5 Southern African transboundary waters

Non-state actors in the Inkomati-Usuthu water management area and the Okavango river basin

Richard Meissner

Introduction

The Southern African Development Community (SADC) is an economic and political integration community consisting of 16 member states: Angola, Botswana, Comoros, Democratic Republic of Congo, eSwatini (formerly Swaziland), Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Tanzania, Zambia and Zimbabwe (SADC, 2022). Twenty-one transboundary rivers traverse SADC. Large rivers, and their tributaries, are known as shared watercourse systems or international rivers when they cross state boundaries or flow from one state to another (Heyns, 2003).

In the region, the most economic-developed countries that are also water scarce, e.g., Botswana, Namibia, and South Africa have the potential means to mobilize the necessary human, financial, and technological resources to address water scarcity and related human welfare needs than countries that are not as economically developed and relatively more water rich (Turton & Ashton, 2008; Meissner, 2011). This does not mean that every water management project, like large dams, water transfer schemes, and hydroelectric installations will be implemented in the three most developed SADC states. The linear belief that relative advanced economic development will result in water provisioning for socio-economic development does not hold true. Constraints like political resistance to large dams and hydropower stations, political instability, low economic growth, and corruption often hamper such developments. For instance, Namibia is to a large extent unable to construct the Baynes Hydropower scheme (Meissner & Warner, 2021) due to stagnating economic growth and a recession since 2016 (World Bank, 2022).

Across the region, no scarcity of water cooperation agreements exists between the member states (Meissner, 1998, 2011; Giordano & Wolf, 2003; Turton et al., 2004). Within this context, Jacobs and Nienaber (2011, p. 665) conclude that: "The water resources of the ... [SADC] are highly sensitive and complex to understand, govern, effectively use, and fairly distribute". Meissner and Jacobs (2016) reached a similar conclusion about the complexity of the region's transboundary rivers and their governance and management, especially when considering the role of non-state actors in the politics of water resource management projects.

What the preceding shows is that Southern Africa's shared water resources are not only at the behest of the geographical, climatological environment, and the natural flow of transboundary rivers across and between state boundaries, but also the international political arrangements between riparian states and their differing economic development. Non-state actors also play a role within the political environment.

What this also indicates is that research on transboundary rivers over the past three decades has been framed along empirical and positivist International Relations paradigms (e.g., neorealism and neo-Liberal institutionalism) (e.g., Heyns, 1992, 1995; Conley, 1995, 1996; Conley & Van Niekerk, 1997; Van Wyk, 1998; Turton, 1999; Jacobs, 2006; Ashton & Turton, 2009; Swatuk & Vale, 2000; Jacobs, 2006; Meissner, 2016). A constituting factor for this is that over the past 90 years, bilateral and multilateral treaties have been concluded between riparian states (Meissner, 2011), placing the focus exclusively on the foreign policy conduct between states. Because of the high number of these treaties, International Relations experts and engineers investigated foreign relations over transboundary rivers and their potential for economic development and contestation and cooperation (Meissner, 2016). This view is limited and we need to consider the role of non-state actors to gain a deeper understanding of transboundary water governance and management.

The purpose of this chapter is to report on the role and involvement of non-state actors in the Inkomati-Usuthu Water Management Area and the Okavango River. The first part of the chapter describes the three rivers (Komati, Usutu, and Okavango). Since the Inkomati and Usuthu Rivers are governed politically as a water management area under the custodianship of the Inkomati-Usuthu Catchment Management Agency (IUCMA), I will describe the water resources of the water management area before moving onto the Okavango. The third section will focus on the developments surrounding integrated water resources management area and the role and involvement of the epistemic community in promoting these practice theories. My case study of the Okavango River revolves around oil exploration and its perceived impact agitated by a host of interest groups, scientists, and citizens. I follow this with a discussion before finishing with a conclusion.

The Inkomati-Usuthu water management area

The water management area is located in South Africa's Mpumalanga Province and a small portion of the Limpopo Province. The area includes three catchments with rivers flowing into the Inkomati River system: the Sabie-Sand, Crocodile (east), and Komati. The origin of the Inkomati River is in South Africa, after which it flows through eSwatini, back through South

Africa, and eventually into Mozambique where it drains into the Indian Ocean. The geographic extent of the catchment covers 31,230 square kilometers (km²). The largest water requirement, 57%, is allocated to irrigated agriculture (DWA, 2012a; Denby et al., 2016). According to various research endeavors, the area is water-stressed with a growing water deficit in the basin. This results in frequent water restrictions, growing demands from emerging black farmers, international treaty obligations, and concern about the water quality and ecological reserve (DWA, 2007; Woodhouse, 2012; DWA, 2012b; Denby, 2016). Schreiner (2012 in Denby et al., 2016) states that there is water deficit of around 165 million m³ per annum in water yield in the three subcatchments, the Komati, Sand, and Crocodile. Water had been over-allocated not meeting the reserve and international requirements. Despite this water scarcity, according to Munnik and Barnes (2016), the water management area's gross geographic product (GGP) is estimated at about R9 billion (USD530 million) per year. This represents around 0.3% of South Africa's gross domestic product (GDP).

Inkomati river

The Inkomati catchment has a total basin area of 50,000 km² and an average mean annual run-off of 3 600 million cubic meters (mcm). Of the catchment area, 62% is in South Africa, 5% in eSwatini, and 33% in Mozambique. In the past, the contribution of the mean annual run-off by the three riparians had been in dispute, with 64%–81% flowing from South Africa, 13%–20% from eSwatini, and 6%–16% from Mozambique. The disputed data depends on which country's data is used (Savenije & Van der Zaag, 1998; Turton, 2003; Turton et al., 2004). As already alluded to, the Inkomati basin is of great strategic importance to South Africa since it supports various economic activities. An inter-basin transfer scheme sustains electricity generation in the adjacent Olifants catchment (a tributary of the Limpopo River) (Ohlsson, 1995; Turton et al., 2004).

