

## Water conflict and cooperation in Southern Africa

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It is very likely that water will become a contributing factor to [Southern African] regional instability as demands for water approach the limits of available supplies.

- Ashton (2000)

Water offers one of the few paths for dialogue to navigate an otherwise heated bilateral conflict.

- Wolf, Kramer, Carius, Dabelko (2005)

The effects of environmental changes on violent conflict appear to be contingent on a set of intervening economic and political factors that determine adaptation capacity.

- Bernauer et al (2012)

### **Introduction: Research reflects global trends and follows money**

When one mentions ‘water in Africa’, a number of common images come to mind: women standing in long queues; livestock crowded around a water point in an otherwise desolate environment; cracked earth under a blazing sun; flooded valleys; a land of extremes. For perhaps the last twenty-five years, there has been a great deal of speculation as to whether these persistent water problems will one day lead to violent or acute conflict, within and between states. Yet, it is commonly claimed that there is far more cooperation than there is conflict where shared waters are concerned (Wolf, 1998; De Stefano et al, 2010; Gleick, 1993b). As Wolf et al (2005: 85) point out, ‘water is an irritant and a unifier’. Due in part to its unusual characteristics – e.g. non-substitutability, bulkiness – conflict most often times is a precursor to cooperation (Savenije, 2002). This essay reviews this literature, and these ideas, in the context of Southern Africa.

Let me state from the outset that there are no systematic, large-n studies of either water conflict or water cooperation in the SADC (Southern African Development Community) region<sup>1</sup>. There are several, largely anecdotal, broad overviews of ‘trends’ in conflict and cooperation at the inter-state level (Chenje and Johnson, 1996; Chenje and Johnson, 2000; Heyns, 2003). There are also quite a few speculative exercises in impending regional water conflicts. These latter studies have come in two waves: the first wave was initiated in the early 1990s by global-level speculation on population, poverty and environmental degradation/resource scarcity (Falkenmark, 1989; Gleick, 1993; Lundqvist, 1998; Ohlsson, 1995 and 1999; Postel, 1994 and 1996; Solomon, 1996; Van Wyk, 1998). The second wave arrived about a decade later, initiated this time by questions of climate change and adaptive capacity, also a global governance preoccupation (Adano et al, 2012; Bernauer and Siegfried, 2012; Devitt and Tol, 2012; De Wit and Stankiewicz, 2006; Gemenne et al, 2014; Government of South Africa, 2011; SADC, 2011; Swain et al, 2011).

Perhaps reflecting external research funding availability, there are a great many single-case and comparative case studies of water cooperation at various scales (Turton and Henwood, 2000; Ashton, 2000; Ashton, 2002; Ashton et al, 2008; Carmo Vaz, A. and Lopes Pereira, A., 2000; Mbaiwa, 2004; Magole, 2008; Manning and Seely, 2005; Turton, 2003; Vaz and Van der Zaag, 2003). This trend is complemented by several streams of ‘cooperation for peace promotion and conflict avoidance’ (Swatuk, 2000, 2002, 2004, 2005; Solomon, 1996; Solomon and Turton, 2000; Turton and Ashton, 2008). The few cases that focus on discreet instances of inter-state conflict all locate themselves within the ‘lessons learned’ school of policy studies (Thamae and Pottinger, 2006; Kistin and Ashton, 2008; Phillips et al, 2006; Carmo Vaz and Van der Zaag, 2003; Swatuk and Van der Zaag, 2008; Turton and Funke, 2008; Turton et al, 2006).

At the sub-state level, there is a burgeoning critical literature of the conflict-inducing decisions made by policy makers in particular SADC countries, with an overwhelming dominance of South Africa as a case study (Bond, 2002; 2008; 2013a and 2013b; McDonald and Ruiters, 2005;

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<sup>1</sup> The Southern African Development Coordination Committee (SADCC) was created by nine member states in the late-1970s, all of which were opposed to apartheid and colonial power in the region. Anticipating the end of apartheid, SADCC became the Southern African Development Community (SADC) in 1994, welcoming South Africa as a member. Today SADC comprises 14 states: Angola, Botswana, Democratic Republic of the Congo, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe,

Thompson and Tapscott, 2010). This scholarship emanates from social science departments – politics, sociology, geography – and tends to have little overlap with the ‘conflict and violence’ perspective of scholars of international relations. The former tends to frame ‘conflict’ within the ambit of citizenship and rights (e.g., Ruiters, 2014), whereas the latter tends to emphasise sovereignty, statehood, and balances of power (e.g., Swain, 2011; Turton and Ashton, 2008).

In summary, the ‘chorus of doom’ that echoes around the world of water politics, governance and management finds little resonance among scholars of Southern Africa. The balance of this essay treats each of these categories in some depth, and critically reflects on the state of scholarship regarding conflict and cooperation over water resources in Southern Africa.

