

Water Wars: Enduring Myth or Impending Reality?

Anthony Turton

Introduction

There is a fascination with the notion of a Water War, and the existence of such a false phenomenon seems to prevail, despite irrefutable evidence to the contrary. This concluding chapter will suggest that it is time for us to debunk the myth of Water Wars for two important reasons. Firstly, such things tend to be highly emotive, and as such, they lure us away from the real issues that we should be focussing on. Water Wars are nothing more than a red herring, consuming our collective research energy when there are other more pressing problems which we need to attack. Secondly, this construction of knowledge is actively fed into the media, who then propagate the myth as if it were reality. As such, the media is doing us a grave disservice, because such untested information informs an already negative perception that exists about Africa, which undermines investor confidence and continues to marginalise the continent. Who, after all, would want to invest in a region when the popular belief is that it is likely to slip into a quagmire of water wars during the twenty-first century?

The myth of water wars

Water Wars are nothing more than a myth. There is not a shred of evidence to support their existence in any of the chapters in this book. True, there is a lot of conflict, or potential conflict, over water resources. This is particularly true where these water resources are found in shared river basins or aquifers. However, this does not mean a war over water. In this sense, we need conceptual clarity (Turton 2000a). Water scarcity, as both a necessary and sufficient condition for going to war, is an almost non-existent phenomenon.

In this regard, it is illuminating to read the revealing findings of a comprehensive research project which used the Transboundary Freshwater Dispute Database. One of the main conclusions was that, 'the actual history of armed water conflict is somewhat less dramatic than the water wars literature would lead one to believe: a total of seven incidents, in three of which no shots were fired. As near as we can find, *there has never been a single war fought over water*' (emphasis in the original text), (Wolf 1998:255) This has been the case since at least 2,5000 BC, when the Sumerian city-states of Lagash and Umma went to war over the right to exploit boundary channels along the Tigris River (Cooper 1983 as cited in Wolf 1998:255). However, that was not even a true water war (Turton 2000), falling neatly, instead, into the definition of a quasi water war. These seven incidents are briefly as follows (Wolf 1998:256):

- The 1948 partition between India and Pakistan saw the Indus Basin being divided in a convoluted fashion. No less than 12 years of negotiations, led by the World Bank, resulted in the Indus Waters Agreement.
- Between 1951 and 1953, Syria and Israel exchanged sporadic fire over Israeli water development in the Huhleh Basin. Israel moved its freshwater intake to the Sea of Galilee.
- In 1958, Egypt mounted an unsuccessful military expedition into disputed Nile riparian territories. Tensions eased when a pro-Egyptian government was elected in Sudan and the Nile Waters Agreement was signed.
- Between 1963 and 1964, border skirmishes between Somalia and Ethiopia erupted over disputed territories in the Ogaden Desert, which included some critical water (and oil) resources. Several hundred deaths occurred before the ceasefire. One element in this conflict was the fact that the 1948 boundary had left Somali nomads

under Ethiopian rule.

- Between 1965 and 1966, Israel and Syria exchanged fire over the 'all-Arab' plan to divert the Jordan River headwaters, presumably in order to counter the Israeli plans to develop the 'national water carrier'. Construction of the Syrian diversion halted in July 1966.
- In 1975, Iraq claimed that their water from the Euphrates was insufficient, citing upstream dam construction as the cause. This resulted in Syrian-Iraqi hostility with military posturing, but successful mediation by Saudi Arabia eventually eased tensions.
- Between 1989 and 1991, two Senegalese peasants were killed in a dispute over grazing rights on the Senegal River. This sparked off ethnic and land reform tensions in the region, resulting in the death of several hundred people. Significantly, the fighting was not between two armies, but between civilians from opposing sides. The army intervened and order was restored.

