An aerial photograph of a wide, winding river with a light-colored, sandy or silty bed. The river meanders across a vast, arid landscape characterized by deep, dark brown and purple cracked earth, indicating severe drought. The terrain is rugged and textured, with the river's path cutting through the parched land. The sky is a clear, pale blue, suggesting a bright, sunny day.

# Securing the future of the Limpopo River Basin System

An Investment Strategy and Action Plan  
for Building Resilience

## RESILIM Investment Strategy: Investing in Resilience

Crossing four riparian countries—Botswana, Mozambique, South Africa and Zimbabwe—the Limpopo River Basin is scientifically termed a “closed” system, meaning there is no more water left to allocate for abstraction, while demand continues to grow in the water-intensive industries, such as mining and energy production. Water scarcity defines the basin system, making coherent resilience building essential. The primary contributing factors to scarcity are decreasing water quantities, climate change and vulnerability to extreme weather, environmental degradation, inadequate infrastructure, urban population growth, and low levels of regional integration that result in poor transboundary water governance. The combination of these factors too frequently means there is not enough water to allocate; increasingly, it also means that water cannot reach the right place at the right time.

Geography, politics, economics, biodiversity, natural resources and people influence the system, meaning that a political or development decision in one area can have ramifications across the basin, as can climatic shocks, such as a flood event, which can multiply vulnerabilities. Coherent resilience-building is needed in almost any river basin system in the world as population pressure, urbanisation and climate change combine to place enormous pressure on renewable resources. The already water-stressed Limpopo system, located in a semi-arid sub-region characterised by relatively low levels of regional integration, needs it more than most.

The Limpopo River Basin Investment Strategy is intended as the ‘go-to’ investment guideline for all investors motivated to build **basin-wide resilience**. In effect, it is a “tool” for Basin custodians (who are also Basin investors) to deploy in directing and guiding investments towards resilience-building activities that are scalable and which aim to transform the way the basin is managed.

*Strategic and coherent investments are needed to unlock potential flows in the basin, thus enabling achievement of multiple goals of the four riparian countries.*

## Strategic Goals for Investment

The strategy aims to achieve five strategic goals within the Limpopo River Basin:

1. **Reduce the likelihood of a water crisis** in the Basin by restoring and protecting the ecosystem health of the basin’s most productive catchments
2. **Build commitments to responding to climate change** through inclusive decision-making across all levels of governance within the Limpopo River Basin system.
3. **Promote equitable access to the Basin’s key resources**, particularly water, through benefit sharing and related trade-offs at all levels of governance
4. **Optimize Basin water flows and quality** as the primary returns on strategic basin-wide investments, by restoring biodiversity and expanding its range.
5. **Promote green growth and resilient livelihoods** by stimulating employment and enterprise development through climate resilience and adaptation interventions.

## Why High Altitude Catchments?

The Investment Strategy targets High Altitude Catchments (HACs) for high impact interventions. As an increasingly scarce commodity in the basin, water poses the biggest threat to the livelihoods, economies and ecosystems of the river basin system. Generating up to 100 times more runoff per unit area than lower-lying, lower rainfall areas, the HACs (Figure 1) are an extremely valuable source of water. Thus, insuring this source of water by building long-term resilience in the Basin’s primary HACs guarantees substantial returns on investment, at the same time as providing scalable adaptation, a key criteria of some of the international climate funds.



FIGURE 1: High biodiversity, high runoff catchment areas (green) juxtaposed against lowland degraded land (red) in the Limpopo River Basin.

## A Programmatic Approach to Building Resilience

The Investment Strategy is built around **four integrated investment programs** (Figure 2) that are critical to building resilience and opening water flows in the Basin, with a specific focus on protecting the High-Altitude Catchments with in the region.

The Investment Actions are organized within a matrix according to which **domain** they belong to (e.g. data and knowledge management, institutional capacity and development, etc.) and to which **program** (e.g. Resilient Ecosystems, Enhanced Livelihoods, etc.) (Figure 3). Each Investment Program contains investments from every domain, highlighting the cross-sectoral nature of these programs and the importance of collaboration across multiple fields in order to achieve overall objectives.