### **Water and Conflict**

While conflict and violence come in many different shapes and sizes, and are usually easily recognizable, we tend to most commonly associate them with macro, inter-group events that are destabilizing to the social system, with the assumption being that they are bad and to be avoided at all costs: e.g. warfare, terrorism, civil war and genocide. So, while the Merriam Webster dictionary defines ‘conflict’ (noun) as the ‘competitive or opposing action of incompatibles; antagonistic state or action (as of divergent ideas, interests, or persons)’ and ‘conflict’ (verb) as ‘to be different, opposed, or contradictory: to fail to be in agreement or accord’, each definition chooses to emphasise military conflict at the outset, i.e. ‘fight, battle, war’ (n.) or ‘to contend in warfare’ (v.). Similarly, violence (n.) is defined as ‘exertion of physical force so as to injure or abuse (as in warfare ...)’ (see [www.merriam-webster.com](http://www.merriam-webster.com)).

However, there is a long history of the study of conflict and violence as normal and even essential social behaviours. Coser (1957: 197), for example, argued that ‘conflict ... presents the ossification of the social system by exerting pressure for innovation and creativity’. He goes on to quote John Dewey’s now well-known observation that ‘Conflict is the gadfly of thought. It stirs us to observation and memory. It instigates to invention. It shocks us out of sheeplike passivity, and sets us at noting and contriving ... Conflict is a sine qua non of reflection and ingenuity’ (Coser, 1957: 198).

As concepts in the social sciences conflict and violence take on specific and often distinctive meanings. Part of the problem with the literature on conflict and natural resources is the

predominant assumption that conflict (i) is to be avoided; and (ii) we know it when we see it. Few are the studies that endeavor to be as precise as Tostet et al (2000) and Gleditsch et al (2006), who define ‘violent conflict’, for example, as ‘the onset of militarized disputes with at least one fatality’. Homer-Dixon (1991; 1994; 1999), in his highly-regarded project on natural resources and conflict, focused on ‘acute conflict’, defined as conflict which has a ‘substantial probability of violence’. The case studies in his project, including one on South Africa, revealed a wide variety of conflicts and various levels of violence. For example, Homer-Dixon and Percival (1998), examined the relationship between resource scarcities and violence defined as total deaths and injuries over a particular time period (in this case, the late 1980s – early 1990s, arguably the most violent moment in the transition from apartheid to post-apartheid).

The assumption here, and in almost all case studies, is that further conflict is to be avoided. In a recent study of the literature on climate change and conflict, Hsiang et al (2013) grouped violence and conflict into three categories: (i) personal violence; (ii) group violence; and (iii) breakdown of social order and political institutions. In a wide ranging survey of the literature, they concentrated on 60 large-n, empirical studies, where the data was gathered in a variety of ways (e.g. content analysis of media). While perhaps imperfect in their methods, these studies nonetheless provide an important baseline for comparison and generalization and, in my view, point a useful way forward for future research regarding conflict and cooperation over water resources in Southern Africa. As shown below, there is little systematic, sustained or critical and reflective research into these topics; to the contrary, most of it is policy oriented and proceeds under the assumption that ‘cooperation is good; conflict is bad’ – indeed, the term ‘conflict’ is officially not to be used in any SADC materials!

### **A History of Violence**

Southern Africa, like any world region, is replete with a history of violent struggle for group-based social ends: from colonial and imperial land and resource grabbing projects to the creation of particular social forms based on exclusivist ideologies such as white racial superiority, anti-communism, socialism and ethnicity/tribalism to name several (see, e.g., Denoon with Nyeko, 1972; Hanlon, 1986; O’Meara, 1986; Saul, 1993). Several of these conflicts are ongoing (e.g. in the Democratic Republic of Congo), or recently revived (e.g. in Mozambique between former

combatants FRELIMO and RENAMO), and several other states teeter on the brink of collapse (e.g. Swaziland and Zimbabwe) (Williams, 2013; Moore, 2001; Vandome et al, 2013). This instability has resulted in neighboring states playing host to large numbers of refugees (e.g. in Malawi, Zambia and Tanzania) and economic migrants (e.g. in South Africa). Most notably, perhaps, South Africa transitioned peacefully to a post-apartheid, non-racially segregated democracy in the early 1990s after a decade of violent conflict with several of its neighboring states and a great deal of highly-organized civil unrest.<sup>2</sup> Many long-time observers of the region anticipated a descent into civil war, which failed to materialize, so leading to the popular claim that South Africa's transition was 'a miracle' (Guelke, 1996; Klug, 2007). This transition was preceded by the end to the revolutionary struggle in Namibia, which led to a peaceful, single party-dominant, non-racial democracy; and was followed by the end of a multi-decadal civil war in Angola. In each of these cases, apartheid South Africa played a significant role as a military antagonist standing in the way of majority rule (in Namibia) and peace (in Angola) (Leys and Saul, 1995; Malaquias, 2007).

