

HYDROPOLITICS IN THE DEVELOPING WORLD: A SOUTHERN AFRICAN PERSPECTIVE

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ISBN: ????

First published by
African Water Issues Research Unit
Centre for International Politics
University of Pretoria
Pretoria 0002
South Africa

Tel: +27-12-420-????
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Language editing: Euníce Reyneke
Cover design: Imagedesign
Design and layout: eR Communication & Consulting
Reproduction: PrePress Images +27-12-346-2168
Printing: Cedilla +27-11-683-1302

*In the world there is nothing more submissive and weak than water.
Yet for attacking that which is hard and strong nothing can surpass it.*
-Lao Tzu

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the 'reserve' would not have ultimately found its way into the National Water Act (36/1998). The fact that it finally prevailed in the national legislation was largely the result of Dr Carolyn (Tally) Palmer's tireless work. For her efforts, Dr Palmer won a gold medal, which was awarded to her in Swakopmund in 1999 by the Southern African Society of Aquatic Scientists (SASAQS). The National Water Act's (36/98) Resource Directed Measures involving the classification of rivers, the determination of the 'reserve' and the development of resource quality objectives, are largely founded on the inclusion of the 'reserve' in the legislation. The outcome of this is water legislation that is somewhat unique in a global context, and this in turn is the result of allowing special interest groups to become involved in the drafting of legislation. In short, this is an excellent example of the Lockean form of hydrosocial contract at work.

- 16 Refer to note 15 above for a history of how the 'reserve' came to be a legal concept.
- 17 The fact that water use authorisations can be used as source directed controls is based substantially on the fact that resource protection measures can be included as conditions in general authorisations and licenses (Rowlston 2000).
- 18 Technically, this is a moot point. While all licenses are applied for individually, for the most part these applications are likely to arise from invoking part 8 of chapter 4 of the National Water Act, which is a compulsory and geographically general application. This is important to note in the context of reducing overall water allocations at the national level. Compulsory license applications are specifically intended to effect reallocation in areas where demand exceeds sustainable levels of supply (Rowlston 2000).
- 19 This does not imply that water boards are the principal providers of water services under the Water Services Act. Local authorities are constitutionally the Water Services Authorities, and the Water Services Act makes it clear that water boards are but one Water Services Institution, with a specifically defined role of providing water services to other Water Services Institutions (WSAs29) (Rowlston 2000).
- 20 The parliamentary review process was introduced to preclude administrative law-making, which was perfectly possible under the older 1956 Water Act, where potentially powerful regulations were not subject to any substantial regular mandatory review process. According to Rowlston (2000), the legal requirement for public consultation is probably a more significant counterbalance to arbitrary DWAF actions, than the parliamentary review process. The National Water Act thus has two significant forms of counter-balance, making it a good example of the Lockean form of hydrosocial contract.
- 21 Basson (2000) notes that this may be an unrealistic aspiration. At best, according to Dr Basson, WDM measures may delay augmentation. Gilham & Haynes (2000) concur with this view.
- 22 The legal requirement that DWAF must be open to public consultations is an example of this.
- 23 In this regard, the National Water Act specifically states that the government is the trustee of the nation's water resources. It is interesting to note that NEMA have also adopted this approach (Rowlston 2000).
- 24 While whites were in general privileged over their black counterparts, the water resource profession was skewed in favour of white, predominantly Afrikaans-speaking males over time. Refer to note 11 above.
- 25 The decision to allow existing lawful use to continue pro tem was a tacit acknowledgement that DWAF simply did not have the capacity to address all existing uses at once. In the longer term, there will be a need to reduce existing allocations, on a priority basis, under the loose banner of water stress. There are sufficient mechanisms in the National Water Act to do this. In the long term, the intention is to make the pie bigger by means of WDM, so these measures should be seen as being short-term strategies only (Rowlston 2000).
- 26 As with most hydropolitical issues, the data is contested. The heavy rains that fell over the entire Southern African region during the first quarter of 2000 have probably also served to stave off the inevitable for a bit longer, because they filled most large storage dams and recharged groundwater aquifers significantly. The dates should not be seen as absolutes, but can best be regarded as being one possible scenario.
- 27 A hydropolitical security complex is defined as including those states that are geographically part 'owners' and technically 'users' of shared rivers, and as a consequence, they all consider the rivers as a major national security issue (Schulz 1995:97). This happens under conditions of water deficit at the level of the international river basin. This condition of water deficit already exists in the Incomati, Limpopo and Maputo River Basins, and is rapidly approaching in the Orange River Basin.
- 28 This is a clear manifestation of the Lockean form of hydrosocial contract.
- 29 This is relevant to feminisation as a critical component of the changing hydrosocial contract (Turton et al 2000b).

