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The project is jointly led by FANRPAN and ARC, South Africa.

The Challenge Program on Water and Food (CPWF)
The CPWF is a multi-stakeholder global program that aims to increase water productivity for agriculture in order to leave more water for other users and the environment (www.waterandfood.org). This project is supported by the CPWF and contributes to its goal.

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Participating Organisations

University of Limpopo · University of Pretoria · IIAM · IWMI International Water Management Institute · University of Botswana · University of Zimbabwe · Global Water Partnership · Universidade Eduardo Mondlane

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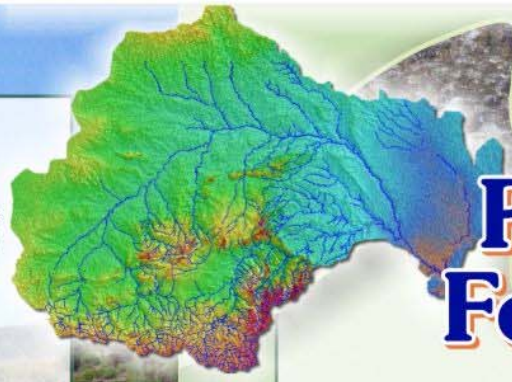

Limpopo River Basin Focal Project

FANRPAN Food, Agriculture and Natural Resources Policy Analysis Network · CGIAR Challenge Program on WATER & FOOD · ARC • LNR Excellence in Research and Development

This project will contribute to reducing poverty and enhancing food, health and nutritional security in the Limpopo River Basin by analysing the status of agricultural water use, access and productivity, and identifying opportunities for improved agricultural water management. The basin has an average rainfall of 530mm/yr, but extreme variability makes agriculture very risky, and underlies high levels of poverty and malnutrition in all four basin countries (Botswana, Mozambique, South Africa and Zimbabwe).

The total population of the basin is over 14 million. Nearly a quarter of South Africa's population and over 60% of Botswana's live within the basin. Major southern African cities within or adjacent to the Basin include Johannesburg-Pretoria, Gaborone and Bulawayo. The basin is a major location for mining gold, platinum, vanadium, iron, coal and other minerals and mines both consume and pollute scarce water supplies. Half of South Africa's electricity is generated by coal-fired plants within the basin. Large highly-capitalised commercial irrigated farms are found in South Africa and Zimbabwe, using over half the basin's water. Side by side in these two countries, the basin contains huge pockets of poverty as a result of previous policies. In both countries as well as Mozambique, large numbers of poor people try to make a living on small farms having no reliable water supply, degrading soils, and poor market access. The basin contains valuable and productive ecosystems that consist of the mangroves and fisheries of Mozambique to the Great Limpopo Transfrontier Park (e.g. the Kruger National Park in South Africa), Conservation Areas, Nature Reserves and Ramsar sites. Tourism is a major and growing activity in the basin.

In this complex environment, the potential for major expansion of irrigation is limited. However, if the four basin countries establish effective institutions, they can cooperate to improve access to water by those currently disadvantaged and help people to make productive use of scarce water while also conserving the basin ecosystems.

Location

The Limpopo River and its tributaries drain a large portion of northern South Africa and smaller portions of eastern Botswana and southern Zimbabwe before flowing southeast through southern Mozambique to the Indian Ocean

Objectives

- Promoting sustainable agricultural development for poverty alleviation
- Facilitating greater cross-border cooperation and ensuring equitable inter-country and intersectoral water allocation
- Protecting and restoring areas of environmental degradation
- Introducing technologies to optimise water productivity
- Improving access to water for multiple uses

Background

- Catchment area: Around 413,000km^2
- Rainfall: Average 530mm per annum. (Range: 200 - 1,200mm)
- Evaporation: Average - 1,970mm per annum. (Range 800 - 2,400mm)
- Water transfers: Water is transferred into the basin under 5 separate transfer schemes in South Africa
- Irrigation: Present - 244,000ha, unevenly distributed. Current over-development in South Africa, under-development in Botswana, Zimbabwe and Mozambique
- Other land use (dryland): Crops - 234,000ha; Pastures - 1,780,000ha; Forestry 455,000ha
- Population: 14 million
- Poverty indicators: Poverty rate - Average 52% of population but higher in South Africa and Mozambique

Work Packages

	Work Package	Study Objectives	Work Package Leader
1	Poverty Analysis	Improved insight into the status of poverty within the basin; its water-related causes; and opportunities for poverty alleviation	Prof Charles Mataya (FANRPAN - Malawi) cmataya@poly.ac.mw
2	Analysis of Water Availability and Access	Improved understanding of water availability and access by different users	Mr Kevin Scott (ARC) scott@arc.agric.za
3	Analysis of Agricultural Water Productivity	Analysis of agricultural water productivity at basin and detailed scales, including an assessment of potential increases and their contribution to poverty alleviation	Dr Hilmy Sally (IWMI) h.sally@cgiar.org
4	Institutional Analysis	Improved understanding of the institutional and policy context, the constraints to and opportunities for improved water management for poverty alleviation and changes needed to enable improvement	Dr Douglas Merrey (FANRPAN) djmerrey@fanrpan.org
5	Intervention Analysis	Interventions are human actions that will significantly change or contribute to changes in water availability, access and productivity	Dr Lindiwe Sibanda (FANRPAN) lmsibanda@fanrpan.org
6	Development and Application of the Knowledge Base	To maximise the benefit from new and existing insight and data through effective knowledge sharing processes. The desired outcome is significantly enhanced knowledge flow from and to agricultural producers, researchers and development agencies	Mr Terry Newby (ARC) Terry@arc.agric.za