What is all the conflict about? Like most wars, the primary conflict drivers have been and continue to be land and resources (Klare, 2001). With regard to water resources, it would be correct to say that these overt, direct and physical conflicts have not been about water – e.g. the fight over a particular river – but in every case, about the wealth that access to water may bring: i.e. rainfed crop and grazing lands often extended by irrigation; precious stones, minerals and metals dug from the ground requiring vast amounts of water for processing, and alluvial gold and diamonds taken straight from the river beds. The wealth deriving from these resources is significant but poorly distributed. SADC is characterized by several states (e.g. Botswana, Namibia, South Africa, Zimbabwe) whose Gini coefficients of income inequality are among the highest in the world, and several others whose HDI values are among the lowest in the world (e.g. DRC; Malawi; Mozambique; Tanzania; Zambia; Zimbabwe), so wealth is badly skewed toward elites within and across SADC states. Among SADC states, South Africa remains predominant in every category measuring state power, despite being relatively poorly endowed

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<sup>2</sup> For recent reflections on these processes and their impacts upon the ensuing 20 years in South Africa, see the special issue of Thesis 11, 'Between adolescence and anger: The 'new' South Africa nears twenty, edited by Peter Vale and Estelle Prinsloo (April 2013, 115:1); and John S. Saul and Patrick Bond, 2014, South Africa: the present as history, London: James Currey.

with freshwater resources in comparison to most of its fellow SADC member-states (Pressend and Otieno, 2009).

To many scholars, these factors taken together are a recipe for violent conflict: a history of intra- and inter-state violence; a dominant state in need of water for development; limited human, financial and other key resource capacities so limiting adaptive capacity (often described as ‘second order water scarcity’, see Ohlsson and Turton, 1999; 2000); poor states with (relatively or absolutely) authoritarian elites presiding over weak civil societies and poor populations; difficult and sometimes unpredictable hydrological regimes (Ashton, 2000).

Southern Africa’s states share 15 river basins, of which six were identified to be ‘at risk’ by Aaron Wolf and his colleagues in Oregon -- the Cunene, Inkomati, Limpopo, Orange-Senqu, Okavango, Zambezi (Wolf et al, 2003) – who argued in 2003 that these basins were likely to see ‘an escalation of conflict’ in the next five to ten years. More than ten years have passed and predictions such as theirs have fallen by the wayside<sup>3</sup>. Rather than an ‘escalation of conflict’, things look pretty much the same in these and all other SADC state river basins (Swatuk and Mazvimavi, 2012; Swatuk and Fatch, 2013).

### **The Presence of Cooperation**

So much of the research on water resources in Southern Africa takes its cues from trends in the global North. Post-Cold War narratives of ‘the coming anarchy’ across the global South, said to be driven by populations spiraling out of control, renewable resources being degraded, and runaway poverty rates, led to several large-scale research programmes investigating the relationship between resources and violent conflict (Dalby, 2009; Swatuk, 2014). Several Southern, Central and Eastern African countries featured as case-studies in these projects (Bannon and Collier, 2003; Homer-Dixon, 1999; Homer-Dixon and Blitt, 1998). In the mid-1990s, the World Bank turned its attention to freshwater resources, arguing that the wars of the future would be about water. This was echoed by many others (Brown, 2000). Several river basins in the SADC region were identified as ‘global hotspots’, with the Zambezi being primus

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<sup>3</sup> In a recent update (De Stefano et al, 2010: 883), Wolf and colleagues state: ‘Among those basins flagged as “at risk” ... only the Ganges-Brahmaputra and Mekong have recorded a significant number of events between 2000-08 and cooperation has outweighed conflict in both basins. This confirms the idea that “basins at risk” is a fluid concept, with the actual basins changing constantly’.

inter pares. It was also about this time that South Africa rejoined the global community, and scholars and policy makers wishing to be good global citizens, took to the task of following current global trends with some relish.

Among many other research streams, ‘natural resources, the environment and violent conflict’ and the ‘water wars hypothesis’ were investigated, only to reveal a good deal of cooperation – within and across states – where conflict might have been expected (Solomon, 1996; Solomon and Turton, 2000). Beginning in the latter half of the 1990s, numerous studies emerged from small presses and in various university or research institute working paper and other publication series, primarily out of South Africa and to a lesser extent Zimbabwe, articulating the facts of regional cooperation.<sup>4</sup>

In some ways, the region was ahead of the global curve in contesting ‘the water wars’ and ‘resource wars’ hypotheses. In the words of South Africa’s former Minister of Water Affairs and Forestry, Kader Asmal, ‘water is a catalyst for peace’ (Asmal, 2001). As global trends in policy-oriented research pressed for better management (through IWRM) and governance (in the post-2000 period following WWF2 in The Hague) of water resources, SADC came to feature as a case of global ‘best practice’ (Savenije and Van der Zaag, 2000; Swatuk, 2002; Phillips et al, 2006; Earle et al, 2010).

