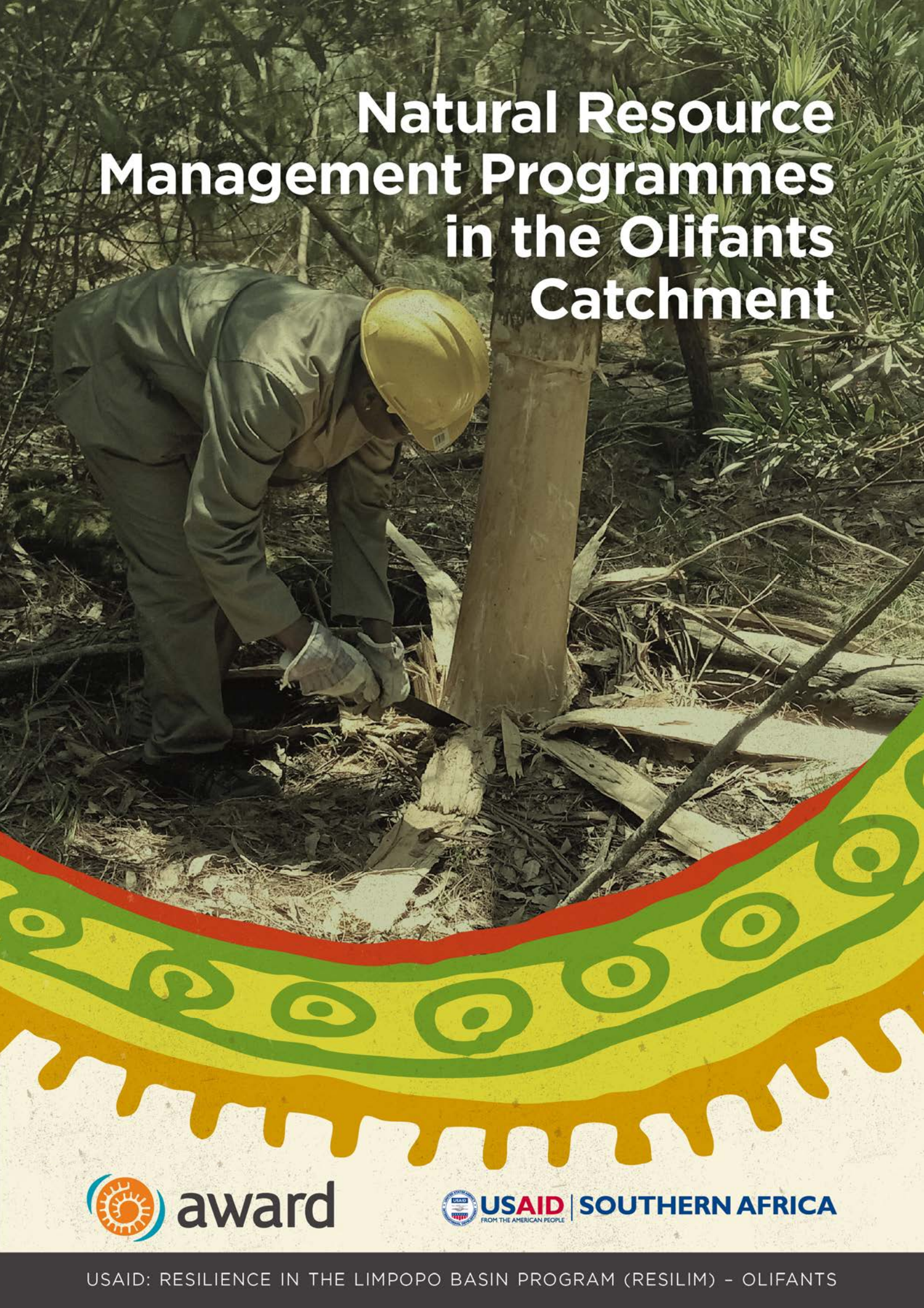


# Natural Resource Management Programmes in the Olifants Catchment



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# Acronyms

CSIR	Council for Scientific and Industrial Research
DAFF	Department of Agriculture, Forest and Fisheries
DEA	Department of Environmental Affairs
EPWP	Expanded Public Works Programmes
GIS	Geographic Information System
HAT	High Altitude Teams
MTPA	Mpumalanga Tourism & Parks Agency
NRMPs	Natural Resource Management Programmes
SANParks	South African National Parks
WfW	Working for Water
WoF	Working on Fire



# Introduction

The Olifants River catchment contains many high-priority biodiversity areas. However, many of these areas, particularly wetlands, riparian zones and areas adjacent to forestry plantations, are being threatened by invasive alien plant species and soil erosion.

