange available information and data”, concerning hydrological, environmental, etc. parameters of the watercourse (SADC 2000). In addition to providing suggestions for best practice concerning shared watercourse legislation, as well as for conflict-resolution mechanisms between member states, the protocol also provides the framework for specific shared watercourse agreements in the region<sup>10</sup>.

The Protocol is complemented by two policy documents at SADC level, the Regional Water Policy (RWP) and the Regional Water Strategy (RWS). One of the key priorities of the RWP refers to public participation, with an explicit focus on increased awareness, broad participation, and gender mainstreaming in water resources development and management. In line with the SADC Protocol, the RWP commends the establishment of ‘shared watercourse institutions’, which then in turn become responsible for promoting stakeholder-participation in decision-making. Other sections detail stipulations on stakeholder participation and capacity-building (SADC 2005). Thus the basis for public participation in river basin management is clearly provided by the SADC Protocol as well as ancillary policy documents; however, the concrete implementation of this concept in the context of the various river basin commissions is lagging behind (Kidd and Quinn 2005).

Other observations confirm that public participation, apart from some exceptions (cf. Okavango), currently remains an emerging concept in much of Southern Africa, at least as far as the transboundary level is concerned (Kidd and Quinn 2005). There have been significant developments in a number of countries - for example in South Africa - with regards to improving participatory approaches in water management and forging strong partnerships between different government departments, technology providers in the private and public sector, as well as stakeholders from other sectors (Ashton 2007). However, these efforts remain in many instances rather small-scale, fragmented, and are not yet reflected at the transboundary level. This can also partly relate to the fact that in some countries, legislative and procedural reforms are only slowly progressing, thus also impeding collaborative efforts at the international level. Turton et al. (2007) also point out the importance of the ‘political maturity’ of a society, when it comes to participation. In comparing mature with fledgling democracies<sup>11</sup>, one can identify three mechanisms which might have an effect on the degree to which stakeholder participation is being implemented. In fledgling democracies, the ramifications of a ‘history of non-consultation’ and extremely

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<sup>8</sup> The Southern African Development Community (SADC) comprises 14 member states: Angola, Botswana, the DRC, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia, and Zimbabwe.

<sup>9</sup> The Revised SADC Protocol on Shared Water Resources was signed by the SADC countries in August 2000 and entered into force in 2003, after 2/3 of all member countries had ratified.

<sup>10</sup> Several river basin organisations have been formed after the signing of this protocol and specifically refer to it in the corresponding agreements (e.g. Orange-Senqu River Commission (ORASECOM), Zambezi Watercourse Commission, Limpopo Watercourse Commission).

<sup>11</sup> The terminology has been taken from Turton et al. (2007). It largely equates mature democracies with industrialised and developed countries, while assuming that developing countries often have fledgling democracies. While this can be challenged from a theoretical perspective, empirical observations would confirm such relations.



unequal power relations between and within stakeholder groups (Schreiner 2007) are still noticeable. Stakeholders are often not aware of their rights and the opportunities to get involved. With regards to water resources management, the management style in young democracies is more autocratic and centralised, and skilled personnel is scarce and often mainly trained and engaged in supply-side management activities. More mature democracies, on the contrary, feature more accessible management structures, and water resource management is less focused on infrastructure development, but rather on adaptive management approaches. In terms of capacity, management personnel represents a broader range of disciplines and recognises the importance and value of stakeholder participation.

The extent to which international river basin commissions can support participative approaches at the international and possibly at the national level in the Orange basin will be addressed in the following sections. This follows the logic that not only participative efforts at the individual country level would be necessary for such processes to take place at the river basin level, but that appropriate progress at this level could possibly also promote reform processes within the individual countries and vice versa.

## **4 Orange-Senqu River Basin**

The following section can only provide a brief description of the hydrological, economic, and hydro-political characteristics in the Orange-Senqu basin, as well as of its institutional development to date. Many authors have elaborated these aspects in much more detail in previous publications (see for example Turton, Heyns, Biggs and others). I have attempted to point out those characteristics which appear to me as instrumental for understanding the existing and emerging potential for participative approaches in the context of the international governance structure currently in place; this might allow for a first assessment with regards to the adaptive capacity of the current water regime.

