

## **Water Resources Management and Governance in Southern Africa: toward regional integration for peace and prosperity**

Larry A. Swatuk, University of Waterloo, Canada ([lswatuk@uwaterloo.ca](mailto:lswatuk@uwaterloo.ca)) and Joanna Fatch, University of the Western Cape, South Africa ([Joanna\\_Fatch@yahoo.com](mailto:Joanna_Fatch@yahoo.com))

### **Introduction**

The Southern African Development Community (SADC) is an organization of long-standing. Created in 1979-80 as a ‘development coordinating conference’ (SADCC) of regional states actively opposed to apartheid and minority-rule, SADC became a ‘development community’ in 1994, welcoming a majority-ruled South Africa into the fold (du Pisani, 2001). Devoted to regional economic integration, for twenty years SADC has been taking deliberate policy, program, legal and institutional steps to create a functional framework for sustainable and equitable wealth creation. Importantly, the initial regional protocol – i.e. the established code of procedure or behaviour for any group or organization – concerned shared watercourses. The symbolic value of this protocol was clear: for the region to recover from a century of colonial misrule and maldevelopment symbolized by cycles of violence, destruction and disorganization it would have to overcome the artificial divisions contrived and codified at the Berlin Conference in 1884.

The practical value of the protocol was that these political boundaries disrupted the natural rhythm and flow of people, animals and resources laid down by the geo-historical patterns of the region’s hydrological cycle; for the region to prosper, it would have to return to the collective utilization of its shared water resources (see Table 1 below).

As this short essay demonstrates, a great deal has been achieved over the ensuing twenty years, so much so that the region is often put forward as a case of ‘best practice’ in transboundary water governance and management (Ashton, 2002; Green, Cosens and Armestani, 2013; Jacobs, 2012). Notwithstanding the numerous barriers to sustainable and equitable development in a region of abiding underdevelopment (Swatuk, 2008), one must start somewhere and, it seems to us, SADC has made a significant start.

In this paper we discuss regional achievements in the following way: First, we describe the Protocol, setting it within the broader context of international water law. Second, we highlight its role as foundation stone for a wide series of legal-institutional and functional achievements in transboundary water governance and management, with a particular focus on river basin organizations. Lastly, we reflect on the inspirational value of this document to a region trapped in abiding forms of poverty and underdevelopment. The paper draws on both primary and secondary sources, including a series of semi-structured interviews conducted between 2011-13 and the results of a 2011 survey administered among regional water professionals.

### **Windows of Opportunity**

Resilience scholars often speak of ‘windows of opportunity’, i.e. of a society’s ability to seize opportunities in a timeous fashion in order to facilitate the transformation from one relatively

stable but sub-optimal condition to another, more robust and collectively beneficial condition (Walker and Salt, 2006). In Southern Africa, one can point to the near-simultaneous advent of several interrelated factors that served to push the region's decision-makers into a new direction (see Swatuk 2002 for details):

- The global focus on freshwater resources deriving from both the Rio Summit and the Dublin conference in 1992
- The formal end of apartheid in South Africa and the Nelson Mandela-led 'new' South Africa becoming 'part of' the SADC region, rather than 'apart from' it
- Widespread multi-year drought across the region from the late-80s to mid-90s
- South African desire to fit into the world and become a good global citizen after apartheid
- The rise of the 'basin approach' to water management fitting nicely with a region already interdependent on water resources due to colonial/imperial border delineation
- Regional need for energy combined with South African need for water
- Donor state interest, particularly the Nordics (especially Sweden) on water and the European Union on regional integration
- National goals for sustainable economic development and poverty alleviation

### **Legal Foundation: The Protocol**

SADC leaders reacted positively to these pressures and opportunities through the creation of the regional water protocol (signed in 1995 and acceded to in 1998). With the 1997 creation of the United Nations Convention on the Law of Non-navigational Uses of International Watercourses (UNC), however, the 1995 protocol was revised in 2000 and ultimately adopted in 2003. Based on Article 22 of the SADC Treaty, and viewed as 'a vehicle for regional integration' the spirit and intent of the Protocol was to collectively manage the region's shared water resources for sustainable economic and social development of all SADC citizens. Specifically, the objective of the Protocol as spelled out in article 2 is "to foster closer cooperation for judicious, sustainable and coordinated management, protection and utilisation of shared watercourses and advance the SADC agenda for regional integration" (SADC, 2000). The background to the Protocol has been studied extensively (e.g. Ramoeli, 2002; Swatuk, 2002). The Protocol is meant to inform the actions of all member states with regard to water resources policy, law and management at **national** level. At the same time, it underpins a wide variety of inter-state actions particularly in the context of developing **transboundary** river basins and their management including the setting up of relevant basin institutions (Swatuk and Wirkus, 2009).

