

103 | a gendered critique of transboundary water management

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abstract

The starting point of this paper is that most of the international transboundary water management (TWM) processes taking place globally are driven by 'the hydraulic mission'—primarily the construction of mega-infrastructure such as dams and water transfer schemes. The paper argues that such heroic engineering approaches are essentially a masculinised discourse, with its emphasis being on construction, command and control. As a result of this masculinised discourse, the primary actors in TWM processes have been states—represented by technical, economic and political elites operating in what generally gets termed 'the national interest'. Left out are the local communities relying on the resource directly: the water users; the poor; women; and other important groups. Instruments such as the UN Watercourses Convention of 1997 make an effort to present an attempt at a gender-balanced approach—through asserting the importance of the 'no-harm rule' and the 'equitable share approach'. However, they end up supporting the *status quo* through the omission of any reference to gender issues. The paper provides an overview of the masculinised discourse on TWM institutions, proposing that this is the case because of the intersection of two masculinised fields—water resource management and the disciplines engaged in the research of transboundary water management, namely, political science and international relations. The paper investigates two southern African examples that illustrate the potential for including a gendered perspective and pro-poor policies that take into account the needs of the water users or 'stakeholders'. The analysis includes the international and regional legal agreements on transboundary water issues, searching for evidence of a gendered approach. It is concluded that the laws and organisations responsible for transboundary water management currently do not reflect a gendered approach, despite the international recognition given to the necessity of including women in water management structures at all levels.

keywords

transboundary water management; international water law; human rights; gender; masculinised discourse; international relations

introduction

That there is a situation of crisis over the management of the water resources of the world is a claim promoted by a range of international organisations (UNDP, 2006; UNESCO, 2008;¹ UNEP, 2009²). Ecosystems are under increasing pressure from human activities and settlements; industries and cities have to convey water over longer distances; the production of crops for food and fuel consumes greater amounts of water; and we have just begun to see how climate change will magnify the crisis. Yet, 884 million people globally lack decent access to water (UNICEF, 2011).³ This has led some researchers to conclude that 'for the first time in human history, human use and pollution of freshwater have reached a level where water scarcity will potentially limit food production, ecosystem function, and urban supply in the decades to come' (Jury and Vaux, 2007). It has been argued that water scarcity is a gendered issue, in terms of, access to clean drinking water, water to grow food, water for health and sanitation, indeed, water for survival. According to the 2011 report by the United Nations Children's Fund (UNICEF) and the World Health Organisation (WHO) Joint Monitoring Programme for Water Supply and Sanitation, in almost 'three-quarters of households without access to drinking water on premises, women and girls have the primary responsibility for collecting water. In some countries the proportion is more than 90 per cent' (UNICEF-WHO, 2011). The Global Water Partnership (GWP) concludes that women play a leading role in the provision of water and the safeguarding of the resource; however, this is not reflected in the institutional arrangements for water management (GWP, 2010).⁴ This paper calls attention to this gap in the context of international transboundary water management, and thus institutional arrangements (including laws and agreements, as well as management organisations) established between states on transboundary water bodies.

Of the over 264 international watercourses in the world, most have some form of cooperative institution formed to contribute to their management (Wolf *et al*, 2003; WWF-DFID, 2010). In southern Africa alone, there are sixteen organisations on transboundary basins incorporating various countries in that region (Earle and Malzbender, 2005). Yet, despite the large number of agreements on these watercourses, the environmental and developmental indicators associated with these basins show little sign of improving (Kistin, 2007). Key ecosystems such as wetlands and deltas continue to be under threat from human activities, with negative impacts for the biological processes they support. For example, the delta of the Orange-Senqu River has been declared a wetland of international importance under the Ramsar Convention, and yet it is under threat due to decreased flow volumes and increased sediment transport, at times preventing the river from flowing into the sea (Earle *et al*, 2005). In some cases, the benefits of cooperation accrue at a different scale to the costs of cooperation. Thus, the agreement between South Africa and Lesotho on the Lesotho Highlands Water Project (LHWP) creates a range of benefits for each country (a secure supply of

1 UNESCO (2008) From Potential Conflict to Cooperation Potential, retrieved 2011, from UNESCO projects page: <http://www.unesco.org/water/wwap/pccp/>.

2 UNEP (2009) Water at a glance: the global crisis, <http://www.unep.org/ourplanet/imgversn/141/glance.html>, last accessed 2010.

3 UNICEF (2011) UNICEF—water, sanitation and hygiene, <http://www.unicef.org/wash/>, last accessed 9 January 2012.

4 GWP (2010) Dublin-Rio Principles, <http://www.gwp.org/The-Challenge/What-is-IWRM/Dublin-Rio-Principles/>, last accessed 9 January 2012.

water for South Africa and royalty payments for Lesotho), but these benefits go mainly to the urban populations of the two countries. Local communities living in the project area have been negatively impacted through having to relocate or losing access to traditional agricultural land (Kistin, 2007). The development of water storage and distribution infrastructure is vital to achieving water security, but it needs to take into account social and environmental safeguards. In some cases, it could prove to be the agreement itself that is a source of contention, such as on the Nile River where earlier agreements between Egypt, Sudan and Britain (acting on behalf of the upstream colonies in 1929 and 1959) allocated the entire flow of the river to Egypt and Sudan (Nile Basin Initiative (NBI), 2011). This has caused tension with the upstream states, who now wish to gain an equitable share of the water resources of the river.