Chapter 4

River basin management reconsidered

Philippus Wester and Jeroen Warner

Introduction

Integrated river basin management and stakeholder participation are twin planks of a new consensus on how water should be managed. The assumptions on scale, boundaries, appropriate institutions and procedures underlying this new model are, however, not as self-evident as they seem. Rather, they are the outcome of socio-political *choices*. By presenting these choices as natural, the dominant water discourse works to depoliticise important issues of scale and voice. The apparent 'closure' in this debate is of concern, and an argument can be made for the rehabilitation of the political in water resource management – showing the realist side of the coin that, in the official literature, too easily plumps for its idealist face.

As water is essential to life and livelihood security and has multiple users and uses (use(r)s), its management readily gives rise to 'wicked' problems. Not all problems become politicised – many are handled in a routine, 'rational' fashion. Wicked problems are those that are not easily resolved through rational deliberation, as they involve alternative views based on competing perspectives and values, as well as large power disparities. They thus enter the realm of politics, understood here broadly as the process through which relations of power are constituted, negotiated, reproduced or otherwise shaped (see Mollinga 2001). Water is frequently a politically contested resource: a contest with unpredictable and unstable outcomes and diverging pathways to alternative futures (see Mehta 2000; Mollinga 2001; Mosse 1997). As a plethora of choice and controversy can be frustrating for decision makers, it is attractive for those in charge to present an outcome as unavoidable, that is, to posit a *point of no return*. This very powerful speech form could be called a 'move for closure' of the political issue. This chapter argues that such a process may be at work in river basin management, with many river basins not only heading towards closure from a water perspective, but also from a political perspective.

In the past ten years, a global water narrative has been constructed around water scarcity and an impending water crisis (most famously Gleick 1993c). This alarmist rhetoric was sanctioned at the Second World Water Forum held in The Hague in March 2000, where the growing global concern was highlighted about freshwater supplies and the complexity of the issues that must be faced for developing countries to meet future demands for water (Cosgrove & Rijsberman 2000). All around them, people are told, are the signs of a looming water crisis, consisting of droughts, waterlogging, salinisation, groundwater depletion and water pollution, threatening the world's capacity to feed itself, maintain human health and protect aquatic ecosystems.

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It has become conventional to cite water scarcity as the largest threat facing humanity in the 21st century, although there are also dissident voices suggesting it is not water scarcity *per se*, but rather the mismanagement of water that is the main problem. By creating a sense of urgency, the water scarcity discourse serves to justify a new series of water reforms and to galvanise support for these reforms. To make the transition to sustainable water management, the dominant water discourse emphasises three policy prescriptions:

- manage water on the basis of river basins;
- increase stakeholder participation in water management; and
- treat water as an economic good.

These prescriptions, lubricated with the promise of international funding, have led many countries to initiate significant water reforms, focused on national level policies, irrigation management transfer, the privatisation of domestic water supply and the creation of new institutions for managing river basins.

However, the water scarcity narrative is both flawed and dangerous, not least because it obscures issues concerning unequal access to and control over water (Mehta 2000). It is also necessary to question which institutional constellation produces the water scarcity discourse and whose interests it serves. While freshwater supplies are clearly limited, for most people water scarcity is caused by political, technological and economic barriers that limit their access to water and by competition between water use(r)s (Falkenmark & Lundqvist 1998). Water scarcity is not a naturally occurring phenomenon, but has been created through the development of water resources in the past, the selective entitlement of water rights and incidental and structural resource capture by the better off (see Homer-Dixon & Perceval 1996).