Explanations for regional cooperation are several. Turton et al (2006) interestingly argue that scarcity is an inducement to cooperation, not conflict, particularly where a dominant or, in their terms, ‘pivotal’ or ‘hydrohegemonic’ basin state is involved: ‘Because of the existence of water scarcity constraints to future economic development within basin hegemonic states, this might be sufficient inducement to seek future cooperative solutions’ (Turton et al, 2006: 29). Turton and Funke (2008), apply the general principle to a case study of the Orange-Senqu river basin, arguing that South Africa’s ‘hydrohegemony’ enables cooperative outcomes. This does not mean

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<sup>4</sup> In Zimbabwe, SARDC (Southern African Research and Documentation Centre), SARIPS (Southern African Research Institute for Policy Studies), the IUCN’s regional office, and the University of Zimbabwe were particularly active. In South Africa, the University of Western Cape formerly through the Centre for Southern African Studies (CSAS) and currently through ACCEDE (African Centre for Citizenship and Democracy), the University of Pretoria’s Africa Water Issues Research Unit, and the University of Kwa-Zulu Natal’s Centre for Civil Society have produced a considerable number of papers relating to water and (state, society) security. In Namibia, the Desert Research Foundation of Namibia (DRFN) and, in Botswana, the Okavango Research Institute, continue to be important research nodes for water issues in the region.

that cooperation is everywhere and always good. The authors make the central point that cooperation among asymmetrical states (i.e. where South Africa is overwhelmingly the economic and military power in relation to Lesotho, Namibia and Botswana) can lead to durable outcomes that are sub-optimal in the eyes of the weaker states. This finding contrasts with Waterbury's (1997) observation that where resource interdependence is present, the likelihood of 'asymmetric gains' will act as a barrier to cooperation. In the case of the Orange-Senqu, however, it is clear that 'benefit sharing' can be realized – despite asymmetrical gains – if the need of the hydrohegemonic state is significant (Turton and Funke, 2008; Conley and van Niekerk, 2000), so confirming Delbourg and Strobl's (2012) observation that cooperation in country dyads is more likely when the upstream riparian receives a shock. In this case, cooperation quickly followed a coup d'etat (Turton and Funke, 2008; Lambrechts, 1999; Weisfelder, 2014). Moreover, for Turton and Funke (2008: 64),

South Africa's chosen role as a 'positive-sum outcome' hydro-hegemon is commensurate with findings by Gleditsch et al (2005) that states with endemic water scarcity have a vested interest in finding cooperative solutions that minimize the potential for future conflict.

Moving from potential conflict to cooperation potential (to quote UNESCO PC-CP program material)<sup>5</sup> requires the identification of 'benefits' to be shared by parties in dispute. Following on early work by Sadoff and Gray (2002; also 2005), Southern Africa became an incubator for studies of benefit sharing (Klaphake and Scheumann, 2009; Scheumann and Neubert, 2006; Meissner and Turton, 2003; Phillips et al, 2008; Turton, 2008; Van der Zaag, 1999; Van der Zaag and Vaz, 2003; Van der Zaag et al, 2002; Van der Zaag, 2006; Mirumachi and van Wyk, 2010).

Swatuk (2002, 2008) argues that regional cooperation is partly due to a combination of factors relating to SADC state elites: having shared in the liberation struggle against colonialism and apartheid, these leaders drive coordination of regional affairs from the top and are reluctant to criticize each other's behavior as leaders of their respective states. At the same time, they share a high-modern perspective on water's role in national development that is typical of (men) of their

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<sup>5</sup> See [unesco.org/water/wwap/pccp/](http://unesco.org/water/wwap/pccp/)



generation: i.e. the control of nature for human-determined ends, so pipelines, dams, power-grids and so on form the basis for SADC state-based regional cooperation (Simon, 1998).

A third explanation for the overriding dominance of regional cooperation is the impact of international actors. Chenje (2000) and Chenje and Johnson (1994; 1996) describe the myriad ways in which multilateral, international and non-governmental organisations are involved in water resources development and management within and across SADC states. Jonker and colleagues (2012) describe the central contribution of SADC member states, national institutions and organizations and international partners to water research and education in the Southern African region. Unlike other world regions, Southern Africa has long been recognized, in the words of Larry Bowman (1968), as a ‘penetrated political system’. A brief survey of research projects being undertaken across the region quickly reveals the extent to which SADC states are influenced by the finance and thinking of scholars and policy-makers across the world, in particular European donor states, tertiary institutions, international organizations and so on. Keck and Sikkink (1998) describe these types of actors as ‘norm entrepreneurs’, underscoring the influence of external actors in fostering intra- and inter-SADC state cooperative action on water resources development and management.<sup>6</sup>