There are several possible reasons for the lack of positive outcomes associated with transboundary water management initiatives, some notably rooted in the role power plays between countries. States may view each other with some degree of mutual mistrust and may thus not be willing to enter into agreements that may eventually prove beneficial. Or agreements are entered into but with very little input from sub-national stakeholders, despite the fact that much of the responsibility for implementing the provisions of agreements lies at this level. However, over the past 60 years, the 264 international transboundary watercourses in the world have had more than twice the number of cooperative than conflictual events associated with them (Wolf *et al*, 2003). The conclusion is that states cooperate over water precisely because it is such a precious resource; it does not pay to fight over water at the inter-state level. Much work has been done to break the hold of environmental determinism, showing that conflict is not a predetermined outcome in conditions of scarcity (Lowi, 1995; Allan, 2002; Wolf *et al*, 2003; Kalpakian, 2004; Zeitoun and Mirumachi, 2008). However, despite this history of inter-state cooperation, the problems associated with the world water crisis have not diminished over the past 60 years (World Water Council, 2010). The improved mutual outcomes hoped for by embarking on cooperative processes have not always materialised. Environmental, social and economic problems related to water are more pressing now than ever (World Water Assessment Programme, 2009).

Drawing on work developed by Kistin (2007), Zeitoun and Mirumachi (2008), Zeitoun and Jägerskog (2011) and Daoudy (2009), it becomes apparent that it is not sufficient to count the number of cooperative events (such as the existence of treaties, joint organisations or other institutions) in a basin to make an assessment of the effectiveness of the management frameworks and their ability to deliver joint benefits. The quality of cooperation needs to be better understood, linking this to the stated desired outcomes of the states in realms such as economic development, environmental protection and social equity.

If the quality of cooperation between states is important and there is recognition that social equity in water management is also important, it follows that water

management institutions should be representative of the population relying on those resources. It then further follows that these institutions must take gender into account in all aspects of their functions. This paper makes the point that gender issues are largely absent from frameworks for managing transboundary waters. It is proposed that transboundary water management is largely blind to gender issues due to the intersection of two epistemic communities strongly linked to this area. The water management community, dominated in much of the world until recently by the 'hydraulic mission' approach, with its military antecedents, intersects with the community of international relations (IR), international water law and political science practitioners. These communities are dominated by masculinised approaches, thus re-enforcing an omission of gender issues in transboundary water management.

water governance and gender

There is a plethora of international and regional principles and conventions that apparently support the role of women and gender in water governance. What follows is an overview of commitments made by states and other actors to include women and gender issues in water governance frameworks.

The Dublin Principles of 1992, which form the basis of good water management practice under the integrated water resource management approach, recognise in Principle Three that 'women play a central part in the provision, management and safeguarding of water' (GWP, 2010). This principle further states that 'acceptance and implementation of this principle requires positive policies to address women's specific needs and to equip and empower women to participate at all levels in water resources programmes, including decision-making and implementation, in ways defined by them' (*ibid.*). In essence, there is the expectation that good water management practice would address gender issues at all levels of water institutions, including the international transboundary. It may be argued that some progress has been made in promoting the involvement of women in water management institutions at the local and, to a limited degree, the national level. However, arguably this is more about visibility of women than women's equal power in decision-making forums. It has become more common for women to be included in water use and water management institutions at a sub-national level, providing at least the possibility of gender issues being considered. However, at the international level, there is a general lack of incorporation of gender issues in transboundary water management institutions.

There are other principles of international customary law that reference gender and water. Principle 20 of the *Rio Declaration* (UNEP, 1992) states: 'Women have a vital role in environmental management and development. Their full participation is therefore essential to achieve sustainable development'. *Agenda 21* (CSD, 1992)

contains a chapter on women and sustainable development (Chapter 24) and a chapter on water management (Chapter 18). The Johannesburg Plan of Implementation of the 2002 World Summit on Sustainable Development, Paragraph 25(a), includes agreement by governments to 'support capacity building for water and sanitation infrastructure and services development, ensuring that such infrastructure and services meet the needs of the poor and are gender sensitive'.

The Beijing Platform for Action of 1995 highlighted environmental issues as one critical area of concern: 'gender inequalities in the management and safeguarding of natural resources and in the safeguarding of the environment'. Three strategic objectives were agreed: (i) to involve women actively in environmental decision making at all levels; (ii) to integrate gender concerns and perspectives in policies and programmes for sustainable development; and (iii) to strengthen or establish mechanisms to assess the impact of development and environmental policies on women.

The Millennium Development Goals include 2015 targets on gender equality and empowerment of women, as well as on safe water and sanitation. The UN General Assembly proclaimed 2005 to 2015 as the International Decade for Action, 'Water for Life', and called for a focus on implementation of water-related programmes and projects, 'whilst striving to ensure women's participation and involvement in water-related development efforts' (WSSCC and WEDC, 2006).