A significant portion of the South African economy depends on the electricity generated by coal-fired power stations supplied by water from the Inkomati (Turton et al., 2004). The Inkomati River is also an important source of water for the economic development of both eSwatini and Mozambique, where it sustains the cultivation of sugar cane and hydroelectric production (Maguga Dam in eSwatini) (KOBWA, 2022).

Usuthu river

Also called the Maputo River or Great Usuthu, the Usuthu River originates in South Africa, traverses eSwatini before entering South Africa again and then flowing into Mozambique where it enters the Indian Ocean (Dlamini et al., 2014; Nkambule, 2016). The catchment has a total area of around 12,000 km² (Matondo & Msibi, 2001; Van der Molen & Mthimkhulu, 2016). In eSwatini and Mozambique the river is a vital water source for the cultivation of sugarcane (Mhlanga-Ndlovu & Nhamo, 2017). Around 75% of eSwatini's population live in the catchment. Here, the river supports the sugar and ethanol industries and other agricultural activities such as livestock and maize production in the three countries (Mhlanga, et al., 2012; Nkambule, 2016).

The Usuthu River, just like the Inkomati, is also of strategic importance for South Africa. By the mid-1970s, two power stations had been constructed: Camden and Kriel. At that time, the Usuthu's water had been developed in four phases to supply the needs of the power stations. These consisted of the Jericho, Westoe, and Morgenstond Dams, and a system of interconnecting pipelines and pump stations. The Usutu was, at that time, also of strategic importance to supply the planned SASOL II synthetic fuel plant (RSA, 1976; Turton et al., 2004).

Considering these developments, discussions were held at a technical level with what was then Swaziland and Portuguese-ruled Mozambique. In 1976, the South African Department of Water Affairs (DWA) said that: "Both the Komati and Usutu Rivers are international rivers, and the claims of bordering countries must constantly be borne in mind" (RSA, 1975; RSA, 1976; Turton et al., 2004) when developing their water resources.

Okavango river

Three countries share the endorheic Okavango River: Angola, Namibia, and Botswana. As already mentioned, Namibia and Botswana are two of Southern Africa's driest states. This also means that they are water-stressed or water scarce. Angola is more water "rich" (Jacobs, 2006). The river's headwater is in central Angola on the Bié Plateau, flow south-eastwards for 650 kilometers, forms the border with Namibia before it turns southwards, traverses the Caprivi strip, and enters Botswana. After flowing for 100 kilometers, the river forms the Okavango Delta. The average mean annual run-off is around 10–11.6 billion cubic meters (bcm) and has surplus water of high quality (Van der Heiden, 1992; Conley, 1995; Meissner, 1998). The catchment extends across 565,000 km² with the Okavango Delta covering an area of 5,000 km². When surface flows are of a sufficient quantity, the river flows into the Makgadikgadi pans downstream from the delta (Conley, 1995; Heyns, 1995; Meissner, 1998). The Okavango Delta is considered as one of Africa's last remaining wilderness areas (Maltby, 1986).

Since the 1980s, a successful marketing campaign by tourist operators have turned the Okavango Delta into one of the world's most renowned tourist destinations and is listed as a wetland of international importance under the RAMSAR Convention. The delta is the largest source of employment in northern Botswana. In the mid-1990s, the delta was responsible for the generation of 65% of foreign tourist revenue, representing 6% of Botswana's overall GDP (Meissner, 1998; Turpie, 2010). Each year, around 50,000 foreign tourists visit the delta (Mbaiwa, 2005).

Non-state transnational relations

Both catchments have varying degrees of water available for socio-economic development. In the Inkomati-Usuthu water management area, the water resources are mainly used for agriculture, electricity generation, and other water uses. The Okavango River's water is mainly used to sustain tourism concentrated in and around the delta. In this section, I will concentrate on the role and involvement of the epistemic community and interest groups in the Inkomati-Usuthu water management area and the Okavango delta, respectively. For the Inkomati-Usuthu water management area, the role and involvement concentrate on the establishment of the Inkomati-Usuthu Catchment Management Agency (IUCMA) and for the Okavango Delta resistance to oil exploration.

The Inkomati-Usuthu catchment management agency and the diffusion of programme theories

When it was founded in 2006 as the Inkomati Catchment Management Agency (IUCMA), the IUCMA was South Africa's first CMA (Anderson, 2005; Denby et al., 2016; Rogers & Luton, 2011). The IUCMA (2021, n/p) states that the agency's goal is to "... enhance water resources management at local level" by promoting decentralized decision-making within the water management area. The IUCMA's default role is to coordinate the related water use operations of water management organizations and water users, such as irrigation boards and water user associations. The organizations must encourage community involvement in the management, protection, conservation, and control of water resources (IUCMA, 2021). South Africa's National Water Act (No. 36 of 1998) set up the IUCMA as a statutory body (RSA, 1998; Meissner & Funke, 2014; Munnik, 2020) and calls for the catchment-scale implementation of IWRM by CMAs (Rogers & Luton, 2011). To protect, use, develop, conserve, manage, and control water resources, it is important to adhere to the guiding principles of equality, sustainability, efficiency, and representativity (RSA, 1998; DWA, 2012b). The adoption of these principles shows a shift away from the so-called command-and-control method of managing water resources in favor of IWRM, stakeholder involvement in decision-making, and cooperative governance (DWA, 2012b).

The principles of IWRM have been implicitly incorporated into South African water legislation¹ and is actively supported by the country's government and intellectual community (Movik et al., 2016). During the drafting of the Act, several international experts from the Food and Agriculture Organization (FAO) and countries like Australia, Finland (as donor), France, other European countries, Mexico, Namibia, New Zealand, and the United States shared their expertise with water reform. According to Movik et al. (2016 p. 459), "... donor influence was not considered to be massive ..." and, therefore, concluded that IWRM was not imposed in South Africa. Nevertheless, the fact that IWRM found its way into the Act, does not mean that the transnational epistemic influence played a role; the absence of "massive" donor influence does not translate into no transnational influence.