### **4.1 Basin Characteristics**

The Orange River basin lies within the territories of South Africa, Lesotho, Namibia and Botswana. It covers an area of approx. one million square kilometres. The landscapes of the Orange Basin vary from high mountains at its source in the Lesotho Highlands, over pastures and semi-arid savannah grasslands, to the extremely arid deserts near the Atlantic Ocean on the border between Namibia and South Africa. The estuary of the Orange is not formed by a large surface delta; it is however regarded as one of the hotspots for wetlands conservation in Southern Africa and of utmost importance to the region's ecology and biodiversity.

While in Lesotho the river is called Senqu, the Orange is also known as the Gariep River. Major tributaries to the Orange are the Vaal, Fish, Caledon, Molopo and Nossob Rivers.

Major challenges to water resource management in the Orange Basin are water scarcity, climate change, pollution and land degradation. Water shortages apply to both surface and groundwater. This is also aggravated by the fact that water distribution networks are not sufficiently developed to provide water to all potential users.

The situation is particularly problematic in the Gauteng Province, where about 40 percent of South Africa's population, 50 percent of the country's wealth creation and 85 percent of its energy generation are concentrated, and which receives its water from the Vaal river, a main tributary to the Orange. Increasing industrialisation and population growth have resulted in a very high demand for water and at the same time led to massive water pollution issues due to industrial and domestic sewage (Conley and van Niekerk 1998). In order to maintain growth and industrial activities, the Vaal's water resources are boosted by water transfers from no less than eight other basins, including the Limpopo and the Incomati, through a variety of inter-basin transfer schemes (Turton 2003). In support of this system, more than 31 dams



with storage capacities of approximately 12 million cubic metres have been constructed across the entire basin, the majority of them in South Africa.

These inter-basin transfer schemes and extensive dam systems of the Orange Development Project - and most prominently the Lesotho Highlands Water Project - have brought about river habitat changes and impacts on ecological integrity by contributing to the degradation of wetlands and other fragile ecosystems.

Turton (2003 and following publications) points to relevance of the Orange river basin within the so-called Southern African hydro-political complex. He argues that the Orange is an 'immature regional security complex', as not all actors have realized the strategic implications of water scarcity on their respective long-term economic growth and prosperity. The different interests of the four riparian states, which derive from completely different motivations, needs and bilateral interactions of the countries, have shaped and will continue to shape the underlying fabric of the development of ORASECOM.

#### **4.2 Institutional Development and Current Set-up at the Transboundary Level**

Before the establishment of ORASECOM, transboundary co-operation in water management was limited to bilateral agreements. In the case of the Lesotho/South Africa co-operation in the context of the Lesotho Highlands Water Project (LHWP), two independent organisations were created, one in each country, for the implementation of the treaty that established the LHWP. The organisation managed by Lesotho, the Lesotho Highlands Development Authority (LHDA), is largely in charge of construction and operation of dams and electricity generation, whereas the South African Trans-Caledon Tunnel Authority was put in charge of construction and operation of the tunnel system and of the credit and financing management. The Lesotho Highlands Water Commission (LHWC) (successor of the original Joint Permanent Technical Commission (JPTC)) is the bi-national organisation co-ordinating and supervising both national institutions and in charge of monitoring and advising the administrative, technical and financial activities of the project (Wirkus and Böge 2005).

Originally, the LHWP project did not consider stakeholder participation as necessary. Over the years, national and international NGOs related to the environment and human rights movement started mounting pressure on the project and its financiers, due to perceived problems regarding the environment and the relocation and compensation of project-affected people (practically all pressure on and resistance to the project was in Lesotho). Due to this pressure, a "Memorandum of Understanding" was signed between the LHDA and interest groups in Lesotho, agreeing to co-operation on supervision and evaluation, lobbying, and information, among other things (Wirkus and Böge 2005). This agreement, though, has not resulted in an end to the problems between interest groups and the LHDA; several issues, especially compensation of project-affected people, remain contentious.

The other relevant bilateral agreement in the Orange basin is the Permanent Water Commission (PWC), signed by Namibia and South Africa in 1992 (replacing the Joint Technical Committee created in 1987). Its mission is to advise both governments on the development possibilities of the Lower Orange (the section of the river that forms the border between both countries). This technical advice focuses on the development and use of water resources that represent common interests of the signatory countries, and is mainly delivered through reports. The organisational structure is weak: the meetings of the commission are sporadic, and subcommittees address irrigation and planning issues (Heyns 2003). The Joint Irrigation Authority, in charge of the irrigation project on both sides of the border, was also created in 1992 and is related to the agreement that created the PWC.