It should be noted that gender empowerment concerns more than merely counting the number of women represented in institutions (Parpart, 2004)—there needs to be a shift in the political decision-making process that allows alternative approaches to the management of international waters. Representation of women in decision-making structures needs to be accompanied by policies, strategies and work plans of those organisations that reflect an understanding of gender issues. As Parpart argues, 'a deeper analysis of the masculinist operations of power reveals the limits of the "body count" [approach] to gender transformation' (Parpart, 2009). The rules of the game and the sanctioned discourse are not changed merely by allowing women (and marginalised men) into decision-making structures, as the newcomers face great pressure to adhere to the implicit rules. It is important to look at the legal agreements establishing water management organisations, as well as their various policies and strategies, in addition to looking at their representation of women.

International agreements or conventions on water management can only be implemented through the local, national and regional organisations that have been created to manage them. It is important to consider three elements of institutional incorporation of gender issues: (i) representation of women in decision making; (ii) incorporation of gender in the legislation, policies and strategies of organisations; and (iii) the technical specialists working in these

organisations. We review two basin organisations (and the broader institutional framework they are part of) in Sub-Saharan Africa against our claim that gender is not integrated into these structures. In the review, the emphasis is placed on looking at the last two of the above points—policies, agreements and strategies that guide these organisations and the types of professional positions that staff them (looking out for positions related to social sciences, for instance), and less on the counting of the number of women represented in them. In addition, we investigate the international transboundary water management institutional framework and its lack of incorporation of a gendered perspective.

transboundary water management institutions

As noted, there exists a nascent global institutional framework for the management of international transboundary waters. This institutional framework consists of international laws as well as management organisations (WWF-DFID, 2010). International laws on transboundary water management include agreements between basin states (either basin-wide or covering part of a basin); regional legal frameworks, such as the Southern African Development Community (SADC) Protocol on Shared Watercourses of 2000, and international customary law such as the 1997 UN Convention on the Law of the Non-navigational Uses of International Watercourses (UN Convention). These laws form the basis of the rights and responsibilities of states with regard to transboundary watercourses and set basic minimum standards for their use, allocation, conservation and dispute resolution (McIntyre, 2010).

The implementation of legal provisions is done by organisations—either national ones (such as departments responsible for water issues) or specifically created joint entities such as multi-country basin organisations of various sorts. These organisations receive a legal mandate from the respective international agreements that created them, and are expected to reduce the possibility of conflict over water resources, resolve disputes between party states and promote sustainable socio-economic development. These organisations perform a range of functions as delegated to them by the member states (NBI, 2011).

The direction and pace of institutional development related to transboundary water management (including laws, organisations and other initiatives) is set primarily at the political level (Earle *et al*, 2010). With ultimate responsibility for the 'allocation of values in society', politicians have great influence over water management domestically (Allan, 2002). Coupled with the responsibility to protect the sovereignty and rights of their state, they emerge collectively as the group with the most influence over the direction, speed and quality of transboundary interactions over water (Earle *et al*, 2010). It is at the political level that inter-state discussions that result in water laws take place. The organisations tasked with managing water resources derive their mandate from these laws, performing the functions that politicians desire of them.

If the transboundary water management institutional framework is set at the political level, it is implemented by another important group: the water management community broadly defined to include water management professionals from government departments and basin organisations, as well as the water users at various scales (Earle *et al*, 2010). At this level, there is an increasing recognition of the different needs of women in water use (Singh, 2006). According to the GWP's Technical Committee, the 'meaningful involvement of women in water resources development and management can help make projects more sustainable, ensure that infrastructure development yields the maximum social and economic returns, and advance progress on Millennium Development Goals' (GWP-TEC, 2006). This is vital in many parts of Africa and Asia where there is a backlog of water-related infrastructure development which needs to be addressed.

The greater participation of stakeholders generally, and women specifically, in water management institutions is a relatively recent development, receiving official international recognition first at the UN Water Conference, in Mar del Plata, Argentina, in 1977 (Singh, 2006). Until the 1970s, most of the world pursued the 'hydraulic mission'—centred on dominating and controlling the natural environment through technological and scientific prowess (Allan, 2002 and Molle *et al*, 2009). The emphasis was on large-scale water storage and transfer schemes in an effort to develop irrigation, exploit hydropower potential and supply urban centres with water. This supply-side approach ran into opposition in the developed world in the 1970s in the form of environmental and social pressure groups (Molle *et al*, 2009). However, a 'hydro-bureaucracy' had been well established, one that proposed that 'not a single drop of water should reach the sea without being put to work for the benefit of *Man*' (Molle *et al*, 2009). Over time, this hydraulic mission was pursued by developing countries, first by colonists and later by independent governments.