What is more, the Australian experience played a crucial influencing role during the drafting of the Act. The basis for this was the argument that Australia and South Africa are quite similar in biophysical terms. The idea of catchment management agencies (CMAs) was adopted from Australia. During the early 1990s, IWRM was en vogue. The Water Research Commission (WRC) at the time "... brought IWRM to South Africa ..." since it was considered to be an international best practice (Movik et al., 2016 p. 459).

Rogers and Luton (2011, p. 43) from the University of the Witwatersrand said in 2011 that "IWRM is the way to go in working together, all parties concerned, towards fair access and benefit for all people who depend on the Crocodile River [a tributary of the Inkomati] for their livelihood." Regarding the duties of the executive management of the IUCMA, the DWA (2012b) expressed a similar opinion, albeit in a more normative way. Executive management must understand the relevance of IWRM as well as the function that water plays in socio-economic development and the reduction of poverty. In the IUCMA, IWRM also had a transnational purpose since the DWA has instructed the organization to create a renowned international presence through approved IWRM techniques (DWA, 2012b).

Considering this, the IUCMA rose to the position of "pioneering leader" in IWRM, according to Rogers and Luton (2011). However, contrary research on the IUCMA's implementation of IWRM concluded that the decentralization and integration parts of IWRM in South Africa have failed to take off and what "integrated" signifies is unclear. Additionally, the policy around IWRM did not fully recognize the complicated historical background and the underlying disparities in knowledge, power, and resource access, efforts to implement the National Water Act and IWRM have been difficult in practice (Denby et al., 2016). Since it does not "trickle down" to the lowest levels or is even understood, IWRM is more of an academic idea with minimal experiential applicability in the field of water management (Denby et al., 2016). The IWRM institutional architecture and roles are also essentially in place, according to Wilkinson et al. (2016: 641). Change areas, though, show varying degrees of success. Institutional duties, structures, and responsibilities have been outlined by policy and legal frameworks; however, it is difficult to put these requirements into practice for IWRM (Wilkinson et al., 2016).

The Okavango river, hydrocarbons, and climate change

The search for oil and gas in Namibia started in 1959 by the Etosha Petroleum Company of Namibia after it received a prospecting and mining grant from the Administrator of the Mandated Territory of South West Africa. This grant gave the company the right to explore oil and gas until 1985 in 258,998 km² of northern Namibia. In 1966, Brilund Ltd. acquired Etosha Petroleum. The former was in the same year incorporated in Canada and in 1976 in Liechtenstein (Hovey, 1982).

Earlier exploratory investigations convinced petroleum experts that exploratory drilling should be undertaken to find if oil is present in the area. At that time, Etosha was not able to do so due to financial or technical limitations. The company sought the assistance of other companies to conduct drilling. In 1980, Superior Oil of Houston, Texas, and the largest oil and gas producer in the United States, signed a letter of intent with Etosha. This letter asked Superior to conduct test drilling on Etosha's concession. If commercial quantities of oil were discovered, Superior could start production. The agreement was cancelled due to unspecified reasons, but Superior showed its interest in investing in Namibia if it could develop the resources, make a profit, and was able to take its investment out of the country (Hovey, 1982).

In 2012, the Duma Energy Corporation announced that geological field surveys by Hydrocarb Energy Corporation (based in Houston, Texas) in the Owambo (Etosha or Kavango) basin² in northern Namibia and southern Angola confirmed the presence of crude oil (DEC, 2012; Hoak et al., 2014). The Canadian explorer, Reconnaissance Energy Africa, also known as ReconAfrica, drilled two test wells in 2021 that confirmed the oil and gas reserves. The extent of the discovery is in the order of 5 billion barrels of oil and gas equivalent. ReconAfrica, in collaboration with the National Petroleum Corporation of Namibia (NAMCO), announced that it will drill three wells in the second half of 2022 (Koning, 2022).

Due to the oil and gas exploration activities in the Okavango River basin environmental and ecumenical interest groups³, citizens, and scientists had their misgivings due to the proximity to the Okavango River and the fact that the drilling took place some 260 kilometers northwest of the delta. Although some distance from the Okavango River (50 kilometers) and delta, environmental interest groups, like Environmental Justice (South Africa) (Environmental Justice Atlas, 2022) protested against the exploration activities. Bishop Geoff Davies, founder, and patron of the Southern African Faith Communities' Environment Institute (Safcei) (in Cape Town, South Africa) a multi-faith environmental organization, in his protest against ReconAfrica's exploration activities announced that "God is green". He asked investors and private financiers to withdraw their financial investments. Following Pope Fransiscus, Davies stated that it is a "sin" to destroy God's creation because ReconAfrica's activities poses a threat to the environment and the indigenous San people's livelihood. He also criticized the Namibian and Botswana governments for allowing ReconAfrica to conduct such exploration (Tempelhoff, 2020; Bega, 2022). Davies, furthermore, protested that the exploration would cause the "death" of the Okavango delta⁴ (Tempelhoff, 2021).

Environmental interest groups raised various negative issues. The Environmental Investigation Agency (EIA) (United Kingdom) highlighted that the Okavango delta is Africa's last wilderness for savanna elephant, rhino, pangolin, and other fauna and flora species (EIA, 2021; Tempelhoff, 2021). The EIA also linked the issue with fracking and the contribution of fossil fuels to climate change. According to Rachel Mackenna from the EIA: "While the world slowly but surely turns away from fossil fuels in a bid to address climate change, ReconAfrica's push for oil and gas – and possibly fracking – in one of the world's last remaining wilderness areas is a disturbing illustration of how unsustainable extractive projects can undermine the survival of an entire ecosystem, as well as the livelihoods and traditions of local communities" (EIA, 2021, n/p).

