

SHARED RIVERS INITIATIVE: Supporting the wise use of southern Africa's waters

Over the past decades, integrated water resource management (IWRM) has gained prominence as a powerful water management concept. It is an idea that promotes the equitable and sustainable management of a catchment by all who live and share its waters. A closer look at a current research programme aimed at testing IWRM in practice reveals that implementation is much more complex than initially thought.



The Letaba River is one of the study rivers in the Shared Rivers Initiative.

Lant van Vuuren

Emerging concerns regarding the sustainability of South Africa's water resources contend that despite world-acclaimed legislation, such as the National Water Act (NWA), the ecological condition of the country's river systems – many of which are transboundary – continue to deteriorate.

On the one hand many recognise that at the very least, developments are taking longer than expected to take effect, and an 'implementation lag' is to be expected. On the other hand, with varying degrees of empathy or frustration, stakeholders express the view that government is unable, or even unwilling, to enforce legislation and water users, acting with impunity, take as much as they want. Undoubtedly the reality lies somewhere in between.

There is much that can be shared and learnt between South Africa and its neighbours. The Lowveld river basins, for example, are all shared between neighbouring states. Each country has to achieve their own important resource management and water supply priorities within their portions of their basins.

Each also faces a similar set of needs and challenges in its attempts to balance social development imperatives with management for resource sustainability. There is a clear need to harmonise management and decision-making within relevant institutions and between neighbours to ensure fair and effective policy implementation.

From these concerns has emerged a research programme known as the Shared Rivers Initiative, a transboundary project that aims to understand and effect change in the implementation of policies and legislation relevant to the wise use of the Lowveld river systems. The programme now in its second phase, is led by the Association for Water & Rural Development (AWARD) and is funded by the Water Research Commission (WRC).

ESTABLISHING THE SUSTAINABILITY OF LOWVELD WATER RESOURCES

As part of Phase I of the Shared Rivers Initiative, AWARD undertook a preliminary assessment of the status of sustainability of the water resources of the Lowveld and the factors that constrain or contribute to this, in order to provide a grounding from which the project was able to design and implement real change. Investigations were carried out in six major river catchments (Levuhu, Letaba, Olifants, Sabie-Sand, Crocodile and Komati). The results of this study are captured in the report, *The Shared Rivers Initiative Phase I: Towards the sustainability of freshwater systems in South Africa* (WRC Report No. TT 477/10).

The investigation did not uncover a rosy picture. Of the Lowveld Rivers investigated, none met the Reserve requirements in terms of river flow. In fact, with the exception of the Sabie River, the situation was found to be generally worse than when the NWA was promulgated in 1998. In many cases, water quality also seemed to have deteriorated. However, some signs of a welcome turnaround were evident, certainly in the Crocodile Catchment which falls in the Inkomati Water Management Area, where new IWRM approaches were due to come online, with water resource classification already underway.

Familiarity with the Reserve was found to vary widely, being better in the Inkomati Water Management Area (WMA) than in the other WMAs, where it was generally weak. Perceptions were often negative: there was a tendency to believe that the Reserve was intended to benefit the Kruger National Park to the exclusion of other stakeholders; the task of interpreting and operationalising outputs from a Reserve determination study tended to evoke

frustration among water managers.

Importantly, the study underlined the importance of a lawful catchment-based system in which water use is authorised, regulated and monitored against the Reserve requirement. This requires not only adequate resources and skills for compliance monitoring and enforcement, but also the involvement of stakeholders in the monitoring, reporting and rectification of transgressions.

Each catchment experienced cases of unlawful water use, often related to issues of municipal and mining expansion and of effluent control. Monitoring and regulation were generally inadequate and lacked coherency. There was a dearth of legal and regulatory support. Owing to the open and unpredictable nature of complex systems, such systems cannot, however, be managed only from the outside.

Self-regulation therefore becomes essential. Throughout all the catchments studied, some degree of self-regulation was evident, especially among established users who share a limited resource. Cases of effective self-regulation provide ideal opportunities for future mentorship programmes.

The Phase I study pointed out that meeting of commitments to the Reserve requires the transformation of policies and practices beyond

Lake Funduzi, in the Levuhu River catchment, is besieged with sedimentation problems due to improper land-use practices.