In November 2000, the Governments of the Republic of Botswana, the Kingdom of Lesotho, the Republic of Namibia, and the Republic of South Africa established the Orange-Senqu River Commission (ORASECOM). The Commission was founded in consideration of existing international water law, the Revised Protocol on Shared Watercourses of the Southern African Development Community, and in the wish of strengthening co-operation and building up good neighbourhood relations. ORASECOM was the first commission to be created within the framework of the Revised SADC Protocol (Böge, 2006).

To date, the institutional structure of ORASECOM is still under development. While the commissioners have established regular meetings on a bi-annual basis with support of a technical task team, shared, permanent structures are only slowly emerging. After an interim-secretariat had been set-up temporarily in Gaborone, the permanent secretariat has now been established in Pretoria (Pyke, pers. comm. 2006).

While ORASECOM will not supersede the already existing bilateral agreements between Lesotho/South Africa and South Africa/Namibia, expectations regarding the Commission's performance among the member states are high, albeit partly diverging. A significant portion of the benefits expected are of a technical nature, such as improved monitoring, data collection, or flood management; others relate to the creation of more trust among the riparian countries. In addition, there is a general agreement by the commissioners that ORASECOM so far is important as a forum to improve capacity and share data (Davidsen, 2006). According to a commissioner's assessment, 'ORASECOM is progressing much faster than most river basin organisations in the region, still this would not imply that is progress is fast' (Biggs, quoted in Davidsen 2006). Nevertheless, there appear to be some unresolved issues, largely attributed to South Africa's hegemonial role in the basin, which basically uses its powerful position to maintain the current situation in terms of water allocation in the basin (Turton 2005).

These issues form part of the framework for participation in the context of ORASECOM.

### **4.3 Approaches to Public Participation in the Orange Basin**

#### **4.3.1 Participative Approaches in the Riparian Countries**

Public participation in the water sector of the four basin countries is slowly emerging, either due to its gradual inclusion in the official legislative framework or in the wake of best practice examples in the individual countries. It needs to be noted, however, that the institutional frameworks at the national level still differ significantly. Only recently a process of aligning legislation has been initiated.

In South Africa, both the Constitution and the water legislation, in an effort to redress inequalities and imbalances under the apartheid regime, expressly incorporate public participation. Water resources legislation in South Africa is mainly constituted by two distinct acts – the Water Services Act (No.108 of 1997) and the National Water Act (No.36 of 1998). The latter contains provisions regarding stakeholder participation in water resource management, particularly at the level of the Catchment Management Agencies (CMA)<sup>12</sup>. It is particularly at the catchment level where close interaction with stakeholders and other role-players is suggested. While the legislative backbone in South Africa can be considered as very strong and elaborate, the implementation is only coming along slowly, with the

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<sup>12</sup> Nineteen CMAs are in the process of being established. The governing boards of the CMAs are to include representatives of key stakeholders, such as local government, provincial government, and representatives of water users such as agriculture, mining, power generation and communities.



necessary institutions and structures, and particularly a culture of public participation, only slowly emerging.

The most recent effort in Namibia to reform long-standing legislation in the water sector (Water Act from 1956) is the Water Resources Management Act (Office of the Prime Minister of Namibia), promulgated in 2004. The Water Resources Management Act echoes the principles laid out in the National Water Policy Paper (2000). Public participation is also included in the provisions of the newly revised Namibian water legislation; explicit reference is made to the role of basin management committees.

Botswana and Lesotho are also revising their water legislation. In the case of Botswana, the Water Act dates back to 1968 and does not include any references to participative engagement of stakeholders with regards to water management issues. The newly drafted legislation (2005), though, makes explicit reference to the importance of stakeholder engagement and specifies Botswana's rights and obligations in the context of international agreements related to water. In Lesotho, the current situation, governed by the Water Resources Act from 1978, is comparable. However, the law is complemented by a recently reviewed Water and Sanitation Policy (2007), which makes reference to stakeholder engagement in the implementation of IWRM.

With regards to national legislation and the (eventual) establishment of public participation practices in the water sector of the riparian countries, the basin countries present favourable conditions for public participation on the transboundary scale.

#### **4.3.2 Participative Approaches in Southern African basins – Okavango**

Also favourable are the experiences that have been made regarding transboundary public participation in other transboundary basins of the region, particularly the Okavango. This basin has what can be described as the most advanced public participation programme in a southern African transboundary basin (Montshiwa, pers. comm. 2006). Because of the close connection between the two basin commissions (many commissioners from Namibia and Botswana serve on both the Okavango and the Orange Commissions) and the validity of the experience for the Orange basin, the experience in the Okavango basin will be summarised briefly.