Scientists offered their opinion on the link between the exploration and climate change. The Prof Bob Scholes, formerly from the Council of Scientific and Industrial Research (CSIR), and in his capacity as professor in systems ecology at the Global Change Institute at the University of the Witwatersrand (South Africa) announced that the discovery of oil by ReconAfrica is a "stupid bet". His argument was that: "Major new fossil-fuel resource development, at a time when the world has over-abundant supplies and an urgent need to reduce consumption, is morally and environmentally dubious. In the time needed to recover the investment, there is unlikely to be a market" (Bega, 2021, n/p). Scholes further warned that San land in Namibia and Botswana and their traditional cultures are under threat from such developments. The areas in which the drilling takes place, are some of the last places where the San can practice their traditional way of life (Azrai, 2021). Dr. Surina Esterhuyse, geohydrologist at the University of the Free State's Centre for Environmental Management in Bloemfontein, South Africa, argued that the Kavango basin is a water-scarce area and that the potential pollution from the drilling operations could contaminate the groundwater on which the local people depend (The Zimbabwe Independent, 2021).

Professor Francois Engelbrecht, former CISR principle scientist and currently with the Global Change Institute as well as an author of the Intergovernmental Panel on Climate Chane (IPCC) reports, mentioned another problem. "The big risk is that the global North makes the transition [to sustainable energy sources; solar and wind], and that Africa becomes the dumping ground for the world's fossil fuel technologies – the last place where this kind of energy is being pursued" (Wengraf, 2021, n/p). Engelbrecht added that "Southern Namibia has twice the global rate of [global] warming. In northern Namibia it is a staggering 3.6 degrees Celsius per century. The northern part of Namibia and Botswana and southern Zambia are likely to be the region in the southern hemisphere that is warming the fastest" (The Zimbabwe Independent, 2021, n/p).

Frack Free Namibia and Botswana – Community, reported that Mr. Andreas Sinonge of Mbambi settlement (Namibia) with assistance from the Windhoekbased Legal Aid Centre (LAC) approached the Namibian High Court to get his land back on which ReconAfrica is drilling its second exploration well. Sinonge demanded that his traditional land be returned after ReconAfrica gave him alternative land. He argues that he was never consulted and that he was negatively affected by the decision of the Shambyu Traditional Authority and government officials, who allowed ReconAfrica to drill on his farmland (FFNB-C, 2021; Steffen, 2021).

Discussion

Transnationalism is the blurry territorial attachments that extend beyond national borders (Rosenau, 1997). For Rosenau (1980: 1 cited in Meissner, 2005b: 5–6) transnationalism is "... the process whereby international relations conducted by governments have been supplemented by relations among private individuals, groups and societies that can and do have important consequence for the course of events".

In the Inkomati-Usuthu water management area, the transnationalization of IWRM took place through an epistemic community. At first, the transnationalization occurred when experts from several countries gave input into the drafting of the National Water Act (No. 36 of 1998) (RSA, 1998). Integrated water resources management was then debated by South African water managers and "adopted" in parallel with the development of the new idea of CMAs, which was modeled on Australian experiences. The WRC played a role in the "importation" of IWRM as a global best practice of water management in the early 1990s when its experts suggested the adoption of the program theory for the new way of managing South Africa's water resources in opposition to the earlier command and control style contained in the 1956 Water Act (No. 54 of 1956) (Union of South Africa, 1956).

IWRM and CMAs are not unique to South African water resources management but were "imported" from abroad into the country. The notion of IWRM as an international best practice fostered the ideational notion that the approach is the "way to go" as a central tenet of water reforms. What South African experts, like Rogers and his team did, was to diffuse IWRM and adaptive water governance through the Inkomati-Usuthu water management area and convince the IUCMA that it is indeed how the institution should manage water resources. Integrated water resources management found its institutionalization as a norm in the water management area and the IUCMA. Not only was it institutionalized as a norm, Rogers and his team also pushed for it to become part of the IUCMA's operating and water management culture. Since IWRM was already implicit in the National Water Act (RSA, 1998), it was embedded into the water management area and its managing agency. The transnationalization had important consequences through the institutionalization of IWRM in the National Water Act and consequently the Inkomati-Usuthu water management area and IUCMA.

The transnational roles of ReconAfrica, interest groups, and scientists find expression in their interest in creating and spreading wealth and agitating against oil exploration and production in the Okavango catchment. The interest groups, scientists, and Namibian citizens bringing his case before the high court did not establish formal contacts and/or interactions with one another. The collection of political actors is a transnational advocacy arrangement. To call it a network would be to recognize the organizational elements of communication, interaction, and exchange (Keck & Sikkink, 1999; Miller, 2014). The collection of actors discussed in the case study show that they have formed this arrangement where norms and values play a significant role (Miller, 2014). They are active due to their vision of humane governance that offers the expectations of extending the domain of democracy (Falk, 1995) making their position on oil exploration more real and enhances their significance as political actors (Meissner, 2005b) in the catchment and wider regional setting.

The values and norms reified by the epistemic community in the Inkomati-Usuthu water management area are also palpable. The arrangement of these political actors comes closer to a network since researchers in the water sector are more likely to interact, exchange information and knowledge, and, by default, communicate through more formalized channels like workshops, seminars, and conferences. The publication of research reports and peerreviewed scientific articles also makes this contact, interaction, and exchange more formal than is the case with the assorted non-state actors in the Kavango oil exploration case.

Nevertheless, norms and values are central features in both cases. The notion of (hydro-)normative commensalism⁵ (Meissner, 2005b) can deepen our understanding of the role and involvement of non-state actors and entities and transnationalized norms and values in transboundary hydropolitics and management.

