

LIMPOPO River Basin

Fact Sheet 3

Economic Profile The Limpopo River Basin constitutes a major economic hub for the SADC region. Almost all key economic activities such as agriculture, mining, tourism and manufacturing are, in one way or another, undertaken within the basin.

While it is difficult to aggregate the exact economic contribution of the basin to the entire economy of SADC or the four riparian states – Botswana, Mozambique, South Africa and Zimbabwe, there is no doubt that the basin's contribution is significant. SADC countries have a combined GDP of US\$180 billion, which translates to a per capita income of US\$933. However this masks wide disparities in the basin; Botswana and South Africa have a GDP per capita of more than US\$3,000 while Mozambique and Zimbabwe each have less than 10 percent of that figure.

Macro-economic trends for most countries of the region have not been impressive since 1999. Budget deficits for many governments remain high, except Botswana where budget surpluses have been recorded in consecutive years. In Zimbabwe, inflation exceeded 100 percent in 2002. Mozambique and Botswana recently surpassed the UN New Agenda for Development in Africa's targeted economic growth rate of 6 percent by registering growth rates of 10 percent and 6.5 percent, respectively, in 2000.

The concentration of economic ventures along the basin can be explained by three key factors (a) availability of water (b) abundance of natural resources including minerals, forests, parks and wildlife, and (c) availability of suitable energy.

Water Demand The Limpopo river is an important source of surface water for economic development in

Proportion of the Limpopo river basin covered by each riparian state



Macro-economic situation in the Limpopo basin countries in 1999

Country	Population (,000)	GDP growth rates (%)	Inflation (%)	GDP/capita (US\$)	Consumer price increase (%)
Botswana	1,247	4.2	7.2	3,117	7.2
Mozambique	16,841	9.0	6.2	242	6.2
South Africa	43,050	1.2	5.2	3,044	5.2
Zimbabwe	13,079	0.5	58.5	278	58.5

all four riparian states. The relatively high density of population, the existence of major towns and cities in the basin, and the development of a large number of dams to service industries, agriculture and mines all exert considerable pressure on the water resources. The demand for water throughout the Limpopo river basin is high and unevenly spread. Water demand by industry, mining and the formal irrigation agricultural sector accounts for over 75 percent of all water used. For example in the Crocodile river, the estimated water use in 1997 was 508 million cu m per year, of which irrigation accounted for 49 percent, forestry 43 percent and industry, commerce and mining accounted for the remaining eight percent.

Water Supply The basin offers a wide spectrum of shared aquifers. The alluvial aquifers associated with the Limpopo river and its tributaries are of particular importance in areas where river flow is not permanent, and need to be adequately protected against overexploitation, pollution and destruction from abstraction of sand.

In the basin there are at least 13 dams with a storage capacity exceeding one cu km – one in Mozambique, eight in South Africa, three in Zimbabwe and one in Botswana. The largest is Massingir dam in Mozambique whose present capacity is estimated at 1.2 cu km.

Major Economic Activities

Agriculture is the most common economic activity in the Limpopo river basin. About 28 percent of the basin's total land area is under crop production. Approximately 0.6 percent of the total basin area is under irrigation. High value crops produced under irrigation include sugarcane, citrus and bananas.

Although the basin has great irrigation potential, only a fraction of it is under irrigation. South Africa has benefited most from this infrastructural development, with 198,000 ha under irrigation. This is followed by Mozambique which is irrigating 40,000 ha. Zimbabwe has 3,992 ha,

while Botswana has 1,381 ha under irrigation in the basin.

Livestock is the principal form of economic activity in most parts of the basin, but moreso in the upstream parts of the Limpopo area, though its nature and degree of importance varies greatly. In the rural areas, rearing of small stock is quite important in all the basin countries except for South Africa.

Overstocking of domestic animals is a major factor contributing to the deterioration of land quality in the basin. In Zimbabwe, for example, communal cattle numbers between 1980-91 increased from about 2.9 million to 4.09 million, recording an average annual growth rate of three percent, despite the severe effects of the 1982-84 drought. In Botswana, stocking rates in the rural areas are generally very high while the same has been observed in some parts of South Africa.

Energy The basin relies on coal-fired thermal power stations and on hydroelectricity generated from a few major reservoirs outside the river basin for its energy. The majority of rural communities living in the Limpopo river basin rely on firewood for energy supplies.