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water conservation and protection. It needs to be embedded in IWRM and requires the collective contribution and synergies of a number of strategies, plans and practices. Progress towards this complex goal was found to vary widely between catchments studied and at different scales examined.

Factors responsible for shortcomings were documented and provide a sound basis for making necessary changes to policies and approaches. Likewise, cases where system resilience was found to be strengthening – especially through collective action, good governance, strong leadership, feedbacks, learning and regulation, offer lessons for weaker situations.

MOVING INTO ACTION

Building on the knowledge gleaned from the Phase I study, a second phase of the Shared Rivers Initiative is now underway. The main objective of this project

is to develop a dynamic synthesis of the reasons for the lags in the implementation of the NWA, focusing on the Reserve. It will not be a blueprint for solving the problem, but it will provide the principles and framework to guide water practitioners and managers in solving context-specific problems.

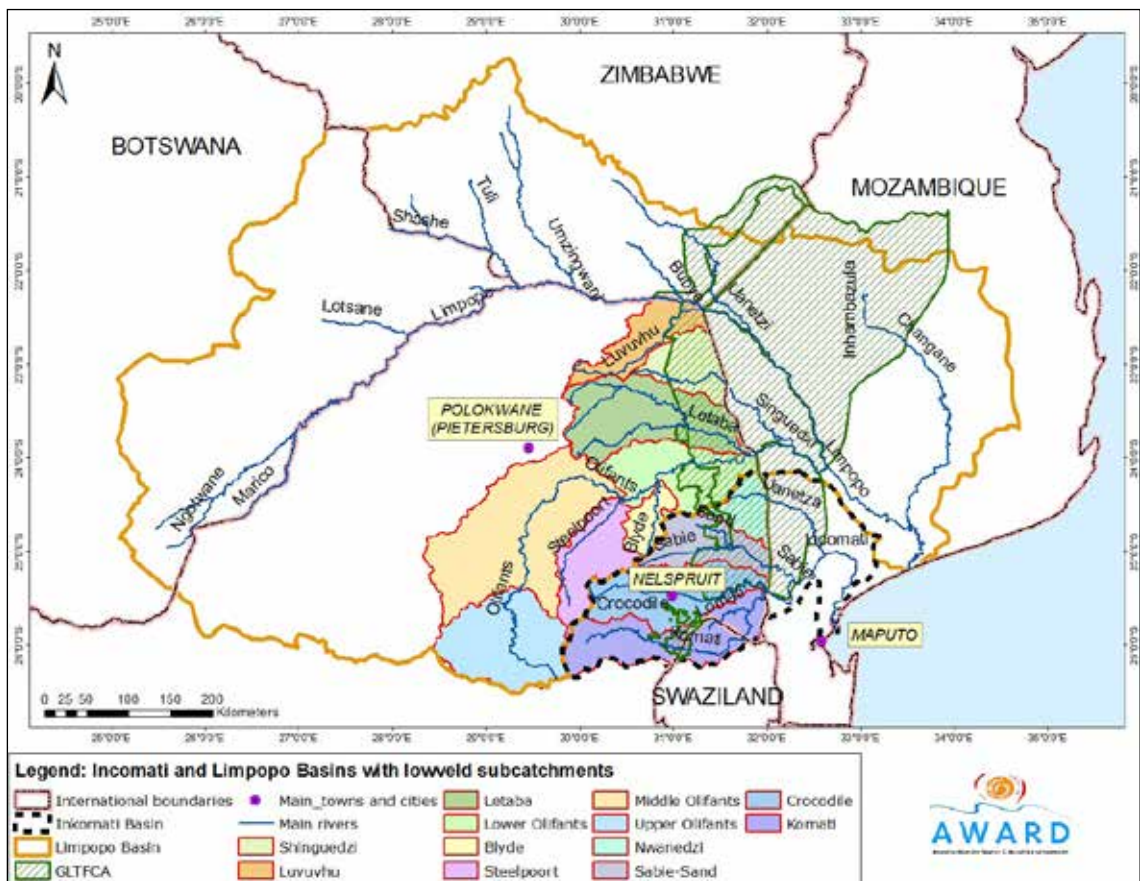
Key to the programme is building of capacity among the people involved in all levels of water resource and service management (relevant spheres of government, agriculture, mining etc.) through action research. A means of working in this study is through collective action, networking, self-organisation and practice-based feedback loops, the aim being to develop these features where they do not already exist. It is anticipated that this will be a collaborative process and some of the outcomes will need to be negotiated.