The OKACOM was founded in 1994 and is the oldest river basin commission in the region. The strength of community-based organisations and NGOs in the basin, and the strong linkage between the river and the livelihoods of several groups of stakeholders, inspired their networking and joint efforts. A series of issues, including environmental ones, were picked up by these organisations; in addition, the basin has seen a huge amount of projects, some of them donor-funded, providing support for governance in the river basin, some of them supporting stakeholder involvement. The work with communities, community-based organisations, NGOs and stakeholders culminated in the development of a basin-wide forum, on which 10 persons per riparian country sit and discuss the challenges facing the basin (Earle, pers. comm. 2006). In a move without precedent in the region, and which gives testimony to the recognition and legitimacy with which the basin-wide forum is perceived, OKACOM has granted it observer status, allowing one representative to assist to the Commission's meetings. In addition, initiatives for a "shadow commission" made up of grassroots organisations are currently being developed in the basin (Turton, pers. comm. 2006).

#### **4.3.3 Process of Initiating Public Engagement within ORASECOM**

The results achieved in the Okavango have definitely had an influence on the actions of the river basin commissions established more recently in the region; in some cases it can be said that they are being taken as a model for public participation in transboundary basins. Also, due to the significant overlap of commissioners between OKACOM and ORASECOM, the



value of a well-functioning stakeholder approach has become obvious to the ORASECOM commissioners. In contrast to the Okavango, where grassroots organisations and NGOs actively demanded participation and “drove” the process which eventually led to a public participation component, in the Orange basin the recent strategy for involving the public is basically a result of the Commission’s initiative (Earle, pers. comm., 2006). A significant political imperative originating at the ministerial level is driving these efforts (Pyke, pers. comm. 2006), and the water ministers of the four basin states gave ORASECOM the mandate to start developing a strategy for stakeholder participation in the basin in May 2005 (Earle, *ibid.*).

Since then, several workshops and initiatives have been carried out addressing the shape of the future public participation strategy. The elaboration of a strategy was initiated by a workshop held in February 2006 in the Limpopo province of South Africa. After the presentation of several case studies on participation in transboundary river basins, including the Okavango and Incomati, the task of developing an outline for a public participation strategy was assigned directly to the commissioners, in order to assure the buy-in and approval of the draft strategy, which constituted the result of the first workshop.

In the follow-up to the first workshop, “regional resource persons” were commissioned with the task of further developing the draft outline. A workshop held by this group together with regional and international experts in October 2006 produced the proposal, termed “Roadmap towards Stakeholder Participation”. The term strategy was abandoned in this process, in order to avoid the impression that a strategy was being developed which then had to be implemented without allowing for stakeholders to take part in the process. On the contrary, the Roadmap actively seeks the input of the stakeholders and explicitly opens the process to multiple interactions, aiming for the building of strong relations among different stakeholder groups. Along the same lines, the implementation side is more loosely structured than overly determined by a ‘Framework of Activities’, in order to allow stakeholders to determine the pace of the implementation process.

The second draft of the proposal was presented to the technical task team of the Commission in January 2007. Additional input was received for the proposal and some changes were introduced to the institutional set-up of the participative framework. In April 2007, the Roadmap proposal was presented to the council meeting of the Commission. This initiated the discussions lasting until today regarding the alignment of the Roadmap to several donor activities in the region, as well as the co-ordination of donor activities in general. The latter will be crucial in securing sufficient funding for any activity suggested by the Roadmap. Up to now, various donors have been supporting different aspects of transboundary water management in the Orange-Senqu basin. Their engagement initially involved ‘classical’ investment activities in large water infrastructure projects, e.g. dams, but more recently focused on policy and law development, institutional development, capacity-building, research, monitoring and network-building.

#### **4.3.4 Roadmap towards Stakeholder Participation**

The Roadmap, which currently remains a draft document, self-statedly covers the short to medium term of stakeholder participation in the basin, corresponding to the next five to ten years. It emphasises the need for (future) alignment between the public participation strategy and ORASECOM’s “vision” as an institution (which does not yet formally exist for the Commission). As a consequence, the current approach to public participation in the basin is ‘not cast in stone and is itself merely a step towards co-management’ (Malzbender, pers. comm. 2008). Its objectives are:

- to develop and strengthen institutional mechanisms for effective stakeholder participation,
- to build and strengthen capacity in basin forums,



- to develop and maintain horizontal and vertical communication between and among the structures of ORASECOM and basin stakeholders.