As a result of water over-exploitation, many river basins have become 'closed' and no longer have utilisable outflows as water depletion (the use of water that renders it unavailable for further use) equals or exceeds the level of annual renewable water (Keller et al 1996; Seckler 1996). It is undeniably true that the closure of river basins results in a complex interplay among declines in water quality, intersectoral water transfers, inequitable water allocation and reduced access to water, particularly affecting poor people. Especially the transfer of water from the agricultural to the urban and industrial sectors is a substantial threat to irrigation with grave implications for social equity and agricultural productivity. Paradoxically, while more water is withdrawn and consumed than ever before in closed river basins, the dominant water discourse would have it that water scarcity is the key problem. This scarcity paradox obscures the fact that the tremendous inequality in access to and control over water and the conflicts between the different use(r)s of water lie at the heart of the need for new approaches to water management (Mehta 2000).

Although it is widely argued that existing institutional arrangements for water management are inappropriate and a major constraint for achieving sustainable water management (Cosgrove & Rijsberman 2000; Gleick 2000; Merrey 1997; Vermillion & Merrey 1998), it is necessary to question whether the reforms currently in vogue will lead to significant improvements. Emerging research results suggest that irrigation management transfer, the creation of water markets and new forums for river basin management, as well as the privatisation of domestic water supply are strengthening

inequitable patterns of access to water and concentrating water rights in the hands of multinational corporations, private sector water companies, agribusiness enterprises and wealthy farmers (Barlow 1999; Bauer 1998; Ferrier 2001; ISDC/GCI 2001; Mollinga et al 2000). What is also striking is that hydraulic bureaucracies are proving to be very creative in maintaining their construction and command-and-control orientation under the guise of apparently drastic institutional reform processes (see Espeland 1998; McCool 1994; Rap et al 2001; Reisner 1993).

This chapter reconsiders one of the key water reforms propagated internationally: river basin management (also termed integrated catchment management or watershed management), based on a concern that the political dimension of river basin management has not received sufficient attention. The rationale for river basin management most frequently stressed in water policy circles is that nature prescribes, or even mandates river basins as the management units for water (see Newson 1997 for a summary of the literature), thus leaving no choice. The closure of river basins from a political perspective is an issue that warrants careful consideration. In raising this issue, it is clearly not the intention to question the sincerity of the many researchers, planners and policy makers working hard to make sustainable river basin management a reality. Rather, it is hoped that it will stimulate debate and critical reflection on the 'politics' of river basin management reforms and engender a shift in policy prescriptions from a technocratic 'should' to a democratic 'could'. To open the debate, the concept of 'river basin management' is first discussed – its provenance, rise and problems.

The problem with river basin management

Although it has long been argued that the effective management of surface and groundwater requires a basin perspective, the experience with river basin authorities as action agencies (in contrast to those designed primarily to carry out studies) suggests that they are difficult to sustain (Barrows 1998). Frequently, this is attributed to the fact that political and administrative jurisdictions usually do not correspond with basin boundaries, making accommodation between different states and government agencies difficult. In recent years, nonetheless, the proponents of river basin management appear to be gaining the upper hand over the pessimists who argue that river basin management will never work. Concomitantly, the question of which types of institutional arrangements are best suited for water management in a basin context has received increasing attention. Mostert et al (1999) identify three organisational models for river basin management: the hydrological, administrative and co-ordination model.

In the hydrological model, the organisational structure for river basin management is based on hydrological boundaries, and all water development and management decisions are typically concentrated in one single agency: the river basin authority. The most famous example of this model is the Tennessee Valley Authority (TVA). The opposite of the hydrological model is the administrative model, where water management is the responsibility of states, provinces, municipalities and other bodies not based on hydrological boundaries. This model applies in most countries in the world, where water is not managed along basin lines. In the co-ordination model, which falls between the previous two models, water management is typically co-ordinated by river basin councils or co-ordinating bodies. Pioneering countries in applying this approach are France and

England, which have had functioning co-ordinating bodies at the basin level for the past 30 years (Betlem 1999; Buller 1996). More recently, Australia has joined the select list of countries reputed to have 'successful' river basin management (Chenoweth 1999; Malano et al 1999; Pigram 2000).

