



Climate Adaptation in Small-Scale Agriculture [Middle Olifants Catchment]

PROJECT SUMMARY



Project partners

Ukuvuna is dedicated to the implementation of optimised sustainable projects within communities in southern Africa. It was established in March 2005 in response to the demand from southern African rural and urban communities, for diversified livelihood programmes to assist with climate change adaptation, HIV/AIDS and gender difference.

Ukuvuna aims for a fruitful process or a period of gathering produce or harvesting something positive that cares for the earth and the people (especially women and youth). The focus is on practical skills for diversified livelihood activities towards creating replicable models of best practice for living sustainably. This process involves mind-set transformation, adaptability and resilience of individuals, families and society, whilst creating awareness of climate change, HIV/AIDS and gender difference.

Ukuvuna focuses on facilitating a process that enables individuals, families and communities to alleviate poverty through resilience and creation of wealthy and healthy systems. In partnership with local stakeholders and/or actors, Ukuvuna creates replicable models of 'nodes' and 'cluster systems' in sustainable biodiversity management at household and community levels. In 2018 Ukuvuna focused on the two districts of Capricorn and Sekhukhune, both located within the Olifants River Catchment area, in the Middle Olifants RESILIM-O operation area. In these districts Ukuvuna engaged with two local municipalities and five wards: Lepelle-Nkumpi Municipality, Wards 7 and 21 and Elias Motsoaledi Municipality, Wards 20, 26 and 31.



UKUVUNA

People. Nature. Innovation.



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Introduction

There is a general consensus among climate scientists, economic strategists, agricultural experts and policy makers that climate change is a reality. It is now agreed that climate change will negatively impact economic, social, physical and in particular, the agricultural sector. Of concern in Southern Africa in general, and the Olifants River Catchment (ORC) more specifically, are projected increases in average temperatures and more volatile rainfall patterns.