Individuals, either working solo or part of a collectivity, can start the change in the management and politics of international river basins. They cause tipping points or trigger events that reconfigure the composition of actors active in the domestic and international domains characterizing transboundary catchments. The individuals are not only government officials, members of donor agencies or inter-governmental agencies, project managers but also private individuals who are not part of the governmental system and who are not leaders of state and non-state organizations. These individuals do not contract with the state, and whenever they feel the need to act and bring about change will do so without state consent or any other collectivity. Loyalty to the state is not the norm; individuals no longer have strong (patriotic) attachments to the state or ruling government (Meissner, 2005). This is not so much the case with the actors that had been involved in the adoption and diffusion of IWRM in the IUCMA and its governed water management area. The individuals actively lobbying against ReconAfrica are a different matter. That said, there is a more altruistic attitude that takes shape, which informs individuals' actions toward water management and politics in both cases. To further this argument, international and transnational relations, reduced to human relations, are not only made up of material conditions and forces, but also of thoughts and ideas about the human condition and how to change it (Meissner, 2005b). We see a strong tendency to change the human and ecological condition in both cases.

In both case studies, individuals together with the state are key drivers of hydropolitics since the hydropolitical environment and domestic and international system allow them to function as the main drivers of change (Meissner, 2005a). Change may not always be immediate or tangible, but these systems are dynamic and predominantly democratic which allows for the voluntary association of epistemic actors, interest groups, and individuals to form loose coalitions, and freely express and exchange ideas as well as influence the governmental and corporate policies. The democratic norm is, therefore, a further driver of water politics (Meissner, 2005a).

Individuals also create norms to direct hydropolitics and water management. Here their identity and ideology play an important role (Meissner, 2005b). Scientists like Rogers and Luton, officials from the WRC and IUCMA as well as Bishop Davies, environmental activists, Professors Scholes and Engelbrecht and Mr. Sinonge had varying interests and identities that inform their position on matters pertaining to the cases under discussion. It is through an identity-informed ideology that these actors created a certain norm that they, in turn, used to inform their actions to the particular issues and relationships with other actors (South Africa's Department of Water Affairs and the IUCMA and ReconAfrica and the governments of Namibia and Botswana). Ideology follows identity, which influences an actor's norm creating ability from which it produces discourses. Shared intersubjective beliefs have a strong ideological element, present in water resource management and transnational politics (Meissner, 2005a).

The specific hydropolitical environment, whether institutional or biophysical, acts like a "laboratory" for the political actors under discussion. The non-state and state actors observe this environment, translate the observation to create new norms for the purposes of learning and influence (Meissner, 2005a). Integrated water resources management and adaptive water governance were not unique South African inventions; they were observed in the international water community as best practices and thereby found their way into South African water legislation, the broader societal context, and the management of water management areas and CMAs. The protection of the Okavango catchment and delta is not only a matter of safeguarding it as a tourist destination. Indigenous peoples and endangered fauna, like elephant and pangolin, also depend on the delta for survival. The norm of giving rights to the river, species, and indigenous peoples (Meissner & Warner, 2022) finds expression in the activism against ReconAfrica and the two sovereign states governing the shared catchment.

Conclusion

It appears that states are the dominant actors in SADC governing and managing its 21 transboundary river basins. By examining transboundary hydropolitics through a lens that is not colored with a state-dominant perspective, we notice that political actors have and do play a role in the hydropolitics of transboundary rivers. The two case studies highlighted the processes through ideas and norms are adopted and diffused throughout the institutional and wider societal landscape.

In the Inkomati-Usuthu water management area and Okavango catchment, various actors from the epistemic community to interest groups and individuals played a role in the formalisation and agitation of normative ideas and values. This does not mean that sovereign states or their institutions do not have a role to play. In the Inkomati-Usuthu water management area, the South African government and WRC were significant actors in the adoption of IWRM and adaptive water governance. Individuals as experts were responsible for sustaining these approaches in the management and institutional culture of the IUCMA.

In the Okavango River basin, we see a more confrontational spirit from the non-state entities when they argue for the secession of oil and gas exploration by ReconAfrica and for investors and states to end their relationship with the company. To what extent the non-state actors will be successful in their endeavour is to be seen. What is fairly certain, though, is that they are likely to continue with their actions as long as ReconAfrica continues its operations. This continued action by both the non-state actors and ReconAfrica will be a function of global norms defined as standards of behavior. Climate change and habitat and cultural destruction and the generation and spread of wealth stand in opposition to one another. Pertaining to the case at hand and to paraphrase Vladimir Lenin, in the end, one or the other will triumph – a funeral dirge will be sung over capitalism or environmentalism.

Notes

- 1 It is the National Water Act's preamble: "Recognising the need for the integrated management of all aspects of water resources and, where appropriate, the delegation of management functions to a regional or catchment level so as to enable everyone to participate" (RSA, 1998).
- 2 The area is situated in the Okavango catchment.
- 3 Interest groups are conceptualized as non-state entities supported by a specific constituency and converging on an exact issue which influence government policies and other non-state entities and inter-governmental institutions in the national and international political domains (Meissner, 2005a).
- 4 Davies erroneously argued that the exploration is taking place in the Okavango delta.
- 5 Adapted from biology, normative commensalism refers to the symbiotic relationship that exists between norms and values created by political actors and to use norms and values to sustain arguments for or against a policy, project, or program (Meissner, 2005b).