Portions of the basin have large deposits of coal, an important ingredient for thermal power generation. Bobonong in Botswana, and some coalmines in the Limpopo province of South Africa are operational, while in Zimbabwe has deposits of both coal and methane gas.

In South Africa and Botswana, the majority of people in the basin live in urban areas, and many have access to electricity. Electricity is also commonly found on commercial farms, although farm labourers rely largely on fuelwood for domestic activities.

While the Zimbabwe portion of the Limpopo basin is predominantly rural, a recently accelerated rural electrification programme is likely to improve access to this source of energy in the rural areas.

Firewood is the main form of energy in the portion of the Limpopo river basin that is in Mozambique, and is extensively harvested for local use and for sale. Fuelwood cutters and charcoal producers have set up numerous camps along major roads, where Mopane woodlands are being rapidly cut down and sold to dealers.

Country	Irrigation Potential (Ha)
Botswana	15 208
Mozambique	148 000
South Africa	131 500
Zimbabwe	10 900

Manufacturing industry The manufacturing and service industry sectors are well developed, especially in the Upper Limpopo basin. In South Africa, manufacturing is more diversified than in Botswana where mining and processing of mine products is the most dominant activity. The manufacturing sector is supported by a well-developed infrastructure, including a good road and rail network.

The Middle and Lower Limpopo does not have significant manufacturing except in Bulawayo, where the main manufacturing concerns include food processing, leather tanning, textiles and steel fabrication.

In Botswana, where the dependence of the economy on a few commodities is a source of risk, diversification into manufacturing has been adopted as a prime objective. Much has already been achieved, though progress in manufacturing has been steady rather than spectacular

In South Africa, the manufacturing sector now employs about 16 percent of the economically active population, compared to 14 percent in agriculture and 8 percent in mining. The Gauteng and Limpopo provinces in South Africa are the most industrialised parts of the basin.

In the Mozambican part of the basin, trading and manufacturing activities were seriously disrupted by war. Though manufacturing activities are on the recovery, much of the old manufacturing capacity is still under-utilised. Informal sector trading in food, repair workshops and light furniture, and small-scale family-based enterprises are developing rapidly.

Tourism Tourism is one of the fastest growing industries in the Limpopo river basin and a major source of development income for basin states. Although a precise account of income generated by tourism in the basin is not easy to calculate, the basin is well known for its large and well-managed parks such as Kruger in South Africa and Gonarezhou in Zimbabwe which attract a lot of tourists. There has also been a huge increase of private sector participation in tourism in the basin over the past few years.

Whilst tourism in the basin can be said to be thriving, there are nevertheless concerns that in the SADC region in general, tourism contribution is still much lower than the region's potential. In South Africa for example, which attracts over half the region's total visitors, the contribution from tourism was only 4 percent of the GDP in 1995. According to the World Tourism Organisation, world receipts from tourism grew from US\$267.6 billion in 1991 to US\$337.1 billion in 1994, an increase of 26 percent. During this time, SADC's share of the world total grew by only 14 percent, from US\$1.6 billion to US\$1.8 billion.

There are many initiatives on transfrontier conservation areas in the SADC region which have been proposed,

including some in the Limpopo basin. The most publicized transfrontier conservation area is the Greater Limpopo Park, which involves a management plan for three protected areas namely Coutado 16 in Gaza in Mozambique, the Kruger National Park in South Africa and Gonarezhou in Zimbabwe. Another notable transfrontier conservation area being proposed is the Tuli/Shashi involving Botswana, South Africa and Zimbabwe.

In Mozambique, tourism presents considerable interest in the coastal area of Gaza province, mainly in Xai-Xai. The coastal area has many unique environmental features, and is already attracting visitors from South Africa who drive to the coast and use the camping sites in Xai-Xai beach and Zongoene beach at the mouth of Limpopo River.

Other Economic Activities There are numerous other economic activities in the basin whose contribution in the economies of the four riparian states cannot be ignored. These include fishing, which is carried out mainly by communities for subsistence, although of late there has been an increase in fish trade taking place within and outside boundaries of the Limpopo river basin.