Given that 70% of the region's land falls within an international river basin, and of the centrality of water in economic development, the revised SADC Protocol on Shared Watercourses is a seminal document in international water cooperation. The Protocol grew out of riparian states' inability to move forward on a Zambezi River agreement in 1993 at which point it was decided to pursue a regional agreement instead (Respondent 7). The revised Protocol takes into account the 1966 Helsinki Rules and the UNC. The 1966 Helsinki Rules by the International Law Association (ILA) most notably established the principle of a state's right to a 'reasonable and equitable share in the beneficial use of the waters of an international drainage basin'. The UNC is a framework convention therefore enabling flexibility for basin states to 'enter into agreements ... which apply and adjust the provisions of the present Convention to the characteristics and uses of a particular watercourse or part thereof' as contained in article 3(3). In article 2 it defines a watercourse as 'a system of surface and groundwater constituting by virtue of their physical

relationship a unitary whole and normally flowing into a common terminus’.

The Convention, in articles 5 – 10, lays out general principles for the content of basin-specific agreements, some of which are as follows:

Article 5: Calls for states to adhere to the principle of ‘equitable and reasonable use’ of an international watercourses within their territories.

Article 7: Obligates states to ‘prevent the causing of significant harm’ to other watercourse states in their use of a shared watercourse.

Article 8: Obligates states to cooperate on basis of ‘sovereign equality, territorial integrity, mutual benefits, good faith and to consider establishing joint management mechanisms or commissions to facilitate cooperation.

Article 9: Calls for the regular exchange of information and data.

Article 11: Requires states to exchange information and consult with other states on any planned activity.

Article 12: Requires prior notification of any planned measure ‘which may have a significant adverse effect’ on other watercourse states.

Article 20-23: Deal with environmental concerns such as ecosystem preservation, pollution control, control of alien species, and protection and preservation of the marine environment.

Article 33: Lays out dispute resolution procedures, including an obligation to ‘peacefully’ resolve disputes; endorse the use of arbitration and mediation and develop procedures for the creation of fact-finding missions.

Most importantly, in our view, in defining a watercourse in terms of ‘hydrological reality’ – as opposed to simply surface waters – and by including the principle of ‘prevention of significant harm’, this UN Convention moved a step further toward managing water within its natural, holistic setting, although it continued to focus on the right of states to determine activities, and on the watercourse itself rather than the wider basin.

In light of these provisions, the SADC Revised Water Protocol specifically seeks to:

- a) promote and facilitate the establishment of shared watercourse agreements and Shared Watercourse Institutions for the management of shared watercourses;
- b) advance the sustainable, equitable and reasonable utilisation of the shared watercourses;
- c) promote a co-ordinated and integrated environmentally sound development and management of shared watercourses;
- d) promote the harmonisation and monitoring of legislation and policies for planning, development, conservation, protection of shared watercourses, and allocation of the resources thereof; and
- e) promote research and technology development, information exchange, capacity building, and the application of appropriate technologies in shared watercourses management.

Included in the Protocol are key aspects such as:

SADC Tribunal: ‘A Tribunal shall be constituted to ensure adherence to and to ensure the proper interpretation of the provisions of this Treaty and subsidiary instruments and to adjudicate upon such disputes as may be referred to it. Decisions of this Tribunal shall be

final and binding.’

Article 2b: Advance the sustainable, equitable and reasonable utilisation of the shared watercourses; Promote coordinated and integrated environmentally sound development and management of shared waters.