As noted, the hydraulic mission is intimately associated with a masculinised discourse and patriarchal practice. According to Zwarteveen (2008: s.111), the 'feminist project in irrigation to date has largely been a project of representation of women—in the two meanings of the word: that of extending visibility and legitimacy to women as political subjects, and that of the normative function of language which either reveals or distorts what is assumed to be true about the category of women'. That is to say, men have traditionally been over-represented in the professions associated with water management—such as engineering, hydrology and irrigation. But in addition, there is an assumption that water management functions will be performed by men, thus reinforcing and normalising the situation by making it appear self-evident or natural (Zwarteveen, 2008). To question, the norm becomes an aberration. Connell and Messerschmidt refer to 'hegemonic masculinity', understood as a pattern of practice that allows men's dominance over women to continue (Connell and Messerschmidt, 2005), where its ascendancy is promoted through culture, institutions and persuasion. Thus, it appears normal that men would wish to participate in efforts to subdue nature

and make the desert bloom, and great honour was bestowed on men who succeeded in developing large dams or irrigation schemes (Zwarteveen, 2008).

Today there is a large body of research and policy that documents the need to engage women in water management and development at the local and national level (GWA, 2003; Laurie, 2005; UNWater, 2005; UNDP, 2006; Zwarteveen, 2008; Molle *et al*, 2009; GWP, 2010; UNICEF-WHO, 2011). By engaging a larger cross-section of stakeholders in the planning, building and operation of much-needed water infrastructure there is a greater possibility of mitigating environmental and social impacts. That is not to say that gender issues are properly considered or incorporated in water management at these levels, but there is at least a recognition that they should be.

As we point out, the area lagging in incorporating gender issues is international transboundary water management. The laws, policies and strategies at this level are mostly silent on the promotion of gender issues, as are the various organisations responsible for managing transboundary waters. This point is important as domestic law (national law) is subservient to international law, that is, agreements that states consent to be bound by supranational legislation (Malzbender and Earle, 2007). The implication is that what is agreed to at the international level, between sovereign states, needs to be adhered to and implemented at the local level. National laws, regulations and policies have to be brought in line with international laws that states have acceded to. As women are greatly engaged in the provision and management of water at the local level, this means they are directly impacted by the international legal agreements.

Representatives of states in basin organisations are usually senior technical staff from the respective departments of water (NBI, 2011). During negotiations to develop legal agreements on transboundary waters, representatives from other government departments such as foreign affairs and justice may also participate, with ultimate leadership taken at the political level. In all these fields, there is usually an under-representation of women (Zwarteveen, 2008), and generally the field of IR has 'remained relatively impervious to gendered arguments' (Parpart and Thompson, 2011). As reported by Tetreault, an investigation by the International Studies Association found that women are underrepresented in political science generally and IR specifically (Tetreault, 2008). She suggests the reason is the embedded masculinism in IR and the security professions, with use of language reinforcing the *status quo*. This is important for transboundary water management as much of the research being done in this field comes from an IR or political science perspective. These researchers play an important role in advising or working with governments as they seek to develop transboundary water management institutions.

As will be discussed in the following cases, there is usually an absence of non-governmental stakeholders in the negotiations around transboundary waters, and only rarely is there formal stakeholder participation in the management of basin

organisations. This bias towards governmental and masculinised approaches to transboundary water management practice is to some degree echoed in the composition of the researchers pursuing activities in this field. Most researchers have backgrounds in engineering, hydrology, water law, IR or political science, all areas traditionally dominated by men. Indeed, some of the most prominent researchers in IR generally and transboundary water management specifically come from military backgrounds (Tickner and Waever, 2009: 202; Tetreault, 2008).

There is a resemblance to military honours in the state recognition of engineers and other water management professionals for their infrastructure development efforts. In practice there are many similarities between army bureaucracies and water management and development bureaucracies, with many early water management engineers coming from a military background (Gilmartin, 1994). The United States Army Corps of Engineers' stated mission is to provide vital public engineering services in peace and war to strengthen security, energise the economy, reduce risks from disasters, and work on canal construction and flood control.

To some degree, it is the dominance of technical experts in water management and research organisations (whether men or women) that crowds out innovation from the social sciences. For instance, in assessing the Consultative Group on International Agricultural Research, which has a wide range of activities in water resources management, it was found that social scientists are habitually under-represented on projects (Cernea, 2005). Social science research was found to be small in range and underfinanced. This in part explains why a greater emphasis on gender is not entering the world of water management, as it is not only the water management organisations that are gender-blind but also the research networks.

Thus, despite the recognition by the international community of the need to involve women and gender issues equally in water management at the national level, there is much less recognition of this at the international level. We contend that the reason for this is the intersection of the water management field with that of IR. As the practice of transboundary water management involves relations between sovereign states, much of the activity involves IR and diplomacy. With the hydraulic mission being a strongly masculinised endeavour, both in terms of representation of men and the approaches taken to dominating nature, the field of water management has only recently and gradually started incorporating a gendered approach. Coupled with the masculinised fields of IR, international water law and political science, the result is a neglect of a gendered approach to transboundary water management.

a gendered critique of transboundary waters frameworks

What follows is a discussion of various international and regional transboundary water management frameworks. These include institutions, such as legal agreements

and organisations, as well as a study of the institutional framework for transboundary water management. These are distinct from the commitments made by states to improve water management, as discussed above, as they focus specifically on transboundary water management. Collectively, they form the foundation for managing transboundary water bodies in various parts of the world.