A more sophisticated analysis of how increasing levels of water exploitation are related to institutional changes for water management is provided by Turton and Ohlsson (2000), who argue that an important distinction exists between a "first-order scarcity of natural resources" and a "second-order scarcity of social resources". They posit that water scarcity *per se* (first-order scarcity) is not the key issue, but rather the question whether a social entity has the ability or adaptive capacity (second-order scarcity) to cope with the challenges posed by increasing water scarcity.

Based on historical examples and conceptual work, Turton and Ohlsson (2000) conclude that two institutional transitions (need to) occur as water becomes more scarce: the first transition when water abundance turns to water shortage and the second transition when water shortage turns to water scarcity. The first transition occurs when the demographically induced demand overtakes the readily available supply of water, and triggers the construction of significant hydraulic infrastructure, usually by the government, to mobilise more water. Reisner (1993) terms this transition to water supply development the birth of the hydraulic mission, embodied in a central government agency consisting of hydraulic engineers. Whereas water was controlled locally before, its development and management becomes highly centralised after the first transition.

At a given point, the supply-oriented phase runs up against a barrier: when river basins close. This is when water demand continues to outstrip supply even though all available water sources have been developed or are prohibitively expensive to develop. This induces increased competition between water use(r)s, and water scarcity reaches such a level that the exploitation limits become evident and finding the best possible use of water becomes imperative. However, making the second water transition, from supply-oriented development to water demand management, requires substantial changes in institutional arrangements for water management. Under favourable socio-economic and political conditions, this transition can be made, resulting in a stabilisation of water demand and the birth of sustainable water management. However, these transitions are not automatic and whether and how well they occur are functions of the adaptive capacity of a society.

While Ohlsson and Turton seem to suggest that the second transition is actually holding sway over the water world, there is reason to be cautious. Certainly, the discourse of participation and integrated management is promising, but the situation on the ground often tells a different story. So far, environmental turnarounds and the design of participatory decision-making structures have taken on a top-down character. It may legitimately be questioned whether the onset of an *environmental consciousness* has fundamentally changed this technocratic outlook.

Combining the findings of Mostert et al (1999) and Barrows (1998) with that of Turton and Ohlsson (2000) suggests that co-ordinating bodies at the river basin level are necessary in the demand management phase. It is fair to say that this has become received wisdom, as evidenced by its endorsement in the World Water Vision process. Although the World Commission on Water for the 21st century emphasises that there is no 'silver bullet' to solve the water crisis, it is quite adamant that river basins should be managed holistically:

"[G]overnments should set up management agencies at the basin and aquifer levels, and international funding agencies should be willing to support and help finance the setting up and strengthening of such agencies ... There must also be clarification of the decisionmaking processes within the basin organization and accountability arrangements for those making decisions. The experience of water user parliaments needs to be generalized so that all stakeholders have a voice in the decisionmaking ... It is equally imperative that decisionmaking be informed and scientifically and technically sound. Effective river basin management thus walks on two legs: parliaments, where users make policies and decide on the raising and spending of money, and excellent technical agencies, which provide the parliaments and users with the raw and processed information necessary for management" (World Commission on Water for the 21st Century 2000:27-29).

Together with Australia, England and France, several middle-income countries such as Brazil, Mexico and South Africa are at the forefront of applying variations of this approach to river basin management.

On the face of it, these policy prescriptions seem to make imminent sense as a pathway to sustainable water management and perhaps even substantial poverty reduction and ecosystem restoration. So why question the soundness of the policy prescription that water should be managed on the basis of river basins, and that governments should create councils or 'water parliaments' at the basin and aquifer levels, consisting of user and government representatives, which control the activities of its executive branch, the Water Agency? Answering this question is more difficult than it seems, and entails considering what is at stake in river basin management and studying why current water reforms continue to work to the detriment of poor people. As Barham argues so eloquently:

"History teaches that gains in human freedom and democratic self-rule have never been given but have always been won, sometimes only after long and bitter struggle. Private interests may see in the transition to watershed thinking an opportunity to close some channels of true public debate and deliberation, thereby eliminating bothersome environmental 'constraints'. And politicians may see opportunities for new avenues to power, further removed from public accountability. It is the confluence of these two sets of interests that poses the danger of 'watershed rule'. We can only be sure of avoiding this outcome by taking the time to put democratic institutions and processes in place to match new ecosystem-based levels of authority. There are difficult questions of citizenship rights and responsibilities involved in building such new institutions, and they should be carefully studied rather than avoided or glossed over" (Barham 2001:190).