Article 4 outlines a number of important Specific Provisions:

4.1a and b focus on the need to provide information and notification of any planned measures. 4.1g.(ii) The consultations and negotiations shall be conducted on the basis that each State must

in good faith pay reasonable regard to the rights and legitimate interests of other States.

4.2. concerns environmental protection and preservation and highlights ecosystems, pollution, alien species, and aquatic environments, to name several.

4.3. discusses management in terms of such things as flow, construction of regulation works And describes the need for prevention and mitigation of harmful conditions due to natural or human causes. It also describes the need for coordinated waste management.

Admittedly, the agreement is not perfect. For example, Article 6.1 makes special note that prior activities are not subject to the agreement, so removing any controversial hydraulic works from the purview of the SADC Water Division. Due to governance issues in Zimbabwe, the Tribunal is presently moribund. Nevertheless, the Protocol provides a firm base for regional actors to treat water as a regional public good whose management should be to the benefit of all.

Inevitably, disputes will arise. Article 7 deals with Settlement of Disputes and states that SADC states shall strive to resolve disputes amicably (7.1). Any disputes not settled amicably shall be referred to Tribunal (7.2); and where SADC decides to take action against a member State, that state can ask for ‘an advisory opinion’ (7.3).

### **Relevance of the Protocol for Good Water Governance and Management**

Criticisms of the protocol tend to focus on three issues:

- the primacy of sovereignty as an impediment to true regional cooperation;
- the need for more deeply realized ‘regional community’ before regional water sharing could be made more meaningful;
- the weakness of the Protocol due to its highly generalised form.

Taken together, these criticisms in our view constitute the core of issues most scholars and observers of regional integration processes in Southern Africa put forward as barriers to meaningful cooperation (cf. Swatuk and Vale, 2000 and 1999 for a discussion of these issues). However, support for the Protocol among regional water decision-makers, managers and experts is widespread. Here we divide discussion of relevance and value into two categories: legal-institutional and functional, before turning to a discussion of the supporting structures that have grown up around and because of the Protocol.

#### *Legal-Institutional*

According to one observer (Respondent 15), it is better to have a written document – however

unsatisfactory it may be – than to not have a document at all. For many respondents, the protocol's main importance is its role in forming the legal basis for the drafting of transboundary basin agreements, and for guiding state-behaviour on particular shared river basins.

The protocol establishes the guidelines, founded in international water law principles, for good conduct and cooperation to manage transboundary water sources and to study the potential of the rivers (hydropower, water supply, irrigation, fishing, navigation, etc) long before conflicts arise. These studies are done jointly, it develops mutual trust, understanding and the facts are agreed upon as we go along. In this way the expectations and fears of the up and downstream basin states are discussed while the situation is still amicable and not by the time conflict situations arise (Respondent 4).

The protocol is argued to form the basis for the harmonization of water and related resource policy and law both at the regional scale and on specific rivers.

It is the most relevant in ensuring regional harmonisation as far as the management of shared basins is concerned. Article 6(3) of the Protocol stipulates that watercourse states may enter into watercourse specific agreements, but such agreements must apply the provisions of the Protocol to the watercourse in question (Respondent 16).

In the absence of specific inter-state agreements, or functioning river basin organisations, the Protocol is said to have provided the means for such positive outcomes as the Inco-Maputo Interim Agreement and the recent joint completion of a benefit-sharing study on the Zambezi.

On the Incomati, South Africa is under immense pressure to deliver the agreed-upon minimum cross-border flow at Komatiport, as enshrined in the Interim Inco-Maputo Agreement concluded in 2002; it cannot be proven that that agreement would not have existed without the Revised Protocol, but I like to believe that it was an important contextual factor (Respondent 6).

According to Respondent 5, a senior water manager, the Protocol is mostly used by the region's River Basin Organisations (e.g., OKACOM, ORASECOM, LIMCOM, ZAMCOM) and it is the presence of the protocol that makes RBO agreements possible.