In 2010, the World Wide Fund for Nature (WWF) and the United Kingdom's Department for International Development (DfID) conducted a comprehensive review of the international architecture of transboundary water management intended to contribute to improving transboundary water management globally. It is based on a comprehensive literature survey, regional assessments and targeted interviews, and is arguably the most comprehensive study of its kind on this topic, making it an important point of reference for policy makers, practitioners, researchers and the development community at large. It is thus surprising to note the absence of gender issues in the report, given that women bear a large portion of the impact of transboundary water management decisions and yet are not represented in the institutional framework for transboundary water management. Searching for the terms 'gender', 'women' or 'female' in the fifty-four-page document returns no hits. Nor do the terms 'men' or 'male' appear—indicating that there is no gendered perspective taken. Neither was this an attempt at gender neutrality, which anyone familiar with a gender analysis and water would not purport to use. Gender is simply not seen as an issue. The document recognises the importance of 'stakeholder participation' in water management, and while not specifically identifying women as stakeholders, it cannot be assumed that the authors consider them. There is also recognition that transboundary water management is

not an end in itself, but rather a means to an end, namely the optimal use of shared water resources to achieve environmentally sustainable social and economic development. In this regard, it is critical that water managers at all levels engage strongly outside the water sector and ensure that the importance of water management in social and economic development is fully appreciated (WWF-DfID, 2010: 26).

Thus, the transboundary water management institutional framework is explicitly linked to social and economic development objectives, an area where the need for the consideration of gender issues is well established.

The WWF–DfID review makes a strong recommendation for the implementation of the UN Convention, stating that DfID (and by implication the UK government) should 'reconsider its position on UK and other countries' accidence to the 1997 UN Convention in the light of the conclusions', while WWF should 'continue its advocacy work around the 1997 UN Convention, but should shift from a predominantly legal argument to one that includes institutional, policy and developmental dimensions' (2010: iii). While the 1997 UN Convention is not the

only global instrument providing a legal framework for transboundary water management, it does represent a codification of the internationally accepted principles for the management and allocation of international waters (McIntyre, 2010). Other global conventions such as the Ramsar Convention on Wetlands and the Convention on Biological Diversity, as well as rules developed under the International Law Association (the 1966 Helsinki Rules and the 2004 Berlin Rules, respectively), form part of the body of international law on transboundary waters. In addition, the various regional agreements covering international waters, such as the 2000 SADC Protocol on Shared Watercourses and the 1992 United Nations Economic Commission for Europe's (UNECE) Convention on the Protection and Use of Transboundary Watercourses and International Lakes, all play an important role in promoting cooperation and good governance of transboundary water resources in their respective areas. However, the 1997 UN Convention is the one overarching instrument that would apply (once it has come into force) to all transboundary watercourses, including lakes, rivers and aquifers in party states, and provides a mandate for the management of international waters as a global public good (WWF-DFID, 2010); it will therefore be investigated in some detail.

Currently, the 1997 UN Convention has twenty-seven contracting states, that is, eight short of the number required for it to enter into force.⁵ Although the 1997 UN Convention is not yet in force, it is considered part of the body of customary international law—meaning that the norms and principles it promotes (such as the 'equitable and reasonable utilisation' principle and the 'no harm' rule) are accepted as common state practice (McIntyre, 2010). The International Court of Justice has made specific reference to the UN Convention in the adjudication of disputes between countries on transboundary watercourses, such as the Gabcikovo-Nagymaros case between Hungary and the Slovak Republic on the Danube River in 1997. As the pace of countries joining the UN Convention has increased over the past 5 years, there exists a strong likelihood of it entering into force in the not too distant future.

The WWF-DFID review provides two key arguments for the 1997 UN Convention to come into force:

- Provides a clear institutional mandate for a global facilitator to promote, coordinate, facilitate and monitor appropriate transboundary cooperation, through regional dialogue and institutions.
- Strengthens the weaker voices of countries (and marginalised groups) against stronger riparians for cooperation (and achieves water management obligations), particularly when supported by a global institutional framework (WWF-DFID, 2010: 48).

The second point above would seem to provide a possible entry for gender issues to be considered in the 1997 UN Convention; however, a review of the convention does not turn up any terms related to gender issues. Indeed, the 1997 UN

5 WWF (2012) WWF—UN Watercourses Convention, http://wwf.panda.org/what_we_do/how_we_work/policy/conventions/water_conventions/Un_watercourses_convention/, last accessed 12 January 2012.

Convention makes no mention of 'stakeholders', and refers to 'participation' only in the context of the right of states to participate in the protection and development of an international watercourse (UN, 1997). In Article 6, the 1997 UN Convention lists factors relevant to equitable and reasonable utilisation, essentially codifying how water allocation determinations should be made. The state-centric approach taken places emphasis on impacts of one state's use of a watercourse on another state (factor 'D'). Factor 'B' (the social and economic needs of the watercourse states concerned) and factor 'C' (the population dependent on the watercourse in each watercourse state) come closest to considering stakeholders in the allocation and use of watercourses. This provides the possibility of considering gender issues in the management of a trans-boundary watercourse, but falls far short of explicit recognition of a gendered approach.