FIGURE 2: Investment programs

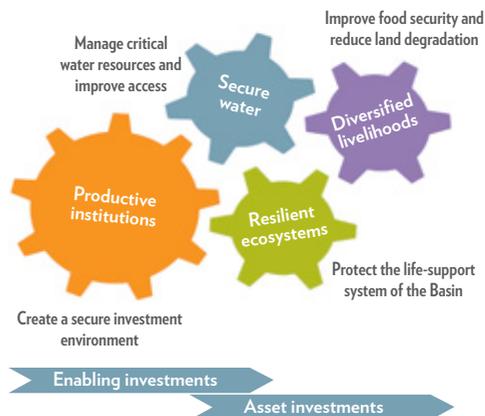


FIGURE 3: Investment Actions by Domain and Program

### Investment Action Matrix

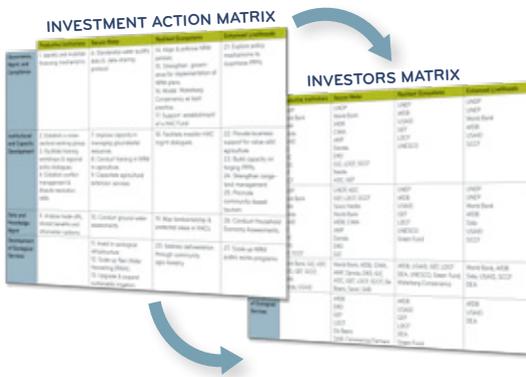
	Productive Institutions	Secure Water	Resilient Ecosystems	Enhanced Livelihoods
Governance, Mgmt, and Compliance	1. Identify and mobilize financing mechanisms	6. Standardize water quality data & data-sharing protocol	14. Align & enforce NRM policies. 15. Strengthen governance for implementation of NRM plans. 16. Model Waterberg Conservancy as best practice. 17. Support establishment of a HAC Fund	21. Explore policy mechanisms to incentivize PPPs
Institutional and Capacity Development	2. Establish a cross-sectoral working group. 3. Facilitate training workshops & regional policy dialogues. 4. Establish conflict management & dispute resolution skills.	7. Improve capacity in managing groundwater resources. 8. Conduct training in NRM in agriculture. 9. Capacitate agricultural extension services.	18. Facilitate investor-HAC mgmt dialogues.	22. Provide business support for value-add agriculture. 23. Build capacity on forging PPPs. 24. Strengthen rangeland management. 25. Promote community-based tourism
Data and Knowledge Mgmt	5. Analyse trade-offs, shared benefits and information systems	10. Conduct ground-water assessments	19. Map landownership & protected areas in HACs.	26. Conduct Household Economy Assessments.
Development of Ecological Services		11. Invest in ecological infrastructure. 12. Scale up Rain Water Harvesting (RWH). 13. Upgrade & expand sustainable irrigation	20. Address deforestation through community agro-forestry	27. Scale up NRM public works programs

## Mobilizing Financial Resources – Identifying Investors

Investors are central to the success of the strategy for securing the future of the Limpopo River Basin. Identified investors are organized in the same matrix, by **domain** and **program**. This allows Investment Actions to be matched with potential investors that are already operating within specific spheres in the region. Figure 4 demonstrates how the Investment Actions Matrix aligns with identified existing and potential investors in the Investors Matrix.

*This organization allows investors and basin custodians to select investments based on differing areas of interest and expertise*

FIGURE 4: The Investment Strategy at a Glance



Public investors and their incentives to invest in a transboundary river basin are diverse. Their incentives often relate to the developmental outcomes that result from increased and improved water flows. Development finance is broadly understood as the use of capital to spur economic activity and alleviate poverty. The established relationship between water access and developmental outcomes implies that there are opportunities for accessing development finance to fund the identified Investment Programs.