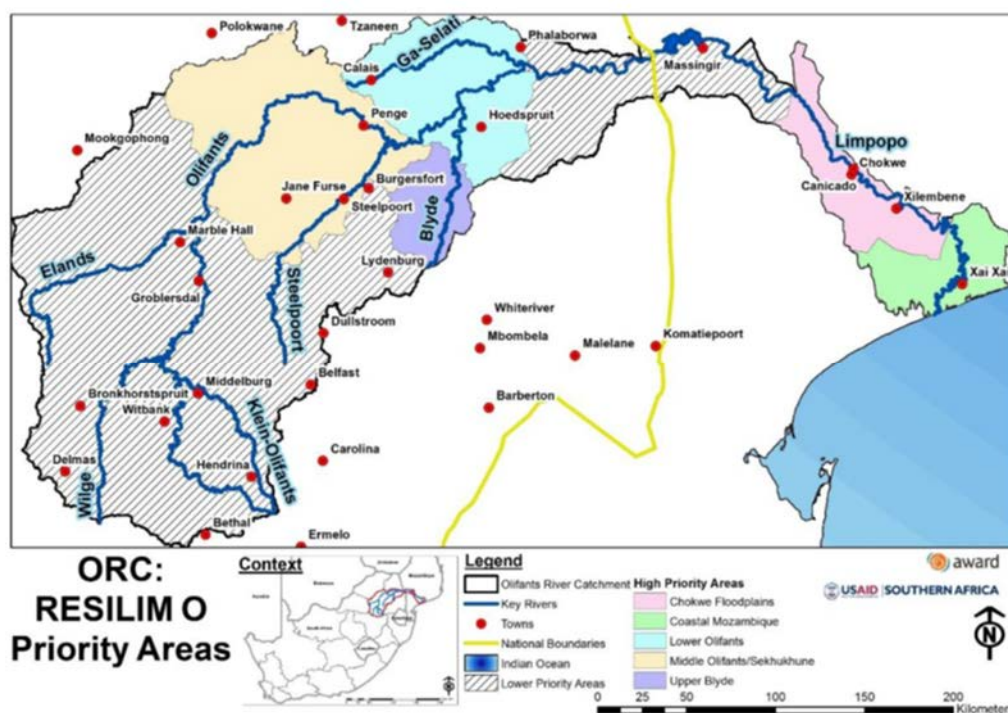


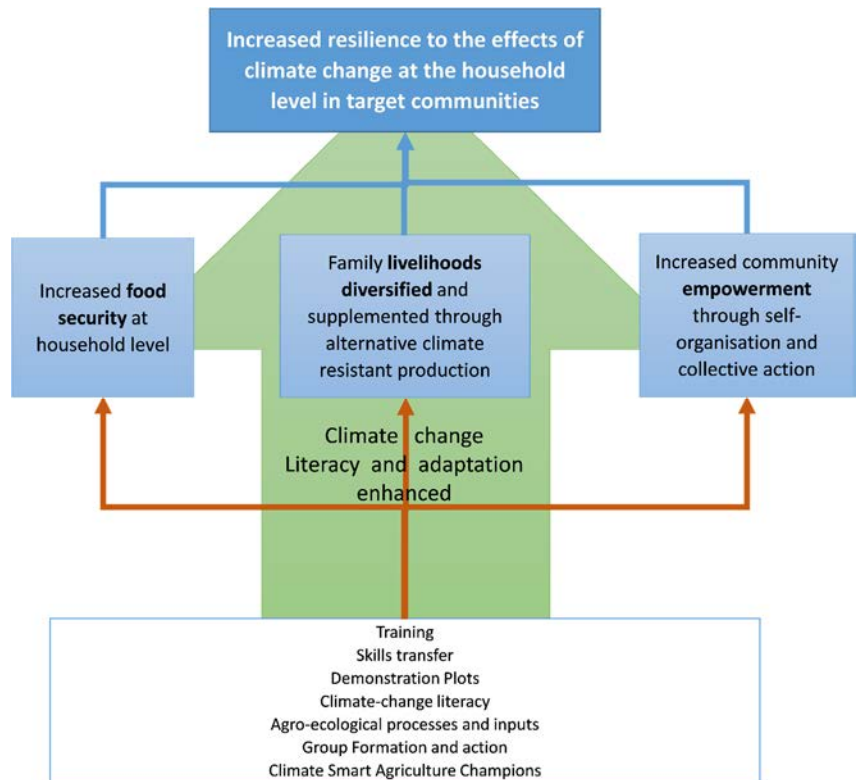
Figure 1: Priority areas for the RESILIM-O program (Source: AWARD 2016)

Agriculture is a significant form of land-use in the Olifants catchment, and is seen as a major driver of change in terms of both environmental and social aspects of the social-ecological system (SES) of the catchment. Moreover, agriculture is also a contributor to climate change. However, as a sector it is also heavily impacted by climate change, especially in terms of changing temperatures and rainfall. Given these factors, it is clear that agriculture also forms part of the solution.

Communal areas tend to be densely populated and over utilisation of natural resources combined with a lack of management of these resources has led to erosion and reduction of water availability. In addition, between 70-80% of inhabitants are entirely reliant on social grants (child grants and pensions) for their incomes (GrainSA Smallholder Farmer Innovation Programme, Annual report 2015-2016). Thus, pressure on existing natural resources to fulfil basic needs (grazing for livestock, firewood, plants for food and medicine and water) is likely to continue and intensify.

Project Purpose

The project's specific aim was to build the resilience of small-scale farmers in targeted communities in Sehkhukuneland to the impacts of climate change through an assessment of the potential impacts of climate change; and the development of effective, sustainable adaptation approaches that are holistic, and socially and technically appropriate and acceptable to the farmers.



Maize crop wilting due to drought in Motetema



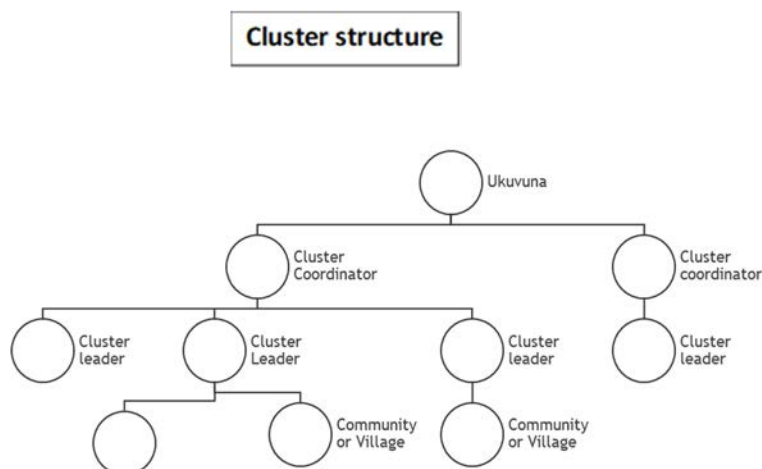
Traditional clearing of land damaging the natural environment



Activities

Training Programme

Households were divided into clusters and these clusters were managed by Cluster Leaders from the same communities. These leaders reported to Cluster Coordinators. Farmer groups identified their own leaders. The leader for a specific geographical area or village, is passionate and willing to help and teach others. Leaders are champions or have strength in specific or diversified systems of managing the environment, while producing food and generating income.