A major problem with river basin management is that its political dimension has been neglected, through the reification of 'natural' boundaries, the emphasis on 'neutral' planning and participation and the search for optimal management strategies ('win-win' solutions). From a political science perspective, it becomes apparent that, at heart, the delineation and maintenance of boundaries, the mobilisation of interests and stakeholder representation, and the creation of basin-level decision-making arrangements are quintessentially political processes that revolve around matters of choice. To grasp why these insights have not received more attention in river basin management, it is necessary to consider how the dominant water discourse exerts a strong depoliticising effect (see Ferguson 1994).

River basin management as depoliticising discourse

To understand how river basin management could have taken off so successfully without much critical reflection, it is necessary to consider how hegemonic concepts are adopted. Sustainability, development, participation and integrated water management are all concepts that sound intuitively attractive and desirable – they sound like ‘good things in themselves’ as they connote desirable collective goals such as equity, voice, self-realisation and a healthy environment. However, they are also facile in that using such concepts papers over the inherent conflict that each of the concepts carries with it. Thus, ‘stakeholder participation’ sounds much more painless than ‘managing conflict between disputing parties’, which describes the same thing from the vantage point of negotiation literature (see Ramirez 2001, for example). The former starts from an imputed commonality of interest and desire to co-operate peacefully, while the latter starts from inherently contrasting interests and the difficulty of avoiding violent clashes that result from them. As people are both rational, self-regarding individualists and social beings with a sense of community, each approach represents one side of the coin. It is interesting to ponder why international aid institutions much prefer to emphasise the harmonious definition and ignore the discord. The concept of (de)politicisation seems to provide a major clue.

Politicisation of an issue questions the status quo, presents alternatives and involves conflict, often a drawn-out process. Politics is necessarily messy – it side-tracks, interferes and reopens debates long presumed closed, making business as usual problematic. As a plethora of choice and debate can be frustrating for decision makers, it is attractive for those in charge to present an outcome as unavoidable, that is, to posit a *point of no return*. Famously, Margaret Thatcher was fond of seeking to depoliticise an issue by claiming that “There Is No Alternative” (TINA). This very powerful speech form could be called a ‘move for closure’ of the political issue. If the issue is uncontroversial, it is not political; if there is nothing to choose from, and thus no degree of freedom, there is no politics. In this sense, language indeed “contributes to the domination of some people by others” (Fairclough 1989). Depoliticisation is therefore an attractive option to those who seek to neutralise opposition, opposition that might present persuasive alternatives to the preferred approach.

Ferguson (1994) highlights how development policy discourse constitutes Lesotho as a less developed country, badly in need of development, thus legitimising external development intervention. It reinforces the existing development trajectory as the ‘norm’, scripting aid institutions, notably the World Bank, as dispassionate, philanthropic institutions that know how to do development, and makes a different way of understanding society seem far-fetched (see also Crush 1995). How is the norm justified? This brings the argument to theories around legitimacy. As noted by Machiavelli (1958), a social order entails difference – everybody cannot be equal – but even a ruthless ruler needs to ensure that the ruled believe his rule is *justified*. Legitimacy justifies the authority of some over others, and hence power inequalities. Legitimising strategies seek support for a certain social arrangement that institutionalises these differences. These justifications are more persuasive if they invoke internal (custom, elders) or external (religion, science, natural law) allies. While the legitimacy of religion is on the wane in many societies, natural law and science remain powerful sources of legitimisation. It will be shown that the ‘natural’ scale of the river basin is a case in point.

Discourse is a powerful legitimising tool. While competing discourses may initially make themselves heard on the scene, a dominant discourse tends to emerge. It brings

‘closure’ to the ways society, its organisation and the way power is distributed are understood, thus excluding competing understandings. Scientific discourse has the particular characteristic of describing the world in an ‘out-there’ fashion as objective truths, without agency, subjectivity and uncertainty (Potter 1996). Thus, when the experts make a claim, it has much more authority than when other enunciators make a competing claim, unless the latter is successful in politicising such a claim. Thus, discourse helps to privilege and institutionalise expert knowledge, while overt (conditionality) or covert forms of indoctrination helps to diverge and divulge it (Bierschenk 1988).