### *Functionalism*

Classic regional integration theory concentrated heavily on functionalism, believing that cooperation in one area would spill-over into other areas so building 'peace in parts' (Young, 1969; Keohane and Nye, 1977). While the creation of SADCC out of the 1980 Lusaka Declaration was more of a political exercise than it was an economic endeavour (du Pisani, 2001: 199-201), at least three of the organisation's four founding principles continue to resound across present-day SADC:

- forging links to create a genuine and equitable regional organisation
- mobilizing resources to promote the implementation of national, interstate and regional policies
- acting in a concerted fashion so as to secure international cooperation within the framework of SADCC's strategy of economic liberation (du Pisani, 2001: 201)

Indeed, with regard to the continued place of politics in regional relations, Respondent 7 (a senior SADC bureaucrat) stated,

Currently, although negotiations in the Zambezi Basin are between the riparian states, the SADC Ministers who are not party to the Zambezi basin also exact some pressure on the riparians since it is SADC Ministers' standing Agenda. At that level, they don't just talk about cooperation in water issues but about issues including their cooperation in liberation struggles. That is the power of the regional approach.

At a functional level, the Protocol is said to provide the basis for joint studies, cross-sectoral cooperation, data-sharing and collecting, and to set the parameters for development activities on shared river basins. The Protocol 'is the common thread' across all of the region's river basin organisations and, once a year, SADC facilitates an RBO coordinating meeting so that actors across the basins can compare practices, issues and processes.

### **Regional Policies, Plans and Organizations**

The shift in regional thinking about water is also reflected in water's changing place in SADC(C) structures: from its being part of the Environment and Land Management Sector (ELMS), to its own Water Sector, to the present Water Division within the overarching Directorate of Infrastructure and Services. Thus water for the environment now includes water management for, among other things, economic development. Moreover, water management is embedded within wider SADC processes of regional economic development, as highlighted in the 2005 documents the SADC Regional Indicative Strategic Development Programme (SADC, n.d.) and the SADC Regional Strategy for Water Resources Development and Management (SADC, 2005).

Subsidiary to the Protocol are the SADC Regional Water Policy, the Regional Water Strategy and Regional Strategic Action Plan on Integrated Water Resources Management (RSAP I, II and III). The Policy highlights the various opportunities water management presents to achieving the SADC goal and objectives and the attainment of Millennium Development Goals (MDGs) (SADC, 2005). The Strategy provides strategies for implementation of the Protocol (SADC, 2006). The RSAP, currently in its third phase, 2011-2015, guides implementation.

According to Conca (2006), 'One of the entry points for institution-building in defense of the world's watersheds is the fact that nearly all of the world's largest rivers cross national borders.' It is estimated that there are at least 263 international river basins, with some estimates going as high as more than 300. There are fifteen shared river basins in SADC (see Table 1).

**Table 1: International River Basins in SADC**

<b>Basin name and catchment area</b>	<b>Basin states</b>	<b>Special features</b>
Buzi 31,000km <sup>2</sup>	Mozambique, Zimbabwe	Mean annual run-off 2,500 MCM/year Joint Water Commission between Mozambique and Zimbabwe to address issues related to transboundary