An additional incentive for public investment relates to climate change mitigation and adaptation—sources of funding for these investments are known as climate finance. The Limpopo River Basin's water issues will be exacerbated by climate change and preparing for these changes through the utilization of climate finance is an avenue for attracting public funding.

*The bundling of co-benefits of both climate finance and development finance provides an opportunity to attract investment from a number of different avenues.*

This Investment Strategy is targeted at both development and climate finance, noting that it is not always appropriate to separate development from climate change. This is particularly so in the Limpopo Basin, challenged by increases in intensity and frequency of extreme events. Finance can be tapped from both climate finance and development finance sources and blended to produce benefits that extend beyond the primary benefit. For example, an investment that diversifies livelihoods by diluting the dependence on land and water for income generation, is a significant socio-economic benefit that at the same time, produces environmental benefits from reduced land pressure, reducing land degradation and restoring biodiversity.

### KEY PRIORITY AREA 1: Adaptation Investments in the High Altitude Catchments

This Investment Strategy seeks to protect and restore **four key high altitude catchment (HAC) areas** in the Limpopo River Basin that act as water towers for the whole of the basin.

While addressing land degradation is a necessary challenge throughout the basin, prioritizing these catchment areas through a biodiversity and ecosystem approach aims to secure adequate flows of clean, fresh water downstream, while protecting biodiversity-rich areas. This strategy provides a high-impact approach to the wide-scale degradation facing the basin, while focusing on specific areas for their value in water provision. Through their protection, high altitude catchments are able to provide life-giving services, enhance the development of the riparian states, resist damage, and recover quickly from shocks.

The high-altitude catchment areas represented in Figure 1 face unique threats to the health of ecosystems and natural resources. There are many potential avenues for restoring biodiversity in the HACs—these actions focus generally on restoring degraded land and to clearing alien vegetation, while working in partnership with private landowners and communities to encourage sustainable land management. In order make the most impact with limited resources, the following actions have

been prioritised as the **three critical first steps** that will build a strong foundation for adaptation investing in the HACs, and will ensure the long-term sustainability of subsequent interventions.

- **Review, align, and enforce natural resource management (NRM) policies and revise catchment management plans** in order to strengthen implementation of existing national policy and regulatory frameworks. This action is built upon the understanding that there are frameworks currently in place that can be used to protect the high altitude catchments, but that these frameworks may not necessarily be enforced or applied in these areas.
- In order to get an accurate picture of landownership and use patterns in each of the HAC areas, it is necessary to first **map landownership and protected areas in the HACs**.

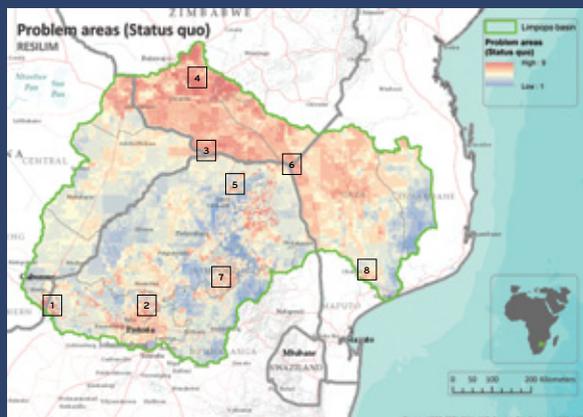
The information will be used to inform revision of catchment management plans, to identify key private stakeholders in the area, and to guide appropriate land action and management.

- **Strengthen collaborative governance for increased implementation of natural resource management plans** with the aim to secure the high altitude catchments as strategic and high value water source areas. This activity focuses on identifying key stakeholders across multiple levels of the public and private spheres, raising awareness of prioritizing the restoration and conservation of high altitude catchment areas as a high impact intervention, and building coalitions between stakeholders for dedicated implementation of natural resource and catchment management plans and the community level.