- Training of trainers (Cluster Leaders)
- Cluster leader support to farmers and mentoring of cluster leaders
- Internal and external exchange

Five Finger System*

The “five fingers” of soil and water conservation

Like agroecology, SWC is based on principles which can be used almost anywhere. To help remember these, we can use a hand or ‘the five-fingers’ to recall important principles. Each principle can be achieved by a diversity of farming practices (agroecological practices). These can be quite complex to remember and the practices that are associated with each principle may change from place to place and in different contexts. Thus, as a farmer, armed with your ‘hand’ to remember principles, you can work out which practices you can

1. Water management:
Practice good water management to enhance soil moisture and limit water movement

2. Limit soil movement:
Adopt practices that limit soil movement

apply in your context. You can do this with our support and support from each other through being part of a network. You can also do this by experimenting but we understand that experimentation can be very costly for small-scale farmers which is why we offer support and ideas in this resource. The principles of SWC are:

3. Crop management for diversity:
Manage your crops for diversity, location and sustainability

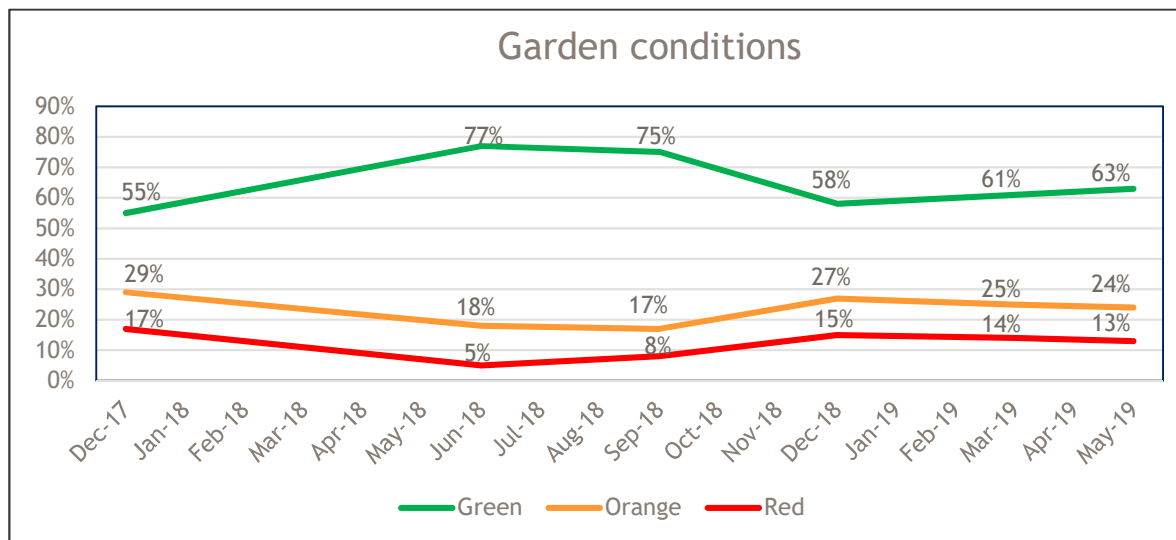
4. Build soil health:
Adopt practices that build and maintain soil health

5. Maintain Indigenous plants:
Protect and maintain indigenous plants as part of your farming practice



* For more details see the complete AWARD brochure: Principles of Soil and Water Conservation in Agroecology available at www.award.org.za

Results



Green	Garden covered with variety (more than 7) crops & vegetables. Garden area shows good water conservation, soil cover, soil conservation, crop diversity, enterprise, recycling & greening.
Orange	Garden with few vegetables and less maintained. Crops attacked with pests.
Red	Garden neglected, land bare, few unmaintained vegetables

Green gardens have significantly out-performed the other colours, as indicated on the ‘Garden Conditions’ graph above. In line with the increase in Cluster Members (CMs), the red and the orange categories increased slightly, especially from December 2018 onwards. The increase in red coincided with new members joining the CMs and they are at the beginning of the learning process. The simultaneous increase in green gardens confirms the confidence of farmers in maintaining the interventions of climate change and adaptation.



Drip irrigation water conservation



Entrepreneurship



Crop diversification improving food security and nutrition



Recommendations

- Engage youth, adults and institutions in mass tree planting in the streets and at homesteads for greening the communities. The trees also improve biodiversity and they are the lungs of the earth. They will also help in regulating temperature hence they become tools for positive impact in response to Climate Change.
- Improve publicity at district and provincial levels so that awareness is promoted in more communities. This can establish a broader agroecology practices network.
- Expand the entrepreneurship program for food processing/value addition training for CMs, as most are producing more crops than they can utilise. The entrepreneurship program involves linking farmers to markets within the villages and within the district. The farmers can then share, exchange and sell products to a broad market base.



