

Management, tenure issues threaten Limpopo smallholder irrigation schemes



While it is recognised that smallholder irrigation schemes can make a contribution towards alleviating household food insecurity and poverty levels in South Africa, examples of vibrant and successful schemes remain relatively few. In addition to the challenges of management and infrastructure maintenance smallholder irrigation plot holders are now also facing a new threat in the form of land grabs.
Article by Lani van Vuuren.

Lerato* is part of the 200 000 farmers and their families that make a living off the country's 300 or so smallholder irrigation schemes. Her family has worked the land at Dzindi Irrigation Scheme, in Limpopo's Vhembe district, since 1954, and while she does not own the land she does have permission to occupy and use it, according to the certificate in her possession.

So imagine her surprise when arriving at her plot one day to tend her maize, she found instead of

plants the foundations of a house. Even more surprising was that the new land 'owner' could show a deed of sale allegedly given to him by the local municipality. Lerato had just been the latest victim of a land grab – a new trend that is threatening the already precarious livelihood of plot holders at Dzindi Irrigation Scheme.

The issue of illegal occupation and urban encroachment is but one of the challenges standing in the way of smallholder irrigation

*Not her real name

scheme vitality uncovered during a recently published research study undertaken by the Department of Crop and Animal Sciences of the Tshwane University of Technology (TUT) and the Agricultural Engineering Institute of the Agricultural Research Council. Funding for the five-year study, which focused on mainly smallholder canal irrigation schemes in Vhembe was provided by the Water Research Commission (WRC).

According to the final report, *Improving plot holder livelihood and scheme productivity on smallholder canal irrigation schemes in the Vhembe District of Limpopo Province (Report No. TT 566/13)*, the root of the problem appears to be the trust tenure system, which prevails at most of the irrigation schemes in Vhembe. Trust tenure is regarded as the least secure of all systems applied to African land holding, the report points out.

OVERCOMING INSECURE TENURE

In a trust tenure system, land belongs to the state and land use rights are awarded and regulated

by the state. Originally (prior to 1994) these regulations were strictly enforced and managed all aspects of plot holders' lives, from the time they were allowed to be absent from the scheme, to what they planted and when, and that they had to provide labour to maintain the irrigation works infrastructure. Disobeying any part of the regulations meant immediate eviction.

Following South Africa's democratisation the trust tenure system prevailed at schemes at Dzindi, however enforcement of the terms and conditions for occupation were notably relaxed. While this has removed many of the anxieties plot holders had in the past about losing the user rights over their irrigation plots, it has inadvertently also contributed to the deterioration of conditions on the scheme.

In addition, plot holders have seemingly lost their exclusive rights to use the land surrounding the irrigation scheme. At Dzindi, commonage land has been excised for residential purposes, bringing residential developments onto the commonage of the scheme. Township areas are now extending into canal areas, and basic housing has

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been constructed on commonage land. This is rapidly reducing the size of the land resource.

It now appears that the municipality has even demarcated plot land for residential purposes. When plot holders turned to their local chief for support they found that he too was allegedly grabbing land belonging to the irrigator community. "The WRC study has found that various power groups, both traditional leadership and local government have been grabbing land from this smallholder community," reports Prof Wim van Averbek of TUT and WRC project leader. "It is a great shame. The victims of past land policies are becoming victims once more."

When Lerato confronted the municipality she was told that the person who had built his house on her plot was in possession of a legal document that entitled him to his stand, and that even if the matter went to court, she would never win the case. "Now that the house is

The main farming system on smallholder irrigation schemes involves the production of maize and vegetables, both of which could be used for own consumption or sales.



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almost ready, I have problems getting a tractor to enter what remains of my plot, because the house has closed off access. I now have to ask my neighbour for permission to have the tractor drive over his plot every time I want to plough some land.”

The conflict over land at Dzindi is not unique. Similar issues have been reported at Palmaryville, close to Thohoyandou. According to Prof van Averbeke, the issue of urban encroachment on irrigation land is bound to affect schemes that become part of peri-urban areas as a result of urban expansion. “In these circumstances, the value of land increases greatly, because people are looking for residential land. On the other hand, such locations are extremely favourable for farmers, because of the closeness of substantial markets for their produce.”

Indeed, the degree of commercialisation on smallholder irrigation schemes in Vhembe was found to be associated directly with the location of schemes in relation to local urban

centres. As distance between scheme and urban centre increased, farmers were less likely to produce for marketing purposes. “Smallholder schemes of about 50 plots of 1 to 2 ha located close to towns or cities generally have the best potential to generate livelihoods linked to food value chains, particularly those involving perishables and semi-perishables,” maintains Prof van Averbeke.

In Limpopo, registered smallholder irrigation schemes fall under the Department of Agriculture, the report points out. “This department represents the state, which is the owner of the land. It is therefore the mandate and duty of that department to protect the community of registered occupants against land grabs and other forms of interference by outsiders that infringe on the user rights of the legitimate occupants of this scheme. Without this protection, the land rights of the plot holder communities are very vulnerable.” Prof van Averbeke further points out

that zoning could go a long way to halt land grabs.