We can therefore safely conclude, that based on available evidence, Water Wars as defined by Turton (2000) are very rare indeed. In fact, their existence is nothing more than a myth which deserves to be debunked. The conclusion of Wolf's comprehensive study serves as a wise warning in this regard — he said that, 'while water wars may be a myth, the connection between water and political stability certainly is not' (Wolf 1998:261). Consequently, we should accept that water and conflict are deeply intertwined, therefore we need to focus more sharply on the finer nuances of this if we are to move forward with the discipline of hydro-politics as a distinct branch of political science.

When it comes to water as a target of war, there is vast literature to show that this is indeed true. However, this is not a water war. It can be regarded as a conventional form of war, with hydraulic installations as a tactical component (Turton 2000). The best examples of this in southern Africa at present are in Angola, where major hydraulic installations on the Kunene River are either damaged or malfunctioning, directly as the result of military action (Meissner 2000).

The existence of quasi Water Wars can also be found in southern Africa. In this case, the conflict is not over the resource itself, but the theatre of the conflict happens to coincide with aquatic environments. The best example of this is the Kasikili/Sedudu Island issue, which was dealt with in the chapter by Ashton (2000). These are interesting cases in their own rights, because despite the fact that the International Court of Justice has made a ruling on

the cases, the fundamental dynamics of the conflict have not been considered in the judgements. The conflict can return, in response to fluvial dynamics and tectonic movements, which can in fact affect a number of other islands in the area. Clearly this is an interesting area of future work, and one that will yield rich pickings for the researcher.

The important emerging issues

So, if Water Wars are unlikely – at least in the true sense of the definition – what are the really important hydropolitical issues that we should concern ourselves with? At least six distinct issues can be isolated at this time.

The first major issue is that which relates to the role of civil society. Recent work (Turton & Meissner 2000) suggests that civil society has become an increasingly important role player within the water sector. Nowhere is this more evident than in the activities of NGOs. In this regard, NGOs are likely to play a key role in at least three areas – the environment, human rights and water service delivery – and should be regarded as legitimate hydropolitical role players. This implies that conflict is inevitable as more role players become involved in what used to be the exclusive domain of the government. This conflict is likely to centre on the interaction between, and definition of, legitimate roles for each actor. Consequently, there is the need to conduct research into this problem, in order to map out the processes at work and suggest viable solutions.

The second major issue is that regarding environmental security, which is alluded to in the Chonguica (2000) contribution. Elements of this are expanded on in the contribution by Du Plessis (2000). This is likely to become a major thrust of political science studies in the future, especially as Environmental Diplomacy is increasingly brought to bear by the developed countries of the world. To this end, the words of Rodal (1996) are illuminating:

[T]he environmental issue symbolises the logic and complexity of the new agenda, a defining element in the emergence of a different shaping spirit of world politics. ... Environmental issues symbolise what appear to be among the salient features of the post-Cold War [and] the emergence of an agenda comprising truly global issues. In the West, at least, the health of the global environment is commonly perceived to be critical for the sustainability of civilisation, and yet to be in deepening crisis. Integral to this conception

is the idea that meeting the environmental challenge will require new conceptions of security and of the national interest, and new forms of action and coordination. The existing international political and economic system, grounded in the parochial interests of states and industries, is seen as a major part of the present environmental problem. Indeed, the environment is seen as the quintessential global issue. ... It is seen as being above ideology. It serves as something of a unifying concept linking a range of problems which need connected, transnational, complex strategies if they are to be treated. It is an element in statecraft, foreign policy, Canada's relations with other states and in Canada's participation in international bodies'.