The ‘naturalness’ of river basins

River basins have gained pre-eminence as the new territoriality for water management (Buller 1996) due to the confluence of three types of science, namely hydrology, geography and ecology. For hydrology, river basins are indeed the natural units for studying water flows on and in the earth. Geographers such as the Frenchman Philippe Buache (1700-1773) were the first to develop the concept of river basins as an ordering principle to study the lie of the land and have remained fascinated by them ever since (Melville 2000). The current concern for ecosystem management rests on the foundations of ecology, a science with a great interest in the delineation of natural systems. In practice, however, drawing the boundaries of ecosystems has proven difficult and, as a result, river basins and watersheds are being used more frequently as ecosystem boundary proxies (Barham 2001). Because river basins appear to be well-bounded and their boundaries are ‘natural’, it would seem that they are removed from the arbitrariness and mutability of boundaries drawn by humans (see Schlager & Blomquist 2000).

This seems to suggest the inevitability of the adoption of the so-called French model (Lorrain 1995). Indeed, the European Water Directive by and large adopts this model as does the World Commission on Water for the 21st century. But it is useful to keep in mind that river basin management in the US, generally seen as mature and ‘successful’, is characterised by river basin policy-making *without* a river basin policy maker (Schlager & Blomquist 2000; Svendsen 2000). Thus, the French model is not the only conceivable model. Once people become aware of the possibility of alternative modes of organising water resource management, it can be contemplated how and why one model is chosen over another, and whether such a model is necessarily ideal in all cases. It is thus necessary to bring politics back into river basin management, as explanations grounded in politics show that boundaries and institutional arrangements are not natural but matters of choice and contestation. In this context, it can be said that the politics of river basin management revolves around three fundamental questions:

- What is the appropriate scale for water management?
- Who decides on the appropriate scale and on the ensuing water management?
- How and in which forums are these decisions taken?

Bringing politics back into river basin management

Boundaries

The policy prescription that river basins are natural units and thus the logical scale for organising water management is depoliticising in that it rules out debate by drawing

'nature' into the equation. Anyone wishing to dispute the boundaries of river basins has lost beforehand, as these boundaries are not a matter for political debate, but have been drawn by nature itself. On closer inspection, however, it turns out that it is not quite that easy to determine on the ground where nature has drawn the line. Mostert et al (1999) point out that river basins are open systems with sometimes ill-defined boundaries as rivers may have a shared delta, their boundaries often do not correspond with aquifer limits and in flatland and extremely dry areas are either vague or human-made. In addition, river basins interact with the atmosphere and their receiving waters, such as seas. Furthermore, the uses made of river basins often transcend river basin boundaries through interbasin water transfers (Mostert et al 1999). Griffen (1999:509) also highlights that nature does not always do such a good job at drawing the boundaries of river basins by stating that approximately one third of the landmass of the US (excluding Alaska and Hawaii) possesses physical characteristics that make river basin delineation problematic. He also points out that:

“another problem with using a watershed as the appropriate spatial unit is that the use of watersheds erroneously assumes that all biotic and abiotic factors are similarly organized. Air, wildlife, and other natural resource issues are effectively transboundary and may not be well served by using watersheds as an organizing principle” (Griffen 1999: 509).

Newson (1997) makes similar points and emphasises the tremendous diversity in the size of river basins. Once these characteristics of river basins are taken into account, an obvious question becomes where the boundaries of river basins should be drawn and on which scale water management should be organised. As Schlager and Blomquist point out “the definition of a watershed and the selection of boundaries are matters of *choice*” (2000:14; emphasis in original) and “[d]rawing boundaries is the first step in determining who decides and how and with what effects. Different boundaries imply different decision makers and different effects” (2000:16). It is not suggested that water should not be managed on the basis of river basins, but rather that this choice is political and that river basins are thus as much political units as they are natural units.