		watercourses including the Pungwe, Buzi, and Save river basins – 2002
Kunene/Cunene 106,500km <sup>2</sup>	Angola, Namibia	Mean annual run-off 5,500 MCM/year Third Water Use Agreement - 1969 Cunene Permanent Joint Technical Commission (PJTC) – 1990
Cuvelai 100,000 km <sup>2</sup>	Angola, Namibia	Mean annual run-off 130 MCM/year (at the ephemeral, endoreic Etosha pan) No agreement but receives waters from the Kunene
Incomati/Komati 50,000 km <sup>2</sup>	Mozambique, South Africa, Swaziland	Mean annual run-off 3,500 MCM/year Komati Basin Water Authority (SA and Swaziland – Driekoppies and Maguga dams)- 1993 Tripartite Interim Agreement on the Incomati and Maputo Watercourses (Inco-Maputo Tripartite Permanent Technical Committee) - 2002
Limpopo 415,000 km <sup>2</sup>	Botswana, Mozambique, South Africa, Zimbabwe	Mean annual run-off 5,500 MCM/year LBPTC – 1986 LIMCOM Agreement- 2003
Maputo/Pongola 32,000 km <sup>2</sup>	Mozambique, South Africa, Swaziland	Mean annual run-off 2,500 MCM/year Inco-Maputo Tripartite Permanent Technical Committee - 2002
Nata Karoo sub-basin	Botswana, Zimbabwe	Mostly ephemeral and considered to be of little international importance though climate change may alter this
Okavango 530,000km <sup>2</sup>	Angola, Botswana, Namibia	Mean annual run-off 10,000 MCM/year (at the “panhandle” of the Okavango Delta) Permanent OKACOM Agreement 1994
Orange-Senqu 850,000km <sup>2</sup>	Botswana, Lesotho, Namibia, South Africa	Mean annual run-off 10,000 MCM/year ORASECOM Agreement 2000 Trans Caledon Tunnel Authority (Lesotho, South Africa- Lesotho Highlands Water Project) - 1986
Pungwe 32,500km <sup>2</sup>	Mozambique, Zimbabwe	Mean annual run-off 3,000 MCM/year Joint Water Commission between Mozambique and Zimbabwe to address issues related to transboundary watercourses including the Pungwe, Buzi, and Save river basins – 2002
Rovuma 155,500 km <sup>2</sup>	Malawi, Mozambique, Tanzania	Mean annual run-off 15,000 MCM/year Ruvuma Joint Watercourse Commission 2006
Save 92,500 km <sup>2</sup>	Mozambique, Zimbabwe	Mean annual run-off 7,000 MCM/year Joint Water Commission between Mozambique and Zimbabwe to address issues related to transboundary watercourses including the Pungwe, Buzi, and Save river basins – 2002
Umbeluzi 5,500 km <sup>2</sup>	Mozambique, Swaziland	Mean annual run-off 600 MCM/year Joint Permanent Technical Water Commission -
Zaire/Congo 3,800,000 km <sup>2</sup>	Angola, Democratic Republic of Congo,	Mean annual run-off 1,260,000 MCM/year International Commission of the Congo-Oubangui-

	Republic of Congo, Central African Republic, Cameroon, Tanzania, Zambia	Sangha – 1999 (came into force 2003) (Cameroon, CAR, DRC, Congo
Zambezi 1,400,000 km <sup>2</sup>	Angola, Botswana, Malawi, Namibia, Mozambique, Tanzania, Zambia, Zimbabwe	Mean annual run-off 94,000 MCM/year Zambezi River Authority (Zambia, Zimbabwe Kariba Dam) - 1987 ZAMCOM Agreement - 2004

MCM = million cubic metres

Source: adapted (and corrected) from Swatuk, 2002; original based on Ohlsson, 1995. Heyns 2003, LIMCOM, ORASECOM, SADC

As highlighted in Table 1, SADC states are party to numerous river basin agreements and organizations (RBOs). Some agreements stretch back as far as the 1891 treaty between the colonial governments of Great Britain and Portugal on the use of Zambezi River waters. Others are the results of intra-colonial policy (e.g. between Northern and Southern Rhodesia), or between colonial states and South Africa's apartheid government (e.g. between Portugal and the Union of South Africa on the development of the Cunene river basin in 1969. The RSAP III states that joint management institutions have been arrived at in all shared basins in the region (SADC, 2011). Far from being isolated entities, these RBOs have become 'incubators' of global water governance, involving a range of actors from stream-level smallholder farmers to European and North American resource management 'experts' and representatives of riparian states (Nakayama, 2003).

The agreements shown in Table 1 are mainly those that form basin wide arrangements – ORASECOM and ZAMCOM for instance. However, numerous other bilateral and multilateral agreements exist, mainly between South Africa and its co-riparians in various basins the country shares with other states. While many of the historical agreements are not 'satisfactory' by today's needs and standards, they nevertheless form the basis for discussion about how to move forward for mutual benefit sharing (UN-Water, 2008). Joint management authorities, for example the Trans-Caledon Tunnel Authority (TCTA), between South Africa and Lesotho, the Joint Permanent Technical Committee (JPTC), between South Africa, Mozambique and Swaziland, and the Zambezi River Authority (ZRA), between Zambia and Zimbabwe, concern specific projects involving development and management of hydraulic infrastructure. These joint management authorities are not basin-wide. Initiatives such as the Lesotho Highlands Water Project (LHWP) are put forward as an example of regional cooperation on water resources for multi-purpose and mutually-beneficial outcomes (Qaddumi, 2008). This is despite the undeniable environmental and social costs of the exercise (Matete, 2006). Most recently, Botswana's ability to draw 495 Mcm/yr from the Chobe/Zambezi system has been lauded by Kitso Mokaila, Minister of Minerals, Energy and Water Resources, as the result of its participation in ZAMCOM (Mmegi online, <http://www.mmegi.bw/index.php?sid=1&aid=203&dir=2013/March/Friday29>).