References

- Anderson, A.J. (2005). Engaging disadvantaged communities: Lessons from the Inkomati CMA establishment process. In *Proceedings of the International workshop* on African water laws: Plural legislative frameworks for rural water management in Africa. Johannesburg, South Africa, 26–28 January 2005.
- Ashton, P. and Turton, A. (2009). Water and security in Sub-Saharan Africa: Emerging concepts and their implications for effective water resource management in the Southern African Region. In: Brauch, H.G., Spring, U.O., Grin, J., Mesjasz, C., Kameri-Mbote, P., Behera, N.C., Chourou, B, and Krummenacher, H. (eds.), *Facing global environmental change: Environmental, human, energy, food, health and water security concepts.* Berlin: Springer-Verlag.
- Azrai, E. (2021). Bon Scholes' last warning on the Kavango nasin: "The wildcatters are coming". *Daily Maverick*, 19 May. Accessed at: https://www.dailymaverick.co.za/ article/2021-05-19-bob-scholes-last-warning-on-the-kavango-basin-the-wildcatters-arecoming/. Accessed on: 20 July 2022.
- Bega, S. (2021). Pursuing fossil fuels in Kavango basin a "stupid bet". Mail and Guardian, 26 April. Accessed at: https://mg.co.za/environment/2021-04-26pursuing-fossil-fuels-in-kavango-basin-a-stupid-bet/. Accessed on: 20 July 2022.
- Bega, S. (2022). *God is an environmentalist, says South Africa's "green bishop"*. Mail and Guardian, 17 April. Accessed at: https://mg.co.za/environment/2022-04-17-god-is-an-environmentalist-says-south-africas-green-bishop/. Accessed on: 20 July 2022.
- Conley, A.H. (1995). A synoptic view of water resources in Southern Africa. Paper delivered at the Conference of Southern Africa Foundation for Economic Research on Integrated Development of Regional Water Resources, Nyanga, Zimbabwe, November 1995.
- Conley, A.H. (1996). *The need to develop the water resources of Southern Africa*. Paper delivered at the Vic Falls Conference on Aquatic Systems, Zimbabwe, July 1996.
- Conley, A.H. and Van Niekerk, P.H. (1997). Sustainable management of international waters: The Orange River case. Pretoria: Department of Water Affairs and Forestry.
- Denby, K., Movik, S., Mehta, L., and Van Koppen, B. (2016). The 'trickle down' of IWRM: A case study of local-level realities in the Inkomati Water Management Area, South Africa. *Water Alternatives*, 9(3): 473–492.
- Department of Water Affairs (DWA). (2007). Principles to guide the development of a framework for water allocation: Develop a framework for water allocation to guide compulsory licensing in the Inkomati water management area. Pretoria: Department of Water Affairs.
- Department of Water Affairs (DWA). (2012a). Proposed National Water Resource Strategy 2: Summary. Pretoria: Department of Water Affairs.
- Department of Water Affairs (DWA). (2012b). Business case for the Inkomati-Usuthu Catchment Management Agency. Pretoria: Department of Water Affairs.
- Dlamini, N.S., Sithole, S.S., and Ndlovu, J. (2014). The CDAA framework for development of sustainable large-scale smallholder irrigation schemes in Swaziland. *Agriculture and Agricultural Science Procedia*, 2: 386–393.
- Duma Energy Corporation (DEC). (2012). Crude oil confirmed in Namibia Owambo basin soil sample. 24 October. Accessed at: https://www.sec.gov/Archives/edgar/ data/1425808/000118374012000516/f8k10242012ex99.htm. Accessed on 20 July 2022.

- Environmental Investigation Agency (EIA). (2021). *Elephants and wildlife threatened* by plans to drill for dirty energy in Africa's unique Okavango region. London: Environmental Investigation Agency. Accessed at: https://eia-international.org/news/ elephants-and-wildlife-threatened-by-plans-to-drill-for-dirty-energy-in-africas-unique-okavango-region/. Accessed on: 20 July 2022.
- Environmental Justice Atlas. (2022). Oil and gas exploration in the Kavango region threatens San people and endangered wildlife, Botswana-Namibia. Accessed at: https://ejatlas.org/conflict/kavango-oil-botswana-namibia. Accessed on: 20 July 2022.
- Falk, R. (1995). On humane governance: Toward a new global politics A report of the World Orders Models Project. Cambridge: Policy Press.
- Frack Free Namibia and Botswana Community (FFNBB-C). (2021). Recon Africa has to go to high court. Windhoek, Namibia. Accessed at: https://www.facebook.com/ FrackFreeNamibiaAndBotswana/posts/recon-africa-has-to-go-to-the-high-courtnamibia-kavango-og-exploration-by-canadi/235480954999712/. Accessed on: 20 July 2022.
- Giordano, M.A. and Wolf, A.T. (2003). Transboundary freshwater treaties. In, Nakayama, N. (ed.), *International waters in Southern Africa*. Tokyo: United Nations University Press.
- Heyns, P. (1992). Namibia's water resources: A new approach needed. *Namibia Review*, 1(9), 17–28.
- Heyns, P. (1995). Existing and planned water development projects on international rivers within the SADC region. Paper delivered at the Conference of SADC Ministers responsible for water resources management, 23–24 November 1995, Pretoria, South Africa.
- Heyns, P. (2003). Water-resources management in Southern Africa. In, Nakayama, N. (ed.), *International waters in Southern Africa*. Tokyo: United Nations University Press.
- Hoak, T.E., Klawitter, A.L. Dommer, C.F., and Scaturro, P.V. (2014). Integrated exploration of the Owambo basin, onshore Namibia: Hydrocarbon exploration and implications for a modern frontier basin. Search and Discover, July 7. Accessed at: https://www.searchanddiscovery.com/documents/2014/10609hoak/ndx_hoak.pdf. Accessed on: 20 July 2022.
- Hovey, G. (1982). Namibia's stolen wealth: North American investment and South African occupation. New York: The African Fund.
- Inkomati-Usuthu Catchment Management Agency (IUCMA). (2021). Catchment management strategy: 2021–2026. Mbombela, South Africa: Inkomati-Usuthu Catchment Management Agency. Accessed at: https://iucma.co.za/iucmadocuments/#1632576881011-53c99906-3dd3. Accessed on: 18 July 2022.
- Jacobs, I.M. (2006). The water war debate: Swimming upstream or downstream in the Okavango and the Nile? Master's Dissertation, Stellenbosch: University of Stellenbosch.
- Jacobs, I.M. and Nienaber, S. (2011). Waters without border: Transboundary water governance and the role of the "transdisciplinary individual" in Southern Africa. *Water SA*, 37(5): 665–678.
- Keck, M.E. and Sikkink, K. (1999). Transnational advocacy networks in international and regional politics. *International Social Science Journal*, 51(159): 89–101.
- Komati Basin Water Authority (KOBWA). *The Komati Basin Water Authority: The Komati River basin*. Pigg's Peak, eSwatini: Komati Basin Water Authority. Accessed at: http://www.kobwa.co.za/index.php#. Accessed on: 19 July 2022.

