

# PROS AND CONS OF MANAGING SHARED RIVER BASINS USING LEGISLATIONS FROM DIFFERENT COUNTRIES: A LIMPOPO RIVER BASIN CASE STUDY

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River systems do not respect the political boundaries. In South Africa there are four river basins that are shared by more than one country and a typical example is the Limpopo River basin. Limpopo River flows over a total distance of 1,750 kilometers. It forms the border between South Africa and Botswana and further down it turns almost due east and forms the border between Zimbabwe and South Africa. It passes through Mozambique before reaching the Indian Ocean 60 kilometers down stream of the town of Xai-Xai in Mozambique.



**LIMPOPO RIVER BASIN**

The Limpopo basin covers almost 14% of the total area of the four riparian states, South Africa, Botswana, Zimbabwe and Mozambique. The base total of 44% is occupied by South Africa, 21% by Mozambique, almost 20% by Botswana and 16% by Zimbabwe. Limpopo River basin contributes significantly in the livelihoods of many people in South Africa, Zimbabwe, Botswana, and Mozambique. It is important that the four states manage the shared water resources properly to enhance optimum use of this important water resource. Limpopo River basin is the lifeblood of the mining industries (platinum, coal, copper, vermiculite, phosphate and diamond), private game reserves, national parks, agriculture, etc. Since these

countries are regarded as developing countries, competition among water use sectors within the respective countries is often inevitable during dry seasons and this has resulted in groundwater forming an important water resource. The aquatic ecosystem of this river basin has been negatively impacted upon by these competing water uses with flow dependent fish species finding refuge only in the tributaries of this international river. There is evidence from preliminary phylogeography results that suggest that aquatic biota in the upper catchments of the Limpopo River basin is somewhat diverged from the lower catchments. In historical times, the Limpopo River was a strong flowing perennial river but it is now regarded as weak perennial river where flows frequently cease. During the drought period no water is present over a large stretch of the middle and the lower reaches of the river. This clearly shows that the river is negatively affected to a larger extent by anthropogenic activities, and this requires proper interventions. This predicament must be addressed holistically by ensuring that there is a somewhat convergence on the application of legislations by four riparian states. The Limpopo River Basin does not have a fully functional body that looks at the basin holistically from where it starts to a point where it enters the Indian Ocean. South African National Water Act of 1998 (NWA) regards a catchment as functional unit for effective water management and this is given effect through the establishment of Catchment Management Agencies. However, the agencies are not geared towards management of transboundary water resources, as they are established by a minister of a particular country. It is therefore of paramount importance that countries sharing a water resource put an arrangement of some sort to ensure that the indivisibility of the resource is factored into the management of the shared water resource.

The study attempts to look at different legislations and other tools that the countries currently use to manage this shared river basin to foster socio-economic development, support decision making regarding the use and development of the water resources, and prevent conflict that might arise between the riparian states. We have taken stock of legislations, policies, strategies, guidelines and other documents currently used by the riparian states to manage the water resources. This was followed by a thorough analysis of these legislations and tools under among others the following areas:

- Water management strategies
- Authorization of water uses,
- Allocation of water to different water use sectors including aquatic ecosystems
- Setting of standards for discharges
- Protection of the water resources
- Monitoring , assessment and information

The purpose of these legislations and tools from respective riparian states were analyzed to identify areas where there are gaps, similarities and dissimilarities. This study was compared with similar studies carried out in shared river basins found elsewhere in the country and also around the globe. We considered application of legislations and tools to manage four water use sectors, which included agriculture, domestic, industries, and aquatic ecosystems. The Limpopo River basin provides goods and services for all four water use sectors with agriculture using more than 50% of total surface run-off.

The study also considered treaties and agreements that are already put in place by the riparian states to manage this shared river basin. Notwithstanding the value of the projects under the auspices of Limpopo Water Commission such as the Limpopo basin study and flood forecasting task, our study has confirmed a dire need to have the agreement ratified by all riparian states including Zimbabwe. A further degradation of the Limpopo basin would soon lead into conflict among affected countries and possibly the entire Southern African Developing Countries (SADC). All these four countries had individually reformed their water laws to suit the arid conditions of the region, which the previous colonization did not consider in the management of this shared river basin. All riparian states have their own water management institutions and water laws, which should be effectively assessed before the agreement is ratified. In South Africa the management of water resources is in the process of being devolved to Water Management Institutions (WMIs), which encourages participation at local level by all water users. One of the objectives of these institutions is to give the water users a sense of ownership and to redress the past imbalances with regard to water allocation.

## References

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