- Expand the programme into schools and crèches so children grow up with an understanding of climate change and climate adaptation. This will need to engage the Ministry of Education at regional, provincial and national levels and build a relationship that will help farmers and their communities.
- Ongoing support to increase awareness of diversified livelihood systems.

- Develop climate change adaptation initiatives that will appeal to the youth and motivate them to start their own innovative projects (like the youth group in Tafelkop that developed a centre pivot irrigation system).
- Ongoing support for collecting seeds and creating seed banks at household level to mitigate the risk of genetic erosion.
- Ongoing support on the value of indigenous knowledge systems and practices in relationship to agricultural biodiversity, resilience and community rights.





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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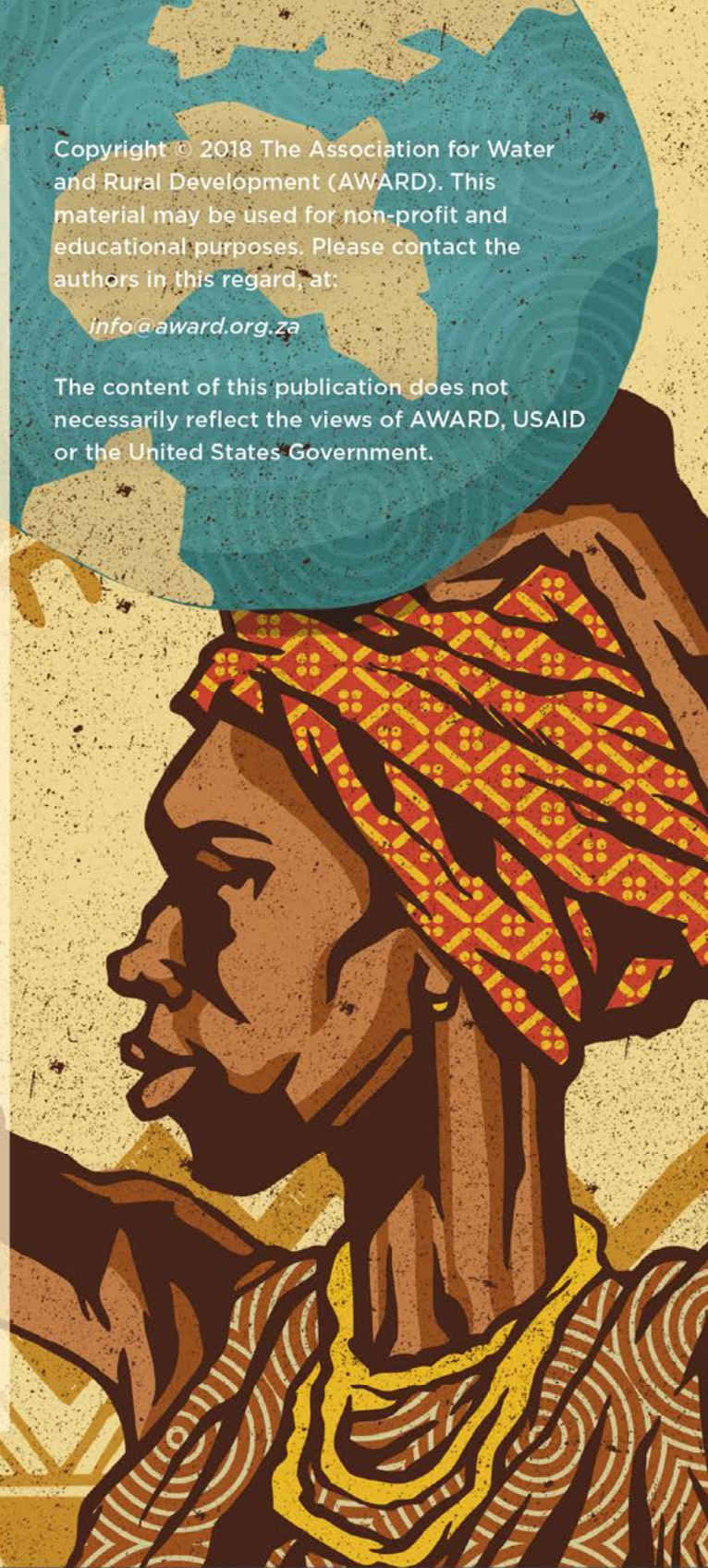
About USAID: RESILIM-O

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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