- Koning, T. (2022). It's Namibia's turn. Africa Oil+Gas Report, April 10. Accessed at: https://africaoilgasreport.com/2022/04/oil-patch-sub-sahara/its-namibias-turn/. Accessed on: 20 July 2022.
- Maltby, E. (1986). *Waterlogged wealth: Why waste the world's wet places?* London: International Institute of Environment and Development.
- Matondo, J.I. and Msibi, K.M. (2001). Water resources development in the Usutu catchment Swaziland under climate change. *Uniswa Journal of Agriculture, Science and Technology*, 4: 135–146.
- Mbaiwa, J.E. (2005). Enclave tourism and its socio-economic impacts in the Okavango Delta, Botswana. *Tourism Management*, 26(2): 157–172.
- Meissner, R. (1998). Water as 'n bron van politieke konflik en samewerking: 'n Vergelykende studie van die Midde-Ooste en Suider-Afrika. Unpublished Masters Dissertation. Johannesburg: Randse Afrikaanse Universiteit.
- Meissner, R. (2005a). Interest groups and the proposed Epupa Dam: Towards a theory of water politics. *Politeia*, 24(3): 354–396.
- Meissner, R. (2005b). The transnational role and involvement of interest groups in water politics: A comparative analysis of selected South African case studies. Unpublished D. Phil Dissertation. Department of Political Science. University of Pretoria.
- Meissner, R. (2011). *Transboundary water resource management, benefit sharing and cooperative management strategies*. Presentation Delivered at the Summer School on Integrated Water Resources Management, September 19–24, 2011, Addis Ababa, Ethiopia.
- Meissner, R. (2016). Water security in Southern Africa: Discourses securitising water and the implications for water governance and politics. In, Pahl-Wostl, C., Bhaduri, A., and Gupta, J. (eds.), *Handbook on Water Security*. Cheltenham, UK: Edward Elgar Publishing.
- Meissner, R. and Turton, A.R. (2003). The hydrosocial contract theory and the Lesotho Highlands Water Project. *Water Policy*, 5: 115–126.
- Meissner, R. and Funke, N. (2014). The politics of establishing catchment management agencies in South Africa: the case of the Breede-Overberg Catchment Management Agency. In: Huitema, D. and Meijerink, S. (Eds.), *The politics of river basin organisations: Coalitions, institutional design choices and consequences.* Cheltenham, UK: Edward Elgar.
- Meissner, R. and Jacobs, I. (2016). Theorising complex water governance in Africa: The case of the proposed Epupa Dam on the Kunene River. *International Environmental Agreements: Politics, Law and Economics*, 16(1): 21–48.
- Meissner, R. and Warner, J. (2021). Indigenous paradiplomacy and the Orokawe hydroelectric dam on the Kunene River. *Regions and Cohesion*, 11(1): 21–48.
- Meissner, R. and Warner, J. (2022). Giving rivers rights aims to protect the "voiceless" – but there's a catch. *The Conversation*, 20 July. Accessed at: https:// theconversation.com/giving-rivers-rights-aims-to-protect-the-voiceless-but-theres-acatch-185895. Accessed on: 20 July 2022.
- Mhlanga, N.K., Matondo, J.I., Nobert, J. and Salam, A. (2012). Evaluation of the impact of climate change on the inflow of the Lubovane reservoir in Usutu Catchment. *Journal of Sustainable Development in Africa*, 14(4): 96–116.
- Mhlanga-Ndlovu, B.F.N. and Nhamo, G. (2017). An assessment of Swaziland sugarcane farmer associations' vulnerability to climate change. *Journal of Integrative Environmental Sciences*, 14(1): 38–56.