The four key focus areas outlined in support of the objectives are:

- communication and information,
- institution creation and development,
- capacity-building, and
- institutional interfaces.

The Roadmap's Framework of Action, which outlines the activities to be carried out, recognises that ORASECOM, in spite of its primary responsibility for the management of the basin, "has relatively limited capacity for the implementation of many of the processes". It is envisioned that most of the actions will be carried out by other organisations, such as NGOs, community-based organisations (CBOs), academic institutions, development partners, etc. Due to the overlaps and gaps that often occur when different development partners work in a region, Terms of Engagement have been drawn up for development partners wishing to work on transboundary stakeholder projects in the basin.

In spite of the political backing, the positive experiences with public participation and the region-specific expertise acquired in this field, the challenges facing stakeholder participation in the Orange Basin are still significant. The level of organisation of stakeholders in rural communities, for example, can be very low; this would hinder awareness-raising and effective joint efforts (Tau, pers. comm. 2006).

In terms of the institutional set-up, the Roadmap foresees the establishment of a basin-wide forum which would allow access to a wide range of stakeholders. The basin-wide forum is to integrate already existing fora at the sub-basin level in the individual countries, e.g. the forum established by DWAF for the Vaal river basin, as well as other fora created in the context of setting-up catchment management institutions in the South African part of the Orange-Senqu basin. These fora were developed with the intention of providing a platform for public consultation, and for integrating water-related activities of other non-governmental and community-based organisations.

#### **4.3.5 Overview of Main Stakeholders**

The following overview is intended to demonstrate the diversity and variety of actors in the basin<sup>13</sup>. While this preliminary list is based on the situation in South Africa, it has to be considered that similar structures also exist in the other basin countries.

##### ***Water utilities, water-service providers and water boards***

This group includes roughly all those institutions responsible for providing water to water users at the local or higher level. The South African system in this respect is rather complex, including private as well as public actors, organized in complex actor networks.

Water-service providers (e.g. Rand Water) operate at the local level and are mostly organised at the district level, where district councils perform a re-distributive function providing bulk service to rural councils, including the collection of water-use levies from water users.

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<sup>13</sup> A preliminary stakeholder analysis has apparently been conducted by one of the donors active in the basin. However, the analysis is not publicly available and quite contested among those experts who have had access to it. It should be noted that the overview presented in this paper by no means intends to provide a full-blown stakeholder analysis. The list was prepared with help of Dr. Chris Dickens, Institute of Natural Resources, University of KwaZulu-Natal.



The primary activity of a water boards is the provision of water services to water-services institutions. Their activities might be extended to supplying water to consumers, providing services, training and other support to water-service providers, as well as catchment management services on behalf of the responsible authorities.

### ***Agricultural sector***

The agricultural sector is the largest water consumer in the region, using between 70 and 80 percent of available resources. Water intensive crops, such as cereals (wheat and maize) for domestic or regional consumption as well as cash crops (high quality fruits and vegetables) for international exports, dominate the agricultural landscape in the region (Malzbender and Earle 2007). Actors, however, vary from subsistence farmers to large industrial agribusiness, which is also reflected in the respective organisational structures. Agri SA, for example, is an autonomous body and represents the farmers' viewpoints on agricultural affairs. The Union is a powerful lobbying organisation and has direct access to the organs of the State and to other authorities in South Africa. The Union is likely to be an important actor in water management as its members (still mostly white farmers) manage large parts of privately owned land.

### ***Industry sector***

According to Hirji (2002), water use by the industrial sector in the Southern African region is projected to increase by a third by 2020 compared to 1995, which would then account for 20 percent of water used. Electricity production is the largest industrial water user. In particular the further development of hydropower infrastructure is expected to have further repercussions on natural resources in the region over the years to come.

Another important water user is the mining industry, especially with regards to pollution issues, but also in terms of water consumption. Mining activities are likely to be expanded in the region over the years to come, which more mineral deposits constantly being discovered (Malzbender and Earle 2007). The mining industry has a very powerful lobby and has very close relations with government authorities in most of the basin countries.