It remains to be seen how these sub-basin river authorities and basin wide institutions relate and work together and how, as provided for in Article 4 of the UN Watercourse Convention, other countries not part of these authorities are able to participate in them.

**Conclusion: Toward a 'Greater Good'?**

The SADC region remains seriously underdeveloped. The region is said to suffer ‘economic water scarcity’ (Schreiner and van Koppen, 2002) – not absolute water scarcity. What this means in simple terms is that the region’s abundant supplies of freshwater have not been harnessed for widespread socio-economic good. There is a long line of ‘priority water projects’ laid out in both the SADC Regional Strategic Action Plan (RSAP) and the Regional Indicative Strategic Development Plan (RISDP). Placing ‘water’ within the infrastructure and services directorate of SADC signalled to the rest of the world – in particular the donor community – that the region’s states regard water as, among other things, a key driver of socio-economic development. While such a position may irritate influential global and local environmental actors (see Swatuk, 2008 for details), it nevertheless highlights the widely-shared view of the role water must play as a greater regional good.

The SADC agenda of regional integration is developed through the activities in the water sector by the different water commissions established between the basin states in terms of the Protocol. The international donor community supports the work of the water commissions through the SADC Water Sector on the basis of the potential for conflict resolution and generates a lot of funding for activities that otherwise would never have been funded by the individual (poorer) states. In this process, capacity is built and states who are at different levels of capacity and competence are supported to be more equal (Respondent 4).

Numerous respondents highlighted the ‘inspirational’ role that the Protocol – as symbol and substance of regional water cooperation – plays in the minds of many of the region’s decision-makers and water managers. This is not to underplay the severe limitations the region faces in terms of human, financial, technical and other sorts of capacities. It is also not to undermine the ways in which underdevelopment forces states to compete rather than cooperate (with the recently inflamed Lake Malawi border issue being a prime example). In our view, however, it is always easiest to focus on the shortcomings and the difficulties and to lose sight of the many positive aspects of regional cooperation on transboundary waters. When it comes to SADC regional water governance and management, the glass is half-full.

## **Bibliography**

Conca, K., 2006, *Governing Water: Contentious Transnational Politics and Global Institution Building*. Cambridge, Mass: MIT Press.

Conca, K., F. Wu, J. Neukirchen, 2003. *Is there a Global Rivers Regime? Trends in the Principled Content of International River Agreements*. A Harrison Program Research Report. Maryland: University of Maryland (September).

Du Pisani, A., 2001. *New Sites of Governance: Regimes and the future of Southern Africa*. In: P. Vale, L.A. Swatuk and B. Oden, eds, *Theory, Change and Southern Africa’s Future*. London: Palgrave, pp. 195-218.

Finger, M., L. Tamiotti, and J. Allouche, eds, 2006, *The Multi-Governance of Water: four case studies*, New York: SUNY Press.