Several government-initiated Natural Resource Management Programmes (NRMPs) focus on clearing invasive species and restoring degraded land within the Olifants River catchment. These NRMPs form part of the Expanded Public Works Programme (EPWP), a nationwide government programme aimed at creating labour-intensive employment and skills development for previously disadvantaged people, thereby contributing to poverty alleviation and economic empowerment. Programmes currently operational include Working for Water, Working on Fire, Working for Wetlands and Working for Land.

With their potential to simultaneously contribute to improved natural resource management and socio-economic empowerment of vulnerable communities, the NRMPs are directly relevant to the goals of the RESILIM-O programme. However, published studies as well as experience on the ground suggest that NRMPs have not always delivered the promised benefits in practice. The reasons for these failures are complex, involving biological, social and institutional factors which vary from place to place - exactly the kind of problem that could benefit from RESILIM-O's systemic and collaborative learning approach to building resilience.

In 2014, RESILIM-O conducted a preliminary assessment of the NRMPs in the Olifants catchment to understand how these programmes can be supported or improved so as to enhance the resilience of both ecosystems and people. So far, the focus has been on the lower part of the catchment from the escarpment to the border with Mozambique, and on NRMPs involved with clearing of invasive alien plants, because several such programmes are well established in this area. This may be expanded to other types of NRMPs and other parts of the catchment in future.

## Overview of NRMPs in the Lower Olifants

In the Lower Olifants, alien plant clearing is performed primarily by Working for Water (WfW) and Working on Fire High Altitude Teams (WoF HAT) (see Figure 1). Within National Parks the Biodiversity Social Projects section implements WfW projects. In the Kruger National Park portion of the Olifants catchment these projects are mainly focused along the Olifants River and its tributaries (including buffer zones upstream of the park). The Mpumalanga Tourism and Parks Authority (MTPA) is in the process of taking over full responsibility for management of these projects from SANParks.

Three WfW regions overlap with the Olifants catchment, namely those of Mpumalanga, Limpopo and Gauteng. WfW in the Limpopo region has four management areas with two (Tzaneen and Groblersdal) overlapping with the Olifants catchment. The Groblersdal management area contains 5 projects, which all fall completely within the Olifants catchment. Tzaneen management area contains 8 projects, with 4 of these overlapping with the catchment. In Mpumalanga, two management areas (Lowveld North, Highveld) overlap with the catchment, with about four projects falling within the catchment. The Gauteng region has a different organisational structure, with much of the work implemented by external agents. Currently, WoF HAT has 101 beneficiaries in the Olifants catchment, with 4 teams working in Lekgalameetse reserve and 6 in the Blyde river catchment. It is clear that there are three clusters of activity within the lower Olifants: two along the escarpment (Lekgalameetse Nature Reserve in the north and the area around Pilgrim's Rest in the south), and one within and adjacent to the Kruger NP. Two different regional offices of WfW and WoF are involved (Limpopo and Mpumalanga), as well as the MTPA and SANParks.

Initiated by the (then) Department of Water Affairs and Forestry in 1995

WfW appoints contractors (via a bidding process) who then appoint teams of 11-15 workers. Worker selection must be in line with the EPWP criteria which stipulate that 60% of the programme's beneficiaries should be women, 25% youth and 2% persons with disabilities.



Focuses on management and control of invasive alien plants along watercourses, to enhance the conservation of water and other natural resources as well as to promote socio-economic development as part of the government's Expanded Public Works Programme.

Implemented nationwide, across all provinces which are referred to as regions. Regional boundaries roughly correspond to provincial boundaries, with some adjustments made according to catchment boundaries. These regions are further scaled down to Management Areas, which themselves contain multiple projects with defined project areas.