### ***NGOs and community-based organisations***

NGOs are playing an increasingly important role in stakeholder processes in South Africa and the other riparian countries, but mainly at the local level. Environmental (such as Eco-Link) as well as social justice groups (such as Alexandra and Soweto Civic Organisations) have emerged to address very specific community water issues. Due to the fact that many have been newly established in the wake of the democratisation process, their role in the institutional set-up still needs to be strengthened. International NGOs are also active in the field of water management in the region; among the most active are IUCN and WWF. The US-based International Rivers Network (IRN) has been very active in addressing injustices in the context of the large dam projects in Lesotho. There seems to be a disconnect between efforts at the local and those at the international level.

### ***Traditional authorities***

Traditional tribal structures are institutional structures, mainly in rural areas, which in the case of South Africa are recognised and thus subject to the Constitution. It is to be expected that these traditional structures will play a mediating and supportive role in dealing with



water management issues, as they might help to address also large parts of the general public.

### ***Research institutions***

Research plays an important role with regards to providing a sound basis for water management in the national as well as the international context. This applies to the acquisition, analysis and coordination of primary data, as well as the identification of indicators for good water management practices and, eventually, for the training of researchers and practitioners in the field. The research landscape in the Orange basin, and particularly within South Africa, is well developed. Main players are the Water Research Commission (WRC), a statutory body reporting directly to the Department of Water Affairs. In addition, South African universities generate a large amount of relevant research. South Africa's Council for Scientific and Industrial Research (CSIR) has been significantly shaping the discussion on transboundary watercourses in the region. IWMI, the International Water Management Institute, also maintains a regional office in South Africa, focusing on sustainable water use and land resources in agriculture, and on the water needs of developing countries.

Of increasing importance are also stakeholder networks formed at the local level, which under the current institutional set-up brought forward by the Roadmap are expected to feed into the basin-wide process (Malzbender pers. comm. 2008). The following two examples are represent an increasing variety of groups and meetings.

### ***Water committees***

Water committees are established at the local level, mainly in villages, and liaise between water management organisations and other institutions involved in water management and villages. They communicate the needs of villagers and report back to these on decision made by the authorities. Members of these committees are elected by the people of the village at general village assemblies.

### ***Water user associations (WUA)***

Water user association are foreseen under the South African Water Management Act. However, the scope of their objectives as well as their geographical extent will be more limited than that of the CMAs. They are conceptualised as co-operative associations of individual water users who wish to undertake water-related activities at the local level. They are expected to be financially self-supporting from income derived from water use charges payable by their members. It is furthermore foreseen that already existing institutions such as irrigation boards, subterranean water control boards and water boards for stock watering purposes need to be transformed into water user associations.

## **5 Preliminary Analysis**

This section can only provide a preliminary assessment of the nascent participative efforts at the transboundary level in the Orange-Senqu basin. Based on the discourse among scientists and practitioners on the relevance of participation for fostering and improving adaptive capacity, and on information collected during explorative interviews in the basin, I aim to identify existing gaps and challenges and to suggest possible ways ahead. In undertaking this analysis, I acknowledge that the evolution of the participative process, like many other



parallel processes taking place at the river basin level, is subject to complex dynamics, which are influenced by a wide range of actors.

In my preliminary assessment I will address the following aspects, which are roughly guided by the questions and challenges posed in section 2.2.. More specifically, I will take a look at:

- Process management and the issue of capacity,
- Characteristics of stakeholders and the implications,
- Issue of integration across multiple governance levels.

#### *Management style and capacity*

Participation in the Orange basin has been initiated through a largely ‘top-down’ style management process by the Commissioners, which was driven by the international discourse on the role of governance in IWRM, as well as their experiences with stakeholder engagement in the Okavango basin.

This approach can have both positive and negative implications. On the positive side, the participative process is thus built on a strong backbone: the Commission and in the future also its secretariat. This will ensure that the momentum of the process is maintained and that participative engagement is undertaken in a coordinated manner, while reducing redundancies. Also, the coordination of participative efforts across various administrative levels can best be achieved through a central point of coordination. At the same time, this type of process design allows for donors to channel and address their efforts through one single organisation.

On the other hand, this approach bears risks originating from two different sources. The most obvious is achieving sufficient buy-in from stakeholders. So far, only experts have been involved in the process design. Actual stakeholder groups will only be consulted and involved in the following steps, and it remains to be seen to what extent this will take place at all and whether it will positively influence the process.