If environmental security is increasingly becoming an issue, and if Environmental Diplomacy is becoming a post-Cold War phenomenon, then the whole issue of conflict mitigation becomes relevant. Thus, the third major issue relates to conflict mitigation, with two sides of the coin being evident. The one side relates to conflict resolution, whereas the other side relates to conflict mitigation. A number of key issues are central to both of these components:

- We need to reach consensus on what a hydropolitical hotspot is and how we define it. This is complicated and not easy to develop. The chain reaction of cascading problems is evident in Mozambique, where dams that are built downstream as the direct result of reduced flow (caused by upstream use), in turn result in flooding and unseasonal water supply on peasant land (Leestemaker 2000). The contribution by Meissner (2000) shows the value of developing a hydropolitical history of each major river basin. This will help contextualise each conflict within a broader historical and geographical setting, and will assist with the generation of enduring conflict mitigation strategies.
- The role of good governance is also highlighted under this broad heading (Mochebelele 2000). We need to understand what good governance entails, and then transplant it from one basin setting to another if we are to effectively mitigate conflict. An element of good governance is the establishment of a clear set of institutional guidelines that embrace the values of society (Nundwe & Mulendema 2000). In this regard, the concept of the 'hydro-social contract' is of critical importance (Turton & Meissner 2000). Thus, we need to

understand this better.

- When talking of hotspots, the issue of geographic scale immediately comes to mind. What is a crucially important issue at the water-hole or household level, seems to pale into insignificance at the international level. Wolf's (1998:261) finding – that there is an inverse relationship between the level of geographic scale (ranging from the international down to the household or farmer) and the degree of violence – is therefore highly relevant. In other words, an individual is more likely to resort to violence over water than a country is. Yet each level is relevant, and each is potentially a source of endemic conflict. Thus, we need to map these out and understand them better as part of a comprehensive conflict mitigation strategy at the SADC level.
- An age-old coping strategy has been the use of trade. In hydropolitical terms, this trade in 'Virtual Water' – the water that is used to produce a crop or product – has offered a viable way of balancing the water budget at the strategic level. 'Virtual Water' is therefore likely to become increasingly relevant to conflict mitigation. Yet we understand little of this process. Whereas a lot of work has been done in the Middle East/North Africa (MENA) region, most notably by Professor Tony Allan, very little has been done in southern Africa. We need to ask this central question: can 'Virtual Water' trade be an effective alternative to augmentation within the SADC Region, and if so, what do we need to do in order to implement this as a coherent strategy? In truth, this is a complex problem, deserving a major research initiative. One critical issue which needs to be understood is the implication of changing from a policy of national self-sufficiency in food production, to one of food security. There are far-reaching ramifications regarding this issue, and we have not yet begun to map these out in a coherent way.

This leads on to the fourth emerging hydropolitical issue, namely that of Sovereignty. At the heart of normal international political interaction is the concept of sovereignty, which is said to be indivisible and absolute, resulting in an international political milieu in which all states are treated as legal equals. This is a myth however, as states are equal only in terms of legal fiction. Nowhere is this problem more evident than in international river basins, where you have two major issues confronting one another. On the

one hand, state sovereignty as embodied in the United Nations Charter is taken to be absolute; whereas on the other hand, the changing consensus on the desirability of Integrated Catchment Management places the emphasis on the entire river basin as an integral unit. Thus, these two concepts are mutually exclusive of one another if interpreted in extreme forms. Consequently, acceptable middle ground needs to be found. In terms of this issue, the following are becoming increasingly relevant:

- The need to deconstruct the concept of sovereignty was expressed at the Second World Water Forum at The Hague. In this regard, there has been a call for the acceptance that national sovereignty is limited by the respect for the sovereignty and rights of other states (GCI 2000b:61). We need to map out the ramifications of this new trend.
- Related to this is the emerging debate on rights versus needs, which was also evident at both the 1999 Stockholm Water Symposium and the Second World Water Forum at The Hague. Whereas the absolute sovereignty paradigm focuses on the rights that states have to appropriate water in a given international river basin, the alternative needs-based paradigm suggests that we should approach the issue of allocation in a more humane way. An example of the former is the Harmon Doctrine, and an example of the latter is the principle of equitable utilisation as found in the Helsinki Rules. This is gaining credibility and is extremely important from a conflict mitigation perspective, because the rights-based approach is inherently conflictual (being based on the zero-sum principle), whereas the needs-based approach is inherently conciliatory. This debate is likely to find ready supporters in the southern African region. Downstream states which have a heavy reliance on exogenous water are likely to support the needs-based model, while upstream states are likely to support the rights-based model. There are clearly implications for this which we need to start understanding in a more profound manner.
- Linked to the notion of sovereignty is the problem of international border disputes. These typically fall into the category of quasi-water wars as defined by Turton (2000a), and southern Africa has a number of potential hotspots under this heading. At the time of writing, there are tensions over the various islands in the Zambezi Basin around the Caprivi Strip, and the ramifications of shifting the South African/Namibian border to the centre of the Orange River