Teams are primarily trained in fire fighting and advanced search and rescue. However, High Altitude Teams (HAT) of highly trained workers also use twin rope access techniques to remove invasive plants from inaccessible areas and steep slopes (i.e. areas deemed too dangerous for normal WfW clearing teams).

The HAT programme has fewer beneficiaries than WfW because the programme requires strong, motivated people with a high level of fitness and extensive training



Addresses the prevention and control of wildland fires to enhance the sustainability and protection of life, property and the environment through the implementation of Integrated Fire Management practices.

WoF is a national project, often working hand in hand with the Working for Water programme and conservation authorities.



# Challenges facing NRMPS in the region

During our engagements so far with NRMP personnel at different management levels, a number of challenges have been noted. Many of these are very similar to those identified in the literature, although local context additional facets and complexities.

## 1. Lack of Coordination across Regions & Programmes

Despite the effort put in so far by government to ensure institutional alignment, coordination is still a major challenge, both vertically and horizontally within the NRMPS, and between NRMPS and other agencies involved in natural resource management (conservation, water, and agriculture agencies) and social development. Relationships between the NRMPS are reported to be weak and limited mainly to a few individual relationships. This results in duplication of effort and failure to take advantage of potential synergies between projects. Realignment of regions to provincial boundaries rather than catchment boundaries has also negatively affected prioritisation and implementation. So far coordination and alignment across provincial boundaries has not been fully and coherently addressed. The prioritisation models and processes used by the WfW programme were designed to inform planning and funding allocations at quaternary catchment scale within the regions. Since criteria and weightings were done independently for each region, and alignment across regions was not included explicitly as a criterion (as it is in the provincial systematic conservation plans), priority areas across regional boundaries often do not align. An example of this is the Steelpoort catchment, where the lower part of the catchment (in Limpopo) is considered a priority for alien clearing, while the upper part of the catchment (in Mpumalanga) is not. This goes against the general catchment-based clearing approach of WfW, which states that catchments should be cleared from the top downwards. An adaptive management approach, with a monitoring and evaluation system which is able to effectively assess outcomes and facilitate learning, may be essential for achieving the ongoing coordination needed for successful implementation of NRMPS.

## 2. DEA Bureaucracy

Currently, delays in finalising contracts disrupt planning and performance, and lead to time pressures within individual projects. Implementation teams tend to respond to this pressure by hiring more workers, but investing less in each. This practice tends to dilute the impact of the programme on livelihoods and skills development. A longer-term contract system (e.g. 3 years) could assist in this regard.

## 3. Human Resource Issues

Staffing issues are a problem, particularly within the Mpumalanga regional office of WfW where key operational positions such as Area Manager, Implementation Manager, Project Coordinator and GIS Coordinator are all vacant, seriously constraining the ability to implement alien clearing projects successfully. The Limpopo regional office, on the other hand, has almost a complete structure with all the core positions occupied. Interestingly, Mpumalanga has more budget than Limpopo but cannot appoint staff because expenditure on employment is already considered too high. The prioritisation process led by the CSIR<sup>1</sup> identified a need to move clearing efforts from the Lowveld to the higher priority areas on the Highveld. This has had a number of implications for the Mpumalanga region, including pressure (and a possible court case) to keep the contracts and team from the Lowveld, as well as pressure to take workers from the new areas. These human resource issues have significantly slowed progress on projects

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<sup>1</sup> Forsyth et al. (2011). *Prioritising Quaternary Catchments for Invasive Alien Plant Control*. CSIR, Report numbers: CSIR/NRE/ECO/ER/2011/0029/B (Gauteng), CSIR/NRE/ECO/ER/2011/0030/B (Limpopo) and CSIR/NRE/ECO/ER/2011/0031/B (Mpumalanga).



*Lantana Camara*  
Problematic Alien invasive



#### 4. Lack of Interest by Beneficiaries

Another issue that has been identified is that local people are often not particularly interested in being involved in NRMP work. In mining and urban areas in the upper part of the catchment, potential beneficiaries of NRMPs often prefer to work in other sectors. In a Witbank NRMP project run by Mpumalanga WfW, these job conflicts are reported to be drastically affecting the project. Local communities say they are not “*bulldozers to kill trees*”, and that they prefer to work in the mines. This has left project managers with no choice but to move the project to rural areas.