Focusing more on the Commission itself, and given the past limitations in terms of capacity and resources, the Commission might simply be overwhelmed by the task assigned to it in the wake of the past processes. It will largely depend on the ability and capacity of the Commission/secretariat to delegate tasks in the participative process to the national and local levels, while at the same time maintaining oversight and control of it. To this end, it will be crucial that, next to support from international donors, there is sufficient agreement and coordination among the riparian countries with regards to the allocation of financial resources, but also ‘vested power’ to make decisions, especially when considering the overall volatility of the hydro-political context in the region. As long as issues at the diplomatic level remain un-settled, it might be difficult to open up processes for other stakeholders at all.

Here again the issue of trust emerges. This is an issue of central importance for all policy processes in transboundary water governance, especially when it comes to involving other groups than government actors, as the buy-in from stakeholders will greatly depend on the convener of the process and whether he is perceived to be trustworthy and neutral. This bears the danger of the Commission not being perceived as a neutral convener, in case hydro-political issues conflict with the other mandates of the Commission.

#### *Stakeholder characteristics*



The range of stakeholders in the Orange-Senqu basin includes a wide range of actors, which are fundamentally different with regards to resources, interest in specific water policy issues, and their power position relative to other actors. These three aspects also constitute the main challenges with regards to involving these stakeholders.

When considering the inherent interest and current involvement of the general public with water resources management at the transboundary level, the public's concern with the issue of transboundary river basin management seems more limited than the concern it has been given by the political system. Judging from the activities of NGOs in the area, involvement only arises in response to negative impacts of transboundary projects, most noticeably those of the LHWP. A deeper involvement with the issues of transboundary river management as such seems not to have taken place, probably due to its technical complexity and the absence of a flagship environmental problem related to it. This lack of concern and involvement of the public could be due to transboundary river management being in an early stage of implementation, and also due to the current changes to the national water management systems.

At the same time, it is to be expected that agricultural and industrial stakeholders are going to progressively step up their involvement. They dispose of much more resources, both in terms of capacity and finances, to represent their interests. Already some industry sectors, such as the mining sector, have very strong connections with the government, particularly in South Africa, but also in the other basin countries. Any effort with regard to stakeholder interactions needs to take into consideration any prior channels of interaction between authorities and stakeholders. In a first step, this will require immense efforts with regards to providing a broad range of stakeholders with access to relevant information and also with the capacity to actually partake in any participatory process.

Unlike the Okavango, where stakeholders' interests were more or less aligned, focusing on the issues of nature conservation and the promotion of tourism in the Okavango delta region, interests in the Orange-Senqu are much more divergent. At the same time, divergent interests are promoted by stakeholders with then again significantly different resources and power to access authorities at this moment.

This is particularly problematic against the background of the aspired mode of interaction with stakeholders at the transboundary level, which in many cases goes beyond pure consultation, but rather involves co-decision-making<sup>14</sup>. It is envisaged that decisions be generated through broad-based consultations at the international level. Especially in a country like South Africa, with a 'fledgling democracy', managing to embark on a balanced process involving all affected stakeholders poses a big challenge, as some stakeholder groups might not have the knowledge about how to attain access to participatory or decision-making processes at all.

It will be crucial in the further process to first conduct a detailed stakeholder analysis, which also takes in consideration the value and norm systems and the underlying power structures, in order to elicit how different stakeholder groups react to different incentive structures and demands. Following this, the process, which has so far only been drafted theoretically, needs to be kick-started through actually involving stakeholders. Starting with a pre-selected group, it will be crucial to keep the process open so as to add stakeholders to the mix if necessary, and also to keep the momentum. Constant monitoring and evaluation need to be part of this

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<sup>14</sup> This is termed co-management of stakeholders in the Roadmap.



process as well. The goal of the first avenues into stakeholder involvement should be a development of a common vision for the basin, which will have to be highly integrative with regards to the issues to be addressed. The prioritization of these key issues will be the next big step. Only then will the Commission be in a position to rely on the input of the stakeholders and tap into their potential, so as to make a true contribution to adaptive water management in the region. As mentioned before capacity-building among stakeholders in order to empower their participation will be one of the main tasks to accomplish over the years to come.

### *Multi-level integration*

In order to ensure adaptive water management in the entire basin, participative efforts at the transboundary level need to be effectively linked to already existing efforts, i.e. at the national, provincial, and local level. It also needs to be sufficiently open to discursive processes among the international water community, e.g. with regards to the criticism of dam-building activities.