(Ashton 2000) are only starting to be appreciated by government. We need to unravel the dynamics of these issues further, so that we can effectively resolve them in a peaceful and sustainable manner.

The fifth emerging hydropolitical issue is directly related to water scarcity at the regional level. Southern Africa is characterised at present by the development (or planning) of major inter-basin transfers of water, some of which cross international borders. Some of these projects are extremely ambitious. The Eastern National Water Carrier in Namibia is a complex system of dams, pipelines, canals and aquifers. Plans exist to augment supply by building a pipeline from the Okavango River at Rundu. There is a network of pipelines and canals which take water from the Kunene River into Owamboland. Plans exist for harnessing water from the Congo (Zaire) River and transferring it to Namibia. This would traverse Angola, linking at least three different southern African countries, one of which (Angola) has been the centre of an ongoing civil war that appears to be unstoppable. The first phase of the North-South Carrier has been completed in Botswana, and additional phases are being planned (Chenje & Johnson 1996:202). The Matebeleland Zambezi Water Project is planned to take water from the Zambezi River to Bulawayo (Chenje & Johnson 1996:174) (Berry & Nel 1993), but at present no funding is available. Indications are that this may be linked, at some future date, with the North-South Carrier in Botswana. Then there is the Lesotho Highlands Water Project which is already in existence. These pipelines are getting increasingly complex, costly and vulnerable to the vagaries of international political tensions. Thus, we need to develop a deeper understanding of the politics of pipelines (Turton 2000b) within the context of SADC. The central questions here are:

- Who benefits?
- Who pays?
- To what extent is resource capture justifiable?
- What are the impacts on the environment?
- Can 'Virtual Water' trade be a viable alternative to pipeline development, and if so, what needs to be done to make this sustainable?

Sixthly, we need to grasp the fact that the problems we are being confronted with are becoming increasingly complex. As Wolf (1998:263) notes, water is an interdisciplinary resource, therefore the attendant disputes can only be resolved through active dialogue between and among disciplines. This is of

critical importance if we are to effectively mitigate against the conflict potential in the southern African region. Consequently, we need to focus on the development of a multidisciplinary capacity, across international borders, between bureaucratic entities, and within the broader framework of SADC. To this end, we need to look to the SADC Water Sector and ask what needs to be done to empower this structure in order to make it an effective vehicle for delivery? One important element of this problem is the establishment of a set of concepts and models which can be used to link the various disciplines. Another critical element is how we deal with the issue of historically advantaged versus historically disadvantaged institutions. Thus, we are confronted with the challenge of developing capacity – against the trends of the historically skewed patterns which characterise southern Africa – between countries, institutions and disciplines.

These six issues are the important ones, deserving of our undivided attention. Therefore, to focus any more energy on Water Wars will merely dilute those efforts and undermine the long-term need to develop effective coping strategies to ensure social stability in a region facing increasing levels of water scarcity.

Proposed research project for southern Africa

Having noted that the Water War debate is largely sterile, and then having suggested six more fruitful areas of hydropolitical research, it now becomes possible to propose a focussed research agenda for consideration by various funding agencies, governments and institutions. It seems that what is needed in southern Africa is a regional map of existing and potential hydropolitical hotspots. In short, we need an atlas of such problem areas, capable of overcoming the issue of scale. Such a venture would provide decision-makers with a solid foundation of empirically derived data on which they can base future decisions. This will go a long way to mitigate conflict before it flares up to unmanageable proportions. We therefore need a three phased approach to the problem.