Regional legal documents on transboundary watercourses are similarly silent on issues related to gender. The 2000 SADC Protocol is largely based on the 1997 UN Convention (Malzbender and Earle, 2007) and similarly omits any mention of 'gender', 'stakeholders' or 'participation' (SADC, 2000). This agreement is in force and legally binding on the twelve SADC states that have acceded to it (all of the SADC except Zimbabwe and the DRC). The SADC Regional Water Policy and Regional Strategy have sections on Stakeholder Participation (Gender Mainstreaming): 10.2.1. Policy: women are recognised as playing a central role in the provision, management and safeguarding of water and shall be fully involved in the development and implementation of policies, processes and activities at all levels; and 10.2.2. Policy: all SADC water institutions shall implement the principles, goals and objectives of gender mainstreaming in their administration and implementation. However, these provisions have yet to be incorporated at the transboundary level.

Compared with the 1997 UN Convention, the 1992 UNECE Convention is considered to be more far-reaching in scope of issues, more stringent in provisions and generally more detailed (Rieu-Clarke *et al*, 2007). This makes sense, as it is a regional agreement negotiated between countries in Europe and their neighbours. It is especially more stringent in the area of environmental issues, requiring a range of actions to protect ecosystems. However, it omits any mention of the terms associated with a gender dimension; the closest it comes to a mention of stakeholder participation is in Article 16, where the public's right of access to information is established.

If the international and regional legal frameworks for transboundary water management do not contain anything close to a gender perspective, what then of the organisations tasked with managing such watercourses? As noted earlier, the majority of the 264 international transboundary watercourses globally have some sort of joint management organisation—some basin-wide while others only cover a portion of the basin. It is beyond the scope of this exploratory paper to

investigate all, or even a representative sample, of these organisations. But to gain a better perspective of how gender issues are treated in such organisations, two in southern Africa will be discussed—ORASECOM and OKACOM. They have been chosen partly for pragmatic reasons (familiarity of the authors with the cases and availability of information) and partly because they serve as good examples of basin organisations internationally, while recognising that no two basins are alike (NBI, 2011).

the Orange-Senqu river commission

The Orange-Senqu River has its headwaters in Lesotho's Maluti mountains from where it flows into South Africa, and is joined by its largest tributary (the Vaal River), later forming the border with Namibia before flowing into the Atlantic Ocean (Earle *et al*, 2005). Ephemeral streams link southern Botswana to the basin. The basin is one of the most used in southern Africa, and supplies most of the freshwater to Guateng province, South Africa's industrial heartland. The world's largest international transfer of water is the Lesotho Highlands Water Project (LHWP), whereby water is transferred by gravity to South Africa, earning Lesotho royalty income. The basin is important both to the major cities in the two countries (for Johannesburg the water allows it to keep expanding and in Maseru the government benefits from the foreign income) and to the predominantly rural population of the basin, where it supports small-scale as well as large-scale commercial agriculture (Schuermans *et al*, 2004).

However, experience shows that in practice women are negatively affected by projects such as the LHWP. In a study done by the Transformation Resource Centre, a social and development NGO in Lesotho, it was found that women were negatively impacted by the construction of the first phase of LHWP dams. The three main points are that there were very high rates of HIV/AIDS infection among women living close to the construction sites; female poverty increased in some areas as garden plots were lost, and women bore the brunt of the psychological stress associated with moving to a new area (Thamae and Pottinger, 2006). The fact that gender issues are not explicitly mentioned in any of the Commissions' documents and strategies means that there is a real possibility of such negative impacts being repeated in future projects.

In 2000, the four states negotiated the formation of the Orange-Senqu River Commission (ORASECOM), constituting it as an international organisation to advise the parties on the equitable and sustainable development of the basin (Earle *et al*, 2005). The Commission provides a forum for consultation and coordination between the basin states, and is currently in the process of adopting a basin development plan (NBI, 2011). ORASECOM advises the member states on matters related to the development, use and conservation of the water

resources in the river system. This may include recommendations on water availability, equitable and reasonable use of water resources, development of the river system, stakeholder participation, and harmonisation of policies (ORASECOM, 2000). The Commission is controlled by the Council—where the four governments are represented by three Commissioners each.

At present, all the Commissioners are from government departments (mainly the respective ones responsible for water issues), though nothing in the formation agreement precludes the appointment of non-governmental representatives as Commissioners (ORASECOM, 2000 and NBI, 2011). There is no requirement for gender equality in the representation of Commissioners. That some of these Commissioners (at the time of writing) happen to be female is not due to any policy on equal representation, and is only indicative of the level of seniority of the individuals concerned. The Council may mandate the formation of technical task teams—to perform studies on specific issues. There is a standing technical task team—responsible for a range of hydrological and related studies—as well as a legal task team, a financial task team and a communications task team. These task teams comprise professionals from relevant national departments and at times experts outside of government. The daily functioning of the Commission is supported by a secretariat, consisting of four recruited staff (NBI, 2011). The secretariat has four permanent staff posts—the Executive Secretary, a Water Resources Expert, a Financial Officer and a Personal Assistant to the Executive Secretary.