- Miller, K. (2014). *The role of transnational advocacy networks in combating wildlife crime: The case of the illegal ivory trade*. Unpublished Masters dissertation. Boston: McCormack Graduate School of Policy and Global Studies, University of Massachusetts.
- Movik, S., Mehta, L., Van Koppen, B., and Denby, K. (2016.) Emergence, interpretations and translations of IWRM in South Africa. *Water Alternatives*, 9(3): 456–472.
- Munnik, V. (2020). The reluctant role-out of catchment management agencies: Assessing the key risks and consequences of delays in finalising institutional arrangements for decentralised water resource management. Pretoria: Water Research Commission. WRC Report No. 2943/1/20.
- Munnik, V. and Barnes, G. (2016). Engaging a complex problem through a community of practice approach: Improvement of dysfunctional wastewater treatment works through a multi-stakeholder green drop support campaign. Pretoria: Water Research Commission, Report No. KV 345/15.
- Nkambule, T.S. (2016). Evaluation of the status of water quality of the Great Usuthu River, Swaziland. Unpublished M.Sc dissertation in Integrated Water Resources Management. Harare, Zimbabwe: University of Zimbabwe.
- Ohlsson, L. (1995). *Water and security in Southern Africa*. Publications on Water Resources, No. 1. Stockholm: Swedish International Development Agency (SIDA), Department of Natural Resources and the Environment.
- Republic of South Africa (RSA). (1975). *Report on the Komati-Usutu Rivers link* system government water scheme. Pretoria: Department of Water Affairs. Doc. No. W.P. G-'75.
- Republic of South Africa (RSA). (1976). Supplementary report on the Komati-Usutu Rivers link system government water scheme (Water distribution to Eastern Transvaal Highveld). Pretoria: Department of Water Affairs. Doc. No. W.P. R-'76.
- Republic of South Africa. (1998). *National Water Act (No. 36)*. Pretoria: Government Printer.
- Rogers K. and Biggs, H.C. (1999). Integrating indicators, endpoints and value systems in strategic management of the Kruger National Park. *Freshwater Biology*, 41: 439–451
- Rogers, K.H. and Luton, R. (2011). Strategic adaptive management as a framework for implementing integrated water resource management in South Africa. Pretoria: Water Research Commission. Report No. KV 245/10.
- Rosenau, J.N. (1980). The study of global interdependence: Essays on the transnationalisation of world affairs. New York: Nicols.
- Rosenau, J.N. (1997). Along the domestic-foreign frontier: Exploring governance in a turbulent world. Cambridge: Cambridge University Press.
- Savenije, H.G. and Van der Zaag, P. (Eds.). (1998). *The management of shared river basins: Experiences from SADC and EU*. The Hague: Ministry of Foreign Affairs.
- Swatuk, L. and Vale, P. (2000). Swimming upstream: The water discourses of security. Security, Ecology and Community. Working Paper Series. Centre for Southern African Studies, School of Government. Cape Town: University of the Western Cape.
- Southern African Development Community (SADC). (2022). *Member states*. Gaborone: Southern African Development Community.

- Stefen, F. (2021). ReconAfrica muss vors obergericht: Farmer will Land zurück Chancen auf Ölfund doch sehr gering. *Allgemeine Zeitung*, 10 May. Accessed at: https://www.az. com.na/nachrichten/reconafrica-muss-vors-obergericht2021-05-10. Accessed on: 20 July 2022.
- Turpie, J. (2010). The livelihood of Botswana's Okavango delta. Cape Town: University of Cape Town. Accessed at: https://www.efdinitiative.org/publications/livelihood-valuebotswanas-okavango-delta?root=/publications/south-africa%3Fauthor%3DAll%26page %3D20. Accessed on: 19 July 2022.
- Tempelhoff, E. (2020). 'Dood' van Okavango-delta. Beeld, 8 December 2020. Accessed at: https://www.netwerk24.com/netwerk24/nuus/omgewing/dood-van-okavangodelta-20201207. Accessed on: 20 July 2022.
- Tempelhoff, E. (2021). "Ryk ekostelsel só bedreig". *Beeld*, 8 April. Accessed at: https://www.netwerk24.com/netwerk24/nuus/omgewing/ryk-ekostelsel-so-bedreig-20210408. Accessed on: 20 July 2022.
- Turton, A.R. (1999). Water scarcity and social adaptive capacity: Towards an understanding of the social dynamics of water demand management in developing countries. MEWREW Occasional Paper No. 9. London: School of Oriental and African Studies, University of London.
- Turton, A.R. (2003). The political aspects of institutional development in the water sector: South Africa and its international river basins. Unpublished D.Phil. Thesis. Pretoria: University of Pretoria.
- Turton, A.R., Meissner, R. Mampane, P., and Seremo, O. (2004). A hydropolitical history of South Africa's international river basins. Pretoria: Water Research Commission. Report No. 1220/1/04.
- Turton, A.R. and Ashton, P. (2008). Basin closure and issues of scale: The Southern African hydropolitical complex. *International Journal of Water Resources Development*, 24(2): 305–318.
- Union of South Africa (U of SA). (1956). Water Act, No. 54, in U. of SA, Statutes of the Union of South Africa 1956. Part II Nos. 47-73. Cape Town: Cape Times Ltd.
- Van der Heiden, L.J. (1992). The Okavango Delta: Current state of planning and conservation. In: Matiza, T. and Chabwela, H.N. (Eds.), *Wetlands conservation conference for Southern Africa*. Gland, Switzerland: IUCN and SADC.
- Van der Molen, J. and Mthimkhulu, S. (2016). Building river basin institutions in Swaziland. Water Governance, 3: 28–33. Accessed at: https://edepot.wur.nl/430761. Accessed on: 19 July 2022.
- Van Wyk, J-A. (1998). Towards water security in Southern Africa. *African Security Review*, 7(2): 59–68.
- Wengraf, L. (2021). Will Africa be the last oil frontier? *New Politics*, 10 July. Accessed at https://newpol.org/issue_post/will-africa-be-the-last-oil-frontier/?print=pdf. Accessed on: 20 July 2022.
- West, D.T., Van As, J.G., and Van As, L.L. (2015). Surface water quality in the Okavango Delta panhandle, Botswana. *African Journal of Aquatic Science*, 40(4): 359–372.
- Wilkinson, M.J., Magagula, T.K., & Hassan, R.M. (2016). Piloting a method to evaluate the implementation of integrated water resource management in the Inkomati River Basin. *Water SA*, 41, 633.
- Woodhouse, P. (2012). Reforming land and water rights in South Africa. *Development* and Change, 43(3): 847–868.

98 Richard Meissner

- World Bank. (2022). *Namibia: Overview*. Washington, D.C.: World Bank. Accessed at: https://www.worldbank.org/en/country/namibia/overview. Accessed on: 19 July 2022.
- The Zimbabwe Independent. (2021). Oil firms strikes it big in Namibia, but fears about of climate impact. 7 May. Accessed at: https://www.theindependent.co.zw/2021/05/07/oil-firm-strikes-it-big-in-namibia-but-fears-abound-of-climate-impact/. Accessed on: 20 July 2022.