Phase 1 would entail the development of a clearer conceptual understanding of what we actually mean when we refer to a 'hydropolitical hotspot'. Ideally, this would be consensus-based and would cross all of the international borders within SADC. The outcome of this initial process would consist of two distinct items: Firstly, there would be a general understanding

of what is meant by the term 'hydropolitical hotspot'. If sufficient consensus has been achieved, then this concept would be legitimate; Secondly, there should be a clearly defined research methodology, capable of being used in every river basin in southern Africa. This will have to be developed in close consultation with a wide spectrum of role players.

Phase 2 would then consist of a number of independent studies, at the level of the respective river basins, but using the agreed methodology that emerged from Phase 1. Ideally these studies would focus on the major river basins, but if possible, the entire SADC region should be covered. The end product of this process would be a series of basin-wide studies, all using the same methodology and sharing a common terminology.

Phase 3 would then entail the synthesis of these basin-wide studies into one coherent Atlas. Ideally, this phase would result in three distinct end products: Firstly, a Hydropolitical Hotspot Atlas would be generated, which would show up every existing and potential problem area; Secondly, a coherent conflict mitigation plan will be developed for consideration by SADC and member countries; Thirdly, scientists from a wide variety of disciplines, from across the entire SADC region, would be able to see the problem in a more holistic way, and attack it with an arsenal of newly-defined concepts and models that are both indigenous and appropriate.

Conclusion

This book has been an attempt to start the journey towards the establishment of a regional hydropolitical conflict mitigation/resolution capability. The authors have covered a wide variety of topics, some of them from a broader African perspective. While it seems doubtful that Water Wars will happen, this does not mean to say that conflict over water will simply go away. It won't! In fact, conflict over water resources is likely to escalate, but probably only at the sub-national level. It is abundantly clear that within southern Africa, we already have the necessary goodwill to cooperate in a peaceful way. Our combined challenge is to transform the prevailing negative peace – the mere absence of open hostility – to a condition of positive peace — the existence of all the necessary pre-conditions for prosperity, investment, job creation and social stability.

For this to happen, at least four key elements are needed. SADC must get fully involved in the process. We also need the full political commitment

of all of the regions' leaders. From this, the development of solid institutional structures must evolve. These, in turn, must be empowered with the necessary intellectual and financial capital. In short, the so-called second-order resources are likely to be the key determinants of our joint futures. For that reason, a unique and specific research project has been proposed — the Hydropolitical Hotspot Atlas of Southern Africa. If adopted, it will foster cooperation across international borders, develop intellectual capital and redistribute this scarce resource in a more equitable way, which will ultimately help generate the blueprint for sustainable peace. In short, unless we effectively develop second-order resources where they are needed in the water sector, social instability is likely to result from increasing levels of water scarcity.

References

- Ashton, P., 2000, Southern African Water Conflicts: Are they Inevitable or Preventable? in Solomon, H. and Turton, A.R., (eds), *Water Wars: Enduring Myth or Impending Reality?* Durban: ACCORD.
- Berry, B. and Nel, E., 1993, 'Operation Pipeline' – Bulawayo's Search for Water, in *Geography*, No.78, pp.312-315.
- Chonguica, E., 2000, Water and the Environment as a Locus for Conflict in Southern Africa, in GCI, (2000a), *Water for Peace in the Middle East and Southern Africa*, Geneva: Green Cross International.
- Chenje, M. and Johnson, P., (eds), 1996, *Water in Southern Africa*, Maseru/Harare: SADC/IUCN/SARDC.
- Cooper, J., 1983, *Reconstructing History from Ancient Inscriptions: The Lagash-Umma Border Conflict*, Malibu: Udena.
- Du Plessis, A., 2000, Charting the Course of the Water Discourse through the Fog of International Relations Theory, in Solomon, H. and Turton, A.R., (eds), *Water Wars: Enduring Myth or Impending Reality?* Durban: ACCORD.
- GCI, 2000(a), *Water for Peace in the Middle East and Southern Africa*, Geneva: Green Cross International.
- GCI, 2000(b), *National Sovereignty and International Watercourses*, Geneva: Green Cross International.
- Leestemaker, J., 2000, The Domino Effect. A Downstream Perspective on Water Management in Southern Africa, in GCI, 2000(a), *Water for Peace in the Middle East and Southern Africa*, Geneva: Green Cross International.