The formation agreement of ORASECOM is silent on gender issues, but does make mention of stakeholder participation. Article Five describes the functions of the Council, with 5.2.4 calling on it to advise the states on the 'extent to which the inhabitants in the territory of each Party concerned shall participate in respect to the planning, development, utilisation, protection and conservation of the River System' (ORASECOM, 2000: s.5). On the basis of this article, the Commission developed a Roadmap Towards Stakeholder Participation (ORASECOM, 2007). The Stakeholder Roadmap is a strategy for enhancing stakeholder involvement and participation in the Orange-Senqu River basin, in order to support co-management of the basin.

The various components of the Roadmap are being implemented incrementally, largely through avenues created by the various donor-supported projects active in the basin, donors who do not necessarily mandate gender inclusion. Although gender is not named specifically in the Roadmap, a great deal of attention is focussed on promoting equity in participation and decision-making mechanisms in the basin, as well as the need to foreground marginalised groups in the basin.

As part of a Global Environmental Facility (GEF) project, a transboundary diagnostic analysis (TDA) was performed across the basin and completed in 2008.

This GEF TDA process has no indicators on gender in any of its international waters projects, despite 20 years of work by feminist scholars on water and gender. The TDA includes interviews with thirty-six stakeholder groups in the basin countries. The stakeholders include employees of departments dealing with: environmental affairs; tourism; water affairs; meteorology; forestry and agriculture; national water managers and parastatals; agronomic boards; mining industry; scientists; NGOs; tour guides; river community members; members of ORASECOM; and other international development organisations working on other ORASECOM projects. The interviews were followed by a telephonic/face-to-face questionnaire survey of more than 400 stakeholders from thirty-six groups across the region (UNDP-GEF, 2008). The analysis reflects the views and concerns of the stakeholders interviewed—but there is no evidence of a gender approach being taken.

At present, there is no explicit mention of a gender approach in any of the Commission's formation documents, policies and strategies. Thus, there is no policy promoting the equal representation of women in the decision-making structures of the Commission. Of the four task teams established under the Commission, the Communications task team holds the possibility of including staff with a social science background. However, the main purpose of the communications activities of the Commission (as outlined in its 2010 Communications strategy) is to disseminate ORASECOM messages to various stakeholders—essentially a one-way flow (ORASECOM, 2010). The permanent staff members of the Secretariat come from a physical science or financial background, and thus there is no professional with the necessary social sciences background for the promotion of gender issues in the Secretariat's work. A recommendation has been made to employ a Communications Expert in the Secretariat, but to date this has not happened.

In sub-basin projects, such as the next phase of the LHWP, there are extensive provisions around investigating social issues related to the construction of the infrastructure and relocation of communities. As noted above, it is already known that women have been negatively impacted through such projects. Without explicit incorporation of gender issues in the work of the Commission, there is a risk of negative impacts being repeated in future projects.

permanent Okavango river basin water commission

The Cubango-Okavango River basin is home to about 600,000 people, over half of whom live in the Angolan portion of the basin. Namibia is home to 160,000 people in the basin, with the remainder living in and around the Okavango Delta in Botswana (Mendelsohn and Obeid, 2004). The two main sources, the Cubango and the Cuito, rise on the Bie Plateau in central Angola, where average annual rainfall

is over 1000 mm a year, and the flow south towards Namibia. The Okavango River does not flow into the sea, terminating instead in Botswana as the Okavango Delta, where it is swallowed up by the sands of the Kalahari Desert and 'lost' to evapotranspiration (Turton and Earle, 2004).

In 1994, the three countries concluded an agreement forming the Permanent Okavango River Basin Water Commission (OKACOM), serving as 'technical advisor to the parties on matters relating to the conservation, development and utilisation of water resources of common interest' (OKACOM, 1994). The river is one of the last large undammed rivers in Africa and is a valuable earner of tourism revenue for Botswana (Turton and Earle, 2004). With the arrival of peace in Angola in 2004, there has been discussion about the possibility of constructing dams on the headwaters, which if carried out could impact the ecological functioning of the delta. To-date, the countries have used OKACOM as an avenue for communication and joint planning, thus reducing the possibility of conflict in the basin (Turton and Earle, 2004).

Much like ORASECOM, OKACOM acts in an advisory capacity, and thus lacks an executive mandate. Its highest organ is the Commission, where each country is represented by three Commissioners, again coming from their respective governments, but this is not stipulated in the formative agreement (OKACOM, 1994). At the time of writing, there are two female Commissioners, out of eight currently appointed. Reporting to the Commission is the Okavango Basin Steering Committee (OBSC), which is responsible for performing technical studies. Of the nine members, three are women. At present, there are three task forces under the OBSC—Institutional, Hydrological and Biodiversity (NBI, 2011). The task forces are staffed by seconded personnel from the respective departments of water. The Institutional task force contains several individuals with backgrounds in social sciences or in other ways familiar with gender issues. A small secretariat provides administrative support and has a recruited staff of three professionals, including the post of Communication and Information Specialist. This position is more proactive than one-directional outreach in that it strives to promote information and knowledge exchange between communities in the basin. The present incumbent of this position has strong experience in gender issues.