In a comparative study of three regions (Middle East; South Asia; Southern Africa) with a focus on one country (Israel; India; South Africa) Giordano et al (2002), compiled and analysed two events datasets, one covering international water relations (1948-1999), and one covering domestic water relations (1989-2000). Events were catalogued according to the well-known water-related Friendship-Hostility Index (FHI) which ranges between -7 (formal declaration of war) and +7 (voluntary unification into one nation). Aside from a general conclusion which showed that national water relations are related to international water and non-water relations, what is interesting for our purposes here is the finding that of 1831 events catalogued, 507 were conflictful, 1228 were cooperative, and 96 were neutral. Similarly, large-n studies of conflict and cooperation on shared water resources revealed the same sorts of data: the simultaneous presence of conflict and cooperation (e.g., Wolf et al. 2003, Giordano et al. 2002, Yoffe et al. 2003, Giordano et al. 2005; Toset al. al 2000; Gleditsch et al. 2006; Bernauer and Kalhbenn 2010).

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<sup>6</sup> One can very clearly see the breadth of international influence from the list of publishers in the appended bibliography.

In a critical review of the literature on transboundary waters in Southern Africa, Furlong (2006) demonstrated the contradictory nature of inter-state cooperation whereby regional peace may in fact mask sub-national forms of structural violence through, for example, alienation of land due to dam construction as is the case in the Lesotho Highlands Water Project (LHWP). Similarly, Cascao (2008; 2009) and Zeitoun (2009) and colleagues (Zeitoun and Warner, 2006; Zeitoun and Mirumachi, 2008; Zeitoun et al, 2009) show that cooperation sometimes equals domination. This finding of the simultaneous presence of cooperation and conflict, as well as the often sub-optimal outcomes that result in the balance has been described in some detail by Swatuk in relation to the Okavango (2003; Swatuk and Kgomotso, 2007; Kgomotso and Swatuk, 2006); the region (Swatuk, 2008; Swatuk and Wirkus, 2009); and South Africa in particular (Swatuk, 2010). Indeed, Mirumachi (2015), argues that the obsession with inter-state cooperation is unfortunate as it obscures the ‘messiness’ of actually existing water politics.

Mark Zeitoun and colleagues have developed the TWINS framework in order to begin to be able to tease out these complex relations, primarily in terms of inter-state relations on transboundary rivers. This important work helps explain not why cooperation predominates over conflict in the SADC region, but why, in particular cases, relations are on balance more or less conflictful or more or less cooperative and what these conditions mean for water resource access, use and management. Mirumachi and van Wyk (2010), in their study of the Orange-Senqu river show the unevenness of shared benefits where riparian states are highly unequal. Kistin and Ashton’s (2008) work on the same river system is important in illustrating the ‘dynamic’ nature of relations among riparian states, warning that formal agreements are no guarantee of mutually beneficial outcomes to the satisfaction of all stakeholders in a basin. Ohlsson and Turton (1999) describe the multi-level stressors (local, national, regional/transboundary) facing water resource managers, arguing that unequal access founded on poor systems of delivery is a consequence of ‘second-order scarcity’, meaning that they result not from absolute scarcity of water but of manufactured scarcities due to the structure of the social system (also, Mehta, 2001 and 2007; Noemdoe et al, 2006). Similar to Homer-Dixon’s general findings (1999), the authors argue that, among other things, adaptive capacity must be developed for conflict to be avoided. This stands in contrast to Swatuk’s observation that the wealthy always have water (2008), so while ‘second-order scarcity’ as a concept is useful in moving the analysis beyond the resource scarcity-social

violence narrative, it nevertheless masks the real basis for ‘persistent, diffuse, subnational conflict’, i.e. resource capture by the few (following Homer-Dixon, 1998) and the subsequent and equally persistent allocation of resources by and for those actors who have captured the resource to the exclusion of others (following Mehta, 2001, 2007). I return to this conceptualization below.

### **Warning Signs and Lessons Learned**

With regard to actual cases of inter-state conflict as chronicled in peer reviewed literature, there are only two such cases: the SADC-endorsed, South African Defense Force-led intervention in Lesotho in 1998, and the mobilization of troops along the Chobe River border between Namibia and Botswana who were contesting ownership of Sedudu/Kasikili island (Botswana call it Sedudu; Namibians Kasikili). In the case of the former, SADC took emergency action following a direct request to intervene from Lesotho’s Prime Minister, Pakilitha Mosisili, while the country was caught up in a military revolt (Makoa, 1999; Matlosa, 1999; Swatuk and Vale, 1999; Johnson Likoti, 2007). One of the first actions taken by the SADF was to ‘secure’ the Katse Dam – a key piece of hydraulic infrastructure ensuring water security not for Lesotho but for South Africa. Several Basotho military troops were killed during this action so leading to an outcry among scholars and critical observers regarding the heavy-handed tactics of post-apartheid South Africa (Thompson, 1999; Swatuk and Vale, 1999). Several studies characterize this military action as a ‘water war’, or a ‘resource war’, or an instance of ‘resource capture’ (see, for example, Kadima, 1999; Johnson Likoti, 2007). However, the evidence supporting this claim is conjectural and anecdotal.<sup>7</sup> Nevertheless, the lesson to be learned, according to these scholars, is that South Africa will remain the dominant actor in the region for the foreseeable future (Van Wyk, 2000). It is interesting to note how this behavior and these interpretations have been pushed to the margins of the discourse on sharing water, as other frameworks such as ‘benefit sharing’ reveal the win-win outcomes of the LHWP in general (see Klaphake and Scheumann, 2009; Alam et al, 2009).