An important deliverable of Phase II of the Shared Rivers Initiative is to

evaluate the application of legal practices and procedures with compliance with the NWA (with a focus on enforcement and unlawful use) and other legislation related to ensuring sustainability of water resources. It is expected that the output of this study, which was recently completed, will assist government in strengthening its monitoring programmes and prosecution of defaulters.

The legal component has four inter-related areas of activity:

- To undertake foundational legal research around sustainability and enforcement issues related to water resources;
- To undertake a regulatory support project focusing on legal issues related to compliance monitoring and enforcement;
- To document legal case studies and/or focused in depth studies that affect sustainability of water resources, with a focus on compliance, sustainability and/or enforcement; and



The study area, which comprises six major rivers of the South African lowveld.

- To develop professional interest and capacity in water law through the integration of law students in every aspect of the legal component.

Within the context of the NWA non-compliance with the law will directly lead to unsustainable management of the nation's water resources. Consequently, the link between compliance, enforcement and sustainability of the nation's water resources is not difficult to conceptualise.

MAIN FINDINGS

Several key findings emanate from the legal component of the study. Firstly, it was found that the dearth of legal cases stemming out of the NWA provides little guidance on what constitutes non-compliance with respect to key components of the NWA – such as the classification of resources or the delivery of the Reserve – resulting in uncertainty as to how alleged non-compliance with NWA actions can be litigated in court.

Although court decisions related to sustainability and equity are helpful to understand non-compliance with the NWA, there are few court decisions that directly touch on the NWA implementation issues. Consequently, a lot of uncertainty remains regarding what would constitute non-compliance with important components of the NWA, such as classification of water resources, the setting of resource quality objectives, the finalisation of verification and validation, compulsory licensing, and implementing measures to achieve Reserve determinations. Uncertainty also exists as to how one might prepare a court case which alleges non-compliance with respect to the various components of the NWA.

Secondly, there was found to be a poor understanding of the difference between assignment and delegation of functions to catchment management agencies (CMAs), the latter which is an integral part of IWRM in South Africa as it seeks to decentralise water

resource management. Due to conflicting viewpoints around the assignment and delegation of functions to the CMA and the role the CMA should play in water management, the two CMAs that have been established are far from undertaking the amount of functions that the NWA envisions for them.

Thirdly, the study has shown that regulators undertaking enforcement activities related to water resource protection require substantially more support from within government departments, other government departments and non-governmental organisations. The project reviewed the immense number of challenges on the road leading to an acceptable level of enforcement in order to protect South Africa's water resources and to enable compliance with the NWA.

The research demonstrated that the regulators themselves have a solid understanding of and agree on the main issues facing them. In many instances, they have offered legitimate solutions to tackle these issues. However, as the project team points out, without understanding the underlying causes for the issues that participants identified and how these affect each other, it will be difficult to devise solutions and take meaningful actions to improve enforcement.

In the catchments studied local authorities were found to be major violators of the NWA, with cooperative government requirements making it difficult for the other spheres of government to hold them accountable. Municipalities are critical to ensuring compliance with the NWA and ensuring the implementation of IWRM actions. On the one hand, they can be major violators through mismanagement of wastewater treatment plants, approving unlawful developments, and abstracting water without authorisation. On the other hand, because they have environmental-related powers and responsibilities pursuant to the Constitution, municipalities can also be a major player in promoting compliance with



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environmental laws.

Lastly, the study recommends that the Water Tribunal's legal mandate and rules under the NWA need to be amended so as to address shortcomings to its functioning as an independent, efficient and expert administrative tribunal. Despite almost ten years since its inception, there is sparse literature reviewing the Tribunal's decisions, its effectiveness in carrying out its mandate and whether its mandate is adequate to enable it to appropriately fulfil its functions as required by the NWA.

Phase II of the study will conclude this year. It is expected that the knowledge gained through the Shared Rivers Initiative will go a long way towards improving cooperative management within South Africa and of the region's transboundary river systems. The latter aspect will be key to Phase III of the study, to be launched later this year. □

A group of farmers in the Sand River catchment learn about the importance of catchments and the role of planning at this level for sustainable water resource management.