The OKACOM formative agreement contains no provisions around gender issues, or about stakeholder participation, possibly reflecting its earlier provenance (than the ORASECOM agreement). Despite this, the Commissioners recognised early on that they would not be able to perform most of the required activities in the basin alone. They therefore recognised the potential role of national community-based organisations and NGOs in public outreach and stakeholder participation. The Every River Has Its People (ERP) project ran from 1999 to 2006 and was implemented by three NGOs, one from each of the basin states—the Kalahari Conservation Society in Botswana, the Namibian Nature Foundation and

6 (ACADIR) Associação de Conservação do Ambiente e Desenvolvimento Integrado Rural (trans. Association of Environmental Conservation and Integrated Rural Development) is a registered NGO in Angola.

ACADIR in Angola.⁶ The project aimed to link up and empower communities living along the river, allowing them to play an active role in management of basin resources and to combat poverty and environmental degradation. The project started off with no links to OKACOM, but there was a commitment from the Commissioners to support the project where possible. By 2004, the Basin Wide Forum (BWF), established through the project, had gained official recognition from OKACOM. The BWF is made up of elected representatives from communities living in the basin, in all three states. At present, the forum has observer status on OKACOM; it may attend regular OKACOM meetings and table motions, but it cannot vote.

There is no gender strategy for the BWF, with communities choosing representatives best suited to their needs. At present, there are eight male representatives and two female, reflecting the lower level of involvement of women in transboundary issues. A possible reason for this lower level of involvement (in contrast to local initiatives in the region where women are usually well represented) is that women find it difficult to leave their home and village for more than a day to attend meetings (Magole, 2012). The nature of transboundary activities means that a fair amount of travel to other parts of the basin is involved.

OKACOM does not mention gender issues in any of its founding or organisational design documents, nor in any of its policies. There is no gender equality in representation policy, leading to only two out of eight Commissioners being women. The OBSC (which reports to the Commissioners) currently has three women out of eight members. The Institutional Task Force and the Secretariat would seem to contain staff positions and specific individuals with a greater awareness and knowledge of gender issues. However, as mentioned in the discussion above, it is difficult for such individuals to effect change if it is not supported through the policies and strategies of the organisation, as well as the broader institutional framework under which it operates.

concluding discussion

In both the basin organisation cases analysed above, gender approaches are notable by their absence—at best there is a general acknowledgement that stakeholders should participate. There is some limited degree of representation of women in both organisations, but not due to a formal equality policy. And representation at the highest decision-making levels of both Commissions is heavily male-dominated. The professional staff members of these organisations are primarily from technical or physical science backgrounds, with few showing a strong connection with gender issues. In practice, it would seem that issues around stakeholder participation and gender specifically are expected to be

handled at the national or local level. This is reflected right from the formation of the two organisations—in both there were only governmental representatives in the negotiations; civil society was only included (to a limited degree) after the Commissions were established and at the request of the stakeholders themselves.

The lack of any explicit incorporation of gender issues is perhaps to be expected as both organisations are founded on (in the case of ORASECOM) or run on the principles established by international legal frameworks such as the 1997 UN Convention and the 2000 SADC Protocol. Where the prime international law instruments are silent on the issue of gender in transboundary water management, it is to be expected that organisations founded on their principles will follow suit. As Rochette notes, the lack of progress in international environment law, especially from a feminist perspective, is due in part to the 'gendered state system', which relies on individual states to implement the commitments (Rochette, 2005). The law has not translated into a questioning of the basic assumptions underlying it. International law and the regional implementing agencies 'actually work to preserve the hegemony of masculinist institutions such as the global capitalist system and Western science and technology' (Rochette, 2005).

This paper has investigated whether gender issues are included in international transboundary water management institutions. It has shown that there is almost no inclusion of gender issues in the three areas of institutional incorporation: (i) representation of women in decision making; (ii) incorporation of gender in the legislation, policies and strategies of organisations; and (iii) the technical specialists working in these organisations. A reason for this is the intersection of the field of water management (dominated by the hydraulic mission) and political science and international relations. These fields are traditionally masculinised, and when combined become mutually re-enforcing in this aspect, negating progress currently being made to incorporate gender issues in water management at sub-national levels. Thus, there is a difference between water management at the sub-national level, where more progress has been made in developing gendered approaches, and water management at the inter-state level, where gender is found to be absent. Several transboundary basins have well-advanced infrastructure development plans (including water storage, water transfer, hydropower generation and navigation). The building of this infrastructure is a vital part of stimulating socio-economic growth in developing countries; making it all the more important to include gender dimensions in the management of transboundary basins.

What remains to be done is to investigate potential avenues for the incorporation of gender issues in the current institutional architecture. This could be a study similar to the review performed by WWF–DfID discussed above, but this time with a clear mandate to mainstream and include a gender perspective. Once this is done, recommendations can be made on how to bring

about changes to the international architecture for transboundary water management so that it better incorporates gender. Such recommendations need to include indicators to measure gender inclusion. By doing so, a tangible contribution will be made to the quality of the inter-state cooperation over water management.

authors' biographies

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