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<sup>7</sup> The lone dissenter here is Richard F. Weisfelder (2014) who argues that (i) the intervention was misconstrued by some as a ‘water war’; and while (ii) there were several initial missteps; ultimately (iii) the intervention was one element of many SADC interactions ‘vital in sustaining its democratic government and restoring political stability’ (2014: 126).

In the Namibia-Botswana case, aside from the popular press in these two countries which were only too happy to point to ‘water wars’ in bold type across their newspapers<sup>8</sup>, the general take on the conflict was and remains that the choice to submit the issue for adjudication to the International Court of Justice (ICJ) and abide by the recommendation once it was handed down was evidence of a nascent ‘regime’ in operation where conflict was a precursor to cooperation (to use classic international organization nomenclature) (Turton, 2008; Turton et al, 2006; Swatuk, 2002).

In some ways then, and in line with Furlong’s (2006) review of the literature, while these two cases of overt inter-state conflict sit at polar extremes, they fit comfortably with the expectations of state-centric perspectives based on classic International Relations theories of realism (the unilateral pursuit of national interest based on power: the Lesotho case) and neo-institutionalism (the collective resolution of disputes through established institutions where participants are respected as equals: the Namibia-Botswana case). The key point seems to be that with regard to transboundary resources, viable cooperative management options pass through the orthodox pathway of inter-state diplomacy in pursuit of ‘national interest’.

### **Getting it right before time runs out**

Empirical studies indicate that climatological variables have a large effect on the risk of violence or instability in the modern world ... Climatic anomalies of all temporal deviations, from the anomalous hour to the anomalous millennium have been implicated in some form of human conflict.

- Hsiang et al (2013)

The fear of scarcity-driven conflict in SADC is pervasive in regional and international water resources scholarship, particularly that which is policy-oriented (Ashton, 2000; CSIR, 2010). The standard argument goes like this: While cooperation predominates now, there is no guarantee that conflict will not arise in the near future particularly if current trends continue. With specific reference to water, by ‘trends’ what is usually meant is disintegrated management and poor governance. Avoiding conflict, then, requires inter alia bridging ingenuity gaps,

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<sup>8</sup> See ‘Sedudu Case Ends’, Botswana Guardian, 5 March 1999; and ‘Something cynical about Nujoma’s visit’, Botswana Guardian, 19 March 1999 for example.

building resilience, technical and human resource capacity building, collecting information and building a knowledge bank, enhancing trust, facilitating stakeholder participation, creating smart partnerships across state, civil society and the private sector, or around a dialogue of state, science and society. There is a sense of urgency to all of this literature as well as an enduring lament at the durability of maladaptive systems, fostered in part by ‘a lack of political will’. Terminology such as ‘closed basins’ and ‘over-allocation’, commonly used to describe the Limpopo River basin (Ashton, 2000; also, Government of Sweden, 2001), heighten the sense of tension regarding time frames for informed decision making. The climate change and conflict discourse has given renewed urgency to these tasks, and you can find the hypothesized negative consequences of being ill-prepared for climate change scattered across recent literature. In most cases, the argument is put forward that ‘climate change is a threat multiplier’ (Swain et al, 2011). But, again, it must be pointed out that the empirical evidence is weak and the ‘coming anarchy’ is a product largely of fantasy. In the introduction to a special issue of the Journal of Peace Research, Gleditsch (2012: 7) summarizes the findings: ‘On the whole, however, it seems fair to say that so far there is not yet much evidence for climate change as an important driver of conflict’.

### **What is missing from this picture?**

All of this attention paid to the potential for violent conflict at a macro scale, be it inter-state or intra-state, and what states and their various partners must do to avoid it, sits uncomfortably apart from the facts of conflicts within states that Homer-Dixon (1999) accurately defined as sub-national, persistent and diffuse. These are small-scale conflicts among stakeholders in rural areas (Funder et al, 2010; Maganga, 2002), and across the urban/peri-urban milieu as they relate to the perceived failure of the state to provide access to potable water and sanitation (Ruiters and McDonald, 2005). As Funder et al (2010: 1) correctly state, ‘[W]hile transboundary water conflict and cooperation has been subject to increasing attention in recent years ... less is known about the nature of local water conflict and cooperation, especially in terms of quantitative systematic analysis of the characteristics of such events.’ While quantitative systematic analysis is still lacking, there is a great deal of critical scholarship focusing on these issues from a case study perspective wherein questions regarding peace and conflict are set not within the context of scarcity, but within the interrelated contexts of access and equity, or, put differently,

‘manufactured scarcity’ (Noemdoe et al, 2006; Mehta, 2007). Articulated by Homer-Dixon (1999: 159) as problems of resource capture and environmental marginalization, the resulting violence is often anomic, unorganized and spontaneous.