The current institutional set-up for stakeholder participation relies heavily on a ‘trickle-up’ process, whereby local and national level activities are aggregated at the transboundary level. At the same time, it is expected that international development discourses, e.g. among the donor communities, find their way to local communities by way of the Commission. This constitutes a great task for the Commission and its emerging institutional structures, but it also raises the expectations towards the emerging Catchment Management Authorities (CMA) in the South African context. The CMA shall act as a mediator and a platform for expressing and resolving problems and concerns that arise among the stakeholder of a certain river basin. Albeit the CMA structures have not been fully established yet, this creates the challenges of finding a balanced approach among all riparian states without risking an absolute domination of the South African perspective. This threat is already looming, since active stakeholders are unevenly distributed across the basin, with some areas showing a high activity and others no stakeholder interest at all.

Other integrative tasks are related to linking up water management to other government portfolios, in cases where they are relevant for the transboundary perspective, such as agricultural and trade policies, environmental impact assessments, and energy policy.

Overall, the Commission and its Secretariat are faced with an immense integration task. Given the lack of capacity and the fragmented situation in terms of legislation in the four riparian countries, one of the main tasks the Commission should try to fulfil is that of serving as an information hub and a communication platform. This paper does not explicitly address the role of sound information management, but it should be mentioned that it is crucial for ensuring a balanced involvement and engagement of a diverse range of stakeholders. This points to the additional task of linking up several regime elements, not only including information management, but also the legal and policy frameworks and, last but not least, the issue of financing. Especially in the case of participation in the Orange-Senqu basin, this entails the co-ordination and alignment of different suggestions and interests to support participative approaches on the side of the donors.

## **6 Conclusions and Outlook**

In this paper I have started out by illustrating the widely acknowledged and promoted paradigm that, in order for water management regimes to be adaptive and capable of addressing emerging challenges in the context of global environmental change, broad-based stakeholder participation and learning by all relevant actors is absolutely mandatory. From the discussion of the underlying rationales of the concept and its ramifications for successful, i.e. adaptive water management, I have turned to the challenges arising with regards to



enabling participation in transboundary river basin, focusing on the situation in the Southern African region.

In the Orange-Senqu basin, public participation has been placed high on the agenda of the Commission, but also among the supportive donor community. An elaborate Roadmap has been drafted in order to direct stakeholder interaction over the years to come. The question that remains is what it takes to put this Roadmap into practice and how learning among all actors can be maintained and strengthened, also with view to fostering the adaptive capacity of the water management regime.

Considering the emerging challenges, the key issue seems to be that of capacity at ORASECOM to successfully tackle the daunting tasks of nurturing a sound and effective transnational stakeholder network in the years to come. The path commenced with the Roadmap, which clearly supports decision-finding among all stakeholders rather than decision-making (Hemmati 2002), points into a promising direction; nevertheless, many questions still remain open regarding the implementation of such an ambitious approach and the direction it will take.

The fact that the Commission is operating with a very low capacity, and that the authorities in the four riparian countries do not as of yet have an impressive track record concerning implementation of water policy, raise doubts as to whether a result will be obtained in the near future, but also the question of which actors will take the lead and shape water resource management in the basin.

Certainly, the donors will play a role when it comes to financing the officially accepted Roadmap, but it remains to be seen how open to stakeholders these processes will be. Also, in 'everyday water management', other actors might assume a stronger role, to the degree that one could detect a blurring of the usual distinction between state and non-state actors. Whether or not an equal representation of all interests can be achieved is not only relevant due to the history of non-consultation in the region, as well as against the background of the emerging democracy: it will also provide useful information for the assessment regarding the adaptive capacity of the water management system in the Orange basin vis-à-vis global environmental change. If the engagement of stakeholders on a basin-wide scale provides the fabric for an adaptive water management approach in the future, and if thus the adaptive capacity of a river system is fostered through participation, then the implementation of this approach should receive the utmost attention by those responsible. A lot of responsibility has been assigned to the Commission by the riparian countries in this regard. It remains to be seen how this can be put into practice against the background of the hydro-political situation in the region, the historic challenges in water management and, most importantly, the evolving power positions of the various stakeholders. In addition to the capacity to manage all relevant interactions in water management at the multiple scales, it will be a crucial task for the Commission to fully grasp the norms and values of their stakeholders across the basin.

The roles have been defined; it remains to be seen whether an enhancement of the adaptive capacity of the water regime in the Orange can be achieved through stakeholder participation by tapping into the potential of the stakeholder community or whether, on the contrary, the capacity to act at the international level will be stifled by an ill-conceived approach, which is using up too much of the available resources.

However, there appears to be a lot of awareness of the issues at hand among those steering the process at the moment, providing reason enough for an optimistic outlook.



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