- Meissner, R., 2000, Hydropolitical Hotspots in Southern Africa: The Case of the Kunene River, in Solomon, H. and Turton, A.R., (eds), *Water Wars: Enduring Myth or Impending Reality?* Durban: ACCORD.
- Mochebelele, R.T., 2000, Good Governance and the Avoidance of Conflicts: The Lesotho Highlands Water Project Experience, in GCI, 2000(a), *Water for Peace in the Middle East and Southern Africa*, Geneva: Green Cross International.
- Nundwe, C.D. and Mulendema, C., 2000, Mitigation of Conflicts derived from Water Use-related Problems – Zambia, in GCI, 2000(a), *Water for Peace in the Middle East and Southern Africa*, Geneva: Green Cross International.
- Rodal, B., 1996, *The Environment and Changing Concepts of Security*, Commentary No.47, Canadian Security Intelligence Service Publication, ISSN 1192-277X, Catalogue JS73-1/47, available from CSIS, P.O.Box 9732, Postal Station T, Ottawa, Ontario K1G 4G4, Canada.
- Turton, A.R., 2000(a), Water Wars in Southern Africa: Challenging Conventional Wisdom, in Solomon, H. and Turton, A.R., (eds), *Water Wars: Enduring Myth or Impending Reality?* Durban: ACCORD.
- Turton, A.R., 2000(b), Precipitation, People, Pipelines and Power: Towards a 'Virtual Water' Based Political Ecology Discourse, in Stott, P. and Sullivan, S., (eds), *Political Ecology: Science, Myth and Power*, London: Edward Arnold.
- Turton, A.R. and Meissner, R., 2000, *The Hydro Social Contract and its Manifestation in Society*, AWIRU Occasional Paper, Forthcoming in a book as yet untitled. Available from Website <<http://www.up.ac.za/academic/libarts/polsci/awiru>>.
- Wolf, A.T., 1998, Conflict and Cooperation along International Waterways, in *Water Policy*, Vol.1, pp.251-265.

Notes on Contributors

Peter Ashton

Dr. Peter Ashton trained as a botanist at Rhodes University in Grahamstown and received his PhD in aquatic plant ecology in 1983. He is a Professional Member of the South African Institute of Ecologists and Environmental Scientists, and is also a member of eight other South African and international scientific associations. He has been employed by the CSIR since 1975 as a water quality and resources specialist, and was appointed as Divisional Fellow on 1 January 1998. He has carried out environmental studies and consultancies in several African countries. Peter Ashton was elected as Vice-President of the International Commission on Water Quality (ICWQ) of the International Association of Hydrological Sciences (IAHS) (1999-2003), and was also appointed as Honorary Professor of Water Resources Management at the University of Pretoria for a three-year term (1999-2002). He has studied the impact of land use and development projects on the quantity and quality of water resources and, in particular, their effects on aquatic ecosystems, as well as their role in integrated catchment management. He has a special interest in the role of aquatic ecological issues in decision-making processes for conflict prevention or resolution, and the management of water resources in shared river basins. Peter Ashton is the author and co-author of more than 80 articles on aquatic plant ecology and management, phytoplankton succession patterns, nutrient cycling, saline lakes, general limnology, the impacts of development on aquatic ecosystems, water resource management in shared river basins. In addition, he is the author and co-author of more than 70 technical reports for external contract