With regard to water conflicts in urban settings, virtually the entirety of scholarship emanates from South Africa (McDonald and Ruiters, 2005; Bond, 2002; Ruiters, 2001; Tapscott, 2010; Thompson and Tapscott, 2010; Thompson and Nleya, 2010). Elsewhere in the SADC region, conflict is often mentioned as a byproduct of poor governance and management as it manifests in inadequate service delivery, moves toward privatization (through water kiosks, for example), and full-cost recovery (Gumbo and van der Zaag, 2002). It is interesting to note that in the post-apartheid setting, a new Water Services Act was passed before a new Water Act. This was due to the pressing need to provide water to the millions of newly enfranchised South Africans who were deliberately un- or underserved under apartheid. While urban water provision for personal, household and small-scale economic needs is, in Tony Allan’s terms, ‘small water’, in post-apartheid South Africa it is very big politics. The bulk of these studies locate conflict causality within highly stratified class systems (Von Schnitzler, 2008; Alexander, 2010; McDonald and Ruiters, 2012). So, the recipe for resolving social conflict related to access to water is, in fact, more effective conflict through enhanced organizational capacity of social movements and civil society organizations (Booyesen, 2007; Thompson, 2014). The energy surrounding anomic, sporadic and chaotic violence, therefore, according to scholars of the left, should be captured and channeled through (i) unifying concepts regarding what exactly social movements are fighting for; and (ii) shared strategies across organizations at all levels (from community to transnational) (compare Runciman, 2011 and Sinwell, 2011).

Recently, questions have arisen regarding both the validity and utility of the Constitutional courts of South Africa as sites for pressing government to deliver services and resources as per the Constitution itself. Just as ‘Cochibamba’ serves as shorthand for state-civil society ‘wars’ over water, so too does ‘Marikana’<sup>9</sup> – the infamous mineworker massacre – serve as shorthand for the

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<sup>9</sup> On Cochibamba, see Emily Achtenberg, ‘From Water Wars to Water Scarcity: Bolivia’s Cautionary Tale’, North American Congress on Latin America, available at <https://nacla.org/blog/2013/6/5/water-wars-water-scarcity-bolivia%E2%80%99s-cautionary-tale>. Regarding the Marikana massacre, see Mail & Guardian online: <http://mg.co.za/article/2014-08-15-remember-marikana-9-things-you-need-to-know> and Patrick Bond, ‘South

extremely poor condition of state-civil society relations in post-apartheid South Africa today (Bond and Mottiar, 2013; Mottiar, 2013; Ruiters, 2014). So, Cape Town's 'toilet wars', join a long line of public protests as they relate not only to services but to citizenship (Ruiters, 2014). Put slightly differently, water scarcity for the many and water plenty for the few is manufactured through social relations of production; lack of water, therefore, is a symbol of an unequal society irrespective of South Africa's freshwater resources endowment. Fiddling with governance or management may help somewhat, but the source of water poverty is deeply embedded in terms of class, race, gender among other things (Dungumaru, 2007; Kwaramba, 2001; Van Koppen, 2001; Schreiner et al, 2004; Wester et al, 2003). In terms of conflict, then, the implication here is that without thorough-going alterations to social structure, current forms and levels of violence are but the tip of the iceberg.

In terms of rural water, and as shown in a recent study by Funder et al (2010), which focuses on Namwala District in Southern Zambia, water conflicts in these areas are highly localized and revolve around "everyday life" (Lankford et al, 2009; Magombeyi et al, 2008). Funder et al's study is, to my knowledge, the only study to attempt to quantify conflict and cooperation over water resources in the SADC region<sup>10</sup>. According to Thomasson (2005), and Wolfe et al (2005), local conflicts within nations – i.e. 'between tribes, water use sectors, rural and urban populations and states or provinces' (Wolf et al, 2005: 87) – are on the rise. Funder et al (2010) show that 74% of conflictful events are water infrastructure-centred (of which 45% relate specifically to boreholes), and 82% of these events occur in the dry season (so are mainly about quantity). This corroborates research conducted in other parts of Sub-Saharan Africa which shows that, in terms of extreme events, while both drought and flood create serious tensions within and between states, drought leads most often to conflict whereas flood often leads toward cooperation (Raleigh and Kniveton, 2012; Msilimba et al, 2009).

