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River Basin Commissions in Southern Africa

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Introduction

Southern Africa is characterized by three distinct features, which act as fundamental drivers of potential conflict or cooperation. The first is climate variability, with drought and flooding being normal events in the regional hydrological context. This variability is a key determinant of ecological dynamics. The second relates to the large number of international rivers, with some 15 basins linking the various Southern African countries together. Thirdly, there is a maldistribution of development across Southern Africa, and within separate countries in the region. Water scarcity acts as a limiting factor for the economic growth potential of the region, making water and associated ecosystems a key component of sustainable development.

Key International Rivers in Southern Africa

Careful analysis reveals that of these 15 international rivers, some are more critical than others in terms of sustainable development, environmental security and hence the potential for conflict and/or cooperation. In this regard research that is being conducted by the African Water Issues Research Unit (AWIRU) is attempting to prioritize these international river systems into strategic and non-strategic basins. The strategic significance of these basins is determined by the extent of economic development that each river basin supports, along with the availability of alternative water resources for the respective riparian states involved. This research has revealed that the four most economically developed countries in Southern Africa - the Republic of South Africa, Botswana, Namibia and Zimbabwe - are also the most water-stressed countries in the region. Botswana and Namibia are largely covered by the Namib Desert, with the Kalahari stretching from Zimbabwe, into parts of Angola and down to the Karoo in South Africa. Both Namibia and Botswana are unique in the sense that they have no rivers permanently flowing on their sovereign territory, except for the Okavango that flows for a short distance in both countries. More importantly, these four countries have all reached, or are rapidly approaching, the limit to their readily available water resources. Significantly, these four countries also share two major international river basins - the Orange and Limpopo - and each of these countries in turn share a number of other basins with co-riparian states in a complex web of interdependence.

A Hydropolitical Complex as a Component of a Regional Security Complex

Given the background noted above, research at AWIRU is starting to develop the notion of a Hydropolitical Complex as a distinct component of a Regional Security Complex within Southern Africa. A security complex exists when a group of countries have their respective processes of securitization, desecuritization, or both being so interlinked that their security problems cannot reasonably be analyzed apart from one another (Buzan *et al.*, 1998:201). Buzan (1991:201) identifies five regional security complexes in the developing part of the world, with one distinct cluster being what he calls the Southern African Security Complex. The notion of a hydropolitical security complex as a distinct form of security complex has been developed by Schulz (1995:97). This has been refined by the author who is starting to show that a hydropolitical complex is emerging within Southern Africa as shown in Figure 1 (Turton, 2003a; 2003b).