River basins as territories of governance

Reconceived as political units, river basins become territories of governance. Who will make decisions and how are the questions that immediately arise. The need for stakeholder participation in river basin management is widely accepted, but including the poor and achieving substantive stakeholder representation has actually proven elusive in practice (Cleaver 1999). There is a danger that the participation discourse draws the attention away from the very real social and economic differences between people and the need for the redistribution of resources, entitlements and opportunities. This is typified by the frequent definition of stakeholders as water users only, thereby excluding those without water rights. As decision-making moves to the river basin level, serious thought needs to be given to how hard-won democratic rights in conventional social and political domains are assured in the river basin domain. As pointed out by Barham:

“While watershed-level ‘rules’ may be desirable in terms of holistic environmental planning, the simple fact is that we do not have established social and political institutions in place that can assure that deliberations over these new rules will be

broadly democratic. Without such institutions ... we may witness a gradual reassembling of authority on a watershed basis that leaves behind democratic access to information and the possibility of open public debate” (2001:189).

The nexus between integrated management and participation is not an obvious one. As Green and Warner (2000) point out, holistic management and participation pull in opposite directions. While the complexity of integrated management invites centralisation and technocracy, participation suggests subsidiarity and small-scale operations, engaging people to think creatively about issues intimately linked to their lives. Thus, in any basin of some size, river basin management would entail a layered system of participation, necessarily increasing the complexity of the arrangement.

River basin organisations and stakeholder representation

On the face of it, participatory platforms or ‘water parliaments’ democratise water management by giving voice to a multiplicity of interested actors. But participation is not necessarily politics. It can institutionalise power differentials as the literate elite take on leadership roles (as chairpersons), and co-opt the weak, and may even prove empty shells when it has little mandate to change anything. Stakeholders may therefore find it more attractive to (threaten to) pull out of the process. Much depends therefore on the social/material practices from which stakeholder platforms for river basin management emerge – whether river basin councils, catchment management agencies, watershed councils, and the like. To understand this, the kind of institutions also need to be considered. They reduce the complexity of the real world by setting rules, assigning roles and allocating rights to the actors involved in them. Institutional change therefore changes (redistributes) all three of these. Rules and rights create boundaries (including that of the institution itself), ownership titles, permitted activities, and ingroups and outgroups, while roles structure the field. Institutions are *dynamic* – they are embedded in social/material practices where they are reproduced, transformed and subverted through interactions and negotiations between actors. As Cleaver suggests:

“The institutions for the management of water ... are socially located and critically depend on the maintenance of a number of grey areas and ambiguity regarding rights of access, compliance and rules, [and] on a continuous process of negotiation between all users” (1999:602).

Such a notion of institutions opens avenues to analyse how power pervades institutional arrangements and gives rise to differentiated access to and control over water and more importantly, how to design processes to redress inequities.

Unfortunately, the situation before the creation of new institutions is often treated like a *tabula rasa*, while many roles (sanctioned or informal, established or highly flexible) and certainly the technologies for controlling water are in effect already in place. Barham points to the risk that river basin organisations may:

“sap the effectiveness of existing democratic channels of communication in the interest of finding more efficient *technical* solutions to complex problems. Social organizations (boards, committees, etc.) created for watershed planning are imposed as it were *from the outside*, overlaying natural boundaries in a new way on top of existing social and political boundaries ... To use a water metaphor, authority, funding, research, and new scientific approaches can all be poured from existing

social and political ‘containers’ into the watershed boundary. But we can’t be certain that processes of democratic deliberation that were associated with the older containers will be poured along with the rest or separated out and cast aside unless we give this careful and constant attention” (2001:190; emphasis in original).