- Giordano, M., and A.T. Wolf, 2003. 'Transboundary Freshwater Treaties'. In: M. Nakayama, ed., *International Waters in Southern Africa*. Tokyo, Paris, New York: UNU.
- Green, O.O., B.A. Cosens, A.S. Garmestani, 2013. Resilience in Transboundary Water Governance: the Okavango River Basin. *Ecology and Society* 18(2): 23.
- Jacobs, Inga M., 2012. *The politics of water in Africa: norms, environmental regions and transboundary cooperation in the Orange-Senqu and Nile Rivers*. London: Continuum.
- Keohane, R., J. Nye, 1977. *Power and Interdependence: world politics in transition*. Boston: Little Brown.
- Malzbender, D., and A. Earle, n.d. *The Impact and Implications of the Adoption of the 1997 UN Watercourse Convention for Countries in Southern Africa*. The Netherlands: WWF-Global Freshwater Program. Available at: [http://www.internationalwaterlaw.org/bibliography/WWF/RA\\_SADC\\_states.pdf](http://www.internationalwaterlaw.org/bibliography/WWF/RA_SADC_states.pdf)
- Matete, M.E., 2006. *The ecological economics of inter-basin water transfers: The Case of the Lesotho Highlands Water Project*. PhD Thesis. University of Pretoria: South Africa.
- Molle, F., et al., 2007. 'River Basin Management'. In: D. Molden, ed., *Water for Food: comprehensive assessment of water in agriculture*. London: Earthscan.
- Nakayama, M., ed., 2003. *International Waters in Southern Africa*. Tokyo: UNU.
- Ohlsson, L., 1995. *Water and Security in Southern Africa*. Stockholm: Department of Natural Resources and the Environment. Publications on Water Resources No. 1.
- Qaddumi, H., 2008. *Practical approaches to transboundary water benefit sharing*. ODI Working paper 292. London: ODI.
- Ramoeli, P., 2002. 'The SADC Protocol on shared watercourse: history and current status' in Turton, A. and Henwood, R., (eds), *Hydropolitics in the developing world: a southern African perspective*, Pretoria, Centre for International Political Studies.
- SADC (Southern African Development Community), 2005. *Regional Strategic Action Plan on Integrated Water Resources Development and Management, Annotated Strategic Plan 2005-2010 (June)*. Gaborone: SADC.
- SADC (Southern African Development Community), n.d. *Regional Indicative Strategic Development Plan*. Gaborone: SADC.
- Savenije, HHG, 2002. , 'Why water is not an ordinary good, or why the girl is special', *Physics and Chemistry of the Earth*, 27(11-22): 741-44.
- Schreiner, B. and B. Van Koppen, 2002. *Catchment Management Agencies for poverty*

- eradication in South Africa, *Physics and Chemistry of the Earth*, 27(11-22): 969-976.
- Swatuk, L.A., 2008. 'A political economy of water in Southern Africa', *Water Alternatives*, 1(1): 24-47.
- Swatuk, L.A., 2002. 'The New Water Architecture in Southern Africa: reflections on current trends in the light of Rio +10', *International Affairs*, vol. 78 no. 3 (July): 507-30.
- Swatuk, Larry A., 2008, 'Neoliberalism, Globalism and the Poverty Trap in Southern Africa'. In: Michelle Pressend and Timothy Othieno, eds, **Rethinking Natural Resources in Southern Africa**, (Pretoria: Institute for Global Dialogue).
- Swatuk, L.A. and L. Wirkus, eds, 2009. *Transboundary Water Governance in Southern Africa: Examining underexplored dimensions*. Bonn: Nomos.
- Swatuk, L.A. and Peter Vale, 2000. *Swimming Upstream: Water and Discourses of Security. Security, Ecology and Community: A Working Paper Series No. 2*. Bellville, South Africa: CSAS: School of Government, University of Western Cape.
- Swatuk, L.A. and Peter Vale, 1999. 'Why Democracy is Not Enough: Security and Development in Southern Africa in the 21<sup>st</sup> Century', *Alternatives*, 24:3 (1999): pp. 361-89.
- UN-Water, 2008. *Transboundary Waters: sharing benefits, sharing responsibilities*. Geneva: UN-Water.
- Walker, B., and D. Salt, 2006. *Resilience Thinking: sustaining ecosystems and people in a changing world*. Washington, D.C.: Island Press.
- Wolf, A.T., M. Stahl, M. Macomber, 2003. 'Conflict, Cooperation and University Support for Institutions in International River Basins', paper presented at the annual meeting of the International Studies Association (ISA), Portland, Oregon.
- Wolf, A.T., J. Natharius, J. Danielson, B. Ward, J. Pender. 1999. 'International River Basins of the World,' *International Journal of Water Resources Development* 15(4) December: 387-427.
- Wolf, A. T., 1997. International river basins of the world. *Water Resources Development* 15: 387-427.
- Young, O., 1969. 'Interdependencies in world politics.' *International Journal* 24: 726-750.