#### 5. Uncertainty over the Social Benefits of Programmes

Social development is an integral part of the NRMPs. The EPWP M&E framework stipulates that cross-sectional surveys of contractors and beneficiaries must be conducted at the end of each project cycle (in years one, three and five) to determine the impact of the project on biodiversity, the impact of income transfers on beneficiaries and their households, the impact of assets created, and the relevance and quality of training. Furthermore, a longitudinal survey must be conducted six months after beneficiaries exit the EPWP and a further six months thereafter to assess whether employment or self-employment occurred after exiting the EPWP and to determine longer-term impact of income transfers and training. However, with the current available information, it is not clear whether such surveys have been conducted by DEA.

Stronger efforts to record and publicise the social benefits arising from NRMPs could be hugely beneficial in stimulating interest in these programmes among local communities, as well as helping to create realistic expectations.

#### 6. Involvement of Local Authorities & Other Stakeholders

Local political interests play an important role in rural development. NRMPs therefore need to work with corporates, community-based organisations and traditional authorities and not just individual beneficiaries, to create longer-term benefits and stimulate local people’s interest in natural resource management.



## Blyde River Catchment

The upper Blyde River catchment provides a good example of the complex challenges affecting NRMPs. This catchment is one of the highest known plant diversity areas in the lower Olifants and contains many endemic species. The Mariepskop complex alone has over 1,400 plant species. However, a large portion of the catchment is under severe threat from afforestation and the spread of alien invasive plants including Pines (*Pinus* species) and Bluegums (*Eucalyptus* species). In 2006, a comprehensive plan was finalised for the state (the then Department of Water Affairs and Forestry) to exit commercial forestry operations in this area and to transfer 5 state forest plantations (Mariepskop, Salique, Hebron, Welgewonden, and Onverwacht) into the proposed Blyde River Canyon National Park.

This 2001 cabinet decision was motivated by the need for improved fiscal discipline by the state, as well as by the conservation merits of the land. A comprehensive rehabilitation plan was developed, which included detailed guidelines for restoring the different vegetation types in different topographical settings. It was noted that achieving successful conversion and future sustainable forest management would require commitment by, and coordination between, several different groups, including the (then) Department of Agriculture and Land Administration, Working for Water, Working on Fire, the Department of Water Affairs and Forestry (DWAF), Mpumalanga Parks Board, surrounding communities and Traditional Authorities.

Unfortunately, the plan was never implemented, and today abandoned plantations pose a severe threat to biodiversity conservation, both through spread of invasive alien species, and through secondary effects such as soil erosion where plantations have been clear-felled or burnt.

The lack of weed control and plantation maintenance over the last few years has substantially increased the rehabilitation backlog, the cost, and the difficulty of access because the weeds have grown larger, require more herbicide to kill, and release more seed into the environment. The situation in the upper Blyde provides substantial opportunities for NRMPs. However, the coordination between the different programmes and projects is less than optimal, partly because the integrated rehabilitation plan was never implemented and no coordinator was appointed to oversee the process.

RESILIM-O is becoming involved with the various agencies involved in running NRMPs in the area (WfW, WoF, MTPA), as well as DAFF and local communities, to help facilitate a shared vision, cooperation and learning among the various stakeholders.





# award

The Association for Water and Rural Development

AWARD is a non-profit organisation specialising in participatory, research-based project implementation. Their work addresses issues of sustainability, inequity and poverty by building natural-resource management competence and supporting sustainable livelihoods. One of their current projects, supported by USAID, focuses on the Olifants River and the way in which people living in South Africa and Mozambique depend on the Olifants and its contributing waterways. It aims to improve water security and resource management in support of the healthy ecosystems to sustain livelihoods and resilient economic development in the catchment.

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## About USAID: RESILIM-O

USAID: RESILIM-O focuses on the Olifants River Basin and the way in which people living in South Africa and Mozambique depend on the Olifants and its contributing waterways. It aims to improve water security and resource management in support of the healthy ecosystems that support livelihoods and resilient economic development in the catchment. The 5-year programme, involving the South African and Mozambican portions of the Olifants catchment, is being implemented by the Association for Water and Rural Development (AWARD) and is funded by USAID Southern Africa.

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