## Making Targeted Investments for Basin-wide Resilience

The RESILIM Risk and Vulnerability Assessment highlighted resilience action areas representative of high climate vulnerabilities, as well as defined by low adaptive capacity, inadequate infrastructure, dense populations and weak institutional arrangements. These resilience action areas

map closely with nodes of high environmental degradation, as well as with the High Altitude Catchments of the Basin. Throughout the Investment Strategy, these areas are targeted in order to maximise impact on provision of ecosystem services and on livelihoods.



**FIGURE 5: Eight highly vulnerable areas identified as resilience action areas across the Limpopo River Basin:**  
 1) Upper Limpopo, 2) Pretoria North – Moretele, 3) Shashe – Limpopo river confluence, 4) Upper Umzingwane, 5) Soutpansberg, 6) Pafuri Triangle, 7) Middle Olifants and 8) Lower Limpopo – Chokwe

### KEY PRIORITY AREA 2: Developing Mechanisms for Transboundary Investments

Financing the Investment Actions is a major undertaking and will require a variety of financing sources and financing mechanisms. There are

currently investors in the Limpopo River Basin, yet their activities are generally not conducted in a programmatic manner, nor are the financing flows sufficient for the challenges facing the basin.

An effective mobilization of financial resources requires a financing strategy that identifies sources of financing, financing vehicles and

necessary funding. The success of this process depends on a number of factors, including the 'readiness' of the investment environment (Box 1), as well as the degree to which investments are 'matched' with investor's priorities and agendas.

Resource mobilization in a transboundary context is different from sourcing funds at a national level—a key challenge to developing a financing strategy for the basin. There are major barriers to under-capacitated countries, but even more so in the context of a transboundary River Basin Organization. Therefore, a financing strategy will need to carefully identify the institutional capacity requirements necessary at the transboundary level to ensure a truly transboundary program.

However, even if this capacity remains absent at the transboundary level, there are still actions that can be taken at a national level to ensure progress is made:

- **Identifying and mobilizing financing mechanisms from riparians and development partners** is essential for accessing and blending multiple sources of climate and development finance for implementation. Creating a transboundary river basin fund may be a long-term goal for the Limpopo River Basin; however, national and regional mechanisms for channelling funds should be identified for financing projects in the short-term.

- **Support the establishment of a High Altitude Catchment (HAC) fund** that will leverage collective investment for HAC implementation actions. While all HACs are located in one or other riparian country (mostly in South Africa), the benefits of effective HAC management accrues to other countries and the consequences of poor management impacts negatively on neighbouring countries and the basin.
- **Facilitate HAC investor and management dialogues** to ensure alignment of management approaches and funding with HAC priority needs. HAC investor dialogues are needed to both identify priorities, such as removing alien invasive species in the HACs, and in monitoring impact and progress in securing and/or maintaining these high value catchments.
- **Explore policy mechanisms that incentivize public-private partnerships (PPPs)** in order to increase and diversify private sector investment in water resource, agricultural, and environmental services. Strengthening the science-policy-finance interface and scoping the opportunities for diversifying livelihoods (e.g. water treatment, rain water harvesting, and disaster risk reduction) will identify entry points for private investors.

### BOX 1: What is an “investment ready” environment?

Establishing an “investment ready” environment, an investment requirement in itself, means that riparian governments will be able to accelerate the implementation of Investment Actions, as well as enhance country ownership of their own climate and development agendas. Ownership is demonstrated through clear prioritization of climate relevant mandates and strong water stewardship, and reinforced by regular evaluation. Riparian countries and the river basin organization needs investment support specifically targeted at creating the right conditions for attracting finance.

For the riparian countries that face multiple demands for water, the reality of limited resources and capacities heightens the need to identify the most important steps that they can take now to build an enabling environment for financial stability and low-risk investments. These essential “critical conditions” for investment readiness are:

- Politically-endorsed inter-ministerial and cross-sectoral institutional arrangements;
- Coherent, aligned investment planning across all domains;
- Established policy incentives for leveraging partnerships and resources; and,
- Strong and climate-integrated public finance systems that can report on progress

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