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Africa: Politics, profits and policing after the Marikana Massacre', Links: International Journal of Socialist Renewal, online at <http://links.org.au/node/3154>

<sup>10</sup> Canvassing 10 villages, the authors catalogued water-related conflict and cooperation in terms of 'public events', defined as "an action (or a set of actions) that seeks to secure one or more parties' access to water by: (i) challenging other parties' access; (ii) confirming own or other parties' access; or (iii) collaborating with other parties to secure access" (Funder et al, 2010: 2). 183 specific events were identified, 66.1% being conflictful and 33.9% being cooperative.

While highly localized rural water conflicts are generally resolved due to a combination of mutual need and shared vulnerability, as the geographic scale and variety of stakeholders increases, conflicts become more deeply entrenched and tangled up with broader social issues of power and politics (Baptista, 2010; Mul et al, 2011; Komakech et al, 2011). Upstream-downstream conflicts over, inter alia, access, quantity and quality involving smallholder farmers, large-scale commercial agriculture, hydro-power generation for cities, parks and protected areas, and mining companies are common in virtually every SADC state river basin (Buscher, 2012; Van der Zaag and Vaz, 2003; Swatuk and Kgomotso, 2007; Franks, et al, 2013; Maganga et al, 2004, 2002). Van der Zaag et al (2013) show how new water laws designed to facilitate improved water management and governance actually privilege a particular social class and often serve as the basis for peasants' loss of access to traditional sources of water (also, Kemerink et al, 2012; Komakech et al, 2012). Narratives built around 'national development' further justify the appropriation of water resources by powerful coalitions of stakeholders (Buscher, 2013). Meissner (2000; 2005) describes the plight of the Himba in northern Namibia in their on-going struggle with the government of Namibia over the proposed Epupa Dam (now moth-balled due to a combination of local and global pressure). Kgomotso and Swatuk (2006) describe the process of resource capture and ecological marginalization around the Okavango Delta in northern Botswana. Cullis and van Koppen (2009) document how closely a gini coefficient of water inequality mirrors income inequality in South Africa for the Olifants river basin. These conflicts are persistent, tending to flare up in the dry season, often requiring government to come in as a 'mediator' (which is problematic given that government is also a user, as in the case of the proposed Epupa dam). What all of these studies reveal is the important role played by outside actors, such as the International Rivers Network in both the Namibia and Botswana cases, in balancing power between conflicting parties.

Unlike the critical sociological studies of urban water conflicts, the majority of studies of rural water conflicts invariably argue for improved forms of management and governance as a viable means for conflict resolution and win-win outcomes: e.g. more representative management structures; embedded forms of stakeholder participation; formal systems of dispute resolution, often with an emphasis on the need to embed local tradition, custom, and indigenous knowledge in the resulting organizational forms (Boge, 2006; Derman, 1995; Cleaver, 2009; van der Zaag,



2005, 2007, 2009). In these cases, conflict is often explained as the inevitable consequence of the clash of the traditional with the modern, or of limited understanding. Compiling more and better information, and getting the institutions right, it is often suggested, will help resolve these conflicts. The land-grabbing phenomenon (Jensen et al, 2012; Good, 2009; Cotula et al, 2009), however, suggests that something more is needed beyond institutional reform (Swatuk, 2005, 2008; Bond, 2002).

### **Conclusion: where do we go from here?**

The water-food-energy-climate change security nexus discourse is upon us. It places water at the centre of sustainable futures, since water is the common variable across key issue areas. It argues that if we get water management right, we will solve a rather complex puzzle (Waughray, 2011). In my view, the nexus is bound to shape the ‘third wave’ of water and conflict scholarship. The first wave – ‘neo-Malthusian water wars’ – revealed a good deal of cooperation across the global freshwater landscape, while fuelling countless national, regional and global projects and programs for improved governance and management. The second wave – ‘climate wars’ – is currently reshaping management responses through a language of ‘adaptation’ and ‘resilience’. No doubt, the ‘nexus’ will draw much of its energy from these first two waves. Each of these approaches privileges the state as the primary entity in ensuring national and regional water peace and security.

Flying under the radar of these studies, are the facts of sub-national, persistent and diffuse conflicts across Southern Africa’s cities and rural areas. Where they do intersect with the orthodox approaches to water conflict, they are often explained as national problems relating to poor governance, disintegrated management and lack of political will. Put differently, these conflicts are intellectually contained by what Furlong calls the territorial trap. Critical scholarship, on the other hand, would argue that these are not discrete events reflecting individual state-civil society relations, but are indicative of a global phenomenon of ‘water apartheid’ (to paraphrase Fantu Cheru), largely resulting from pressures due to neoliberal globalization. They add up to what Vandana Shiva (2002) describes as a ‘water war’ of the rich against the poor.

Whether one agrees with this analysis or not, it is clear that those interested in water and conflict – globally or regionally – must find a way to integrate the continuing fascination with the potential for inter-state conflict on transboundary waters (and possibly aquifers) – which shows rather a great deal of both conflict and cooperation – with the real-time, numerous and persistent conflicts that exist within states across entire world regions.

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