

Challenges for Water Sharing in a River Basin

Dr. Peter Ashton Discusses the Okavango Experience

Aerial view over a portion of the lower Boro River in a dry season. The entire area (except the islands) will be under water when the floods arrive in mid-June.

During the 2000 SIWI Seminar “Towards Upstream/Downstream Hydrosolidarity,” the importance of communication between countries sharing the same river basin was highlighted. A whole river basin approach that focuses on upstream/downstream conflicts of interest must involve attention not only to water itself but also to water-related ecosystem services. Dr. Peter Ashton from South Africa has examined this aspect with respect to the Okavango River Basin, which is shared by Angola (upstream), Namibia and Botswana (downstream). In a paper presented at the UN University Symposium on Southern African Waters in September 2000, he presented a concrete example on estimates of water needs in the basin states, plus management implications and recommendations. He stresses the importance of an ideally functioning River Basin Organization with representatives from all countries in the basin. With hydrosolidarity issues again to be in focus at the August Stockholm Water Symposium, *Stockholm Water Front* took time to talk to Dr. Ashton about the subject.

Dr. Ashton, you name challenges and tasks of the ideal River Basin Organization (RBO). What in your opinion are the main points why those existing today do not work efficiently?

Perhaps the two most important reasons why most River Basin Organizations do not work perfectly are due to the make-up or constitution of the organization, and the ways in which they operate.

In a shared river basin situation such as that of the Okavango or Zambezi rivers, it is vitally important to make sure that all national-level role players (i.e. national governments of each basin state involved) feel that they have an equitable share in all decision-making processes. If any “player” feels that their interests are being overwhelmed or ignored by one of the other parties, then there is a tendency to withdraw from the process; the process then loses legitimacy in the eyes of at least some of the parties. This

is quite easily visible in the case of the Zambezi River. The Zambezi River Authority consists of representatives from two countries, Zambia and Zimbabwe, whilst there are actually eight basin states who share portions of the catchment. The interests of the other six parties appear to be seldom taken into account, except for occasions when a formal request is made. In this type of situation, various claims are made by external role players (normally representatives of NGOs and not government officials) that the two key parties dominate discussions and decision-making processes. There seems to be a general absence of equity and ownership in the process. Overall, this contributes to less-than-ideal management of the catchment’s water resources.

A similar situation, though with somewhat different circumstances, also holds for the Okavango River basin. The existing institutional arrangement, OKACOM, in-

volves all three basin states. However, with a civil war continuing within its borders, the Angolan government has many things on its mind; water may not be top of the list of priorities since Angola is a relatively well-watered country. In Botswana and Namibia, however, water supply is a crucial issue and is very close to the top of the agenda. In this case, the institutional structure is driven by government representatives and, like good government representatives everywhere, they work well at their international relations with their neighbors and at supporting their respective government viewpoints. However, if everyone does not have exactly the same set of agenda points and in the same priority order, it becomes difficult to generate and maintain cohesive, integrated programs of action.

What would be the “ideal” River Basin Organization?

An ideal RBO would have representatives appointed by each basin state, but these would not be government representatives. They might in fact be private sector individuals who are empowered and resourced by their home government to act on their behalf and to focus on the key issues related to water management. This RBO would also be responsible and accountable for achieving a series of clearly defined objectives. Some would relate to basin-wide management of water resources, resource protection, and water supply to user groups on the basis of defined needs and proven ability to conserve (not waste) water, pollution control, etc.

How could your concept be transferred into the region, and what are the major problems?

It is extremely important for the basin states involved to be in a position where each of them fully trusts the motives and promises of their partners. In addition, each party trusts its partners to deliver on their promises in terms of support for their representatives on the RBO. Many southern African democracies are relatively young and still seem to feel vulnerable about their sovereignty. Trust is sometimes difficult to give if you are not always on the very best of terms with your neighbors.

Similarly, if the relative social, economic and military strengths of such neighbors are very different from one another, there is sometimes a tendency to worry that a stronger neighbor may become big brother and impress "his" views over the others. This can only be avoided when neighbors trust each other. Ideally, I think it would be important to start with a test case basin that can serve as an example to everyone in the region. This would, unfortunately take time to achieve; and the sub-continent does not have a lot of time to spare when one examines the pressing needs for water and the pervasive effects of HIV/AIDS. In summary, building trust between neighbors and creating/maintaining competence are probably the two biggest problem areas here.

In your calculations on future water balance in the Delta, a 3% loss in water (to ecological services, among others) does not sound very threatening for the ordinary reader when having a variation of the mean annual flow of 4-10% in mind. Why do you think it is actually a danger? How would you try to reach the public with that ?

Three percent (3%) isn't a large fraction when you look at the number on its own. Also, if you consider that many southern African rivers already have well over 50% of their water allocated already, and some as high as 100%, then 3% doesn't seem a lot. But it is also important to remember that this figure represents a proportion of annual average flow. In dry years, the volume would be much more than 3%, and in wet years it would be much less. My estimate is that in the worst case dry season, the number may increase to 10% of that specific seasonal low flow; similarly, in the highest flood season, it would decrease to below 1% of that season's flow. However, even at these high and low extremes, the proportions are still relatively low because the Okavango River is a large river.

To my mind, the major threat that is perceived by residents along the river and around the Delta are based on perceptions that the Delta would dry up, if not entirely then large areas of it, if water is withdrawn from the Okavango River upstream. This would then destroy its ecological integrity and interrupt the supply of ecosystem goods and services that these people rely on for their everyday lives. One of the major problems, and one that fuels these perceptions, are the statements made by experts or knowledgeable people that the Okavango Delta is a very fragile ecosystem that is delicately balanced and is very susceptible to disturbance. They are, in essence, correct. My problem is that the Delta ecosystem has evolved in the presence of large-scale changes in flows that have occurred naturally and without any help from man. It is this very variability in flows that drives the mosaic of habitats within the Delta ecosystem and gives it its unique character.

I think it is important to make sure that people understand how the Delta functions and what environmental processes control the ways in which it shrinks and expands in response to natural cycles. Secondly, it is also very important to inform people that if populations continue to grow unchecked, then there will be an inevitable increase in the numbers of people per unit of available water (Professor Malin Falkenmark's "water crowding" index shows this exceptionally clearly). At this point, people have to make choices and not all of the choices are easy. If we want to completely conserve an ecosystem (such as the Okavango Delta) then we have to understand very clearly what the real costs are to society. It is simply not fair or equitable to expect one country to bear all

the costs whilst other countries enjoy at least some of the advantages.

In the case of a river shared by more than one basin state, there must be absolute consensus between all the parties as to exactly what is best for the basin, not just for one country. Then, decisions have to be taken and acted upon. Then, each party has to take accountability for the joint decision.

In what way, do you think, the new approach of the blue/green water concept affects your calculations and perspectives?

The "blue water/green water" approach helps to clarify where the water in a river or lake comes from. It also helps to demonstrate where water is needed and how much is needed and why it is needed. To some classical hydrologists, it complicates what would otherwise be a few relatively straightforward calculations about how much water is needed for what purpose. I believe that the concept helps people to form a better opinion/judgement as to what proportion of the flow in a system can safely be used/allocated for purposes other than maintaining river flows/aquatic ecosystem functioning. It also helps when trying to understand seasonal changes in flows in arid regions such as southern Africa. Overall, I am comfortable with the concept and the fundamentally sound principles embodied therein. In particular, it helps to prevent over-estimation of the fraction of a catchment's water that could be abstracted for off-channel use.

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Aerial view of a small portion of the floodplain in the Okavango Delta along the middle reaches of the Santantadibe River channel.