IMPROVING MANAGEMENT

Lack of effective management of smallholder irrigation schemes in Vhembe has not only led to illegal occupation of farm land. It has also had a marked effect on the productivity of schemes. “Scheme management, of which water distribution and routine maintenance of the system are central, depend on a rule system and collective action in adhering to that system,” explains Prof van Averbeke. Few of the schemes investigated by the research team had such a management system in place. On the schemes that did have a management system it was generally not enforced.

On schemes where little to no management takes place, infrastructure is allowed to deteriorate rapidly. In addition there is a lack of proper scheduling of irrigation, leading to



A street trader buying green maize at Dzindi canal scheme. Most marketing of farmers' produce are in the hands of street traders.

upstream farmers extracting more than their share of water, leaving too little for those farmers situated downstream of the irrigation canal.

At Dzindi the project team discovered large holes, cracks, misalignment and missing sections along the main canal, causing leakage. Aqueducts and sections of the canal that passed under bridges were of particular concern. Canal water was also lost due to the absence of or poor working order of the gates regulating the flow of water. Plots located at the tail end of the canal received too little water to enable effective short furrow irrigation.

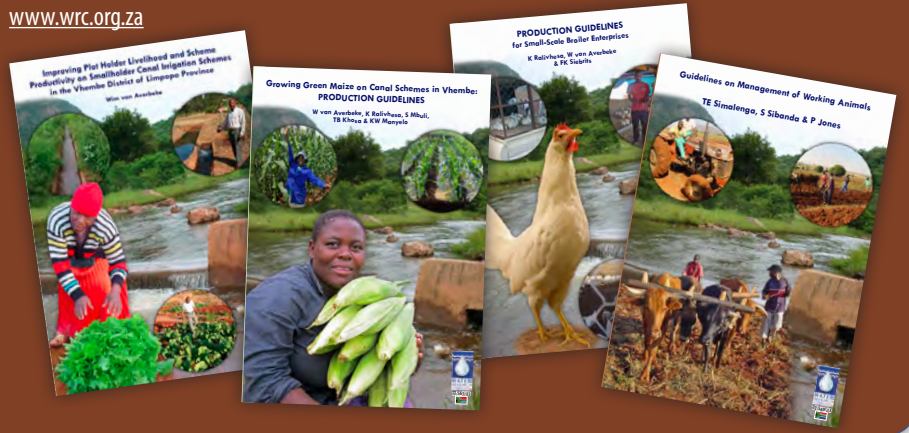
It was further found that of the 48 smallholder irrigation schemes investigated only 27 had a water license issued by the Department of Water Affairs. Payment for water occurred at only 17 schemes, but water was paid for by the Limpopo Department of Agriculture, not the farmers themselves.

It is important that this be improved, the report points out. "Government support for refurbishment of degraded parts of the system could be made conditional to the revitalisation of the rule system and related collective action," notes Prof van Averbeke. "Government should also monitor the collective action, especially routine maintenance. The report presents a simple procedure based on visual observations that could be used to objectively monitor routine maintenance of canal systems by plot holder communities."

According to Dr Gerhard Backeberg, Executive Manager of Water Utilisation in Agriculture at the WRC, while the findings of the study were not necessarily surprising, the consequences of the underlying causes for underperformance are a major concern. "Management deficiencies and problems with tenure are interrelated and require decisive interventions. Tenure reform is essential to ensure tenure security at smallholder irrigation schemes, while priority attention should be given to improving the knowledge

WRC SMALLHOLDER IRRIGATION REPORTS

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and skills of smallholder farmers. This will provide incentives for individual farmers and groups of farmers to better manage the plots and schemes to the best of their capabilities."

PRODUCTION GUIDELINES

The most common farming system found on the schemes investigated involved maize. As part of the WRC project a production guideline was produced for the growing of green maize aimed specifically at farmers on these schemes. For this part of the project Prof van Averbeke and his students spent much time in the field conducting experiments.

"The work on green maize was of particular interest to farmers. Farmers' days were held to demonstrate the objectives of the experiments as contained in the treatments, and to demonstrate and discuss the effects of particular treatments," Prof van Averbeke reports. In addition, a production guideline for small-scale broiler enterprise and guidelines on the management of working animals have also been produced.

WAY FORWARD

The report has highlighted important issues in the revitalisation of smallholder irrigation schemes, notes Dr Backeberg. He continues to say that this investment in human and social capital must receive priority attention, in contrast to the usual preference to invest in physical and natural capital, i.e. infrastructure on irrigation schemes. "This report directs attention to key issues of management and land tenure, which should be addressed as a matter of urgency. A long-term approach with a focus on investment in people is necessary rather than attending to short-term, quick-fix solutions. Of course, on some irrigation schemes refurbishment and upgrading of infrastructure is necessary, but this should not receive exclusive attention."

It is only through these long-term investments in people that we will see smallholder irrigation schemes reach their full potential and become the food baskets we hope they will be. □