If done unreflectively, new institutions can institutionalise inequality. In river basins, it is the norm that water management stakeholders have different levels and kinds of education, speak different languages, differ in access to politics, and hold different beliefs about how nature and society function (see Edmunds & Wollenberg 2001). If this is not taken into account when creating rules, roles and rights, the institutional outcome can easily privilege those who are literate and have access to the legal system. A preliminary path to understanding why this should be so lies in a limited understanding of the definition of ‘resources’. It suggests that, once social energies are released, reformist tendencies will evolve painlessly. Indeed, many social energies remain untapped. Turton and Ohlsson are saluted for pointing out that a more extensive definition of ‘resource’ is needed. In addition to natural resources, actors and societies have material and other resources (energies and capacities) available that can help (or hurt) adaptation to first-order scarcity. Indeed, freeing up second-order resources requires a more sophisticated social arrangement for decision-making to widen rather than narrow down the range of alternatives (White 1974) to a supposed ‘natural’ approach (or ‘one best way’). The work of Kooiman (1993) suggests that governing complexity requires a wider range of actors whose self-organising energies, knowledge and capacities can enable (or disable) sensible (water) management. While these insights may help in understanding why countries with similar endowments can have widely diverging degrees of success in switching to demand management, it focuses on the idealist side of the coin – it does not really clarify structural iniquities that impede change and promote conflict. Second-order resources, like first-order resources, can be captured by powerful interests, which have the means at their disposal to alter the playing field to their advantage. When pressing for institutional reforms, there is a clear danger of institutionalising the very rigidities that obstruct structural reforms at the level of first-order resource management.

Moreover, it is of little use to establish new institutions for water management without realising that they are embedded in an institutional ecology, a meta-institution with its own rules, roles and rights. The new institution will need to carve out its niche, demarcate its boundary, defend its mandate and acquire a resource base, which will inevitably create some conflict with those interested in the *ancien regime*. Resources may be material or intangible – power, knowledge, occupation of strategic pressure points in decision-making (Warner & Turton 2001). This process is deeply politico-strategic, a fact that is easily obscured by depoliticising discourse – in this case, on scale, boundaries, participation and procedure.

It is clear that the size of the population in most river basins is such that it precludes the direct participation of all stakeholders in basin-level decision-making. The question then is who represent groups of stakeholders in river basin management, once again a political choice. The issue of inequality and difference in stakeholder representation has already been pointed out. In addition, the relationship of the people participating in any multistakeholder process to their constituents is also problematic, especially when third parties are involved. It is a nostrum of development work that third-party facilitators

(researchers, NGOs, extension workers) are needed to help to identify, mobilise, organise and inform stakeholder groups. However, as pointed out by Edmunds and Wollenberg: “the relationship of a representative to his/her constituency is perhaps most politically charged when representatives of a group are designated by outsiders or are accountable to them, as is often the case in multistakeholder negotiations. From the start, outside convenors and facilitators influence representation by the selection of stakeholder groups, the people to represent each group and how the expression of interests is facilitated in the meeting” (Edmunds & Wollenberg 2001:240).

Even when agreement is reached on stakeholder selection and the concerns mentioned above are taken into account, the question remains to which extent the representative body actually has a mandate. Empirical research is needed to assess emerging forums for river basin management and their democratic content. This entails studying the boundaries of consent, that is, where the line is drawn between weak forms of stakeholder participation (communicative governance, surveys, public enquiries) and strong ones (actual control over water management agenda-setting and decision-making by water users and citizens). It also entails questioning whether emphasis is placed on protecting proven productive capacity and assuming that growth will lead to redistribution, or whether meaningful attempts are made to redistribute productive resources. Where the boundaries of consent for river basin management are drawn is a political choice, and should be treated as such in current water reforms.

Conclusion

Drawing from the insights of political science, it becomes apparent that the closure of the discourse on river basin management is a quintessentially political process that revolves around matters of choice and legitimacy. By showing how there is nothing ‘logical’, ‘natural’ or ‘unavoidable’ about taking river basins as the units for water management, an attempt was made to reopen the closed concept of river basin management and to engage critically with the way such concepts are selected and promoted. Interdisciplinary research focusing on the relationship between the over-exploitation of water, the production of dominant water discourses, processes of institutional change concerning river basin management and changing patterns of access to water, is needed to bring a greater understanding of such processes (see Bolding et al 2000). Such research should be conceptually grounded on the notion that water is a politically contested resource and that water management institutions and policies are effects of political practices. It would contribute to the construction of a counterdiscourse that describes instead of prescribes, that focuses on processes and outcomes instead of forms and functions, and that is informed by real world struggles instead of deformed by donor agendas and elite interests. This will lead to a better understanding of water management practices and processes of institutional change in the water sector and yield new insights into outcomes in terms of economic and environmental sustainability and social equity in the face of increased competition over water.