There is also a limited amount of commercial forestry in the basin, particularly in parts of South Africa and Mozambique. Suitable climatic conditions for large-scale commercial forestry occur in South Africa in the highveld where plantations are generally confined to the high rainfall belt along the eastern escarpment of the Drakensburg mountains and in northern Mpumalanga. The rest of the Limpopo basin is climatically unsuitable for commercial production of exotic forest species.

Conclusion The Limpopo river basin plays a critical role in facilitating the economic development of the riparian countries, as well enhancing intra-regional trade. The basin provides some of the most well-developed road and rail transport networks in the SADC region. However, it is worth noting that the basin's road and rail networks are in different conditions, with the road network linking Botswana, South Africa and Zimbabwe being generally good and tarred all round. In Mozambique, severe floods in 2000 and a prolonged civil war damaged much of the road network.

The sustainable economic development of the basin centres around the concept of integrated water resources management and development. There is need to consider both the capacity of the land and the availability of water when designing any activity.

In all the riparian countries, shortage of land, another important economic resource, is apparent, and this calls for a well-planned land redistribution process. Apparent features of land shortage are conflicts over the resource, as well as cultivation of marginal lands such as hill-tops and stream banks.

Sources for further information

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See also the CEP partners listed below.

Selected references

- Basson, M.S. 1997. *Overview of Water Resources Availability and Utilization in South Africa*. Department of Water Affairs South Africa, Pretoria
- Boroto, R.A.J. July 2000. *Limpopo River: Steps Towards Sustainable and Integrated Water Resources Management*, Department of Water Affairs and Forestry South Africa, Pretoria
- SADC/IUCN/SARDC, 2001. *A Guide to State of Environment Reporting in Southern Africa*. CEP, Maseru/Harare
- SADC/IUCN/SARDC, 2001. *A Guide To Indicators For State of Environment Assessment and Reporting In Southern Africa*. CEP, Maseru/Harare
- SADC/IUCN/SARDC, 2000. *Biodiversity of Indigenous Forests and Woodlands in Southern Africa*. CEP, Maseru/Harare
- SADC/IUCN/SARDC, 1996. *Water in Southern Africa*. CEP, Maseru/Harare
- SADC/IUCN/SARDC, 1994. *State of the Environment in Southern Africa*. CEP, Maseru/Harare
- SADC/IUCN/SARDC/World Bank, 2002. *Defining and Mainstreaming Environmental Sustainability in Water Resources Management in Southern Africa*, CEP, Maseru/Harare/Washington
- UN FAO, 2001. *Drought Impact Mitigation and Prevention in the Limpopo River Basin: A Situation Analysis*, FAO Sub-Regional Office for Southern and Eastern Africa, Nairobi
- SADC Water Sector, 1998. *Regional Strategic Action Plan (RSAP) for Integrated Water Resources Development and Management in the SADC Countries (1999-2004): Summary report*. SADC WSCU, Maseru

See also the SADC Protocol on Shared Watercourses

RAPID ENVIRONMENTAL APPRAISAL OF THE LIMPOPO RIVER BASIN

The Limpopo River Basin Factsheets are produced as part of the Rapid Environmental Appraisal of the Limpopo River Basin, and drawn from the technical report prepared for the SADC Water Sector by

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Other products in addition to fact sheets are a technical report, summary booklet and a “virtual library” of bibliographic and contacts information accessible through internet at www.sardc.net/imercsa/limpopo

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COMMUNICATING THE ENVIRONMENT PROGRAMME (CEP)

This study of the Limpopo river basin is related to the Communicating the Environment Programme (CEP), a regional partnership which seeks to inform, motivate and empower people at all levels of environmental decision-making in southern Africa, from the individual and NGOs to the private sector and governments, to take positive actions to counter environmental degradation and move towards sustainable development paths by providing them with clear, objective and meaningful information on the environment. The partnership is also to facilitate understanding and communication between environmental groups, stakeholders and decision-makers. The CEP partners produce state of the environment reporting for the SADC region, and have also produced books on water, on biodiversity of indigenous forests and woodlands, and on the Zambezi river basin. The longstanding CEP partnership of the SADC Environment and Land Management Sector (ELMS), IUCN-The World Conservation Union Regional Office for Southern Africa (ROSA) and SARDC's, I Musokotwane Environment Resource Centre for Southern Africa (IMERCSA), has been expanded to include the SADC Water Sector and the Zambezi River Authority.