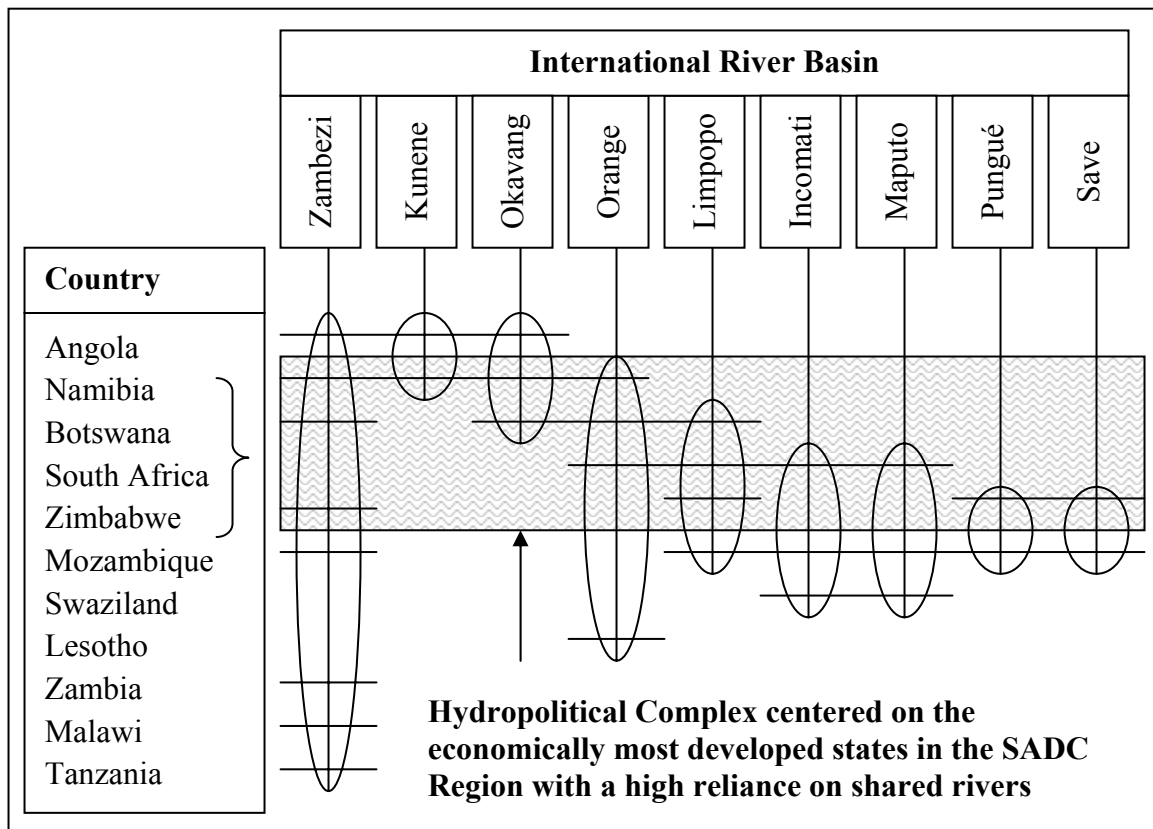


Figure 1. Schematic Rendition of the Southern African Hydropolitical Complex.

In terms of this conceptualization, the Southern African Hydropolitical Complex is clustered around the four most economically developed countries in the region - South Africa, Botswana, Namibia and Zimbabwe - with the two pivotal river basins being the Orange and Limpopo. The four most developed countries are linked to eleven other states by means of the two pivotal basins and seven other international river systems. These linkages are important because water scarcity has the potential to prevent future economic growth for those countries, making water access a strategic issue in the region.

Attention is drawn to Mozambique in this conceptualization, because it is economically one of the most underdeveloped countries in Southern Africa, and it is also downstream on six international rivers that are part of this hypothesized Southern African Hydropolitical Complex.

Inter-Basin Transfers

Given the strategic importance of water as a limiting factor to the economic growth potential of the most developed states in Southern Africa, and their high joint reliance on shared water found in international river basins, the issue of Inter-Basin Transfers (IBTs) is an important one. To date, there are a number of existing IBTs, with the industrial heartland of South Africa - Gauteng Province - being 100% reliant on these transfers for its economic viability, with seven other South African provinces being dependent on these transfers for 60% or more of their respective Gross Geographic Product (Basson *et al.*, 1997:55). The economic privilege that accompanies these water transfers is not equitably distributed in society, giving rise to the so-called pipelines of power thesis (Turton, 2000). Planned IBTs include an ambitious project to abstract water from the Zambezi River and deliver it to the Okavango/Zambezi/Cunene Rivers, and a linkage between the Zambezi and Limpopo River Basins (Heyns, 2002:163). The high reliance on IBTs has a number of significant implications for sustainable development. These include:

- The internationally accepted notion of managing a river basin as a hydrological unit is not appropriate under these conditions.
- There is a loss of biodiversity when rivers become regulated by means of dams and IBTs.
- There is a strong possibility that biota endemic to the recipient river basin may be threatened by the introduction of species from the donor basin. This has particular relevance for the Okavango River Basin, which is Africa's last remaining pristine aquatic ecosystem.

River Basin Organizations

Having noted the strategic importance of international river basins in Southern Africa, and in particular the importance of IBTs as the foundation of future economic growth and stability in the region, the need for robust River Basin Organizations (RBOs) is self-evident. To this end it is instructive to note that not all of the international river basins have functioning RBOs involving all of the riparian states. In fact to date, there are only two RBOs involving all of the riparian states in a given river basin in the entire Southern African region (Turton, 2003b). These are the Permanent Okavango River Water Commission (OKACOM) that was established in 1994 and the Orange-Senqu River Commission (ORASECOM) that was established in 2000. OKACOM pre-dates the SADC Protocol on Shared Watercourse Systems, while ORASECOM is the first RBO to be established in terms of this Protocol. The first basin-wide RBO was established in 1983 between South Africa, Swaziland and Mozambique for the management of the Incomati and Maputo Rivers, but this failed and was subsequently replaced by a bilateral

agreement between South Africa and Swaziland. There are current attempts underway to revive the basin-wide RBOs for the Limpopo, Incomati and Maputo River Basins, with a breakthrough being expected soon (possibly during the World Summit on Sustainable Development). The development of these RBOs tracks the significance of water resources found in international river basins in Southern Africa, having been focused on the basins that are shared by the four most economically developed countries in the region. Significantly, the lack of RBOs is an important bottleneck to sustainable development and the effective implementation of Integrated Water Resource Management (IWRM). Without functioning RBOs, environmental security issues will probably remain unaddressed, and conflict potential is likely to increase as a result.

Conclusion

The research currently underway at AWIRU is suggesting that a Hydropolitical Complex is emerging as a component of the Southern African Regional Security Complex. The Hydropolitical Complex can best be understood as being an important linkage (or analytical variable) functioning between the respective sovereign states and the Southern African Regional Security Complex. The pivotal states in this hydropolitical complex are South Africa, Botswana, Namibia and Zimbabwe, with the key river basins being the Orange and Limpopo. Other important basins involve any of these four countries and riparian states in the Zambezi, Kunene, Okavango, Incomati, Maputo, Pungué or Save, locking those other states into the hydropolitical complex by virtue of their riparian position. This is a new direction for research in Southern Africa and is considered to be relevant to the whole discourse on sustainable development, and in particular to the emerging discourse on environmental security.

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